Lake Elmo Airport

Environmental Assessment (EA)/ Environmental Assessment (EAW) Worksheet

May 25, 2017 – Community Engagement Panel Meeting #2

Public Event Debrief and Introduction to Purpose & Need/Alternatives

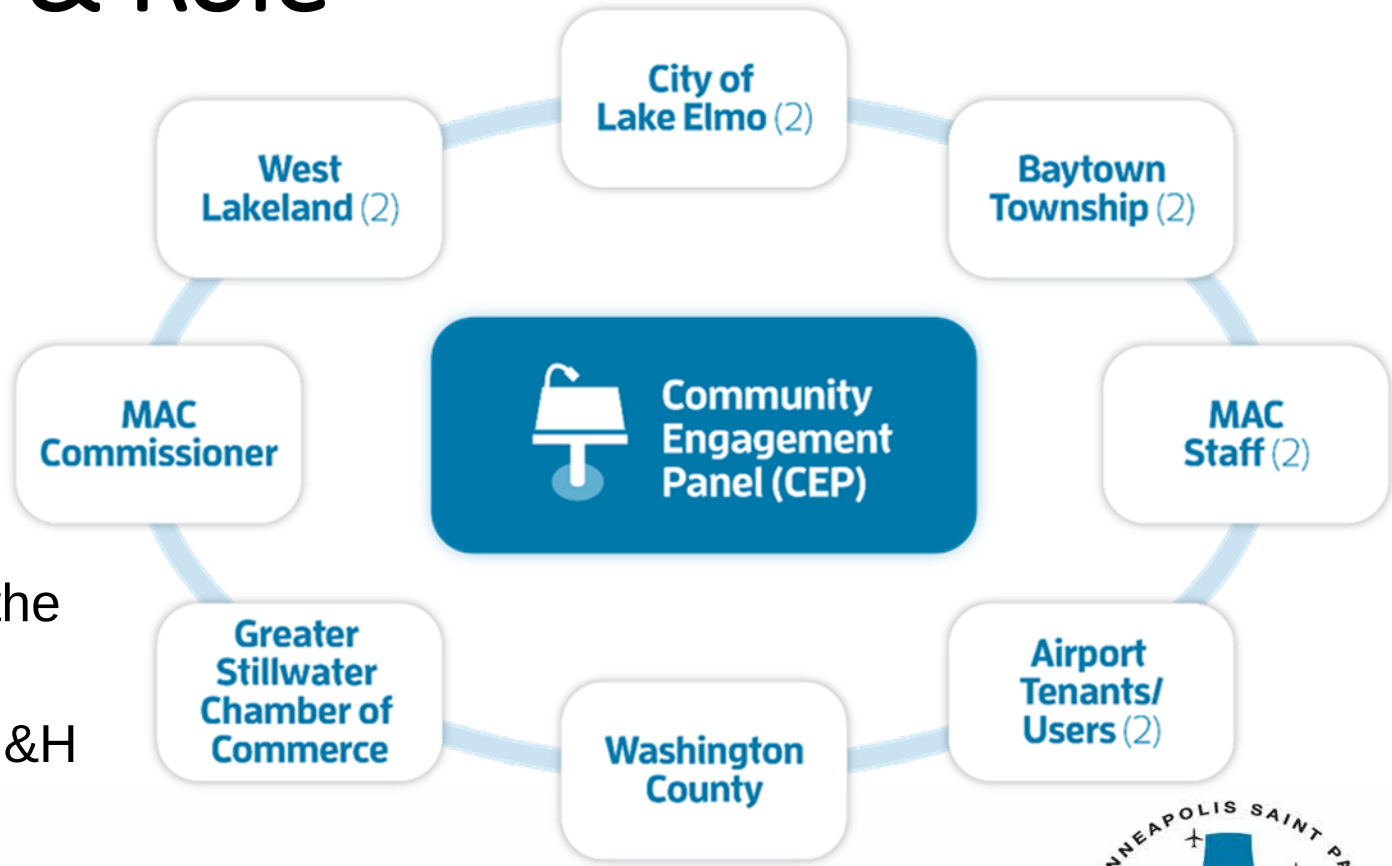
Agenda

- Recap – CEP Participants, Role, & Guidelines
- Debrief – May 11th Public Event
- Recap – Environmental Process
- Purpose & Need
- Range of Alternatives to be Considered
- Discussion

Community Engagement Panel (CEP) Recap: Participants & Role

Serves several important functions including:

- Representing a broad range of stakeholder groups in the EA;
- Receiving information about the EA/EAW and sharing it with constituencies;
- Providing input to the EA/EAW as the voice of key stakeholders; and
- Providing technical advice to the M&H Team.



Recap: CEP Guidelines

- Acknowledge and respect the opinions and interests of all CEP members at all times
- No formal meeting or voting procedures will be established
- CEP is advisory; MAC retains decision-making authority
- CEP members are encouraged to disseminate project information to their constituent groups and the general public
- CEP members are discouraged from misrepresenting meeting proceedings to their constituent groups, the general public, or the media
- Observers may attend CEP meetings but are asked to refrain from interrupting the proceedings
- Future meetings will be scheduled at least one month in advance and every effort will be made to identify dates and times that work for all CEP members
- MAC's consultant will take meeting notes for the record, which will be made available on the project website

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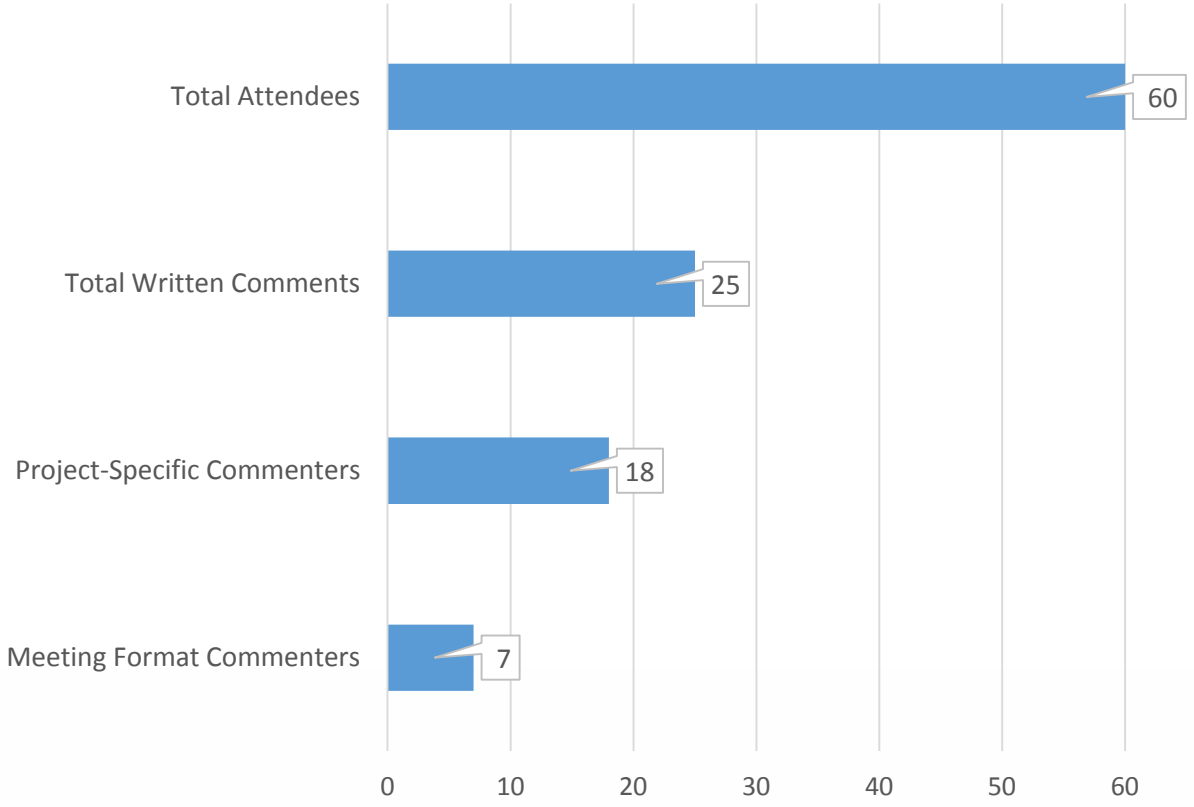
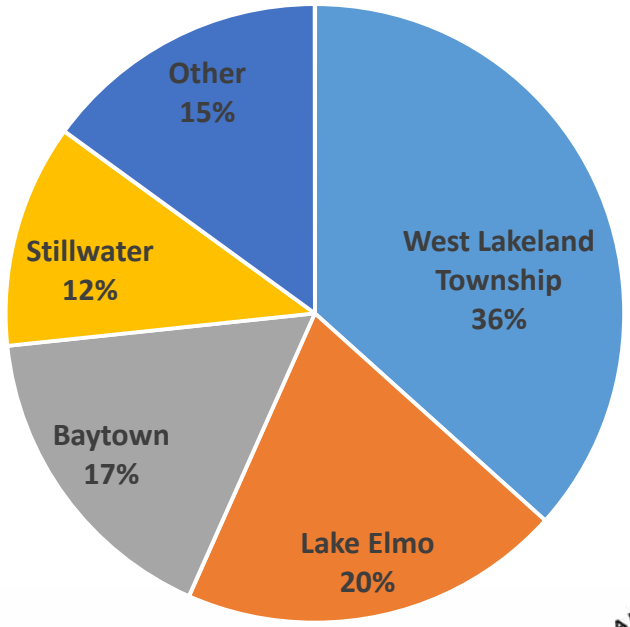
May 11th Public Event #1

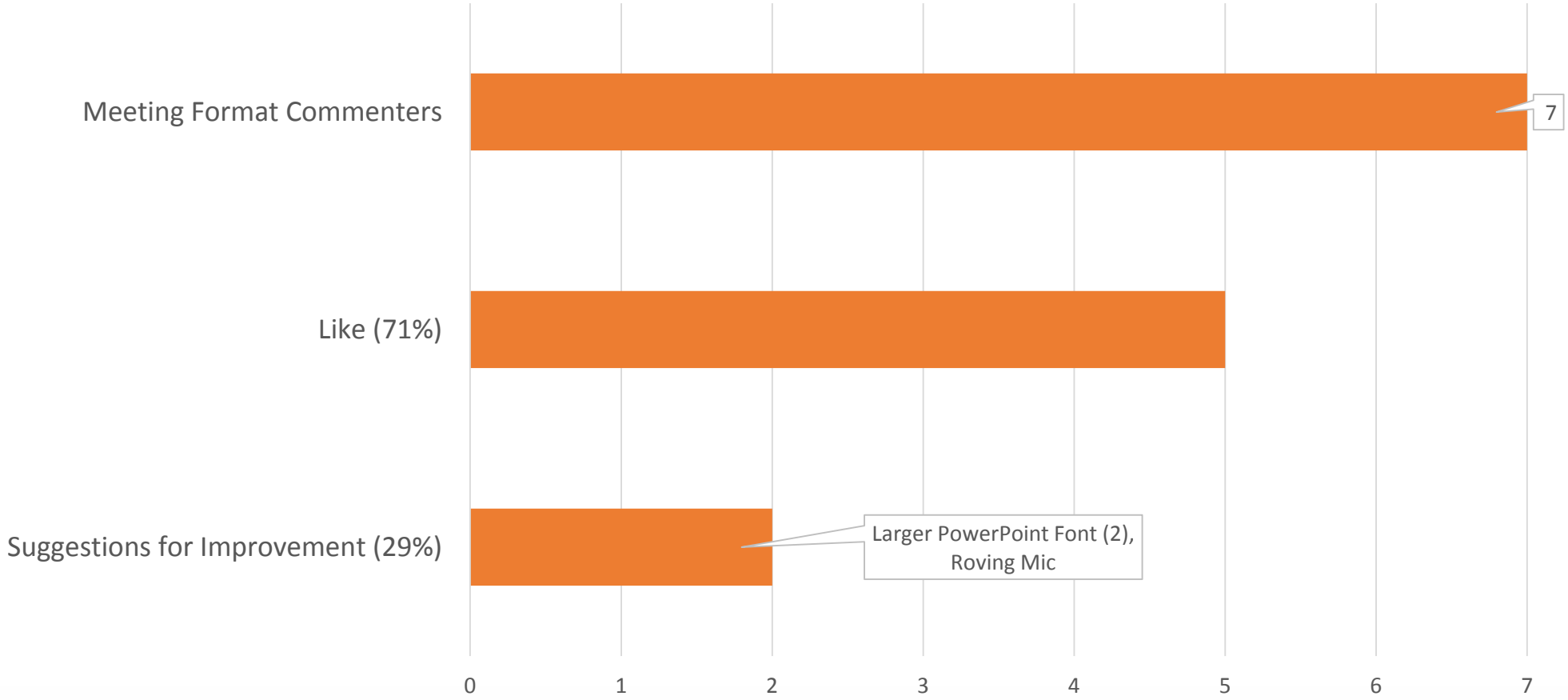
Overall Meeting Summary



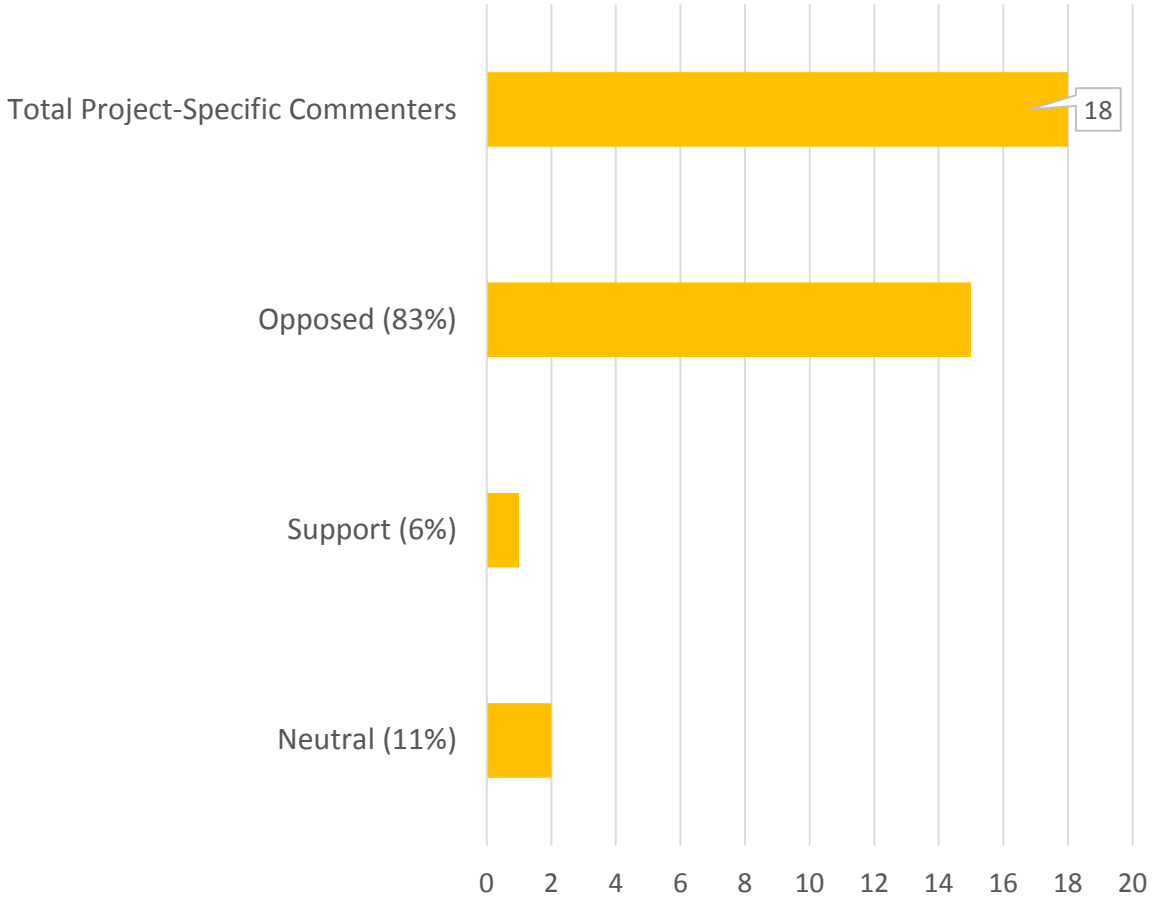
Attendees by City/Township



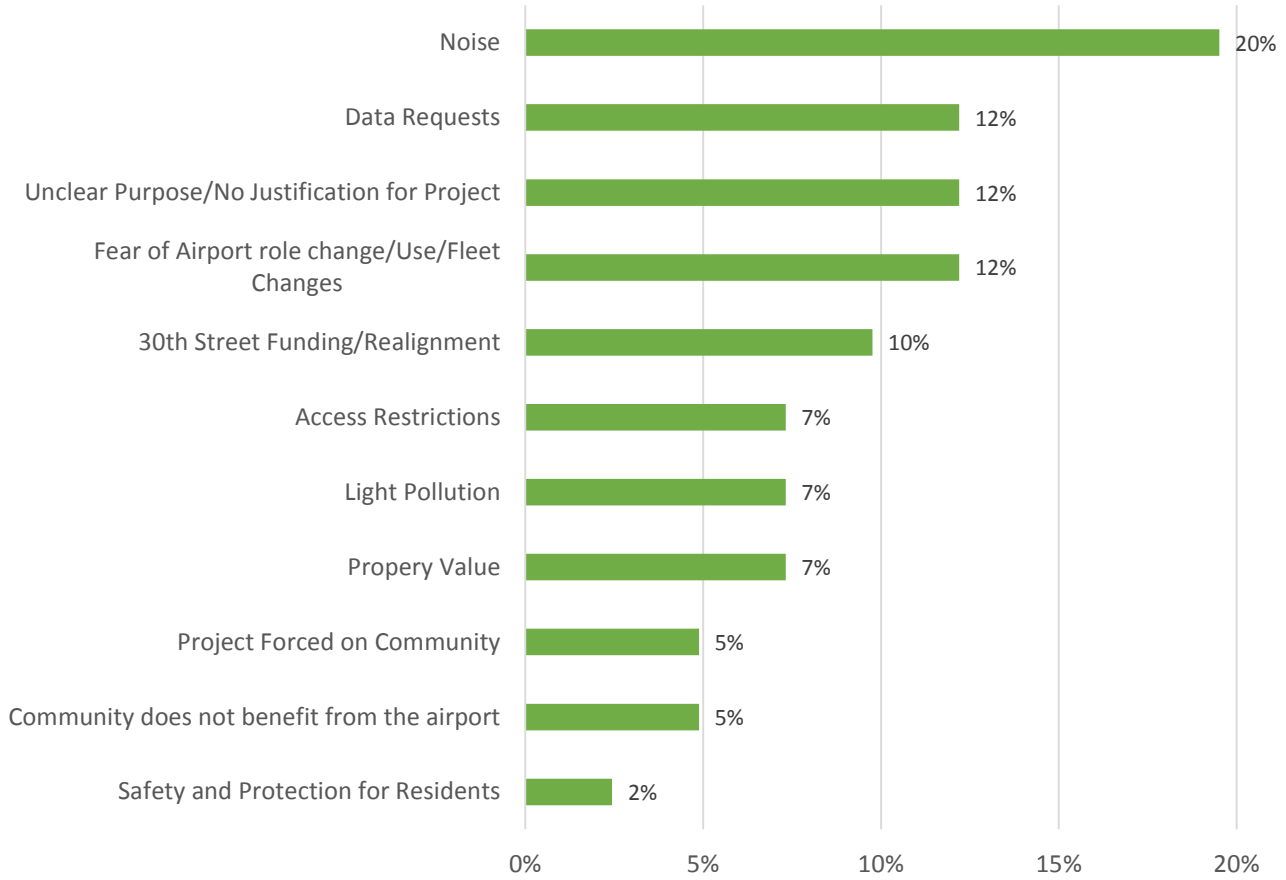
Meeting Format Comments



Project-Specific Comments



Opposition Comment Themes



Questions/Comment Themes

- Jet operations
- Business operations
- Aircraft noise
- Close the airport
- Property values
- Project costs versus benefits
- 30th Street Realignment/who's going to maintain
- Taxes MAC pays to the city/county and use of general tax dollars
- MAC/pilots/users don't care about impacts to the community
- TCE groundwater pollution
- Concern that this project is meant to attract more, bigger aircraft – that this is to grow the airport

Discussion and Feedback

- What are your thoughts on advanced notification for the meeting, venue/room set-up, and information presented at the meeting?

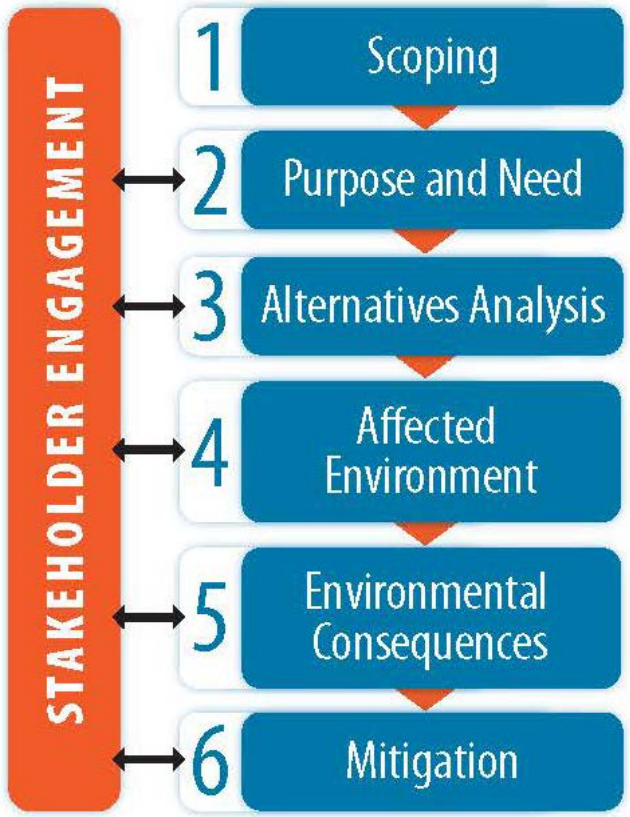
- Are there opportunities for improvement?

- How do we make it easier for each person to get their question/comment heard during the meeting?

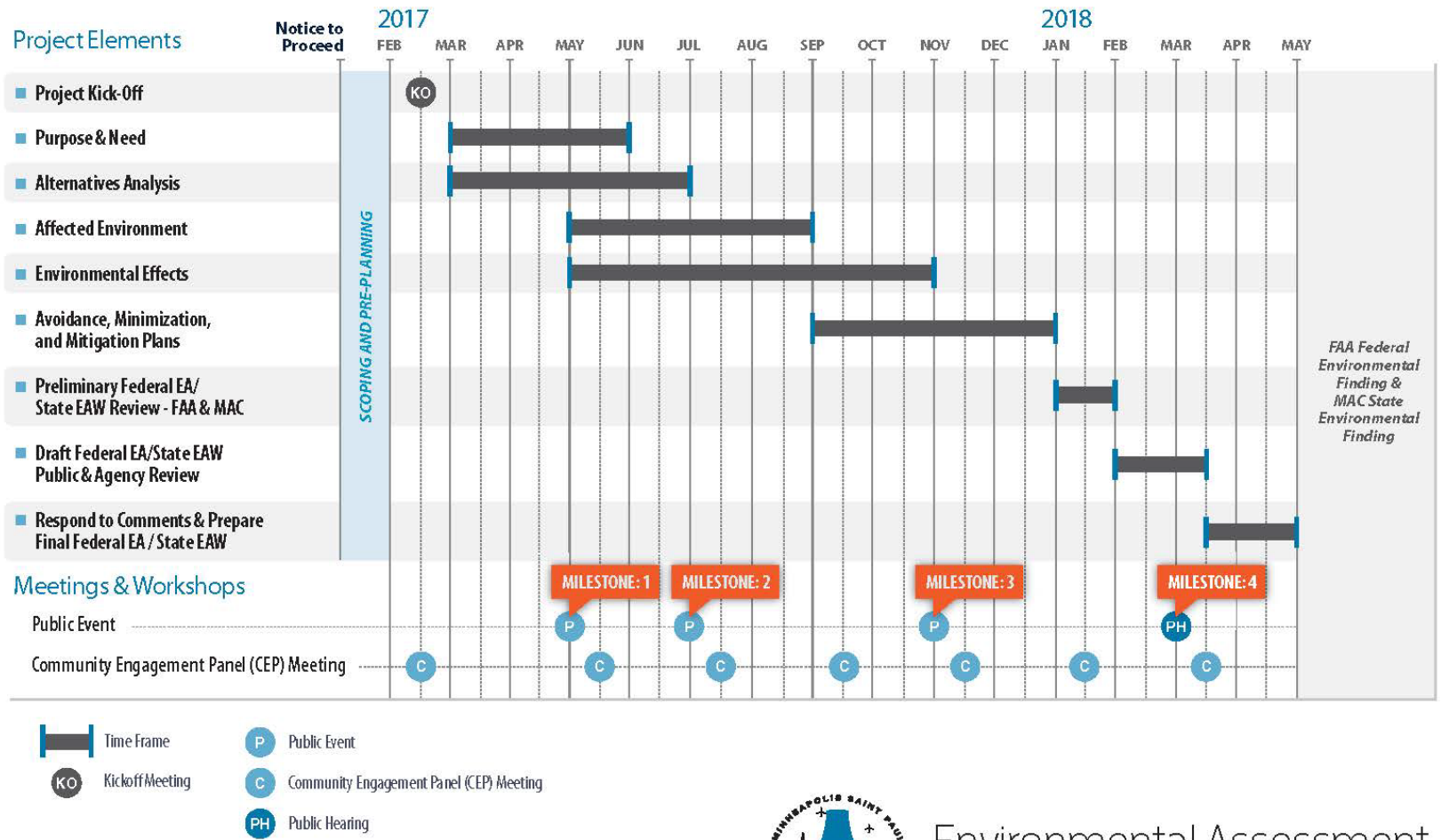
Next Steps

- We will be expanding FAQs on the website to respond to the common questions and comments heard throughout the meeting:
  - How will noise be evaluated in the EA?
  - Why do aircraft need to run their engines up?
  - Why do aircraft repeatedly fly over the same areas?
  - What will be done to mitigate aircraft noise?
  - Is the airport able to restrict certain kinds of aircraft or operations to certain times?
  - What is the current make-up of the aircraft at the Airport today? How is it expected to change?
  - What are the impacts to my property value?
  - What are the project costs and funding sources?
  - How will my property taxes be impacted?
  - Who will pay for the reconstruction of 30th Street?
  - Who will be responsible for maintaining 30th Street?
  - How is the airfield lighting going to change?
  - Why can't the runway be rehabilitated without extending?

Environmental Process Recap



EA Project Timeline



Environmental Assessment
Lake Elmo Airport

Purpose and Need
FAA Guidance

- Explains why a project is being proposed.
- A defensible Purpose and Need statement should be:
  - Clearly written
  - Concise (incorporating any detailed supporting data by reference)
  - Understandable to those unfamiliar with aviation
- The **Purpose** is a general statement of over-arching project goals.
- The **Need** is a more detailed statement describing:
  - Problems to be solved by the project, and
  - Specific objectives for resolving these problems and achieving the project goals.

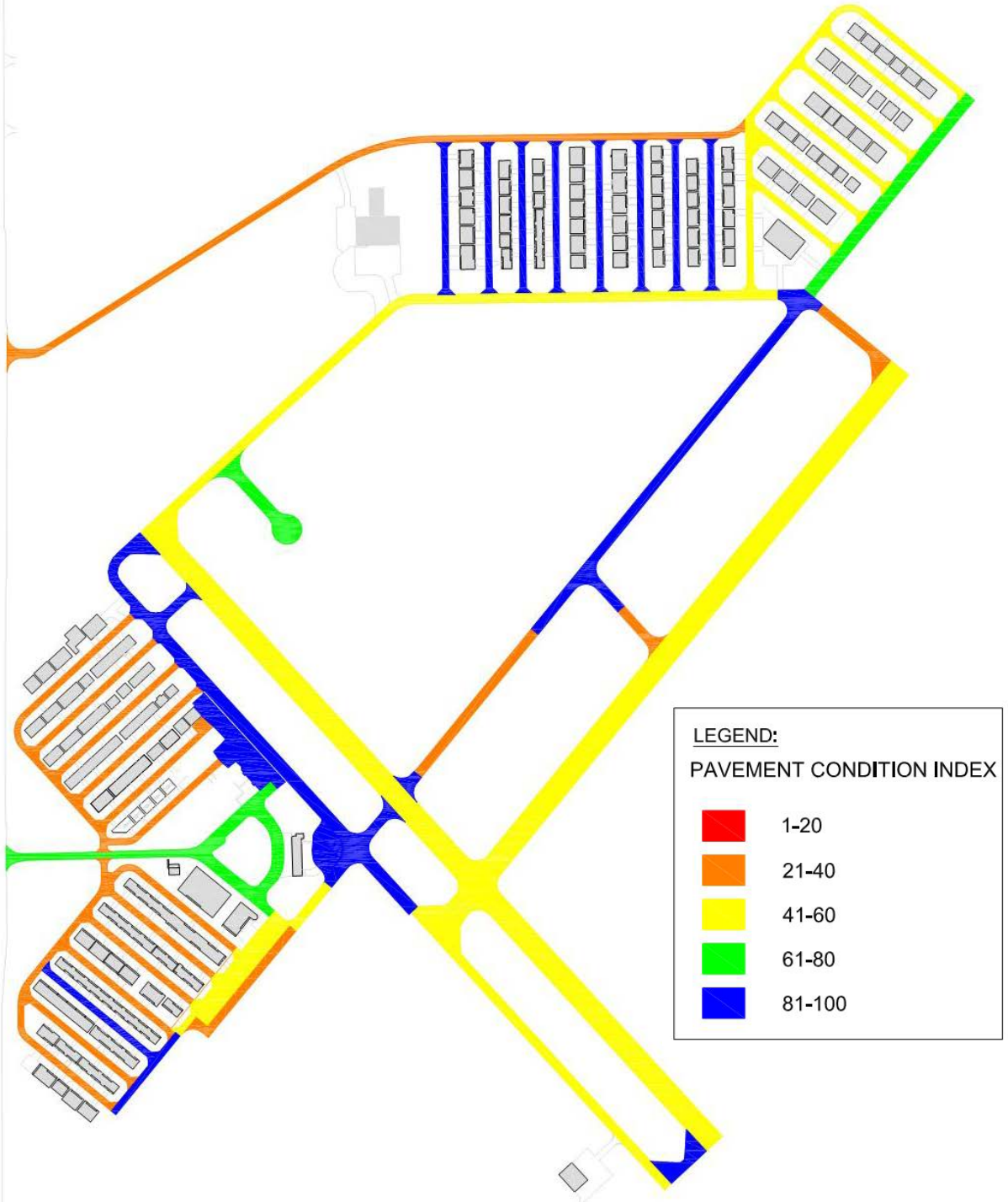
Purpose and Need
Lake Elmo Airport

The **Purpose** of the project at Lake Elmo Airport is to pursue the following broader goals:

1) Address failing end-of-life infrastructure
2) Enhance safety for airport users and the general public
3) Improve facilities for the aircraft currently operating at the airport

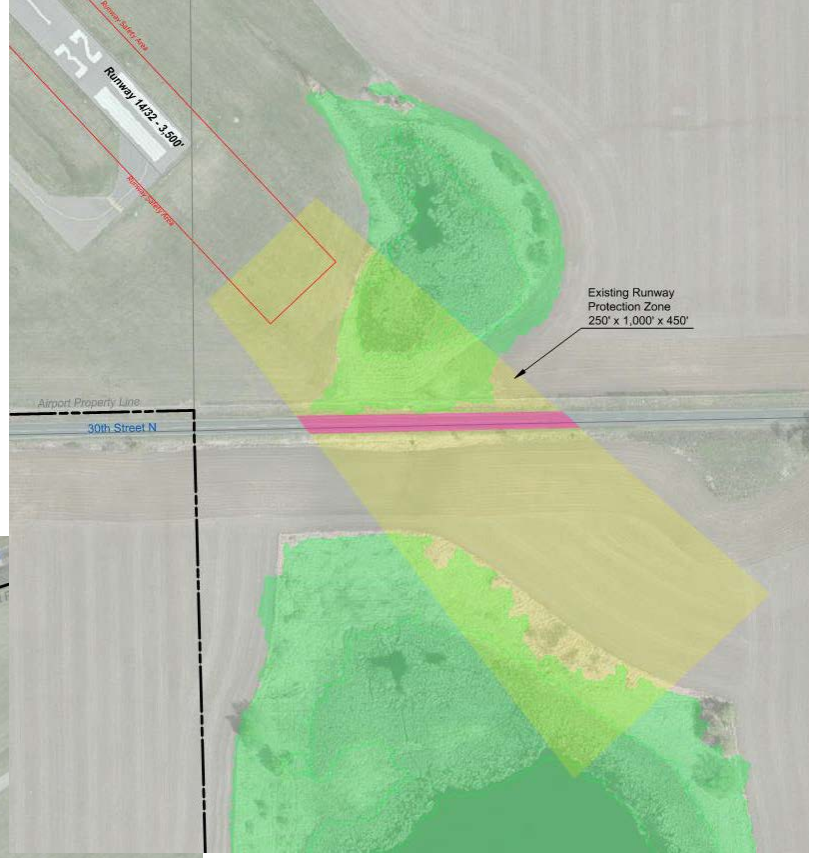
The **Need** for the project at Lake Elmo Airport is based on the following specific objectives:

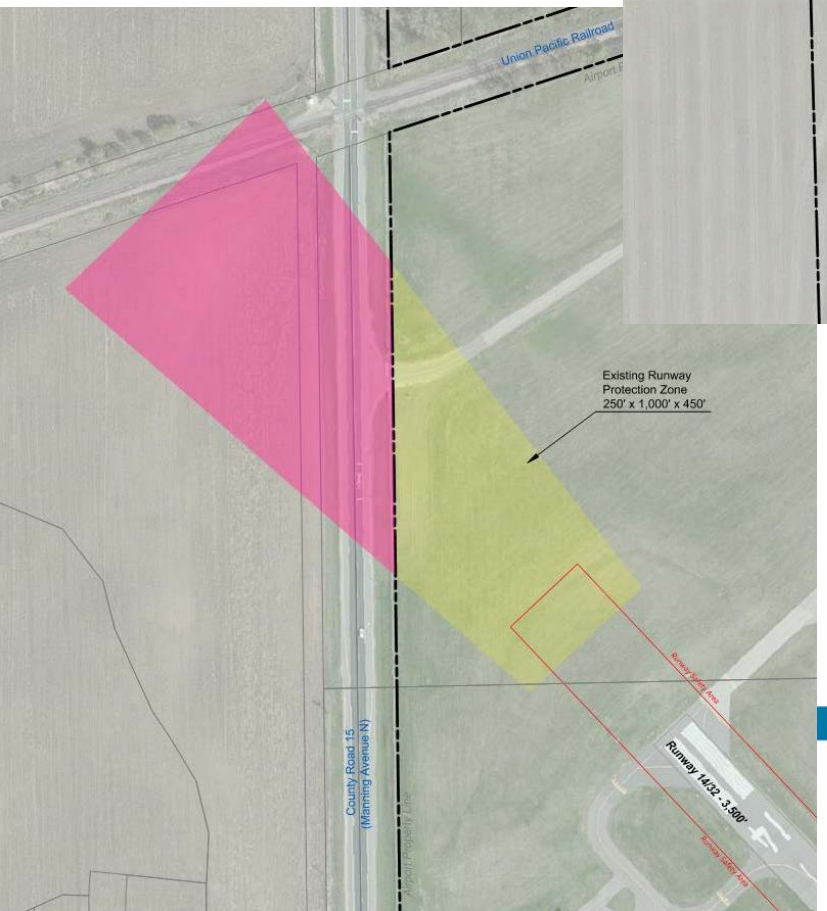
1) Improve the runway pavement conditions
2) Minimize incompatible land uses in the runway protection zones (RPZs)
3) Meet runway length needs for existing users
4) Upgrade the instrument approach procedures



P&N Objective 1: Improve the Runway Pavement Conditions

- Both runways have pavement condition index (PCI) ratings between 41 and 60.
- Pavements in this PCI range usually require major repairs, from overlays to reconstruction.
- Once the PCI falls below 40, reconstruction is typically the only viable alternative.





P&N Objective 2: Minimize Incompatible Land Uses in the RPZs

- Runway 14/32 has the following incompatible land uses within its RPZs:
  - Manning Avenue N
  - 30th Street N
  - Union Pacific Railroad
  - Private property

Runway 14/32 Design Aircraft (less than 12,500 pounds)

Aircraft Model	Engine Type	Seat Capacity
Beechcraft King Air 200	Multi-Engine Turboprop	7 to 9
Pilatus PC-12	Single-Engine Turboprop	7 to 9
Cessna 421C	Multi-Engine Piston	6 to 8
Socata TBM 700	Single-Engine Turboprop	4 to 6
Piper PA-31 Chieftain	Multi-Engine Turboprop	5 to 7
Cessna 414A	Multi-Engine Piston	6 to 8
Cessna 340	Multi-Engine Piston	4 to 5
Cessna 310R	Multi-Engine Piston	5 to 6
Beechcraft Baron 58	Multi-Engine Piston	4 to 6
Piper PA-30 Twin Comanche	Multi-Engine Piston	4 to 6

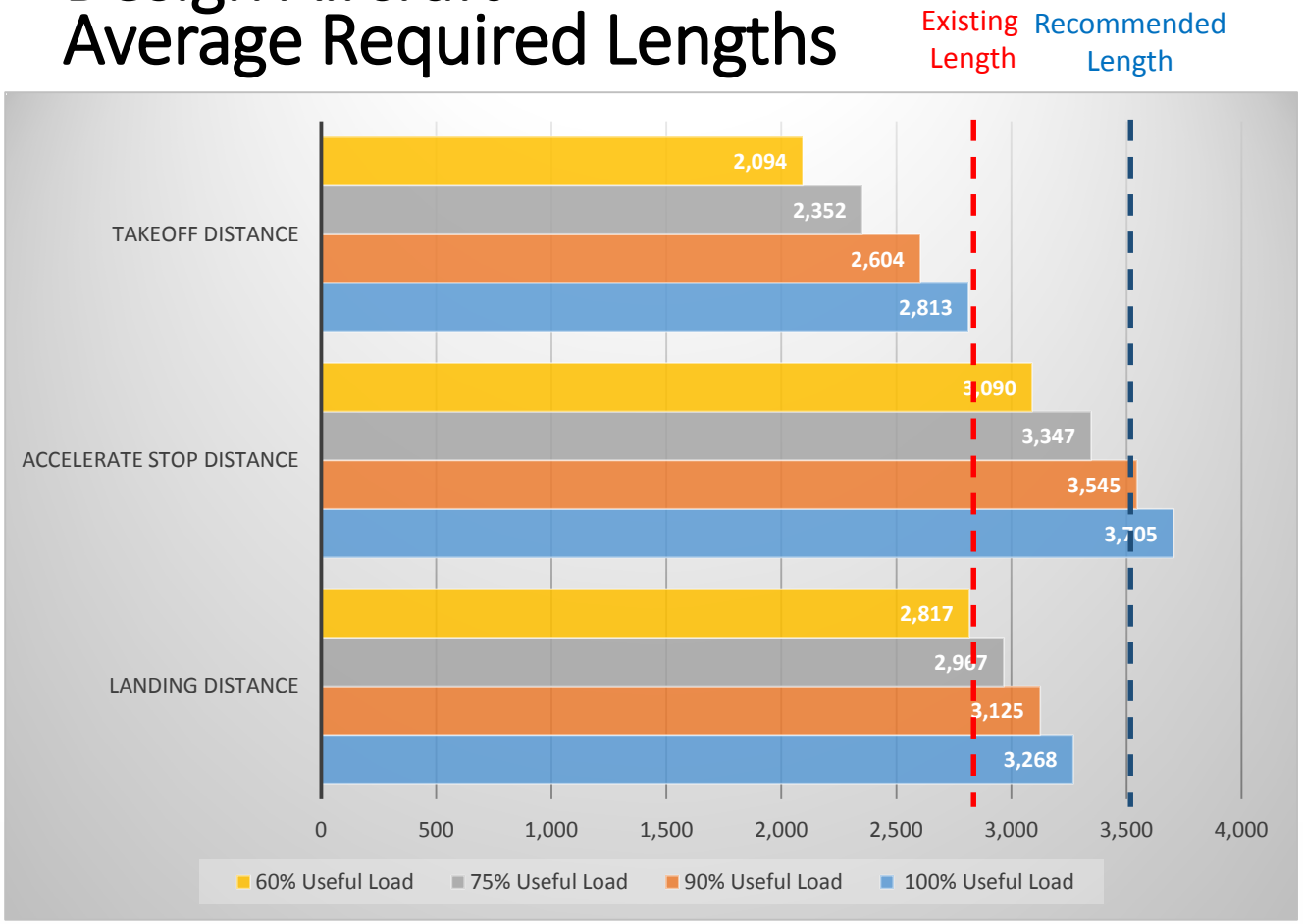
Runway 04/22 Design Aircraft (less than 5,000 pounds)

Aircraft Model	Engine Type	Seat Capacity
Piper PA-34 Seneca	Multi-Engine Piston	5 to 6
Piper PA-46 Malibu	Single-Engine Piston	5 to 6
Lancair IV	Single-Engine Piston	4
Piper PA-30 Twin Comanche	Multi-Engine Piston	4 to 6
Cirrus SR22	Single-Engine Piston	4 to 5
Beechcraft Bonanza 33	Single-Engine Piston	6
Mooney M20TN	Single-Engine Piston	4
Piper PA-28 Cherokee	Single-Engine Piston	4
Cessna 172	Single-Engine Piston	4

P&N Objective 3: Meet Runway Length Needs for Existing Users

- Airfield design at Lake Elmo is based on a group of “design aircraft” with the following characteristics:
  - Wingspan less than 79 feet
  - Approach speed less than 121 knots
  - Gross weight less than 12,500 pounds
- Operations by existing airport users are currently limited by the current runway lengths.
  - Runway 14/32 = 2,849 feet
  - Runway 04/22 = 2,496 feet
- Optimum runway lengths are based on the needs of the “design aircraft” for each runway.

Runway 14/32 Design Aircraft Average Required Lengths



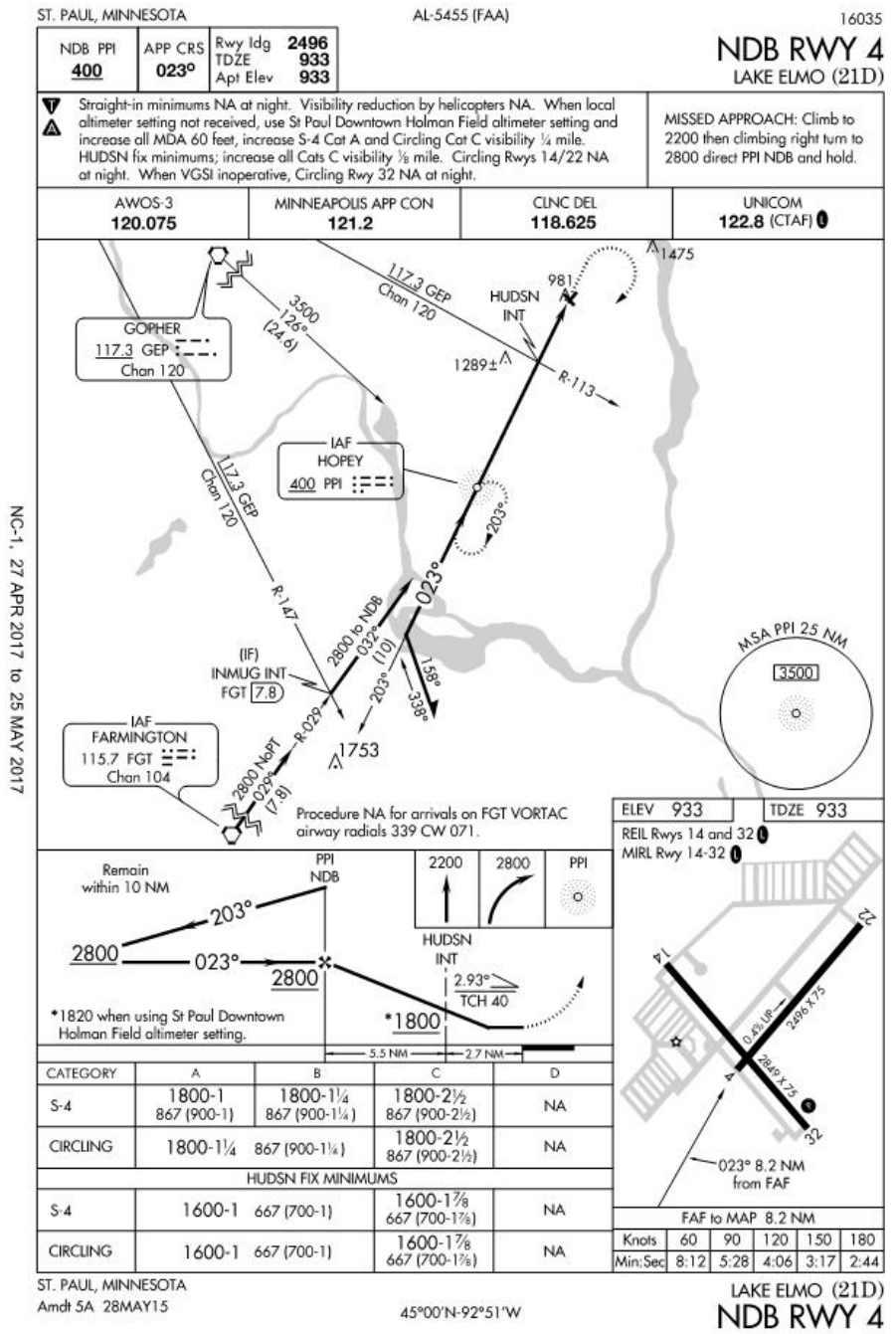
P&N Objective 3: Meet Runway Length Needs for Existing Users

- Recommended Runway 14/32 length (3,500 feet) is based on a blend of takeoff, landing, and accelerate stop distance requirements of design aircraft.
- Recommended Runway 04/22 length (2,750 feet) is based on takeoff distance requirements of design aircraft at maximum takeoff weight.

Note: Landing distances adjusted to account for wet/slippery runway conditions, and to allow landing within 70% of the available runway length.

P&N Objective 4: Upgrade the Instrument Approach Procedures

- Instrument approach procedures allow safer access to the airport, especially during inclement weather.
- Upgrading the runway approaches to modern navigational technology will improve airport safety and accessibility.



Range of Alternatives Considered
FAA Guidance

- Alternatives considered should:
  - Represent the range of reasonable alternatives.
  - Provide a clear basis for choice among options.
- No requirement for specific number or range of alternatives.
- Generally, the greater the degree of environmental effects, the wider the range of alternatives that should be considered.
- An EA may limit alternatives to the proposed action and no action if there are no conflicts concerning alternative uses of available resources.
- A preferred alternative should be identified by the EA.
- The EA should briefly explain why certain alternatives were eliminated from further study.

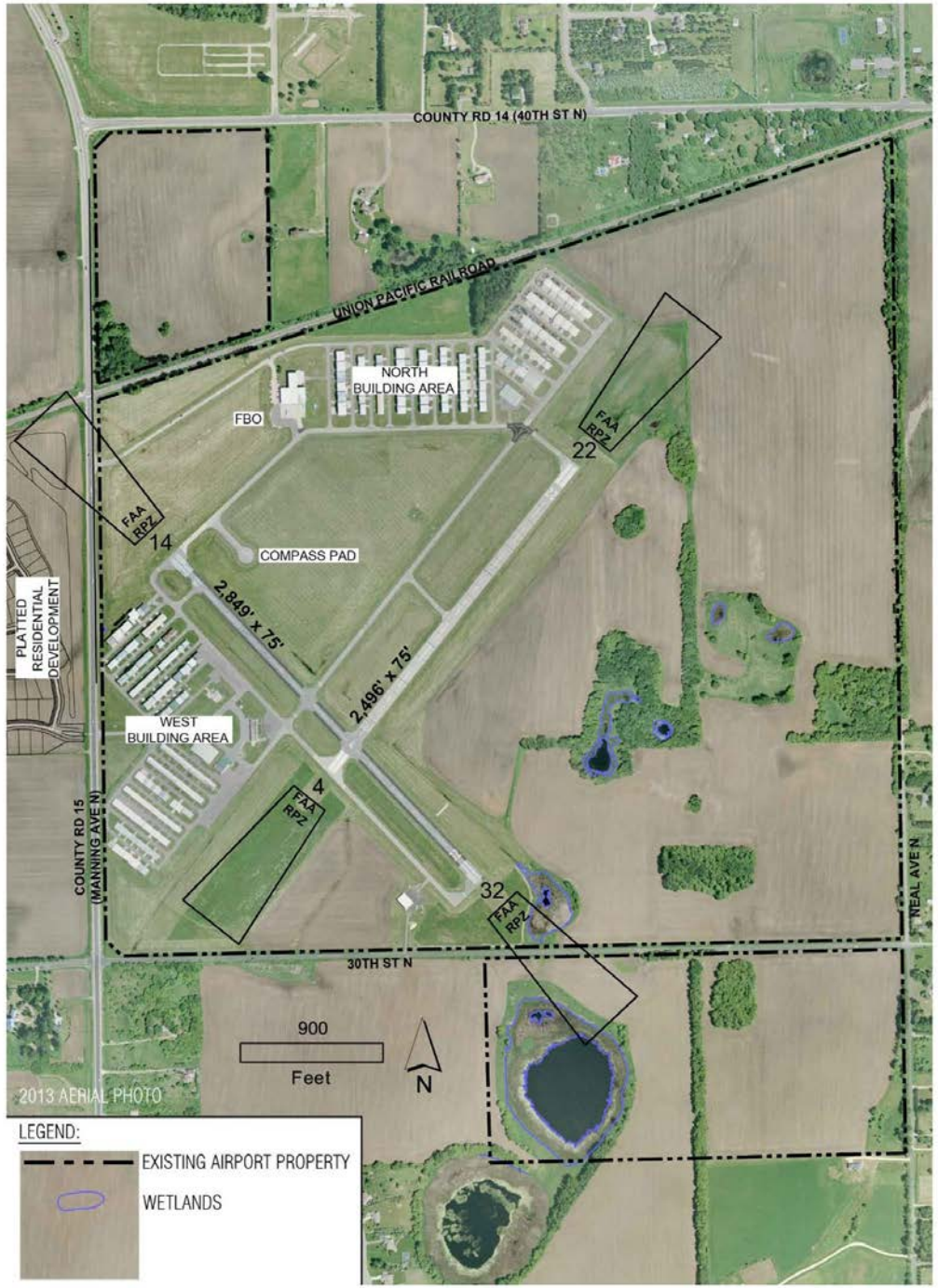
Range of Alternatives Considered
Lake Elmo Airport

- Criteria used to identify reasonable alternatives at Lake Elmo include:
  - Maintain Runway 14/32 and Runway 04/22 orientations
  - Avoid or minimize land acquisition
  - Avoid or minimize changes to airport use and aircraft flight patterns
- Five categories of alternative concepts will be considered by the EA:
  - No-Action Alternative
  - Primary Runway 14/32 Alternatives
  - 30th Street North Realignment Alternatives
  - Crosswind Runway 04/22 Alternatives
  - Instrument Approach Alternatives

No-Action Alternative

- Must be carried forward throughout the environmental review for comparison with the preferred alternative.
- Under this scenario, no improvements would be made to the airport.
- The airport would become increasingly unusable due to:
  - Failing pavement,
  - Incompatible land uses in the RPZs,
  - Inadequate runway length, and
  - Outdated/inadequate instrument approaches.
- This alternative does not meet the Purpose & Need.

Figure ES-1: Existing Airport Layout

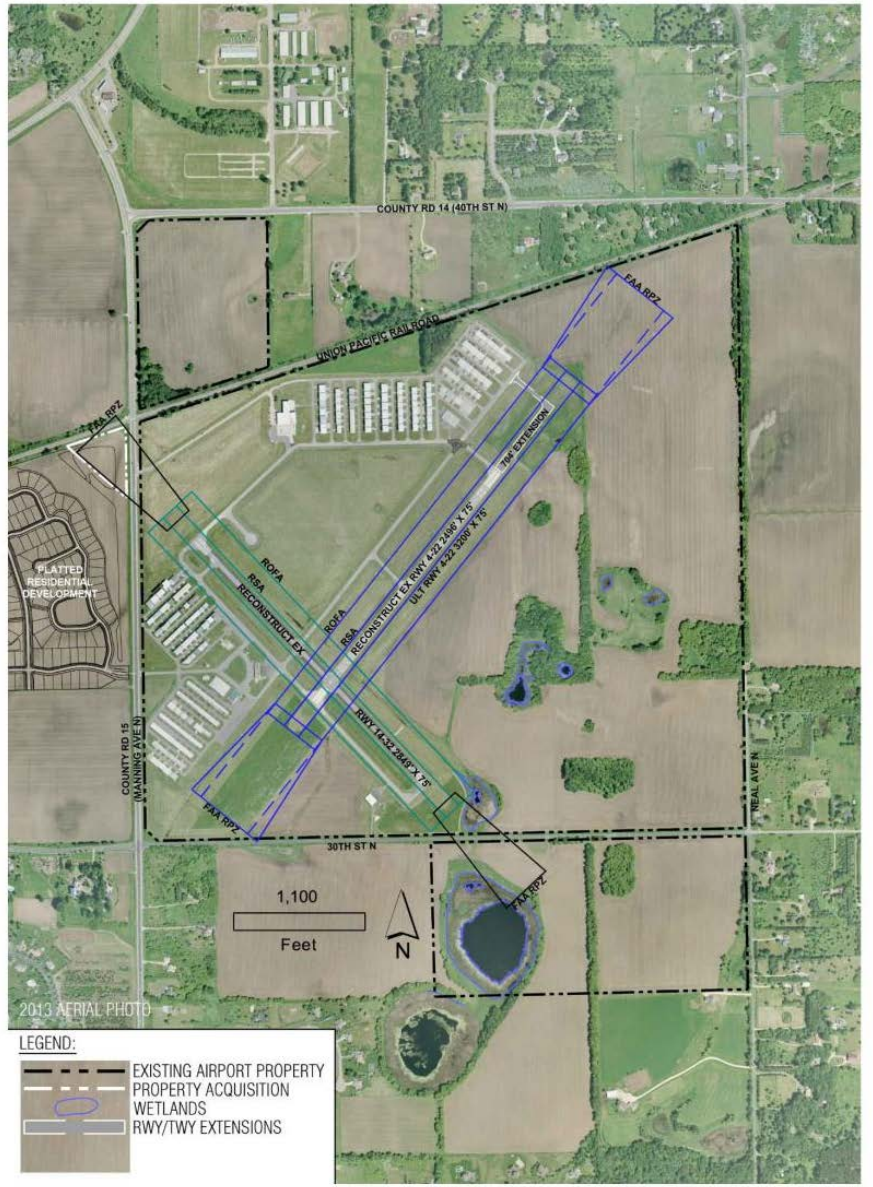


Primary Runway 14/32 Alternatives

- The LTCP considered five concepts.
- Supplemental planning identified three additional concepts.

Figure 5-1: Base Case Alternative Layout

Figure 5-2: Alternative A Layout



Primary Runway 14/32 Alternatives

Figure 5-3: Alternative B Layout

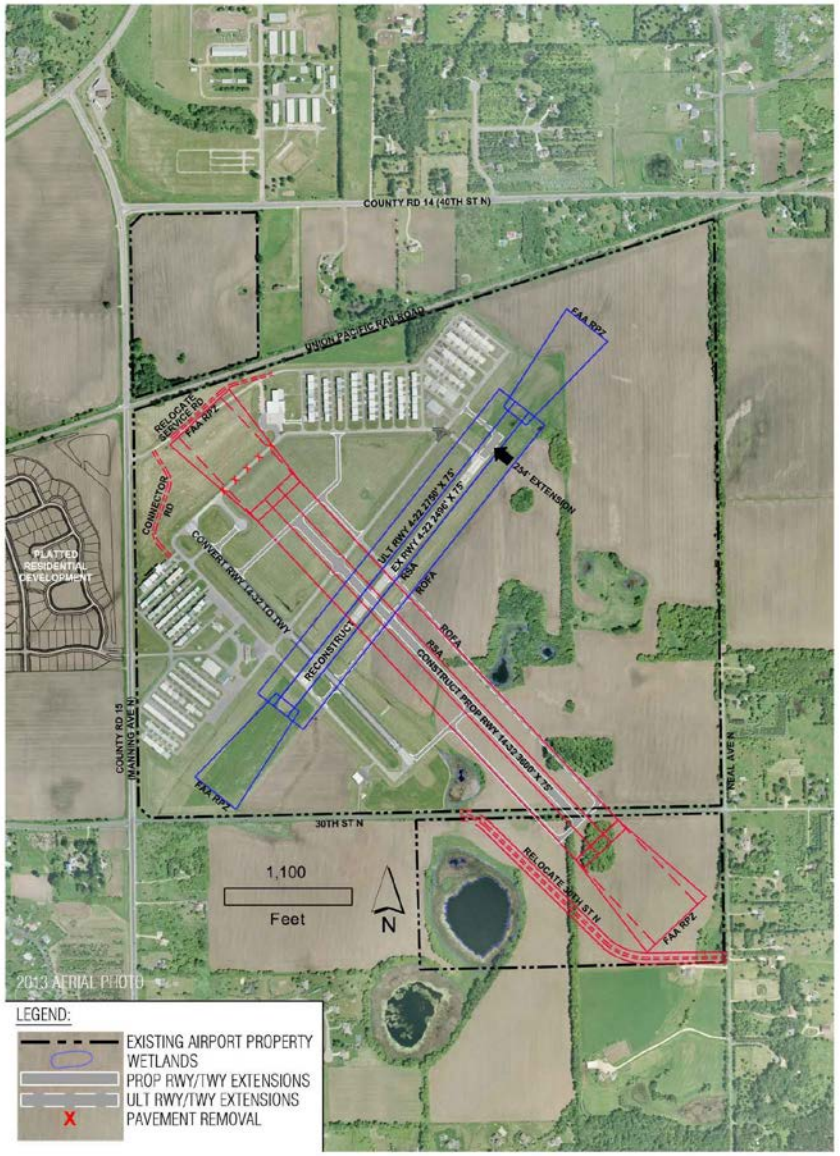


Figure ES-5: Alternative B1 (Final Preferred Alternative)

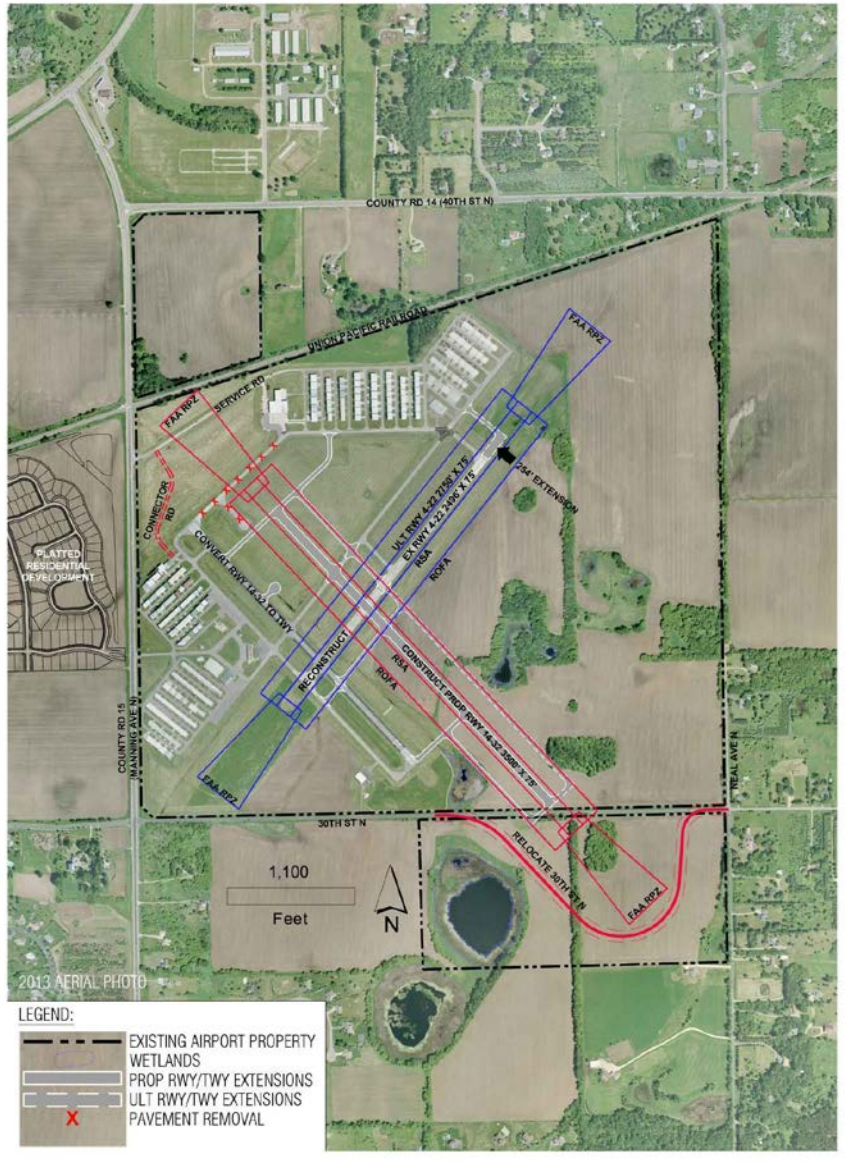
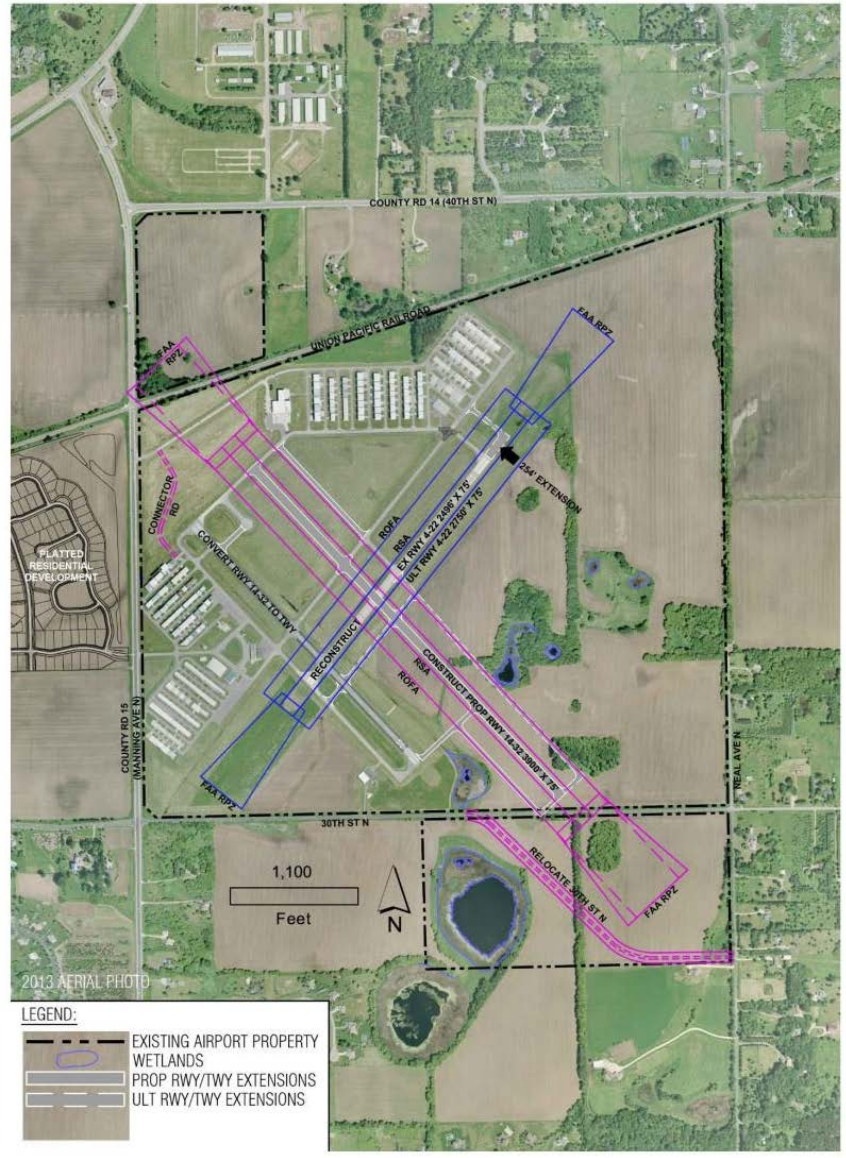


Figure 5-4: Alternative C Layout



Primary Runway 14/32 Alternatives

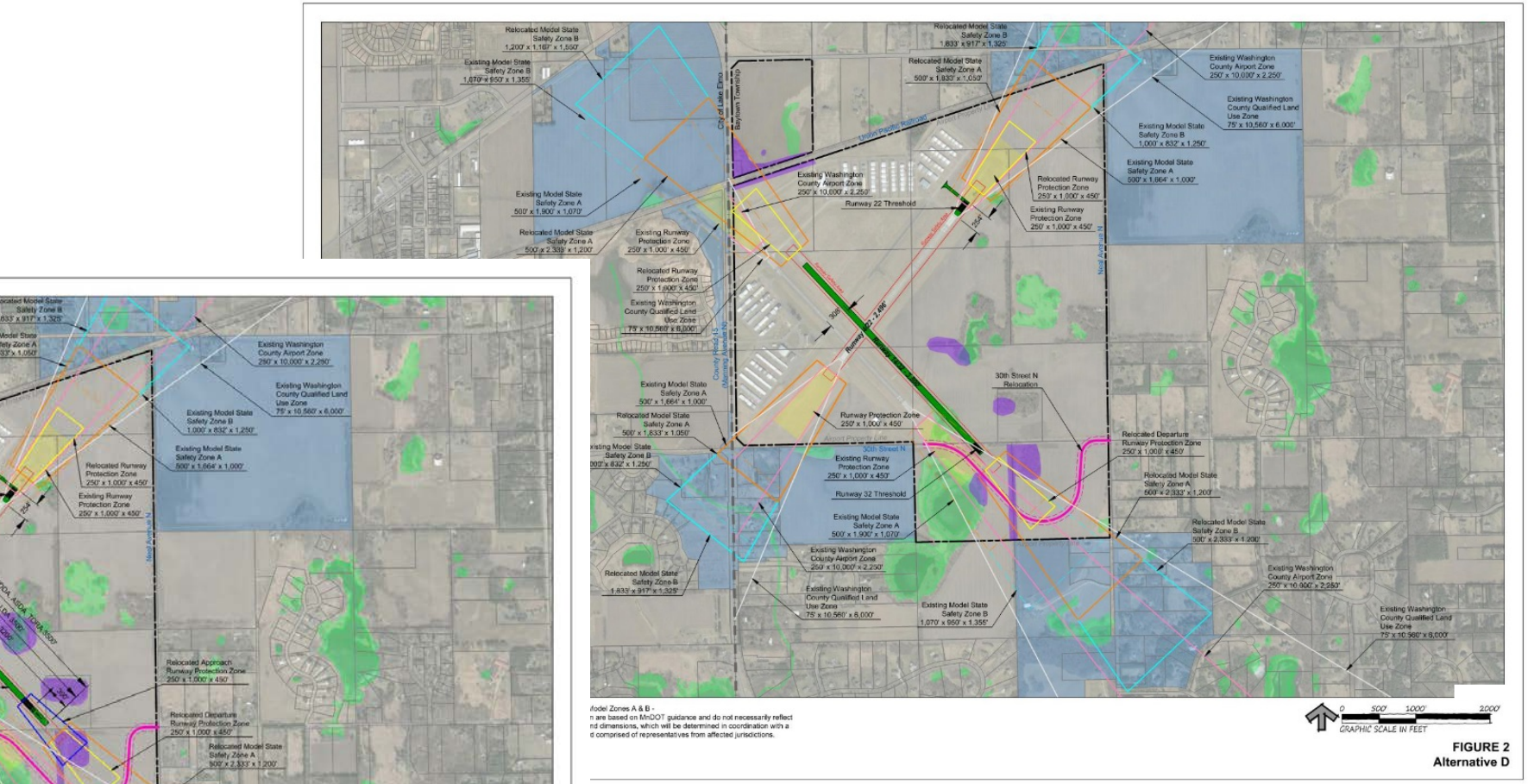
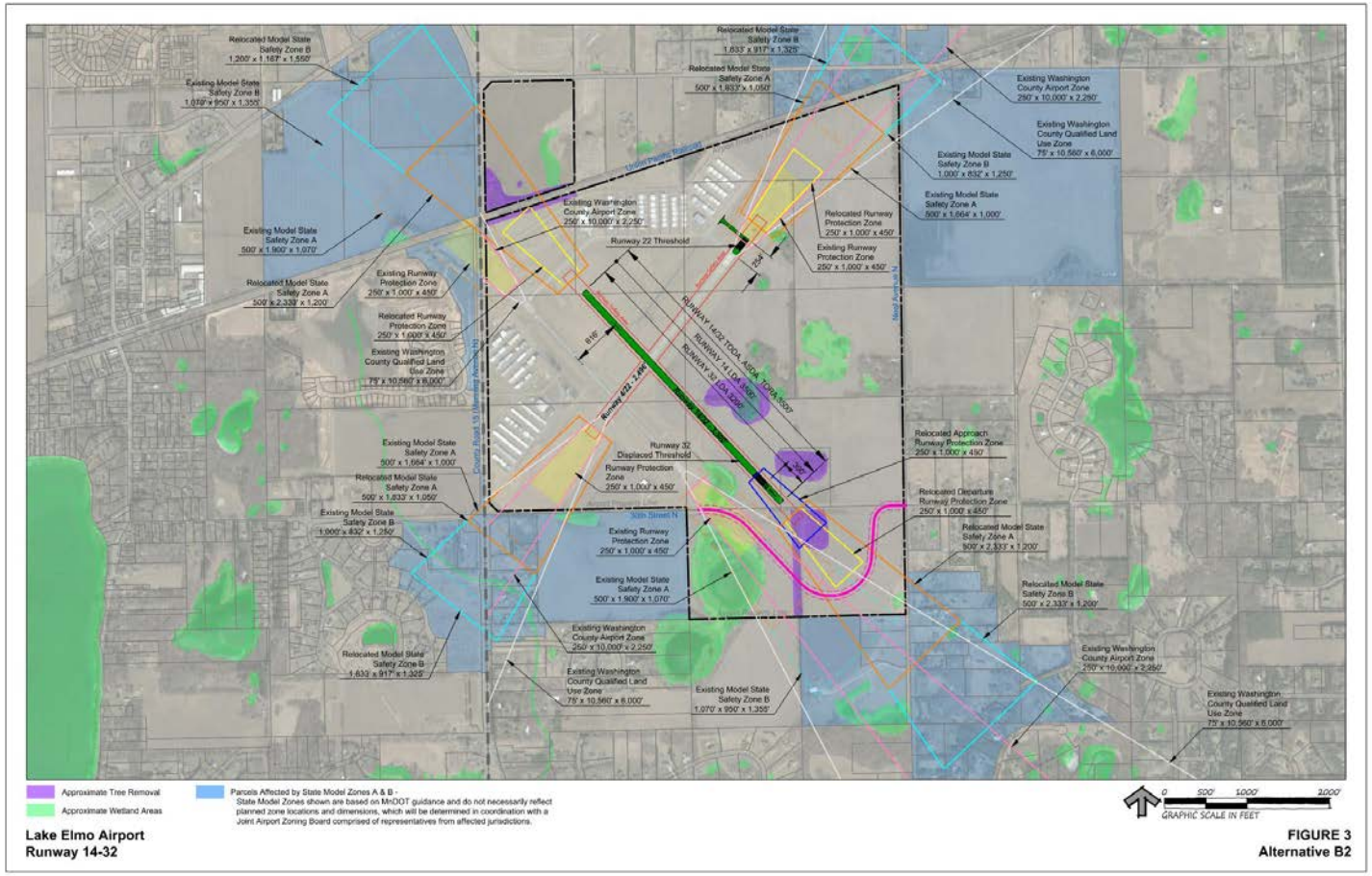


FIGURE 2
Alternative D



Lake Elmo Airport
Runway 14-32

FIGURE 3
Alternative B2

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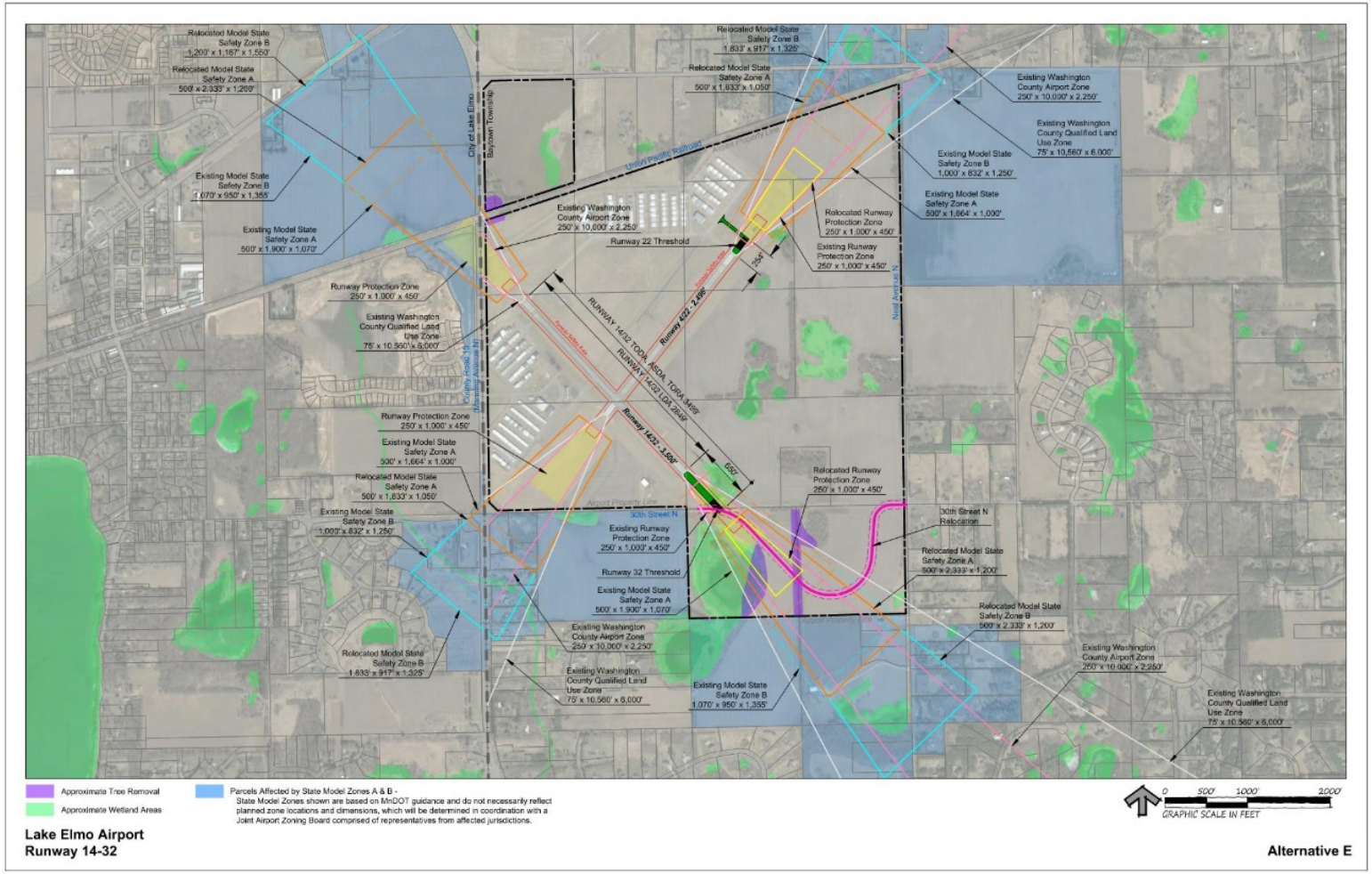
Primary Runway 14/32 Alternatives



Of the eight Runway 14/32 concepts, only four meet the Purpose & Need.

- Alternative B
- Alternative B1
- Alternative B2
- Alternative D

30th Street North Realignment Alternatives

- The LTCP considered three concepts.
- Supplemental planning identified two additional concepts.

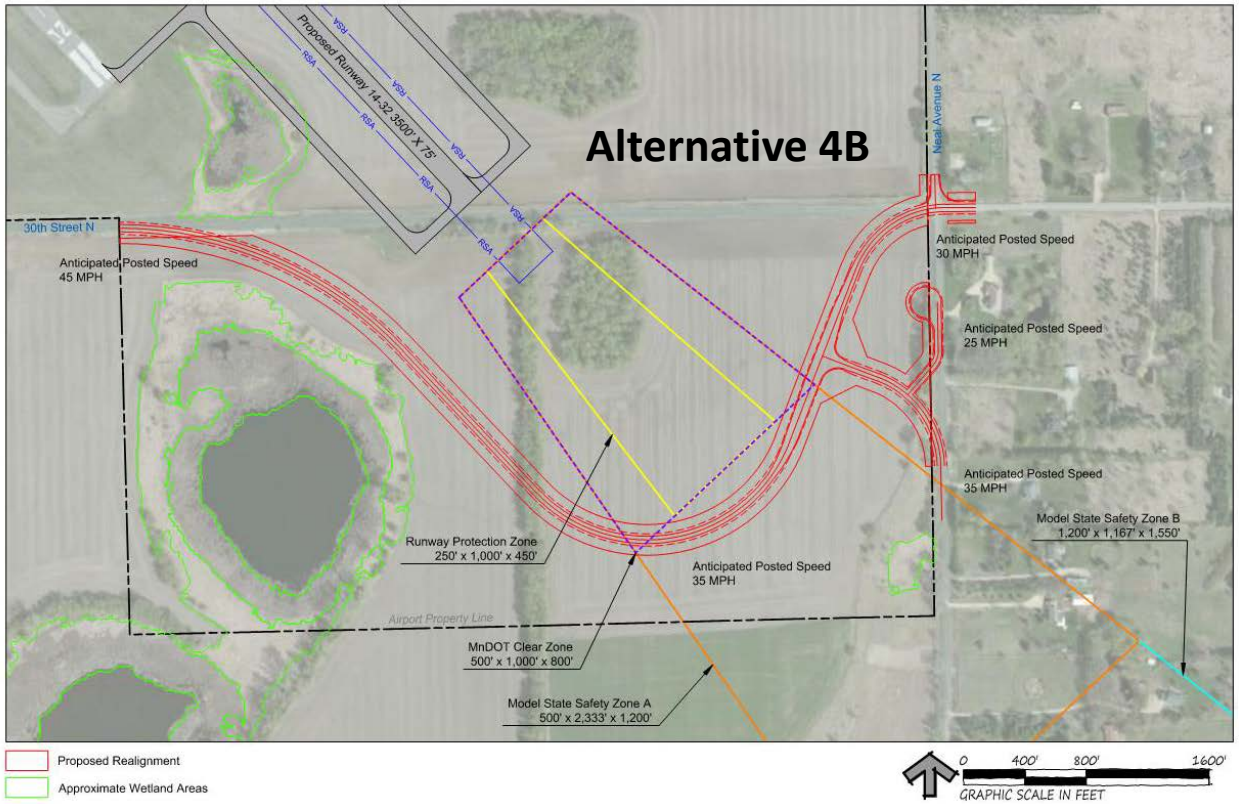
ALTERNATIVE 1
-SPEED LIMIT: 45 mph
-COMPATIBLE WITH AIRFIELD ALTERNATIVE B (3,600')
-COMPATIBLE WITH AIRFIELD ALTERNATIVE C (3,900')
-ADDS 30TH ST N TRAFFIC TO A PORTION OF NEAL AVE N
-REQUIRES CONSTRUCTION OF ADDITIONAL INTERSECTION
-LOWEST COST ALTERNATIVE

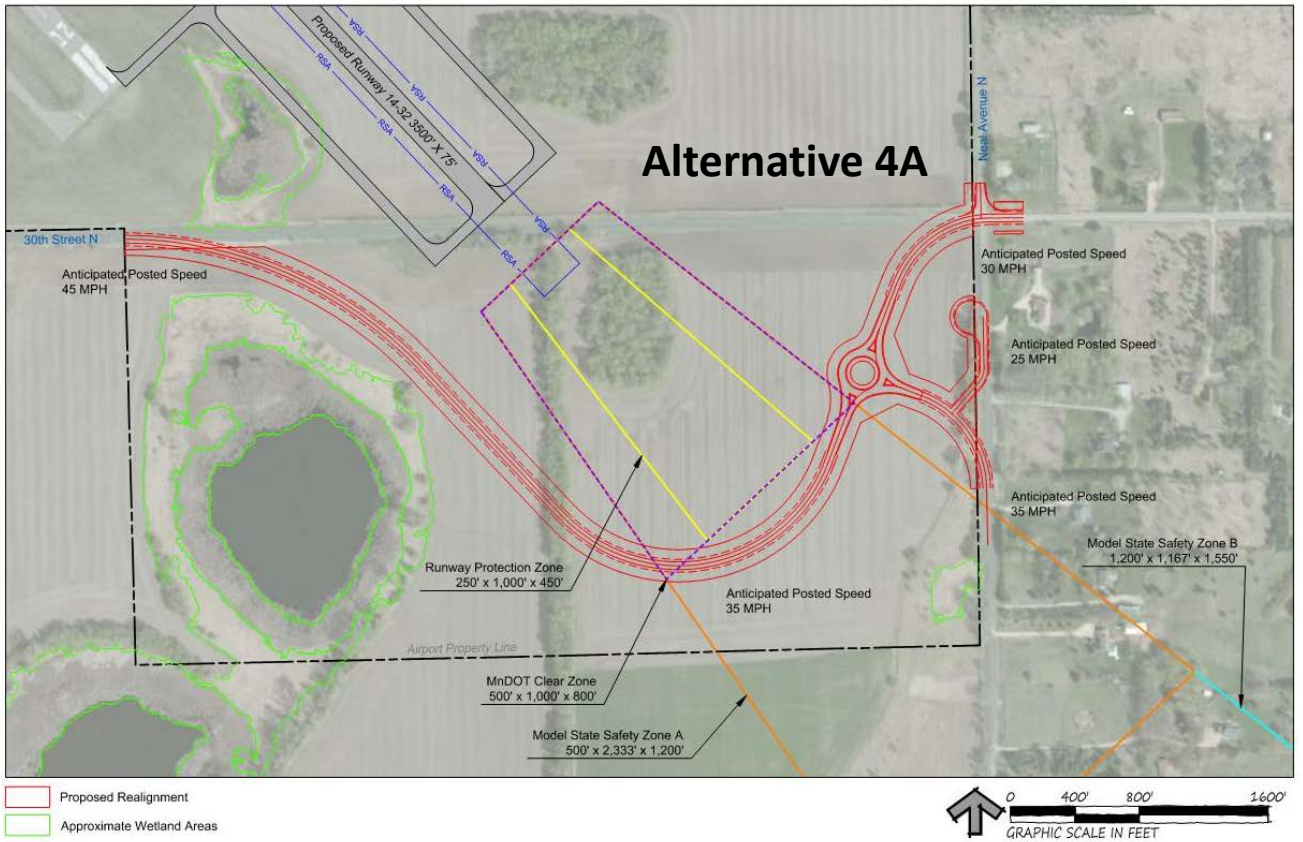
ALTERNATIVE 2
-SPEED LIMIT: 45 mph
-COMPATIBLE WITH AIRFIELD ALTERNATIVE B (3,600')
-COMPATIBLE WITH AIRFIELD ALTERNATIVE C (3,900')
-ADDS 30TH ST N TRAFFIC TO A PORTION OF NEAL AVE N
-REQUIRES CONSTRUCTION OF ADDITIONAL INTERSECTION
-HIGHEST COST ALTERNATIVE

ALTERNATIVE 3
-SPEED LIMIT: 30 mph
-RESTRICTS AIRFIELD ALT. B RUNWAY LENGTH TO 3,150'
-RESTRICTS AIRFIELD ALT. C RUNWAY LENGTH TO 3,760'
-NO ADDITIONAL INTERSECTION REQUIRED
-MIDDLE COST ALTERNATIVE

30th Street North Realignment Alternatives

- Alternatives 4A & 4B are modified hybrid versions of Alternatives 2 & 3.





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Crosswind Runway 04/22 & Instrument Approach Alternatives

- Crosswind Runway 04/22 LTCP Alternatives
  - Base Case Alternative (reconstruct only) – does not meet Purpose & Need
  - Preferred Alternative: Extend Runway 04/22 by 254 feet northeast
- Instrument Approach LTCP Alternatives
  - Preferred Alternative: Instrument Approach Upgrades
- Supplemental planning did not identify any additional alternatives for these categories.

Alternatives to be Carried Forward into the EA Lake Elmo Airport

- No-Action Alternative
- Primary Runway 14/32
  - Alternatives B, B1, B2, & D
- 30th Street North Realignment
  - Alternatives 3, 4A, & 4B
- Crosswind Runway 04/22
  - Preferred Alternative from LTCP
- Instrument Approach
  - Preferred Alternative from LTCP

Alternatives Evaluation Criteria
Lake Elmo Airport

Evaluation criteria to be used in determining preferred alternatives for Runway 14/32 and 30th Street North realignment:

1) Purpose & Need
2) Practicability Factors
   a) Financial factors
   b) Operational factors
   c) Logistical factors
3) Environmental Factors
   a) Wetlands
   b) Tree Removal
   c) Wildlife
   d) Aircraft Noise
   e) Social Effects
   f) Private Land Uses
   g) Other Unique Effects

Note: This is not a comprehensive list of environmental analysis categories required under Federal and State regulations. A more comprehensive analysis of environmental effects will be completed for the no-action and preferred alternatives.

Discussion/Questions

- CEP Meeting #3 planned for two weeks after second public event (tentatively July 2017)
- Topics for the next meeting will include:
  - A recap of the second public event
  - More on alternatives analysis
  - Initial work on Affected Environment and Environmental Consequences