September 16, 2014

Ms. Margaret Gilligan
Associate Administrator for Aviation Safety
Federal Aviation Administration
800 Independence Avenue, SW
Washington, DC 20591

Dear Peggy:

The Performance-based Operations Aviation Rulemaking Committee (PARC) is pleased to submit the attached report and recommendations for modifying vectors to RNP approaches to enhance efficiency of these procedures in the National Airspace System (NAS). This activity was initiated at the request of Industry and led to the formation of the Vectors to RNP Action Team. The request was for revised Air Traffic rules necessary to support increased utilization of RNP AR approach procedures in dynamic high traffic density areas.

The Vectors to RNP Action Team was formed with representatives from FAA Flight Standards Service, FAA Air Traffic Organization, NATCA, NBAA, Southwest Airlines, and United Airlines.

The team concluded that design enhancements to Standard Instrument Approach Procedures (SIAPs) with RF legs offer the necessary aircraft protection for ATC- issued 90 degree direct clearances to specific waypoints. This will potentially increase the utilization and safety of such procedures while simultaneously reducing controller workload. A full set of recommendations and supporting information is included in the attached report.

The PARC Action Team identified that a small number of RNP AR procedures will require amendment to remain in compliance with the recommendations. Funding and timelines for this activity are beyond the scope of PARC, but should be coordinated within FAA and aligned with business objectives to provide benefits and safety enhancements to the NAS at the first opportunity.

The PARC appreciates your continued support of its activities and invites you to discuss any aspects of these recommendations at your earliest convenience. The PARC respectfully requests the FAA to provide us with a formal response.

Sincerely,

Mark Bradley
Chairman, PARC

Cc: B. DeCleene

M. Steinbicker
D. Newton
B. Rush

Vectors to RNP Summary Report

PARC Vectors to RNP Action Team

August 22, 2014

Executive Summary: Vectors to RNP Recommendations

Introduction

FAA Order 7110.65 (the Controller Handbook), paragraph 4-8-1 *Approach Clearance* was amended in the summer of 2013 to address several important changes related to RNAV approach clearances. However, various Industry representatives objected to one of the changes; the introduction of new restrictions for issuing direct-to clearances to fixes preceding Radius-To-Fix (RF) legs. They argued that such restrictions were too conservative and would result in lower utilization of efficient procedures for Operators and increased workload for Controllers.

A Performance-based operations Aviation Rulemaking Committee (PARC) ad hoc Action Team was formed to address the perceived reduction in flexibility of instrument procedures containing radius-to-fix (RF) legs. The "Vectors to RNP" Action Team consists of Air Traffic Organization, Flight Standards Service, and Industry Subject Matter Experts. The first meeting was conducted in August 2013 with subsequent meetings throughout the remaining year and first half of 2014.

The Action Team recommends a policy that requires Standard Instrument Approach Procedure (SIAP) designs containing radius-to-fix (RF) legs to support up to, and including, a 90 degree intercept to an Intermediate Fix (IF), and/or the Initial Approach Fix (IAF). This policy change requires the design of the procedure to protect for direct-to clearances on unpublished routes to the IF/IAF to ensure adequate segment length.

Removing the 3NM and 6 NM restrictions described within 7110.65 4-8-1 (f) simplifies clearances and allows greater use in more situations. Except for two new limits for RF legs, no new constructs are created. Controllers may implement the already familiar 90 degree intercept angles. Increased flexibility for Controllers, especially in dynamic conditions such as convective weather near an approach or where runway load balancing alleviates traffic congestion, are expected to translate to increased procedure utilization for Operators.

These benefits do not occur without a price. The tradeoff is that procedure design with RF legs requires additional work to assess for segment lengths. It is not normal procedure design to address limitations for unpublished routes. Where segments are short prior to an RF leg, airspeed restrictions not otherwise required may be necessary. Some existing designs may not be practical. Criteria are recommended within this report.

Two new Controller guidance items for SIAPs with RF legs are recommended to align 7110.65 with Advisory Circulars 90-101 and 90-105. Though mostly understood within the Controller community, it is appropriate to state them clearly within the guidance documents.

The existing inventory of SIAPs with RF legs were assessed for impact of the proposed criteria. A significant majority of RNP AR SIAPs would require no modification. Approximately 90 SIAP procedure transitions may require speed restrictions that can be added without major procedure revision. Approximately 3.3% (13) of all RNP AR procedures would require major procedure modifications, team review, and associated chart date production slots/resources.

Near-term Recommendations

The following near-term recommendations are suggested for FAA consideration:

1. Revise FAA Order 8260.58 to require Standard Instrument Approach Procedures (SIAPs) with RF legs be designed to support ATC direct clearances to the Intermediate Fix (IF), and/or Initial Approach Fix (IAF), with intercept angles of 90 degrees. Policy should contain amplifying statements that airspeed restrictions may be necessary to support shorter leg lengths.

- If an airspeed restriction is required to support a 90 degree intercept, specify in a 5-knot increment not less than the minimum airspeeds specified in 8260.58, Volume 6, Table 1-3 *Indicated Airspeeds*. Round intermediate values to the next lower 5 knot increment.
- Turn radii, Distance of Turn Anticipation, etc. criteria would be identical to existing FAA Order 8260.58, Volume 6, except that a bank angle of 25 degrees is permitted regardless of the intercepted segment RNP value.

2. Modify RNP AR SIAPs, as necessary, to support a 90 degree intercept to the IF and/or IAF.

- For SIAPs with RF legs, where the maximum permissible airspeed requires a speed restriction be placed on the procedure, issue a P-NOTAM to amend the procedure.
- For SIAPs with RF legs, where the maximum permissible airspeed is less than the minimum airspeeds specified in Order 8206.58, Volume 6, Table 1-3 *Indicated Airspeeds*, or is otherwise not practical, schedule the procedure for revision.

3. Revise FAA Order 7110.65 paragraph 4-8-1 (f) restrictions for procedures with RF legs:

- Remove the 3 NM and 6 NM restrictions.
- For direct-to clearances to fixes after the IF, require adherence to paragraph (d).
- Add a restriction that prohibits a direct-to clearance to a fix beginning an RF leg or to join an RF leg.
- Add a restriction that prohibits ATC assigning a speed in excess of the charted procedure speeds.

Vectors to RNP

1) Introduction

RNP Authorization Required (AR) Standard Instrument Approach Procedures (SIAPs) were first deployed in terrain-challenged and surveillance-poor environments. The primary operational paradigm was for Controllers to clear Pilots for the entire procedure from the enroute structure, through terminal airspace, to landing or missed approach.

Subsequently, such procedures have become a foundation of Performance Based Navigation with increasing utilization for purposes such as flight efficiency and airspace containment rather than solely terrain avoidance. However, existing ATC phraseology did not sufficiently support their use in higher traffic density locations with dynamic environments where aircraft separation and/or weather avoidance were necessary. Additionally, Controller phraseology did not address the requirements of Advisory Circular 90-101 *Approval Guidance for RNP Procedures with AR* and Advisory Circular 90-105 *Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System* , as amended, that prohibit Pilots from modifying a procedure with RF legs by proceeding direct-to a fix beginning an RF leg. For procedures containing RF legs, a clearance direct-to a fix is only permitted if the fix is prior to:

a) the Final Approach Fix (FAF), and

b) the fix beginning an RF leg.

These restrictions were intended to ensure aircraft are "wings level" before beginning the RF leg.

Recent changes to JO 7110.65[1] paragraph 4-8-1 *Approach Clearance* are highlighted in Section 2 herein to understand their history relative to approach clearances for procedure containing RF legs. The current limitations for such procedures are based on worst case conditions and require a direct-to clearance to the IF to be:

- No greater than a 90 degree intercept if the distance between the IF and the fix beginning the RF leg is at least 6 NM.
- No greater than a 30 degree intercept if the distance between the IF and the fix beginning the RF leg is at least 3 NM.

However, most RNP AR SIAPs published after January 2011 were informally designed to account for a 90 degree turn at the IF by segment length design and/or application of airspeed restrictions. This number constitutes the bulk of Public RNP AR SIAPs in existence today. In effect, the design of the procedure considered high-angle "direct-to" clearances rather relying on worst-case constraints required by the Controller Handbook phraseology. Current procedure design practice fixes leg lengths based on facility and operator constraints, then applies speed

[1] JO 7110.65, Section 8 *Approach Clearance Procedures*, paragraph 4-8-1 *Approach Clearance*

restrictions where necessary to allow a 90 degree turn at the IF.

Incorporating the limitations within the design vs. the broad-brush "one-size fits all" worst case limitations has the following benefits:

- Potentially reduces individual SIAP track miles
- Provides greater flexibility to meet airspace constraints for ATC Facility purposes.
- Simplifies workload for Air Traffic Controllers. Applying the well-known 90-degree turn rule replaces the 6 NM restriction and obviates the need for the 3 NM restriction.
- Provides improved flexibility for Air Traffic Controllers in dynamic environments to provide direct-to clearances for SIAPs with RF legs. For example, weather or aircraft spacing may require vectoring off the procedure. Similarly, runway load balancing at airports with multiple runways could by employed to maintain a high arrival rate by assigning RNP capable aircraft to another runway. The 3NM and 6NM restrictions limit the ability for Controllers and Pilots to have such flexibility in many runway/procedure geometries.

Therefore, the focus of this Action Team was to reduce the impact of FAA Order 7110.65 4-8-1 (f) 3 NM and 6 NM restrictions by satisfying the requisite limitations in the procedure design or providing other appropriate mitigations. An additional outcome was to ensure the Controller Handbook provides sufficient guidance to ensure ATC clearances for RNP AR SIAPs permit aircraft to operate in a manner consistent with the built-in procedure protections.

2) Use of Direct-To Clearances in RNAV Approach Procedures containing RF legs

2-a) Controller Phraseology for RNAV Approaches, prior to August 2013

Prior to August 22, 2013, the Controller Handbook phraseology in paragraph 4-8-1 for issuing direct-to clearances for RNAV approaches were as follows:

b. *For aircraft operating on unpublished routes, issue the approach clearance only after the aircraft is:*

1. *Established on a segment of a published route or instrument approach procedure.*

2. *Assigned an altitude to maintain until the aircraft is established on a segment of a published route or instrument approach procedure.*

3. *Established on a heading or course that will intercept the initial segment at the initial approach fix or intermediate segment at the intermediate fix when no initial approach fix is published, for a GPS or RNAV instrument approach procedure at an angle not greater than 90 degrees. Angles greater than 90 degrees may be used when a hold in lieu of procedure turn pattern is depicted at the fix for the instrument approach procedure.*

4. *Established on a heading or course that will intercept the intermediate segment at the intermediate fix, when an initial approach fix is published, provided the following conditions are met:*

(a) *The instrument approach procedure is a GPS or RNAV approach.*

(b) *Radar monitoring is provided to the Intermediate Fix.*

(c) *The aircraft has filed an Advanced RNAV equipment suffix.*

(d) *The pilot is advised to expect clearance direct to the Intermediate Fix at least 5 miles from the fix.*

(e) *The aircraft is assigned an altitude to maintain until the Intermediate Fix.*

(f) *The aircraft is on a course that will intercept the intermediate segment at an angle not greater than 90 degrees and is at an altitude that will permit normal descent from the Intermediate Fix to the Final Approach Fix.*

Notably, 4-8-1 b.4.(f) permitted an intercept not greater than 90 degrees to the intermediate segment. However, as discussed previously, this did not address the AC 90-101 requirement to be wings level prior to the beginning of the RF leg. A change was necessary and appropriate.

2-b) Controller Phraseology for RNAV Approaches, post-August 2013

In consideration of the requirement to be wings level prior to beginning the RF leg, as well as other issues, FAA Order 7110.615[2] substantially modified paragraph 4-8-1 including sub-paragraphs (d) as follows:

d. *For RNAV-equipped aircraft operating on unpublished routes, issue approach clearance for conventional or RNAV SIAP only after the aircraft is:*

1. *Established on a heading or course direct to the IAF at an intercept angle not greater than 90 degrees and is assigned an altitude in accordance with b2. Radar monitoring is required until the aircraft is established on a segment of the instrument approach procedure for RNAV (RNP) approaches when no procedure turn or hold-in-lieu of procedure turn will be executed.*
2. *Established on a heading or course direct to the IF at an angle not greater than 90 degrees, provided the following conditions are met:*
   - ***(a)*** *Assign an altitude in accordance with b2 that will permit a normal descent to the FAF.*
   - ***(b)*** *Radar monitoring is provided to the IF.*
   - ***(c)*** *The SIAP must identify the intermediate fix with the letters "IF."*
   - ***(d)*** *For procedures where an IAF is published, the pilot is advised to expect clearance to the IF at least 5 miles from the fix.*

[2] Excerpt from JO 7110.65V, effective April 3, 2014

3. *Established on a heading or course direct to a fix between the IF and FAF, at an intercept angle not greater than 30 degrees, and assigned an altitude in accordance with b2.*

This paragraph addresses the general RNAV SIAP case and permits up to a 90 degree intercept at the IAF or IF, with certain restrictions.

During the crafting of the Paragraph 4-8-1 change, concerns surfaced about leg length segments leading into RF legs given the 90 degree intercepts. Certain worst case scenario assumptions, such as aircraft operating at 250 kts at the IAF/IF, 18 degrees of bank, adverse wind aloft relative to the approach to the IAF/IF, and approaches commencing above 10,000 feet MSL, required the leg length in advance of the RF leg to be no less than 6 NM. Since Air Traffic could not tolerate a sliding scale of possible intercept angles and leg lengths that would result, a single alternative agreement of no greater than 30 degrees with a leg length no less than 3 NM was reached.

In consideration of this segment length issues, sub-paragraph (f) pertaining to SIAPs with RF legs, was added with additional restrictions:

f. *Clear RNAV-equipped aircraft conducting RNAV instrument approach procedures that contain radius to fix (RF) legs:*

- ***1.*** *Via published transitions, or*
- ***2.*** *On a heading or course direct to the IAF/IF when a hold-in-lieu of procedure turn is published and the pilot will execute the procedure, or*
- ***3.*** *On a heading or course direct to the IAF/IF, at intercept angles no greater than 90 degrees and the distance to the waypoint beginning the RF leg is 6NM or greater, or*
- ***4.*** *With radar monitoring, on a heading or course direct to any waypoint 3 miles or more from the waypoint that begins the RF leg, at an intercept angle not greater than 30 degrees.*

The assumptions supporting direct-to clearances preceding RF legs were that aircraft speed would be restricted only by 14 CFR 91.117[3] and that a high tailwind condition could exist. FAA Order 8260.58[4] describes tailwind assumptions and the effect on turn radius. To ensure aircraft would be "wings-level" before starting the RF leg under these conditions for all SIAPs, worst case distances were developed to support turns of up to and including 90 degrees, and up to and including 30 degrees. These are 6 NM and 3 NM, respectively. In recognition of updating ATC phraseology[5], the Controller Handbook was modified in the summer of 2013[6] with these global distance restrictions in paragraph 4-8-1 (f).

However, most RNP AR SIAPs published after January 2011 were informally designed to account for a turn of up to, and including, 90 degrees at the IF. This constitutes the bulk of

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[3] 14 CFR 91.117 limits aircraft speed to 250 KIAS below 10,000 feet MSL, 200 KIAS below Class B airspace, and 200 KIAS within Class C and D airspace that is not within Class B airspace. In all cases, if the minimum safe speed is greater than speeds above, then those speeds are permitted.

[4] 8260.58 *United States Standards for Performance Based Navigation (PBN) Instrument Procedure Design*, Volume 6, Calculator 1-3

[5] JO 7110.65, Section 8 *Approach Clearance Procedures*, paragraph 4-8-1 *Approach Clearance*

[6] FAA Order JO 7110.620 delayed implementation of 7110.615 until July 31, 2013. JO 7110.65U CHG 3, effective August 22, 2013, incorporated these changes.

Public RNP AR SIAPs in existence today. In effect, the design of the procedure considered high-angle "direct-to" clearances rather relying on worst-case constraints required by the Controller Handbook phraseology. Current procedure design practice fixes leg lengths based on facility and operator constraints then applies speed restrictions where necessary to allow a 90 degree turn at the IF.

Pilots are not expected to be familiar with the limitations described within the Controller Handbook. Reports of Pilot frustration have been received in being denied a request for an RNP AR approach clearance when, in their estimation, aircraft turn performance appears suitable to conduct the approach. Often these aircraft have already begun slowing for approach for energy management purposes and are well below limiting speeds. Controllers, too, have reported reduced flexibility in issuing direct-to clearances in certain approach geometries. In at least one case, Controllers at a major metropolitan airport desired to offload some RNP–capable aircraft to a parallel runway for load balancing purposes, but were prevented from doing so due to the paragraph (f) restrictions.

2-c) Obstacle Evaluation Areas and "Established On"

The Action Team considered Obstacle Evaluation Area (OEA) requirements with the expectation that ATC would issue direct-to clearances no lower than the higher of the MVA or MIA. However, in the subsequent turn to become established on a published segment of the procedure, aircraft are likely to descend below this altitude. Air Traffic Control is responsible for terrain/obstacle separation until the aircraft is established on the procedure. The Action Team addressed the question of how the turn at the IF can assure terrain/obstacle separation.

Since Air Traffic is providing a clearance direct to the intermediate fix on an instrument approach procedure, and providing radar monitoring, this requires the Air Traffic Control to assign an altitude that meets the higher of the Minimum IFR Altitude (MIA) or the Minimum Vectoring Altitude (MVA), until the aircraft is established on a segment of the approach. The MIA and the MVA both provide a minimum of 1000 feet of obstacle clearance, which is twice the amount of obstacle clearance required in the intermediate segment (500 feet) of the approach procedure being cleared to. Thus, the aircraft will have twice the amount of obstacle protection required and therefore, no additional evaluation is required.

The Action Team also considered the definition of "established on" for RNAV and RNP operations.

This definition can be found in the Aeronautical Information Manual 5-5-16 *RNAV and RNP Operations* as:

> **11. Definition of "established" for RNAV and RNP operations.**
>
> *An aircraft is considered to be established on-course during RNAV and RNP operations anytime it is within 1 times the required accuracy for the segment being flown. For example, while*

operating on a Q-Route (RNAV 2), the aircraft is considered to be established on-course when it is within 2 nm of the course centerline.

AIM 5-5-16 also explains Pilot responsibilities for descending to the next procedural altitude.

It is noted that these considerations apply for RNAV SIAPs regardless of whether or not a procedure contained RF legs. A TF-TF leg combination is exposed to the same principles regardless of whether it is part of an RNAV(RNP) or RNAV(GPS) procedure, the difference being that RNAV(GPS) approaches have segment widths of 1.0 NM whereas RNAV(RNP) procedures may have a value less than 1.0 NM.

The existing ATC phraseology contained in 4-8-1 (d) can thus be applied for RNAV(RNP) approaches to ensure obstacle/terrain separation for up to a 90 degree intercept to the IAF/IF. Notably, this requires radar monitoring for RNAV(RNP) approaches. This is a separate issue than protection(s) required for procedures with RF legs.

It appears, then, that the question of "established on" has already been answered by Air Traffic as reflected in the Controller Handbook. The Action Team took no further action on this question.

2-d) Procedure Design for SIAPs with RF legs

Procedure design of SIAPs with RF legs accounts for segment lengths, waypoint placement, and altitudes to meet airspace and aircraft performance requirements. The procedure designer, in conjunction with Facility and Industry representatives, makes design compromises within these constraints to meet as many of the objectives as reasonably possible within the constraints of the criteria. Where segment length(s) prior to the beginning of an RF leg are of insufficient length to support the worst case condition of aircraft airspeed and tailwind along the procedure, speed restrictions (at or below speeds) are placed at the appropriate waypoint(s) to ensure aircraft are wings-level before the RF leg.

In a practical sense for instrument approaches, it is often the case that aircraft will be slowing prior to RF legs to meet downstream speed restrictions, permit aircraft configuration changes in preparation for landing, avoid excessive energy for a close-in approach, or when desired by ATC to avoid separation loss due to traffic compression. Considering lessons learned from earlier PBN development projects (e.g. Washington, DC area FRDMM/TRUPS arrivals), it would be appropriate to minimize the use of waypoint restrictions as much as possible and account for the natural behavior of aircraft. However, approach operations, especially RNP AR SIAPs, require a high level of safety and restrictions cannot be easily avoided.

The Action Team recommends that procedure designs support a 90 degree direct-to clearance to the IF and/or the IAF. Further, the Action Team recommends adding appropriate design criteria to FAA Order 8260.58 *United States Standard for Performance Based Navigation (PBN) Instrument Procedure Design,* Volume 5 & Volume 6, to support such turns.

In the design process, leg lengths are most often set to meet constraints of Air Traffic and

Operators. Therefore, it may be necessary to add aircraft speed restrictions for procedures with RF leg to support up to a 90 degree intercept at the IAF/IF. The criteria should define the minimum segment length and/or maximum permissible airspeed at the IF/IAF to support such a turn. Additionally, because the direct-to clearance occurs on an unpublished route with a different level of safety requirement than RNP AR procedures, the Distance-of-Turn-Anticipation (DTA) should be calculated using 8260.58, Volume 6, with the following exceptions:

- Bank angle of 25 degrees (ϕ = 25 degrees)
- Assumed turn angle of 90 degrees (β = 90 degrees).

The resultant maximum permissible airspeed from these calculations should be specified in 5-knot increments, rounded to the next lower 5-knots.. Where the resultant speed is greater than the maximum speeds specified in 8260.58, Volume 6, Table 1-3 *Indicated Airspeeds*, no speed restriction is required. This means the segment length after the IF is sufficient to support a 90 degree turn at the IF. Where the resultant speed is less than the minimum speeds specified in Table 1-3, the segment length must be increased. Effectively, this condition means the speed required to support a 90 degree turn is too slow for the segment length.

2-e) Assessment of existing procedures with RF Legs

Beginning in January 2011, most Public RNP AR SIAPs were constructed in a manner that would permit up to a 90 degree direct-to clearance to the IF. This was accomplished to reduce ATC workload and permit greater utilization in a dynamic environment. However, it was necessary to assess the other procedures to determine the scope of necessary changes. The following groupings were utilized:

Group 1 – RNP AR SIAPs published prior to January 2011

Group 2 – RNP AR SIAPs published after January 2011, but did not consider a 90 degree direct-to clearance to the IF within the design

Group 3 – RNP AR SIAPs published after January 2011 that did consider a 90 degree direct-to clearance to the IF within the design.

Appendix 1 lists an assessment of Group I and Group 2 procedures where more than 210 knots is permitted prior to the beginning of the RF leg. Thirty-three (33) of the two-hundred plus RNP AR procedures may require modification to become compliant with the proposed criteria. This may include simple changes such as a speed restriction or more complex changes such as leg length modifications or fix relocations.

Appendix 2 lists an assessment of Group 1 and Group 2 procedures that have less than 6 NM between the IF and the first fix beginning the RF leg. Forty-One (41) of the two-hundred plus RNP AR procedures may require modification to become compliant with the proposed criteria. This may include simple changes such as a speed restriction or more complex changes such as leg length modifications or fix relocations.

Appendix 5 lists all RNP AR SIAPs in existence, or planned for publication this year, and actions necessary to remain in compliance with the Action Teams recommendations.

Two examples were used within the Action Team to identify and highlight various issues. These are the KMKE RNAV(RNP) Y Runway 7R and KBHM RNAV(RNP) Z Runway 24 SIAPs.

Example of a procedure requiring only a simple speed restriction

The south downwind of the MKE RNAV(RNP) Y Runway 7R (see Appendix 3) does not have an airspeed restriction at the GAUSS IF. The distance between the IF (GAUSS) and the beginning of the RF leg (JITNU) is 4.1 NM. Because this is less than 6 NM, under the current ATC rules, an aircraft must be vectored to within 30 degrees of the course after GAUSS before being issued a direct-to clearance. However, the maximum permissible speed at GAUSS to support a 90 degree intercept is 220 KIAS. In this case, placing a speed restriction of 220 KIAS at GAUSS would permit up to a 90 degree direct-to intercept at GAUSS.

Example of a procedure requiring redesign

The distance between the IF (LISRE) and the beginning of the RF leg for the BHM RNAV(RNP) Z Runway 24 (see Appendix 4) is only 2 NM. Because this is less than 3 NM, under the current ATC rules, an aircraft cannot be issued a direct-to clearance to LISRE under any circumstances. Instead, today, aircraft must fly the appropriate transition from VUZ or HESGA. Additionally, information provided to the Action Team indicates there is a design proposal that will reduce this distance to approximately 1 NM. The airspeed restriction required to meet such a short distance would be less than the minimum speeds permitted within 8260.58, Volume 6, Table 1-3 *Indicated Airspeeds*. This means the segment length is too short and cannot support a 90 degree turn at the IF. This is an example where the procedure would have to be re-designed. While the tracks do not necessarily need to be changed, the location of an IF should reasonably be moved and possibly a speed restriction be applied to limit the distance between the new IF and the beginning of the RF leg.

Because a large number of recent designs with RF legs should already be compliant with the proposed criteria, the Action Team recommends modifying those procedures needing only a speed restriction via P-NOTAM.

Those procedures requiring modification beyond speed restrictions should be prioritized for re-design with the affected stakeholders. The Action Team expects such work rely heavily on existing designs, and their basis, rather than become a "clean-sheet" design.

Because the NAS benefits to be gained from removing the 6 NM and 3 NM restrictions is greater than the loss of a small number of RNP AR procedures, the Action Team recommends moving forward with the necessary changes to 7110.65 paragraph 4-8-1 concurrent with P-NOTAM speed restrictions for affected SIAPs. Upon the effective date of the Controller Handbook change, it may be necessary to NOTAM out-of-service a small number of RNP AR procedures that require more substantive changes. Alternatives to this action should be explored by Air Traffic and the Facilities well in advance of this action. Additionally, funding support from FAA Mission Support Services and AeroNav Products will be necessary to prioritize and implement RNP AR re-design activities.

2-f) ATC Clearance Limitations

FAA Advisory Circulars 90-101A and 90-105, as amended, prohibit Pilots from certain modifications of RNAV and RNP approach procedures. For procedures containing RF legs, Pilots may only accept a direct-to a fix clearance if the fix is prior to:

a) the Final Approach Fix (FAF), and

b) the fix beginning an RF leg.

Effectively, a direct-to clearance is prohibited if it is to the fix beginning an RF leg or to join an RF leg. Air Traffic Controllers are trained on these limitations but the Controller Handbook is moot on the issue. The Action Team recommends aligning the Controller Handbook with the Advisory Circulars and Controller training curricula.

Procedures with RF legs often have speed restrictions designed to ensure aircraft remain within necessary containment areas. This is an additional limitation compared to speed clearances for SID, STAR, and/or SIAP procedures that are primarily concerned with aircraft flyability and energy management. For SIAPs with RF legs, the Action Team recommends Air Traffic Control issue speed clearances in a manner that permits Pilots to comply with published SIAP speeds.

3) Recommendations

3-a) Revise 8260.58 to allow for SIAP designs with not greater than a 90 degree intercept at the IF and/or the IAF.

Revise FAA Order 8260.58 to require Standard Instrument Approach Procedures (SIAPs) with RF legs be designed to support ATC direct clearances to the Intermediate Fix (IF), and/or Initial Approach Fix (IAF), with intercept angles of 90 degrees. Policy should contain amplifying statements that airspeed restrictions may be necessary to support shorter leg lengths.

- If an airspeed restriction is required to support a 90 degree intercept, specify in a5-knot increment not less than the minimum airspeeds specified in 8260.58, Volume 6, Table 1-3 *Indicated Airspeeds*. Round intermediate values to the next lower 5 knots.
- Turn radii, Distance of Turn Anticipation, etc. criteria would be identical to existing FAA Order 8260.58, Volume 6, except that a bank angle of 25 degrees is permitted regardless of the intercepted segment RNP value.

This should not preclude procedure Designers from making desired compromises between airspeed restrictions and minimum distance prior to an RF leg. Additionally, Designers should recognize that a design goal is to permit aircraft to remain "clean" as long as possible. A generally recognized speed of 210 KIAS for most aircraft is desirable.

3-b) Modify SIAPs with RF legs to support a 90 degree intercept to the IF and/or the IAF.

Modify RNP AR SIAPs, as necessary, to support a 90 degree intercept to the IF and/or IAF.

- For SIAPs with RF legs, where the maximum permissible airspeed requires a speed restriction be placed on the procedure, issue a P-NOTAM to amend the procedure. Refer to Appendix 5b for a list of affected procedures requiring speed restriction modifications.
- For SIAPs with RF legs, where the maximum permissible airspeed is less than the minimum airspeeds specified in Order 8206.58, Volume 6, Table 1-3 *Indicated Airspeeds*, or is otherwise not practical, schedule the procedure for revision. Refer to Appendix 5c for a list of affected procedures requiring structural modifications.

  Note: For Category C/D aircraft, the minimum indicated airspeed is 180 knots.

Where a procedure must be re-designed, the priority should occur after those required:

- For Safety
- To provide access to a runway end where no other approach exists.
- To prevent delay to major airspace projects providing benefits to stakeholders
- To replace/revise procedures necessary due to navigation aid closures

3-c) Revise JO 7110.65 4-8-1 (f) to remove the 3 NM and 6 NM restrictions

Revise FAA Order 7110.65 paragraph 4-8-1 (f) restrictions for procedures with RF legs:

- Remove the 3 NM and 6 NM restrictions.
- For direct-to clearances to fixes after the IF, require adherence to paragraph (d).
- Add a restriction that prohibits a direct-to clearance to a fix beginning an RF leg or to join an RF leg.
- Add a restriction that prohibits assigning a speed in excess of the charted procedure speeds.

4) Activities for Further Consideration

4-a) The Effect of New Navigation Specifications on ATC Guidance.

New navigation specifications ("RNP APCH", etc.) should have rules that also support up to a 90 degree intercept to the IF and/or IAF. It may be necessary to assess changes due to RF legs resulting from these new navigation specifications to ensure procedure design protects for appropriate intercepts.

5) Action Team Members

The members of the Action Team were:

Arrighi, Jim	FAA, Mission Support Services, Airspace Services
Beck, Larry	FAA, Terminal Services
Belk, John	FAA, PBN Integration Group
Bigler, Trent	FAA, Flight Standards Service, Performance Based Flight Systems
Boll, Rich	NBAA
Brunette, Marvin	FAA
Fiske, Gary	FAA, Mission Support Services, Air Traffic Procedures
Gonzalez, George	FAA, Mission Support Services, Aeronautical Navigation Products
Hamilton, Danny	FAA, Flight Standards Service, Flight Technologies and Procedures
Harris, Jon	FAA, Mission Support Services, PBN Integration Group
Kelly, Dennis	NATCA, Safety Committee
Kernaghan, John	NBAA
Lamond, Bob	NBAA
McMullin, Gary	Southwest Airlines
Nichols, TJ	FAA, Flight Standards Service, Flight Procedure Standards
Newton, David (Co-Chair)	Southwest Airlines
Renk, Ron	United Airlines
Rush, Brad	FAA, Mission Support Services, Aeronautical Navigation Products
Singletary, Ron	FAA, Terminal Services
Steinbicker, Mark (Co-Chair)	FAA, Flight Standards Service, Performance Based Flight Systems

Appendix 1 –RNP AR SIAP Assessment

Assessment status of various RNP AR approaches.

State	City	Airport	Ident	Procedure	Remarks	Major Amdt Effective Date	Minor Amdt Effective Date
AL	BIRMINGHAM	BIRMINGHAM-SHUTTLESWORTH INTL	BHM	RNAV (RNP) Z RWY 06	**OK, but the RNP RWY 24 needs restriction at MOKEE and LISRE**	9/23/2010	7/28/2011
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 07L	**OK**	3/12/2009	3/8/2012
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 07R	**OK**	3/12/2009	3/8/2012
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 08	**OK**	3/12/2009	12/15/2011
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 08	**OK**	3/12/2009	12/15/2011
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 25L	**OK**	3/12/2009	3/8/2012
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 25L	**OK**	3/12/2009	3/8/2012
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 25R	**OK**	3/12/2009	11/17/2011
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 25R	**OK**	3/12/2009	11/17/2011
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 26	**OK**	3/12/2009	3/8/2012
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 26	**OK**	3/12/2009	3/8/2012
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 26	**OK**	3/12/2009	3/8/2012
AZ	PRESCOTT	ERNEST A. LOVE FIELD	PRC	RNAV (RNP) RWY 03R	**OK**	7/2/2009	2/9/2012
AZ	PRESCOTT	ERNEST A. LOVE FIELD	PRC	RNAV (RNP) RWY 03R	**OK**	7/2/2009	2/9/2012
AZ	SCOTTSDALE	SCOTTSDALE	SDL	RNAV (RNP) Y RWY 03	**OK**	7/2/2009	6/30/2011
AZ	TUCSON	TUCSON INTL	TUS	RNAV (RNP) Y RWY 11L	**OK**	8/7/2006	11/17/2011
AZ	TUCSON	TUCSON INTL	TUS	RNAV (RNP) Y RWY 29R	**OK**	8/7/2006	5/2/2013
CA	BISHOP	EASTERN SIERRA RGNL	BIH	RNAV (RNP) RWY 30	**OK**	9/4/2007	6/30/2011
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 06L	**OK**	7/31/2008	3/8/2012
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 06R	**OK**	7/31/2008	3/8/2012
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 07L	**OK**	7/31/2008	3/8/2012
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 07L	**OK**	7/31/2008	3/8/2012
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 07R	**OK**	7/31/2008	3/8/2012
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 24R	**OK**	9/25/2008	11/17/2011

CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 25R	**OK**	9/25/2008	
CA	LONG BEACH	LONG BEACH /DAUGHERTY FIELD/	LGB	RNAV (RNP) RWY 25R	**OK**	5/7/2009	11/17/2011
CA	LONG BEACH	LONG BEACH /DAUGHERTY FIELD/	LGB	RNAV (RNP) Y RWY 30	**OK**	8/7/2006	
CA	MONTEREY	MONTEREY REGIONAL	MRY	RNAV (RNP) Z RWY 28L	**OK**	5/7/2009	5/30/2013
CA	ONTARIO	ONTARIO INTL	ONT	RNAV (RNP) Z RWY 08L	**OK**	5/7/2009	6/30/2011
CA	ONTARIO	ONTARIO INTL	ONT	RNAV (RNP) Z RWY 26L	**OK**	5/7/2009	6/30/2011
CA	ONTARIO	ONTARIO INTL	ONT	RNAV (RNP) Z RWY 26R	**OK**	5/7/2009	6/30/2011
CA	PALM SPRINGS	PALM SPRINGS INTL	PSP	RNAV (RNP) Y RWY 13R	**SBONO**	7/5/2007	11/17/2011
CA	PALM SPRINGS	PALM SPRINGS INTL	PSP	RNAV (RNP) Y RWY 31L	**OK**	7/5/2007	11/17/2011
CA	PALM SPRINGS	PALM SPRINGS INTL	PSP	RNAV (RNP) Z RWY 13R	**SBONO**	7/5/2007	11/17/2011
CA	SAN JOSE	NORMAN Y. MINETA SAN JOSE INTL	SJC	RNAV (RNP) Z RWY 12L	**HITIR**	9/23/2010	6/30/2011
CA	SAN JOSE	NORMAN Y. MINETA SAN JOSE INTL	SJC	RNAV (RNP) Z RWY 12R	**HITIR**	9/23/2010	6/30/2011
CA	SAN JOSE	NORMAN Y. MINETA SAN JOSE INTL	SJC	RNAV (RNP) Z RWY 30L	**FODPA (210 prior)**	9/23/2010	6/30/2011
CA	SAN JOSE	NORMAN Y. MINETA SAN JOSE INTL	SJC	RNAV (RNP) Z RWY 30R	**OK**	9/23/2010	6/30/2011
CO	COLORADO SPRINGS	CITY OF COLORADO SPRINGS MUNI	COS	RNAV (RNP) Z RWY 17L	**WIPUN & REEFF**	9/23/2010	12/15/2011
CO	COLORADO SPRINGS	CITY OF COLORADO SPRINGS MUNI	COS	RNAV (RNP) Z RWY 17R	**TEXCO**	9/23/2010	3/8/2012
CO	COLORADO SPRINGS	CITY OF COLORADO SPRINGS MUNI	COS	RNAV (RNP) Z RWY 35L	**WOVID**	9/23/2010	8/25/2011
CO	COLORADO SPRINGS	CITY OF COLORADO SPRINGS MUNI	COS	RNAV (RNP) Z RWY 35R	**OK**	9/23/2010	12/15/2011
CO	GUNNISON	GUNNISON-CRESTED BUTTE RGNL	GUC	RNAV (RNP) RWY 06	**OK**	8/27/2009	6/30/2011
CO	GUNNISON	GUNNISON-CRESTED BUTTE RGNL	GUC	RNAV (RNP) RWY 24	**OK**	9/23/2010	6/30/2011
CO	HAYDEN	YAMPA VALLEY	HDN	RNAV (RNP) Z RWY 10	**OK**	4/8/2010	6/30/2011
CO	RIFLE	GARFIELD COUNTY RGNL	RIL	RNAV (RNP) Y RWY 26	**OK**	11/18/2010	6/30/2011
CO	RIFLE	GARFIELD COUNTY RGNL	RIL	RNAV (RNP) Z RWY 08	**OK**	11/18/2010	6/30/2011
CO	RIFLE	GARFIELD COUNTY RGNL	RIL	RNAV (RNP) Z RWY 26	**OK**	11/18/2010	6/30/2011
CT	WINDSOR LOCKS	BRADLEY INTL	BDL	RNAV (RNP) Z RWY 15	**OK**	8/26/2010	3/8/2012
DC	WASHINGTON	WASHINGTON DULLES INTL	IAD	RNAV (RNP) Z RWY 01C	**OK**	10/22/2009	7/26/2012
DC	WASHINGTON	WASHINGTON DULLES INTL	IAD	RNAV (RNP) Z RWY 01R	**OK**	10/22/2009	3/8/2012
DC	WASHINGTON	WASHINGTON DULLES INTL	IAD	RNAV (RNP) Z RWY 19C	**OK**	10/22/2009	3/8/2012
DC	WASHINGTON	WASHINGTON DULLES INTL	IAD	RNAV (RNP) Z RWY 19L	**OK**	10/22/2009	3/8/2012
FL	FORT LAUDERDALE	FORT LAUDERDALE/HOLLY WOOD INTL	FLL	RNAV (RNP) Z RWY 09R	**Does not exist: 10L is OK**	6/7/2007	7/28/2011

FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 17L	**OK**	8/27/2009	7/28/2011
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 17R	**OK**	8/27/2009	7/28/2011
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 18L	**OK**	8/27/2009	7/28/2011
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 18R	**OK**	8/27/2009	7/28/2011
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 35L	**OK**	8/27/2009	4/5/2012
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 35R	**OK**	8/27/2009	4/5/2012
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 36L	**OK**	8/27/2009	4/5/2012
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 36R	**OK**	8/27/2009	4/5/2012
FL	MIAMI	MIAMI INTL	MIA	RNAV (RNP) Y RWY 08R	**OK**	8/31/2007	6/30/2011
FL	MIAMI	MIAMI INTL	MIA	RNAV (RNP) Y RWY 12	**OK**	12/18/2008	6/30/2011
FL	MIAMI	MIAMI INTL	MIA	RNAV (RNP) Y RWY 26L	**OK**	5/7/2009	6/30/2011
FL	MIAMI	MIAMI INTL	MIA	RNAV (RNP) Y RWY 27	**OK**	7/30/2009	6/30/2011
FL	MIAMI	MIAMI INTL	MIA	RNAV (RNP) Y RWY 30	**OK**	8/31/2007	6/30/2011
FL	WEST PALM BEACH	PALM BEACH INTL	PBI	RNAV (RNP) Z RWY 14	**OK**	2/11/2010	7/28/2011
FL	WEST PALM BEACH	PALM BEACH INTL	PBI	RNAV (RNP) Z RWY 28R	**HETMO**	2/11/2010	4/4/2013
FL	WEST PALM BEACH	PALM BEACH INTL	PBI	RNAV (RNP) Z RWY 32	**OK**	2/11/2010	7/28/2011
GA	SAVANNAH	SAVANNAH/HILTON HEAD INTL	SAV	RNAV (RNP) Y RWY 28	**RLENE, UCETA, ATEYO**	9/23/2010	
HI	HONOLULU	HONOLULU INTL	HNL	RNAV (RNP) RWY 26L	**OK**	10/30/2007	6/30/2011
HI	LIHUE	LIHUE	LIH	RNAV (RNP) Z RWY 21	**OK**	7/10/2007	10/20/2011
HI	LIHUE	LIHUE	LIH	RNAV (RNP) Z RWY 35	**OK**	7/10/2007	10/20/2011
ID	BOISE	BOISE AIR TERMINAL/GOWEN FLD	BOI	RNAV (RNP) Z RWY 10L	**ASAYU, KOUKE, EKEME**	8/27/2009	11/17/2011
ID	BOISE	BOISE AIR TERMINAL/GOWEN FLD	BOI	RNAV (RNP) Z RWY 10R	**ASAYU, KOUKE, EKEME**	8/27/2009	11/17/2011
ID	BOISE	BOISE AIR TERMINAL/GOWEN FLD	BOI	RNAV (RNP) Z RWY 28L	**DIKAC**	8/27/2009	11/17/2011
ID	BOISE	BOISE AIR TERMINAL/GOWEN FLD	BOI	RNAV (RNP) Z RWY 28R	**DIKAC**	8/27/2009	11/17/2011
ID	IDAHO FALLS	IDAHO FALLS RGNL	IDA	RNAV (RNP) Z RWY 02	**OK**	9/23/2010	6/30/2011
ID	IDAHO FALLS	IDAHO FALLS RGNL	IDA	RNAV (RNP) Z RWY 02	**OK**	9/23/2010	6/30/2011
ID	IDAHO FALLS	IDAHO FALLS RGNL	IDA	RNAV (RNP) Z RWY 20	**OK**	9/23/2010	6/30/2011
ID	IDAHO FALLS	IDAHO FALLS RGNL	IDA	RNAV (RNP) Z RWY 20	**OK**	9/23/2010	6/30/2011

ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) RWY 30	**OK**	6/3/2010	6/30/2011
ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) Z RWY 08	**OK**	6/3/2010	6/30/2011
ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) Z RWY 12	**OK**	6/3/2010	6/30/2011
ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) Z RWY 12	**OK**	6/3/2010	6/30/2011
ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) Z RWY 26	**OK**	6/3/2010	6/30/2011
ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) Z RWY 26	**OK**	6/3/2010	6/30/2011
ID	HAILEY	FRIEDMAN MEMORIAL	SUN	RNAV (RNP) Y RWY 31	**OK**	11/28/2006	11/17/2011
ID	HAILEY	FRIEDMAN MEMORIAL	SUN	RNAV (RNP) Z RWY 31	**OK**	10/25/2007	
ID	HAILEY	FRIEDMAN MEMORIAL	SUN	RNAV (RNP) Z RWY 31	**OK**	1/19/2007	
IN	GARY	GARY/CHICAGO INTL	GYY	RNAV (RNP) Z RWY 12	**OK**	8/7/2006	8/25/2011
IN	GARY	GARY/CHICAGO INTL	GYY	RNAV (RNP) Z RWY 30	**OK**	7/3/2008	8/25/2011
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 05L	**OK**	3/12/2009	3/8/2012
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 05R	**OK**	7/31/2008	3/8/2012
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 14	**OK**	9/25/2008	6/30/2011
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 23L	**OK**	7/31/2008	3/8/2012
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 23R	**OK**	3/12/2009	3/8/2012
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 32	**OK**	10/23/2008	6/30/2011
KS	WICHITA	WICHITA MID-CONTINENT	ICT	RNAV (RNP) Z RWY 01L	**OK**	9/23/2010	6/30/2011
KS	WICHITA	WICHITA MID-CONTINENT	ICT	RNAV (RNP) Z RWY 14	**OK**	9/23/2010	6/30/2011
KS	WICHITA	WICHITA MID-CONTINENT	ICT	RNAV (RNP) Z RWY 19L	**OK**	9/23/2010	4/5/2012
KS	WICHITA	WICHITA MID-CONTINENT	ICT	RNAV (RNP) Z RWY 19R	**OK**	9/23/2010	6/30/2011
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 09	**OK**	9/25/2008	7/28/2011
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 18C	**OK**	9/25/2008	4/4/2013
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 18L	**OK**	9/25/2008	4/4/2013
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 18R	**OK**	9/25/2008	4/4/2013
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 27	**OK**	9/25/2008	7/28/2011
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 36C	**OK**	9/25/2008	4/4/2013
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 36L	**OK**	9/25/2008	4/4/2013
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 36R	**OK**	9/25/2008	4/4/2013
LA	NEW ORLEANS	LOUIS ARMSTRONG NEW ORLEANS INTL	MSY	RNAV (RNP) Z RWY 10	**OK**	9/23/2010	6/30/2011

LA	NEW ORLEANS	LOUIS ARMSTRONG NEW ORLEANS INTL	MSY	RNAV (RNP) Z RWY 19	**OK**	9/23/2010	6/30/2011
LA	NEW ORLEANS	LOUIS ARMSTRONG NEW ORLEANS INTL	MSY	RNAV (RNP) Z RWY 19	**OK**	9/23/2010	6/30/2011
MD	BALTIMORE	BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL	BWI	RNAV (RNP) Z RWY 15R	**OK**	9/25/2008	6/30/2011
MD	BALTIMORE	BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL	BWI	RNAV (RNP) Z RWY 28	**OK**	9/25/2008	6/30/2011
MO	KANSAS CITY	KANSAS CITY INTL	MCI	RNAV (RNP) Z RWY 19R	**OK**	9/25/2008	4/5/2012
MT	BOZEMAN	BOZEMAN YELLOWSTONE INTL	BZN	RNAV (RNP) RWY 30	**PESRE**	7/29/2010	11/15/2012
MT	BOZEMAN	BOZEMAN YELLOWSTONE INTL	BZN	RNAV (RNP) RWY 30	**PESRE**	7/29/2010	11/15/2012
MT	BOZEMAN	BOZEMAN YELLOWSTONE INTL	BZN	RNAV (RNP) RWY 30	**PESRE**	7/29/2010	11/15/2012
MT	BOZEMAN	BOZEMAN YELLOWSTONE INTL	BZN	RNAV (RNP) Z RWY 12	**OK**	7/29/2010	11/15/2012
MT	HELENA	HELENA RGNL	HLN	RNAV (RNP) Y RWY 27	**OK**	5/7/2009	5/30/2013
MT	HELENA	HELENA RGNL	HLN	RNAV (RNP) Y RWY 27	**OK**	5/7/2009	1/10/2013
MT	HELENA	HELENA RGNL	HLN	RNAV (RNP) Z RWY 09	**OK**	5/7/2009	6/30/2011
MT	HELENA	HELENA RGNL	HLN	RNAV (RNP) Z RWY 27	**OK**	5/7/2009	5/30/2013
MT	MISSOULA	MISSOULA INTL	MSO	RNAV (RNP) RWY 29	**OK**	8/27/2009	6/30/2011
MT	MISSOULA	MISSOULA INTL	MSO	RNAV (RNP) Z RWY 11	**OK**	8/27/2009	4/5/2012
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 05	**OK**	2/11/2010	7/28/2011
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 18C	**OK**	2/11/2010	4/5/2012
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 18L	**OK**	2/11/2010	3/8/2012
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 18R	**OK**	2/11/2010	3/8/2012
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 18R	**OK**	2/11/2010	3/8/2012
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 23	**OK**	2/11/2010	7/28/2011
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 36C	**OK**	2/11/2010	4/5/2012
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 36L	**OK**	2/11/2010	3/8/2012
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 36R	**OK**	2/11/2010	3/8/2012
NH	MANCHESTER	MANCHESTER	MHT	RNAV (RNP) Z RWY 17	**OK**	8/28/2008	6/30/2011
NJ	ATLANTIC CITY	ATLANTIC CITY INTL	ACY	RNAV (RNP) Z RWY 13	**OK**	9/23/2010	6/27/2013
NJ	ATLANTIC CITY	ATLANTIC CITY INTL	ACY	RNAV (RNP) Z RWY 31	**OK**	9/23/2010	6/27/2013
NJ	NEWARK	NEWARK LIBERTY INTL	EWR	RNAV (RNP) Y RWY 22L	**OK**	9/5/2007	11/15/2012
NJ	NEWARK	NEWARK LIBERTY INTL	EWR	RNAV (RNP) Z RWY 04R	**OK**	4/10/2006	11/15/2012

NJ	NEWARK	NEWARK LIBERTY INTL	EWR	RNAV (RNP) Z RWY 29	**OK**	3/12/2009	11/15/2012
NJ	TETERBORO	TETERBORO	TEB	RNAV (RNP) RWY 19	**OK**	9/24/2009	6/27/2013
NJ	TETERBORO	TETERBORO	TEB	RNAV (RNP) Z RWY 06	**OK**	9/24/2009	6/27/2013
NV	RENO	RENO/TAHOE INTL	RNO	RNAV (RNP) Z RWY 34L	**OK**	9/25/2008	2/9/2011
NV	RENO	RENO/TAHOE INTL	RNO	RNAV (RNP) Z RWY 34L	**OK**	9/25/2008	2/9/2012
NV	RENO	RENO/TAHOE INTL	RNO	RNAV (RNP) Z RWY 34R	**OK**	9/25/2008	2/9/2011
NV	RENO	RENO/TAHOE INTL	RNO	RNAV (RNP) Z RWY 34R	**OK**	9/25/2008	2/9/2012
NY	WHITE PLAINS	WESTCHESTER COUNTY	HPN	RNAV (RNP) Z RWY 16	**WALOB**	9/23/2010	9/22/2011
NY	WHITE PLAINS	WESTCHESTER COUNTY	HPN	RNAV (RNP) Z RWY 34	**HAARP**	9/23/2010	6/30/2011
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) RWY 13L	**OK**	5/14/2007	
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) RWY 13R	**OK**	5/14/2007	
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) Z RWY 04L	**OK**	9/25/2008	12/13/2012
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) Z RWY 04R	**OK**	9/25/2008	12/13/2012
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) Z RWY 31L	**OK**	9/25/2008	7/28/2011
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) Z RWY 31R	**OK**	12/17/2009	7/28/2011
NY	NEW YORK	LA GUARDIA	LGA	RNAV (RNP) Z RWY 04	**OK**	9/5/2007	6/30/2011
NY	NEW YORK	LA GUARDIA	LGA	RNAV (RNP) Z RWY 04	**OK**	9/5/2007	6/30/2011
NY	NEW YORK	LA GUARDIA	LGA	RNAV (RNP) Z RWY 22	**OK**	9/5/2007	6/30/2011
NY	NEW YORK	LA GUARDIA	LGA	RNAV (RNP) Z RWY 22	**OK**	9/5/2007	6/30/2011
OK	TULSA	TULSA INTL	TUL	RNAV (RNP) Z RWY 18R	**OK**	9/23/2010	3/8/2011
OK	TULSA	TULSA INTL	TUL	RNAV (RNP) Z RWY 26	**OK**	9/23/2010	4/4/2013
OR	MEDFORD	ROGUE VALLEY INTL - MEDFORD	MFR	RNAV (RNP) RWY 32	**FILPU**	11/18/2010	6/30/2011
OR	MEDFORD	ROGUE VALLEY INTL - MEDFORD	MFR	RNAV (RNP) Z RWY 14	**OK**	11/18/2010	6/30/2011
OR	PORTLAND	PORTLAND INTL	PDX	RNAV (RNP) Y RWY 28L	**OK**	7/18/2006	
OR	PORTLAND	PORTLAND INTL	PDX	RNAV (RNP) Y RWY 28R	**OK**	7/18/2006	
OR	PORTLAND	PORTLAND INTL	PDX	RNAV (RNP) Z RWY 28L	**OK**	7/18/2006	
OR	PORTLAND	PORTLAND INTL	PDX	RNAV (RNP) Z RWY 28R	**OK**	7/18/2006	
PA	PHILADELPHIA	PHILADELPHIA INTL	PHL	RNAV (RNP) Z RWY 09L	**OK**	8/27/2009	10/18/2012
PA	PHILADELPHIA	PHILADELPHIA INTL	PHL	RNAV (RNP) Z RWY 09R	**OK**	8/27/2009	10/18/2012
PA	PHILADELPHIA	PHILADELPHIA INTL	PHL	RNAV (RNP) Z RWY 09R	**OK**	8/27/2009	10/18/2012

PA	PITTSBURGH	PITTSBURGH INTL	PIT	RNAV (RNP) Z RWY 10C	**OK**	9/25/2008	4/5/2012
PA	PITTSBURGH	PITTSBURGH INTL	PIT	RNAV (RNP) Z RWY 10R	**OK**	9/25/2008	4/5/2012
PA	PITTSBURGH	PITTSBURGH INTL	PIT	RNAV (RNP) Z RWY 28C	**OK**	9/25/2008	4/5/2012
PA	PITTSBURGH	PITTSBURGH INTL	PIT	RNAV (RNP) Z RWY 28L	**OK**	9/25/2008	4/5/2012
PA	PITTSBURGH	PITTSBURGH INTL	PIT	RNAV (RNP) Z RWY 28R	**OK**	9/25/2008	5/30/2013
SP	AGANA	GUAM INTL	GUM	RNAV (RNP) Z RWY 06L	**OK**	3/12/2009	12/15/2011
SP	AGANA	GUAM INTL	GUM	RNAV (RNP) Z RWY 06R	**OK**	3/12/2009	12/15/2011
SP	AGANA	GUAM INTL	GUM	RNAV (RNP) Z RWY 24L	**OK**	3/12/2009	12/15/2011
SP	AGANA	GUAM INTL	GUM	RNAV (RNP) Z RWY 24R	**OK**	3/12/2009	12/15/2011
TN	MEMPHIS	MEMPHIS INTL	MEM	RNAV (RNP) X RWY 18L	**OK**	7/2/2009	5/31/2012
TN	MEMPHIS	MEMPHIS INTL	MEM	RNAV (RNP) X RWY 18R	**OK**	7/2/2009	5/31/2012
TX	CORPUS CHRISTI	CORPUS CHRISTI INTL	CRP	RNAV (RNP) Z RWY 13	**YEHEC**	9/23/2010	6/30/2011
TX	CORPUS CHRISTI	CORPUS CHRISTI INTL	CRP	RNAV (RNP) Z RWY 31	**RIXMU**	9/23/2010	6/30/2011
TX	CORPUS CHRISTI	CORPUS CHRISTI INTL	CRP	RNAV (RNP) Z RWY 35	**GLASN, VOWKO**	9/23/2010	6/30/2011
TX	HOUSTON	GEORGE BUSH INTERCONTINENTAL /HOUSTON	IAH	RNAV (RNP) Y RWY 08R	**OK**	1/23/2008	
TX	HOUSTON	GEORGE BUSH INTERCONTINENTAL /HOUSTON	IAH	RNAV (RNP) Y RWY 27	**OK**	1/23/2008	
TX	LUBBOCK	LUBBOCK PRESTON SMITH INTL	LBB	RNAV (RNP) Z RWY 17R	**OK**	9/23/2010	6/30/2011
TX	LUBBOCK	LUBBOCK PRESTON SMITH INTL	LBB	RNAV (RNP) Z RWY 35L	**OK**	9/23/2010	6/30/2011
WA	SEATTLE	BOEING FIELD/KING COUNTY INTL	BFI	RNAV (RNP) Z RWY 13R	**ZUVEN, JAMRO**	5/7/2009	6/30/2011
WA	WENATCHEE	PANGBORN MEMORIAL	EAT	RNAV (RNP) RWY 30	**OK**	6/3/2010	6/30/2011
WY	JACKSON	JACKSON HOLE	JAC	RNAV (RNP) Y RWY 01	**OK**	1/19/2007	6/30/2011
WY	JACKSON	JACKSON HOLE	JAC	RNAV (RNP) Z RWY 01	**OK**	6/5/2008	6/30/2011

Not on AeroNav list that we noticed:

MD	BALTIMORE	BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL	BWI	RNAV (RNP) Z RWY 10	**STRPS, ANCRR**
MO	KANSAS CITY	KANSAS CITY INTL	MCI	RNAV (RNP) Z RWY 9	**TONYG, NOMEE**
NJ	NEWARK	NEWARK LIBERTY INTL	EWR	RNAV (RNP) Y RWY 29	**TETER**
NY	SYRACUSE	SYRACUSE HANCOCK INTL	SYR	RNAV (RNP) Y RWY 10	**HETEL, LENEC, JEMKA**
NY	SYRACUSE	SYRACUSE HANCOCK INTL	SYR	RNAV (RNP) Y RWY 28	**PRIMS, ESAME, HADAS, RILIE**
WI	MILWAUKEE	GENERAL MITCHELL INTL	MKE	RNAV (RNP) Y RWY 7R	**GAUSS**

OH	DAYTON	DAYTON/JAMES M. COX DAYTON INTL	DAY	RNAV (RNP) RWY 6L	RISHI, WETAR
OH	DAYTON	DAYTON/JAMES M. COX DAYTON INTL	DAY	RNAV (RNP) RWY 24R	OVEDE

Appendix 2 –RNP AR SIAP Assessment

Assessment status of RNP AR approaches – 6 NM or more distance between IF and the beginning of the RF leg.

State	City	Airport	Ident	Procedure	Special Minimums Flag
AL	BIRMINGHAM	BIRMINGHAM-SHUTTLESWORTH INTL	BHM	RNAV (RNP) Z RWY 06	OK
AL	BIRMINGHAM	BIRMINGHAM-SHUTTLESWORTH INTL	BHM	RNAV (RNP) Z RWY 24	MOKEE 4.0, LISRE 2.0
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 07L	OK
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 07R	OK
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 08	OK
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 08	OK
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 25L	OK
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 25L	OK
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 25R	OK
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 25R	OK
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 26	OK
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 26	OK
AZ	PHOENIX	PHOENIX SKY HARBOR INTL	PHX	RNAV (RNP) Z RWY 26	OK
AZ	PRESCOTT	ERNEST A. LOVE FIELD	PRC	RNAV (RNP) RWY 03R	OK
AZ	PRESCOTT	ERNEST A. LOVE FIELD	PRC	RNAV (RNP) RWY 03R	OK
AZ	SCOTTSDALE	SCOTTSDALE	SDL	RNAV (RNP) Z RWY 03	OK
AZ	SCOTTSDALE	SCOTTSDALE	SDL	RNAV (RNP) Y RWY 03	OK
AZ	SCOTTSDALE	SCOTTSDALE	SDL	RNAV (RNP) RWY 21	OK
AZ	TUCSON	TUCSON INTL	TUS	RNAV (RNP) Y RWY 11L	OK
AZ	TUCSON	TUCSON INTL	TUS	RNAV (RNP) Y RWY 29R	OK
CA	BISHOP	EASTERN SIERRA RGNL	BIH	RNAV (RNP) RWY 30	OK
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 06L	OK
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 06R	OK
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 07L	OK
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 07L	OK
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 07R	OK
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 24R	OK
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 24L	OK
CA	LOS ANGELES	LOS ANGELES INTL	LAX	RNAV (RNP) Z RWY 25R	OK
CA	LONG BEACH	LONG BEACH /DAUGHERTY FIELD/	LGB	RNAV (RNP) RWY 12	OK
CA	LONG BEACH	LONG BEACH /DAUGHERTY FIELD/	LGB	RNAV (RNP) RWY 25R	OK
CA	LONG BEACH	LONG BEACH /DAUGHERTY FIELD/	LGB	RNAV (RNP) Y RWY 30	OK
CA	MONTEREY	MONTEREY REGIONAL	MRY	RNAV (RNP) Z RWY 28L	OK
CA	ONTARIO	ONTARIO INTL	ONT	RNAV (RNP) Z RWY 08L	OK
CA	ONTARIO	ONTARIO INTL	ONT	RNAV (RNP) Z RWY 26L	OK
CA	ONTARIO	ONTARIO INTL	ONT	RNAV (RNP) Z RWY 26R	OK
CA	PALM SPRINGS	PALM SPRINGS INTL	PSP	RNAV (RNP) Y RWY 13R	SBONO 4.7
CA	PALM SPRINGS	PALM SPRINGS INTL	PSP	RNAV (RNP) Y RWY 31L	OK
CA	PALM SPRINGS	PALM SPRINGS INTL	PSP	RNAV (RNP) Z RWY 13R	SBONO 4.7
CA	SAN JOSE	NORMAN Y. MINETA SAN JOSE INTL	SJC	RNAV (RNP) Z RWY 12L	HITIR 2.4

CA	SAN JOSE	NORMAN Y. MINETA SAN JOSE INTL	SJC	RNAV (RNP) Z RWY 12R	HITIR 2.4
CA	SAN JOSE	NORMAN Y. MINETA SAN JOSE INTL	SJC	RNAV (RNP) Z RWY 30L	FODPA 2.6 210kt previous WP
CA	SAN JOSE	NORMAN Y. MINETA SAN JOSE INTL	SJC	RNAV (RNP) Z RWY 30R	OK
CO	COLORADO SPRINGS	CITY OF COLORADO SPRINGS MUNI	COS	RNAV (RNP) Z RWY 17L	WIPUN 4 & REEFF 4
CO	COLORADO SPRINGS	CITY OF COLORADO SPRINGS MUNI	COS	RNAV (RNP) Z RWY 17R	TEXCO 4
CO	COLORADO SPRINGS	CITY OF COLORADO SPRINGS MUNI	COS	RNAV (RNP) Z RWY 35L	WOVID 4
CO	COLORADO SPRINGS	CITY OF COLORADO SPRINGS MUNI	COS	RNAV (RNP) Z RWY 35R	OK
CO	GUNNISON	GUNNISON-CRESTED BUTTE RGNL	GUC	RNAV (RNP) RWY 06	OK
CO	GUNNISON	GUNNISON-CRESTED BUTTE RGNL	GUC	RNAV (RNP) RWY 24	OK
CO	HAYDEN	YAMPA VALLEY	HDN	RNAV (RNP) Z RWY 10	OK
CO	RIFLE	GARFIELD COUNTY RGNL	RIL	RNAV (RNP) Y RWY 26	OK
CO	RIFLE	GARFIELD COUNTY RGNL	RIL	RNAV (RNP) Z RWY 08	OK
CO	RIFLE	GARFIELD COUNTY RGNL	RIL	RNAV (RNP) Z RWY 26	OK
CT	WINDSOR LOCKS	BRADLEY INTL	BDL	RNAV (RNP) Z RWY 06	OK
CT	WINDSOR LOCKS	BRADLEY INTL	BDL	RNAV (RNP) Z RWY 15	OK
CT	WINDSOR LOCKS	BRADLEY INTL	BDL	RNAV (RNP) Z RWY 24	OK
DC	WASHINGTON	WASHINGTON DULLES INTL	IAD	RNAV (RNP) Z RWY 01C	OK
DC	WASHINGTON	WASHINGTON DULLES INTL	IAD	RNAV (RNP) Z RWY 01R	OK
DC	WASHINGTON	WASHINGTON DULLES INTL	IAD	RNAV (RNP) Z RWY 19C	OK
DC	WASHINGTON	WASHINGTON DULLES INTL	IAD	RNAV (RNP) Z RWY 19L	OK
FL	FORT LAUDERDALE	FORT LAUDERDALE/HOLLYWOOD INTL	FLL	RNAV (RNP) Z RWY 09R	NO 9R PROCEDURE, 10L OK
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 17L	OK
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 17R	OK
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 18L	OK
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 18R	OK
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 35L	OK
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 35R	OK
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 36L	OK
FL	ORLANDO	ORLANDO INTL	MCO	RNAV (RNP) Z RWY 36R	OK
FL	MIAMI	MIAMI INTL	MIA	RNAV (RNP) Y RWY 08R	OK
FL	MIAMI	MIAMI INTL	MIA	RNAV (RNP) Y RWY 12	OK
FL	MIAMI	MIAMI INTL	MIA	RNAV (RNP) Y RWY 26L	OK
FL	MIAMI	MIAMI INTL	MIA	RNAV (RNP) Y RWY 27	OK
FL	MIAMI	MIAMI INTL	MIA	RNAV (RNP) Y RWY 30	OK
FL	WEST PALM BEACH	PALM BEACH INTL	PBI	RNAV (RNP) Z RWY 14	OGGAN 5, INEVY 5.5
FL	WEST PALM BEACH	PALM BEACH INTL	PBI	RNAV (RNP) Z RWY 28R	HETMO 4, FESAK 5.8
FL	WEST PALM BEACH	PALM BEACH INTL	PBI	RNAV (RNP) Z RWY 32	OK
GA	SAVANNAH	SAVANNAH/HILTON HEAD INTL	SAV	RNAV (RNP) Y RWY 28	RLENE 4.5 , UCETA 2, ATEYO 2
HI	HONOLULU	HONOLULU INTL	HNL	RNAV (RNP) Z RWY 04R	OK
HI	HONOLULU	HONOLULU INTL	HNL	RNAV (RNP) RWY 08L	OK
HI	HONOLULU	HONOLULU INTL	HNL	RNAV (RNP) RWY 26L	OK
HI	LIHUE	LIHUE	LIH	RNAV (RNP) Z RWY 21	OK
HI	LIHUE	LIHUE	LIH	RNAV (RNP) Z RWY 35	OK

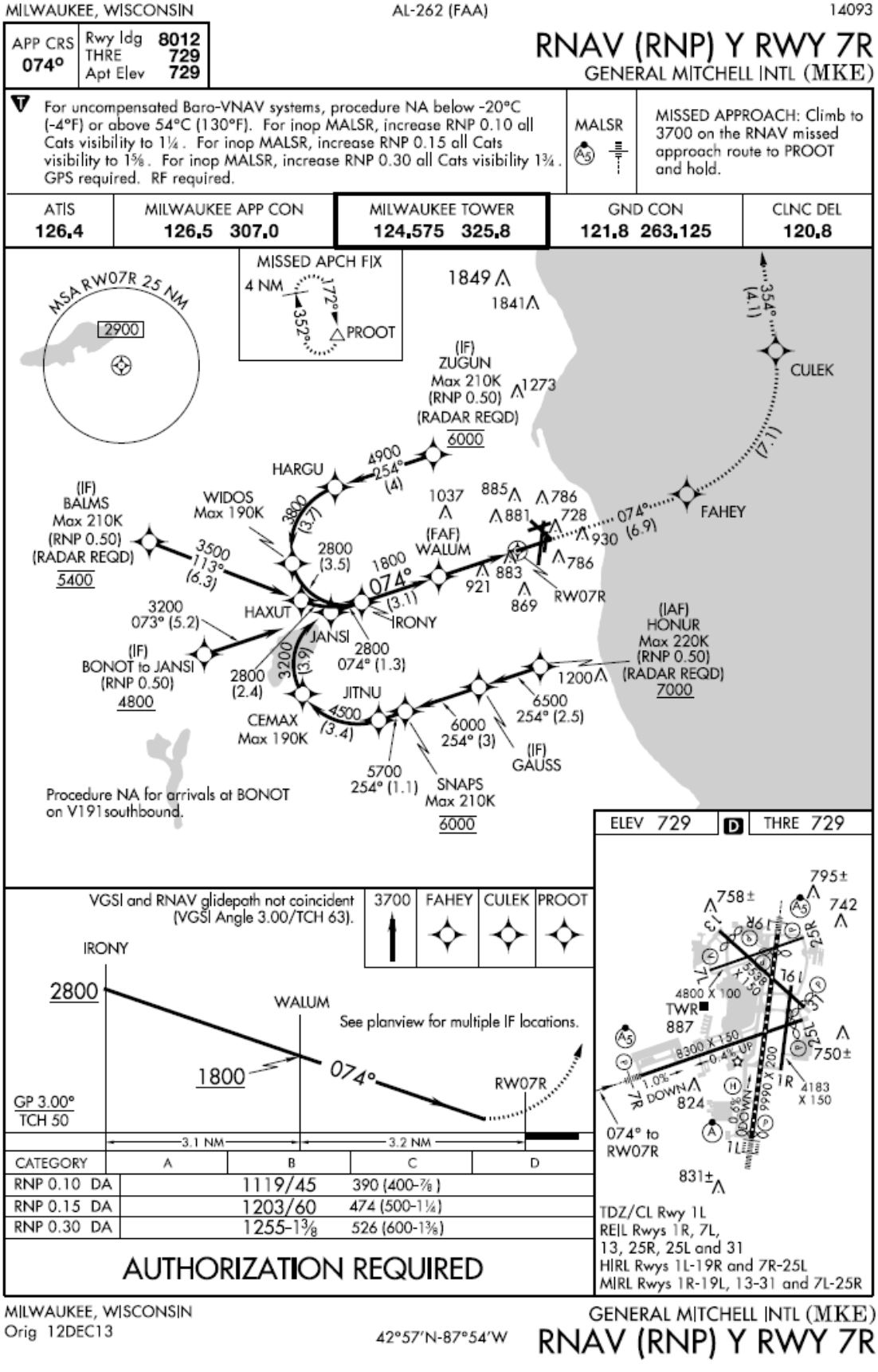
ID	BOISE	BOISE AIR TERMINAL/GOWEN FLD	BOI	RNAV (RNP) Z RWY 10L	ASAYU 4.5, KOUKE 4.5, EKEME 3.5
ID	BOISE	BOISE AIR TERMINAL/GOWEN FLD	BOI	RNAV (RNP) Z RWY 10R	ASAYU 4.5, KOUKE 4.5, EKEME 3.5
ID	BOISE	BOISE AIR TERMINAL/GOWEN FLD	BOI	RNAV (RNP) Z RWY 28L	DIKAC 4.1, JAGHE 5
ID	BOISE	BOISE AIR TERMINAL/GOWEN FLD	BOI	RNAV (RNP) Z RWY 28R	DIKAC 4.1, JAGHE 5
ID	IDAHO FALLS	IDAHO FALLS RGNL	IDA	RNAV (RNP) Z RWY 02	HUDEP 5
ID	IDAHO FALLS	IDAHO FALLS RGNL	IDA	RNAV (RNP) Z RWY 02	HEDEP 5
ID	IDAHO FALLS	IDAHO FALLS RGNL	IDA	RNAV (RNP) Z RWY 20	HULSA 5, WOSKO 5
ID	IDAHO FALLS	IDAHO FALLS RGNL	IDA	RNAV (RNP) Z RWY 20	HULSA 5, WOSKO 5
ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) RWY 30	OK
ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) Z RWY 08	OK
ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) Z RWY 12	OK
ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) Z RWY 12	OK
ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) Z RWY 26	OK
ID	LEWISTON	LEWISTON-NEZ PERCE COUNTY	LWS	RNAV (RNP) Z RWY 26	OK
ID	HAILEY	FRIEDMAN MEMORIAL	SUN	RNAV (RNP) Y RWY 31	OK
ID	HAILEY	FRIEDMAN MEMORIAL	SUN	RNAV (RNP) Z RWY 31	OK
ID	HAILEY	FRIEDMAN MEMORIAL	SUN	RNAV (RNP) Z RWY 31	OK
IN	GARY	GARY/CHICAGO INTL	GYY	RNAV (RNP) Z RWY 12	OK
IN	GARY	GARY/CHICAGO INTL	GYY	RNAV (RNP) Z RWY 30	OK
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 05L	OK
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 05R	OK
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 14	OK
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 23L	OK
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 23R	OK
IN	INDIANAPOLIS	INDIANAPOLIS INTL	IND	RNAV (RNP) Z RWY 32	OK
KS	WICHITA	WICHITA MID-CONTINENT	ICT	RNAV (RNP) Z RWY 01L	OK
KS	WICHITA	WICHITA MID-CONTINENT	ICT	RNAV (RNP) Z RWY 14	OK
KS	WICHITA	WICHITA MID-CONTINENT	ICT	RNAV (RNP) Z RWY 19L	OK
KS	WICHITA	WICHITA MID-CONTINENT	ICT	RNAV (RNP) Z RWY 19R	OK
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 09	OK
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 18C	OK
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 18L	OK
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 18R	OK
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 27	OK
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 36C	OK
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 36L	OK
KY	COVINGTON	CINCINNATI/NORTHERN KENTUCKY INTL	CVG	RNAV (RNP) Z RWY 36R	OK
LA	NEW ORLEANS	LOUIS ARMSTRONG NEW ORLEANS INTL	MSY	RNAV (RNP) Z RWY 10	OK
LA	NEW ORLEANS	LOUIS ARMSTRONG NEW ORLEANS INTL	MSY	RNAV (RNP) Z RWY 19	OK
LA	NEW ORLEANS	LOUIS ARMSTRONG NEW ORLEANS INTL	MSY	RNAV (RNP) Z RWY 19	OK
MD	BALTIMORE	BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL	BWI	RNAV (RNP) Z RWY 15R	OK
MD	BALTIMORE	BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL	BWI	RNAV (RNP) Z RWY 28	OK
MO	KANSAS CITY	KANSAS CITY INTL	MCI	RNAV (RNP) Z RWY 19R	OK

MT	BOZEMAN	BOZEMAN YELLOWSTONE INTL	BZN	RNAV (RNP) RWY 30	PESRE 4, FIDEP 5
MT	BOZEMAN	BOZEMAN YELLOWSTONE INTL	BZN	RNAV (RNP) RWY 30	PESRE 4, KELOT 5
MT	BOZEMAN	BOZEMAN YELLOWSTONE INTL	BZN	RNAV (RNP) RWY 30	PESRE 4
MT	BOZEMAN	BOZEMAN YELLOWSTONE INTL	BZN	RNAV (RNP) Z RWY 12	OK
MT	HELENA	HELENA RGNL	HLN	RNAV (RNP) Y RWY 27	OK
MT	HELENA	HELENA RGNL	HLN	RNAV (RNP) Y RWY 27	OK
MT	HELENA	HELENA RGNL	HLN	RNAV (RNP) Z RWY 09	OK
MT	HELENA	HELENA RGNL	HLN	RNAV (RNP) Z RWY 27	OK
MT	MISSOULA	MISSOULA INTL	MSO	RNAV (RNP) RWY 29	ROKNY 5
MT	MISSOULA	MISSOULA INTL	MSO	RNAV (RNP) Z RWY 11	OK
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 05	OK
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 18C	OK
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 18L	OK
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 18R	OK
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 18R	OK
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 23	OK
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 36C	OK
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 36L	OK
NC	CHARLOTTE	CHARLOTTE/DOUGLAS INTL	CLT	RNAV (RNP) Z RWY 36R	OK
NH	MANCHESTER	MANCHESTER	MHT	RNAV (RNP) Z RWY 17	OK
NJ	ATLANTIC CITY	ATLANTIC CITY INTL	ACY	RNAV (RNP) Z RWY 13	OK
NJ	ATLANTIC CITY	ATLANTIC CITY INTL	ACY	RNAV (RNP) Z RWY 31	OK
NJ	NEWARK	NEWARK LIBERTY INTL	EWR	RNAV (RNP) Y RWY 22L	OK
NJ	NEWARK	NEWARK LIBERTY INTL	EWR	RNAV (RNP) Z RWY 04R	GRITY 5.9
NJ	NEWARK	NEWARK LIBERTY INTL	EWR	RNAV (RNP) Z RWY 29	OK
NJ	TETERBORO	TETERBORO	TEB	RNAV (RNP) RWY 19	OK
NJ	TETERBORO	TETERBORO	TEB	RNAV (RNP) Z RWY 06	GUZTI 5.6
NV	RENO	RENO/TAHOE INTL	RNO	RNAV (RNP) Z RWY 34L	OK
NV	RENO	RENO/TAHOE INTL	RNO	RNAV (RNP) Z RWY 34L	OK
NV	RENO	RENO/TAHOE INTL	RNO	RNAV (RNP) Z RWY 34R	OK
NV	RENO	RENO/TAHOE INTL	RNO	RNAV (RNP) Z RWY 34R	OK
NY	WHITE PLAINS	WESTCHESTER COUNTY	HPN	RNAV (RNP) Z RWY 16	WALOB 4.1, CUFDO 5
NY	WHITE PLAINS	WESTCHESTER COUNTY	HPN	RNAV (RNP) Z RWY 34	HAARP 3.4
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) RWY 13L	OK
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) RWY 13R	OK
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) Z RWY 04L	OK
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) Z RWY 04R	OK
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) Z RWY 31L	OK
NY	NEW YORK	JOHN F KENNEDY INTL	JFK	RNAV (RNP) Z RWY 31R	OK
NY	NEW YORK	LA GUARDIA	LGA	RNAV (RNP) Z RWY 04	OK
NY	NEW YORK	LA GUARDIA	LGA	RNAV (RNP) Z RWY 04	OK
NY	NEW YORK	LA GUARDIA	LGA	RNAV (RNP) Z RWY 22	OK
NY	NEW YORK	LA GUARDIA	LGA	RNAV (RNP) Z RWY 22	OK
OK	TULSA	TULSA INTL	TUL	RNAV (RNP) Z RWY 18R	OK
OK	TULSA	TULSA INTL	TUL	RNAV (RNP) Z RWY 26	OK
OR	MEDFORD	ROGUE VALLEY INTL - MEDFORD	MFR	RNAV (RNP) RWY 32	FILPU 2.5
OR	MEDFORD	ROGUE VALLEY INTL - MEDFORD	MFR	RNAV (RNP) Z RWY 14	JIVTI 5, WOTSU 5
OR	PORTLAND	PORTLAND INTL	PDX	RNAV (RNP) Y RWY 28L	OK 10R-OK
OR	PORTLAND	PORTLAND INTL	PDX	RNAV (RNP) Y RWY 28R	OK 10L-OK

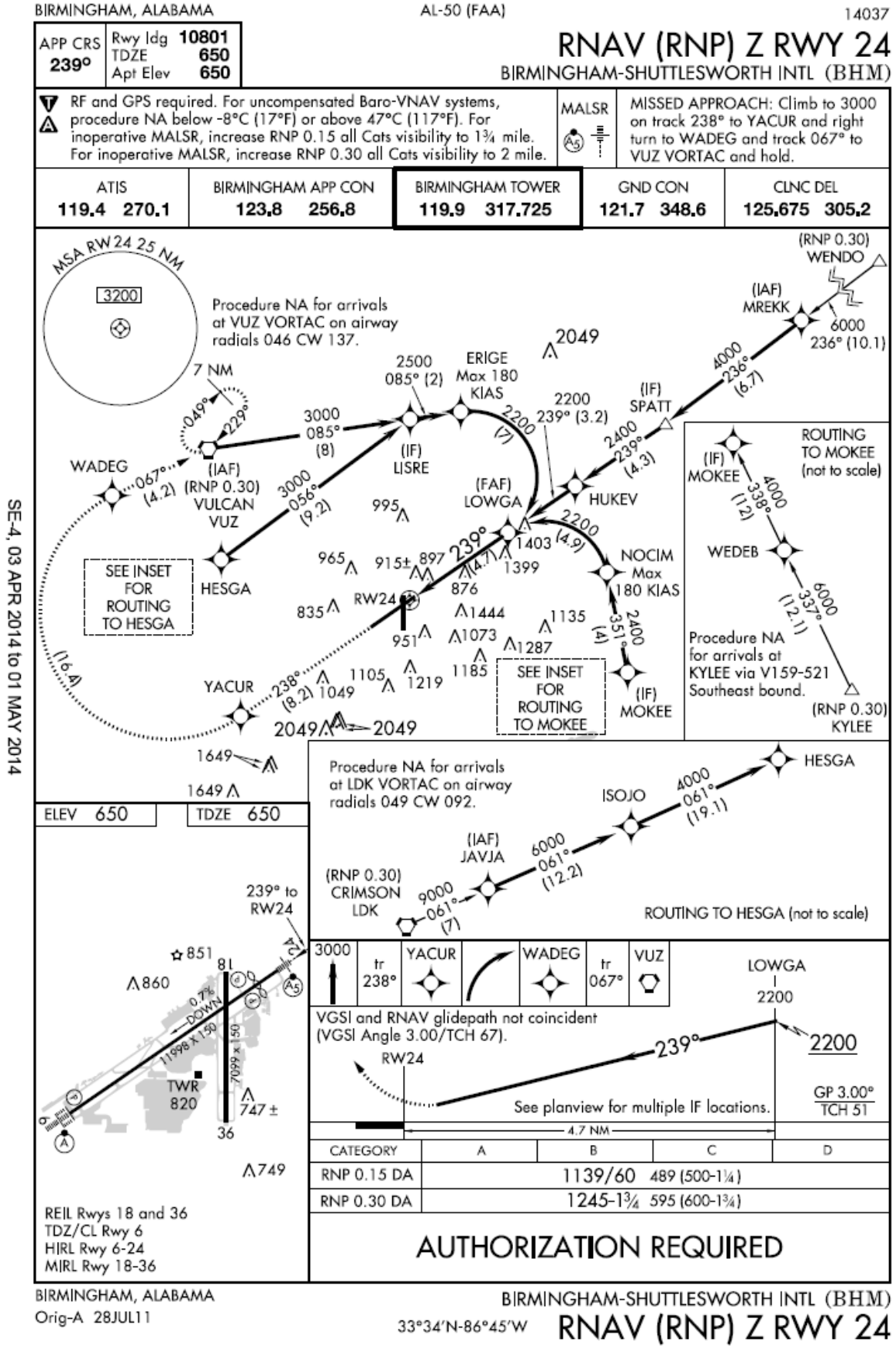
OR	PORTLAND	PORTLAND INTL	PDX	RNAV (RNP) Z RWY 28L	OK
OR	PORTLAND	PORTLAND INTL	PDX	RNAV (RNP) Z RWY 28R	OK
PA	PHILADELPHIA	PHILADELPHIA INTL	PHL	RNAV (RNP) Z RWY 09L	OK
PA	PHILADELPHIA	PHILADELPHIA INTL	PHL	RNAV (RNP) Z RWY 09R	OK
PA	PHILADELPHIA	PHILADELPHIA INTL	PHL	RNAV (RNP) Z RWY 09R	OK
PA	PITTSBURGH	PITTSBURGH INTL	PIT	RNAV (RNP) Z RWY 10C	OK
PA	PITTSBURGH	PITTSBURGH INTL	PIT	RNAV (RNP) Z RWY 10R	OK
PA	PITTSBURGH	PITTSBURGH INTL	PIT	RNAV (RNP) Z RWY 28C	OK
PA	PITTSBURGH	PITTSBURGH INTL	PIT	RNAV (RNP) Z RWY 28L	OK
PA	PITTSBURGH	PITTSBURGH INTL	PIT	RNAV (RNP) Z RWY 28R	OK
SP	AGANA	GUAM INTL	GUM	RNAV (RNP) Z RWY 06L	OK
SP	AGANA	GUAM INTL	GUM	RNAV (RNP) Z RWY 06R	OK
SP	AGANA	GUAM INTL	GUM	RNAV (RNP) Z RWY 24L	OK
SP	AGANA	GUAM INTL	GUM	RNAV (RNP) Z RWY 24R	OK
TN	MEMPHIS	MEMPHIS INTL	MEM	RNAV (RNP) X RWY 18L	OK
TN	MEMPHIS	MEMPHIS INTL	MEM	RNAV (RNP) X RWY 18R	OK
TX	CORPUS CHRISTI	CORPUS CHRISTI INTL	CRP	RNAV (RNP) Z RWY 13	YEHEC 3
TX	CORPUS CHRISTI	CORPUS CHRISTI INTL	CRP	RNAV (RNP) Z RWY 31	RIXMU 2.7
TX	CORPUS CHRISTI	CORPUS CHRISTI INTL	CRP	RNAV (RNP) Z RWY 35	GLASN 3.3, VOWKO 5.9
TX	HOUSTON	GEORGE BUSH INTERCONTINENTAL/HOUSTON	IAH	RNAV (RNP) Y RWY 08R	OK
TX	HOUSTON	GEORGE BUSH INTERCONTINENTAL/HOUSTON	IAH	RNAV (RNP) Y RWY 27	OK
TX	LUBBOCK	LUBBOCK PRESTON SMITH INTL	LBB	RNAV (RNP) Z RWY 17R	OK
TX	LUBBOCK	LUBBOCK PRESTON SMITH INTL	LBB	RNAV (RNP) Z RWY 35L	OK
WA	SEATTLE	BOEING FIELD/KING COUNTY INTL	BFI	RNAV (RNP) Z RWY 13R	ZUVEN 3.7, JAMRO 2.5
WA	WENATCHEE	PANGBORN MEMORIAL	EAT	RNAV (RNP) RWY 30	HESNI 5, 12-OK
WY	JACKSON	JACKSON HOLE	JAC	RNAV (RNP) Y RWY 01	OK
WY	JACKSON	JACKSON HOLE	JAC	RNAV (RNP) Z RWY 01	OK

NEW	**PROCEDURES NOT on AeroNav List**				
MD	BALTIMORE	BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL	BWI	RNAV (RNP) Z RWY 10	STRPS 3, ANCRR 3
MO	KANSAS CITY	KANSAS CITY INTL	MCI	RNAV (RNP) Z RWY 9	TONYG 4.9 , NOMEE 4.9, MAMMA 5.3
NJ	NEWARK	NEWARK LIBERTY INTL	EWR	RNAV (RNP) Y RWY 29	TETER 3.4
NY	SYRACUSE	SYRACUSE HANCOCK INTL	SYR	RNAV (RNP) Y RWY 10	HETEL 3, LENEC 3, JEMKA 4.3
NY	SYRACUSE	SYRACUSE HANCOCK INTL	SYR	RNAV (RNP) Y RWY 28	PRIMS 3, ESAME 3.1, HADAS 3.4, RILIE 3.1
WI	MILWAUKEE	GENERAL MITCHELL INTL	MKE	RNAV (RNP) Y RWY 7R	GAUSS 4.1

Appendix 3 – MKE RNAV (RNP) Y Runway 7R SIAP



Appendix 4 – BHM RNAV (RNP) Z Runway 24



Appendix 5 – RNP AR SIAPs Requiring Modification to Comply With Proposed 8260.58 Changes

5a – RNP AR SIAP Assessment

ID	Procedure Title	AMDT	IF/IAF	FAF-IF/IAF	TA	KIAS	VKTW	RNP	BA	Min Lgth	Pub Lgth	New KIAS	Remarks
1V6	RNAV (RNP) RWY 11	ORIG-A	FLOOD (IAF)	18.6	12100	300	71	0.50	20	7.83	9.0	N/A	YOKUY (IF) IS RF
1V6	RNAV (RNP) Z RWY 29	ORIG-A											**NO RF**
ABQ	RNAV (RNP) Y RWY 21	ORIG	FOXRR	N/A	**10000**	210	N/A	1.00	25	N/A	7.5	**N/A**	MAN 10000; OK >4.2 NM
ABQ	RNAV (RNP) Y RWY 21	ORIG	NODME	N/A	**9000**	210	N/A	1.00	25	N/A	6.0	**N/A**	MAN 9000; OK >4.2 NM
ABQ	RNAV (RNP) Y RWY 26	1	DEWEB	6.9	8500	210	64	1.00	25	2.99	4.6	N/A	
ABQ	RNAV (RNP) Y RWY 26	1	CADAT	N/A	**9000**	210	N/A	0.50	20	N/A	9.5	**N/A**	MAN 9000; OK >5.4 NM
ABQ	RNAV (RNP) Z RWY 03	1	TNTOE	N/A	**10000**	210	67	1.00	25	3.17	3.4	N/A	MAN 10000
ABQ	RNAV (RNP) Z RWY 03	1	CEMAC	5.6	7900	210	63	1.00	25	2.93	4.0	N/A	
ABQ	RNAV (RNP) Z RWY 03	1	ABQ	9.1	8800	210	64	1.00	25	3.02	4.2	N/A	
ABQ	RNAV (RNP) Z RWY 08	1	TNTOE	N/A	**10000**	210	67	1.00	25	3.17	6.1	N/A	MAN 10000
ABQ	RNAV (RNP) Z RWY 08	1	FRANI	8.3	8400	210	64	1.00	25	2.99	3.8	N/A	
ABQ	RNAV (RNP) Z RWY 21	1	TACOH	N/A	**10000**	210	67	1.00	25	3.17	3.9	N/A	MAN 10000
ABQ	RNAV (RNP) Z RWY 21	1	RMERO	12.8	9800	210	N/A	1.00	25	N/A	6.2	**N/A**	OK - >4.2 NM
ABQ	RNAV (RNP) Z RWY 21	1	WILKE	8.2	9000	210	**41**	0.30	20	3.33	3.2	200	HIST VKTW
ABQ	RNAV (RNP) Z RWY 26	1	TACOH	N/A	**10000**	210	67	1.00	25	3.17	3.7	N/A	MAN 10000
ABQ	RNAV (RNP) Z RWY 26	1	RMERO	7.8	9000	210	65	1.00	25	3.05	4.9	N/A	
ABQ	RNAV (RNP) Z RWY 26	1	BRNDO	8.2	9100	210	65	1.00	25	3.06	3.1	N/A	
ACY	RNAV (RNP) Z RWY 13	ORIG-B											**NO RF**
ACY	RNAV (RNP) Z RWY 31	ORIG-B											**NO RF**
ALB	RNAV (RNP) Z RWY 01	ORIG-A	FOSEX	11.1	4200	210	55	0.30	20	3.24	3.9	N/A	
ALB	RNAV (RNP) Z RWY 01	ORIG-A	HIGES	8.3	3500	210	N/A	1.00	25	N/A	6.0	**N/A**	OK - >4.2 NM
ALB	RNAV (RNP) Z RWY 01	ORIG-A	URACI	8.4	3500	210	54	0.30	20	3.17	4.4	N/A	
ALB	RNAV (RNP) Z RWY 01	ORIG-A	YETGU	11.1	4200	210	55	0.30	20	3.24	3.9	N/A	
ALB	RNAV (RNP) Z RWY 19	ORIG-A	WEKOR	11.0	4200	210	55	0.30	20	3.24	3.8	N/A	
ALB	RNAV (RNP) Z RWY 19	ORIG-A	TUKUY	11.0	4200	210	55	0.30	20	3.24	3.8	N/A	

ALB	RNAV (RNP) Z RWY 19	ORIG-A	SEYON	9.2	3700	250	N/A	1.00	25	N/A	6.0	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 04	ORIG-A	QURTR	15.0	8400	245	N/A	0.80	20	N/A	6.8	**N/A**	OK - >5.4 NM
AMA	RNAV (RNP) Z RWY 04	ORIG-A	TEXAZ	10.9	7400	250	N/A	0.80	20	N/A	6.8	**N/A**	OK - >5.4 NM
AMA	RNAV (RNP) Z RWY 04	ORIG-A	WESTX	11.3	7500	250	N/A	1.00	25	N/A	7.2	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 04	ORIG-A	VERRO	15.0	8400	230	N/A	1.00	25	N/A	6.8	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 13	ORIG-A	JETIM	10.9	7500	250	N/A	0.80	20	N/A	6.8	**N/A**	OK - >5.4 NM
AMA	RNAV (RNP) Z RWY 13	ORIG-A	FLITE	15.0	8500	245	N/A	0.80	20	N/A	6.8	**N/A**	OK - >5.4 NM
AMA	RNAV (RNP) Z RWY 13	ORIG-A	BITNE	15.0	8500	230	N/A	1.00	25	N/A	6.8	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 13	ORIG-A	ROUTE	11.3	7600	250	N/A	1.00	25	N/A	7.2	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 22	ORIG-A	ZATRO	15.0	8400	230	N/A	1.00	25	N/A	6.8	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 22	ORIG-A	TELVE	11.3	7500	250	N/A	1.00	25	N/A	7.2	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 22	ORIG-A	MIRVE	11.3	7500	250	N/A	1.00	25	N/A	7.2	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 22	ORIG-A	PULBE	15.0	8400	230	N/A	1.00	25	N/A	6.8	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 31	ORIG-A	HOGET	15.0	8400	230	N/A	1.00	25	N/A	6.8	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 31	ORIG-A	MIRBE	11.3	7500	250	N/A	1.00	25	N/A	7.2	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 31	ORIG-A	HRNET	11.3	7500	250	N/A	1.00	25	N/A	7.2	**N/A**	OK - >4.2 NM
AMA	RNAV (RNP) Z RWY 31	ORIG-A	HORSY	15.0	8400	230	N/A	1.00	25	N/A	6.8	**N/A**	OK - >4.2 NM
ATL	RNAV (RNP) Z RWY 08L	ORIG	BBRAD (IAF)	15.5	6800	210	N/A	1.00	25	N/A	4.5	**N/A**	COORD SITE; OK - >4.2 NM. PUB 09/18/14
ATL	RNAV (RNP) Z RWY 08L	ORIG	REAKS (IAF)	16.2	7000	210	61	1.00	25	2.83	3.9	N/A	COORD SITE. PUB 09/18/14
ATL	RNAV (RNP) Z RWY 08L	1B	**DELETED 7/24/14**										**NO RF**
ATL	RNAV (RNP) Z RWY 08R	1	**DELETED 7/24/14**										**NO RF**
ATL	RNAV (RNP) Z RWY 09L	1	**DELETED 7/24/14**										**NO RF**
ATL	RNAV (RNP) Z RWY 09R	1	**DELETED 7/24/14**										**NO RF**
ATL	RNAV (RNP) Z RWY 10	2	**DELETED 7/24/14**										**NO RF**
ATL	RNAV (RNP) Z RWY 10	ORIG	WALTT (IAF)	15.8	6700	210	N/A	1.00	25	N/A	4.3	**N/A**	COORD SITE; OK - >4.2 NM. PUB 09/18/14
ATL	RNAV (RNP) Z RWY 10	ORIG	STUUF (IAF)	18.0	7200	210	N/A	1.00	25	N/A	5.1	**N/A**	COORD SITE; OK - >4.2 NM. PUB 09/18/14
ATL	RNAV (RNP) Z RWY 26L	1	**DELETED 7/24/14**										**NO RF**

ATL	RNAV (RNP) Z RWY 26R	1	**DELETED 7/24/14**										**NO RF**
ATL	RNAV (RNP) Z RWY 26R	ORIG	POORS (IAF)	17.9	7200	210	N/A	1.00	25	N/A	5.0	N/A	COORD SITE; OK - >4.2 NM. PUB 09/18/14
ATL	RNAV (RNP) Z RWY 26R	ORIG	COLEE (IAF)	16.6	6900	210	61	1.00	25	2.82	3.9	N/A	COORD SITE. PUB 09/18/14
ATL	RNAV (RNP) Z RWY 27L	2	**DELETED 7/24/14**										**NO RF**
ATL	RNAV (RNP) Z RWY 27R	1	**DELETED 7/24/14**										**NO RF**
ATL	RNAV (RNP) Z RWY 28	2B	**DELETED 7/24/14**										**NO RF**
ATL	RNAV (RNP) Z RWY 28	ORIG	SWETE (IAF)	17.5	7100	210	N/A	1.00	25	N/A	4.6	**N/A**	COORD SITE; OK - >4.2 NM. PUB 09/18/14
ATL	RNAV (RNP) Z RWY 28	ORIG	SPEIR (IAF)	16.4	6800	210	N/A	1.00	25	N/A	4.5	**N/A**	COORD SITE; OK - >4.2 NM. PUB 09/18/14
BCT	RNAV (RNP) Z RWY 23	ORIG	WEMSO	13.5	4900	210	N/A	1.00	25	N/A	4.5	N/A	OK - >4.2 NM
BDL	RNAV (RNP) Z RWY 06	ORIG	PAGNE	13.4	5200	250	N/A	0.30	20	N/A	5.5	**N/A**	OK - >5.4 NM
BDL	RNAV (RNP) Z RWY 06	ORIG	NOBIY	9.8	4300	250	56	0.30	20	4.35	5.0	N/A	
BDL	RNAV (RNP) Z RWY 06	ORIG	DILLN	13.3	5200	250	N/A	0.30	20	N/A	5.6	**N/A**	OK - >5.4 NM
BDL	RNAV (RNP) Z RWY 24	ORIG-A	PAGNE	13.2	5000	180	N/A	0.30	20	N/A	5.4	**N/A**	OK - 5.4 NM
BDL	RNAV (RNP) Z RWY 24	ORIG-A	DILLN	13.6	5000	180	N/A	0.30	20	N/A	5.4	**N/A**	OK - 5.4 NM
BED	RNAV (RNP) Y RWY 11	ORIG	FOVEG	10.1	4400	210	56	1.00	25	2.56	5.2	N/A	
BED	RNAV (RNP) Y RWY 11	ORIG	ZARAB	12.0	4800	210	N/A	1.00	25	N/A	6.0	**N/A**	OK - >4.2 NM
BED	RNAV (RNP) Y RWY 29	ORIG	EXXRO	14.8	5500	210	N/A	1.00	25	N/A	5.5	**N/A**	OK - >4.2 NM
BED	RNAV (RNP) Y RWY 29	ORIG	YANRU	11.5	4700	250	N/A	1.00	25	N/A	6.7	**N/A**	OK - >4.2 NM
BFI	RNAV (RNP) Z RWY 13R	ORIG-C	ZUVEN (IAF)	14.5	5400	250	58	1.00	25	3.54	3.7	N/A	
BHM	RNAV (RNP) Z RWY 06	ORIG-A	BAMTE	9.7	4800	180	**57**	0.30	20	2.61	4.0	N/A	
BHM	RNAV (RNP) Z RWY 24	ORIG-A	LISRE	9.0	4500	250	**56**	0.30	20	4.37	2.0	**150**	**<180K NA**
BHM	RNAV (RNP) Z RWY 24	ORIG-A	MOKEE	8.9	4500	250	**56**	0.30	20	4.37	4.0	230	
BIH	RNAV (RNP) RWY 30	ORIG-B	FOMES	6.0	9000	250	N/A	0.50	20	N/A	6.0	N/A	OK - >5.4 NM
BIL	RNAV (RNP) Z RWY 10L	ORIG	HYTES	16.8	10000	300	67	1.00	25	5.67	7.4	N/A	COORDINATION SITE; PUB 01/08/15
BIL	RNAV (RNP) Z RWY 10L	ORIG	IZUFE	16.7	10000	300	67	1.00	25	5.67	7.4	N/A	COORDINATION SITE; PUB 01/08/15
BIL	RNAV (RNP) Z RWY 10L	ORIG	GRYNT	25.5	12500	300	67	1.00	25	6.20	20.9	N/A	COORDINATION SITE; PUB

													01/08/15
BIL	RNAV (RNP) Z RWY 28R	ORIG	IGIFE	16.8	8500	250	N/A	1.00	25	N/A	7.4	N/A	OK - >4.2 NM; COORD SITE; PUB 01/08/15
BIL	RNAV (RNP) Z RWY 28R	ORIG	MACBU	6.2	5900	250	59	0.40	20	4.61	3.5	210	COORDINATION SITE; PUB 01/08/15
BIL	RNAV (RNP) Z RWY 28R	ORIG	ZOHZE	6.4	5900	250	59	0.30	20	4.61	4.7	N/A	COORDINATION SITE; PUB 01/08/15
BIL	RNAV (RNP) Z RWY 28R	ORIG	GRYNT (IAF)	29.8	11800	300	71	1.00	25	6.06	20.3	N/A	COORDINATION SITE; PUB 01/08/15
BLI	RNAV (RNP) Z RWY 16	ORIG-A	APDON	9.5	4400	250	N/A	1.00	25	N/A	5.9	**N/A**	OK - >4.2 NM
BLI	RNAV (RNP) Z RWY 16	ORIG-A	UCAKI (IAF)	12.5	5200	250	N/A	1.00	25	N/A	6.5	**N/A**	CUSEL (IF) IS RF; OK - >4.2 NM
BLI	RNAV (RNP) Z RWY 34	ORIG-A	ZEJYA (IAF)	11.8	4300	250	N/A	1.00	25	N/A	6.7	**N/A**	ISUWU (IF) IS RF; OK - >4.2 NM
BNA	RNAV (RNP) Z RWY 02C	2	WAMAR	N/A	**5000**	210	57	1.00	25	2.62	4.0	N/A	MAN 5000
BNA	RNAV (RNP) Z RWY 02C	2	TUPIE	N/A	**4000**	210	N/A	1.00	25	N/A	4.5	**N/A**	MAN 4000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 02C	2	PUCOR	N/A	**4000**	210	N/A	1.00	25	N/A	7.7	**N/A**	MAN 4000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 02C	2	ZODKA	N/A	**5000**	210	N/A	1.00	25	N/A	5.6	**N/A**	MAN 5000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 02L	2	WAMAR	N/A	**5000**	210	**57**	1.00	25	2.62	3.2	N/A	MAN 5000
BNA	RNAV (RNP) Z RWY 02L	2	TUPIE	N/A	**4000**	210	55	1.00	25	2.52	5.3	N/A	MAN 4000
BNA	RNAV (RNP) Z RWY 02L	2	PUCOR	N/A	**4000**	210	N/A	1.00	25	N/A	8.6	**N/A**	MAN 4000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 02L	2	ZODKA	N/A	**5000**	210	N/A	1.00	25	N/A	5.0	**N/A**	MAN 5000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 02R	2	WAMAR	N/A	**5000**	210	57	1.00	25	2.62	3.0	N/A	MAN 5000
BNA	RNAV (RNP) Z RWY 02R	2	TUPIE	N/A	**4000**	210	N/A	1.00	25	N/A	5.7	**N/A**	MAN 4000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 02R	2	PUCOR	N/A	**4000**	210	N/A	1.00	25	N/A	8.0	**N/A**	MAN 4000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 02R	2	ZODKA	N/A	**5000**	210	N/A	1.00	25	N/A	5.1	**N/A**	MAN 5000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 20L	2	JOGLO	N/A	**5000**	210	57	1.00	25	2.62	3.8	N/A	MAN 5000
BNA	RNAV (RNP) Z RWY 20L	2	CULAR	N/A	**4000**	210	N/A	1.00	25	N/A	6.1	**N/A**	MAN 4000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 20L	2	MUUDD	N/A	**6000**	250	N/A	1.00	25	N/A	7.6	**N/A**	MAN 6000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 20L	2	SIPPO	N/A	**5000**	210	57	1.00	25	2.62	3.9	N/A	MAN 5000
BNA	RNAV (RNP) Z RWY 20R	2	JOGLO	N/A	**5000**	210	57	1.00	25	2.62	3.8	N/A	MAN 5000
BNA	RNAV (RNP) Z RWY 20R	2	CULAR	N/A	**4000**	210	N/A	1.00	25	N/A	5.4	**N/A**	MAN 4000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 20R	2	MUUDD	N/A	**6000**	250	N/A	1.00	25	N/A	7.6	**N/A**	MAN 6000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 20R	2	SIPPO	N/A	**5000**	210	57	1.00	25	2.62	3.9	N/A	MAN 5000
BNA	RNAV (RNP) Z RWY 31	1	GILME	N/A	**5000**	210	N/A	1.00	25	N/A	4.4	**N/A**	MAN 5000; OK >4.2 NM
BNA	RNAV (RNP) Z RWY 31	1	BGEDD	N/A	**4000**	210	55	1.00	25	2.52	3.3	N/A	MAN 4000

BNA	RNAV (RNP) Z RWY 31	1	MUGEE	N/A	**4000**	210	55	1.00	25	2.52	4.0	N/A	MAN 4000
BOI	RNAV (RNP) Z RWY 10L	1	EKEME	N/A	**7000**	250	**40**	1.00	25	3.31	3.7	N/A	MAN 7000; HIST VKTW; COORD SITE; PUB 09/18/14
BOI	RNAV (RNP) Z RWY 10L	1	APISE	N/A	**6000**	250	N/A	1.00	25	N/A	5.7	N/A	MAN 6000; OK - >5.4 NM; COORD SITE; PUB 09/18/14
BOI	RNAV (RNP) Z RWY 10L	1	KOLKE	N/A	**8000**	250	N/A	1.00	25	N/A	6.9	N/A	MAN 8000; OK - >5.4 NM; COORD SITE; PUB 09/18/14
BOI	RNAV (RNP) Z RWY 10R	1	EKEME	N/A	**7000**	250	**40**	1.00	25	3.31	3.8	N/A	MAN 7000; HIST VKTW; COORD SITE; PUB 09/18/14
BOI	RNAV (RNP) Z RWY 10R	1	APISE	N/A	**6000**	250	N/A	1.00	25	N/A	5.5	N/A	MAN 6000; OK - >5.4 NM; COORD SITE; PUB 09/18/14
BOI	RNAV (RNP) Z RWY 10R	1	KOLKE	N/A	**8000**	250	N/A	1.00	25	N/A	7.2	N/A	MAN 8000; OK - >5.4 NM; COORD SITE; PUB 09/18/14
BOI	RNAV (RNP) X RWY 28L	ORIG	SMYRF	8.6	6700	210	61	0.30	20	3.59	5.3	N/A	COORDINATION SITE; PUB 09/18/14
BOI	RNAV (RNP) Z RWY 28L	1	DIKAC	N/A	**6000**	210	59	1.00	25	2.72	3.7	N/A	MAN 6000; COORD SITE; PUB 09/18/14
BOI	RNAV (RNP) Z RWY 28L	1	EKEME	N/A	**7000**	210	61	1.00	25	2.83	3.8	N/A	MAN 7000; COORD SITE; PUB 09/18/14
BOI	RNAV (RNP) X RWY 28R	ORIG	SMYRF	9.4	6800	210	N/A	0.30	20	N/A	5.5	N/A	OK - >5.4 NM; COORD SITE; PUB 09/18/14
BOI	RNAV (RNP) Z RWY 28R	1	DIKAC	N/A	**6000**	210	59	1.00	25	2.72	3.7	N/A	MAN 6000; COORD SITE; PUB 09/18/14
BOI	RNAV (RNP) Z RWY 28R	1	EKEME	N/A	**7000**	210	61	1.00	25	2.83	3.9	N/A	MAN 7000; COORD SITE; PUB 09/18/14
BUR	**RNAV (RNP) Y RWY 08**	**ORIG-A**	**YEBUN**	**1.2**	**3000**	**250**	**53**	**0.50**	**20**	**4.13**	**1.2**	**110**	**90° TF - TF EVAL, IF - FAF; <180 KIAS NA**
BUR	**RNAV (RNP) Z RWY 08**	**1A**	**YEBUN**	**1.2**	**3000**	**250**	**53**	**0.50**	**20**	**4.13**	**1.2**	**110**	**90° TF - TF EVAL, IF - FAF; <180 KIAS NA**
BWI	RNAV (RNP) Z RWY 15R	ORIG-B											**NO RF**
BWI	RNAV (RNP) Z RWY 28	ORIG-B											**NO RF**
BWI	RNAV (RNP) Z RWY 10	2B	ANCRR	N/A	**4000**	250	**53**	1.00	25	3.31	3.0	230	MAN 4000; HIST VKTW
BWI	RNAV (RNP) Z RWY 10	2B	STRPS	N/A	**4000**	250	**52**	1.00	25	3.29	3.0	230	MAN 4000; HIST VKTW
BWI	RNAV (RNP) Z RWY 33L	2A	KEEYY	N/A	**4000**	250	N/A	1.00	25	N/A	6.1	**N/A**	MAN 4000; OK - >4.2 NM
BZN	RNAV (RNP) RWY 30	ORIG-B	WOMET	12.9	9000	250	N/A	0.50	20	N/A	6.6	N/A	OK - >5.4 NM
BZN	RNAV (RNP) RWY 30	ORIG-B	KECOT	13.1	9000	250	65	1.00	25	4.04	5.0	N/A	
BZN	RNAV (RNP) RWY 30	ORIG-B	FIDEP	14.6	9400	250	66	1.00	25	4.10	5.0	N/A	
BZN	RNAV (RNP) RWY 30	ORIG-B	PESRE	14.8	9400	250	**66**	1.00	25	4.10	4.0	240	

BZN	RNAV (RNP) Z RWY 12	ORIG-B	WOMET	18.5	10300	300	67	1.00	25	5.71	10.4	N/A	
BZN	RNAV (RNP) Z RWY 12	ORIG-B	GATEY	16.3	9700	250	N/A	1.00	25	N/A	7.2	N/A	OK - >4.2 NM
CHS	RNAV (RNP) Z RWY 03	ORIG-A	RECHY	N/A	**4000**	250	N/A	1.00	25	N/A	5.9	**N/A**	MAN 4000; OK >4.2 NM
CHS	RNAV (RNP) Z RWY 03	ORIG-A	STINNS	9.2	4000	250	**47**	1.00	25	3.19	2.1	190	
CHS	RNAV (RNP) Z RWY 15	ORIG-A	PIPPY	N/A	**5000**	250	57	1.00	25	3.48	4.4	N/A	MAN 5000
CHS	RNAV (RNP) Z RWY 15	ORIG-A	KREIS	N/A	**3000**	250	53	1.00	25	3.23	4.4	N/A	MAN 3000
CHS	RNAV (RNP) Z RWY 21	ORIG-A	ADERY	9.8	4000	250	**47**	1.00	25	3.19	3.0	240	HIST VKTW
CHS	RNAV (RNP) Z RWY 21	ORIG-A	MYERS	N/A	**3000**	250	**47**	1.00	25	3.11	3.0	240	MAN 3000; HIST VKTW
CHS	RNAV (RNP) Z RWY 33	ORIG-A	JAARD	10.0	4000	250	**47**	1.00	25	3.19	3.0	240	HIST VKTW
CHS	RNAV (RNP) Z RWY 33	ORIG-A	CZSAR	N/A	**3000**	250	**47**	1.00	25	3.11	2.6	220	MAN 3000; HIST VKTW
CHS	RNAV (RNP) Z RWY 33	ORIG-A	SNOBB	N/A	**3000**	250	**47**	1.00	25	3.11	3.0	240	MAN 3000; HIST VKTW
CLT	RNAV (RNP) Z RWY 05	ORIG-A											**NO RF**
CLT	RNAV (RNP) Z RWY 18C	ORIG-C											**NO RF**
CLT	RNAV (RNP) Z RWY 18L	ORIG-B											**NO RF**
CLT	RNAV (RNP) Z RWY 18R	ORIG-B											**NO RF**
CLT	RNAV (RNP) Z RWY 23	ORIG-A											**NO RF**
CLT	RNAV (RNP) Z RWY 36C	ORIG-D											**NO RF**
CLT	RNAV (RNP) Z RWY 36L	ORIG-B											**NO RF**
CLT	RNAV (RNP) Z RWY 36R	ORIG-B											**NO RF**
CMH	RNAV (RNP) Z RWY 10L	1											**NO RF**
CMH	RNAV (RNP) Z RWY 10R	1											**NO RF**
CMH	RNAV (RNP) Z RWY 28L	1											**NO RF**
CMH	RNAV (RNP) Z RWY 28R	1											**NO RF**
COS	RNAV (RNP) Z RWY 17L	1	WIPUN	16.2	12800	300	**72**	1.00	25	6.26	3.9	220	
COS	RNAV (RNP) Z RWY 17L	1	REEFF	12.4	11800	300	**70**	1.00	25	6.03	4.2	240	
COS	RNAV (RNP) Z RWY 17R	ORIG-C	TEXCO	12.3	11800	300	**70**	1.00	25	6.03	4.0	230	
COS	RNAV (RNP) Z RWY 17R	ORIG-C	FRANO	18.3	13300	300	**73**	1.00	25	6.37	6.0	280	
COS	RNAV (RNP) Z RWY 35L	ORIG-A	WOVID	8.0	10100	300	**67**	1.00	25	5.68	4.0	240	
COS	RNAV (RNP) Z RWY 35R	ORIG-A	JODUM	6.2	9700	250	**66**	1.00	25	4.13	2.0	**150**	**<180 KIAS NA**
CRP	RNAV (RNP) Z RWY 13	ORIG-B	YEHEC	6.8	3000	250	**43**	1.00	25	3.00	3.0	N/A	HIST VKTW
CRP	RNAV (RNP) Z RWY 31	ORIG-C	FIKLI	13.4	4600	250	N/A	1.00	25	N/A	8.0	N/A	OK - >4.2 NM
CRP	RNAV (RNP) Z RWY 31	ORIG-C	RIXMU	11.4	4100	250	**43**	0.50	20	3.99	2.7	190	HIST VKTW
CRP	RNAV (RNP) Z RWY 36	1	FIKLI	13.2	4600	250	N/A	1.00	25	N/A	7.3	**N/A**	OK - >4.2 NM
CRP	RNAV (RNP) Z RWY 36	1	GLASN	11.9	4300	250	56	1.00	25	3.40	3.4	N/A	

CRP	RNAV (RNP) Z RWY 36	1	VOWKO	11.4	4200	250	55	1.00	25	3.37	4.4	N/A	
CRQ	RNAV (RNP) Z RWY 24	ORIG-B	WAGAV	8.1	5500	250	58	0.30	20	4.54	5.0	N/A	
CRQ	RNAV (RNP) Z RWY 24	ORIG-B	ZAVAN	12.5	5600	250	N/A	1.00	25	N/A	5.0	**N/A**	OK - >4.2 NM
CRW	RNAV (RNP) Z RWY 05	ORIG	WODNA	11.6	5900	250	**57**	1.00	25	3.56	3.4	240	HIST VKTW
CRW	RNAV (RNP) Z RWY 05	ORIG	WUPKU	12.1	6100	250	N/A	1.00	25	N/A	8.9	**N/A**	OK - >4.2 NM
CRW	RNAV (RNP) Z RWY 05	ORIG	YOGUP	10.5	5700	250	N/A	1.00	25	N/A	6.0	**N/A**	OK - >4.2 NM
CRW	RNAV (RNP) Z RWY 05	ORIG	WOXAN	11.6	5900	250	**57**	1.00	25	3.56	3.4	240	HIST VKTW
CRW	RNAV (RNP) Z RWY 23	ORIG	HOVET	11.2	5200	210	57	1.00	25	2.63	3.0	N/A	
CRW	RNAV (RNP) Z RWY 23	ORIG	ZERUT	11.2	5200	210	57	1.00	25	2.63	3.0	N/A	
CVG	RNAV (RNP) Z RWY 09	ORIG-A											**NO RF**
CVG	RNAV (RNP) Z RWY 18C	ORIG-C											**NO RF**
CVG	RNAV (RNP) Z RWY 18L	ORIG-C											**NO RF**
CVG	RNAV (RNP) Z RWY 18R	ORIG-C											**NO RF**
CVG	RNAV (RNP) Z RWY 27	ORIG-A											**NO RF**
CVG	RNAV (RNP) Z RWY 36C	ORIG-C											**NO RF**
CVG	RNAV (RNP) Z RWY 36L	ORIG-C											**NO RF**
CVG	RNAV (RNP) Z RWY 36R	ORIG-C											**NO RF**
DAL	RNAV (RNP) W RWY 13L	ORIG	WENOP	4.9	2900	210	53	1.00	25	2.42	3.2	N/A	COORDINATION SITE; PUB 09/18/14
DAL	RNAV (RNP) W RWY 13L	ORIG	NOKME	9.5	4000	230	55	1.00	25	2.92	3.3	N/A	COORDINATION SITE; PUB 09/18/14
DAL	RNAV (RNP) W RWY 13R	ORIG	WENOP	5.5	3000	210	53	1.00	25	2.42	3.2	N/A	COORDINATION SITE; PUB 09/18/14
DAL	RNAV (RNP) W RWY 13R	ORIG	NOKME	10.1	4200	230	56	1.00	25	2.96	3.3	N/A	COORDINATION SITE; PUB 09/18/14
DAL	RNAV (RNP) X RWY 13L	ORIG	NETNE	N/A	3000	210	53	1.00	25	2.42	3.6	N/A	MAN 3000; COORDINATION SITE; PUB 09/18/14
DAL	RNAV (RNP) X RWY 13R	ORIG	NETNE	5.4	3000	210	53	1.00	25	2.42	3.8	N/A	COORDINATION SITE; PUB 09/18/14
DAL	RNAV (RNP) Z RWY 31L	ORIG	JALIM	10.7	4600	250	N/A	1.00	25	N/A	4.2	N/A	OK - 4.2 NM; COORDINATION SITE; PUB 09/18/14
DAL	RNAV (RNP) Z RWY 31L	ORIG	SUMLN	N/A	4000	250	55	1.00	25	3.35	3.5	N/A	MAN 4000; COORDINATION SITE; PUB 09/18/14
DAL	RNAV (RNP) Z RWY 31L	ORIG	DWNTN	N/A	3000	250	48	1.00	25	3.13	3.0	240	MAN 3000; HIST VKTW; COORD SITE; PUB 09/18/14
DAL	RNAV (RNP) Z RWY 31R	ORIG	JALIM	N/A	4000	250	55	1.00	25	3.35	3.7	N/A	MAN 4000; COORDINATION SITE; PUB 09/18/14

DAL	RNAV (RNP) Z RWY 31R	ORIG	SUMLN	N/A	4000	250	50	1.00	25	3.25	3.0	230	MAN 4000; COORDINATION SITE; PUB 09/18/14
DAL	RNAV (RNP) Z RWY 31R	ORIG	DWNTN	N/A	3000	250	53	1.00	25	3.23	3.8	N/A	MAN 3000; COORDINATION SITE; PUB 09/18/14
DAY	RNAV (RNP) Y RWY 06L	ORIG	WETAR	8.2	4400	210	56	1.00	25	2.56	3.0	N/A	
DAY	RNAV (RNP) Y RWY 06L	ORIG	TANSY	N/A	**6000**	250	N/A	1.00	25	N/A	6.0	N/A	MAN 6000; OK - >4.2 NM
DAY	RNAV (RNP) Y RWY 06L	ORIG	RISHI	5.5	3600	210	54	1.00	25	2.53	3.0	N/A	
DAY	RNAV (RNP) Y RWY 24R	ORIG	GNASH	N/A	**6000**	250	N/A	1.00	25	N/A	6.0	N/A	MAN 6000; OK - >4.2 NM
DAY	RNAV (RNP) Y RWY 24R	ORIG	JESTS	4.7	3400	210	54	1.00	25	2.53	3.0	N/A	
DAY	RNAV (RNP) Y RWY 24R	ORIG	OVEDE	7.0	4100	210	55	1.00	25	2.53	3.0	N/A	
DAY	RNAV (RNP) Y RWY 24R	ORIG	JATAD	N/A	**6000**	250	N/A	1.00	25	N/A	6.0	N/A	MAN 6000; OK - >4.2 NM
DCA	RNAV (RNP) RWY 01	1A											**RF IN MAS**
DCA	RNAV (RNP) RWY 19	1A	ARMEL (IAF)	17.7	6500	250	N/A	1.00	25	N/A	9.4	N/A	OK - >4.2 NM
DCA	RNAV (RNP) RWY 19	1A	BELTS (IAF)	16.0	6000	250	N/A	1.00	25	N/A	8.1	N/A	OK - >4.2 NM
DEN	RNAV (RNP) Z RWY 07	ORIG	BERNZ	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 07	ORIG	BBOOK	N/A	**11000**	210	69	1.00	25	3.29	4.0	N/A	MAN 11000
DEN	RNAV (RNP) Z RWY 08	ORIG	BERNZ	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 08	ORIG	BBOOK	N/A	**11000**	210	69	1.00	25	3.29	4.0	N/A	MAN 11000
DEN	RNAV (RNP) Z RWY 16L	ORIG	CLIFF	N/A	**11000**	210	69	1.00	25	3.29	3.6	N/A	MAN 11000
DEN	RNAV (RNP) Z RWY 16L	ORIG	QWIKE	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 16R	ORIG	CLIFF	N/A	**11000**	210	69	1.00	25	3.29	3.6	N/A	MAN 11000
DEN	RNAV (RNP) Z RWY 16R	ORIG	QWIKE	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 17L	ORIG	CLIFF	N/A	**11000**	210	69	1.00	25	3.29	3.6	N/A	MAN 11000
DEN	RNAV (RNP) Z RWY 17L	ORIG	QWIKE	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 17R	ORIG	QWIKE	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 17R	ORIG	CLIFF	N/A	**11000**	210	69	1.00	25	3.29	3.6	N/A	MAN 11000
DEN	RNAV (RNP) Z RWY 25	ORIG-A	CAPTJ	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 25	ORIG-A	ELREY	N/A	**11000**	210	46	1.00	25	2.84	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 26	ORIG	CAPTJ	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 26	ORIG	ELREY	N/A	**11000**	210	46	1.00	25	2.84	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 34L	ORIG	HIMOM	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 34L	ORIG	DOGGG	N/A	**11000**	210	46	1.00	25	2.84	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 34R	ORIG	HIMOM	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW

DEN	RNAV (RNP) Z RWY 34R	ORIG	DOGGG	N/A	**11000**	210	46	1.00	25	2.84	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 35L	ORIG	HIMOM	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 35L	ORIG	DOGGG	N/A	**11000**	210	46	1.00	25	2.84	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 35R	ORIG	HIMOM	N/A	**11000**	210	43	1.00	25	2.78	3.0	N/A	MAN 11000; HIST VKTW
DEN	RNAV (RNP) Z RWY 35R	ORIG	DOGGG	N/A	**11000**	210	46	1.00	25	2.84	3.0	N/A	MAN 11000; HIST VKTW
DFW	RNAV (RNP) Z RWY 13R	1A											**NO RF; COORDINATION SITE; PUB 09/18/14**
DFW	RNAV (RNP) Z RWY 31L	1B											**NO RF; COORDINATION SITE; PUB 09/18/14**
DFW	RNAV (RNP) Z RWY 31R	2A											**NO RF; COORDINATION SITE; PUB 09/18/14**
EAT	RNAV (RNP) RWY 30	ORIG-A	EAT (IAF)	34.1	11800	300	70	1.00	25	6.03	10.1	N/A	
EAT	RNAV (RNP) RWY 12	ORIG-B	FEMAM	5.1	6100	250	59	0.30	20	4.64	5.1	N/A	
ELP	RNAV (RNP) Y RWY 04	ORIG-C	ZORVA	3.6	6200	210	**59**	0.30	20	3.49	2.5	**165**	**<180 KIAS NA**
ELP	RNAV (RNP) Y RWY 04	ORIG-C	WUTIN	4.6	6500	210	**60**	0.40	20	3.55	3.5	200	
ELP	RNAV (RNP) Z RWY 04	ORIG-B	HAMGI	6.2	7500	250	**62**	1.00	25	3.82	3.0	210	
ELP	RNAV (RNP) Z RWY 04	ORIG-B	PEBCY	7.3	7800	250	**62**	0.50	20	4.93	3.0	180	
ELP	RNAV (RNP) Z RWY 22	1	VICMA	7.6	7000	210	**61**	0.70	20	3.62	3.0	180	
ELP	RNAV (RNP) Z RWY 22	1	CABNU	6.1	6700	210	60	1.00	25	2.79	4.3	N/A	
ELP	RNAV (RNP) Z RWY 22	1	EKIDE	9.0	7400	210	N/A	1.00	25	N/A	5.5	**N/A**	OK - >4.2 NM
ELP	RNAV (RNP) Z RWY 26L	1	KASPN	14.8	8900	210	N/A	1.00	25	N/A	6.5	**N/A**	OK - >4.2 NM
ELP	RNAV (RNP) Z RWY 26L	1	FINAB	5.4	6600	210	60	1.00	25	2.78	3.4	N/A	
ELP	RNAV (RNP) Z RWY 26L	1	AGOPE	6.2	6800	210	60	1.00	25	2.79	5.1	N/A	
EUG	RNAV (RNP) Z RWY 16L	ORIG-B	HIDJI	11.9	4400	250	N/A	1.00	25	N/A	4.7	**N/A**	OK - >4.2 NM
EUG	RNAV (RNP) Z RWY 16L	ORIG-B	CIDEM	5.0	2900	250	**53**	1.00	25	3.22	2.2	190	
EUG	RNAV (RNP) Z RWY 16L	ORIG-B	PORIE	14.8	5100	250	N/A	1.00	25	N/A	7.2	**N/A**	OK - >4.2 NM
EUG	RNAV (RNP) Z RWY 16R	ORIG-A	HIDJI	11.9	4400	250	N/A	1.00	25	N/A	4.4	**N/A**	OK - >4.2 NM
EUG	RNAV (RNP) Z RWY 16R	ORIG-A	FITOK	6.4	3400	250	**54**	1.00	25	3.28	2.2	190	
EUG	RNAV (RNP) Z RWY 34L	ORIG-A	ZUPON	22.5	7500	250	N/A	1.00	25	N/A	10.0	**N/A**	OK - >4.2 NM
EUG	RNAV (RNP) Z RWY 34L	ORIG-A	SHEDD (IAF)	44.0	12800	300	72	1.00	25	6.26	20.6	N/A	WUSAR (IF) IS RF
EUG	RNAV (RNP) Z RWY 34L	ORIG-A	VAUGN (IAF)	13.9	5300	250	N/A	0.70	20	N/A	6.1	**N/A**	JURLO (IF) IS RF; OK >5.4 NM
EUG	RNAV (RNP) Z RWY 34R	ORIG-B	YIRSU	22.6	7600	250	62	0.70	20	4.90	5.0	N/A	
EUG	RNAV (RNP) Z RWY 34R	ORIG-B	VIDAS (IAF)	31.0	9700	250	N/A	1.00	25	N/A	9.7	**N/A**	RORBY (IF) IS RF; OK >4.2 NM

EUG	RNAV (RNP) Z RWY 34R	ORIG-B	VAUGN (IAF)	13.2	5200	250	57	0.70	20	4.48	7.0	N/A	WOLKU (IF) IS RF; OK >5.4 NM
EWR	RNAV (RNP) Y RWY 22L	ORIG-G											**NO RF**
EWR	RNAV (RNP) Z RWY 04R	ORIG-C											**NO RF**
EWR	RNAV (RNP) Z RWY 29	ORIG-D	GRITY	10.0	5500	25	N/A	1.00	25	N/A	5.9	N/A	OK - >4.2 NM
EWR	RNAV (RNP) Y RWY 29	1B	TETER	7.0	4300	250	56	1.00	25	3.40	3.4	N/A	
FAI	RNAV (RNP) Z RWY 02L	ORIG	GLDHL (IAF)	16.3	5700	250	N/A	1.00	25	N/A	6.6	N/A	OK - >4.2 NM
FAI	RNAV (RNP) Z RWY 02L	ORIG	KRIIS (IAF)	15.2	5400	250	N/A	1.00	25	N/A	7.8	N/A	OK - >4.2 NM
FAI	RNAV (RNP) Z RWY 20R	ORIG	YIPUT	13.4	5100	250	**57**	0.50	20	4.45	2.5	**170**	**<180 KIAS NA**
FAI	RNAV (RNP) Z RWY 20R	ORIG	JUSIV	11.9	4700	250	**56**	0.50	20	4.40	3.5	210	
FLL	RNAV (RNP) Y RWY 10L	1A	YELUY	9.9	5000	210	36	0.50	20	2.89	3.0	N/A	HIST VKTW
FLL	RNAV (RNP) Z RWY 28R	1A	HUXIM	6.9	4000	210	N/A	1.00	25	N/A	5.2	**N/A**	OK - >4.2 NM
FRG	RNAV (RNP) Z RWY 14	ORIG-A	SEHDO	12.5	4600	250	N/A	1.00	25	N/A	5.0	**N/A**	OK - >4.2 NM
FTY	RNAV (RNP) Z RWY 08	1A											**NO RF**
GEG	RNAV (RNP) Z RWY 03	ORIG	HODIX	10.9	6300	250	**38**	1.00	25	3.21	2.0	190	HIST VKTW
GEG	RNAV (RNP) Z RWY 03	ORIG	IRLUC	6.8	5200	250	**38**	1.00	25	3.11	2.0	190	HIST VKTW
GEG	RNAV (RNP) Z RWY 03	ORIG	CUMOG	12.7	6700	250	60	1.00	25	3.70	5.0	N/A	
GEG	RNAV (RNP) Z RWY 07	ORIG	WONEV	7.0	5200	250	**38**	1.00	25	3.11	2.0	190	
GEG	RNAV (RNP) Z RWY 07	ORIG	ZOTAV	6.6	5100	250	**38**	1.00	25	3.10	2.0	190	
GEG	RNAV (RNP) Z RWY 07	ORIG	HUBSI	13.2	6700	250	N/A	1.00	25	N/A	6.0	**N/A**	OK - >4.2 NM
GEG	RNAV (RNP) Z RWY 21	1A	WEGNE	14.6	7100	250	N/A	1.00	25	N/A	7.0	**N/A**	OK - >4.2 NM
GEG	RNAV (RNP) Z RWY 21	1A	CAHLA	13.2	6700	250	N/A	1.00	25	N/A	5.9	**N/A**	OK - >4.2 NM
GEG	RNAV (RNP) Z RWY 25	1	IQITO	9.0	5700	250	**45**	0.30	20	4.22	4.0	240	HIST VKTW
GEG	RNAV (RNP) Z RWY 25	1	UNIYA	11.8	6400	250	60	0.30	20	4.70	5.0	N/A	
GEG	RNAV (RNP) Z RWY 25	1	WOSAX	15.9	7400	250	62	1.00	25	3.81	6.0	N/A	OK - >4.2 NM
GJT	RNAV (RNP) Z RWY 11	ORIG-A	TADUY	11.2	8900	250	**65**	1.00	25	4.03	2.7	190	
GJT	RNAV (RNP) Z RWY 11	ORIG-A	SPADA (IAF)	31.7	14000	300	75	1.00	25	6.55	19.2	N/A	HEBUT (IF) IS RF
GJT	RNAV (RNP) Z RWY 11	ORIG-A	PACES (IAF)	26.2	12600	300	72	1.00	25	6.22	11.4	N/A	CULIP (IF) IS RF
GPI	RNAV (RNP) Y RWY 02	ORIG-A	OLIBY (IAF)	39.5	15100	300	77	1.00	25	6.81	15.3	N/A	
GPI	RNAV (RNP) Y RWY 02	ORIG-A	ANGIL (IAF)	43.0	16000	230	**79**	0.80	20	5.85	4.0	**180**	**<210 KIAS NA**

GPI	RNAV (RNP) RWY 20	ORIG-A	QIGVO	19.2	10500	300	**68**	0.40	20	7.39	6.0	260	
GTF	RNAV (RNP) Z RWY 03	ORIG-B	JAYKE (IAF)	16.0	8700	250	N/A	1.00	25	N/A	9.3	**N/A**	BELLT (IF) IS RF; OK - >4.2 NM
GTF	RNAV (RNP) Z RWY 03	ORIG-B	NIMPH	9.5	7100	250	N/A	1.00	25	N/A	7.0	**N/A**	OK - >4.2 NM
GTF	RNAV (RNP) Z RWY 03	ORIG-B	KYELL (IAF)	15.3	8600	250	N/A	1.00	25	N/A	8.5	**N/A**	DVINT (IF) IS RF; OK - >4.2 NM
GTF	RNAV (RNP) Z RWY 03	ORIG-B	HANTZ (IAF)	16.9	9000	250	N/A	1.00	25	N/A	8.2	**N/A**	KEPPR (IF) IS RF; OK - >4.2 NM
GTF	RNAV (RNP) Z RWY 21	ORIG-A	NUPUQ (IAF)	24.9	11000	300	69	1.00	25	5.88	8.4	N/A	JANON (IF) IS RF
GTF	RNAV (RNP) Z RWY 21	ORIG-A	WOLLY	9.0	7000	250	N/A	1.00	25	N/A	5.0	**N/A**	OK - >4.2 NM
GTF	RNAV (RNP) Z RWY 21	ORIG-A	ZILEP	8.9	7000	250	N/A	1.00	25	N/A	5.0	**N/A**	OK - >4.2 NM
GTF	RNAV (RNP) Z RWY 21	ORIG-A	URELE (IAF)	40.6	14900	300	77	1.00	25	6.77	24.3	N/A	PADDL (IF) IS RF
GUC	RNAV (RNP) RWY 06	ORIG-A	HBU (IAF)	33.6	18000 *	300	**83**	0.50	20	9.70	6.1	220	*TA 18700 CAPPED AT 18000
GUC	RNAV (RNP) RWY 24	ORIG-A	HBU (IAF)	33.4	17900	250	N/A	1.00	25	N/A	6.8	N/A	OK - >4.2 NM
GUM	RNAV (RNP) Z RWY 06L	ORIG-D											**NO RF**
GUM	RNAV (RNP) Z RWY 06R	ORIG-C											**NO RF**
GUM	RNAV (RNP) Z RWY 24L	ORIG-E											**NO RF**
GUM	RNAV (RNP) Z RWY 24R	ORIG-C											**NO RF**
GYY	RNAV (RNP) Z RWY 12	ORIG-A											**NO RF**
GYY	RNAV (RNP) Z RWY 30	ORIG-B											**RF IN MAS**
HDN	RNAV (RNP) Z RWY 10	1A											**NO RF**
HLN	RNAV (RNP) Y RWY 27	ORIG-C	HLN (IAF)	49.5	18000 *	300	83	1.00	25	7.57	10.7	N/A	*TA 18900 CAPPED AT 18000
HLN	RNAV (RNP) Z RWY 09	ORIG-B	HLN (IAF)	59.1	18000 *	300	83	1.00	25	7.57	17.8	N/A	*TA 21900 CAPPED AT 18000
HLN	RNAV (RNP) Z RWY 27	ORIG-B	HLN (IAF)	49.5	18000 *	300	83	1.00	25	7.57	10.7	N/A	*TA 18900 CAPPED AT 18000
HNL	RNAV (RNP) RWY 26L	ORIG-C											**RF IN FAS/MAS**
HNL	RNAV (RNP) Z RWY 04R	1A	REEEF (IAF)	18.5	6200	250	N/A	1.00	25	N/A	6.5	N/A	OK - 4.2 NM
HNL	RNAV (RNP) Z RWY 08L	1A	REEEF (IAF)	18.4	6200	250	N/A	1.00	25	N/A	7.1	N/A	OK - 4.2 NM
HPN	RNAV (RNP) Z RWY 16	ORIG-B	CUFDO	14.2	5600	210	N/A	1.00	25	N/A	5.0	N/A	OK - 4.2 NM

HPN	RNAV (RNP) Z RWY 16	ORIG-B	FODAK	8.0	4000	250	N/A	1.00	25	N/A	5.6	N/A	OK - 4.2 NM
HPN	RNAV (RNP) Z RWY 16	ORIG-B	WALOB	6.7	3700	250	54	1.00	25	3.31	4.1	N/A	
HPN	RNAV (RNP) Z RWY 34	ORIG-B	HAARP	12.9	4700	250	**56**	1.00	25	3.43	3.4	240	
HRL	RNAV (RNP) Z RWY 13	ORIG	ORFEN	6.8	3000	250	N/A	1.00	25	N/A	4.2	**N/A**	OK - 4.2 NM
HRL	RNAV (RNP) Z RWY 17R	ORIG	HERUM	7.2	3000	250	N/A	1.00	25	N/A	5.9	**N/A**	OK - >4.2 NM
HRL	RNAV (RNP) Z RWY 31	ORIG	WENOM	10.0	4000	250	N/A	1.00	25	N/A	5.5	**N/A**	OK - >4.2 NM
HRL	RNAV (RNP) Z RWY 35L	ORIG	KAHNS	11.9	4100	250	N/A	1.00	25	N/A	4.3	**N/A**	OK - >4.2 NM
HRL	RNAV (RNP) Z RWY 35L	ORIG	ALUDE	11.7	4100	250	55	1.00	25	3.36	4.1	N/A	
IAD	RNAV (RNP) Z RWY 01C	ORIG-G											**NO RF**
IAD	RNAV (RNP) Z RWY 01R	ORIG-D											**NO RF**
IAD	RNAV (RNP) Z RWY 19C	ORIG-D	TRING (IAF)	22.5	7200	250	N/A	1.00	25	N/A	9.9	N/A	OK - >4.2 NM
IAD	RNAV (RNP) Z RWY 19L	ORIG-C	TRING (IAF)	22.2	7300	250	N/A	1.00	25	N/A	9.1	N/A	OK - >4.2 NM
IAH	RNAV (RNP) Y RWY 08L	ORIG											**NO RF**
IAH	RNAV (RNP) Y RWY 08R	1	HOWLN	N/A	**6000**	210	59	1.00	25	2.72	3.7	N/A	MAN 6000
IAH	RNAV (RNP) Y RWY 09	ORIG	HOWLN	N/A	**6000**	210	59	1.00	25	2.72	3.7	N/A	MAN 6000
IAH	RNAV (RNP) Y RWY 26L	ORIG	VLDEZ	N/A	**6000**	210	59	1.00	25	2.72	3.3	N/A	MAN 6000
IAH	RNAV (RNP) Y RWY 26R	ORIG	DOOOM	N/A	**6000**	210	59	1.00	25	2.72	3.0	N/A	MAN 6000
IAH	RNAV (RNP) Y RWY 27	1A											**NO RF**
ICT	RNAV (RNP) Z RWY 01L	ORIG-B											**NO RF**
ICT	RNAV (RNP) Z RWY 14	ORIG-A											**NO RF**
ICT	RNAV (RNP) Z RWY 19L	ORIG-B											**NO RF**
ICT	RNAV (RNP) Z RWY 19R	ORIG-A											**NO RF**
IDA	RNAV (RNP) Z RWY 02	ORIG-A	ROCCA	14.1	10100	300	67	1.00	25	5.68	7.0	N/A	
IDA	RNAV (RNP) Z RWY 02	ORIG-A	HUDEP (IAF)	21.0	11800	300	**70**	1.00	25	6.03	5.0	260	OKVIE (IF) IS RF
IDA	RNAV (RNP) Z RWY 20	ORIG-B	HULSA	16.2	10800	300	**68**	1.00	25	5.82	5.0	270	
IDA	RNAV (RNP) Z RWY 20	ORIG-B	WOSKO	11.1	9500	250	N/A	1.00	25	N/A	5.0	N/A	OK - >4.2 NM
IND	RNAV (RNP) Z RWY 05L	ORIG-C											**NO RF**
IND	RNAV (RNP) Z RWY 05R	ORIG-B											**NO RF**
IND	RNAV (RNP) Z RWY 14	ORIG-B											**NO RF**
IND	RNAV (RNP) Z RWY 23L	ORIG-B											**NO RF**
IND	RNAV (RNP) Z RWY 23R	ORIG-C											**NO RF**
IND	RNAV (RNP) Z RWY 32	ORIG-B											**NO RF**

IWA	RNAV (RNP) Z RWY 12C	ORIG											**AEJAY (IF) TF-JANID-RF; COORD SITE; PUB 11/13/14**
IWA	RNAV (RNP) Z RWY 30C	ORIG-A	TYLIK (IAF)	8.7	5200	250	**57**	1.00	25	3.50	2.0	**175**	**<210 KIAS NA; GYANT (IF) IS RF**
JAC	RNAV (RNP) Y RWY 01	ORIG-B											**NO RF**
JAC	RNAV (RNP) Y RWY 19	1											**NO RF**
JAC	RNAV (RNP) Z RWY 01	ORIG-C											**NO RF**
JAX	RNAV (RNP) Y RWY 08	ORIG-A	WADOR	N/A	**3000**	210	53	1.00	25	2.42	3.5	N/A	MAN 3000
JAX	RNAV (RNP) Y RWY 08	ORIG-A	CEDOT	N/A	**3000**	210	53	1.00	25	2.42	4.0	N/A	MAN 3000
JAX	RNAV (RNP) Y RWY 08	ORIG-A	PENSE	N/A	**4000**	210	N/A	1.00	25	N/A	5.3	**N/A**	MAN 4000; OK - >4.2 NM
JAX	RNAV (RNP) Y RWY 14	ORIG-A	DEDDA	N/A	**3000**	250	**42**	1.00	25	3.01	3.1	N/A	MAN 3000; HIST VKTW
JAX	RNAV (RNP) Y RWY 14	ORIG-A	DIPDE	N/A	**3000**	210	53	1.00	25	2.42	5.2	N/A	MAN 3000
JAX	RNAV (RNP) Y RWY 14	ORIG-A	KAYEM	N/A	**4000**	210	N/A	1.00	25	N/A	6.0	**N/A**	MAN 4000; OK - >4.2 NM
JAX	RNAV (RNP) Y RWY 14	ORIG-A	EYLND	N/A	**4000**	210	55	1.00	25	2.52	3.6	N/A	MAN 4000
JAX	RNAV (RNP) Y RWY 26	1	EGAGE	N/A	**4000**	210	55	1.00	25	2.52	3.1	N/A	MAN 4000
JAX	RNAV (RNP) Y RWY 26	1	NANAA	N/A	**4000**	210	55	1.00	25	2.52	4.1	N/A	MAN 4000
JAX	RNAV (RNP) Y RWY 26	1	LAYON	N/A	**3000**	210	53	1.00	25	2.42	4.6	N/A	MAN 3000
JAX	RNAV (RNP) Y RWY 26	1	GUTNE	N/A	**4000**	210	N/A	1.00	25	N/A	4.2	**N/A**	OK - 4.2 NM
JAX	RNAV (RNP) Y RWY 32	1	GURDE	N/A	**3000**	210	53	1.00	25	2.42	3.8	N/A	MAN 3000; HIST VKTW
JAX	RNAV (RNP) Y RWY 32	1	ACENE	N/A	**4000**	210	55	1.00	25	2.52	3.0	N/A	MAN 4000
JAX	RNAV (RNP) Y RWY 32	1	ZAXIT	N/A	**4000**	210	N/A	1.00	25	N/A	4.5	**N/A**	MAN 4000; OK - >4.2 NM
JFK	RNAV (RNP) Z RWY 04L	ORIG-B											**NO RF**
JFK	RNAV (RNP) Z RWY 04R	ORIG-B											**NO RF**
JFK	RNAV (RNP) Z RWY 22L	1											**RF IN FAS**
JFK	RNAV (RNP) Z RWY 31L	1											**RF IN MAS**
JFK	RNAV (RNP) Z RWY 31R	1											**RF IN MAS**
KOA	RNAV (RNP) Z RWY 17	ORIG											**RF IN MAS**
LAX	RNAV (RNP) Z RWY 06L	ORIG-B											**NO RF**
LAX	RNAV (RNP) Z RWY 06R	ORIG-B											**NO RF**
LAX	RNAV (RNP) Z RWY 07L	ORIG-C											**NO RF**
LAX	RNAV (RNP) Z RWY 07R	ORIG-B											**NO RF**
LAX	RNAV (RNP) Z RWY 24L	1C											**NO RF**
LAX	RNAV (RNP) Z RWY 24R	ORIG-B											**NO RF**
LAX	RNAV (RNP) Z RWY 25L	1B											**NO RF**
LBB	RNAV (RNP) Z RWY 17R	ORIG-A											**NO RF**

LBB	RNAV (RNP) Z RWY 35L	ORIG-A											**NO RF**
LGA	RNAV (RNP) Z RWY 04	1											**NO RF**
LGA	RNAV (RNP) Z RWY 22	ORIG-C											**RF IN FAS**
LGB	RNAV (RNP) RWY 12	1											**RF IN FAS/MAS**
LGB	RNAV (RNP) RWY 25R	ORIG-B	LUCIG	3.3	3900	180	55	0.40	20	2.52	3.3	N/A	
LGB	RNAV (RNP) Y RWY 30	1											**RF IN MAS**
LIH	RNAV (RNP) Z RWY 21	ORIG-A											**NO RF**
LIH	RNAV (RNP) Z RWY 35	ORIG-A											**NO RF**
LWS	RNAV (RNP) RWY 30	ORIG-B	PUW (IAF)	51.8	16900	300	80	1.00	25	7.25	27.4	N/A	
LWS	RNAV (RNP) RWY 30	ORIG-B	JETTS (IAF)	50.6	16600	300	80	1.00	25	7.19	32.5	N/A	
LWS	RNAV (RNP) RWY 30	ORIG-B	FERDI (IAF)	26.4	10500	300	68	1.00	25	5.77	11.0	N/A	
LWS	RNAV (RNP) RWY 30	ORIG-B	OXLEY (IAF)	41.0	14200	300	75	1.00	25	6.59	20.7	N/A	
LWS	RNAV (RNP) RWY 30	ORIG-B	LEZLE (IAF)	49.7	16400	300	79	1.00	25	7.12	21.9	N/A	
LWS	RNAV (RNP) Z RWY 08	ORIG-A											**NO RF**
LWS	RNAV (RNP) Z RWY 12	ORIG-A	OFINO (IAF)	54.2	17500	300	82	1.00	25	7.43	39.5	N/A	
LWS	RNAV (RNP) Z RWY 12	ORIG-A	MQG (IAF)	38.2	13500	300	74	1.00	25	6.43	13.3	N/A	
LWS	RNAV (RNP) Z RWY 12	ORIG-A	HILUR	6.0	5400	210	58	0.50	20	2.66	2.7	N/A	
LWS	RNAV (RNP) Z RWY 26	ORIG-A											**NO RF**
MCI	RNAV (RNP) Z RWY 19R	1	BUZZR	13.1	6000	210	N/A	1.00	25	N/A	5.0	N/A	OK - >4.2 NM
MCI	RNAV (RNP) Z RWY 19R	1	FARMS	12.1	6000	250	N/A	1.00	25	N/A	9.0	N/A	OK - >4.2 NM
MCI	RNAV (RNP) Z RWY 19R	1	BYKER	13.1	6000	210	59	1.00	25	2.72	4.0	N/A	
MCI	RNAV (RNP) Z RWY 01L	1A	COOKD	8.6	5000	250	N/A	1.00	25	N/A	5.7	**N/A**	OK - >4.2 NM
MCI	RNAV (RNP) Z RWY 01R	1A	COOKD	7.5	5000	250	N/A	1.00	25	N/A	5.2	**N/A**	OK - >4.2 NM
MCI	RNAV (RNP) Z RWY 09	1	MAMMA	14.6	7000	250	N/A	1.00	25	N/A	5.3	**N/A**	OK - >4.2 NM
MCI	RNAV (RNP) Z RWY 09	1	NOMEE	8.8	4800	250	N/A	1.00	25	N/A	4.9	**N/A**	OK - >4.2 NM
MCI	RNAV (RNP) Z RWY 09	1	TONYG	8.3	4700	250	N/A	1.00	25	N/A	4.9	**N/A**	OK - >4.2 NM
MCI	RNAV (RNP) Z RWY 09	1	INNEE	15.8	7000	250	N/A	1.00	25	N/A	6.5	**N/A**	OK - >4.2 NM
MCI	RNAV (RNP) Z RWY 19L	1	FARMS	13.0	6000	250	N/A	1.00	25	N/A	9.0	**N/A**	OK - >4.2 NM
MCI	RNAV (RNP) Z RWY 19L	1	BUZZR	14.0	5800	210	N/A	1.00	25	N/A	5.0	**N/A**	OK - >4.2 NM

MCI	RNAV (RNP) Z RWY 19L	1	BYKER	12.0	6000	210	59	1.00	25	2.72	4.0	N/A	
MCI	RNAV (RNP) Z RWY 27	1	GONNR	17.3	6500	210	N/A	1.00	25	N/A	4.5	**N/A**	OK - >4.2 NM
MCI	RNAV (RNP) Z RWY 27	1	GEKAY	14.5	7000	210	N/A	1.00	25	N/A	4.8	**N/A**	OK - >4.2 NM
MDW	RNAV (RNP) Y RWY 04R	ORIG-A	SAVRD	N/A	**4000**	250	55	1.00	25	3.35	3.8	N/A	MAN 4000
MDW	RNAV (RNP) Y RWY 13C	2A	PLOPP	N/A	**4000**	210	55	1.00	25	2.52	3.5	N/A	MAN 4000
MDW	RNAV (RNP) Y RWY 13C	2A	TINLY	N/A	6400	250	N/A	1.00	25	N/A	9.5	**N/A**	MAN 4000 @ OOPLA; OK - >4.2 NM
MDW	RNAV (RNP) X RWY 22L	ORIG	MIING (IAF)	N/A	**4000**	210	55	1.00	25	2.52	3.0	**N/A**	MAN 4000; COORDINATION SITE; PUB 11/13/14
MDW	RNAV (RNP) Y RWY 22L	2											IF TO RF REMOVED; COORD SITE; PUB 11/13/14
MDW	RNAV (RNP) Y RWY 31C	ORIG-A	TWEEN	7.5	4000	210	55	1.00	25	2.52	3.7	N/A	
MEM	RNAV (RNP) X RWY 18L	ORIG-C											**NO RF**
MEM	RNAV (RNP) X RWY 18R	ORIG-C											**NO RF**
MEM	RNAV (RNP) Y RWY 18C	ORIG-D											**NO RF**
MEM	RNAV (RNP) Y RWY 18L	ORIG-C											**NO RF**
MEM	RNAV (RNP) Y RWY 18R	ORIG-C											**NO RF**
MFR	RNAV (RNP) RWY 32	ORIG-A	FILPU	7.2	4600	250	**56**	0.50	20	4.39	2.5	**170**	**<180 KIAS NA**
MFR	RNAV (RNP) RWY 32	ORIG-A	SAMIE (IAF)	51.3	15500	300	78	1.00	25	6.91	24.9	N/A	
MFR	RNAV (RNP) RWY 32	ORIG-A	ACLOB (IAF)	29.9	10100	300	67	1.00	25	5.68	9.2	N/A	
MFR	RNAV (RNP) RWY 32	ORIG-A	ZUNAS (IAF)	35.8	11600	300	70	1.00	25	6.00	13.0	N/A	
MFR	RNAV (RNP) RWY 32	ORIG-A	BAYTS (IAF)	45.4	14000	300	75	1.00	25	6.55	14.9	N/A	
MFR	RNAV (RNP) Z RWY 14	ORIG-A	JIVTI	11.6	6000	250	59	0.60	20	4.63	5.0	N/A	
MFR	RNAV (RNP) Z RWY 14	ORIG-A	WOTSU	12.6	6300	250	59	1.00	25	4.66	5.0	N/A	
MHT	RNAV (RNP) Z RWY 17	1											**NO RF; COORDINATION SITE; PUB 11/13/14**
MHT	RNAV (RNP) Z RWY 35	ORIG	OLDMN	8.1	3700	210	55	1.00	25	2.50	3.0	N/A	COORDINATION SITE; PUB 11/13/14
MIA	RNAV (RNP) Y RWY 08R	ORIG-A											**NO RF**
MIA	RNAV (RNP) Y RWY 12	ORIG-B											**NO RF**
MIA	RNAV (RNP) Y RWY 26L	ORIG-B											**NO RF**
MIA	RNAV (RNP) Y RWY 27	1A											**NO RF**

MIA	RNAV (RNP) Y RWY 30	ORIG-A											**NO RF**
MKE	RNAV (RNP) Y RWY 07R	ORIG	BALMS	N/A	**5400**	210	N/A	1.00	25	N/A	6.3	**N/A**	MAN 5400; OK - >4.2 NM
MKE	RNAV (RNP) Y RWY 07R	ORIG	ZUGUN	N/A	6000	210	59	1.00	25	2.72	4.0	N/A	MAN 6000
MKE	RNAV (RNP) Y RWY 25L	ORIG	UNWED	N/A	**6000**	210	N/A	1.00	25	N/A	4.2	**N/A**	MAN 6000; OK - 4.2 NM
MKE	RNAV (RNP) Y RWY 25L	ORIG	EGGED	N/A	**4300**	210	56	1.00	25	2.56	4.0	N/A	MAN 4300
MKE	RNAV (RNP) Y RWY 25L	ORIG	OCEBE	N/A	**6000**	210	59	1.00	25	2.72	3.0	N/A	MAN 6000
MMU	RNAV (RNP) Y RWY 23	ORIG	SHOTT	13.5	5400	180	N/A	1.00	25	N/A	5.9	**N/A**	OK - >4.2 NM
MRY	RNAV (RNP) Z RWY 28L	ORIG-B											**RF IN FAS/MAS**
MSO	RNAV (RNP) RWY 29	ORIG-A	MSO (IAF)	41.5	16000	300	79	1.00	25	7.04	9.9	N/A	
MSO	RNAV (RNP) RWY 29	ORIG-A	ROKNY (IAF)	20.6	10800	300	**68**	0.80	20	7.45	5.0	230	
MSO	RNAV (RNP) Z RWY 11	ORIG-C											**RF IN FEEDER**
MSP	RNAV (RNP) Y RWY 35	1	HRBIE	8.4	7000	250	**48**	1.00	25	3.47	2.8	210	HIST VKTW
MSY	RNAV (RNP) Z RWY 10	ORIG-A											**NO RF**
MSY	RNAV (RNP) Z RWY 19	ORIG-A											**NO RF**
MSY	RNAV (RNP) Z RWY 28	1											**NO RF**
MWH	RNAV (RNP) Z RWY 04	ORIG	EDSEW (IAF)	15.5	7200	250	N/A	1.00	25	N/A	11.1	N/A	OK - >4.2 NM
MWH	RNAV (RNP) Z RWY 14L	ORIG-A	WIPES (IAF)	9.8	6100	250	**59**	0.30	20	4.64	3.1	**190**	**<210 KIAS NA**
MWH	RNAV (RNP) Z RWY 14L	ORIG-A	SUGSE (IAF)	15.0	7400	250	N/A	1.00	25	N/A	4.6	N/A	OK - >4.2 NM
MWH	RNAV (RNP) Z RWY 22	ORIG	EPH (IAF)	20.3	7900	250	63	0.30	20	4.97	7.9	N/A	
MWH	RNAV (RNP) Z RWY 32R	ORIG	PLUSS (IAF)	22.3	8400	250	N/A	1.00	25	N/A	10.1	N/A	OK - >4.2 NM
MWH	RNAV (RNP) Z RWY 32R	ORIG	JIBOD (IAF)	17.5	7200	250	N/A	1.00	25	N/A	10.0	N/A	OK - >4.2 NM
MWH	RNAV (RNP) Z RWY 32R	ORIG	WIDKO (IAF)	19.3	7700	250	N/A	1.00	25	N/A	10.0	N/A	OK - >4.2 NM
OAK	RNAV (RNP) Z RWY 28L	1A											**NO RF**
OAK	RNAV (RNP) Z RWY 28R	1B											**NO RF**
OAK	RNAV (RNP) Z RWY 12	1B	HIRMO	18.1	6400	250	N/A	1.00	25	N/A	5.0	**N/A**	OK - >4.2 NM
OAK	RNAV (RNP) Z RWY 30	1B	HOPTA	18.1	7100	250	N/A	0.50	20	N/A	8.6	**N/A**	OK - >5.4 NM
OAK	RNAV (RNP) Z RWY 30	1B	RIDVE	7.6	4400	250	N/A	0.50	20	N/A	5.5	**N/A**	OK - >5.4 NM
OGG	RNAV (RNP) Z RWY 02	ORIG	WUNBU	13.1	5000	250	N/A	1.00	25	N/A	4.2	**N/A**	OK - 4.2 NM

OKC	RNAV (RNP) Z RWY 17L	3	WWILL	N/A	**6000**	210	59	1.00	25	2.72	3.3	N/A	MAN 6000
OKC	RNAV (RNP) Z RWY 17L	3	FLAPP	N/A	**5000**	210	57	1.00	25	N/A	4.9	N/A	MAN 5000; OK - >4.2 NM
OKC	RNAV (RNP) Z RWY 17L	3	HIPES	8.9	4600	230	56	1.00	25	2.98	5.0	N/A	
OKC	RNAV (RNP) Z RWY 17L	3	PALMR	N/A	**6000**	210	59	1.00	25	2.72	4.1	N/A	MAN 6000
OKC	RNAV (RNP) Z RWY 17R	1	WWILL	N/A	**6000**	210	59	1.00	25	2.72	3.3	N/A	MAN 6000
OKC	RNAV (RNP) Z RWY 17R	1	FLAPP	N/A	**5000**	210	N/A	1.00	25	N/A	4.9	N/A	MAN 5000; OK - >4.2 NM
OKC	RNAV (RNP) Z RWY 17R	1	HIPES	N/A	**5000**	250	N/A	1.00	25	N/A	5.0	N/A	MAN 5000; OK - >4.2 NM
OKC	RNAV (RNP) Z RWY 17R	1	PALMR	N/A	**6000**	210	59	1.00	25	2.72	4.1	N/A	MAN 6000
OKC	RNAV (RNP) Z RWY 35L	1	QWAKE	N/A	**6000**	210	N/A	1.00	25	N/A	5.0	N/A	MAN 6000; OK - >4.2 NM
OKC	RNAV (RNP) Z RWY 35L	1	LEVEE	N/A	**4000**	210	55	1.00	25	2.52	3.0	N/A	MAN 4000
OKC	RNAV (RNP) Z RWY 35L	1	IMAGE	N/A	**6000**	210	N/A	1.00	25	N/A	5.0	N/A	MAN 6000; OK - >4.2 NM
OKC	RNAV (RNP) Z RWY 35R	2	QWAKE	N/A	**6000**	210	N/A	1.00	25	N/A	5.0	N/A	MAN 6000; OK - >4.2 NM
OKC	RNAV (RNP) Z RWY 35R	2	FINYA	N/A	**4000**	250	46	1.00	25	3.17	3.0	240	MAN 4000; HIST VKTW
OKC	RNAV (RNP) Z RWY 35R	2	IMAGE	N/A	**6000**	210	N/A	1.00	25	N/A	5.0	N/A	MAN 6000; OK - >4.2 NM
OMA	RNAV (RNP) Z RWY 14L	ORIG	CRPET	N/A	**5000**	210	57	1.00	25	2.62	4.1	N/A	MAN 5000
OMA	RNAV (RNP) Z RWY 14L	ORIG	AULNR	N/A	**4000**	210	55	1.00	25	2.52	4.4	N/A	MAN 4000
OMA	RNAV (RNP) Z RWY 14L	ORIG	HCKEY	8.8	4200	210	55	1.00	25	2.53	2.8	N/A	
OMA	RNAV (RNP) Z RWY 14L	ORIG	SPYVE	N/A	**5000**	210	57	1.00	25	2.62	3.1	N/A	MAN 5000
OMA	RNAV (RNP) Z RWY 14R	ORIG	CRPET	N/A	**5000**	210	57	1.00	25	2.62	3.9	N/A	MAN 5000
OMA	RNAV (RNP) Z RWY 14R	ORIG	AULNR	N/A	**4000**	210	55	1.00	25	2.52	4.2	N/A	MAN 4000
OMA	RNAV (RNP) Z RWY 14R	ORIG	HCKEY	9.0	4300	210	56	1.00	25	2.56	3.8	N/A	
OMA	RNAV (RNP) Z RWY 14R	ORIG	SPYVE	N/A	**5000**	210	57	1.00	25	2.62	3.3	N/A	MAN 5000
OMA	RNAV (RNP) Z RWY 18	ORIG	JAKKI	10.6	4700	210	56	1.00	25	2.58	3.0	N/A	
OMA	RNAV (RNP) Z RWY 18	ORIG	SHUDA	N/A	**4000**	210	55	1.00	25	2.52	3.0	N/A	MAN 4000
OMA	RNAV (RNP) Z RWY 18	ORIG	WOODA	N/A	**4000**	210	55	1.00	25	2.52	4.3	N/A	MAN 4000
OMA	RNAV (RNP) Z RWY 18	ORIG	CHAAD	10.2	4600	210	56	1.00	25	2.58	4.0	N/A	
OMA	RNAV (RNP) Z RWY 32L	ORIG	GEEZR	N/A	**5000**	210	57	1.00	25	2.62	3.1	N/A	MAN 5000
OMA	RNAV (RNP) Z RWY 32L	ORIG	BAARK	N/A	4000	250	55	1.00	25	3.35	5.0	N/A	
OMA	RNAV (RNP) Z RWY 32L	ORIG	BRIKK	11.0	5000	210	57	1.00	25	2.62	3.0	N/A	
OMA	RNAV (RNP) Z RWY 32R	ORIG	GEEZR	N/A	**5000**	210	57	1.00	25	2.62	3.3	N/A	MAN 5000
OMA	RNAV (RNP) Z RWY 32R	ORIG	BAARK	N/A	4000	250	55	1.00	25	3.35	5.1	N/A	
OMA	RNAV (RNP) Z RWY 32R	ORIG	BRIKK	10.7	5000	210	57	1.00	25	2.62	3.0	N/A	
OMA	RNAV (RNP) Z RWY 36	ORIG	HORSS	N/A	**5000**	250	57	1.00	25	3.48	4.5	N/A	MAN 5000
OMA	RNAV (RNP) Z RWY 36	ORIG	JOKRR	8.7	4200	250	**55**	1.00	25	3.37	3.0	230	

OMA	RNAV (RNP) Z RWY 36	ORIG	LOESS	10.6	4700	210	56	1.00	25	2.58	4.9	N/A	
OMA	RNAV (RNP) Z RWY 36	ORIG	CHAZU	10.7	5000	250	**57**	1.00	25	3.48	3.0	220	
ONT	RNAV (RNP) Z RWY 08L	ORIG-C											**NO RF**
ONT	RNAV (RNP) Z RWY 26L	ORIG-C											**NO RF**
ONT	RNAV (RNP) Z RWY 26R	ORIG-C											**NO RF**
ORF	RNAV (RNP) Y RWY 05	ORIG-A	MERFE	12.2	5000	250	57	0.30	20	4.46	4.6	N/A	
ORF	RNAV (RNP) Y RWY 23	ORIG	DULTS	12.5	5200	250	N/A	0.30	20	N/A	5.5	**N/A**	OK - >5.4 NM
OTH	RNAV (RNP) Z RWY 04	ORIG-A	KISEY	15.0	5100	180	57	1.00	25	2.06	3.7	N/A	
OTH	RNAV (RNP) Z RWY 04	ORIG-A	NUJNI	15.0	5100	180	N/A	1.00	25	N/A	7.7	**N/A**	OK - >4.2 NM
OTH	RNAV (RNP) Z RWY 04	ORIG-A	JISDI	15.0	5100	180	N/A	1.00	25	N/A	5.0	**N/A**	OK - >4.2 NM
OTH	RNAV (RNP) Z RWY 04	ORIG-A	HIVOR	15.9	5300	180	57	1.00	25	2.07	3.0	N/A	
PBI	RNAV (RNP) Z RWY 14	ORIG-B	OGGAN	7.4	3100	250	N/A	1.00	25	N/A	5.0	N/A	OK - >4.2 NM
PBI	RNAV (RNP) Z RWY 28R	ORIG-C	HETMO	N/A	**4000**	250	55	1.00	25	3.35	4.0	N/A	MAN 4000
PBI	RNAV (RNP) Z RWY 28R	ORIG-C	FESAK	N/A	**6000**	250	N/A	1.00	25	N/A	5.8	N/A	MAN 6000; OK - >4.2 NM
PBI	RNAV (RNP) Z RWY 32	ORIG-B	BEKAH	N/A	**4000**	250	N/A	1.00	25	N/A	6.8	N/A	MAN 4000; OK - >4.2 NM
PBI	RNAV (RNP) Z RWY 10L	1A	SANZZ	N/A	**4000**	250	N/A	0.50	20	N/A	6.6	**N/A**	MAN 4000; OK - >5.4 NM
PDK	RNAV (RNP) Z RWY 21L	1	BUNNI (IAF)	43.9	13900	300	N/A	1.00	25	N/A	26.9	N/A	
PDK	RNAV (RNP) Z RWY 21L	1	DALAS (IAF)	47.2	14700	300	N/A	1.00	25	N/A	27.4	N/A	
PDK	RNAV (RNP) Z RWY 21L	1	TUCKR (IAF)	37.7	12400	300	N/A	1.00	25	N/A	22.3	N/A	
PDK	RNAV (RNP) RWY 03R	2	ACERA	8.3	4600	250	**56**	0.30	20	4.39	4.1	240	
PDX	RNAV (RNP) Y RWY 28L	1A	LIQWD	N/A	**5000**	210	N/A	1.00	25	N/A	6.0	N/A	MAN 5000; OK - >4.2 NM
PDX	RNAV (RNP) Y RWY 28R	1A	LIQWD	N/A	**5000**	210	N/A	1.00	25	N/A	6.0	N/A	MAN 5000; OK - >4.2 NM
PDX	RNAV (RNP) Z RWY 28L	ORIG-A	WIDMR	N/A	**5000**	210	N/A	1.00	25	N/A	5.7	N/A	MAN 5000; OK - >4.2 NM
PDX	RNAV (RNP) Z RWY 28R	1A	WIDMR	10.1	4600	210	N/A	1.00	25	N/A	6.1	N/A	OK - >4.2 NM
PDX	RNAV (RNP) Z RWY 10L	1A	MYCRO (IAF)	N/A	5000	210	57	1.00	25	2.62	4.6	N/A	GAMBE (IF) IS RF; MAN 5000
PDX	RNAV (RNP) Z RWY 10L	1A	VOODU (IAF)	N/A	5000	210	57	1.00	25	2.62	5.0	N/A	RIPPP (IF) IS RF; MAN 5000
PDX	RNAV (RNP) Z RWY 10L	1A	CIZZL (IAF)	12.0	5000	210	57	1.00	25	2.62	4.0	N/A	DAYSS (IF) IS RF
PDX	RNAV (RNP) Z RWY 10R	ORIG-B	MYCRO (IAF)	N/A	5000	210	57	1.00	25	2.62	4.0	N/A	TOWWN (IF) IS RF; MAN 5000
PDX	RNAV (RNP) Z RWY 10R	ORIG-B	VOODU	N/A	5000	210	N/A	1.00	25	N/A	5.1	**N/A**	CATUL (IF) IS RF; MAN 5000; OK

			(IAF)										>4.2 NM
PDX	RNAV (RNP) Z RWY 10R	ORIG-B	CIZZL (IAF)	12.7	5200	210	57	1.00	25	2.63	4.0	N/A	DAYSS (IF) IS RF
PHL	RNAV (RNP) Z RWY 09L	ORIG-C											**NO RF**
PHL	RNAV (RNP) Z RWY 09R	ORIG-C											**NO RF**
PHX	RNAV (RNP) Z RWY 07L	ORIG-C											**NO RF**
PHX	RNAV (RNP) Z RWY 07R	ORIG-C											**NO RF**
PHX	RNAV (RNP) Z RWY 08	ORIG-B											**NO RF**
PHX	RNAV (RNP) Z RWY 25L	ORIG-C											**NO RF**
PHX	RNAV (RNP) Z RWY 25R	ORIG-C											**NO RF**
PHX	RNAV (RNP) Z RWY 26	ORIG-C											**NO RF**
PIT	RNAV (RNP) Z RWY 10C	ORIG-C											**NO RF**
PIT	RNAV (RNP) Z RWY 10R	ORIG-C											**NO RF**
PIT	RNAV (RNP) Z RWY 28C	ORIG-C											**NO RF**
PIT	RNAV (RNP) Z RWY 28L	ORIG-C											**NO RF**
PIT	RNAV (RNP) Z RWY 28R	ORIG-C											**NO RF**
PIT	RNAV (RNP) Z RWY 32	1B											**NO RF**
PRC	RNAV (RNP) Z RWY 03R	1											**NO RF**
PSC	RNAV (RNP) Z RWY 03L	1	PAIDS	15.0	6000	250	N/A	1.00	25	N/A	10.8	**N/A**	OK - >4.2 NM; COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 03L	1	EVVOR	9.0	4500	250	**56**	1.00	25	3.42	2.1	180	COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 03L	1	CUTAS	18.8	6900	250	N/A	1.00	25	N/A	9.7	**N/A**	OK - >4.2 NM; COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 12	1	PAIDS (IAF)	11.0	4700	250	N/A	1.00	25	N/A	7.7	**N/A**	OK - >4.2 NM; COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 12	1	CULRI	8.5	4100	250	56	1.00	25	3.38	4.0	N/A	COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 12	1	HUKAK	10.0	4400	250	**56**	0.50	20	4.36	2.0	**150**	**<180 KIAS NA; COORD SITE; PUB 11/13/14**
PSC	RNAV (RNP) Z RWY 12	1	MOJUY	21.0	7200	250	N/A	0.50	20	N/A	11.5	**N/A**	OK - >5.4 NM; COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 21R	1	ZONOP	10.2	4100	250	N/A	1.00	25	N/A	6.0	**N/A**	OK - >4.2 NM; COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 21R	1	HONAG	6.1	3100	250	**53**	1.00	25	3.24	2.5	210	COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 21R	1	MOJUY	11.8	4500	250	N/A	1.00	25	N/A	5.0	N/A	OK - >4.2 NM; COORDINATION

													SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 21R	1	KADDE	21.1	6800	250	N/A	1.00	25	N/A	12.4	**N/A**	OK - >4.2 NM; COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 30	1	KADDE	14.4	5500	250	N/A	0.50	20	N/A	8.0	**N/A**	OK - >5.4 NM; COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 30	1	WISBI	10.7	4600	250	**56**	0.50	20	3.42	3.0	230	COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 30	1	RYENS	17.8	6400	250	N/A	0.50	20	N/A	12.3	**N/A**	OK - >5.4 NM; COORDINATION SITE; PUB 11/13/14
PSP	RNAV (RNP) Y RWY 13R	1B	PSP (IAF)	N/A	**10000**	210	N/A	1.00	25	N/A	7.1	N/A	WASAK (IF) IS RF; PSP MAX 10000; OK
PSP	RNAV (RNP) Y RWY 13R	1B	SBONO (IAF)	N/A	**9000**	250	65	1.00	25	4.04	4.7	N/A	WASAK (IF) IS RF; SBONO MAX 9000
PSP	RNAV (RNP) Y RWY 31L	1B	PSP (IAF)	30.9	10700	300	68	1.00	25	5.80	10.2	N/A	
PSP	RNAV (RNP) Y RWY 31L	1B	BALDI (IAF)	36.7	**12000**	300	71	1.00	25	6.09	10.0	N/A	BALDI MAX 12000
PSP	RNAV (RNP) Z RWY 13R	ORIG-B	PSP (IAF)	N/A	**10000**	210	N/A	1.00	25	N/A	7.1	N/A	WASAK (IF) IS RF; PSP MAX 10000; OK
PSP	RNAV (RNP) Z RWY 13R	ORIG-B	SBONO (IAF)	N/A	**9000**	250	65	1.00	25	4.04	4.7	N/A	WASAK (IF) IS RF; SBONO MAX 9000
PUW	RNAV (RNP) Z RWY 06	ORIG	CISOV (IAF)	14.1	7700	250	N/A	1.00	25	N/A	6.9	**N/A**	ZISAK (IF) IS RF; OK - >4.2 NM
PUW	RNAV (RNP) Z RWY 06	ORIG	FEMQI	5.2	5400	250	**58**	0.50	20	4.53	2.0	**145**	**<180 KIAS NA**
PVD	RNAV (RNP) Z RWY 23	ORIG-A	JEEET	8.8	3600	250	54	1.00	25	3.30	3.5	N/A	
PVD	RNAV (RNP) Z RWY 23	ORIG-A	SEABE	11.7	5000	250	57	1.00	25	3.48	3.8	N/A	
PVD	RNAV (RNP) Z RWY 23	ORIG-A	HHIGH	11.6	5000	250	57	1.00	25	3.48	3.6	N/A	
RDM	RNAV (RNP) Z RWY 04	1	VUCUV	10.8	7400	250	**62**	1.00	25	3.81	2.0	**165**	**<180 KIAS NA**
RDM	RNAV (RNP) Z RWY 04	1	JURDY	12.8	7000	180	N/A	1.00	25	N/A	7.6	**N/A**	OK - >4.2 NM
RDM	RNAV (RNP) Z RWY 04	1	SIKZY	5.4	5800	180	59	1.00	25	2.13	2.7	N/A	
RDM	RNAV (RNP) Z RWY 04	1	NISVE	5.2	5800	180	59	1.00	25	2.13	3.2	N/A	
RDM	RNAV (RNP) Z RWY 04	1	POWEL	12.7	7500	250	N/A	1.00	25	N/A	4.4	**N/A**	OK - >4.2 NM
RDM	RNAV (RNP) Z RWY 22	1	JUSLU	10.3	6900	180	N/A	1.00	25	N/A	4.6	**N/A**	OK - >4.2 NM; JUSLU REPLACED HERBS
RDM	RNAV (RNP) Z RWY 22	1	DSD (IAF)	18.3	8900	250	N/A	1.00	25	N/A	9.6	**N/A**	URHAZ (IF) IS RF; OK >4.2 NM
RDM	RNAV (RNP) Z RWY 22	1	POWEL	13.4	7700	250	**62**	1.00	25	3.84	3.2	220	
RDU	RNAV (RNP) Z RWY 05L	2A	HEAVE	11.6	5000	210	57	1.00	25	2.62	3.0	N/A	
RDU	RNAV (RNP) Z RWY 05R	2A	STINT	N/A	**5000**	210	57	1.00	25	2.62	3.2	N/A	MAN 5000

RDU	RNAV (RNP) Z RWY 23L	2A	KENCH	11.5	5000	210	57	1.00	25	2.62	2.9	N/A	
RDU	RNAV (RNP) Z RWY 23R	2A	BUTTS	N/A	**6000**	250	N/A	1.00	25	N/A	10.5	**N/A**	MAN 6000; OK - >4.2 NM
RIC	RNAV (RNP) Y RWY 02	ORIG	BEKKY	N/A	**4000**	250	**55**	1.00	25	3.35	3.2	240	MAN 4000
RIC	RNAV (RNP) Y RWY 02	ORIG	EMWHY	7.0	3100	250	**53**	1.00	25	3.24	3.1	240	
RIC	RNAV (RNP) Y RWY 02	ORIG	EEMIL	N/A	**3000**	250	**53**	1.00	25	3.23	3.0	240	MAN 3000
RIC	RNAV (RNP) Y RWY 16	ORIG	TONEO	7.1	3100	210	53	1.00	25	2.43	3.1	N/A	
RIC	RNAV (RNP) Y RWY 16	ORIG	SOOBY	9.0	3600	210	N/A	1.00	25	N/A	7.4	N/A	OK - >4.2 NM
RIC	RNAV (RNP) Y RWY 16	ORIG	TIRTL	7.0	3100	210	N/A	1.00	25	N/A	4.6	N/A	OK - >4.2 NM
RIC	RNAV (RNP) Y RWY 16	ORIG	AYDEE	10.9	4100	210	55	1.00	25	2.53	3.0	N/A	
RIC	RNAV (RNP) Y RWY 20	ORIG	TTIMM	9.7	3800	250	**55**	1.00	25	3.34	3.0	230	MAN 4000 @ DUCXS
RIC	RNAV (RNP) Y RWY 20	ORIG	SOOBY	12.9	4000	250	N/A	1.00	25	N/A	7.9	N/A	OK - >5.4 NM
RIC	RNAV (RNP) Y RWY 20	ORIG	JADNN	N/A	**3000**	250	**53**	1.00	25	3.23	3.0	240	MAN 3000
RIC	RNAV (RNP) Y RWY 20	ORIG	BECAB	N/A	**4000**	250	**55**	1.00	25	3.35	3.0	240	MAN 4000
RIC	RNAV (RNP) Y RWY 34	ORIG	VARMT	6.1	2100	210	51	1.00	25	2.34	3.1	N/A	
RIC	RNAV (RNP) Y RWY 34	ORIG	BAIRR	6.9	3100	210	53	1.00	25	2.43	3.9	N/A	
RIC	RNAV (RNP) Y RWY 34	ORIG	TRKEY	7.3	3200	210	53	1.00	25	2.44	3.0	N/A	
RIL	RNAV (RNP) Y RWY 26	1A	TRUEL (IAF)	19.3	13000	210	73	0.30	20	4.54	4.6	N/A	
RIL	RNAV (RNP) Y RWY 26	1A	SLOLM (IAF)	35.1	16900	240	80	0.30	20	6.45	11.3	N/A	
RIL	RNAV (RNP) Z RWY 08	1A	AWRAW (IAF	32.0	16000	280	79	1.00	25	6.28	6.9	N/A	
RIL	RNAV (RNP) Z RWY 08	1A	RIYNO (IAF)	38.9	17800	230	82	1.00	25	4.87	11.0	N/A	
RIL	RNAV (RNP) Z RWY 26	1A	TRUEL (IAF)	19.3	13000	210	73	0.30	20	4.54	4.6	N/A	
RIL	RNAV (RNP) Z RWY 26	1A	SLOLM (IAF)	35.1	16900	240	80	0.30	20	6.45	11.3	N/A	
RNO	RNAV (RNP) Z RWY 34L	ORIG-A	SPOOK (IAF)	53.0	18000 *	300	83	1.00	25	7.57	28.1	N/A	*TA 20100 CAPPED AT 18000
RNO	RNAV (RNP) Z RWY 34L	ORIG-A	COLOM (IAF)	74.4	18000 *	300	83	1.00	25	7.57	40.9	N/A	*TA 25400 CAPPED AT 18000
RNO	RNAV (RNP) Z RWY 34L	ORIG-A	FMG (IAF)	93.5	18000 *	300	83	1.00	25	7.57	28.3	N/A	*TA 30200 CAPPED AT 18000
RNO	RNAV (RNP) Z RWY 34R	ORIG-A	SPOOK (IAF)	53.2	18000 *	300	83	1.00	25	7.57	28.1	N/A	*TA 20100 CAPPED AT 18000
RNO	RNAV (RNP) Z RWY 34R	ORIG-A	COLOM	74.6	18000	300	83	1.00	25	7.57	40.9	N/A	*TA 25500 CAPPED AT 18000

			(IAF)		*								
RNO	RNAV (RNP) Z RWY 34R	ORIG-A	FMG (IAF)	93.7	18000 *	300	83	1.00	25	7.57	28.3	N/A	*TA 30300 CAPPED AT 18000
RNO	RNAV (RNP) Y RWY 16L	1	CANYA	10.7	9500	250	66	1.00	25	4.11	5.0	N/A	
RNO	RNAV (RNP) Y RWY 16R	1A	CANYA	11.0	9500	250	66	1.00	25	4.11	5.0	N/A	
RNO	RNAV (RNP) Z RWY 16L	1	JUDPU	13.3	10500	300	**59**	0.80	20	7.09	6.0	270	HIST VKTW
RNO	RNAV (RNP) Z RWY 16R	1	JUDPU	13.4	10500	300	**59**	0.80	20	7.09	6.0	270	HIST VKTW
SAT	RNAV (RNP) Z RWY 04	ORIG-A	YEVUP	13.4	6000	250	59	1.00	25	3.61	4.1	N/A	
SAT	RNAV (RNP) Z RWY 04	ORIG-A	NUPGY	14.6	5700	250	N/A	1.00	25	N/A	8.0	**N/A**	OK - >4.2 NM
SAT	RNAV (RNP) Z RWY 04	ORIG-A	CIXEX	13.1	6000	250	59	1.00	25	3.61	3.9	N/A	
SAT	RNAV (RNP) Z RWY 12R	ORIG-A	CRISS	13.2	6000	250	N/A	1.00	25	N/A	5.7	**N/A**	OK - >4.2 NM
SAT	RNAV (RNP) Z RWY 12R	ORIG-A	HUKRA	12.7	5400	250	N/A	1.00	25	N/A	6.1	**N/A**	OK - >4.2 NM
SAT	RNAV (RNP) Z RWY 22	1	WAFSY	9.3	4100	250	N/A	1.00	25	N/A	5.9	**N/A**	OK - >4.2 NM
SAT	RNAV (RNP) Z RWY 22	1	JILIL	13.5	5100	250	57	1.00	25	3.49	5.2	N/A	
SAT	RNAV (RNP) Z RWY 30L	ORIG	JEGBO	14.6	5900	250	N/A	1.00	25	N/A	5.9	**N/A**	OK - >4.2 NM
SAT	RNAV (RNP) Z RWY 30L	ORIG	HOVOG	9.5	4600	250	56	1.00	25	3.42	5.0	N/A	
SAT	RNAV (RNP) Z RWY 30L	ORIG	JISDA	6.8	5000	250	**40**	1.00	25	3.13	3.3	N/A	HIST VKTW
SAT	RNAV (RNP) Z RWY 30L	ORIG	BRAUN (IAF)	33.1	10500	300	68	1.00	25	5.77	14.6	N/A	ITEPE (IF) IS RF
SAV	RNAV (RNP) Y RWY 28	1											**OTA**
SCC	RNAV (RNP) Z RWY 05	ORIG-B	WEDAD (IAF)	13.2	4300	250	N/A	1.00	25	N/A	7.0	N/A	OK - >4.2 NM
SCC	RNAV (RNP) Z RWY 05	ORIG-B	PIMBE (IAF)	14.2	4600	250	N/A	1.00	25	N/A	5.0	N/A	OK - >4.2 NM
SCC	RNAV (RNP) Z RWY 05	ORIG-B	WOKET (IAF)	20.4	6100	250	59	1.00	25	3.62	4.0		
SCC	RNAV (RNP) Z RWY 23	ORIG-B	OSORE (IAF)	19.5	5900	250	N/A	1.00	25	N/A	5.0	N/A	OK - >4.2 NM
SCC	RNAV (RNP) Z RWY 23	ORIG-B	WENGI (IAF)	16.5	5200	250	N/A	1.00	25	N/A	5.0	N/A	OK - >4.2 NM
SCC	RNAV (RNP) Z RWY 23	ORIG-B	WOKET (IAF)	23.2	6800	250	N/A	1.00	25	N/A	6.9	N/A	OK - >4.2 NM
SDF	RNAV (RNP) Z RWY 17L	ORIG-A	COBLR	11.8	5500	250	**58**	1.00	25	3.55	3.0	220	
SDF	RNAV (RNP) Z RWY 17L	ORIG-A	ALANB	8.4	4600	250	56	1.00	25	3.42	4.0	N/A	
SDF	RNAV (RNP) Z RWY 17L	ORIG-A	CHUWE	N/A	**5000**	250	N/A	1.00	25	N/A	6.0	**N/A**	MAN 5000; OK - >4.2 NM
SDF	RNAV (RNP) Z RWY 17L	ORIG-A	KAEDN	10.9	5300	250	**56**	1.00	25	3.49	3.0	220	HIST VKTW

SDF	RNAV (RNP) Z RWY 17R	ORIG-A	COBLR	N/A	4800	250	**57**	1.00	25	3.46	3.0	220	MAN 4000 @ YUNDV
SDF	RNAV (RNP) Z RWY 17R	ORIG-A	ALANB	7.5	4400	250	56	1.00	25	3.41	4.0	N/A	
SDF	RNAV (RNP) Z RWY 17R	ORIG-A	KAEDN	N/A	5800	250	**58**	1.00	25	3.57	3.0	220	MAN 5000 @ STYKR
SDF	RNAV (RNP) Z RWY 35L	1	DIGRR	9.4	5000	210	N/A	1.00	25	N/A	4.3	**N/A**	OK - >4.2 NM
SDF	RNAV (RNP) Z RWY 35L	1	STUGZ	11.1	5200	210	57	1.00	25	2.63	2.9	N/A	
SDF	RNAV (RNP) Z RWY 35L	1	TUPAY	11.7	5400	210	58	1.00	25	2.66	3.0	N/A	
SDF	RNAV (RNP) Z RWY 35R	ORIG	DIGRR	10.3	5000	210	N/A	1.00	25	N/A	4.3	**N/A**	OK - >4.2 NM
SDF	RNAV (RNP) Z RWY 35R	ORIG	STUGZ	12.0	5400	210	58	1.00	25	2.66	2.9	N/A	
SDF	RNAV (RNP) Z RWY 35R	ORIG	TUPAY	11.0	5200	210	57	1.00	25	2.63	3.0	N/A	
SDL	RNAV (RNP) Y RWY 03	ORIG-B											**INTMDT SDF**
SDL	RNAV (RNP) RWY 21	ORIG-A	WLLMN	5.0	4600	250	56	0.60	20	4.39	5.0	N/A	
SDL	RNAV (RNP) Z RWY 03	ORIG-A	FRMAN	N/A	**5000**	250	N/A	1.00	25	N/A	13.7	**N/A**	MAN 5000; OK - >4.2 NM
SEA	RNAV (RNP) Z RWY 16C	1	VASHN	12.5	**6000**	210	**59**	1.00	25	2.72	3.1	N/A	MAN 6000; COORDINATION SITE; PUB 11/13/14
SEA	RNAV (RNP) Z RWY 16L	1											**NO RF; COORDINATION SITE; PUB 11/13/14**
SEA	RNAV (RNP) Z RWY 16R	1	VASHN	13.3	**6000**	210	**59**	1.00	25	2.72	3.1	N/A	MAN 6000; COORDINATION SITE; PUB 11/13/14
SEA	RNAV (RNP) Z RWY 34C	1	SHIPZ	14.5	**6000**	210	**59**	1.00	25	2.72	3.0	N/A	MAN 6000; COORDINATION SITE; PUB 11/13/14
SEA	RNAV (RNP) Z RWY 34L	1	SHIPZ	14.5	**6000**	210	**59**	1.00	25	2.72	3.0	N/A	MAN 6000; COORDINATION SITE; PUB 11/13/14
SEA	RNAV (RNP) Z RWY 34R	1											NO RF; COORDINATION SITE; PUB 11/13/14
SEF	RNAV (RNP) RWY 19	1	LICIC	7.0	3600	250	N/A	0.50	20	N/A	7.0	**N/A**	OK - >5.4 NM
SFO	RNAV (RNP) Z RWY 10R	2A											**NO RF**
SFO	RNAV (RNP) Y RWY 28R	2A											**RF IN FAS**
SJC	RNAV (RNP) Z RWY 12L	ORIG-A	RERAE	N/A	**3500**	210	N/A	1.00	25	N/A	5.4	N/A	MAN 3500; OK - >4.2 NM
SJC	RNAV (RNP) Z RWY 12L	ORIG-A	HITIR	9.4	3500	250	**40**	1.00	25	3.01	2.4	210	HIST VKTW
SJC	RNAV (RNP) Z RWY 12R	1A	RERAE	N/A	**3500**	210	N/A	1.00	25	N/A	5.4	N/A	MAN 3500; OK - >4.2 NM
SJC	RNAV (RNP) Z RWY 12R	1A	HITIR	9.2	3400	250	**40**	1.00	25	3.00	2.4	210	HIST VKTW
SJC	RNAV (RNP) Z RWY 30L	1A	FODPA	6.5	3900	210	**40**	0.60	20	2.89	2.6	190	
SJC	RNAV (RNP) Z RWY 30R	ORIG-B	FODPA	6.7	3900	210	**40**	0.60	20	2.89	2.7	190	
SMF	RNAV (RNP) Z RWY 16L	ORIG-B	OVOME	10.8	4000	250	**55**	1.00	25	3.35	3.0	230	
SMF	RNAV (RNP) Z RWY 16L	ORIG-B	ZIMAM	6.3	3000	250	N/A	1.00	25	N/A	4.5	**N/A**	OK - >4.2 NM
SMF	RNAV (RNP) Z RWY 16R	ORIG-A	OVOME	9.9	4000	250	**55**	1.00	25	3.35	3.0	230	

SMF	RNAV (RNP) Z RWY 16R	ORIG-A	ZIMAM	7.1	3000	250	N/A	1.00	25	N/A	5.0	**N/A**	OK - >4.2 NM
SMF	RNAV (RNP) Z RWY 34L	ORIG-A	OTOYE	10.2	4200	250	**55**	1.00	25	3.37	3.2	240	
SMF	RNAV (RNP) Z RWY 34R	ORIG-B	OTOYE	11.2	4200	250	**55**	1.00	25	3.37	3.2	240	
SNA	RNAV (RNP) Z RWY 19R	ORIG											**NO RF**
STL	RNAV (RNP) Z RWY 11	ORIG	HRBEE	15.4	5600	250	**58**	1.00	25	3.56	2.9	220	
STL	RNAV (RNP) Z RWY 12L	ORIG	RRIPP	13.7	5200	250	**54**	1.00	25	3.44	2.9	220	HIST VKTW
STL	RNAV (RNP) Z RWY 12L	ORIG	HRBEE	14.2	5300	250	**57**	1.00	25	3.51	2.9	220	
STL	RNAV (RNP) Z RWY 12R	ORIG-A	RRIPP	10.8	5000	250	**54**	1.00	25	3.42	2.9	220	HIST VKTW
STL	RNAV (RNP) Z RWY 12R	ORIG-A	HRBEE	11.9	5000	250	**57**	1.00	25	3.48	2.9	220	
STL	RNAV (RNP) Z RWY 29	ORIG	PEJAA	12.4	5400	210	54	1.00	25	2.59	3.0	N/A	HIST VKTW
STL	RNAV (RNP) Z RWY 29	ORIG	JYAAR	14.2	5900	210	54	1.00	25	2.62	3.0	N/A	HIST VKTW
STL	RNAV (RNP) Z RWY 30L	ORIG-A	PEJAA	12.9	5500	210	54	1.00	25	2.60	3.0	N/A	HIST VKTW
STL	RNAV (RNP) Z RWY 30L	ORIG-A	JYAAR	12.2	5300	210	54	1.00	25	2.58	3.0	N/A	HIST VKTW
STL	RNAV (RNP) Z RWY 30R	ORIG	PEJAA	13.2	5400	210	54	1.00	25	2.59	3.0	N/A	HIST VKTW
STL	RNAV (RNP) Z RWY 30R	ORIG	JYAAR	11.9	5100	210	54	1.00	25	2.57	3.0	N/A	HIST VKTW
SUN	RNAV (RNP) Y RWY 31	1B											**NO RF**
SYR	RNAV (RNP) Y RWY 10	ORIG-A	HETEL	11.0	4700	250	**56**	1.00	25	3.43	3.0	230	HIST VKTW
SYR	RNAV (RNP) Y RWY 10	ORIG-A	LENEC	10.0	4400	250	**56**	1.00	25	3.41	3.0	230	HIST VKTW
SYR	RNAV (RNP) Y RWY 10	ORIG-A	JEMKA	9.1	4200	250	N/A	1.00	25	N/A	4.3	**N/A**	OK - >4.2 NM
SYR	RNAV (RNP) Y RWY 28	ORIG-A	ESAME	6.3	3500	250	**51**	1.00	25	3.23	3.1	240	HIST VKTW
SYR	RNAV (RNP) Y RWY 28	ORIG-A	HADAS	8.6	3800	250	55	1.00	25	3.12	3.4	N/A	HIST VKTW
SYR	RNAV (RNP) Y RWY 28	ORIG-A	RILIE	11.1	4400	250	**56**	1.00	25	3.41	3.1	230	HIST VKTW
SYR	RNAV (RNP) Y RWY 28	ORIG-A	PRIMS	11.8	4600	250	**56**	1.00	25	3.42	3.0	230	HIST VKTW
TEB	RNAV (RNP) Z RWY 06	ORIG-C	GUZTI	10.7	4200	180	N/A	0.30	20	N/A	5.6	N/A	OK - >5.4 NM
TEB	RNAV (RNP) Z RWY 19	ORIG-D											**RF IN MAS**
TPA	RNAV (RNP) Y RWY 19L	1D											**NO RF**
TTN	RNAV (RNP) Y RWY 06	ORIG-A	HAMMA	13.4	5300	250	N/A	1.00	25	N/A	5.0	**N/A**	OK - >4.2 NM
TTN	RNAV (RNP) Y RWY 06	ORIG-A	HILOG	12.6	5100	250	57	1.00	25	3.49	3.8	N/A	
TTN	RNAV (RNP) Y RWY 24	ORIG	HAMMA	9.9	4200	250	55	1.00	25	3.37	3.7	N/A	
TUS	RNAV (RNP) Y RWY 11L	ORIG-A											**IAF IS RF**
TUS	RNAV (RNP) Y RWY 29R	ORIG-C											**NO RF**
YKM	RNAV (RNP) RWY 09	ORIG-A	YKM (IAF)	18.6	7300	250	N/A	1.00	25	N/A	6.2	**N/A**	YINUL (IF) IS RF; OK - >4.2 NM
YKM	RNAV (RNP) Y RWY 27	ORIG-A	DATVE (IAF)	26.4	9500	250	N/A	1.00	25	N/A	17.2	**N/A**	ZIVOM (IF) IS RF; OK - >4.2 NM

YKM	RNAV (RNP) Y RWY 27	ORIG-A	SELAH (IAF)	30.1	10500	300	68	1.00	25	5.77	13.2	N/A	ZOTOG (IF) IS RF
YKM	RNAV (RNP) Y RWY 27	ORIG-A	MUDLE	16.6	7100	250	N/A	1.00	25	N/A	6.9	**N/A**	OK - >4.2 NM
YKM	RNAV (RNP) Z RWY 27	ORIG-A	DATVE (IAF)	26.4	9500	250	N/A	1.00	25	N/A	17.2	**N/A**	ZIVOM (IF) IS RF; OK - >4.2 NM
YKM	RNAV (RNP) Z RWY 27	ORIG-A	SELAH (IAF)	30.1	10500	300	68	1.00	25	5.77	13.2	N/A	ZOTOG (IF) IS RF
YKM	RNAV (RNP) Z RWY 27	ORIG-A	MUDLE	16.6	7100	250	N/A	1.00	25	N/A	6.9	**N/A**	OK - >4.2 NM

- All fixes are Intermediate Fixes (IF) unless specified as Initial Approach Fix (IAF).
- 250 ft/nm was used from the PFAF to compute turn altitude (TA). TA rounded to next higher 100 foot increment. TA is the computed TA or altitude at IF, whichever is higher. TA is capped at 18,000 feet MSL.
- Worst case RNP 1 segment length below 10,000 feet MSL with Bank Angle (BA) 25° is 4.2 NM. Worst case for RNP 1 segment below 10,000 feet MSL with (BA) 20° is 5.4 NM
- Distances and RNP values are in nautical miles (NM). Speeds are in knots. Bank angles are in degrees.
- HIST VKTW = Historical tailwinds were used.

5b – RNP SIAPs Requiring Modification/Addition of Speed Restrictions

ID	Procedure Title	AMDT	IF/IAF	FAF-IF/IAF	TA	KIAS	VKTW	RNP	BA	Min Lgth	Pub Lgth	New KIAS	Remarks
ABQ	RNAV (RNP) Z RWY 21	1	WILKE	8.2	9000	210	**41**	0.30	20	3.33	3.2	200	HIST VKTW
BHM	RNAV (RNP) Z RWY 24	ORIG-A	MOKEE	8.9	4500	250	**56**	0.30	20	4.37	4.0	230	
BIL	RNAV (RNP) Z RWY 28R	ORIG	MACBU	6.2	5900	250	59	0.40	20	4.61	3.5	210	COORDINATION SITE; PUB 01/08/15
BWI	RNAV (RNP) Z RWY 10	2B	ANCRR	N/A	**4000**	250	**53**	1.00	25	3.31	3.0	230	MAN 4000; HIST VKTW
BZN	RNAV (RNP) RWY 30	ORIG-B	PESRE	14.8	9400	250	**66**	1.00	25	4.10	4.0	240	

CHS	RNAV (RNP) Z RWY 03	ORIG-A	STINNS	9.2	4000	250	**47**	1.00	25	3.19	2.1	190	
CHS	RNAV (RNP) Z RWY 21	ORIG-A	ADERY	9.8	4000	250	**47**	1.00	25	3.19	3.0	240	HIST VKTW
CHS	RNAV (RNP) Z RWY 21	ORIG-A	MYERS	N/A	**3000**	250	**47**	1.00	25	3.11	3.0	240	MAN 3000; HIST VKTW
CHS	RNAV (RNP) Z RWY 33	ORIG-A	JAARD	10.0	4000	250	**47**	1.00	25	3.19	3.0	240	HIST VKTW
CHS	RNAV (RNP) Z RWY 33	ORIG-A	CZSAR	N/A	**3000**	250	**47**	1.00	25	3.11	2.6	220	MAN 3000; HIST VKTW
CHS	RNAV (RNP) Z RWY 33	ORIG-A	SNOBB	N/A	**3000**	250	**47**	1.00	25	3.11	3.0	240	MAN 3000; HIST VKTW
COS	RNAV (RNP) Z RWY 17L	1	WIPUN	16.2	12800	300	**72**	1.00	25	6.26	3.9	220	
COS	RNAV (RNP) Z RWY 17L	1	REEFF	12.4	11800	300	**70**	1.00	25	6.03	4.2	240	
COS	RNAV (RNP) Z RWY 17R	ORIG-C	TEXCO	12.3	11800	300	**70**	1.00	25	6.03	4.0	230	
COS	RNAV (RNP) Z RWY 17R	ORIG-C	FRANO	18.3	13300	300	**73**	1.00	25	6.37	6.0	280	
COS	RNAV (RNP) Z RWY 35L	ORIG-A	WOVID	8.0	10100	300	**67**	1.00	25	5.68	4.0	240	
CRP	RNAV (RNP) Z RWY 31	ORIG-C	RIXMU	11.4	4100	250	**43**	0.50	20	3.99	2.7	190	HIST VKTW
CRW	RNAV (RNP) Z RWY 05	ORIG	WODNA	11.6	5900	250	**57**	1.00	25	3.56	3.4	240	HIST VKTW
CRW	RNAV (RNP) Z RWY 05	ORIG	WOXAN	11.6	5900	250	**57**	1.00	25	3.56	3.4	240	HIST VKTW
DAL	RNAV (RNP) Z RWY 31L	ORIG	DWNTN	N/A	3000	250	48	1.00	25	3.13	3.0	240	MAN 3000; HIST VKTW; COORD SITE; PUB 09/18/14
DAL	RNAV (RNP) Z RWY 31R	ORIG	SUMLN	N/A	4000	250	50	1.00	25	3.25	3.0	230	MAN 4000; COORD SITE; PUB 09/18/14
ELP	RNAV (RNP) Y RWY 04	ORIG-C	WUTIN	4.6	6500	210	**60**	0.40	20	3.55	3.5	200	
ELP	RNAV (RNP) Z RWY 04	ORIG-B	HAMGI	6.2	7500	250	**62**	1.00	25	3.82	3.0	210	
ELP	RNAV (RNP) Z RWY 04	ORIG-B	PEBCY	7.3	7800	250	**62**	0.50	20	4.93	3.0	180	
ELP	RNAV (RNP) Z RWY 22	1	VICMA	7.6	7000	210	**61**	0.70	20	3.62	3.0	180	
EUG	RNAV (RNP) Z RWY 16L	ORIG-B	CIDEM	5.0	2900	250	**53**	1.00	25	3.22	2.2	190	
EUG	RNAV (RNP) Z RWY 16R	ORIG-A	FITOK	6.4	3400	250	**54**	1.00	25	3.28	2.2	190	
FAI	RNAV (RNP) Z RWY 20R	ORIG	JUSIV	11.9	4700	250	**56**	0.50	20	4.40	3.5	210	
GEG	RNAV (RNP) Z RWY 03	ORIG	HODIX	10.9	6300	250	**38**	1.00	25	3.21	2.0	190	HIST VKTW
GEG	RNAV (RNP) Z RWY 03	ORIG	IRLUC	6.8	5200	250	**38**	1.00	25	3.11	2.0	190	HIST VKTW
GEG	RNAV (RNP) Z RWY 07	ORIG	WONEV	7.0	5200	250	**38**	1.00	25	3.11	2.0	190	
GEG	RNAV (RNP) Z RWY 07	ORIG	ZOTAV	6.6	5100	250	**38**	1.00	25	3.10	2.0	190	
GEG	RNAV (RNP) Z RWY 25	1	IQITO	9.0	5700	250	**45**	0.30	20	4.22	4.0	240	HIST VKTW
GJT	RNAV (RNP) Z RWY 11	ORIG-A	TADUY	11.2	8900	250	**65**	1.00	25	4.03	2.7	190	
GPI	RNAV (RNP) RWY 20	ORIG-A	QIGVO	19.2	10500	300	**68**	0.40	20	7.39	6.0	260	
GUC	RNAV (RNP) RWY 06	ORIG-A	HBU (IAF)	33.6	18000 *	300	**83**	0.50	20	9.70	6.1	220	*TA 18700 CAPPED AT 18000
HPN	RNAV (RNP) Z RWY 34	ORIG-B	HAARP	12.9	4700	250	**56**	1.00	25	3.43	3.4	240	

IDA	RNAV (RNP) Z RWY 02	ORIG-A	HUDEP (IAF)	21.0	11800	300	70	1.00	25	6.03	5.0	260	OKVIE (IF) IS RF
IDA	RNAV (RNP) Z RWY 20	ORIG-B	HULSA	16.2	10800	300	68	1.00	25	5.82	5.0	270	
MSO	RNAV (RNP) RWY 29	ORIG-A	ROKNY (IAF)	20.6	10800	300	68	0.80	20	7.45	5.0	230	
MSP	RNAV (RNP) Y RWY 35	1	HRBIE	8.4	7000	250	48	1.00	25	3.47	2.8	210	HIST VKTW
OMA	RNAV (RNP) Z RWY 36	ORIG	JOKRR	8.7	4200	250	55	1.00	25	3.37	3.0	230	
OMA	RNAV (RNP) Z RWY 36	ORIG	CHAZU	10.7	5000	250	57	1.00	25	3.48	3.0	220	
PDK	RNAV (RNP) RWY 03R	2	ACERA	8.3	4600	250	56	0.30	20	4.39	4.1	240	
PSC	RNAV (RNP) Z RWY 03L	1	EVVOR	9.0	4500	250	56	1.00	25	3.42	2.1	180	COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 21R	1	HONAG	6.1	3100	250	53	1.00	25	3.24	2.5	210	COORDINATION SITE; PUB 11/13/14
PSC	RNAV (RNP) Z RWY 30	1	WISBI	10.7	4600	250	56	0.50	20	3.42	3.0	230	COORDINATION SITE; PUB 11/13/14
RDM	RNAV (RNP) Z RWY 22	1	POWEL	13.4	7700	250	62	1.00	25	3.84	3.2	220	
RIC	RNAV (RNP) Y RWY 02	ORIG	BEKKY	N/A	**4000**	250	55	1.00	25	3.35	3.2	240	MAN 4000
RIC	RNAV (RNP) Y RWY 02	ORIG	EMWHY	7.0	3100	250	53	1.00	25	3.24	3.1	240	
RIC	RNAV (RNP) Y RWY 02	ORIG	EEMIL	N/A	**3000**	250	53	1.00	25	3.23	3.0	240	MAN 3000
RIC	RNAV (RNP) Y RWY 20	ORIG	TTIMM	9.7	3800	250	55	1.00	25	3.34	3.0	230	MAN 4000 @ DUCXS
RIC	RNAV (RNP) Y RWY 20	ORIG	JADNN	N/A	**3000**	250	53	1.00	25	3.23	3.0	240	MAN 3000
RIC	RNAV (RNP) Y RWY 20	ORIG	BECAB	N/A	**4000**	250	55	1.00	25	3.35	3.0	240	MAN 4000
RNO	RNAV (RNP) Z RWY 16L	1	JUDPU	13.3	10500	300	59	0.80	20	7.09	6.0	270	HIST VKTW
RNO	RNAV (RNP) Z RWY 16R	1	JUDPU	13.4	10500	300	59	0.80	20	7.09	6.0	270	HIST VKTW
SDF	RNAV (RNP) Z RWY 17L	ORIG-A	COBLR	11.8	5500	250	58	1.00	25	3.55	3.0	220	
SDF	RNAV (RNP) Z RWY 17L	ORIG-A	KAEDN	10.9	5300	250	56	1.00	25	3.49	3.0	220	HIST VKTW
SDF	RNAV (RNP) Z RWY 17R	ORIG-A	COBLR	N/A	4800	250	57	1.00	25	3.46	3.0	220	MAN 4000 @ YUNDV
SDF	RNAV (RNP) Z RWY 17R	ORIG-A	KAEDN	N/A	5800	250	58	1.00	25	3.57	3.0	220	MAN 5000 @ STYKR
SJC	RNAV (RNP) Z RWY 12L	ORIG-A	HITIR	9.4	3500	250	40	1.00	25	3.01	2.4	210	HIST VKTW
SJC	RNAV (RNP) Z RWY 12R	1A	HITIR	9.2	3400	250	40	1.00	25	3.00	2.4	210	HIST VKTW
SJC	RNAV (RNP) Z RWY 30L	1A	FODPA	6.5	3900	210	40	0.60	20	2.89	2.6	190	
SJC	RNAV (RNP) Z RWY 30R	ORIG-B	FODPA	6.7	3900	210	40	0.60	20	2.89	2.7	190	
SMF	RNAV (RNP) Z RWY 16L	ORIG-B	OVOME	10.8	4000	250	55	1.00	25	3.35	3.0	230	
SMF	RNAV (RNP) Z RWY 16R	ORIG-A	OVOME	9.9	4000	250	55	1.00	25	3.35	3.0	230	
SMF	RNAV (RNP) Z RWY 34L	ORIG-A	OTOYE	10.2	4200	250	55	1.00	25	3.37	3.2	240	
SMF	RNAV (RNP) Z RWY 34R	ORIG-B	OTOYE	11.2	4200	250	55	1.00	25	3.37	3.2	240	

STL	RNAV (RNP) Z RWY 11	ORIG	HRBEE	15.4	5600	250	**58**	1.00	25	3.56	2.9	220	
STL	RNAV (RNP) Z RWY 12L	ORIG	RRIPP	13.7	5200	250	**54**	1.00	25	3.44	2.9	220	HIST VKTW
STL	RNAV (RNP) Z RWY 12L	ORIG	HRBEE	14.2	5300	250	**57**	1.00	25	3.51	2.9	220	
STL	RNAV (RNP) Z RWY 12R	ORIG-A	RRIPP	10.8	5000	250	**54**	1.00	25	3.42	2.9	220	HIST VKTW
STL	RNAV (RNP) Z RWY 12R	ORIG-A	HRBEE	11.9	5000	250	**57**	1.00	25	3.48	2.9	220	
SYR	RNAV (RNP) Y RWY 10	ORIG-A	HETEL	11.0	4700	250	**56**	1.00	25	3.43	3.0	230	HIST VKTW
SYR	RNAV (RNP) Y RWY 10	ORIG-A	LENEC	10.0	4400	250	**56**	1.00	25	3.41	3.0	230	HIST VKTW
SYR	RNAV (RNP) Y RWY 28	ORIG-A	ESAME	6.3	3500	250	**51**	1.00	25	3.23	3.1	240	HIST VKTW
SYR	RNAV (RNP) Y RWY 28	ORIG-A	RILIE	11.1	4400	250	**56**	1.00	25	3.41	3.1	230	HIST VKTW
SYR	RNAV (RNP) Y RWY 28	ORIG-A	PRIMS	11.8	4600	250	**56**	1.00	25	3.42	3.0	230	HIST VKTW

5c – RNP SIAPs Requiring Structural Modification

ID	Procedure Title	AMDT	IF/IAF	FAF-IF/IAF	TA	KIAS	VKTW	RNP	BA	Min Lgth	Pub Lgth	New KIAS	Remarks
BHM	RNAV (RNP) Z RWY 24	ORIG-A	LISRE	9.0	4500	250	56	0.30	20	4.37	2.0	150	<180K NA
BUR	RNAV (RNP) Y RWY 08	ORIG-A	YEBUN	1.2	3000	250	53	0.50	20	4.13	1.2	110	90° TF - TF EVAL, IF - FAF; <180 KIAS NA
BUR	RNAV (RNP) Z RWY 08	1A	YEBUN	1.2	3000	250	53	0.50	20	4.13	1.2	110	90° TF - TF EVAL, IF - FAF; <180 KIAS NA
COS	RNAV (RNP) Z RWY 35R	ORIG-A	JODUM	6.2	9700	250	66	1.00	25	4.13	2.0	150	<180 KIAS NA
ELP	RNAV (RNP) Y RWY 04	ORIG-C	ZORVA	3.6	6200	210	59	0.30	20	3.49	2.5	165	<180 KIAS NA
FAI	RNAV (RNP) Z RWY 20R	ORIG	YIPUT	13.4	5100	250	57	0.50	20	4.45	2.5	170	<180 KIAS NA
GPI	RNAV (RNP) Y RWY 02	ORIG-A	ANGIL (IAF)	43.0	16000	230	79	0.80	20	5.85	4.0	180	<210 KIAS NA
IWA	RNAV (RNP) Z RWY 30C	ORIG-A	TYLIK (IAF)	8.7	5200	250	57	1.00	25	3.50	2.0	175	<210 KIAS NA; GYANT (IF) IS RF
MFR	RNAV (RNP) RWY 32	ORIG-A	FILPU	7.2	4600	250	56	0.50	20	4.39	2.5	170	<180 KIAS NA
MWH	RNAV (RNP) Z RWY 14L	ORIG-A	WIPES (IAF)	9.8	6100	250	59	0.30	20	4.64	3.1	190	<210 KIAS NA
PSC	RNAV (RNP) Z RWY 12	1	HUKAK	10.0	4400	250	56	0.50	20	4.36	2.0	150	<180 KIAS NA; COORDINATION SITE
PUW	RNAV (RNP) Z RWY 06	ORIG	FEMQI	5.2	5400	250	58	0.50	20	4.53	2.0	145	<180 KIAS NA
RDM	RNAV (RNP) Z RWY 04	1	VUCUV	10.8	7400	250	62	1.00	25	3.81	2.0	165	<180 KIAS NA

Appendix 6 – Action Team Terms of Reference

1.	**Statement of Objective, i.e. what is the problem/requirement:** DCP 4-8-1, to be implemented July 2013, modifies existing FAA 7110.65 guidance for approach clearances (para 4-8-1, APPROACH CLEARANCE). Among other things, the new guidance (sub-paragraph f) requires air traffic controllers clearing an aircraft for an RNP AR SIAP on a heading or course direct to the IAF/IF to do so: a) at angles not greater than 30 degrees provided the distance between the IAF/IF and the waypoint beginning the RF leg is 3 nm or greater, or b) at angles not greater than 90 degrees provided the distance between the IAF/IF and the waypoint beginning the RF leg is 6 nm or greater. Some operators have responded that the original 4-8-1 language permitting a vector to intercept an RNP AR IF at no more than 90 degrees is beneficial for the NAS and can provide shorter paths, operational efficiencies, and reduce capacity degradation. However, criteria must be developed to assess obstacles in the Design Turn Anticipation Area (DTA) for the intercept to the course inside the IF, prior to descending below the Minimum Vectoring Altitude. Other operators and stakeholders have stated that 90 degree intercepts aren't necessary given the design of RNP AR procedures, especially when such procedures are linked to an arrival procedure. Further, some concerns have been voiced about design penalties for a 90 degree evaluation. In addition, there are questions about when an aircraft is considered established on an RNP path. An action team (AT) will be formed to consider these issues and provides recommendations.
2.	**Statement of scope of task/activity:** The AT will consider the operational benefits and consequences of 90 degree intercepts and, as appropriate, determine how these intercepts might be accounted for by an obstacle clearance assessment in procedure design criteria to support RNP AR and/or be managed within the production of new or modified operational procedures. The AT should also consider relationships to PBN and conventional instrument approach and arrival procedures. An adjunct activity is considerations for when an aircraft intercepting an RNP AR procedure is considered to be "established" on such a procedure.
3.	**What is the expected deliverable/product:** The AT will develop recommendations regarding RNP AR approach procedure design concepts and relevant air traffic control procedures. As appropriate, the AT should provide recommendations concerning procedure design criteria to assess obstacle clearance in the DTA area allowing for a 90 degree intercept to an RNP AR procedure IF.

	Additionally, the AT will recommend a definition for when an aircraft conducting an RNP AR approach is considered established on a procedure for the purposes of obstacle clearance.
4.	**Special Considerations:** None.
5.	**What is the schedule of activities:** The anticipated completion date (deadline for deliverable) is December, 2013.
6.	**Related Activities:** DCP 4-8-1 RTCA Tactical OPS Committee (TOC) ? Aeronautical Charting Forum
7.	**What are the resource requirements and commitments:** Given adequate preparation, it is expected the AT will need four 2-day, face-to-face meetings, as well as several teleconferences and associated e-mail correspondence to complete the task.
8.	**What is the urgency/criticality:** The AT will primarily focus on recommendations that can be implemented as soon as practical.
9	**Who are the customers for the product/deliverable:** FAA and Industry policymakers and other stakeholders.
10.	**Will this result in PARC recommendations or is this coordination to keep PARC aware of significant related activities:** This activity will result in PARC recommendations.
11.	**AT Leader(s):** The AT will have an FAA Co-Lead (TBD) and Industry Co-Lead (TBD).
12.	**AT Members:** FAA-AVS/AFS FAA-ATO/AJV (PBN Policy and Support office and AeroNav) FAA-ATO Terminal Services FAA-ATO En Route NATCA Industry Pilot Groups Industry Operators