DRAFT
Lake Elmo Airport
2035 Long-Term Comprehensive Plan (LTCP)

Refined Preferred Alternative Addendum
January 25, 2016

Prepared jointly by the Airport Development & Environment Departments
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AD  DRAFT 2035 LTCP ADDENDUM

AD.1 INTRODUCTION
The purpose of the Lake Elmo Airport 2035 Long-Term Comprehensive Plan (LTCP) is to identify future facility needs at the airport for the 20-year period between 2015 and 2035. It will also provide a "road map" to guide the Metropolitan Airport Commission’s (MAC’s) development strategy for Lake Elmo Airport over the next 5-10 years by renewing aviation activity forecasts, envisioning facility needs and exploring alternatives to meet those needs.

The LTCP is an infrastructure planning tool updated on a regular basis. It is forward-looking in nature, and does not authorize actual construction. The draft 2035 Lake Elmo Airport LTCP aims to improve safety in compliance with Federal Aviation Administration (FAA) guidelines, provide appropriate facilities for the types of aircraft currently utilizing the airport, and delineate the future footprint of the airport.

A Draft 2035 LTCP for Lake Elmo Airport was issued for public review and comment on Monday, June 22, 2015. Two public information meetings were held in July 2015 to provide information about the draft plan to interested citizens. The public comment period closed on Wednesday, September 16 after being extended to provide additional time for community input.

A Refined Preferred Alternative (Alternative B1) has been developed by MAC staff in response to that community input. The purpose of this Addendum is to describe the features of and rationale behind the development of the Refined Preferred Alternative. It is not a re-issue of the Draft 2035 LTCP report in its entirety. It is a supplement to the Draft 2035 LTCP report, and the documentation in the original report related to existing conditions, aviation activity forecasts, facility requirements, and evaluation of the original alternatives remains valid. New materials included in this Addendum will be integrated into the Final 2035 LTCP report before final publication.

For reference, the Executive Summary from the June 2015 Draft 2035 LTCP report is included as Appendix AD-1. A full copy of the Draft 2035 LTCP report can be accessed online via this link: http://metroairports.org/General-Aviation/General-Aviation-Documents/Lake_Elmo_Airport_2035_LTCP_DRAFT_Narrative_Report.aspx

AD.2 SUMMARY OF THE ORIGINAL PREFERRED ALTERNATIVE
The Draft 2035 LTCP report documented the purpose and need for a relocated and longer primary runway at Lake Elmo Airport, the primary reasons being:

- The existing 2,849-foot primary runway pavement is at the end of its useful life and would need to be fully reconstructed;
- The primary runway must be lengthened in order to meet FAA criteria for runway length for the type of aircraft using the runway today;
• Obstructions on both ends of the existing primary runway make it unfeasible to extend the runway in its current location;

• The runway must also be relocated in order to best achieve FAA-compliant Runway Protection Zones (RPZs);

• If the MAC were to choose to reconstruct the primary runway in its current configuration, the FAA has indicated it will require the MAC to purchase the private property within the existing RPZ on the west side of Manning Avenue as a condition of receiving grant funding; and

• The project as proposed will achieve the objectives of enhancing safety and improving operational capabilities for the aircraft currently using the runway (design aircraft family).

As summarized in Section ES.5 of the Draft 2035 LTCP report, the MAC evaluated four development alternatives. Alternative B is the original Preferred Alternative and included the following proposed improvements to Lake Elmo Airport for the 20-year planning period:

• Relocate primary Runway 14-32 by shifting the runway centerline 700 feet to the northeast and extending it to a length of 3,600 feet, including all necessary grading and clearing.

• Relocate 30th Street N (on the south side of the airport) around the new Runway 32 end RPZ to end at a new intersection with Neal Avenue. This new intersection would be approximately ¼ mile to the south of the existing intersection between the roadways.

• Construct a new cross-field taxiway to serve the new Runway 14 end, including taxiway lighting and/or reflectors.

• Convert existing Runway 14-32 into a partial parallel taxiway and construct additional taxiway infrastructure as needed to support the relocated runway, including taxiway lighting and/or reflectors.

• Reconstruct existing crosswind Runway 04-22 and extend it to 2,750 feet as recommended in the facility requirements section, including runway lighting, Precision Approach Path Indicator (PAPI) systems, and a new taxiway connector.

• Pursue the establishment of a new non-precision instrument approach to the Runway 14 end, and upgrade the existing Runway 04 approach to an RNAV (GPS) type.

Improvements associated with the Original Preferred Alternative are shown in Figure AD-1.
Figure AD-1: Original LTCP Preferred Alternative (Alternative B)
AD.3 WASHINGTON COUNTY MANNING AVENUE IMPROVEMENTS

A key factor in this planning process has been the FAA's updated guidance on land uses within a Runway Protection Zone (RPZ). The RPZ is a trapezoid area beyond the end of a runway that is intended to be clear of structures and places of public assembly in order to enhance safety for those operating at the airport and for people on the ground. The RPZ for the north end of the existing primary runway (Runway 14) encompasses a portion of Manning Avenue and the Union Pacific Railroad line, as well as approximately 3 ½ acres of private property on the west side of Manning Avenue in the City of Lake Elmo.

The FAA’s updated RPZ guidance, issued in 2012, clarifies and tightens up the policy on what constitutes an incompatible land use in an RPZ, now defined to include public roadways and railroads. The FAA also clarified the process to evaluate proposed land uses that would be introduced into an RPZ based upon a triggering action. A triggering action could be an airfield project, an off-airport development proposal, or an operational change at the airport.

Washington County’s proposal to widen Manning Avenue through the existing Runway 14 RPZ qualifies as a triggering action. As such, Washington County will be required to submit an RPZ alternatives analysis study to the FAA for its approval. If MAC’s airport plan includes a runway relocation – which would remove the RPZ conflict – then the County can indicate that in its submittal to the FAA.

If the airport plan indicates the runway is not being relocated, MAC staff believes the FAA will expect Washington County to show a realignment of Manning Avenue around the outside of the existing RPZ as an alternative, along with justification as to why that option is or is not feasible. A layout showing a conceptual realignment corridor for Manning Avenue around the existing Runway 14 RPZ is shown in Figure AD-2.

One of the goals for the 2035 LTCP is to comply with the FAA’s airport design standards, so achieving RPZ compliance in the recommended future condition is a high priority. With the preferred development concept, all Runway Protection Zones will be contained on property the MAC already owns and be clear of any non-compliant land uses. The MAC would no longer need to acquire private property, and the County roadway project would not be subject to a FAA runway protection zone evaluation and approval process.
Figure AD-2: Conceptual Manning Avenue Realignment Corridor
**AD.4 SUMMARY OF PUBLIC COMMENTS**

During the initial public comment period, the MAC received 104 written comments, of which 99 were from members of the public. Twelve of the 99 commenters supported the plan, and 87 opposed.

The remaining five comments were received from municipalities and agencies. West Lakeland and Baytown Townships passed resolutions opposing the plan, while neutral comments were received from Washington County, the Metropolitan Council, and the Valley Branch Watershed District. The City of Lake Elmo considered a resolution opposing the preferred plan, however, no action was taken and no formal comments were received from the city.

Common themes from area residents included:

- 30th Street N realignment and the possible associated impacts from noise, traffic and potential right-of-way taking of their property on Neal Avenue;
- Increased aircraft traffic and aircraft noise levels, including concerns the role of the airport would change and introduce significant numbers of jet aircraft flights, impacting property values;
- Concerns about possible adverse environmental impacts to wetlands and wildlife habitats; and
- Questions about the overall justification for the improvements, including skepticism regarding the estimates of airport activity levels.

All public comments received will be published in the Final 2035 LTCP report. A draft version of the Response to Comments document is provided in Appendix AD-2.

**AD.5 DESCRIPTION OF THE REFINED PREFERRED ALTERNATIVE**

The proposed realignment of 30th Street N, which was part of the Original Preferred Alternative, emerged as a prominent cause of concern for area residents.

Based on this feedback, MAC staff re-evaluated options to connect 30th Street N back up to its existing intersection with Neal Avenue. Based on this evaluation, a refined, scaled-back version of the Original Preferred Alternative was prepared to address some community concerns and in a manner that continues to meet the stated planning goals to 1) address failing, end-of-life infrastructure, 2) enhance safety, and 3) improve operational capabilities for the design aircraft family (propeller-driven aircraft with fewer than 10 passenger seats).

When compared with the Original Preferred Alternative, the refined concept includes the following adjustments:

- **Runway length**: The refined concept includes a shorter runway length (3,500 feet versus 3,600 feet). Although 100 feet shorter than the optimal length of 3,600 feet, staff believes a 3,500-foot runway is a significant improvement over the existing condition. The slightly shorter runway also reinforces the MAC’s
intent of not changing the role of the airport or the types of aircraft that will utilize it.

- **Runway designation:** The refined concept includes a “Utility” runway designation allowing use of smaller-dimension Runway Protection Zones (RPZs)\(^1\) and State of Minnesota Department of Transportation (MnDOT) Clear Zones\(^2\). Both runways at Lake Elmo Airport are currently designated as Utility, meaning that they are constructed for, and intended to be used by, propeller-driven aircraft of 12,500 pounds maximum gross weight and less.

- **Runway location:** The combination of a shorter runway length and smaller-dimension RPZs allows the runway alignment to be closer to the existing runway, with the north end sited to keep the RPZ clear of the railroad track.

- **30th Street N Realignment:** With these adjustments, the relocation of 30th Street N can be routed around the new RPZ and meet back up with Neal Avenue at its existing intersection. Vehicle traffic patterns therefore would not be altered on Neal Avenue. The possibility of right-of-way taking from properties located along Neal Avenue also is eliminated.

The improvements associated with the Refined Preferred Alternative are shown in **Figure AD-3**. A comparison of the original to the refined concept is shown on **Figure AD-4**.

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\(^1\) See Table 2-2 in the Draft 2035 LTCP Report for RPZ dimensions

\(^2\) MnDOT promotes the preservation of Clear Zones off runway ends to enhance operational safety of aircraft and to protect life and property in runway approach areas. The dimensions of the MnDOT Clear Zone for a non-precision utility runway are as follows: 500-foot inner width, 800-foot outer width, 1,000 feet long with a 20:1 slope.
Figure AD-3: Refined LTCP Preferred Alternative (Alternative B1)
Figure AD-4: Comparison of Original and Refined LTCP Preferred Alternatives
Advantages and disadvantages of the refined Preferred Alternative (Alternative B1) are summarized in the following table:

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Runway 14-32 RPZs comply with FAA compatibility criteria</td>
<td>• Realignment of 30th Street N will increase travel times between Manning Avenue and Neal Avenue</td>
</tr>
<tr>
<td>• No RPZ Alternatives Analysis required</td>
<td>• Existing north side end taxiway and compass calibration pad must be relocated</td>
</tr>
<tr>
<td>• No land acquisition required</td>
<td>• When compared with the existing runway, the new runway configuration shifts existing aircraft traffic patterns and noise impacts to the southeast, moving the Runway 32 end closer to an established residential neighborhood</td>
</tr>
<tr>
<td>• Existing intersection between 30th Street N and Neal Avenue is maintained; no additional traffic is routed onto Neal Avenue</td>
<td>• May require wetland mitigation</td>
</tr>
<tr>
<td>• Primary runway can be extended to 3,500 feet – still within the FAA’s guidelines for this type airport</td>
<td>• Potential for greater impact on the existing wetland area north of 30th Street N and west of the relocated runway, but potential for less impact on the existing wetland area east of the relocated runway</td>
</tr>
<tr>
<td>• Maintains continuity of existing airport operational footprint; primary runway remains on 14-32 alignment</td>
<td>• Highest development cost</td>
</tr>
<tr>
<td>o Runway 14-32 alignment ensures optimal wind coverage</td>
<td></td>
</tr>
<tr>
<td>o Future runway can be constructed closer to the existing runway</td>
<td></td>
</tr>
<tr>
<td>• New Runway 14-32 can be constructed while existing Runway 14-32 is in operation</td>
<td></td>
</tr>
</tbody>
</table>

*Estimated Development Cost: $11,500,000.00*

On December 21, 2015, the Metropolitan Airports Commission Board approved staff’s recommendation to update the Draft 2035 LTCP by replacing the Original Preferred Alternative (Alternative B) with the refined, scaled-back concept (Alternative B1) and initiate a supplemental public comment period.

**AD.6 ENVIRONMENTAL CONSIDERATIONS**

Prior to any construction taking place, the MAC will complete an Environmental Assessment (EA) and/or an Environmental Assessment Worksheet (EAW) to meet Metropolitan Council guidelines and FAA requirements for utilizing Airport Improvement Program (AIP) grant funds. The environmental categories required to be studied prior to construction of the Refined Preferred Alternative include aircraft noise, sanitary sewer/water utilities, and wetlands.

Both the length and location of the relocated runway are proposed to shift in the Refined Preferred Alternative. As such, this document includes updated noise contours that assess potential noise impacts associated with the shifted runway ends.

The planning-level assessment of sanitary sewer needs, water utilities, and wetland impacts have not changed from that provided in the Draft 2035 LTCP Report.

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3 The estimated cost of the Refined Preferred Alternative is expected to remain the same as the Original Preferred Alternative. See Section AD.8.
Noise
To evaluate potential aircraft noise impacts associated with the Refined Preferred Alternative, the MAC prepared Baseline Condition noise contours for Lake Elmo Airport, along with 2035 Refined Preferred Alternative Condition noise contours for comparison. The contours represent noise levels, expressed in the Day-Night Average Sound Level (DNL) metric. The FAA requires the DNL noise metric for determining and analyzing noise exposure to aid in the determination of aircraft noise and land use compatibility issues around United States airports.

The FAA suggests three different DNL levels (65, 70, and 75 DNL) be modeled but considers the 65 dB DNL contour line as the threshold of significance for noise impact. As such, sensitive land use areas (e.g., residential) around airports that are located in the 65 dB or greater DNL contours are considered by the FAA as incompatible.

The Metropolitan Council suggests that the 60 DNL contour be included for airports in an urban environment and the 55 DNL in cases where airports are located outside the Metropolitan Urban Service Area (MUSA). Currently, Lake Elmo Airport lies outside of the MUSA, so the 55 DNL noise contour will be shown for advisory purposes. However, it is not linked to any requirements for noise attenuation or mitigation.

Table 6-3 in the Draft 2035 LTCP Report provides a summary of the Baseline (existing) noise impact. For comparative purposes, Table AD-1 provides a summary of the 2035 Refined Preferred Alternative noise impact.

Table AD-1: 2035 Refined Preferred Alternative Noise Impact Summary

<table>
<thead>
<tr>
<th>Noise Impact Summary by Contour</th>
<th>75 DNL</th>
<th>70 DNL</th>
<th>65 DNL</th>
<th>60 DNL</th>
<th>55 DNL</th>
</tr>
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<tbody>
<tr>
<td><strong>2035 Refined Preferred Alternative</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contour Overall Area (Acres)</td>
<td>5.5</td>
<td>42.9</td>
<td>72.6</td>
<td>108.4</td>
<td>249.8</td>
</tr>
<tr>
<td>Contour Contained on Airport?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Number of Residential Structures</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: MAC Analysis

The 2035 Refined Preferred Alternative noise contours are shown in Figure AD-5. A comparison of the Baseline, Original Preferred Alternative, and Refined Preferred Alternative noise contours is shown in Figure AD-6.

Table AD-2 provides a comparison of noise impacts from the Baseline to the 2035 Refined Preferred Alternative Condition.
Table AD-2: Changes in Noise Contours (Baseline to 2035 Refined Preferred Alternative)

<table>
<thead>
<tr>
<th>Noise Impact Comparison by Contour</th>
<th>75 DNL</th>
<th>70 DNL</th>
<th>65 DNL</th>
<th>60 DNL</th>
<th>55 DNL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change from Baseline to 2035</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refined Preferred Alternative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contour Overall Area Change (Acres)</td>
<td>-4.4</td>
<td>5.1</td>
<td>13.9</td>
<td>8.6</td>
<td>-10.0</td>
</tr>
<tr>
<td>Percentage Change</td>
<td>-45%</td>
<td>13%</td>
<td>24%</td>
<td>9%</td>
<td>-4%</td>
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<tr>
<td>Number of Residential Structures</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Source: MAC Analysis

In summary, when the Refined 2035 Preferred Alternative Condition contours are compared to the Baseline (existing) Condition contours:

- For the 65 DNL contour, the acreage contained within the contour increases by 24 percent, with no residential parcels contained in the contour under either condition. The 65 DNL contour extends off the airport property in the Baseline Condition but is contained on airport property in the Refined Preferred Alternative Condition.

- For the 60 DNL contour, the acreage contained within the contour increases by nine percent, with no existing residential parcels contained in the contour under either condition. The 60 DNL contour extends off the airport property in the Baseline Condition but is contained on airport property in the Refined Preferred Alternative Condition. Residential development currently platted west of Manning Avenue in the City of Lake Elmo is impacted by the Existing Condition 60 DNL noise contour, but not by the Refined Preferred Alternative Condition.

- For the 55 DNL contour, the acreage contained within the contour decreases by four percent but the number of residential parcels contained in the contour increases by six when compared to the Baseline Condition. This is due to the shift of the noise contour to the southeast associated with the proposed runway relocation. Similar to the 60 DNL contours, the impact to residential development currently platted west of Manning Avenue in the City of Lake Elmo is greatly reduced in the Refined Preferred Alternative Condition as compared to the Baseline Condition.
Figure AD-5: 2035 Refined Preferred Alternative Noise Contour
Figure AD-6: Noise Contour Comparison
AD.7 LAND USE COMPATIBILITY

The Land Use Compatibility chapter of the Draft 2035 LTCP Report evaluated the land use implications of the planned operation and development of Lake Elmo Airport.

The proposed improvements at Lake Elmo Airport result in changes to the noise contour (described in Section AD.6), along with the locations of the Runway Protection Zones (RPZs, described in Section AD.3) and model State Safety Zones, which are described below.

The State of Minnesota Department of Transportation (MnDOT) has established regulations that control the type of development allowed off runway ends in order to prevent incompatible development. These guidelines are meant to be used to establish zoning ordinances to protect areas around an airport.

The most restrictive areas created by MnDOT regulations are called State Safety Zones A and B. The recommended safety zones should exist off each runway end and follow the approach zones out to the total length of the respective runway. The length of Safety Zone A is 2/3 of the total runway length; Safety Zone B is 1/3 of the total runway length and extends from Safety Zone A. There is also an area called Safety Zone C, which is a horizontal plane established 150 feet above the established airport elevation for a specified distance from each runway end.

A complete description and copy of the Minnesota Rules Chapter 8800 Department of Transportation Aeronautics Section 2400 Airport Zoning Standards can be accessed via the following website link: https://www.revisor.mn.gov/rules/?id=8800.2400.

MnDOT has undertaken efforts to update the state’s airport zoning regulations. It’s anticipated that revisions to the statutes governing airport zoning will be submitted for consideration during the 2016 Minnesota Legislative session. The administrative rules used to implement the zoning regulations and define the particulars of the State Safety Zones will likely be updated after the statutory changes are complete.

Once Lake Elmo Airport’s future development plan is finalized, and the process to update the state’s airport zoning regulations is complete, the MAC intends to convene a Joint Airport Zoning Board (JAZB) that will include the respective Responsible Governmental Units that control land use development around Lake Elmo Airport (including Washington County, the City of Lake Elmo, Baytown Township, and West Lakeland Township). Through a collaborative process, the JAZB will seek to develop an Airport Zoning ordinance, in accordance with state statutes and administrative rules, that considers land uses around Lake Elmo Airport to achieve a balance between providing a reasonable level of public safety and facilitating compatible off-airport development.

For this report, the existing MnDOT models for the size and shape of State Safety Zones A and B were used for the purpose of analyzing land use compatibility. The sizes, shapes and/or locations of these zones may be revised by the JAZB during development of the Airport Zoning Ordinance for Lake Elmo Airport. However, it should be noted that these zones are not currently in effect at Lake Elmo Airport.
Table AD-3 provides land use acreages encompassed by the 2035 Refined Preferred Alternative RPZs and model State Safety Zones. For reference, Table 7-3 in the Draft 2035 LTCP report provides existing land use acreages encompassed by the Baseline (existing) condition RPZs and model State Safety Zones⁴.

Table AD-3: 2035 Refined Preferred Alternative Land Use Impacts

<table>
<thead>
<tr>
<th>Land Use Acreage</th>
<th>RWY 14</th>
<th>RWY 32</th>
<th>RWY 04</th>
<th>RWY 22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2035 Refined Preferred Alternative</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runway Protection Zone (Acres)</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td>Airport</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
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</tr>
<tr>
<td>Agricultural</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Farmstead</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Single Family Detached</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Undeveloped</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>State Safety Zone A (Acres)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airport</td>
<td>25.9</td>
<td>26.7</td>
<td>21.3</td>
<td>29.5</td>
</tr>
<tr>
<td>Agricultural</td>
<td>18.4</td>
<td>9.5</td>
<td>4.1</td>
<td>0.9</td>
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<tr>
<td>Farmstead</td>
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<td>-</td>
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<td>-</td>
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<tr>
<td>Single Family Detached</td>
<td>-</td>
<td>2.0</td>
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<td>0.4</td>
</tr>
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<td>Undeveloped</td>
<td>1.2</td>
<td>7.3</td>
<td>5.6</td>
<td>1.8</td>
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<td><strong>State Safety Zone B (Acres)</strong></td>
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<td>Airport</td>
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<td>Institutional</td>
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<tr>
<td>Undeveloped</td>
<td>-</td>
<td>18.9</td>
<td>5.2</td>
<td>9.5</td>
</tr>
</tbody>
</table>

Notes: Totals may not add due to rounding.

Source: MAC Analysis

Figure AD-7 shows the 2035 Refined Preferred Alternative RPZs and model State Safety Zones projected over planned future land use data provided by the Metropolitan Council.

Table AD-4 provides a comparison of on-airport and off-airport land use impacts from the Baseline to the 2035 Refined Alternative Condition. A comparison of the Baseline and Refined Preferred Alternative RPZs, model State Safety Zones, and noise contours is shown in Figure AD-8.

⁴ The Baseline (existing) condition RPZs for Runway 14/32 reported in this Addendum have been changed to the dimensional standards for a Utility Runway (1,000 feet long with a 250-foot inner width and a 450-foot outer width). This change will be reflected in the Final LTCP report.
Table AD-4: Changes in Land Use Impacts (Baseline to 2035 Refined Preferred Alternative)

<table>
<thead>
<tr>
<th>Land Use Impacts</th>
<th>RWY 14</th>
<th>RWY 32</th>
<th>RWY 04</th>
<th>RWY 22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Change from Baseline to 2035</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Refined Preferred Alternative Condition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runway Protection Zone (Acres)</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>On-Airport Change</td>
<td>4.6</td>
<td>0.8</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Off-Airport Change</td>
<td>-4.6</td>
<td>-0.8</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>State Safety Zone A (Acres)</td>
<td>11.3</td>
<td>11.3</td>
<td>3.9</td>
<td>3.9</td>
</tr>
<tr>
<td>On-Airport Change</td>
<td>17.9</td>
<td>-5.7</td>
<td>0.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Off-Airport Change</td>
<td>-6.6</td>
<td>17.0</td>
<td>3.9</td>
<td>2.5</td>
</tr>
<tr>
<td>State Safety Zone B (Acres)</td>
<td>10.4</td>
<td>10.4</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>On-Airport Change</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>-8.8</td>
</tr>
<tr>
<td>Off-Airport Change</td>
<td>10.4</td>
<td>10.4</td>
<td>3.5</td>
<td>12.3</td>
</tr>
</tbody>
</table>

Notes: Totals may not add due to rounding.

Source: MAC Analysis

In summary, when the 2035 Refined Preferred Alternative Condition is compared to the Baseline Condition from a land use compatibility perspective:

- The RPZs are fully contained on airport property in the 2035 Refined Preferred Alternative Condition
- The Baseline Condition model State Safety Zones are 47 percent contained on airport property, while the 2035 Refined Preferred Alternative Condition State Safety Zones will be 39 percent contained on airport property.
- Existing land uses around Lake Elmo Airport are compatible with both the Baseline and 2035 Refined Preferred Alternative Condition and the resultant airport operations considering airport noise impacts as outlined in the FAA and Metropolitan Council land use guidelines.

5 FAA and Metropolitan Council land use guidelines are more fully described in Section 7.2 of the Draft 2035 LTCP Report
Figure AD-7: 2035 Refined Preferred Alternative RPZs, State Safety Zones, and Noise Contours
Figure AD-8: RPZs, State Safety Zones, and Noise Contour Comparison

Note: Model State Safety Zones shown are currently undergoing revisions by MnDOT. Revisions are anticipated to be submitted to the MN Legislature during the 2016 session.
AD.8 IMPLEMENTATION PLAN

Near-term development includes work necessary to relocate and extend Runway 14-32 to its ultimate configuration and length of 3,500 feet. It also includes reconstructing existing Runway 04-22 at its existing length. It is anticipated that this development may occur within the next 5-7 years.

Mid-term development includes work associated with extending Runway 04-22 to its ultimate length of 2,750 feet, which could be accomplished concurrently with the Near-Term Development program but is not required to achieve the desired utility of the Refined Preferred Alternative. It is anticipated that this development may occur in the 8-20 year timeframe.

Long-term development includes work anticipated to occur beyond the 20-year planning horizon.

The anticipated cost for the near-term improvements included in the Refined Preferred Alternative remains at approximately $11,500,000, the same as for the Original Preferred Alternative. Although the refined concept includes a shorter runway and parallel taxiway lengths, the reduction is offset by the need to relocate the compass calibration pad, a longer segment of 30th Street N to be realigned, and construction of an additional segment of parallel taxiway not needed in the original concept.

Project cost estimates for the Refined Preferred Alternative are summarized in Table AD-5.

The LTCP is a planning document and does not authorize construction. Adoption of the LTCP is simply the first step in the project implementation process. Before any construction can begin, the project(s) must first be depicted on an FAA-approved Airport Layout Plan (ALP), evaluated via an environmental review process, and then compete for funding through FAA and/or State grant programs. Once funding is secured, final project engineering and design will take approximately one year to complete with contractor bidding and construction following thereafter.

Figure AD-8 illustrates the next steps for the planning and project implementation process, including at what points additional approvals are needed and at what points public feedback will be solicited.
## Table AD-5: Refined Preferred Alternative Cost Estimate

<table>
<thead>
<tr>
<th>Item #</th>
<th>Project Element</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near-Term Development (Plan Years 5 - 7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Construct New RWY 14-32 (3,600’ x 75’)</td>
<td>$3,900,000</td>
</tr>
<tr>
<td>2</td>
<td>Construct RWY 14-32 Electrical Systems (MIRL, REIL, and PAPI)</td>
<td>$750,000</td>
</tr>
<tr>
<td>3</td>
<td>Construct TWY System for New RWY 14-32 (w/MITL)</td>
<td>$2,400,000</td>
</tr>
<tr>
<td>4</td>
<td>Wetland Mitigation</td>
<td>$350,000</td>
</tr>
<tr>
<td>5</td>
<td>Relocate 30th St N</td>
<td>$1,300,000</td>
</tr>
<tr>
<td>6</td>
<td>Construct On-Airport Connector Road</td>
<td>$200,000</td>
</tr>
<tr>
<td>7</td>
<td>Convert Old RWY 14-32 to TWY (w/MITL)</td>
<td>$525,000</td>
</tr>
<tr>
<td>8</td>
<td>Reconstruct Existing RWY 04-22 (2,496’ x 75’)</td>
<td>$2,050,000</td>
</tr>
<tr>
<td></td>
<td><strong>Near-Term Development Total:</strong></td>
<td><strong>$11,475,000</strong></td>
</tr>
<tr>
<td>Mid-Term Development (Plan Years 8 - 20)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Extend RWY 04-22 to 2,750’ (254’ x 75’ Extension)</td>
<td>$575,000</td>
</tr>
<tr>
<td>10</td>
<td>Construct RWY 04-22 Electrical Systems (MIRL full length, REIL, and PAPI)</td>
<td>$625,000</td>
</tr>
<tr>
<td>11</td>
<td>Construct TWY System to Extended RWY 22 (w/MITL full length)</td>
<td>$475,000</td>
</tr>
<tr>
<td>12</td>
<td>Wetland Mitigation</td>
<td>$175,000</td>
</tr>
<tr>
<td>13</td>
<td>Sewer/Water System Extension to Airport</td>
<td>$2,000,000</td>
</tr>
<tr>
<td></td>
<td><strong>Mid-Term Development Total:</strong></td>
<td><strong>$3,850,000</strong></td>
</tr>
<tr>
<td>Long-Term Development (Beyond the 20-Year Planning Horizon)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Construct TWY System for New RWY 14-32 (w/MITL) (Non-Essential)</td>
<td>$2,000,000</td>
</tr>
<tr>
<td></td>
<td><strong>Long-Term Development Total:</strong></td>
<td><strong>$2,000,000</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Total Development Cost:</strong></td>
<td><strong>$17,325,000</strong></td>
</tr>
</tbody>
</table>

Notes: Cost estimates reflect 2015 pricing and include engineering costs and contingencies.

Source: SEH and MAC cost estimates
Figure AD-9: Planning and Project Implementation Process

- MAC STAFF Research & study development alternatives
- MAC STAFF Engage MAC board, city staff & other key stakeholders
- MAC STAFF Draft report with alternatives including a proposed alternative
- MAC STAFF Request formal MAC board approval to publish draft report for public comment

- MAC STAFF Incorporate public comment & present final LTCP to MAC board for approval
- PUBLIC Comment on Refined Preferred Alternative
- PUBLIC Comment on draft report & proposed preferred alternative

- MAC STAFF Consider public comments, develop refined Alternative, initiate Supplemental Public Comment Period
- MAC STAFF Prepare draft environmental review documents per State and FAA requirements
- PUBLIC Comment on draft environmental and zoning documents

- MAC STAFF Prepare & submit Airport Layout Plan (ALP) to the Federal Aviation Administration for review & approval
- Metropolitain Council For approval

- MAC STAFF Establish Joint Airport/Zoning Board (JAZB) with local governments to develop airport zoning
- MAC STAFF Develop final funding plans and request federal/state grant funds for project(s)

- MAC STAFF Incorporate revisions into the LTCP
- MAC STAFF Request approval from MAC board to proceed with bidding projects

- MAC STAFF Solicit bids & award contracts
- MAC BOARD For approval of bid award

- Project funding programmed by FAA/MinDOT
- Local Governments review and comment on MAC annual Capital Improvement Program (CIP)

- Finalize environmental review documents & submit to State & FAA for approvals

CONSTRUCTION BEGINS
AD.9 PUBLIC INVOLVEMENT PROCESS

The LTCP stakeholder outreach plan consists of three phases. The first phase involved meeting with stakeholders before the draft LTCP plan was finalized in order to provide information about the plan’s purpose, process, preliminary findings, and timeline.

The second phase consisted of the formal public review period after the draft plan was completed and the Commission approved it for public distribution. See Section AD.4 for a summary of the initial public comment period. A supplemental public comment period will be held to solicit community feedback about the Refined Preferred Alternative.

The third phase will occur after the supplemental public comment period closes. During this time, public feedback will be considered and incorporated into the plan as appropriate. The end result will be a final draft LTCP narrative report for Commission adoption and Metropolitan Council formal review.
DRAFT
Lake Elmo Airport
2035 Long-Term Comprehensive Plan (LTCP)
Executive Summary
ES  EXECUTIVE SUMMARY

ES.1  INTRODUCTION

Lake Elmo Airport is one of seven airports owned and operated by the Metropolitan Airports Commission (MAC). It is located in Washington County, approximately 12 miles east of the downtown Saint Paul business district. The airport lies one mile east of downtown Lake Elmo, within Baytown Township, and is bordered by portions of West Lakeland Township and the City of Lake Elmo.

During 2014, Lake Elmo Airport had just over 200 based aircraft and accommodated approximately 26,000 total aircraft operations. It encompasses approximately 640 acres of land and has two paved runways. The primary runway (Runway 14-32) is 2,849 feet long by 75 feet wide, and the crosswind runway (Runway 04-22) is 2,496 feet long by 75 feet wide. The existing airport layout is depicted in Figure ES-1.

There have been a number of previous planning studies completed for the airport. The MAC prepared the first Long-Term Comprehensive Plan (LTCP) for Lake Elmo Airport in 1966, and updated it in 1976 and 1992. These plans included a recommendation for a relocated and extended primary runway (Runway 14-32) and an extension to the crosswind runway (Runway 04-22).

The most recent LTCP for Lake Elmo Airport prepared by the MAC and approved by the Metropolitan Council is dated December 2008. The 2008 LTCP recommended a plan to first extend crosswind Runway 04-22 to a length of 3,200 feet, along with development of a new hangar area on the east side of the airport. The relocation and extension of Runway 14-32 to 3,900 feet was identified as a viable ultimate configuration beyond the 20-year planning horizon to remain on the Airport Layout Plan.

The purpose of this 2035 Long-Term Comprehensive Plan (LTCP) is to identify future facility needs at Lake Elmo Airport for the 20-year period between the years 2015 and 2035. It will also provide a “road map” to guide the MAC’s development strategy for Lake Elmo Airport over the next 5-10 years by renewing aviation activity forecasts, envisioning facility needs and exploring alternatives to meet those needs.

ES.2  AIRPORT ROLE

Functioning within a diverse system of metropolitan area airports, the primary role of Lake Elmo Airport is to accommodate personal, recreational, and some business aviation users within Washington County and the eastern portion of the metropolitan area. Example business services provided at the airport include flight training and aircraft maintenance.

Lake Elmo Airport’s primary role is not expected to change throughout the foreseeable planning period. The classification of the airport will continue to be that of a Reliever in the MAC system and an Intermediate Airport per Minnesota Department of Transportation – Aeronautics (MnDOT) criteria.

The design aircraft that is anticipated to use the airport on a regular basis will continue to be the family of small, propeller-driven airplanes with fewer than 10 passenger seats.
Figure ES-1: Existing Airport Layout
ES.3 FORECASTS

Aviation activity forecasts were prepared for both based aircraft and total aircraft operations.

The forecast calculations take into account assumptions relating to the economy, fuel costs, aircraft ownership trends, general aviation fleet trends including integration of very-light-jet aircraft, and general aviation taxes and fees. The baseline forecast assumes reasonable growth in all of these categories.

Along with a Base Case forecast, a range of scenarios to identify the potential upper and lower bounds of future activity levels at Lake Elmo Airport was developed. These scenarios used the same forecast approach that was used in the Base Case, but alter the assumptions related to socioeconomic conditions and aviation demand to reflect either a more aggressive or more conservative outlook. The forecast also considered the potential impacts of providing an extended runway length under the preferred development scenarios.

Table ES-1 compares the total number of aircraft and operations under different scenarios for Lake Elmo Airport, while Figure ES-2 shows the forecast trends graphically.

Table ES-1: Lake Elmo Airport 2035 LTCP Forecast Summary

<table>
<thead>
<tr>
<th>Scenario</th>
<th>2012</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
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<tbody>
<tr>
<td>Based Aircraft</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Base Case</td>
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<td>226</td>
<td>218</td>
<td>209</td>
<td>211</td>
<td>208</td>
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<tr>
<td>High Range</td>
<td>229</td>
<td>272</td>
<td>287</td>
<td>300</td>
<td>315</td>
<td>332</td>
</tr>
<tr>
<td>Low Range</td>
<td>229</td>
<td>182</td>
<td>167</td>
<td>154</td>
<td>142</td>
<td>133</td>
</tr>
<tr>
<td>Extended Runway (3,300 ft.)</td>
<td>229</td>
<td>226</td>
<td>218</td>
<td>209</td>
<td>211</td>
<td>208</td>
</tr>
<tr>
<td>Extended Runway (3,600 ft.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Aircraft Operations           |      |      |      |      |      |      |
| Base Case                     | 26,709 | 25,454 | 24,232 | 23,908 | 25,200 | 26,138 |
| High Range                    | 26,709 | 29,322 | 30,128 | 32,460 | 35,610 | 39,119 |
| Low Range                     | 26,709 | 20,944 | 19,456 | 18,629 | 18,041 | 17,835 |
| Extended Runway (3,300 ft.)   | 26,709 | 25,454 | 24,418 | 24,125 | 25,459 | 26,442 |
| Extended Runway (3,600 ft.)   | 26,709 | 25,454 | 24,539 | 24,261 | 25,615 | 26,620 |

Source: HNTB Activity Forecasts
Recent activity levels at Lake Elmo Airport suggest that the number of based aircraft is declining slightly faster than predicted in the Base Case forecast scenario, but that aircraft operations are relatively stable. This indicates that the operations per based aircraft for those remaining at the airport are increasing.

The forecast scenarios indicate that future economic growth, fuel prices, technology, and national aviation policy may have a major impact on the development of general aviation. An extension to the primary runway would also affect the forecasts, though not to the...
same extent as economic growth. Therefore, it is prudent to monitor actual local economic conditions closely along with aviation activity, and modify the phasing of facility improvements at the airport if that activity departs materially from forecast levels.

**ES.4 FACILITY REQUIREMENTS**

The existing runways at Lake Elmo Airport are short. In comparison to the other MAC-owned Reliever Airports, both the primary and crosswind runways at Lake Elmo Airport are the shortest in the system.

Based on the aviation activity forecasts, the future critical design aircraft for Lake Elmo Airport will continue to be represented by the family of propeller-driven aircraft with fewer than 10 passenger seats. This family of aircraft includes a diverse range of equipment types, ranging from small single-engine piston aircraft used primarily for recreational and personal flying, up to larger single- and twin-engine turboprop aircraft that are used more predominantly for business aviation. Typical aircraft in the latter category include the single-engine turboprop Pilatus PC-12 and the twin-engine turboprop Beechcraft King Air 200/250.

**Runway Length**

Based on runway length guidance provided by the Federal Aviation Administration (FAA), the primary runway length at Lake Elmo Airport should be between 3,300 feet and 3,900 feet to accommodate 95 percent and 100 percent of the aircraft types in the design aircraft family, respectively.

While the guidance from the FAA serves as a good baseline, more detailed information related to runway length requirements can be derived from manufacturer performance charts published for specific aircraft types. Based on a deeper assessment of runway length requirements for several representative aircraft types in the design aircraft family for Lake Elmo Airport, the optimal primary runway length is approximately 3,600 feet. This length fits into the range predicted by the FAA and will accommodate the majority of small turboprop and multi-engine piston aircraft departing at an operationally-feasible weight.

Meanwhile, a future length of 2,750 feet is recommended for the crosswind runway to better accommodate lower crosswind capable aircraft during periods of gusty conditions.

Also, based on user input, development of a new non-precision GPS-type instrument approach for Runway 14 and a GPS overlay of the existing non-precision approach for Runway 04 would enhance the operational capabilities of the airport. Planning for the establishment of these non-precision approaches is recommended for consideration.

**Runway Protection Zones**

The Runway Protection Zone (RPZ) is an area at ground level prior to the threshold or beyond the departure runway end to enhance the safety and protection of people and property on the ground. According to the FAA, this is best achieved through airport owner control over RPZs. Control is preferably exercised through the acquisition of sufficient property interest in the RPZ and includes clearing of RPZ areas and maintaining them clear of incompatible objects and activities.
In 2012, the FAA issued Interim Guidance to clarify its policy on what constitutes a compatible land use within an RPZ and how to evaluate proposed land uses that would reside in an RPZ.

Based on this guidance, the following existing land uses are not considered to be compatible within an existing RPZ at Lake Elmo Airport:

- Existing Runway 14 End: County Road 15/Manning Avenue, the north Airport Entrance Driveway, the Union Pacific Railroad, and non-owned property on the west side of Manning Avenue
- Existing Runway 32 End: 30th Street North
- Existing Runway 04 End: 30th Street North

Coordination with the FAA in the form of an RPZ Alternatives Analysis is required when an incompatible land use would enter the limits of the RPZ due to a triggering airfield project, an off-airport development proposal, or other operational change at the airport. Achieving compliance with the FAA’s current RPZ compatibility criteria is a primary objective of this LTCP.

**Landside Facilities**

Existing landside facilities, including the existing number of aircraft storage hangars, appear to be adequate to support anticipated levels for both based aircraft and total operations. No new hangar development areas are proposed, although areas to accommodate the construction of additional hangars should be preserved in the LTCP.

The existing MAC Maintenance Facility is in excellent condition; however, an additional bay will likely be needed during the planning horizon to accommodate larger-dimension equipment. Also, an enclosed materials storage facility should be considered to store sand and other solid materials. There is ample space adjacent to the existing maintenance building for these improvements.

**ES.5 ALTERNATIVES ANALYZED FOR DEVELOPMENT**

Four development alternatives were evaluated in the Alternatives Analysis. These alternatives are described below and depicted in Figure ES-3.
Figure ES-3: LTCP Development Alternatives Considered

Note: See the alternatives analysis section for more detail.
The first alternative is the Base Case, which maintains the existing airfield configuration and runway lengths. The primary focus of the Base Case would be to reconstruct existing runway and taxiway pavements as required to maintain operational capabilities throughout the planning period.

### Base Case

**Advantages**
- No changes to existing flight patterns
- Retains use of existing north side end taxiway
- Wind coverage maintained
- No wetland mitigation
- No impact to existing 30th Street N roadway alignment
- Lowest development cost

**Disadvantages**
- Primary runway cannot be extended to the optimal 3,600-foot length
- Additional land acquisition required to comply with FAA RPZ criteria
  - Existing incompatible RPZ land uses are not addressed
  - Improvements to the Manning Avenue corridor will trigger an RPZ Alternatives Analysis

**Estimated Development Cost:** $5,400,000.00

Alternative A considers extending the crosswind Runway 04-22 to a length of 3,200 feet. Existing Runway 14-32 would be maintained at its existing length and configuration. Alternative A represents the Preferred Alternative from the previous LTCP.

### Alternative A

**Advantages**
- Preferred alternative from the previous LTCP
- Retains use of existing north side end taxiway
- No impact to existing 30th Street N roadway alignment
- Low development cost when compared to other alternatives

**Disadvantages**
- Primary runway cannot be extended to the optimal 3,600-foot length and is not aligned for optimal wind coverage
- Additional land acquisition required to comply with FAA RPZ criteria
  - Existing incompatible RPZ land uses are not addressed
  - Improvements to the Manning Avenue corridor will trigger an RPZ Alternatives Analysis
  - RPZ incompatibilities introduced on both ends of Runway 04-22
- Shifts existing traffic patterns and noise impacts to the northeast and southwest to align with lengthened crosswind runway alignment, moving the Runway 22 end closer to an established residential neighborhood
- Requires wetland mitigation

**Estimated Development Cost:** $7,700,000.00
Alternative B considers relocating the primary Runway 14-32 and constructing it to a length of 3,600 feet. The relocation would include shifting the existing runway centerline approximately 700 feet parallel to, and northeast of, the existing alignment.

<table>
<thead>
<tr>
<th><strong>Alternative B</strong></th>
<th><strong>Disadvantages</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advantages</strong></td>
<td><strong>Disadvantages</strong></td>
</tr>
<tr>
<td>• Runway 14-32 RPZs comply with FAA compatibility criteria</td>
<td>• Relocation of 30th Street N will alter established traffic flows in the vicinity of the airport</td>
</tr>
<tr>
<td>• Development program can advance without the time needed for an RPZ Alternatives Analysis</td>
<td>• Existing north side end taxiway must be relocated</td>
</tr>
<tr>
<td>• No land acquisition required</td>
<td>• Shifts existing traffic patterns and noise impacts to the southeast to align with the relocated/lengthened primary runway, moving the Runway 32 end closer to an established residential neighborhood</td>
</tr>
<tr>
<td>• Primary runway can be extended to optimal 3,600-foot length</td>
<td>• Requires wetland mitigation</td>
</tr>
<tr>
<td>• Maintains continuity of existing airport operational footprint; primary runway remains on 14-32 alignment</td>
<td>• Highest development cost</td>
</tr>
<tr>
<td>o Runway 14-32 alignment also ensures optimal wind coverage</td>
<td></td>
</tr>
<tr>
<td>• New Runway 14-32 can be constructed while existing Runway 14-32 is in operation</td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Development Cost:** $11,500,000.00

Alternative C also considers relocating primary Runway 14-32 by shifting the centerline 700 feet to the northeast. However, in this alternative, the Runway 14 end would be placed at the existing north side end taxiway and the runway would be extended to a length of 3,900 feet. Alternative C represents the “legacy” alternative that has been shown on previous Airport Layout Plans for Lake Elmo Airport for many years.
Alternative C

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Primary runway can be extended to 3,900 feet, the longest of any alternative, but beyond the optimal length of 3,600 feet identified in the facility requirements analysis</td>
<td>• Incompatible land uses in the Runway 14 RPZ require an RPZ Alternatives Analysis</td>
</tr>
<tr>
<td>• Legacy development alternative dating back many years</td>
<td>• Relocation of 30th Street N will alter established traffic flows in the vicinity of the airport</td>
</tr>
<tr>
<td>• Retains use of existing north side end taxiway</td>
<td>• Shifts existing traffic patterns and noise impacts to the southeast to align with the relocated/lengthened primary runway, moving the Runway 32 end closer to an established residential neighborhood</td>
</tr>
<tr>
<td>• No land acquisition required</td>
<td>• Requires wetland mitigation</td>
</tr>
<tr>
<td>• Maintains continuity of existing airport operational footprint; primary runway remains on 14-32 alignment</td>
<td>• High development cost</td>
</tr>
<tr>
<td>• Runway 14-32 alignment also ensures optimal wind coverage</td>
<td></td>
</tr>
<tr>
<td>• New Runway 14-32 can be constructed while existing Runway 14-32 is in operation</td>
<td></td>
</tr>
</tbody>
</table>

Estimated Development Cost: $10,600,000.00

After reviewing all of the concepts, costs, advantages and disadvantages, the Preferred Alternative recommended for Lake Elmo Airport is Alternative B, as depicted in Figure ES-4.

In summary, Alternative B proposes the following improvements for the 20-year planning period:

• Relocate primary Runway 14-32 by shifting the centerline 700 feet to the northeast and extend it to a length of 3,600 feet, including all necessary grading and clearing
• Relocate 30th Street N around the new Runway 32 end RPZ
• Construct a new cross-field taxiway to serve the new Runway 14 end, including taxiway lighting and/or reflectors
• Convert existing Runway 14-32 into a partial parallel taxiway and construct additional taxiway infrastructure as needed to support the relocated runway, including taxiway lighting and/or reflectors
• Reconstruct existing crosswind Runway 04-22 and extend it to 2,750 feet as recommended in the facility requirements section, including runway lighting, Precision Approach Path Indicator (PAPI) systems, and a new taxiway connector
• Pursue the establishment of a new non-precision instrument approach to the Runway 14 end, and upgrade the existing Runway 04 approach to an RNAV (GPS) type

Alternative B is recommended as the Preferred Alternative for the following reasons:
• It provides compatible RPZs entirely on airport property for the replacement Runway 14-32.

• It provides a runway length of 3,600 feet, which is the optimal length identified in the Facility Requirements analysis for the long-term demand at Lake Elmo Airport.

After the 3,600-foot length is constructed, the primary runway will be fully built-out in terms of RPZ compliance, with no further extensions contemplated during the 20-year planning horizon. This will give the surrounding municipalities assurance of the airport’s future footprint for comprehensive community planning.

• It maintains the continuity of the existing operational footprint as the primary runway remains on the 14-32 alignment. This ensures optimal wind coverage as well.

• It optimizes the use of existing airport property, including that purchased in the late 1960s and 1970s for the relocation of 30th Street N. No additional property acquisition is required.

• It allows the development program to advance more efficiently without the time needed to complete an RPZ Alternatives Analysis.

• It minimizes operational disruptions during construction as the replacement Runway 14-32 can be constructed with the existing Runway 14-32 in operation.

• It is consistent with the long-term vision for the airport, which has included a relocated and longer primary runway for many years.
Figure ES-4: LTCP Preferred Alternative
ES.6 ENVIRONMENTAL CONSIDERATIONS

The MAC will complete an Environmental Assessment (EA) and/or an Environmental Assessment Worksheet (EAW) to meet Metropolitan Council guidelines and FAA requirements for utilizing Airport Improvement Program (AIP) grant funds. The most notable environmental categories that will require study as a part of any implementation of the Preferred Alternative at Lake Elmo Airport include aircraft noise, sanitary sewer/water utilities, and wetlands.

**Noise**

To evaluate potential aircraft noise impacts associated with the Preferred Alternative, the MAC prepared Baseline Condition noise contours for Lake Elmo Airport, along with 2035 Preferred Alternative Condition noise contours for comparison. The contours represent noise levels, expressed in the Day-Night Average Sound Level (DNL) metric. The FAA requires the DNL noise metric to determine and analyze noise exposure and aid in the determination of aircraft noise and land use compatibility issues around United States airports.

The FAA currently suggests that three different DNL levels (65, 70, and 75 DNL) be modeled but considers the 65 dB DNL contour line as the threshold of significance for noise impact. As such, sensitive land use areas (e.g., residential) around airports that are located in the 65 dB or greater DNL contours are considered by the FAA as incompatible structures.

The Metropolitan Council suggests that the 60 DNL contour be included for airports in an urban environment and the 55 DNL in cases where airports are located outside the Metropolitan Urban Service Area (MUSA). Currently, Lake Elmo Airport lies outside of the MUSA, so the 55 DNL noise contour will be shown for advisory purposes. However, it is not linked to any requirements for noise attenuation or mitigation.

In summary, when the 2035 Preferred Alternative Condition contours are compared to the Baseline (existing) Condition contours:

- For the 65 DNL contour, the acreage contained within the contour increases by 22 percent, with no residential parcels contained in the contour under either condition. The 65 DNL contour extends off the airport property in the Existing Condition but is contained on airport property in the Preferred Alternative Condition.
- For the 60 DNL contour, the acreage contained within the contour increases by six percent, with no residential parcels contained in the contour under either condition. The 60 DNL contour extends off the airport property in the Existing Condition but is contained on airport property in the Preferred Alternative Condition.
- For the 55 DNL contour, the acreage contained within the contour decreases by five percent but the number of residential parcels contained in the contour increases by 11.
Sanitary Sewer and Water Utilities
Lake Elmo Airport currently lies outside of the Metropolitan Urban Services Area (MUSA). However, the Metropolitan Council Environmental Services (MCES) agency has requested that the MAC provide sanitary sewer and water services for all of the hangar areas in the MAC's Reliever system, including Lake Elmo Airport. This request was primarily related to concerns about non-compliant well and septic systems that may be in existence at the MAC's airports. Compliant well and septic systems are allowed to remain until sanitary sewer and water services are made available.

Lake Elmo Airport has no sanitary sewer and water services available. At the time of this plan, there are no adjoining land that have services. However, residential development is occurring on adjoining properties to the west of the airport. Sanitary sewer and water services are being extended to this new residential development area. Therefore, the opportunity for connection to those systems may arise in the future.

The MAC will continue to study the costs, benefits and feasibility of serving the airport with sanitary sewer and water versus well and septic systems. It is recommended that the steps be taken for installation of sanitary sewer and water facilities at Lake Elmo when a MUSA, and related agreements and access, are available.

Wetlands
There are numerous wetland areas around the airport. Most are regulated under the Wetland Conservation Act (WCA) and the Valley Branch Watershed District. There is at least one Department of Natural Resources (DNR) regulated wetland on site. Approximately 36 acres of wetlands were identified within airport property, with varying wetland types.

Any projects completed at the airport require conformance with the watershed district, as well as WCA and/or DNR regulations regarding wetlands. If wetland impacts are suspected with MAC projects, avoidance, minimization efforts and appropriate mitigation will be assessed. The watershed district also reviews plans for water quality. Previous airport projects have required rate and volume controls, infiltration or other means to enhance water quality. These and other best management practices will continue with future projects listed in the Preferred Alternative.

ES.7 IMPLEMENTATION PLAN
The LTCP is by nature a planning document and does not authorize any construction. Adoption of the LTCP is only the first step in the project implementation process. Before any construction can begin, the project(s) must first be depicted on an FAA-approved Airport Layout Plan (ALP), evaluated through an environmental review process, and then compete for funding through FAA and/or State grant programs. Once funding is secured, final project engineering and design will take approximately one year to complete with contractor bidding and construction following thereafter.

Near-Term Development encompasses the project elements necessary to relocate and extend Runway 14-32 to its ultimate configuration and length of 3,600 feet. It also includes reconstructing existing Runway 04-22 at its existing length. It is anticipated that this development may occur within the next 5-7 years.
Mid-Term Development involves project elements to extend Runway 04-22 to its ultimate length of 2,750 feet, which could be accomplished concurrently with Phase 1 but is not required to achieve the desired utility of the Preferred Alternative. It is anticipated that this development may occur in the 8-20 year timeframe.

Long-Term Development involves projects that are anticipated to occur beyond the 20-year planning horizon.

Project cost estimates for the Preferred Alternative are summarized in Table ES-2.

Table ES-2: Preferred Alternative Cost Estimates

<table>
<thead>
<tr>
<th>Item #</th>
<th>Project Element</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Construct New RWY 14-32 (3,600’ x 75’)</td>
<td>$3,950,000</td>
</tr>
<tr>
<td>2</td>
<td>Construct RWY 14-32 Electrical Systems (MIRL, REIL, and PAPI)</td>
<td>$750,000</td>
</tr>
<tr>
<td>3</td>
<td>Construct TWY System for New RWY 14-32 (w/MITL)</td>
<td>$2,400,000</td>
</tr>
<tr>
<td>4</td>
<td>Wetland Mitigation</td>
<td>$350,000</td>
</tr>
<tr>
<td>5</td>
<td>Relocate 30th St N</td>
<td>$1,200,000</td>
</tr>
<tr>
<td>6</td>
<td>Relocate Airport Service Rd</td>
<td>$250,000</td>
</tr>
<tr>
<td>7</td>
<td>Convert Old RWY 14-32 to TWY (w/MITL)</td>
<td>$525,000</td>
</tr>
<tr>
<td>8</td>
<td>Reconstruct Existing RWY 04-22 (2,496’ x 75’)</td>
<td>$2,050,000</td>
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</tbody>
</table>

Near-Term Development Total: $11,475,000

<table>
<thead>
<tr>
<th>Item #</th>
<th>Project Element</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Extend RWY 04-22 to 2,750’ (254’ x 75’ Extension)</td>
<td>$575,000</td>
</tr>
<tr>
<td>10</td>
<td>Construct RWY 04-22 Electrical Systems (MIRL full length, REIL, and PAPI)</td>
<td>$625,000</td>
</tr>
<tr>
<td>11</td>
<td>Construct TWY System to Extended RWY 22 (w/MITL full length)</td>
<td>$475,000</td>
</tr>
<tr>
<td>12</td>
<td>Wetland Mitigation</td>
<td>$175,000</td>
</tr>
<tr>
<td>13</td>
<td>Sewer/Water System Extension to Airport</td>
<td>$2,000,000</td>
</tr>
</tbody>
</table>

Mid-Term Development Total: $3,850,000

<table>
<thead>
<tr>
<th>Item #</th>
<th>Project Element</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Construct TWY System for New RWY 14-32 (w/MITL) (Non-Essential)</td>
<td>$2,150,000</td>
</tr>
</tbody>
</table>

Long-Term Development Total: $2,150,000

Total Development Cost: $17,475,000

Notes: Cost estimates reflect 2015 pricing and include engineering costs and contingencies.

Source: SEH and MAC cost estimates
ES.8 PUBLIC INVOLVEMENT PROCESS

The LTCP stakeholder outreach plan consists of three primary phases. The first phase involved meeting with stakeholders before the draft LTCP plan was finalized in order to provide information about the plan’s purpose, process, preliminary findings, and timeline.

The meetings held during the first phase of this stakeholder engagement process are listed in Table ES-3.

Table ES-3: Phase 1 Stakeholder Engagement Meetings

<table>
<thead>
<tr>
<th>Audience</th>
<th>Materials Covered</th>
<th>Date</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAA</td>
<td>LTCP Process, Review of Alternatives</td>
<td>08/21/2014</td>
<td>MAC</td>
</tr>
<tr>
<td>FAA, MnDOT, Met Council, County</td>
<td>LTCP Process, Review of Alternatives, Preliminary Findings</td>
<td>9/22/2014</td>
<td>MAC</td>
</tr>
<tr>
<td>City, County, Townships</td>
<td>LTCP Process, Review of Alternatives, Preliminary Findings</td>
<td>10/13/2014</td>
<td>LE City Hall</td>
</tr>
<tr>
<td>FBO</td>
<td>LTCP Process, Review of Alternatives, Preliminary Findings</td>
<td>10/29/2014</td>
<td>FBO</td>
</tr>
<tr>
<td>Airport Users and Tenants</td>
<td>LTCP Process, Review of Alternatives, Preliminary Findings</td>
<td>11/18/2014</td>
<td>Airport</td>
</tr>
<tr>
<td>FAA</td>
<td>LTCP Technical Review Session</td>
<td>2/18/2015</td>
<td>FAA</td>
</tr>
<tr>
<td>City, County, Townships</td>
<td>Review of Draft LTCP Recommendations &amp; Public Engagement Plan</td>
<td>4/21/2015</td>
<td>LE City Hall</td>
</tr>
</tbody>
</table>

The second phase will consist of the formal public review period after the draft plan has been completed and the Commission has approved it for public distribution. This public review period will include a 45-day written comment period with two public information meetings scheduled during this timeframe.

The third phase will occur after the public comment period closes. During this time, public feedback will be considered and incorporated into the plan as appropriate. The end result will be a final draft LTCP for Commission adoption and Metropolitan Council formal review. During this time, stakeholder outreach will continue to occur on an as-needed basis.
APPENDIX AD-2: COMMENTS AND RESPONSES

AD-2.1 INTRODUCTION

A Draft 2035 LTCP for Lake Elmo Airport was issued for public review and comment on Monday, June 22, 2015. Two public information meetings were held in July 2015 to provide information about the draft plan to interested citizens. The public comment period closed on Wednesday, September 16, 2015 after being extended to provide additional time for community input.

During the initial public comment period, the MAC received 104 written comments, of which 99 were from members of the public. Twelve of the 99 commenters supported the plan, and 87 opposed.

The remaining five comments were received from municipalities and agencies. West Lakeland and Baytown Townships passed resolutions opposing the plan, while neutral comments were received from Washington County, the Metropolitan Council, and the Valley Branch Watershed District. The City of Lake Elmo considered a resolution opposing the preferred plan, however, no action was taken and no formal comments were received from the city.

Common themes from area residents included:

- 30th Street N realignment and the possible associated impacts from noise, traffic and potential right-of-way taking of their property on Neal Avenue;
- Increased aircraft traffic and aircraft noise levels, including concerns the role of the airport would change and introduce significant numbers of jet aircraft flights, impacting property values;
- Concerns about possible adverse environmental impacts to wetlands and wildlife habitats; and
- Questions about the overall justification for the improvements, including skepticism regarding the estimates of airport activity levels.

AD-2.2 RESPONSE TO PUBLIC COMMENTS

The following responses were developed to address general concerns that were consistent among the comments received on the Draft 2035 LTCP. Specific responses to comments received from municipalities and agencies are provided in the following section.

Realignment of 30th Street N will severely impact traffic flows and result in more traffic on Neal Avenue

According to the Washington County Comprehensive Plan, 30th Street N is designated as a major collector roadway. Traffic estimates contained in the County’s Manning Avenue (CSAH 15) Corridor Management and Safety Improvement Project Subarea Study (prepared by SRF Consulting Group) for the section of 30th Street North between Manning
Avenue and Neal Avenue, suggest an average annual daily traffic volume of 1,060 vehicles in the existing (2010) condition and a forecast of 2,000 vehicles by 2030. The refined alternative allows the relocated 30th Street N to connect back with the existing intersection of Neal Avenue, removing the need to place additional traffic on Neal Avenue. Traffic flow will not be impacted with additional turns or required stops.

The increased travel distance associated with the proposed realignment of 30th Street N versus the existing condition is estimated to be 1,200 feet and the increased travel time is estimated to be approximately 30-45 seconds.

It is understood that the primary emergency response for residents in West Lakeland and Baytown Townships comes from the Bayport Fire Department, located to the east of Lake Elmo Airport and thus not impacted by the proposed realignment of 30th Street N. It is acknowledged that secondary response units to and from the City of Lake Elmo would be subject to increased travel distance and times of the magnitude noted above.

**Realignment of 30th Street N is not feasible due to wetlands and geotechnical conditions**

MAC staff believes that feasible engineering options exist to construct a high-quality section of roadway for the portion of 30th Street North that is proposed for realignment. Area hydrology and watershed district requirements for volume and rate runoff control will be adhered to during design efforts.

**Realignment of 30th Street N will cause a maintenance burden for West Lakeland Township**

Regarding maintenance of the realigned section of 30th Street N, MAC acknowledges that this section of roadway will move from the shared boundary between West Lakeland and Baytown Townships fully into West Lakeland’s jurisdiction, thus increasing the maintenance burden for West Lakeland (while reducing the maintenance burden for Baytown). Although limited by revenue diversion prohibitions contained in federal grant assurances for airport improvement projects, MAC is open to continuing the dialogue with regard to maintaining 30th Street N.

MAC acknowledges that the section of 30th Street N not being realigned will have to be restored to its existing condition if it is used as a construction haul route and any damage to the roadway occurs that is directly attributable to construction activities at the Airport.

**Realignment of 30th Street N requires vacating the existing roadway right-of-way**

Title work confirms the existing 30th Street North roadway is a prescriptive easement over MAC property; no dedicated roadway right-of-way exists for 30th Street North. Under Minnesota Statute 473.608, MAC has express authority to extinguish the prescriptive easement through various means, including condemnation. However, MAC is open to continuing discussions to negotiate a solution whereby 30th Street North can continue to exist as a realigned through-street, which is preferable by MAC since the condemnation process has the potential to cause federal revenue diversion issues with replacing the road.
Environmental impacts to wetlands, prairie, and wildlife habitats

The project will have to go through a full environmental review process per federal National Environmental Policy Act (NEPA) and Minnesota Environmental Policy Act (MEPA) requirements to more specifically identify the environmental footprint of the improvements before construction can begin. During that process, alternatives must be reviewed and any potential impacts must be avoided if possible. If impacts cannot be avoided, they must be minimized to the extent possible and mitigated in full compliance with federal and state requirements.

Change in airport role

The primary role of Lake Elmo Airport is expected to stay the same throughout the planning period. The aircraft mainly anticipated to use the airport – and that which it is designed for – will continue to be a family of small, propeller-driven airplanes with fewer than 10 passenger seats. The proposed plan does not contemplate upgrading the role of the airport to accommodate a larger aircraft family, commercial passenger or cargo flights, or significantly increase the number of aircraft operations.

The proposed runway length is based on propeller aircraft requirements. That being said, some of the smallest jets – those with four to eight passenger seats – could choose to use the lengthened runway, although insurance requirements and lack of precision instrument approaches to the runways will continue to be limiting factors for jet use. The Fixed Base Operator (FBO) at Lake Elmo Airport (Valters Aviation) currently does not provide jet fueling services, although they are not prohibited from doing so.

Each airport in the MAC system plays a specific role and caters to certain aircraft types. While the St. Paul Downtown Airport/Holman Field (STP) can certainly accommodate aircraft operations in lieu of Lake Elmo Airport, it cannot accommodate the existing based aircraft or the type of hangars utilized by Lake Elmo tenants. STP is considered the primary corporate reliever to the Minneapolis–St. Paul International Airport. Lake Elmo is considered a primarily recreational facility, serving that type of traffic. Improving Lake Elmo Airport to accommodate corporate jet traffic would inappropriately duplicate the services of STP. However, a right-sized primary runway as proposed will enhance the utility of the Airport such that additional business-related flying with propeller-driven aircraft may be feasible, allowing the Airport to play a greater role in the total economic development package offered by Washington County and the surrounding municipalities.

Noise from aircraft will increase

The Refined Preferred Alternative reduces the proposed primary runway length from 3,600 feet to 3,500 feet and shifts the runway further to the northwest than the Original Preferred Alternative, further away from residences in West Lakeland Township. In the Refined Preferred Alternative, there are a total of eight (8) residential parcels in the forecasted year 2035 55 Day-Night Average Sound Level (DNL) noise contour, compared to thirteen (13) parcels in the Original Preferred Alternative. There are two (2) residential parcels in the Baseline Condition 55 DNL contour.

Noise level estimates at specific residential properties are not available based on the level of analysis conducted for the LTCP.
The noise analysis contained in the LTCP is intended to provide a high-level assessment of potential noise impacts. A more thorough noise impact analysis will take place during the subsequent environmental review process.

**Justification for the proposed improvements**

In this plan, our key objectives for airfield improvements at Lake Elmo Airport are to address failing end-of-life infrastructure, enhance safety, and improve operational capabilities for the design aircraft family, which is comprised of propeller driven aircraft with fewer than 10 passenger seats. According to FAA guidance, the proposed runway length is justified by the types of aircraft already operating at the airport.

Our activity forecast suggests that operations of piston-engine aircraft will decline slightly over time, due in part to cost increases, an ageing pilot population, and regulatory requirements that may diminish the viability of personal and recreational flying. However, with a longer runway in place, we believe some of that traffic will be replaced with people using propeller-driven airplanes for business-related purposes. This is not the reason for implementing the plan, but it is a possible outcome.

During the public comment period, several users of the airport submitted comments in favor of the Original Preferred Alternative.

**Project costs**

The estimated cost for the Base Case alternative, which would include reconstructing existing runway and taxiway pavements and purchasing non-owned Runway Protection Zone (RPZ) land, is approximately $5.4 million. The estimated cost for the Original Preferred Alternative is approximately $11.5 million, which includes the cost of re-establishing the existing runway as a taxiway. Cost estimates for the alternatives are included in Appendix 6 of the Draft LTCP.

A driving factor behind the proposed improvements is that the existing runway pavements have exceeded their useful life and need to be reconstructed in the near future. Simple rehabilitation methods will be ineffective in the future, so it is prudent to invest dollars in the reconstruction of the primary runway in its long-term configuration. A benefit-cost analysis is required by FAA for all capacity projects that require more than $10 million in Airport Improvement Program (AIP) discretionary funds. Lake Elmo Airport improvements proposed are not a capacity project, and we do not anticipate seeking over $10 million in discretionary funding.

**Impacts of Future State Safety Zoning (Land Use and Airspace Zoning)**

For this report, the existing Minnesota Department of Transportation (MnDOT) models for the size and shape of State Safety Zones A and B were used for the purpose of analyzing land use compatibility. The sizes, shapes and/or locations of these zones may be revised by the JAZB during development of the Airport Zoning Ordinance for Lake Elmo Airport. However, it should be noted that these zones are not currently in effect at Lake Elmo Airport.
The Minnesota Department of Transportation (MnDOT) Office of Aeronautics has undertaken efforts to update the state’s airport zoning regulations. It’s anticipated that revisions to the statutes governing airport zoning will be submitted for consideration during the 2016 Minnesota Legislative session. The administrative rules used to implement the zoning regulations and define the particulars of the State Safety Zones will likely be updated after the statutory changes are complete.

Any runway changes at Lake Elmo Airport will require a new zoning ordinance. MAC will not begin a zoning effort until after the process to update the state’s airport zoning regulations is complete. The actual size, shape, and locations of the State Safety Zones for Lake Elmo Airport will be developed by a Joint Airport Zoning Board (JAZB) that will include the respective local municipalities who control land use development around the Airport (including Washington County, the City of Lake Elmo, Baytown Township, and West Lakeland Township). Through a collaborative process, the JAZB will seek to develop an Airport Zoning ordinance, in accordance with state statutes and administrative rules, which best achieves a reasonable level of public safety while considering existing land uses and compatible off-airport development.

Once adopted and implemented, the new Airport Zoning ordinance will supersede the existing Washington County Airport Overlay District.

The draft plan does not contemplate acquiring property beyond that already owned by the MAC.

**Estimates of aircraft activity levels are too high**

The proposed improvements in the LTCP are not dependent on a specific number of aircraft operations. MAC would be making the same infrastructure improvement recommendations regardless of the number of aircraft operations.

The existing level of aircraft operations at Lake Elmo Airport (25,727 annual or approximately 70 operations per day) was calculated as follows:

- There is no Air Traffic Control Tower (ATCT) at Lake Elmo Airport, so there is no “official” count of aircraft operations.
- The MAC Noise and Operations Monitoring System (MACNOMS) flight tracking system recorded 17,705 flight tracks for aircraft arriving to or departing from Lake Elmo Airport during CY2014.
- The flight track capture rate for the MACNOMS system is not complete at the Reliever Airports. The capture rate at all Towered Relievers Airports (MACNOMS tracks compared to the official FAA Tower Count) for CY2014 was 66.5%. The Anoka County-Blaine Airport (ANE) capture rate is 68.8%, and was used to adjust the Lake Elmo data set to account for missing flight tracks in MACNOMS.
- The MACNOMS capture rate adjustment for Lake Elmo is as follows: 17,705 MACNOMS recorded tracks / 68.8% ANE capture rate = 25,727 annual operations.
This estimate is consistent with on-site observations conducted at the Airport during a two-week period in December 2011 and a one-week period in August 2012.

- Average daily aircraft operations were 52 in December and 87 in August.
- Monthly operations estimates for December 2011 and August 2012 were extrapolated using data from the towered reliever airports.
- A ratio of December and August operations as a percentage of the entire year was established using data from the towered reliever airports.
- This ratio was applied to the monthly estimates at Lake Elmo to estimate total 2012 operations (26,709).

Our activity forecast suggests that operations of piston-engine aircraft will decline slightly over time, due in part to cost increases, an ageing pilot population, and regulatory requirements that may diminish the viability of personal and recreational flying. However, with a longer runway in place, we believe some of that traffic will be replaced with people using propeller-driven airplanes for business-related purposes. This is not the reason for implementing the plan, but it is a possible outcome. We do think that a longer runway will result in a small increase in aircraft traffic levels, but only in the range of one to two percent. This is the equivalent of about eight additional aircraft operations per week.

**The existing primary runway length is adequate**

Staff believes that it is appropriate to continue to use the family of small propeller-driven airplanes with fewer than 10 passenger seats as the design aircraft family. This is an FAA-defined category of aircraft with similar operating characteristics, and includes aircraft powered by both piston and turboprop engines. Examples of the more sophisticated aircraft in this family include the Beechcraft King Air 200 (twin turboprop), the Pilatus PC-12 (single turboprop), and the Piper Chieftain 350 (twin piston). These aircraft occasionally operate at the airport today but at diminished operational capacities due to the existing runway length. The proposal to build a longer runway provides an opportunity to better accommodate these types of propeller-driven aircraft.

To assess runway length needs, staff reviewed the FAA’s Advisory Circular 150/5325-4C, Runway Length Recommendations for Airport Design. Based on FAA’s guidance for this family of propeller-driven aircraft, the appropriate runway length at Lake Elmo Airport should be between 3,300 feet (to accommodate most of the aircraft types in this family or 95% of the fleet) and 3,900 feet (to accommodate all types in the family or 100% of the fleet).

In the Advisory Circular, the FAA states that “if the fleet mix to operate at the airport is known, consult the manufacturer’s literature to determine actual runway length requirements.” To comply with this guidance, staff assessed manufacturer’s performance charts from several representative aircraft types using Lake Elmo Airport including the three referenced above.
Based on the assessment of specific aircraft, the optimal runway length at Lake Elmo Airport is 3,600 feet. This length is based on accommodating the following conditions:

- Accelerate-stop distance (the runway length declared available and suitable for the acceleration and deceleration of an aircraft aborting a takeoff).
- Temperature of 83°F (the mean daily maximum temperature of the hottest month at the Airport).
- Field elevation of 933 feet above mean sea level (AMSL).
- A takeoff weight representing 90% of an aircraft’s useful load (payload and fuel).
- A 5-knot headwind.
- Typical takeoff flap settings.

Feedback from airport tenants also suggests that a 3,600-foot runway would indeed meet most operational needs.

This runway length fits into the range provided by the FAA’s Advisory Circular guidance. It also suggests that while a longer runway length of 3,900 feet – as recommended in previous LTCPs for Lake Elmo Airport – is not necessary to meet the objectives of enhancing safety and improving operational capabilities for the design aircraft family.

The refined preferred alternative recommends a primary runway length of 3,500 feet. Although 100 feet shorter than the optimal length of 3,600 feet, staff believes a 3,500 foot runway is a significant improvement over the existing condition and meets the purpose and need for the project. Specifically, with a 3,500-foot runway, the manufacturer’s performance data suggests that the aircraft analyzed would be able to depart at a weight representing about 84% of useful load during the conditions noted above. This performance is considered appropriate given that aircraft do not routinely need to depart at their maximum takeoff weight to complete a typical flight mission. However, reducing the runway length further will continue to diminish the operational benefits of the proposed improvements, which are intended to serve the Airport for the foreseeable future. For context, a runway length of 3,300 feet would reduce allowable takeoff weights to approximately 75% of useful load for the same conditions.

We acknowledge that insurance requirements are an operational factor in determining what aircraft can use an airport. Specific requirements vary by underwriter. One underwriter shared a general “rule of thumb” for adequate runway length for propeller aircraft is 125% of the takeoff distance over a 50-foot obstacle. We have accounted for this by using accelerate-stop distance when considering the appropriate runway length needs for Lake Elmo Airport.

Insurance requirements for jet aircraft (runway lengths generally 4,000 feet - 5,000 feet) will serve to limit jet operations at Lake Elmo Airport.
Crosswind runway length

The LTCP contains a statement that “a runway length of 2,750 feet is recommended to accommodate 75 percent of the fleet of propeller-driven airplanes with fewer than 10 passenger seats.” This statement is in reference to the runway length analysis for the crosswind runway, not the primary runway. The 75 percent of fleet category was used to represent the fleet of lower-crosswind capable airplanes operating at the Airport. Efforts will be made to clarify this in the final document.

Change in 2008 LTCP Preferred Alternative

The Preferred Alternative from the previous LTCP was evaluated as Alternative A in this LTCP and was not carried forward for several reasons. As documented in the draft plan, extending the crosswind runway does not provide a runway aligned for optimal wind coverage, nor does it address Runway Protection Zone land use incompatibilities.

Two key changes have occurred since the last LTCP was completed. First, wind coverage data specific to Lake Elmo Airport is now available from the weather reporting station installed in 2008. This data suggests that the crosswind runway provides less favorable wind coverage than previously estimated.

Second, a key factor in this planning process has been FAA’s updated guidance on land uses within a Runway Protection Zone (RPZ). The RPZ is a trapezoid area beyond the end of a runway that is intended to be clear of structures and places of public assembly to enhance safety for those operating at the airport and for people on the ground. The RPZ for the north end of the existing primary Runway (Runway 14) encompasses a portion of Manning Avenue and the Union Pacific Railroad line, as well as approximately five acres of private property on the west side of Manning Avenue in the City of Lake Elmo.

FAA’s updated RPZ guidance, issued in 2012, clarifies and tightens their policy on what constitutes an incompatible land use in an RPZ, which now include public roadways and railroads. The guidance also clarifies the process to evaluate proposed land uses that would be introduced into an RPZ based on a triggering action. A triggering action could be an airfield project, an off-airport development proposal, or an operational change at an airport.

For example, widening Manning Avenue through the existing Runway 14 RPZ would qualify as a triggering action that would require Washington County to prepare and submit an RPZ alternatives analysis study to the FAA for their approval. If the final plan indicates the runway is not to be relocated, staff believes that FAA would expect to see the realignment of Manning Avenue around the outside of the existing RPZ as an alternative along with justification as to why that option is or is not feasible.

FAA has also indicated that MAC would be expected to purchase the private property in the RPZ on the west side of Manning Avenue as a condition of receiving grant funding to reconstruct the existing runway in its current configuration.

One of our goals for the plan is to comply with FAA’s airport design standards, so achieving RPZ compliance in the recommended future condition is a high priority. With
the preferred development concept (either Original or Refined), all Runway Protection Zones will be contained on property that the MAC already owns. MAC no longer needs to acquire private property, and the Washington County roadway project would not be subject to a potentially problematic FAA RPZ evaluation and approval process.

**Public engagement has been inadequate**

The availability of the draft LTCP report and information about the public information meetings was advertised to the public via notices in the Stillwater Gazette, Oakdale/Lake Elmo Review, and Saint Paul Pioneer Press, the MAC website, and local community websites. We acknowledge and appreciate efforts taken by West Lakeland and Baytown Townships to notify residents about the public information meetings. The public information meetings were scheduled mid-way through the public comment period to allow time for interested members of the public to review and consider the content of the documentation in advance of the meetings. The format of the public information meetings was intended to facilitate open, one-on-one dialogue between community residents and MAC staff about the plan. Approximately 150 people attended the public information meetings. The comment period was also extended to allow additional time for community input.

Through the public process, MAC made a commitment to consider the concerns voiced by neighbors and evaluate if any adjustments to the proposed plan might be feasible to address some items of concern while preserving the desired objectives for improving the Airport’s facilities.

The Revised Preferred Alternative was developed in the spirit of this commitment.

**Impact to local taxes**

Development at Lake Elmo Airport will continue to be self-funded by users of the airport and aviation system; no local sales or property taxes will be used to fund airport improvements.

MAC expends between $250,000 and $300,000 annually to operate and maintain Lake Elmo Airport to a high level of safety and operational efficiency with no direct cost to local taxpayers.

MAC-owned land that is not leased to airport users or tenants is exempt from property taxes under State law. Leaseholds and the structures located within those leases are subject to property taxes which are paid by the tenants. Washington County assesses property taxes on hangar owners based on the taxable market value of the hangars. For 2014, the total property tax billed on hangars at Lake Elmo Airport was approximately $105,000.

**Property Values**

The relationship between cumulative noise levels and property values is complex. The property value impacts of aviation noise have been studied on multiple occasions, with published study results beginning in the mid-1970s. The results of these studies differ because there are numerous airport-specific variables, including: (1) the level and frequency of noise; (2) the property location with respect to overflights; (3) the perceived
amenities and quality of the affected neighborhood/community; (4) the local supply and demand for housing; (5) the local and regional economy; and (6) other market conditions that cannot be controlled or are difficult to predict. The Airport Cooperative Research Program Synthesis 9, Effects of Aircraft Noise: Research Update on Selected Topics provides the following overview of research conducted to determine the effect of aviation noise on property value:

“In summary, the studies of the effects of aviation noise on property values are highly complex owing to the differences in methodologies, airport/community environments, market conditions, and demand variables involved. Whereas most studies concluded that aviation noise effects on property value range from some negative impacts to significant negative impacts, some studies combined airport noise and proximity and concluded that the net effect on property value was positive.” (Transportation Research Board of the National Academies, ACRP Synthesis 9 Effect of Aircraft Noise: Research Update on Selected Topics, 2008, p. 20.)

In the case of Lake Elmo Airport, the proposed plan does not contemplate upgrading the role of the airport to accommodate a larger aircraft family or significantly increase the number of aircraft flights. Although the proposed runway relocation is expected to shift existing traffic patterns and noise impacts to the southeast, these neighborhoods already experience overflight activity from the existing runway configuration. The impact of the flight pattern shift on property values for residences already in proximity to Lake Elmo Airport is not expected to be substantive.

**Increased Safety**

Lake Elmo Airport operates safely today with the existing runway lengths. MAC maintains that the relocated, longer primary runway proposed in the plan will further enhance existing safety levels both for pilots and citizens living in the vicinity of Lake Elmo Airport by providing additional operating margins for propeller-driven aircraft.

The National Transportation Safety Board (NTSB) database contains 15 aircraft accidents associated with aircraft operating at Lake Elmo Airport between 1983 and 2010. It is difficult to fully know all the contributing factors leading to an aircraft accident. While runway length is not listed as the probable cause in the accidents in the vicinity of Lake Elmo, the accident records do not contain enough information to determine if the availability of a longer primary runway could have changed the outcome in one or more of these accidents.

In addition to an extended runway length, the relocation of the primary runway will provide safety benefits. By moving the runway further to the east, it will be further from Manning Avenue and the new residential developments in the City of Lake Elmo. In the event of an aircraft accident during takeoff or landing, the new runway configuration will increase the likelihood that the aircraft will remain on airport property. Also, by removing both 30th Street N and Manning Avenue from Runway Protection Zones (RPZs), the likelihood of an aircraft overrun or undershoot affecting vehicular traffic is reduced.
Airport Benefits
MnDOT provides an Airport Economic Impact Calculator to estimate the economic value of airports in the State (http://www.dot.state.mn.us/aero/econimpactcalc.html).

According to output obtained from this tool, the total economic impact from activity occurring at Lake Elmo Airport is approximately $1.8 million annually and accounts for approximately 23 jobs in the County.

This is based on the following activity inputs:
- $275,000 average annual operations and maintenance (O&M) expenses.
- $430,000 average annual capital expenses.
- FBO activities: 6 full-time employees, 6 part-time employees, 7 owned aircraft.
- 650 annual transient overnight aircraft (approximately 10-15 per week).
- 100 annual charter visitors.
- one non-profit organization aircraft (Civil Air Patrol).

Reliever Airport designation
Lake Elmo Airport is a designated Reliever Airport. The Reliever designation is given by FAA. To be eligible for the Reliever designation, an airport must be open to the public, have 100 or more based aircraft, or have at least 25,000 annual itinerant operations. Lake Elmo Airport qualifies on the based aircraft criteria.

Proposed lighting improvements
The plan recommends installation of runway lights on the crosswind runway (Runway 04-22) to make it useable at night or during periods of lower visibility conditions. As with the existing primary runway, the lights will only be on when activated by pilots using their radio microphone. The availability of lighting on the crosswind runway is not anticipated to increase nighttime flight activity but will enhance safety by allowing pilots arriving during nighttime hours the option of landing on Runway 04-22 if favored by wind conditions. This will also allow for greater distribution of nighttime operations across the runway system.

Aircraft flight patterns
When compared to the existing runway, the Refined Preferred Alternative shifts existing aircraft traffic patterns and noise impacts to the southeast to align with the relocated/lengthened primary runway, moving the end of Runway 32 closer to an established residential neighborhood.

With the relocated runway, it is estimated that aircraft will be at altitudes of approximately 150-160 feet over Neal Avenue when landing on Runway 32. For context, aircraft are at an altitude of approximately 60-70 feet over 30th Street N when landing on the existing Runway 32.

Estimates of aircraft altitudes at specific residential properties are not available based on the level of analysis conducted for the LTCP.
Tree removal
Some tree removal on airport property will be required in order to implement the Preferred Development Alternative. Off-airport tree removal is not anticipated.

Water quality
In 2005, the source of the trichloroethene (TCE) contamination in the vicinity of Lake Elmo Airport was located at a commercial business on the edge of the City of Lake Elmo. Currently, there are several monitoring wells located at the airport. All of these monitoring wells are related to the TCE contamination and owned and maintained by the MPCA. There has been no evidence to indicate any of the TCE contamination originated at the Airport.

Lake Elmo Airport currently lies outside of the Metropolitan Urban Service Area (MUSA) for sanitary sewer services. Therefore, there is no water or sanitary system available for tenants. However, the land immediately west of the airport is being developed and will include the installation of sanitary sewer and water facilities. Connecting the airport to this system in the future may be feasible.

Existing tenants who have legal wells and septic systems have been allowed to keep them. The MAC maintenance building also has a well and holding tank. Tenants with illegal septic systems or noncompliant wells were required to remove or abandon them after MAC adopted its Sanitary Sewer and Water Policy in 1998.

Any projects completed at the Airport require conformance with the watershed district, as well as WCA and/or DNR regulations regarding wetlands. If wetland impacts are suspected with MAC projects, avoidance, minimization efforts and appropriate mitigation will be assessed.

The watershed district also reviews plans for water quality. Previous airport projects have required rate and volume controls, infiltration or other means to enhance water quality. These and other best management practices will continue with future projects listed in the Preferred Alternative.

LTCP approval
The LTCP is an infrastructure planning tool updated on a regular basis. It is forward-looking in nature and does not authorize actual construction.

Specific to the adoption of a Long-Term Comprehensive Plan for Lake Elmo Airport, the MAC full Commission must adopt the plan and the Metropolitan Council must review the plan and determine whether or not it is consistent with the regional Transportation Policy Plan (TPP). There are no requirements for the local communities to formally approve the LTCP document.

The project will have to go through a full environmental review process per federal National Environmental Policy Act (NEPA) and Minnesota Environmental Policy Act (MEPA) requirements to more specifically identify the environmental footprint of the improvements before construction can begin. The environmental review will be initiated
after the Long-Term Comprehensive Plan is completed and fully approved, and it will provide another opportunity for public review and comment.
AD-2.3 RESPONSES TO MUNICIPAL COMMENTS

This section contains responses to comments received from municipalities and agencies about the Draft 2035 LTCP for Lake Elmo Airport.

<table>
<thead>
<tr>
<th>Commenter</th>
<th>ID</th>
<th>Subject</th>
<th>Response</th>
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<tbody>
<tr>
<td>West Lakeland Township, Letter dated August 3, 2015</td>
<td>1</td>
<td>The town board of supervisors for West Lakeland Township opposes the expansion of the Lake Elmo Airport as outlined in your 2035 Long Term Comprehensive Plan for a number of reasons.</td>
<td>The primary role of Lake Elmo Airport is expected to stay the same throughout the planning period. The aircraft mainly anticipated to use Lake Elmo Airport – and that which it is designed for – will continue to be a family of small, propeller-driven airplanes with fewer than 10 passenger seats. The proposed plan does not contemplate upgrading the role of the airport to accommodate a larger aircraft family or significantly increase the number of aircraft flights. The proposed runway length is based on propeller aircraft requirements. That being said, some of the smallest jets – those with four to eight passenger seats – could choose to use the lengthened runway, although insurance requirements and lack of precision instrument approaches to the runways will continue to be limiting factors for jet use. The Refined Preferred Alternative reduces the proposed primary runway length from 3,600 feet to 3,500 feet and shifts the runway further to the northwest than the Original Preferred Alternative, further away from residences in West Lakeland Township. In the Refined Preferred Alternative, there are a total of eight (8) residential parcels in the forecasted Year 2035 55 Day-Night Average Sound Level (DNL) noise contour, compared to thirteen (13) parcels in the Original Preferred Alternative. There are two (2) residential parcels in the Existing Condition 55 DNL contour. See Chapter 6 of the LTCP Report for a description of the DNL noise metric.</td>
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<td>West Lakeland Township, Letter dated August 3, 2015</td>
<td>2</td>
<td>While the new Runway Protection Zones will be entirely on MAC property, the MnDOT Safety Zones &quot;A&quot; and &quot;B&quot; will essentially overlay existing homes on 2 ½ acres and the overhead power lines which by current zoning is not allowed. In addition the proposed expansion is also in conflict with Washington County's and West Lakeland's Land Use Portion of the State Safety Zones A and B were used for the purpose of analyzing land use compatibility. While the existing Washington County Overlay District does exist, the zoning requirements in it focus on airspace protection and not necessarily land use restrictions. The land use portions of the State Safety zones have not been formally adopted for Lake Elmo Airport. MnDOT has undertaken efforts to</td>
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airport overlay districts. If the intent is to modify current zoning to allow the proposed Lake Elmo expansion to occur, then the West Lakeland Township board would call your attention to MnDOT’s Accident Distribution graphs depicting aircraft crashes within the proximity of an airport. By their own data, 60% of all arriving crashes happen within 6,000 feet of the end of the runway, while 60% of all departing crashes happen within 2,500 feet of the end of the runway. The township board cannot see how any safety zones protecting residents could be modified to accommodate an expansion of this kind.

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<th>West Lakeland Township, Letter dated August 3, 2015</th>
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| In previous correspondence with MAC, West Lakeland Township was informed that the number of operations per year at Lake Elmo airport were reported to be 64,887 in 1995 and 70,687 in 2000. Using the 70,000 number for example, calculates out to one operation every 8 minutes, 24 hours a day, 7 days a week, 365 days a year. In the 2035 LTCP ES-1 Table, MAC states for 2012 the number of operations to be 26,709 a year. Using this number that calculates out to one operation every 20 minutes. It would stand to reason that during the winter months, late November to April; the number of operations would be greatly reduced thus compressing the total operations into the summer months. In talking to a number of aircraft owners at Lake Elmo, all say these numbers are highly exaggerated, so the update the state’s airport zoning regulations. It’s anticipated that revisions to the statutes governing airport zoning will be submitted for consideration during the 2016 Minnesota Legislative session. The administrative rules used to implement the zoning regulations and define the particulars of the State Safety Zones will likely be updated after the statutory changes are complete. Any runway changes at Lake Elmo Airport will require a new zoning ordinance. MAC will not begin a zoning effort until after the process to update the state’s airport zoning regulations is complete. The actual size and shape of the State Safety Zones for Lake Elmo Airport will be developed by a Joint Airport Zoning Board (JAZB) that will include the respective local municipalities who control land use development around the Airport (including Washington County, the City of Lake Elmo, Baytown Township, and West Lakeland Township). Through a collaborative process, the JAZB will seek to develop an Airport Zoning ordinance in accordance with state statutes and administrative rules, which best achieves a reasonable level of public safety while considering existing land uses and compatible off-airport development.

The proposed improvements in the LTCP are not dependent on a specific number of aircraft operations. MAC would be making the same infrastructure improvement recommendations regardless of the number.

The existing level of aircraft operations at Lake Elmo Airport (25,727 annual or approximately 70 operations per day) was calculated as follows:

- There is no Air Traffic Control Tower (ATCT) at Lake Elmo Airport so there is no "official" count of aircraft operations.
- Our MACNOMS flight tracking system recorded 17,705 flight tracks for aircraft arriving to or departing from Lake Elmo Airport during CY2014. The flight track capture rate for the MACNOMS system is not complete at the Relievers. The capture rate at all Towered Relievers (MACNOMS tracks compared to the official FAA Tower Count) for CY2014 was 66.5%. The Anoka County-Blaine Airport (ANE) capture rate is 68.8%, and was
township board is requesting that MAC show us the data, how it was obtained and calculated. To go from 70,000 operations in 2000 to 26,000 operations in 2012, even with the down turn in the economy, seems suspect. According to MAC’s own forecasts, Graph ES-2 predicts operations to stay flat or decrease out to 2035. Until MAC and the Met Council have accurate data on the number of operations per year at Lake Elmo Airport, the township board cannot see how it can be justified spending state and federal tax dollars for moving and extending the 14/32 runway along with the other proposed upgrades.

used to adjust Lake Elmo Airport data set to account for missing flight tracks.

- The MACNOMS capture rate adjustment for Lake Elmo is as follows: 17,705 recorded tracks / 68.8% ANE capture rate = 25,727 annual operations.

This estimate is consistent with on-site observations conducted at the airport during a two-week period in December 2011 and a one-week period in August 2012.

- Average daily aircraft operations were 52 in December and 87 in August.
- Monthly operations estimates for December 2011 and August 2012 were extrapolated using data from the towered reliever airports.
- A ratio of December and August operations as a percentage of the entire year was established using data from the towered reliever airports.
- This ratio was applied to the monthly estimates at Lake Elmo Airport to estimate total 2012 operations (26,709).

Our activity forecast suggests that operations of piston-engine aircraft will decline slightly over time due in part to cost increases, an ageing pilot population, and regulatory requirements that may diminish the viability of personal and recreational flying. However, with a longer runway in place, we believe some of that traffic will be replaced with people using propeller-driven airplanes for business-related purposes. This is not the reason for implementing the plan, but it is a possible outcome. We do think that a longer runway will result in a small increase in aircraft traffic levels but only in the range of one to two percent. This is the equivalent of about eight additional aircraft operations per week.

West Lakeland Township, Letter dated August 3, 2015

According to MnDOT data five other airports in Minnesota have shorter runways than Lake Elmo. In discussing the runway lengths with some of the Lake Elmo aircraft owners, they also say that the 2849 foot runway is adequate for their aircraft, including twin engine aircraft based there.

According to data collected by MnDOT during the last update to the State Aviation System Plan, there were 83 Intermediate Airports in the state. Of these 83 airports, Lake Elmo ranked second in terms of based aircraft and third in the number of aircraft operations. However, only four of the 83 airports had a shorter paved primary runway length than Lake Elmo. MnDOT’s plan concludes that Lake Elmo is one of 13 airports in the state where a primary runway extension should be considered.
According to FAA Advisory Circular 150/5325-4C, Runway Length Requirements for Airport Design, Figure 2-1, an appropriate runway length to accommodate most of the aircraft types in this category (defined by FAA as 95% of the fleet of small propeller-driven airplanes with fewer than 10 passenger seats) is 3,300 feet. The appropriate runway length to accommodate all aircraft types in this category (100% of the fleet) is 3,900 feet. Thus, the range of appropriate runway lengths is 3,300 to 3,900 feet. Based upon an assessment of manufacturer’s literature for several of the more sophisticated aircraft types operating at Lake Elmo Airport, the optimal runway length is determined to be 3,600 feet. See Appendix 5 of the LTCP report for further details.

West Lakeland Township, Letter dated August 3, 2015

5 Of further concern to the town board is the proposed realignment of 30th Street. The proposed route skirts a designated wetland which in 2013 and 2014 was prone to flooding after a number of heavy spring rains, as documented by the attached photos. These two years were wet years, so what would happen during a 50 or 100 year flood? Also adding an additional 270,000 square feet of impervious surface would further impact this wetland area. According to our township land planner / surveyor, constructing a road in this area, would be costly as this area has a very poor soil base.

MAC staff believes that feasible engineering options exist to construct a high-quality section of roadway for the portion of 30th Street N that is proposed for realignment. Area hydrology and watershed district requirements for volume and rate runoff control will be adhered to during design efforts.

The project will have to go through a full environmental review process per federal National Environmental Policy Act (NEPA) and Minnesota Environmental Policy Act (MEPA) requirements to more specifically identify the environmental footprint of the improvements before construction can begin. During that process, alternatives must be reviewed and any potential impacts must be avoided if possible. If impacts cannot be avoided, they must be minimized to the extent possible and mitigated in full compliance with federal and state requirements.

West Lakeland Township, Letter dated August 3, 2015

6 Realigning 30th Street would severely impact traffic flow because this street has been designated by Washington County as a minor east-west collector road, and is a Baytown-West Lakeland Township corridor with an average daily traffic count of 2500 vehicles a day. The township board believes an Environmental Impact Statement is warranted to analyze such impacts to this area before the proposed Lake Elmo expansion is undertaken.

According to the Washington County Comprehensive Plan, 30th Street N is designated as a major collector roadway. Traffic estimates contained in the County’s Manning Avenue (CSAH 15) Corridor Management and Safety Improvement Project Subarea Study (prepared by SRF Consulting Group) for the section of 30th Street N between Manning Avenue and Neal Avenue, suggest an average annual daily traffic volume of 1,060 vehicles in the existing (2010) condition and a forecast of 2,000 vehicles by 2030. The Refined Preferred Alternative allows the relocated 30th Street N to connect back with the existing intersection of Neal Avenue,
| **West Lakeland Township, Letter dated August 3, 2015** | 7 | Furthermore if MAC moves forward with the proposed expansion and realignment of 30th Street and since this new route would be entirely on MAC property, West Lakeland Township would not be responsible for maintaining 30th Street from Manning Avenue to Neal Avenue. Also it appears that the 2035 LTCP fails to identify any funding or monetary assurances to address the potential and consequential deterioration of the western portion of 30th Street. This would be due to any construction and rerouting of the eastern proposed section of 30th Street and for the wear and tear on 30th for the heavy equipment brought in for the construction of the newly proposed runway. Since 30th Street is a shared road, both West Lakeland and Baytown Townships would require monetary assurances from MAC that any detrimental effects to 30th Street, as result of the construction activity related to the airport and the reconstruction of 30th Street, will require MAC to bring the remaining western section of 30th Street towards Manning Avenue back up to township road standards which includes a 25-year warranty on the road. | Regarding maintenance of the realigned section of 30th Street N, MAC acknowledges that this section of roadway will move from the shared boundary between West Lakeland and Baytown Townships fully into West Lakeland’s jurisdiction, thus increasing the maintenance burden for West Lakeland (while reducing the maintenance burden for Baytown). Although limited by revenue diversion prohibitions contained in federal grant assurances for airport improvement projects, MAC is open to continuing the dialogue with regard to 30th Street N. MAC acknowledges that the section of 30th Street N not being realigned will have to be restored to its existing condition if it is used as a construction haul route and any damage to the roadway occurs that is directly attributable to construction activities at the Airport. |
| **Valley Branch Watershed District, Letter dated July 24, 2015** | 1 | As previously indicated, the project(s) at the airport will need to conform to all the VBWD Rules and Regulations, including but not limited to the following: Stormwater volume control: New and fully reconstructed impervious surfaces of 6,000 square feet or more require treatment. The treatment | Comments acknowledged. MAC intends to conform with VBWD Rules and Regulations. |
standard is 1.1 inches of runoff retained on site from the new and/or fully reconstructed impervious surfaces.

Stormwater rate control: During all phases of development the peak rate of stormwater runoff from all points leaving the site shall not exceed the existing peak rate for critical duration events, up to and including the 100-year return frequency storm. Design criteria shall be the 2-, 10-, and 100-year 24-hour storms with respective 2.8, 4.2, and 7.3-inch rainfall depths (with NRCS time distribution) and the 7.2-inch 100-year 10-day snowmelt event.

Wetlands: VBWD is the local government unit responsible for administering the Minnesota Wetland Conservation Act. In addition, VBWD requires a minimum 25-foot-wide vegetative buffer. No impervious surfaces are allowed within the buffer. Average buffers and hydrologic standards are listed in the VBWD Rules and Regulations. The proposed realignment of 30th Street North in the preferred alternative and other projects at the airport need to conform to these standards.

**Washington County, Letter dated September 15, 2015**

Based on review of the Lake Elmo LTCP and additional information gathered from conversations at the two open houses held by the MAC on June 9 and June 16, 2015, and discussion at the August 18, 2015 workshop with the County Board of Commissioners, Washington County offers the following comments:

The County Board encourages the MAC to address the concerns of residents in West Lakeland Township and Baytown Township adjacent to

Information sharing meetings with residents and township representatives occurred on Monday, September 21, 2015 and Wednesday, November 4, 2015.
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<td>the airport related to increased noise and the impact on the surrounding neighborhoods. Similarly, residents and township officials have concerns about the data used to support the need for the extended runways. The County Board would encourage the MAC to meet with those townships and residents and share the appropriate data that is being used to make any improvement decisions.</td>
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**Washington County, Letter dated September 15, 2015**

2 The County Board encourages MAC to work cooperatively with West Lakeland and Baytown Townships on the potential realignment of 30th Street. Getting agreement on the alignment and issues related to the cost to maintain the road prior to any decision on the runway expansion would show the MAC’s willingness to partner with these two entities on the future of the Lake Elmo Airport.

Comment acknowledged. The Revised Preferred Alternative was developed in the spirit of facilitating this community partnership.

**Washington County, Letter dated September 15, 2015**

3 Washington County acknowledges the efforts of the MAC to accommodate the future of the CSAH 15/Manning Avenue Corridor in its current alignment. CSAH 15/Manning Avenue is an "A" Minor Arterial Roadway that carries a significant amount of traffic from 1-94 to the Stillwater Area and beyond. The Average Daily Traffic (ADT) range is between 10,500 ADT near Lake Elmo Airport to 13,600 ADT near 1-94 Manning Avenue. Improvements to the operations and safety along the County Road 15 corridor have been identified and realignment options evaluated in order to accommodate current and future traffic levels. Urban development is expected to increase to the west of the airport, adjacent to this portion of Manning Avenue which will result in additional pressure on

Comment acknowledged.
| Metropolitan Council, Letter dated September 18, 2015 | 1 | The Metropolitan Council received the Long Term Comprehensive Plan for the Lake Elmo Airport on June 12, 2015. The LTCP analyzes several alternatives to address objectives for the Airport. The preferred alternative does not change the classification of the airport. Alternative B provides compatible Runway Protection Zones (RPZs) entirely on airport property for the relocated Runway 14/32, while RPZs for the base case and Alternative A do not.

Alternative B also provides a runway length of 3,600 feet, which is the optimal length identified in the Facility Requirements analysis for the long-term demand at Lake Elmo Airport. Once the 3,600-foot length runway is constructed, the primary runway will be fully built-out in terms of RPZ compliance, with no further extensions anticipated during the 20-year planning horizon. This will give the surrounding communities assurance of the airport’s future footprint for comprehensive community planning. This alternative also maintains the continuity of the existing operational footprint as the primary runway remains on the 14/32 alignment. By keeping the same alignment, optimal wind coverage is provided at Airport. Alternative B optimizes the use of existing airport property and no additional property acquisition is required. This alternative allows the long term program to advance more efficiently without the time needed to complete an RPZ Alternatives Analysis. The relocated runway can be constructed while the existing runway is in operation, allowing for minimal operational disruptions. | Comment acknowledged. |
<p>| Metropolitan Council, Letter dated September 18, 2015 | 2 | The LTCAP states that it recommends that steps be taken for installation of sanitary sewer and water facilities at the airport when access to those urban services become available in the future. At present, the Implementation Plan indicates that those services will not be incorporated in the 'near-term' (during Plan years 5 to 7) when most of the runways and all of the roadways will be relocated and reconstructed, but in the 'mid-term' (during Plan years 8 to 20). Council staff recommends that the MAC reconsider the availability and provision of these facilities in conjunction with the near term airport projects when they are in their final phases of design. Their cost may be significantly lower when undertaken during the earlier phase(s) of airport reconstruction when roadways will be under construction; if they are accessible at that time. | Comment acknowledged. The LTCP recommends that steps be taken for installation of sanitary sewer and water facilities at the Airport when a M USA and related agreements and access are available. |
| Metropolitan Council, Letter dated September 18, 2015 | 3 | All three development alternatives proposing extensions or relocations of facility runways identify as one of their disadvantages that wetland mitigation would be required. While the Plan indicates that there are approximately 36 acres of wetland identified within airport property, none of the submitted maps identify the location of any on-site wetlands. Additionally, none of the alternatives identifies either the location or extent of projected wetland impacts. Council staff requests the MAC clarify the location and extent of expected impacts and planned mitigation for each of the development alternatives. | Figure 2-9 in the Draft LTCP report shows the location of wetland areas at Lake Elmo Airport. Any projects completed at the airport require conformance with the watershed district, as well as WCA and/or DNR regulations regarding wetlands. If wetland impacts are suspected with MAC projects, avoidance, minimization efforts and appropriate mitigation will be assessed. The watershed district also reviews plans for water quality. Previous airport projects have required rate and volume controls, infiltration or other means to enhance water quality. These and other best management practices will continue with future projects listed in the Preferred Alternative. |
| Metropolitan Council, Letter dated September 18, 2015 | 4 | 30th Street N. in Lake Elmo (west of Manning Ave.) is improved with an off-street path for bicyclists and pedestrians, while Manning Avenue is a designated on-street route acknowledged by the Metropolitan Council's Existing Bikeways Map and the Metropolitan Council's Existing Bikeways Map. | Comment acknowledged. Improvements to 30th Street N will be designed to meet local roadway standards. |</p>
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<td>The LTCP’s preferred development alternative appears to have the least substantial impact on adjacent property owners, and would maintain general compatibility with existing and planned land uses, particularly with that planned in the City of Lake Elmo in their downtown area. That said, as we have noted in previous reviews, we continue to suggested the establishment of a joint zoning board with representatives from Baytown Township, Lake Elmo, West Lakeland Township, Washington County, and MAC as well as the creation/update of the Airport Zoning ordinance for the Airport. Pages 7-10 and 7-11 of the full LTCP suggests that MAC will convene a JAZB for this purpose following update to the State’s relevant regulations and the finalization of the LTCP. The Council agrees with this approach and continues our previous support and recommendation. Comment acknowledged.</td>
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| 6     | General Comments:  
(a) In general, for clarity in the document, we recommend putting figures behind the pages referenced, instead of at the back of the Chapter.  
(b) On page xiii, the third bullet states that the acreage in the 55 DNL contour decreases by 5%, but the number of parcels contained in the contour increase by 11. We recommend clarifying the size and the parcels added to clarify this decrease that is |
|       | (a) Comment acknowledged.  
(b) The recommended clarification will be provided.  
(c) The recommended reference will be added.  
(d) Acronym will be corrected.  
(e) Comment acknowledged.  
(f) Comment acknowledged. |
accompanied by a parcel increase, if that's correct.

(c) On page 2, in the first bullet, we recommend adding that the Lake Elmo is a Minor Airport in the Regional System.

(d) On page 3, is the acronym CTAP correct? It is unclear what that might stand for.

(e) Council staff also recommend continued coordination with Washington County on changes to the Lake Elmo overlay district, as discussed on page 28.

(f) As discussed on page 96 and noted previously in this letter, we recommend that the MAC continue to work with local partners and install a JAZB when practical.

This concludes the Council's informal review of the LTCP. The Council will not take action until the LTCP is published and sent to the Council for a formal review.
July 24, 2015

Mr. Neil Ralston  
Metropolitan Airports Commission  
6040 28th Avenue South  
Minneapolis, MN 55450

Re: Lake Elmo Airport 2035 Long-Term Comprehensive Plan

Dear Mr. Ralston:

Thank you for inviting the Valley Branch Watershed District (VBWD) to review the Lake Elmo Airport 2035 Long-Term Comprehensive Plan. As previously indicated, the project(s) at the airport will need to conform to all the VBWD Rules and Regulations, including but not limited to the following:

**Stormwater volume control:** New and fully reconstructed impervious surfaces of 6,000 square feet or more require treatment. The treatment standard is 1.1 inches of runoff retained on site from the new and/or fully reconstructed impervious surfaces.

**Stormwater rate control:** During all phases of development the peak rate of stormwater runoff from all points leaving the site shall not exceed the existing peak rate for critical duration events, up to and including the 100-year return frequency storm. Design criteria shall be the 2-, 10-, and 100-year 24-hour storms with respective 2.8, 4.2, and 7.3-inch rainfall depths (with NRCS time distribution) and the 7.2-inch 100-year 10-day snowmelt event.

**Wetlands:** VBWD is the local government unit responsible for administering the Minnesota Wetland Conservation Act. In addition, VBWD requires a minimum 25-foot-wide vegetative buffer. No impervious surfaces are allowed within the buffer. Average buffers and hydrologic standards are listed in the VBWD Rules and Regulations. The proposed realignment of 30th Street North in the preferred alternative and other projects at the airport need to conform to these standards.

The VBWD may revise its Rules and Regulations and projects will need to conform to those new standards at the time they are permitted. If you have any questions regarding our comments, please contact me at 952-832-2622 or jhanson@barr.com.

Sincerely,

[Signature]

John P. Hanson, PE  
Barr Engineering Co.  
Engineers for the Valley Branch Watershed District
August 20, 2015

Mr. Neil Ralston
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, MN 55450

RE: Lake Elmo 2035 Long Term Comprehensive Plan

Dear Mr. Ralston,

In previous correspondence with MAC, West Lakeland Township provided a comment letter opposing the expansion of the Lake Elmo Airport as outlined in your 2015 Long Term Comprehensive Plan.

Enclosed are two pictures that did not accompany the initial correspondence, dated August 3, 2015. For your convenience, we are also enclosing another copy of the letter.

Please contact us if you have any questions.

Thank You,

Carrie Seifert
Town Clerk, West Lakeland Township
August 3, 2015

Mr. Neil Ralston
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis MN 55450

RE: Lake Elmo 2035 Long Term Comprehensive Plan

Dear Mr. Ralston,

The town board of supervisors for West Lakeland Township opposes the expansion of the Lake Elmo Airport as outlined in your 2035 Long Term Comprehensive Plan for a number of reasons. The first of which will be the impact on our residents and their quality of life by the installation of the new proposed NW / SE 3,600 foot runway. Not only will this bring in larger aircraft, but more importantly move noise and operations into our existing residential neighborhoods of West Lakeland Township. While the new Runway Protection Zones will be entirely on MAC property, the MnDOT Safety Zones "A" and "B" will essentially overlay existing homes on 2 ½ acres and the overhead power lines which by current zoning is not allowed. In addition the proposed expansion is also in conflict with Washington County's and West Lakeland's airport overlay districts. If the intent is to modify current zoning to allow the proposed Lake Elmo expansion to occur, then the West Lakeland Township board would call your attention to MnDOT's Accident Distribution graphs depicting aircraft crashes within the proximity of an airport. By their own data, 60% of all arriving crashes happen within 6,000 feet of the end of the runway, while 60% of all departing crashes happen within 2,500 feet of the end of the runway. The township board cannot see how any safety zones protecting residents could be modified to accommodate an expansion of this kind.

In previous correspondence with MAC, West Lakeland Township was informed that the number of operations per year at Lake Elmo airport were reported to be 64,887 in 1995 and 70,687 in 2000. Using the 70,000 number for example, calculates out to one
Baytown Townships would require monetary assurances from MAC that any detrimental effects to 30th Street, as result of the construction activity related to the airport and the reconstruction of 30th Street, will require MAC to bring the remaining western section of 30th Street towards Manning Avenue back up to township road standards which includes a 25-year warranty on the road.

Daniel Kylo  
Chairman – West Lakeland Township

Steven Ebner  
Supervisor – West Lakeland Township

David Schultz  
Supervisor – West Lakeland Township

cc: Carrie Seifert – Clerk West Lakeland Township  
Ryan Gaug – MnDOT Aviation and Finance Director  
John Hanson – Valley Branch Watershed  
Senator Karin Housley – Minnesota Senate  
Commissioner Gary Kriesel – Washington County Commissioner  
Representative Kathy Lohner – Minnesota House of Representatives  
Michael Madigan – MAC District F Commissioner  
Wayne Sandberg – Washington County Engineer
RESOLUTION
TOWN OF WEST LAKELAND
WASHINGTON COUNTY, MINNESOTA

A RESOLUTION OPPOSING THE METROPOLITAN AIRPORT COMMISION’S LAKE ELMO 2035 LONG TERM COMPREHENSIVE PLAN’S PROPOSAL TO EXPAND THE LAKE ELMO AIRPORT.

Whereas, West Lakeland Township is located on the St. Croix River, and is known for its small town-near the big-city lifestyle enjoyed by residents and

Whereas, the residents and neighboring communities of West Lakeland Township greatly contribute to the unobstructed, peaceful lifestyle of the Township, and

Whereas, the Metropolitan Airports Commission (MAC), has proposed expanding the Lake Elmo Airport by increasing runway lengths and rerouting 30th Street North, and

Whereas, the MAC's proposal will lengthen the runways, modify and increase the Runway Protection Zones (RPZ) and the Airport Overlay District (AOD), and

Whereas, MAC claims that these proposed modifications will improve aircraft safety, and

Whereas, the Town Board has determined that the Lake Elmo Airport aircraft crash records demonstrate that the eight crashes that have occurred over the past 30 years, all have been, as a result, of pilot error or airplane mechanical problems and not due to the length of the runway, and

Whereas, the Town Board has determined that these proposed modifications will compromise more township residents and their homes to potential aircraft accidents, arriving and departing the airport, and

Whereas, the Town Board has determined that MAC's proposal will not improve the safety of present aircraft safety, but only attract and accommodate larger, louder aircraft, and

Whereas, the Town Board has determined that MAC's proposed runway expansion will increase the number of larger, louder aircraft, and have a negative impact on the peaceful lifestyle of the surrounding residents and neighboring communities, and

Whereas, MAC proposes to realign 30th St N around the southern end of the extended runway, and

Whereas, the Town Board has determined that the rerouting of 30th St N (a minor collector road) would redirect more traffic into neighborhoods, and
Whereas, the Town Board has determined that the increased traffic and noise will also have a negative impact on airport's neighbors along the proposed rerouted 30th St N and residents on Neal Ave N, and

Whereas, the estimated cost of construction for MAC's proposal to expand the airport and realign 30th St N is estimated at $11.5 million, and

Whereas, the Town Board has determined that the number of flight operations reported to occur at the Lake Elmo Airport is significantly overstated and not supported or demonstrated by real data, and

Whereas, the Town Board has determined that the significant cost of expansion as compared to the least costly alternative of just improving the present runway surface at the estimated cost of $5.4 million doesn’t justify the burden to taxpayers for the negligible forecasted additional aircraft operations for the next 20 years, and

Whereas, the MAC's proposal would significantly impact the scenic views and peaceful lifestyle West Lakeland is known for, and

Whereas, the MAC's proposal will result in increased air traffic and noise pollution, and

Whereas, the MAC's proposal will greatly and negatively impact the quality of life for the residents and visitors of West Lakeland that have worked so hard to maintain an unobstructed peaceful lifestyle,

NOW, THEREFORE, BE IT RESOLVED, that the Town Board of the Town of West Lakeland hereby resolves as follows:

1. The Town Board opposes the expansion of the Lake Elmo Airport and runways.
2. The Town Board opposes the realignment of 30th St N.

Adopted by the Town Board of the Town of West Lakeland this 3rd day of August, 2015.

[Signature]
Daniel Kyllo, Chairman

ATTEST:

[Signature]
Carrie Seifert, Town Clerk
RESOLUTION NO. 14-2015

A RESOLUTION IN OPPOSITION TO THE EXPANSION OF THE LAKE ELMO AIRPORT

WHEREAS, and a regular meeting of the Town Board of Supervisors of the Town of Baytown, Washington County Minnesota (the Board), the Board considered and reviewed the current plans for expansion of the Lake Elmo Airport recently proposed by the Metropolitan Airport Commission (MAC); and,

WHEREAS, the Board listened to public comment and thereafter considered the public comment and the position of the Town of West Lakeland in opposition to the planned expansion and the displacement of the 30th Street right of way; and

NOW THEREFORE BE IT RESOLVED BY THE TOWN BOARD OF BAYTOWN TOWNSHIP, MINNESOTA:

That the Town Board resolves against the planned expansion and the relocation of the 30th Street right of way, and the Town Clerk is directed to send a copy of the Resolution to the MAC with a copy to the Washington County Board.

Adopted by the Town Board of Supervisors of the Town of Baytown, Washington County, Minnesota this 14th day of September, 2015.

BAYTOWN TOWNSHIP

Kent Grandlienard, It's Chairman
Board of Supervisors

ATTEST:

Kim Zitzmann, It's Town Clerk

Kim Zitzmann

Clerk, Baytown Twp., Washington Co., Minnesota
Notarial Officer (ex-officio notary public)
My term is indeterminate
September 15, 2015

Mr. Neil Ralston
MAC Airport Development
6040 28th Avenue South
Minneapolis, MN 55450

Washington County Comments on the Draft Lake Elmo Airport
2035 Long Term Comprehensive Plan (LTCP)

Dear Mr. Ralston,

Thank you and the representatives of the Metropolitan Airports Commission (MAC) for presenting the Lake Elmo 2035 Long Term Comprehensive Plan (LTCP) to the Washington County Board and extending the comment period in order for the board to fully understand the project and its impacts to Washington County. We appreciate your willingness to engage the local governments and the residents on this important decision.

Based on review of the Lake Elmo LTCP and additional information gathered from conversations at the two open houses held by the MAC on June 9 and June 16, 2015, and discussion at the August 18, 2015 workshop with the County Board of Commissioners, Washington County offers the following comments:

- The County Board encourages the MAC to address the concerns of residents in West Lakeland Township and Baytown Township adjacent to the airport related to increased noise and the impact on the surrounding neighborhoods. Similarly, residents and township officials have concerns about the data used to support the need for the extended runways. The County Board would encourage the MAC to meet with those townships and residents and share the appropriate data that is being used to make any improvement decisions.

- The County Board encourages the MAC to work cooperatively with West Lakeland and Baytown Townships on any potential realignment of 30th Street. Getting agreement on the alignment and issues related to the cost to maintain the road prior to any decision on the runway expansion would show the MAC’s willingness to partner with these two entities on the future of the Lake Elmo Airport.

- Washington County acknowledges the efforts of the MAC to accommodate the future of the CSAH 15/Manning Avenue Corridor in its current alignment. CSAH 15/Manning Avenue is an "A" Minor Arterial Roadway that carries a significant amount of traffic from I-94 to the Stillwater Area and beyond. The Average Daily Traffic (ADT) range is between 10,500 ADT near Lake Elmo Airport to 13,600 ADT near I-94 Manning Avenue. Improvements to the operations and safety along the County Road 15 corridor have been identified and realignment options evaluated in order to accommodate current and future traffic levels. Urban development is expected to increase to the west of the airport, adjacent to this portion of Manning Avenue which will result in additional pressure on the existing transportation system.
Thank you again for presenting the Draft Lake Elmo Airport 2035 Long-Term Comprehensive Plan to the County Board. As you proceed with your planning process, we encourage you to provide continued outreach to the county and neighboring property owners.

Regards,

[Signature]

Gary Kriesel, Chair
Washington County Board of Commissioners

c:  Washington County Commissioners
    Don Theisen, Public Works Director
    Wayne Sandberg, County Engineer
    City of Lake Elmo
    West Lakeland Township
    Baytown Township
September 18, 2015

Neil Ralston, Airport Planner
Metropolitan Airports Commission
6040 28th Ave. S
Minneapolis, MN 55450-2799

RE: Lake Elmo Airport Long Term Comprehensive Plan
    Metropolitan Council Review No. 20301-2
    Metropolitan Council District 12

Dear Mr. Ralston:

The Metropolitan Council received the Long Term Comprehensive Plan for the Lake Elmo Airport on June 12, 2015. The LTCP analyzes several alternatives to address objectives for the Airport. The preferred alternative does not change the classification of the airport. Alternative B provides compatible Runway Protection Zones (RPZs) entirely on airport property for the relocated Runway 14/32, while RPZs for the base case and Alternative A do not.

Alternative B also provides a runway length of 3,600 feet, which is the optimal length identified in the Facility Requirements analysis for the long-term demand at Lake Elmo Airport. Once the 3,600-foot length runway is constructed, the primary runway will be fully built-out in terms of RPZ compliance, with no further extensions anticipated during the 20-year planning horizon. This will give the surrounding communities assurance of the airport’s future footprint for comprehensive community planning. This alternative also maintains the continuity of the existing operational footprint as the primary runway remains on the 14/32 alignment. By keeping the same alignment, optimal wind coverage is provided at Airport. Alternative B optimizes the use of existing airport property and no additional property acquisition is required. This alternative allows the long-term program to advance more efficiently without the time needed to complete an RPZ Alternatives Analysis. The relocated runway can be constructed while the existing runway is in operation, allowing for minimal operational disruptions.

The Council staff review offers the following technical comments for your consideration during this informal review period.

ENVIRONMENTAL CONSIDERATIONS
Sanitary Sewer and Water Utilities
The LTCP states that it recommends that steps be taken for installation of sanitary sewer and water facilities at the airport when access to those urban services become available in the future. At present, the Implementation Plan indicates that those services will not be incorporated in the 'near-term' (during Plan years 5 to 7) when most of the runways and all of the roadways will be relocated and reconstructed, but in the 'mid-term' (during Plan years 8 to 20). Council staff recommends that the MAC reconsider the availability and provision of these facilities in conjunction with the near term airport projects when they are in their final phases of design. Their cost may be significantly lower when undertaken during the earlier phase(s) of airport reconstruction when roadways will be under construction, if they are accessible at that time.
Wetlands
All three development alternatives proposing extensions or relocations of facility runways identify as one of their disadvantages that wetland mitigation would be required. While the Plan indicates that there are approximately 36 acres of wetland identified within airport property, none of the submitted maps identify the location of any on-site wetlands. Additionally, none of the alternatives identifies either the location or extent of projected wetland impacts. Council staff requests the MAC clarify the location and extent of expected impacts and planned mitigation for each of the development alternatives.

LAND USE
Relocation of 30th St. N
30th Street N. in Lake Elmo (west of Manning Ave.) is improved with an off-street path for bicyclists and pedestrians, while Manning Avenue is a designated on-street route acknowledged by the Metropolitan Council’s Existing Bikeways Map and the Comprehensive Plans of both Lake Elmo and Baytown Township (among others). Any reconstruction of 30th Street associated with the Airport LTCP should evaluate and, if possible, accommodate bicycles and pedestrians to enhance connectivity between residential areas and to the regional bicycle network.

Land Use and Development Impacts
The LTCP’s preferred development alternative appears to have the least substantial impact on adjacent property owners, and would maintain general compatibility with existing and planned land uses, particularly with that planned in the City of Lake Elmo in their downtown area. That said, as we have noted in previous reviews, we continue to suggested the establishment of a joint zoning board with representatives from Baytown Township, Lake Elmo, West Lakeland Township, Washington County, and MAC as well as the creation/update of the Airport Zoning ordinance for the Airport. Pages 7-10 and 7-11 of the full LTCP suggests that MAC will convene a JAZB for this purpose following update to the State’s relevant regulations and the finalization of the LTCP. The Council agrees with this approach and continues our previous support and recommendation.

Aviation/Transportation
In general, for clarity in the document, we recommend putting figures behind the pages referenced, instead of at the back of the Chapter.

On page xiii, the third bullet states that the acreage in the 55 DNL contour decreases by 5%, but the number of parcels contained in the contour increase by 11. We recommend clarifying the size and the parcels added to clarify this decrease that is accompanied by a parcel increase, if that’s correct.

On page 2, in the first bullet, we recommend adding that the Lake Elmo is a Minor Airport in the Regional System. On page 3, is the acronym CTAP correct? It is unclear what that might stand for.

Council staff also recommend continued coordination with Washington County on changes to the Lake Elmo overlay district, as discussed on page 28.

As discussed on page 96 and noted previously in this letter, we recommend that the MAC continue to work with local partners and install a JAZB when practical.
This concludes the Council’s informal review of the LTCP. The Council will not take action until the LTCP is published and sent to the Council for a formal review. If you have any questions or need further information, please contact Russ Owen, Principal Reviewer, at 651-602-1724.

Sincerely,

[Signature]

LisaBeth Barajas, Manager
Local Planning Assistance

CC: Harry Melander, Metropolitan Council District 12
Ryan Garcia, Sector Representative
Russ Owen, Metropolitan Council
Raya Esmaeili, Reviews Coordinator