

Ann Arbor Municipal Airport (ARB), Ann Arbor Michigan - Draft Environmental Assessment FAA Combined Comment Matrix
--May thru October 2016--

Comment Number	Page Number	Section Number	Paragraph	FAA Comment	MDOT Comment Resolution
1	1	title page	n/a	Need statement that "This Environmental Assessment becomes a <i>Federal</i> document..." before the FAA signature block, per FAA Order 1050.1F paragraph 6-2.1(a).	Revised draft EA
2	1	title page	n/a	Federal signature block should read "Responsible FAA Official"	Revised draft EA
3	9, 10 & 12	1.3 & 1.4	all	The Intro and background sections are discussing the State Standards. What are the Federal Requirements, in addition to the State reqmts? Critical Aircraft (1.5.1) & use of runway, Aircraft Activity (1.5.2) and Characteristics /Recommendations (1.5.3) all need to be in the background section before purpose and need section. Info in P & N needs to be in the background section.	On April, 21 2015 the FAA-Region provided a 2011 Environmental Assessment from Bolingbrook's Clow International Airport, as an example for MDOT-AERO to follow while re-organizing and revising this draft. AERO put significant effort into modeling this draft after the Bolingbrook example and believes the content is consistent. The draft EA was revised to try and clarify the issue raised here, yet remain consistent with the example previously provided.
4	10	1.3	6	Need a discussion of the SBGP so that the reader is better able to understand the division of proposed actions between state and Federal	Revised draft EA
5	10	1.3	6	The paragraph is implying that the ALP is "fully approved".. If this were the case, it would have been unconditionally approved rather than conditionally approved. - Remove, "...it is in fact a fully approved ALP" - Add "conditional" to the last sentence, "...prior to AERO signing the conditional approval letter."	Revised draft EA
6	12	1.3	2	Please explain why the comments from the ADO were not addressed.	Revised draft EA
7	12	1.4	3	Is the purpose to meet the "FAA design objectives" or to accommodate the runway length needed by critical aircraft? This is implying that FAA is forcing the runway extension. Recommend changing the wording to clarify that aircraft are currently impacted by the shorter runway length. Is "increasing the line of sight for ATCT personnel" (presumably to improve a hotspot) more of a Need than a purpose?	Revised draft EA

8	12	1.4	4	States that the Need is to allow aircraft to operate at "Optimum Capabilities", should this include why there's a need to operate at "optimum capabilities"? Where are aircraft going, how often is the runway length affecting users?	<p>In response to FAA's question regarding the need to allow the majority of critical aircraft to safely operate at their optimum capabilities without weight restrictions, we reference Paragraph 103 of FAA Advisory Circular 150/5325-4B, <i>Runway Length Requirements for Airport Design</i>. This paragraph states "The design objective for the main primary runway is to provide a runway length for all airplanes that will regularly use it without causing operational weight restrictions". The term "regularly use it" is further identified by the FAA as being the volume of usage provided by the runway's particular critical aircraft category (a minimum of 500 Annual Itinerant Operations).</p> <p>As far as FAA questions related to where the aircraft are going, an Origin-Destination Analysis was conducted using records obtained from the FlightAware Instrument Flight Rules (IFR) flight plan database associated with ARB. Flight operations were verified between ARB and at least 31 other states (approximately 63% of the continental U.S.). A list of all of the states involved is included in User Survey Supplemental Report No. 2, which is included in Appendix A-2 of the Draft EA.</p> <p>Additional information related to both of the above paragraphs is included in Sections 1.5.1, 1.5.2, and 1.5.3 of the Draft EA. Revised draft EA where appropriate.</p>
9	12	1.4	3	Another sentence should be added after the first sentence of the paragraph to explain that the Purpose includes lengthening and shifting the runway. The second sentence is a Need and should be placed in the following paragraph.	Revised draft EA
10	12	1.4	all	Use of the term "Safely" implies the airport is not safe currently.	Revised draft EA
11	12	1.4	all	The purpose and needs statement should be complete and concise. This would include stating the problem that is looking to be addressed. A statement of overall safe and efficient and usable is a general statement and should be tightened up to reflect the discussion that follows. It is confusing on why the line of sight issue is singled out in the statement. Consider revising this statement.	On April, 21 2015 the FAA-Region provided a 2011 Environmental Assessment from Bolingbrook's Clow International Airport, as an example for MDOT-AERO to follow while re-organizing and revising this draft. AERO put significant effort into modeling this draft after the Bolingbrook example and believes the content is consistent. The draft EA was revised to try and clarify the issue raised here, yet remain consistent with the example previously provided.
12	12	1.4	4	Clarify why the statement regarding aircraft says majority and not "all" aircraft?	Revised draft EA

13	13	1.5.1	2	Clarify whether the critical aircraft is properly grouped; is it okay to use the category B-II Small Aircraft? Cross reference B-II Large in the document.	The critical aircraft category of "B-II Small Aircraft" is properly grouped. In conducting the analysis of the critical aircraft, the distinction between Small versus Large category aircraft was considered in order to determine which Runway Length Curves in FAA Advisory Circular 150/5325-4B would be applicable to ARB. The curves in Chapter 2 are applicable to Small category aircraft, and the curves in Chapter 3 are applicable to Large category aircraft. The FAA recommended runway length of 4,200' was obtained from Figure 2-2 of Chapter 2. Had the critical aircraft at ARB been determined to be of the Large category, Tables 3-1 and 3-2 of Chapter 3 show that a much longer runway length would have been recommended by the FAA Advisory Circular. As far as FAA's request to cross reference the B-II Large category in the EA document, it is clearly referenced in section 1.5.3.
14	13	1.5.1	5	This paragraph is general in nature. A runway of 4,300 feet would allow without load restrictions... why 4,300's, why not 4,500, 5,000, or 10,000. The paragraph should instead define the runway length needs of the aircraft regularly using the runway, including haul lengths and loads rather than suddenly put out that 4,300 ft. would satisfy it.	<p>As explained in Section 1.5.3, The FAA recommended runway length of 4,200 feet at ARB was obtained by calculation following the methodology referenced in Chapter 2 of FAA Advisory Circular 150/5325-4B, "Runway Length Requirements for Airport Design," a publication that is used nationally by the agency. The methodology and figures referenced in this section of the AC result in recommended runway lengths that are airport-specific, and they can vary by hundreds of feet from site to site, depending on the specific airport elevations and mean daily maximum temperatures used in the calculations.</p> <p>For example, if a representative higher-elevation airport in the Denver area had an elevation of 5,000 feet MSL, interpolation of Figure 2-2 of Chapter 2 of the AC shows that a runway length of approximately 5,000 feet in length would be recommended for the same B-II Small category of critical aircraft.</p> <p>In Michigan, airport elevations at our public-use airports only range from 578 feet to 1,622 feet MSL. The AERO runway length recommendation of 4,300 feet is a statewide standard for all airports in the state with category B-II critical aircraft classifications, as identified in Table 40 of the Michigan Airport System Plan (MASP). Since airport elevations and mean maximum temperatures do not vary significantly from airport to airport in Michigan, as opposed to many other states, AERO uses a single runway length recommendation for all airports of the same critical aircraft classification.</p>
14 Cont.	13	1.5.1	5		The reason that the preferred alternative in the draft EA references a runway length of 4,300 feet is that this length meets both FAA and AERO runway length recommendations for critical aircraft in the B-II Small category.

15	13	1.5.1	6	The example seems to be an extreme case, how often does this user use the airport and what type of B-II aircraft is it? Why do they base at ARB instead of another close airport if they cannot use the aircraft to it's max capability above 40 degree F?	This user flies approximately 200 operations from ARB annually in Cessna 560 Excel jet. The user's business is based in Ann Arbor and the proximity to the airport provides convenience and a significant time savings over other local airports.
16	14	1.5.1	1	"Part 135 operators must reduce the useable length of the runway by anywhere from 20-35% based on runway conditions" has this quote been verified through citation to the actual Part 135?	The corporate pilot quotation regarding Part 135 operators has been verified to 14 CFR 135.385 paragraphs (b) and (f).
17	14	1.5.2	2	"Also, approximately 67% of the IFR flight plan records examined were between ARB and out-of-state locations." It's not clear how far of a distance these itinerant operations are going.. Are they all to surrounding States or are the haul length further?	The first sentence of Section 1.5.2 of the draft EA refers the reader to User Survey Supplemental Report No. 2 in Appendix A-2 for full details regarding the Origin-Destination Analysis. Exhibit No. 2 in the User Survey Supplemental Report lists the names of all 31 states (and Washington DC) that were associated with flights to and from ARB, as obtained from just the IFR Flight Plan database of FlightAware. Potentially, there are even more states associated with ARB flights than those confirmed by the referenced FlightAware records. Nonetheless, the records reviewed confirm that direct flights were conducted from ARB to other airports located in states as far away as Arizona, Texas, Florida, and Maine, just to name a few. The confirmation of flight operations between ARB and at least 31 other states verifies that operations are not confined to the few states surrounding Michigan, and that flights with long distance stage lengths are being conducted.
18	14	1.5.2	2	Second half of paragraph: Why are NetJets and AvFuel further called out in the two final sentences? What about the other six companies?	While many of the large corporations listed as users of ARB are commonly known, NetJets and AvFuel were lesser known entities that are active at the airport. NetJets because of the variety of businesses they serve and AvFuel because they are a local business.
19	16	1.5.3	FAA	Clarify why 4,200' (AC 150/5325-4B) would not support the Purpose and Need (P&N) as opposed to the requested 4,300.'	As explained in section 1.5.3 of the draft EA, utilization of current FAA runway design standards results in a recommended runway length of 4,200 feet at ARB. Utilization of current AERO runway design standards results in a recommended runway length of 4,300 feet. Although the recommendations are very similar, the reason that 4,300 feet was referenced in the draft EA in meeting the purpose and need is that it meets both the FAA and AERO current standards for runway length recommendations based on the critical aircraft category of aircraft.
20	16	1.5.3	FAA	Why isn't 4,200' listed as an alternative?	As explained in Comment 19 shown above, the reason that a runway length of 4,200 feet was not included as an alternative is that it is very similar in length to the 4,300 foot long alternative, and it does not meet current AERO runway design standards.
21	16	1.5.3	3	"The AERO recommendation of 4,300 feet is a statewide standard..." Recommend including how AERO developed their standard. What is this length based on, is it a random length they chose or does it meet the requirements identified in the P&N (optimum capabilities of the critical aircraft at ARB)?	Revised draft EA

22	16	1.5.3	4	Clarify whether the category B-II Small Aircraft requires a runway length of up to 4,300, or do the larger B-II airplanes require this length? The Small B-II may be on the lower end of the spectrum?	Revised draft EA
23	16/17	1.5.4	8 (last)/several	Clarify why User-Survey Reports were heavily relied upon? Why not TAF and Tower Counts? TAF was very close to accurate, however it is not logical to conclude (quantitative to qualitative) that ops will increase, because TAF may not always support constant increase. (Justify, e.g. is there a new coach that may boost attendance for Michigan games which will increase probability of increased attendance/travel?)	The reason that User Survey Reports were relied upon in this study is that they distinguish between the various aircraft makes and models, while the TAF and Tower Counts do not. From the various make and model information, aircraft approach categories, design groups, weight classifications (large vs. small), and critical aircraft categories can be determined. The TAF shows total numbers of forecasted operations, but no distinction of aircraft makes or models. The Tower Counts show historical numbers of total operations, but no distinction of aircraft makes or models. All three data sources (user surveys, TAF reports, and Tower Count reports) are useful for different aspects of analysis and forecasting, and all of these sources were used appropriately in this study. As stated in paragraph 1.5.4, the current TAF (which is prepared by FAA personnel and updated annually) forecasts continually increasing operations at ARB from year 2014 through year 2040, and the current MASP (which is prepared by MDOT personnel and updated periodically) also forecasts similar numbers of continually increasing operations through year 2030.
24	17	1.5.4	4	The paragraph indicates that the TAF is used to project forecasted operations to 2040. Does the airport have a locally developed forecast to compare this to? Does the airport understand how the TAF was developed and if it's really a good indicator of B-II itinerant ops?	While the airport does not have a locally developed forecast, the current FAA-developed TAF as well as the current MDOT-developed MASP both show continually increasing operations at ARB from present date at least through the year 2030. It is logical to conclude that all categories of aircraft that use the airport would show some increase in their annual operational numbers as part of the overall increase in activity. But even if category B-II operations remained at the level of the 538 annual operations that were documented in year 2014, and the entire increase in operations was attributed solely to increased activity by the smaller categories of aircraft (highly unlikely – especially if the runway is extended to 4,300 feet in length as proposed), the justification for the proposed project would still be substantiated both presently and through future years.
25	17	1.5.4	5	"...it is logical to conclude that operations by B-II category aircraft and larger will also increase beyond the 551 that were documented in 2014." Table 1-1 indicates that the 5-year trend from 2010 to 2014 is a steady or downward trend in B-II ops. Why is it logical to believe B-II ops will increase given the history of ops at the airport? - does the 551 include just B-II aircraft or B-II and larger as indicated in the paragraph? - How many of the 551 ops by B-II aircraft are by the representative King Air 200 or aircraft with 10 or more passenger seats?	Changes made and clarification added to Section 1.5.4 as requested. A table has also been added to User Survey Report No. 4 (Exhibit 1 of Appendix A-4 of the draft EA) which clarifies the number of annual operations conducted in 2014 by specific aircraft models and groupings (B-II, B-III, and C-III). As a result of preparing the table and analyzing and categorizing the operations by specific aircraft models, the operations performed exclusively by category B-II aircraft have been revised to 538 instead of the 551 that were mentioned in the previous draft of the EA. A total of 544 annual operations were performed by the combined B-II and Larger categories of aircraft. The text in Section 1.5.4 as well as numbers shown in Table 1-1 have been revised accordingly.

25 Cont.	17	1.5.4	5		<p>In answer to FAA's question regarding a "steady or downward trend in B-II ops" from year 2010 to 2014: Table 1-1 of the draft EA does show minor fluctuations in the levels of estimated annual B-II operations during this time frame, from a low of 537 to a high of 600. These numbers were based on the minor fluctuations in total operations that occurred during the same time frame. The trend is not a steady downward trend as FAA suggests, but rather the numbers fluctuate both downwards and upwards. The numbers are also relatively close to each other, as opposed to being drastically different. The severe and multi-year economic recession that originated in 2009 likely played a role in the minor fluctuations of the total operations at ARB during the time frame in question, and as a result the minor fluctuations in the number of estimated B-II operations. Since the TAF (which is prepared by FAA personnel) shows that Total Annual Operations at ARB are forecasted to increase every year beyond year 2014, it is logical to conclude that operations by B-II category aircraft will also increase beyond the 538 that were documented in 2014. As noted in the text of revised Section 1.5.4 of the draft EA, even if B-II category operations do not increase in the future, but remain the same as in year 2014 (very unlikely if total operations are increasing), justification for the proposed runway extension would still be substantiated through the year 2040.</p>
25 Cont.	17	1.5.4	5		<p>In answer to FAA's questions regarding more details of operations performed by "B-II" versus "B-II and Larger" categories of aircraft, as well as more specifics regarding individual aircraft types, the information is shown in Exhibit 1 of User Survey Report No. 4 (see Appendix A-4 of the draft EA).</p>
26	17	1.5.4	6	<p>"These numbers have been calculated based on the percentage of actual B-II operations to actual Total Operations..." Why wasn't flight aware and FAA data used to determine actual usage by B-II aircraft over more years? Was FAA or Flight Aware data compared to the Airport User Survey data used for 2007, 2009, and 2014?</p>	<p>Changes made and clarification added to Section 1.5.4 as requested. In answer to FAA's questions, FlightAware data was used in the determination of B-II operations for survey data years 2007 and 2009, and FAA's Traffic Flow Management System Counts (TFMSC) data was used in the determination of B-II operations for survey data year 2014. This is clearly explained in User Survey Report Nos. 2, 3, and 4 (see Appendices A-2, A-3, and A-4 of the draft EA). Also, Exhibit 1 in each of these three reports shows a listing of the specific B-II category aircraft that were included in these records.</p> <p>Operational data obtained from both the FlightAware and the TFMS sources is considered the most accurate available, as it is based on actual documented operations obtained from Flight Plans filed by pilots, over an entire calendar year of time. None of the data is based on estimates of annual operations generated by pilots, or proration of partial year survey data, as is common in conducting many other operational surveys.</p>
27	20	1.6	first	<p>First sentence should read: "The City of Ann Arbor proposes to extend and shift 160' the existing..."</p>	<p>Revised draft EA</p>

28	20	1.6	2	"...as it does not currently meet the FAA design objectives" Recommend that all references to "FAA design objectives" be removed... the purpose should not be to meet FAA design objectives or put the onus on the FAA causing the runway length, but their user need for the longer runway	Excerpt directly from Purpose and Need...The Purpose of the proposed actions is to provide facilities at ARB that fully accommodate the operational requirements of critical aircraft currently using the airport, while at the same time enhancing safety. Revised draft EA as appropriate.
29	20	1.6	3	First sentence should read: "The existing runway approach light system pilots use to identify..."	Revised draft EA
30	20	1.6	3	After the second sentence, the remainder of the paragraph should read: "Due to difficulty in maintaing the system, the ODALS are currently temporarily out of service. Due to the fact that the Runway 24 end is proposed to be relocated, the FAA is proposing to permanently decommission and remove the ODALS according to an FAA airspace letter signed on May 13, 2015, Airspace Case Number 15-AGL-14NR (Appendix H). A new runway approach lighting system will not be constructed as part of the proposed action."	Revised draft EA
31	20	1.6	4	Clarify throughout the document the direction of rw/taxi shifting and extension - either west or southwest	Revised draft EA where appropriate.
32	20	1.6	4	The Shift and Extension of the existing runway should be clarified, is the physical pavement going to be shifted and extended or is the pavement just going to be extended and the Runway 24 threshold moved 150 ft. If the remaining 150 ft pavement remains, is it usable? How will the existing taxiway across the threshold be handled (to the southeast)?	Revised draft EA to clarify, details contained in "proposed action" bulleted list.
33	20	1.6	5	delete entire paragraph, as this is not the appropriate section for this discussion.	Revised draft EA
34	20	1.6	6	Paragraph should read: "Implementation of the Preferred Alternative would meet the Purpose and Need by adequately addressing the needs of the..."	Revised draft EA
35	21	1.6	first bullet	To clarify the meaning, please reword this bullet	Revised draft EA
36	21	1.6	second bullet	specify that the parallel taxiway is designated Alpha	Revised draft EA
37	21	1.6	bullets 1, 2, 3	Clarify that 150' is being removed from the northeast end of the runway and added to the southwest end. Runway is being extended by 795'; please label the taxiway and rw; delineate why it is being extended by 945' if the new runway portion will be 795' once the 150' is newly constructed.	Revised draft EA (addressed by Comment #35)
38	21	1.6	bullets 1, 2, 3 & 4	Clarify whether entire runway is being reconstructed, or just portions to determine impacts.	There are no proposed actions to reconstruct the entire runway and the draft EA is clear that the proposed actions only impact the proposed 795' extension and the proposed 150' shift.
39	21	1.6	bullet 5	Reiterate throughout the document direction of the shift/extension	Revised draft EA where appropriate.
40	21	1.6	seventh bullet	Should read: "Relocate airport-owned Precision Approach..."	Revised draft EA
41	21	1.6	tenth bullet	Should read: "Relocate/reconstruct FAA-owned Ruwnay 6 Runway End Identifier..."	Revised draft EA
42	22	1.7.1	after first bullet	add new second bullet: "FAA acceptance of relocated NAVAIDs (REIL)	Revised draft EA

43	22	1.7.1	third bullet	I was unaware that this project would use AIP funds. If this is not the case, reword with the correct funding source or delete	In a December 2013 email between the FAA-Region and MDOT-AERO, the funding sources intended for the project were clarified and remain the same, State Apportionment, Non-primary Entitlements and State/Local Shares will be used.
44	22	1.7.1	3	This bullet needs to be removed. There are no AIP funds being sought or provided for this proposed action.	State Apportionment and Non-primary Entitlements are AIP funds.
45	22	1.8	all	The section labeled, "Other considerations" should be included in the purpose and needs section. These issues kept separate from the statement objectives makes it difficult to have a clear purpose and need statement and to recognize these as part of the project.	On April, 21 2015 the FAA-Region provided a 2011 Environmental Assessment from Bolingbrook's Clow International Airport, as an example for MDOT-AERO to follow while re-organizing and revising this draft. AERO put significant effort into modeling this draft after the Bolingbrook example and believes the content is consistent. The draft EA was revised to try and clarify the issue raised here, yet remain consistent with the example previously provided.
46	22	1.8.1	1	"The proposed shift would enhance operational safety, and possibly prevent a runway incursion, by expanding the view of the hold area and parallel taxiway to ATCT personnel." Therefore, please clarify, does this this shift cause other operational issues with the existing Northeasternmost hangar apron view still blocked from ATCT line of sight? How will aircraft taxi to the Southeast hangar section? - Is 150 ft enough of a shift to remove the hot spot?	With the proposed shift of the A1 connector from Alpha Taxiway to Runway 06/24 to the southwest, the Line of Sight issue will be significantly improved. Aircraft entering the Movement Area from Echo, Delta and Charlie (east facing hangars only) will still have limited visual oversight by controllers. This will be a significant improvement over current conditions where all aircraft using the taxiway hold area of Runway 24 are in a restricted visibility area. The existing Delta taxiway from the southeast hangars will be shifted to the southwest as well under the proposed project. This will allow them full access from Runway 06/24 to the southeast hangar area with full visual access from the control tower. The proposed 150' shift will significantly improve the safety of ground operations of taxiing aircraft. While some visual restrictions for aircraft originating from the northeastern most T hangars will remain, it will be up the FAA to determine if this area should still be designated as a "hot spot."
47	23	1.8.1	second on page	In response to the first sentence, clarify what type of "more negative impacts" would there be?	Revised draft EA
48	23	1.8.1	2	"...than with the runway threshold shift alternative"... is the preferred alternative to shift the threshold only and leave the pavement, or to shift and remove the 150 ft of pavement?	Revised draft EA to clarify, details contained in "proposed action" bulleted list. (Section 1.6)
49	23	1.8.1	3	"...raising the tower in its existing location would very likely result in the tower penetrating the 7:1 transitional surfaces..." Has an airspace study been completed to determine if this is a hazard?	Changes made and clarification added to Section 1.8.1. In answer to FAA's question, yes an airspace study was completed to determine if a raised tower would become a hazard. See revised Section 1.8.1 for details.
50	23	1.8.1	4	How old is the ATCT? Is it due for a modernization or rehab that might cause it to be beneficial to move it?	The ATCT was constructed in the mid-1970's and the attached office structure was constructed around 2003. The ATCT exterior was rehabbed within the last 5 years. The Airport is unaware of any pending plans for additional modernization or rehab.
51	23	1.8.1	4	Delete "disruption of Airport Traffic Control operations"	Revised draft EA
52	23	1.8.2	1	"The proposed shift of the Runway 24 threshold would also allow for a clear 34:1 approach slope..." Why are they protecting for a 34:1 approach slope when the minimums for existing approaches are 1 mile? 34:1 is typically required for minimums below 3/4 mile. If the 34:1 doesn't apply, why would this be a "concern"?	The 34:1 approach slope is planned for future developments at ARB on the current ALP. (Sheet 4 - "Airport Layout Plan (Future)") Plus, any lowering of obstacles in the approach to a runway is an improvement and should always be attempted to improve the safety of the flying public.

53	23	1.8.2	5	Justify the slope gradient based on page 2 of the AC 150/5325 (10) Effective Runway Gradient	The justification of the slope gradient based on page 2 of the AC 150/5325 (10) Effective Runway Gradient will be accomplished once detailed design is performed on the preferred alternative.
54	24	1.8.3	1	Regarding 150/5235 4-B, Figures AC 2-1 and 2-2, an engineer from ARPs stated that the charts support the runway being extended to 4,150 when the temperature is higher than 82.5°. But if the sponsor believes the longer runway is necessary please justify.	The mean daily maximum temperature of the hottest month of the year at ARB is 83.0 degrees F (July). The airport elevation is 839' MSL. When these numbers are factored into Figure 2-2 of FAA AC 150/5325-4B, the resulting recommended runway length is 4,200'. See the draft EA for additional information regarding the FAA recommendation of 4,200' versus the MDOT recommendation of 4,300'. (Section 1.5.3)
55	24	1.8.3	3	Please explain what is meant by a "local objective"	A "local objective" is a goal set by Ann Arbor Municipal Airport leadership that would be obtained by the implementation of the proposed airfield improvements.
56	24	1.8.3	3	several comments. How many overruns occurred? This objective should not be labeled as a local. The runway design criteria accounts for RSAs an RPZ for the critical aircraft.	Eleven overruns have been documented. If additional overruns occurred, the Airport has been unable to find verifiable documentation for them. As overruns are not officially recognized by the FAA or AERO as justification for extending a runway, the objective of keeping aircraft on the pavement is a local one. While the existing RSA and RPZ meet the design criteria for critical aircraft, the Airport believes that keeping aircraft on pavement instead of transitioning to an RSA or RPZ reduces the hazard to aircraft, their occupants and the airport facilities.
57	24	1.8.4	1	This section is being viewed as part of the justification for the statement. Commerce can not be of the P/N. Otherwise, other commerce alternatives will have to be included. Suggest that this section be removed.	On April, 21 2015 the FAA-Region provided a 2011 Environmental Assessment from Bolingbrook's Clow International Airport, as an example for MDOT-AERO to follow while re-organizing and revising this draft. AERO put significant effort into modeling this draft after the Bolingbrook example and believes the content is consistent. The items included as "Other Considerations" are not items to justify the proposed project but are other items that will be impacted if the proposed project is constructed. These items are of significant interest or impact that they warrant explanation.
58	25	1.9	third bullet	How would the project "enhance operational safety in low-visibility conditions" without installing an ILS? Would providing a 34:1 approach really be enough to make this claim?	In answer to FAA's question, the project would enhance operational safety in low visibility conditions by providing a greater margin of safety between the approaching aircraft and the obstacles on the ground in the Runway 24 approach area. Since the 34:1 approach surface provided by the proposed project is flatter than the existing 20:1 approach surface, obstacles with heights just below the 34:1 surface would be farther away (vertically) from overflying aircraft than obstacles with heights just below the 20:1 surface. The greater vertical distance of object-free airspace would obviously increase the margin of safety in low visibility conditions.
59	25	1.9	last bullet	explain "local objective"	(Addressed by Comment #55)
60	25	1.9	all	The summary should be moved up and be made part of the P/N statement and renamed objectives. The document to this point uses safely through out. Either remove the language or change to enhanced safety.	MDOT-Aero and the FAA-Region have had previous discussion regarding the summary, the summary will be left in place. Revised draft EA to address safely/enhanced safety where appropriate.

61	26	2	1	include the number of alternatives at the beginning of the sentence. Drop the rest of the sentence after "project"	Revised draft EA
62	26	2.1.1	3	In regards to the second and third sentences of the paragraph: Does the fact that B-II aircraft still land at ARB instead of nearby YIP demonstrate that the restrictions put on those aircraft by the short runway are not significant, otherwise these users would land at YIP instead? For clarity, this should be rebutted in order to strengthen the Purpose and Need	The Ann Arbor Municipal Airport cannot dictate which airfield a pilot uses. Many factors go into that aircraft operator's decision on where to operate from. B-II aircraft are a regular user of the Airport and the existing runway configuration does not satisfy the FAA design objective of providing sufficient runway length to allow airplanes that regularly use it to operate without weight restrictions. The proposed project would also result in ARB achieving full compliance with all AERO basic development standards outlined in the MASP 2008 for category B-II airports.
63	26-28	2.1	all	What were the criteria used to dismiss these alternatives. For example, there is no mention of environmental impacts etc. in the purpose and needs statement	As is consistent with the standard EA process, alternatives are most commonly dismissed because they failed to meet the Purpose and Need or other alternatives had less harmful impacts on the environment.
64	28	2.2	1	how were these alternatives deemed feasible?	As is consistent with the standard EA process, alternatives are typically only carried forward if they meet the Purpose and Need and avoid, minimize, and/or appropriately mitigate impacts on the environment.
65	29	2.2	3	Build Alt 3 - label the parallel taxiway that will be extended; will a portion of the taxiway or all be demolished and reconstructed? Or new construction to southwest?	Existing taxiway connector Alpha1 will be demolished on the northeast end of the runway and reconstructed 150' to the southwest. The parallel taxiway will be extended with new construction to the southwest. Revised draft EA.
66	33	Figure 3.4	map	For clarity please label the taxiway and runway and the lengths, on the same map	Revised draft EA
67	34	2.3.1	2	The airport is currently safe. This section implies the airport is unsafe.	Revised draft EA
68	35	2.3.3	1	Line of sight is not listed as an objective. Need to make sure the P/N statement is concise, clearly stated, focus, with justification and objectives. Please provide better clarity/flow when tracking the P/N section.	Line of Sight is shown as a "Need" in the revised Purpose & Need section and is consistently addressed in each of the alternative evaluations.
69	35	2.4	1	Clarify that the preferred ALT 3 is to remove 150' from the east end of the runway, (adding back 150' on the west end) plus the adding the 795' and shifting to the southwest	Revised draft EA
70	35	2.4	2	Add on to end of first sentence: "except for the ODALS."	Revised draft EA
71	35	2.4	2	Third sentence should read: "FAA approval for the relocation of the REILS will be required as part of the proposed action."	Revised draft EA
72	35	2.4	2	Fifth sentence should read: "If the decommissioning proposal is finalized, the approach lighting system will be removed and no relocation will occur."	Revised draft EA

73	36-68	3	all	This section needs to use the environmental impact categories specified in FAA Order 1050.1F, paragraph 4-1	The draft EA has been in process continually since 2009 and significant effort has gone into preparing it in accordance with FAA Orders 1050.1E and 5050.4B. Also, as previously mentioned in this comment matrix the FAA-Region provided a 2011 Environmental Assessment from Bolingbrook's Clow International Airport, as an example for MDOT-AERO to follow while re-organizing and revising this draft, it was also prepared in accordance with 1050.1E. Because this change would result in no change to content and the regulatory agencies, tribes and public have previously reviewed the draft EA as is, MDOT-AERO proposes to leave the draft EA unchanged.
74	36	3.1	1	What about the other noise impacts, such as from construction activities?	Noise associated with construction activities is covered in Construction Impacts category not the Noise category. (Section 3.15) Revised draft EA to clarify.
75	36	3.1	all	What about evaluation of the no action alternative for noise impacts?	Included in Section 3.1.2
76	36	3.1.1	1	The title of the methodologies need to be included in the paragraph	They are described in the same section.
77	37	3.1.1	last four bullets on page	Update these sources with more recent versions	These are the original sources used for the 2009 Noise Impact Analysis and should remain for consistency. MDOT-Aero reevaluated the 2009 study in 2015 and found it to be substantially valid. (Section 3.1.3)
78	39	3.1.3	all	Why not just redo the noise analysis with 2015 data?	The effort, timing and cost associated with redoing the noise analysis does not seem prudent, especially for little anticipated change in fleet mix and night operations, and a forecasted decrease in annual operations from the level analyzed in the original 2009 noise analysis. MDOT-Aero reevaluated the 2009 study in 2015 and found it to be substantially valid. (Section 3.1.3)
79	41	4.1	map	Noise Contour - Existing Conditions, please clarify the year.	Revised draft EA
80	42	4.2	map	No build - are the existing conditions still the same? Reasonable representation?	Revised draft EA. MDOT-Aero reevaluated the 2009 study in 2015 and found it to be substantially valid. (Section 3.1.3)
81	43	4.3	map	Preferred Alternative - Please delineate the projection out for the next five years	Revised draft EA. MDOT-Aero reevaluated the 2009 study in 2015 and found it to be substantially valid. (Section 3.1.3)
82	46	Figure 4.4		Is a newer source available than June 2011?	No
83	49	Figure 4.7		Is a newer source available than June 2011?	No
84	50	3.3.2	4	Update U.S. Census data with more recent source	Revised draft EA
85	51	3.3.2	1	Update U.S. Census data with more recent source	Revised draft EA
86	51	3.3.2	2	Update U.S. Census data with more recent source	Revised draft EA
87	52	3.3.4	4	Update U.S. Census data with more recent source	Revised draft EA
88	53	Table 3-2		Update U.S. Census data with more recent source	Revised draft EA

89	55	3.4	1	According to the Federal Register EPA 40 CFR Part 81 which was published in January of 2015, using the latest information from 2012 Annual Fine Particulate Matter NAAQS, Washtenaw (Livingston, Macomb etc.) County; PM 2.5 is Unclassified attainment. Clarify that the data submitted is correct.	The following is an excerpt directly from the <u>2014 Michigan Annual Air Quality Report</u> published in June 2015 - All Michigan counties from 2010-2014 met the 1997 annual PM2.5 standard of 15 µg/m3 and the 2006 24-hour PM2.5 standard of 35 µg/m3. The EPA designated Michigan in attainment of these standards in August 2013. In December 2012, the EPA revised the annual primary standard to 12 µg/m3 while the annual secondary standard remained at 15 µg/m3. The primary and secondary 24-hour standard remained as 35 µg/m3. The EPA has not made designations for the 2012 NAAQS revisions; however, PM2.5 concentrations are below 12 µg/m3 throughout Michigan. (DEQ 2016 Attainment Map Appendix C)
90	55	3.4	3	In regard to air quality, please provide the data from MDEQ (Do not see in Appendix D - there is a Land and Water Management and Wetlands letter)	Appendix D is specifically for "Early Agency Coordination" documentation, Appendix H is for "Additional Agency Correspondence" and includes the letter from MDEQ to EPA.
91	55	3.4	4 thru 7	The discussion does not quite fit affected environment. In terms of air quality what is the baseline conditions.	This language was not included in the first draft EA, however during discussions with the FAA-Region during review of this draft EA, this language was specifically recommended and later provided by the FAA-Region for inclusion into this draft.
92	56	3.4	3	Is there are more recent study than the L&B study from 1996?	No
93	56	3.4	3	Fourth sentence: which standards is this referring to?	NAAQS as referenced in the following sentence.
94	56	3.4	3	Last sentence: The reference to "proposed projects at general aviation airports" is very broad. How could the report know the extent of future projects at all GA airports in MI, especially if the report is 20 years old?	It is assumed that the report considered past GA airport projects and their typical scope and impacts when referencing proposed projects and made the general assertion that those projects are typically not of the scale to contribute to any NAAQS exceedances.
95	56	3.4	4	Please reword paragraph, as it is very confusing	Revised draft EA
96	56	3.4	4	It is not clear if this area is in a nonattainment area or maintenance area. Also not how this estimate was achieved. What calculations, models and sources were used. The citing of the court case should be removed and CAA regulations should be cited.	Based on the 2014 Annual Air Quality Report all of Michigan is in attainment. The following is an excerpt directly from the 2014 Michigan Annual Air Quality Report published in June 2015 - "Michigan ambient NO2 levels have always been well below the NAAQS. Since March 3, 1978, all areas in Michigan have been in attainment for the annual NO2 NAAQS...all monitoring sites have had an annual NO2 concentration at less than half of the 0.053 ppm NAAQS. As such, the DEQ requested a designation of unclassifiable/attainment for the entire state. Unclassifiable/attainment means that there are no air quality measurements that would justify classifying these attainment areas as either serious or moderate nonattainment areas." (DEQ 2016 Attainment Map Appendix C)
97	56	3.4	5	First sentence referrenes NOX - what about the other NAAQS?	Revised draft EA.
98	56	3.4	5	Last sentence: replace "should" with "would"	Revised draft EA
99	57	3.5	1	How was it determined that the water quality is degraded. Was MDEQ contacted? With out some reliable way of establishing this the baseline for environmental conditions is not met.	There was no formal determination that it is degraded, only as it states, that it is "likely degraded", based on the existing conditions, observations and characteristics provided. Given that this is primarily a storm water dominated system, as described, it doesn't seem unreasonable to conclude that it is likely degraded, as it is common thought that many storm water dominated systems are.

100	57	3.5.1	4	Please clarify the status of the NPDES permit, as mentioned in section 4.2.2? The reason for the permit should also be stated.	There are two distinctly different NPDES Storm Water Discharge Permits at ARB, one permanent for municipal storm water discharges and the other temporary for storm water discharges associated with construction activity. Revised draft EA to clarify.
101	57	3.5.2	2	Did not find a map that shows the 14 soil units and how their location to the proposed action site	Revised draft EA
102	58	3.5.2	1	Did not find a map that shows the wellhead area in relationship to the proposed action site.	A map of the City of Ann Arbor's Wellhead Protection Areas is now included. (Appendix H) The airport is located within the Steere Farm Wellhead Protection Area.
103	58	3.5.2	4	What about soils? The paragraph also mentions a new water line. Please provide more info on the water line.	The City replaced an existing raw (untreated) water line with a new 30" raw water line in 2010 along the east side of the airport. (Appendix H)
104	61	3.7	1	What were the results of the survey?	Revised draft EA
105	61	3.7	3	Did SHPO/THPO provide concurrence? If so, please state so.	Yes. Revised draft EA
106	61	3.8	2	Fourth sentence: be more location-specific, as the way the sentence is worded makes it sound the grassy meadows are within the RSA.	Revised draft EA
107	61	3.8	2	Last sentence: This discussion should be expanded. What does the agreement call for? Why does it exist?	This discussion is already included in Section 3.9 Threatened & Endangered Species and Section 4.2 Mitigation Measures.
108	62	3.8	4	Third sentence: What does the Audubon society think of this? Were they contacted as part of the EA public outreach process?	Revised draft EA
109	63	3.9	1	Update June 2009 survey, as this is already seven years old.	Revised draft EA
110	63	3.9	3	Last sentence: Did Audubon agree with this as well?	Revised draft EA
111	63	3.9	3	Update letters from 2009 for preferred alternative (Department of Natural Resources have instructions that may have changed)	As soon as this draft EA is finalized, the regulatory agencies will be contacted in writing and given the opportunity to review, comment and/or update their instructions.
112	63	3.10	1	Update June 2009 survey. As part of the wetlands analysis, was USACE contacted? If so, did they make a jurisdictional determination? Are there any wetlands on the Rwy 06 approach, as the USFWS map depicts a wetland area. What about the removal of the ODALS - will this action impact the wetlands?	Review of available data sources was completed in 2015 and appear largely consistent with what was found in 2009. MDOT-AERO will complete a real-time field review of project areas to confirm the presence of wetlands, or lack thereof, during project design to ensure proper permitting requirements are met, if necessary. In Michigan, the USACE only retains authority over certain wetlands, the USEPA has agreed that MDEQ has compliance responsibilities over all the rest. Both MDOT-AERO and MDEQ have concluded that the wetlands at ARB are not regulated by USACE.
113	64	3.11	3 and 4	Was the floodplain analysis and conclusion confirmed with the local Floodplain Administrator?	The floodplain impacts were discussed at a meeting of MDOT Statewide Environmental Permit Coordinators and Resource Specialists. This level of analysis is adequate for draft EA purposes and the regulatory agency will be involved, as necessary, prior to the project being finalized.
114	64	3.11	3	Agencies should be changed to Agency. A flood plain map that shows the flood plain and the floodway with the proposed action should be included to support the discussion.	Revised draft EA (Appendix H)

115	64	3.12	1	See US Department of Agriculture NRSC letter, dated September 3, 2009, signed by Steve Olds. Update needed since this Agency requested follow up. See Appendix D-7	The following is an excerpt directly from the September 2009 NRCS Letter - "Some prime and farmland of local importance would be impacted by the project. <u>If the project proceeds</u> , I would urge you to utilize NRCS standards and specifications for conservation practices..." The draft EA is still in process and cannot proceed until that process is completed. Revised draft EA to clarify. As soon as this draft EA is finalized, the regulatory agencies will be contacted in writing and given the opportunity to review, comment and/or update their instructions.
116	66	3.14	1	Last sentence: delete "within the light lane"	Revised draft EA
117	66	3.14	2	Second sentence: Wouldn't these impacts be noted here? Where else would they be noted?	Revised draft EA
118	67	3.17		Why is this a separate section, as it is not an impact category?	Hazardous Waste Sites are an impact category under 1050.1E. (Addressed by Comment No. 73.)
119	67	3.18	1	Change to ASTM International Standard 1527-13	Revised draft EA
120	68	3.18	2	Last sentence: Add that any contamination encountered would be characterized and handled in accordance with state regulations	This language is already included later in the "Consequences of the Preferred Alternative" paragraph of Section 3.18 as appropriate.
121	69	4		The title of this section sounds like Section 3. What is the purpose of this section? Recommend changing the title to mitigation.	Revised draft EA
122	69	4	-	Title should be changed to Mitigation. EC was included in the previous section	Revised draft EA
123	-	-	-	In regard to the comment concerning Wildlife Hazards. The existence of the various nature features and species of concern should be assessed and part of the EA. FAA does not agree with the position that changing the profile of the airport will not change the relationship to the wildlife and their use of attractants. Only a certified Airport Wildlife Biologist is qualified to make that determination. The response to previous comment did not cite the participation of a certified Airport Wildlife Biologist.	This comment was not included in the revised draft EA, however it was included in the Response to Comments (Appendix K) . MDOT-AERO did consult with a certified Airport Wildlife Biologist from USDA when preparing the Response to Comments.
124	69	4.2.1	1	Last sentence: Does Audubon agree with this?	Revised draft EA
125	70	4.2.2	1	What about BMPs for air and water quality?	Addressed in Consequences of Preferred Alternative Sections of their respective impact categories.
126	71	5	1	The last public meeting was held six years ago; a new meeting will be needed.	This language is already included later in Section 5.2.2 Public Hearing.
127	71	5.1	1	What were the agencies' comments, at least in summary? What was MDOT's response?	Agency comments are provided in Appendix D and MDOT Responses are provided in Appendix K.
128	71	5.1	3	What did the local tribes say? Provide a summary.	Agency comments are provided in Appendix D and MDOT Responses are provided in Appendix K.
129	72	5.2.2	4	Add that another public meeting will be held.	This language was already included in the last paragraph of Section 5.2.2. Revised draft EA to clarify.