

# Technical & Community Advisory Committees Meeting

May 4, 2017

Mead  
& Hunt



DETROIT METRO • WILLOW RUN  
WAYNE COUNTY AIRPORT AUTHORITY

# Agenda

- **Current Project Status**
- **Aviation Projections Recap**
- **Facility Needs Recap**
- **Recommended Future Facilities**
- **Next Project Steps**



# Current Project Status

# Current Project Status

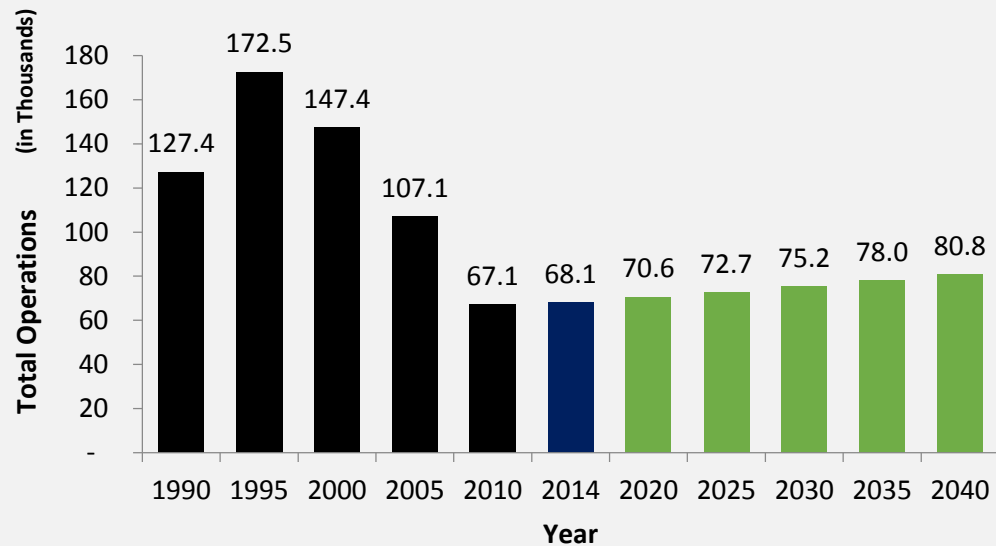
- **Inventory – complete**
- **Forecasts of aviation demand – complete**
- **Review of facility needs – complete**
- **Alternatives analysis – complete**
- **Exhibit A property map – under FAA review**
- **ALP – under FAA review**
- **Capital Improvement Plan – annually updated by WCAA**



# Aviation Projections Recap

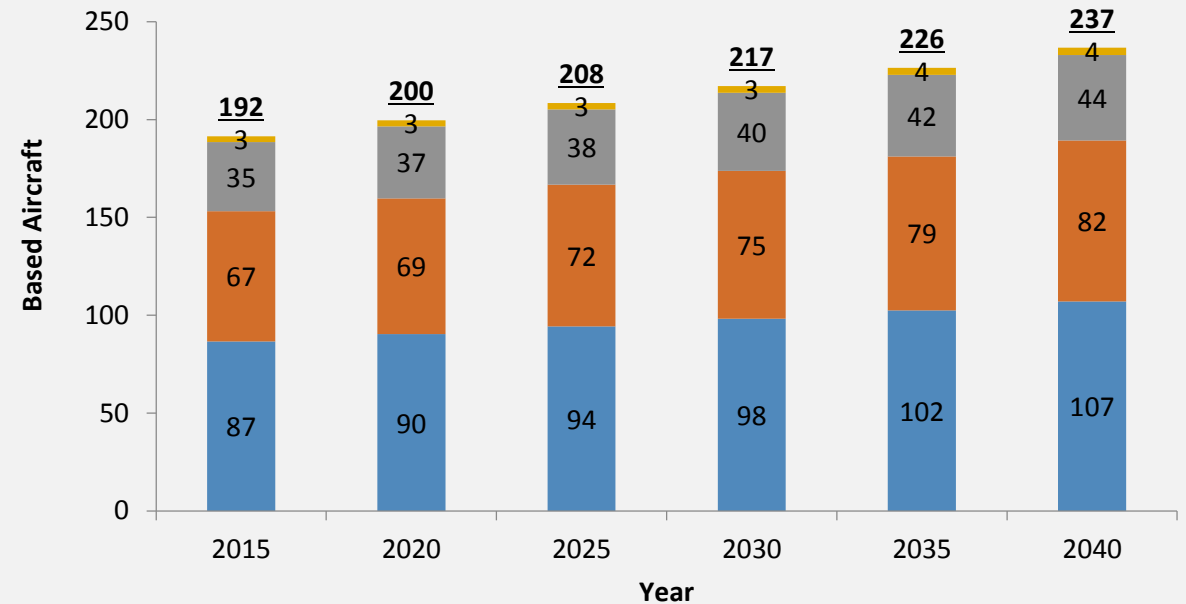
# Aviation Projections Recap

## Total Operations



2014-2040 CAGR: 0.82%

## Based Aircraft



■ Single Engine ■ Jet ■ Multi-Engine ■ Helicopter

# Critical Aircraft

## ✈ Existing critical aircraft

- *DC-9-30*
- *727-200*
- *MD-80*

## ✈ Potential critical aircraft

- *CRJ-200*
- *737 (-400,-500,-600,-700,-800)*
- *757-200*
- *767-300*



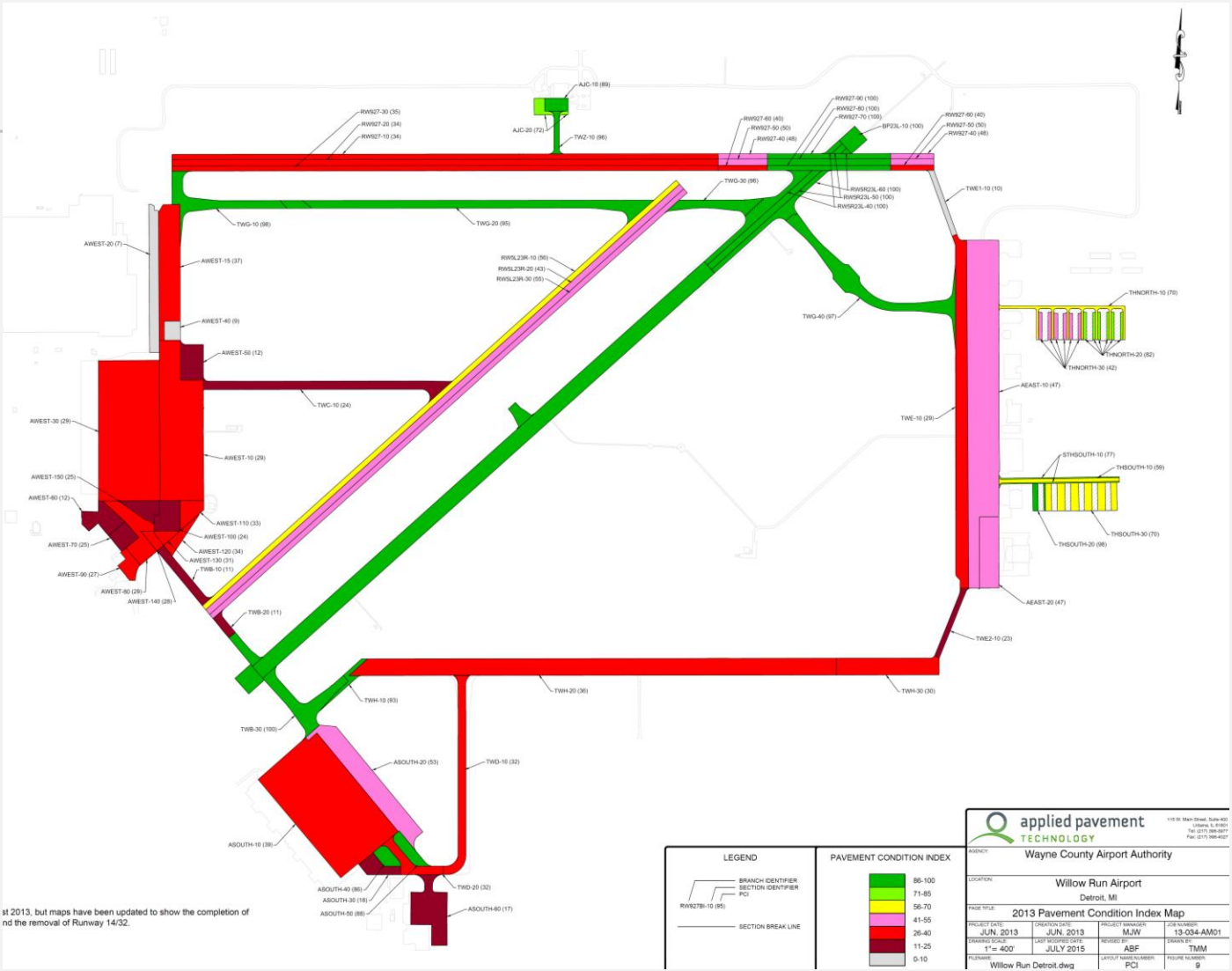
# Facility Needs Recap



# Infrastructure Needs

✈ Existing infrastructure in poor condition

- Airfield pavements
- Landside pavements
- Utilities



st 2013, but maps have been updated to show the completion of and the removal of Runway 14/32.

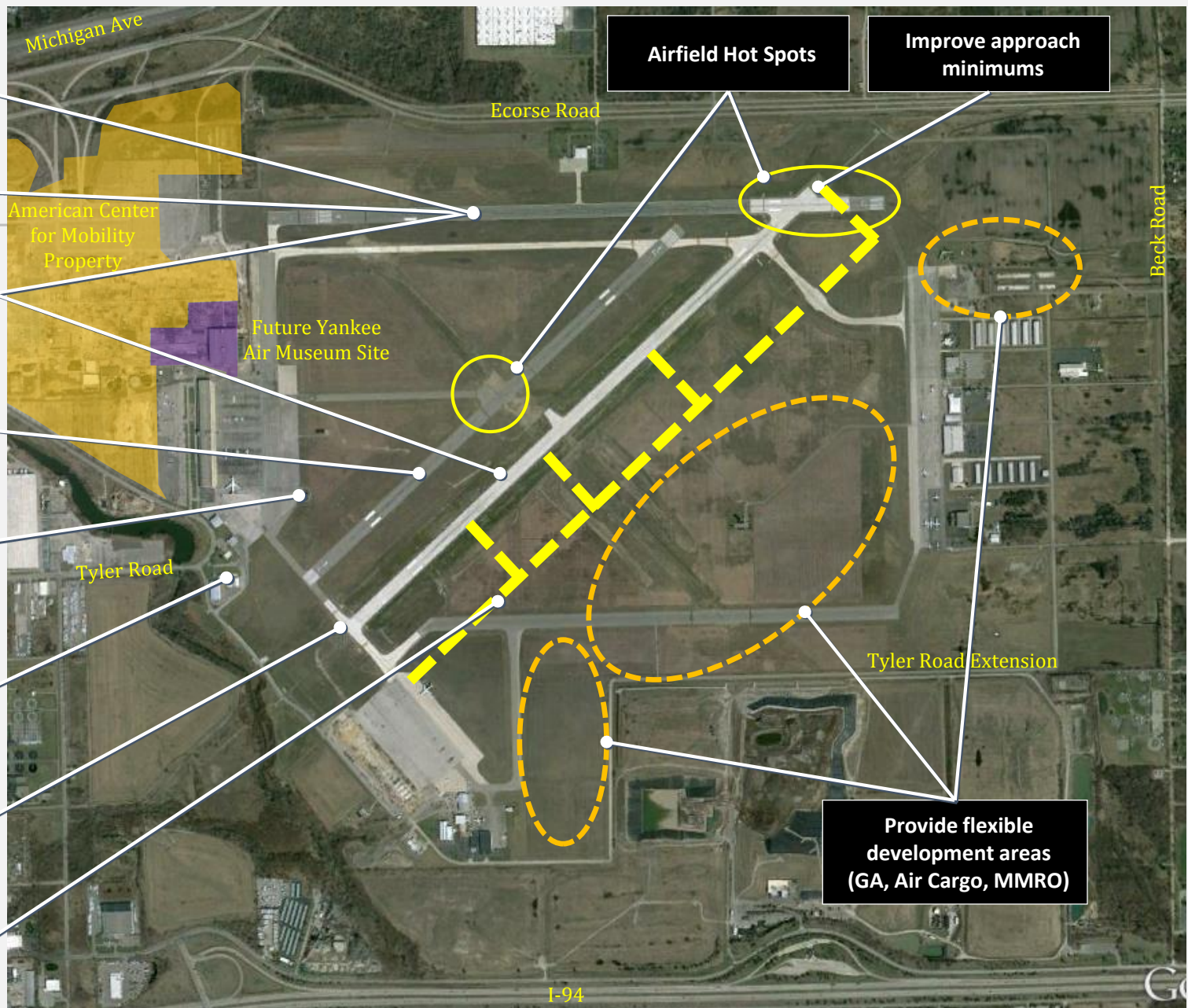
| LEGEND |                    | PAVEMENT CONDITION INDEX |        |
|--------|--------------------|--------------------------|--------|
|        | BRANCH IDENTIFIER  |                          | 95-100 |
|        | SECTION IDENTIFIER |                          | 71-85  |
|        | PCI                |                          | 56-70  |
|        |                    |                          | 41-55  |
|        | SECTION BREAK LINE |                          | 26-40  |
|        |                    |                          | 11-25  |
|        |                    |                          | 0-10   |

|   |  |  |  |
|---|--|--|--|
|   |  |  |  |
| AGENCY: Wayne County Airport Authority    |  |  |  |
| LOCATION: Willow Run Airport, Detroit, MI |  |  |  |
| PROJECT DATE: JUN 2013                    |  |  |  |
| PROJECT NUMBER: 13-034-AM01               |  |  |  |
| DRAWING SCALE: 1" = 400'                  |  |  |  |
| DATE: JULY 2015                           |  |  |  |
| DRAWING NUMBER: 9                         |  |  |  |

# Facility Needs

- Existing infrastructure in poor condition
- Runway to be designated as 10/28
- Crosswind runway recommended for light GA traffic
- Evaluate add'l runway length on either 5R/23L or 9/27
- Parallel runway not needed for capacity,
- ARFF station improvements or replacement recommended
- Improvements to Snow Removal Equipment storage facilities recommended
- Improve approach minimums
- Future parallel taxiway to Runway 5R/23L is on the FAA approved ALP



Airfield Hot Spots

Improve approach minimums

American Center for Mobility Property

Future Yankee Air Museum Site

Tyler Road

Tyler Road Extension

Provide flexible development areas (GA, Air Cargo, MMRO)

I-94

# ▶ Alternatives Analysis Recap



# Alternatives Analysis Recap

Last meeting numerous alternatives evaluated for most facilities

### Runway 5L/23R

**PREFERRED**

| Item                                      | Total Cost   | Item  | Total Cost   | Item  | Total Cost   |
|---|--------------|---|--------------|---|--------------|
| Reconstruct Runway 5L/23R (5,996' x 150') | \$26,500,000 | Shorten & Reconstruct Rwy 5L/23R (3,500' x 75') | \$ 5,500,000 | Close and Remove Rwy 5L/23R (5,996' x 150') | \$ 1,700,000 |

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### Runway 9/27

| Item                                    | Total Cost   |
|---|--------------|
| Reconstruct Runway 9/27 (7,292' x 150') | \$32,400,000 |

**PREFERRED**

| Item   | Total Cost   |
|--|--------------|
| Shorten & Reconstruct Rwy 9/27 (5,000' x 100') | \$16,100,000 |

| Item                                      | Total Cost   |
|---|--------------|
| Close and Remove Rwy 9/27 (7,292' x 150') | \$ 2,100,000 |

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### Runway Extension

→ **Alt 2**

- Extend Runway 5R/23L to south

**\$56,000,000**

WILLOW RUN AIRPORT MASTER PLAN UPDATE

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### Parallel Taxiway to Runway 5/23

WILLOW RUN AIRPORT MASTER PLAN UPDATE

| Item   | Total Cost   | Item   | Total Cost   | Item   | Total Cost   |
|--|--------------|--|--------------|--|--------------|
| East Side Parallel Taxiway (85,000 sq. yds.) | \$22,700,000 | Convert Runway 5L/23R to Parallel Taxiway (102,000 sq. yds.) | \$27,100,000 | West Side Parallel Taxiway (74,000 sq. yds.) | \$19,700,000 |

**PREFERRED**

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### Taxiway System Improvements Summary

| Item                                       | Alt 1 (remove/abandon pavement) | Alt 1A (no removal/abandon pavement) |
|--|---------------------------------|--------------------------------------|
| Reconstruct Twy B (Rwy 9/27 to Rwy 5R/23L) | \$9,900,000                     | \$9,900,000                          |
| Reconstruct Twy B (Rwy 5R/23L to Kalitta)  | \$4,300,000                     | \$4,300,000                          |
| Reconstruct Twy E                          | \$7,200,000                     | \$7,200,000                          |
| Remove Twy D                               | \$500,000                       | *\$80,000                            |
| Remove Twy C                               | \$400,000                       | *\$85,000                            |
| Remove Twy H & E2                          | \$1,800,000                     | *\$85,000                            |
| Construct East Side Parallel Twy           | \$22,700,000                    | \$22,700,000                         |
| <b>Total</b>                               | <b>\$46,800,000</b>             | <b>\$44,350,000</b>                  |

\* Note: Includes removal of small section of pavement at intersections with active taxiways to delineate closed surfaces

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### South Apron Improvements

| Alt   | Item   | Total Cost   |
|-------|--|--------------|
| Alt 1 | Reconstruct South Apron                                | \$33,200,000 |
| Alt 2 | Reconstruct South Apron (west side of Twy B & Kalitta) | \$13,400,000 |
| Alt 3 | Reconstruct South Apron (east side of Twy B)           | \$6,700,000  |
| Alt 4 | Reconstruct South Apron (Kalitta only)                 | \$4,300,000  |

**PREFERRED**

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### Hangar 1 / Administrative Offices

| Alt | Item   | Cost         |
|-----|--|--------------|
| 1a  | Rehabilitate Hangar 1 (10 year useful life)                          | \$22,000,000 |
| 1b  | Rehabilitate Hangar 1 (30 year useful life)                          | \$56,000,000 |
| 2   | Relocate Hangar 1 (6 of 8 bays)                                      | \$38,500,000 |
|     | Construct new admin office   | \$1,000,000  |
| 3   | Transfer Hangar 1 to private entity & construct modular admin office | \$250,000    |
| 4   | Demolish Hangar 1 & construct modular admin office                   | \$4,250,000  |

**PREFERRED**

Approximate annual revenue generated from Hangar 1: \$835,000  
(Note: includes leases, rents, landing fees, and fuel sales associated with Hangar 1 activity)

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### ARFF Facility

| Item  | Total Cost   | Response Time (in minutes) |          |
|---|--------------|----------------------------|----------|
|   |              | Rwy 5R/23L                 | Rwy 9/27 |
| ARFF Alt 1<br>Refurbish (3,300 sq ft) & expand existing ARFF bldg                           | \$ 2,500,000 | 2:38                       | 2:54     |
| ARFF Alt 2<br>New ARFF building & associated landside pavements (requires parallel taxiway) | \$ 4,300,000 | 1:39                       | 2:45     |
| ARFF Alt 3<br>New ARFF building & associated landside pavements                             | \$ 4,000,000 | 2:22                       | 2:42     |

**PREFERRED**

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### West Apron Improvements

**PREFERRED**

| Item                                       | Total Cost   | Item  | Total Cost   | Item                                  | Total Cost   |
|--|--------------|---|--------------|---------------------------------------|--------------|
| Reconstruct West Apron (incl Eagle flight) | \$28,100,000 | Reconstruct West Apron at 75% size & reduced strength | \$22,400,000 | Reconstruct West Apron (Eagle flight) | \$ 3,300,000 |

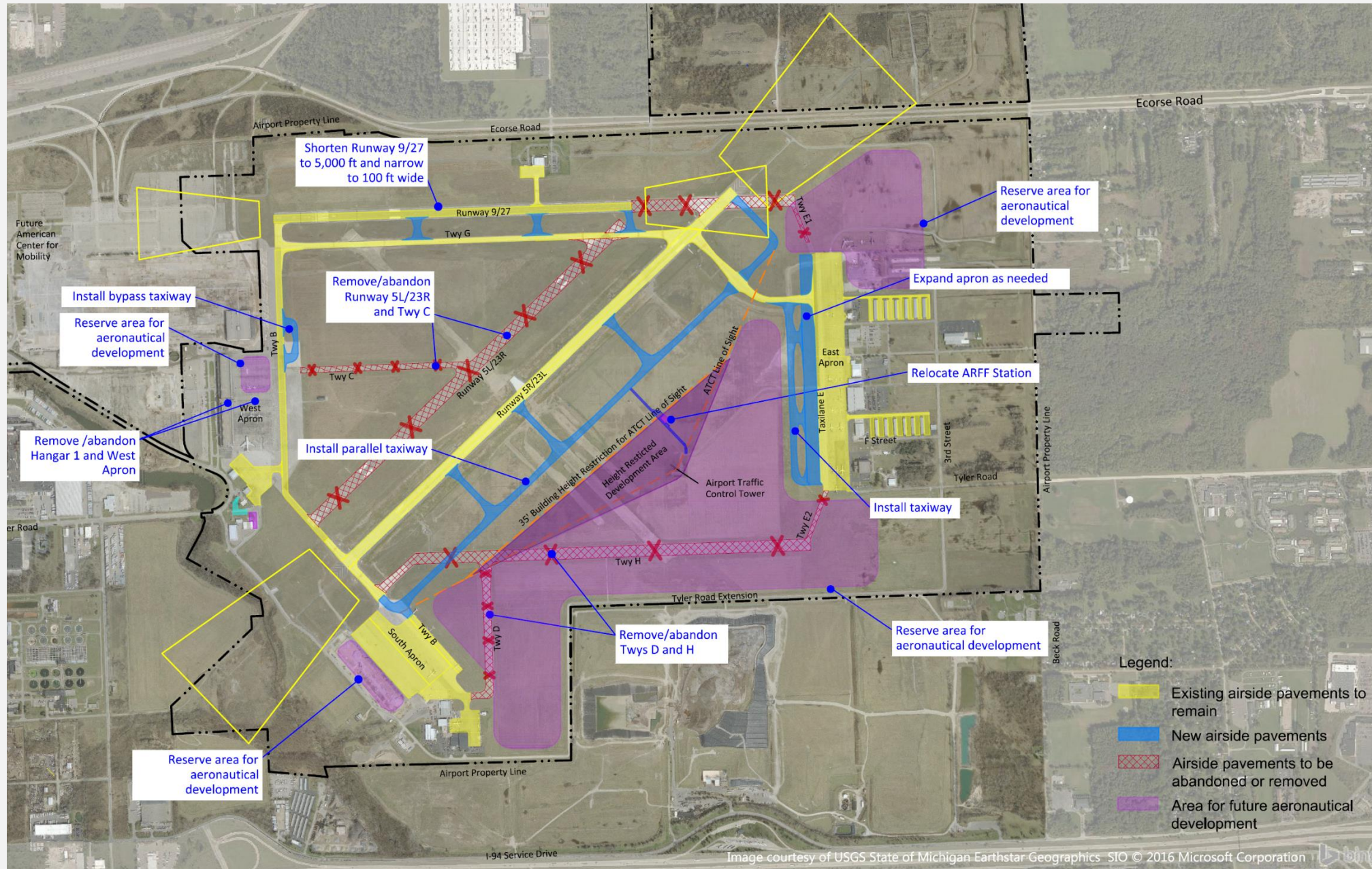
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# Factors Influencing Recommended Alternatives

- **Level of investment needed for all facility requirements**
  - *Roughly \$200 million for airside, landside, and utility needs*
- **FAA design standards**
- **Availability of federal, state, and local funding**
- **Project eligibility for federal & state funding sources**



# Recommended Future Facilities



# Next Project Steps

# Next Project Steps

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## → **Public Information Meeting**

- *Tonight – 5pm-7pm*
- *Holiday Inn Express Hotel – Belleville Road exit I-94*

## → **Complete ALP**

## → **Complete Exhibit A**

## → **WCAA preparation of annual Capital Improvement Plan**

## → **Publish Master Plan**



# Questions and Open Discussion

✈️ **Thank you for your time!**

