September 7, 2007

Dear Mr. Gubry;

The Master Plan Study for Detroit Metro Airport (Airport) has determined the need for additional departure length on Runway 3L-21R. The Wayne County Airport Authority (WCAA) is currently evaluating a number of alternatives for extending the runway. Before the WCAA can make a decision on the best course of action, we need to better understand the operational impacts associated with extending Runway 3L-21R to the south.

Background

Runways 4R-22L and 3L-21R are the primary departure runways for the Airport. Runway 4R-22L is 12,000 feet long while Runway 3L-21R is 8,500 feet long. The current length of Runway 3L-21R is inadequate for some aircraft types to operate at their full payload potential during the warmer summer months or during the winter when the runway is contaminated with ice or snow. This includes DC-9 (30 and 50 series), A-319, A320, B757-300, and A-340-200 aircraft, which represent a significant portion of the current and future fleet mix at the Airport. Furthermore, because it offers significantly longer departure length, a majority of pilots request Runway 4R-22L over Runway 3L-21R. This preference for Runway 4R-22L creates an imbalance in the departure demand, resulting in increased airfield congestion and aircraft delays. This imbalance will be exacerbated in 2009 when the FAA is scheduled to begin using Runway 4R-22L as a third arrival runway during peak arrival periods. When this occurs, Runway 3L-21R will become the lone primary departure runway at the airport.

The Master Plan recommends extending Runway 3L-21R to approximately 12,000 feet ultimately. This long-term recommendation is based on several assumptions regarding technology improvements, fleet mix changes and aircraft operating capabilities, and airline marketing strategies that may change over time. In the near-term, a departure length of at least 9,800 feet is recommended to improve operational efficiency by enabling more aircraft to use Runway 3L-21R. Increasing the length of Runway 3L-21R will also provide necessary redundancy and increased flexibility for snow removal operations and during routine and emergency maintenance. Given the aging condition of the pavement at the Airport, routine and emergency maintenance is occurring more frequently. The recommendation to extend Runway 3L-21R to 9,800 feet is consistent with the results of an independent analysis of departure runway length requirements and, moreover, has been approved by a majority-in-interest of the carriers at the Airport.

Operating Configuration

DTW operates four parallel north-south oriented runways and two parallel crosswind runways as illustrated in **Exhibit 1**. As shown on Exhibit 1, Taxiways J and T serve as perimeter taxiways enabling unabated bi-directional flow around Runway 3L-21R in all operating configurations. Both FAA-ATC and the carriers have indicated a strong preference to avoid runway crossings through the use of perimeter

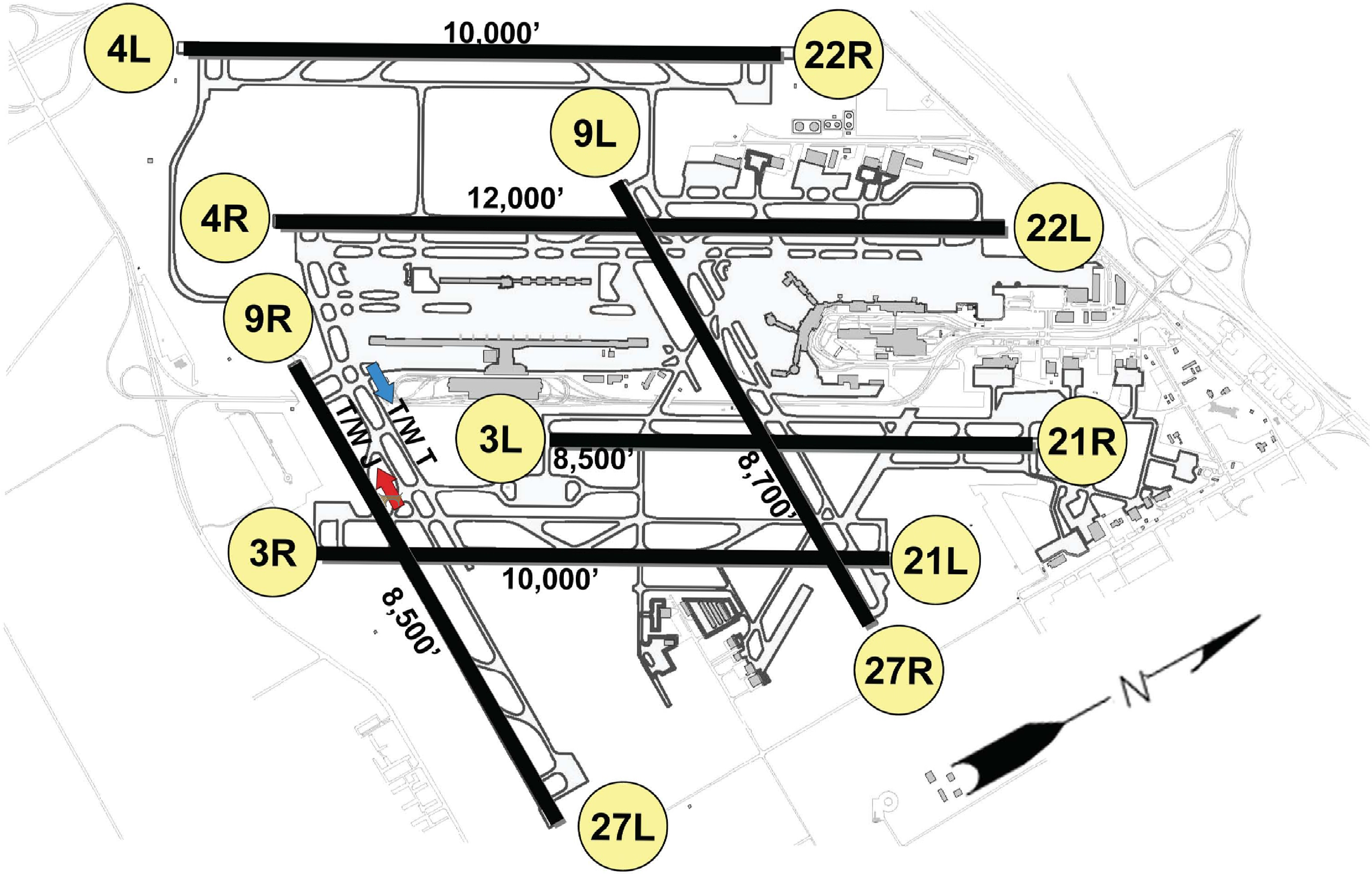
taxiways, in particular using Taxiways J and T. Runway crossing requires additional coordination between pilots and air traffic control which; 1) increases air traffic controller workload, 2) increases the risk of incursions, and 3) typically results in aircraft delays. While extending Runway 3l-21R to the south would provide operational benefits (shorter departure queues, reduced airfield congestion, etc.) it is unclear if there would be operational restrictions as a result of the limited TERPS departure obstruction clearance surface overlying existing Taxiways J and T. The WCAA is concerned that restrictions to Taxiways J and T could effectively negate the operational benefits of the runway extension.

Airspace Review

We are requesting a determination of the anticipated operating restrictions to Taxiways J and T, if any, associated with an extension of Runway 3L-21R to the south by approximately 1,300 feet as depicted in **Exhibit 2**. We are also requesting a similar determination for potential future taxiways south of Runway 9R-27L as depicted on **Exhibit 3**. Both Exhibits 2 and 3 illustrate the proposed 1,300 foot extension of Runway 3L-21R with the TERPS 40:1 departure obstruction clearance surface and the adjacent taxi flows in a south flow operating configuration.

If you have any questions or concerns, please call me at (734) 961-3200.

Sincerely,



Detroit Metropolitan
Wayne County Airport

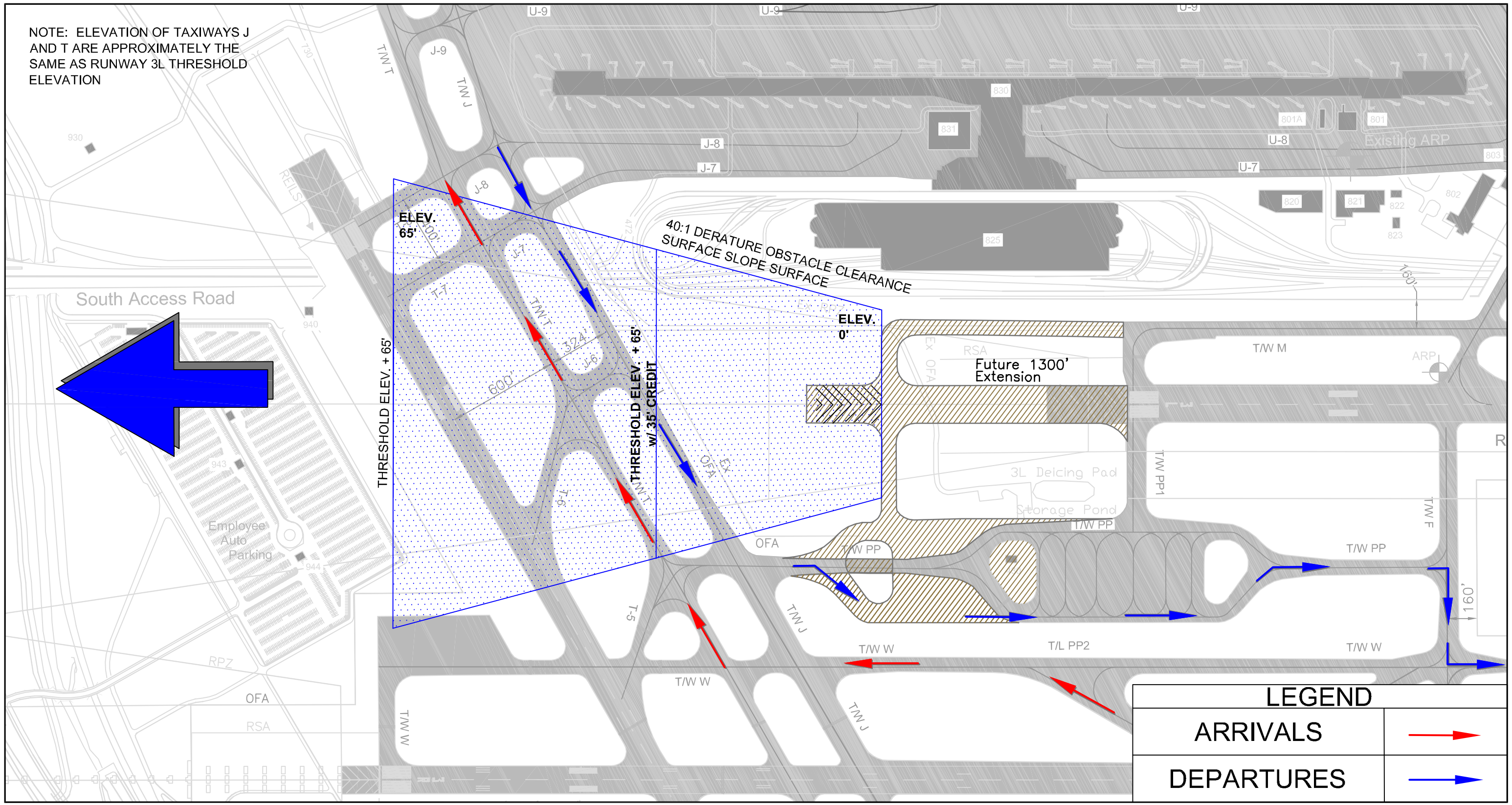
DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

RUNWAY LAYOUT

0 XXX XXXX
NOT TO SCALE

jda

NOTE: ELEVATION OF TAXIWAYS J AND T ARE APPROXIMATELY THE SAME AS RUNWAY 3L THRESHOLD ELEVATION



Detroit Metropolitan Wayne County Airport

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FUTURE CONDITION

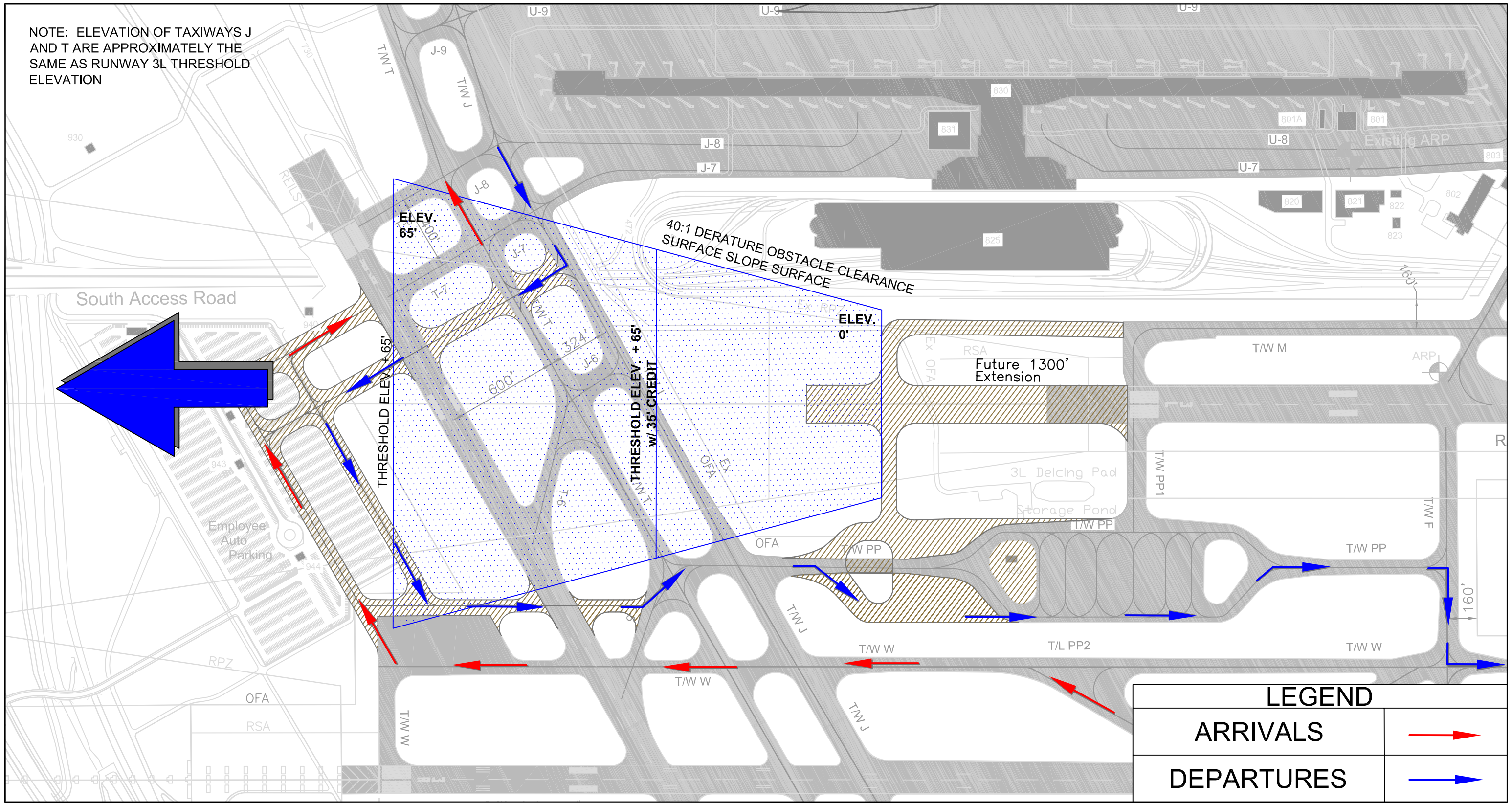
40:1 DEPARTURE OBSTACLE CLEARANCE SURFACE (1300' SOUTH EXTENSION)

0 500' 1,000'

jda

EXHIBIT 2

NOTE: ELEVATION OF TAXIWAYS J AND T ARE APPROXIMATELY THE SAME AS RUNWAY 3L THRESHOLD ELEVATION



Detroit Metropolitan Wayne County Airport

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

FUTURE CONDITION

40:1 DEPARTURE OBSTACLE CLEARANCE SURFACE (1300' SOUTH EXTENSION)

0 500' 1,000'
Scale: 1" = 500'

jda

EXHIBIT 3

U.S. Department
of Transportation
**Federal Aviation
Administration**

**Detroit Airports District Office
11677 South Wayne Road
Suite 107
Romulus, MI 48174**

August 20, 2008

Wayne G. Sieloff, A.I.A.
Director of Planning Design and Construction
Wayne County Airport Authority
L.C. Smith Terminal – Mezzanine
Detroit MI 48242

Dear Mr. Sieloff:

Detroit Metropolitan Wayne County Airport, Detroit, Michigan
Airport Layout Plan (ALP) Review for Runway 3L Extension and End Around Taxiway
Airspace Case No. 2007-AGL-942-NRA

We have completed our review of the ALP filed by Jacobsen & Daniels associates for the Detroit Metropolitan Airport. **We cannot approve** the concept depicted on the ALP at this time. You and your consultants should review the "Results" section of this letter to understand our concerns. The enclosed "General Airspace Comments" provide additional general information to guide future development of the airport.

Proposed Development

The last ALP was approved on 8/21/1998 under Airspace Case 97-AGL-602-NRA. The approved ALP depicts this extension. The extension was studied under the follow airspace cases; 90-AGL-601-NRA, 92-AGL-768-NRA, 92-AGL-769-NRA, and 93-AGL-699-NRA.

This airspace case was submitted to determine what impact, if any, the approved runway extension may have on current taxiway routes and clearances. The proposed extension meets current FAA design standards as defined in FAA Advisory Circular (AC) 150/5300-13 "*Airport Design*". The future extension meets all Runway Protection Zone (RPZ) and Part 77 surfaces requirements. However, there is concern as to how the new 40:1 departure surface will be applied to aircraft taxiing into the departure trapezoid. Currently, aircraft taxiing on Taxiways "J" and "T" move independently of aircraft departure traffic on Runway 21R. The airport sponsor needs to know what impacts, if any, the runway extension would have on this.

Exhibit 1 of the airspace submittal depicted the plan view of the proposed runway extension and highlights the critical point on the taxi route as the intersection of Taxiway "J" and the 40:1 departure obstacle clearance surface (OCS). Exhibit 1A depicts the

profile view with the design aircraft (B747-400) on the taxiway at this critical point. The tail of the aircraft penetrates the new OCS slope by approximately 44'.

Exhibit 2 of the airspace submittal depicts an expensive but feasible taxiway system improvement that provides additional distance between the taxiway and the end of runway extension. However, there still is a critical point for these aircraft as they taxi back to the Northwest Terminal Complex. Exhibit 2A depicts the profile view with the design aircraft (B747-400) on the taxiway at this critical point. The tail of the aircraft penetrates the new OCS slope by approximately 23'.

Design Group

The following design groups, runway lengths, aircraft weights or critical design aircraft were used for this study:

Runway	Length	Status (E or P)	Design Group	Weight	Approach Visibility Minimums
3L/21R	8,500'	E	D-V	>12,500	NDB 600 1-1/2: RNAV 600-1
3L/21R	9,800'	P	D-V	>12,500	no change : no change

Results

Based upon the airspace study FAA identified these concerns:

1. The proposed taxi routes would cause a new and deliberate penetration of the OCS. This is not allowable based upon the information presented to date.

2. The 35' "relief" sometimes discussed, is no longer available for Instrument Flight Rules (IFR) departures. For objects that penetrate the 40:1 departure surface and result in an increased climb gradient to an altitude less than 200' above the Departure End of Runway (DER) elevation, the proposed action would be to add a take off note that would be published in the US Terminal Procedure book.

3. How will pilots departing Runway 21R at night, be able to differentiate aircraft on taxiway between "J" and aircraft at the end of Runway 21R?

4. Per paragraph 415 of AC 150/5300-13, change 12, "*Airport Design*", AAS-100 must pre-approve any proposed development using End Around Taxiways (EATs), such as this. In order for them to provide comments, additional study will be required. At a minimum the airport sponsor must provide the capacity benefits and cost of the proposal.

One way to avoid these concerns is not to taxi aircraft on taxiway "J" when Runway 21R is being used for departures. However, if this is proposed, additional coordination and study will be required, to determine the impacts on capacity at the airport. We recommend that the airport sponsor study an extension to the North. This could be

compared to the proposed extension to the South to determine which alternative is more efficient and cost effective.

If you have any questions, please contact me at (734) 229-2905.

Sincerely,

Ernest Gubry
Environmental Protection Specialist
Detroit Airports District Office

cc: Brad Jacobsen at JDA Inc.
Bob Benko, FAA AGL-622.1
Tom Schauer, FAA AGL-BIS-ADO
Merle Perrine, FAA AGL-230, Flight Standards
Dale Karns, FAA AJW-327E, Flight Procedures Office
Gary Ancinec, FAA DTW ATCT

General Airspace Comments

1. Approval of the ALP is not a commitment of Federal funding for the proposed development. Additional justification will be required for the proposed development.

2. If design critical aircraft or aircraft groups change, the FAA must reevaluate this ALP. This ALP was reviewed based upon a D-V current and future design critical aircraft.

3. FAA policy is the Runway Protection Zone (RPZ) should be acquired in fee. If the airport sponsor determines fee title is impracticable, an avigation easement is required. If the FAA concurs with an avigation easement it must ensure that there is no "congregation of people" in the RPZ.

4. All development depicted on this ALP must comply with the National Environmental Policy Act (NEPA) of 1969. Prior FAA environmental approval is required for all airport development depicted on this ALP. Additional requirements concerning FAA NEPA approval can be found in FAA Order 5050.4B. "*National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions.*"

5. The ALP identified a proposed runway extension. This will require close coordination with several FAA offices. A survey must also be completed. Publication of revised Instrument Approach Procedures (IAPs) could take from 18 months to two years after runway data is submitted. Review of this ALP does not constitute an automatic request for amended procedures or in newly identified obstructions being added or removed from the obstruction database. All obstacles identified as penetrating surfaces should be mitigated as soon as possible in order to achieve the lowest landing/departure minimums possible. Noting on the ALP that an obstruction will be removed does not constitute an official notification that an obstruction has been removed. If it is noted that a tree has been identified, but will be removed later, this action must be followed-up and a confirmation letter sent that the tree(s) have actually been removed. Refer to FAA Advisory Circulars (AC) 150/5300 –16, "*General Guidance And Specifications For Aeronautical Surveys: Establishment Of Geodetic Control And Submission To The National Geodetic Survey*", AC 150/5300-17, "*General Guidance And Specifications For Aeronautical Survey Airport Imagery Acquisition And Submission To The National Geodetic Survey (NGS)*" and AC 150/5300-18, "*General Guidance And Specifications For Submission Of Aeronautical Surveys To NGS: Field Data Collection And Geographic Information System (GIS) Standards*".

6. The FAA cannot prevent erection of any structure near an airport. Airport environs can only be protected through state and local zoning ordinances, building regulations, and like requirements. To avoid conflicts with future development,

we recommend that you utilize the ALP when preparing leases. We further recommend that you provide copies to state and local planning and zoning boards as well as county and city officials. We recommend that you encourage them to adopt compatible land use criteria in and around the airport. Copies should also be distributed to Fixed Base Operators (FBO's) and airport users.

7. This review does not include a detailed evaluation of actual construction. Prior to constructing any structures on the airport (especially hangars), a notice (FAA Form 7460-1) must be filed with this office. This review does not include approval for temporary construction equipment used on site during actual construction (cranes, equipment staging areas, site access routes, etc.). The FAA must review a separate construction safety-phasing plan for any project no less than 60 days prior to the beginning of construction. Each proposed construction activity identified on the ALP shall be submitted as a separate study. FAA must approve the safety-phasing plan before any construction activity can begin. The airport must take all measures necessary during construction to ensure there are no runway incursions.

8. The Airport and Airway Improvement Act (49 U.S.C. 47107(a)(16)(D)) requires the sponsor to eliminate any adverse effects on Federal facilities, or bear all costs to relocate those facilities that are a result of an airport change. If the proposed development requires any displaced or relocated FAA facility, the construction will have to be coordinated through ANI-480 in order to establish reimbursable funding for the engineering and relocation.

9. The FAA Flight Procedures Office (FPO) must be notified at least 5 days prior to any temporary displacement and/or relocation of the thresholds. The latitude/longitude and elevation of the displaced/new threshold locations as well as any new Touch Down Zone Elevation (TDZE) information must be provided. This notification time is necessary for issuance of NOTAMS. The airport manager is responsible for issuing all required local NOTAM's.

10. If planned development, with or without aviation trust fund investments, will change the status or geometrics of runways, taxiways, aprons, or other operating airport surfaces, notice (FAA Form 7480-1) must be filed with this office consistent with 14 CFR 157.

11. Any relocation or installation of FAA facilities will require a signed and executed reimbursable agreement with the FAA. After the FAA concurs with any proposed development and the environmental review is complete the sponsor will need to request a reimbursable agreement from FAA/ANI-480. A preliminary agreement between the FAA and the airport sponsor will be executed upon receipt of the airport's letter so that the FAA can begin providing engineering services. FAA/ANI-480 will then develop the final reimbursable agreement. On average, 12 to 18 months are required from the time the preliminary reimbursable agreement is signed to the time the final reimbursable agreement is signed.