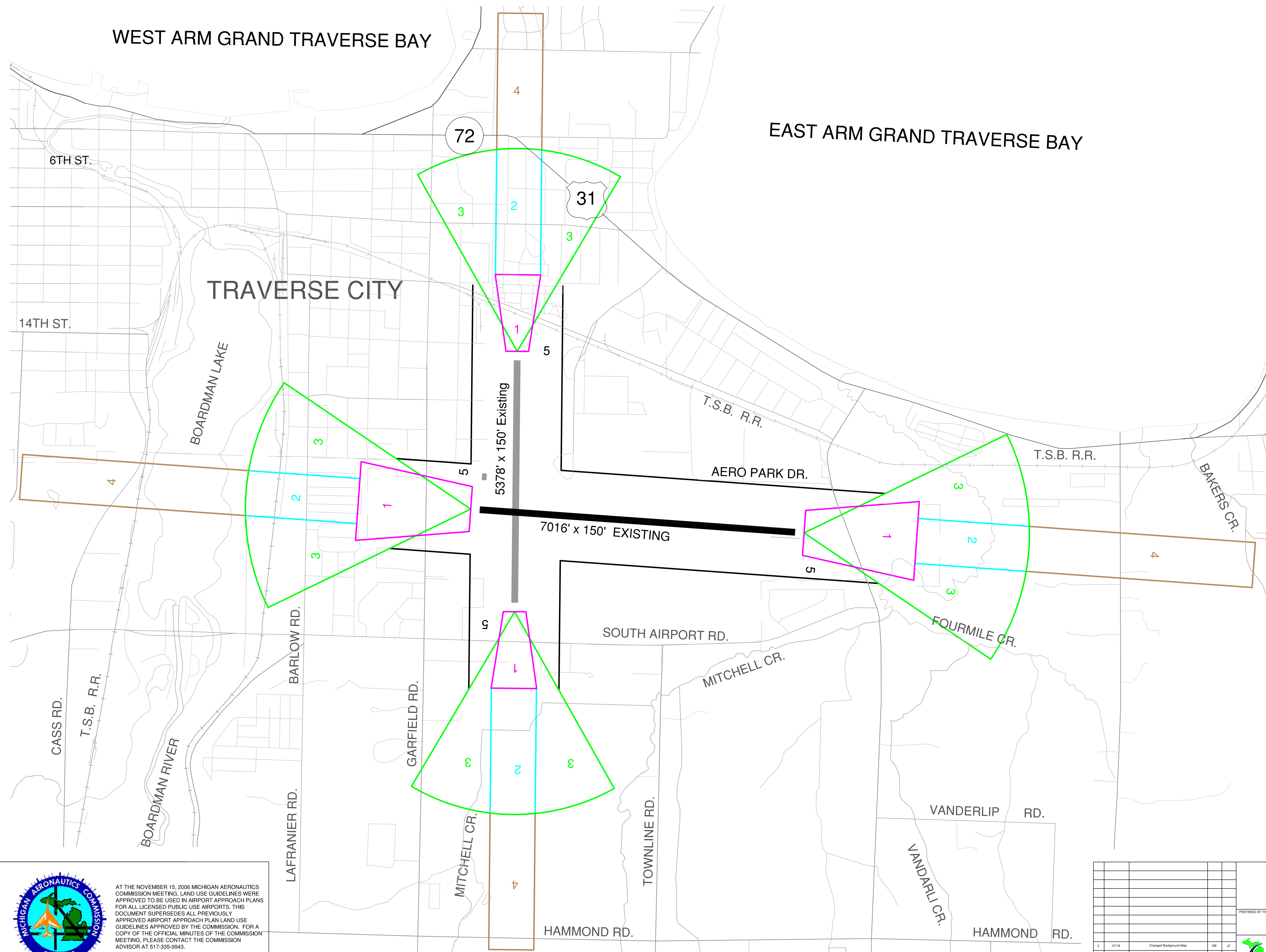
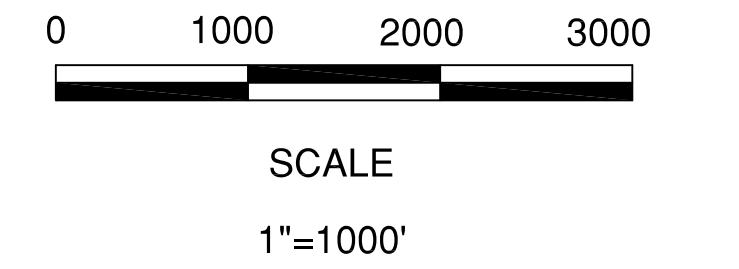
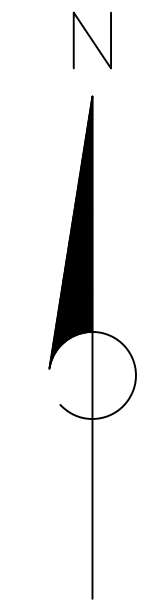


WEST ARM GRAND TRAVERSE BAY

EAST ARM GRAND TRAVERSE BAY

TRAVERSE CITY




AT THE NOVEMBER 15, 2006 MICHIGAN AERONAUTICS COMMISSION MEETING, LAND USE GUIDELINES WERE APPROVED TO BE USED IN AIRPORT APPROACH PLANS FOR ALL LICENSED PUBLIC USE AIRPORTS. THIS DOCUMENT SUPERSEDES ALL PREVIOUSLY APPROVED AIRPORT APPROACH PLAN LAND USE GUIDELINES APPROVED BY THE COMMISSION. FOR A COPY OF THE OFFICIAL MINUTES OF THE COMMISSION MEETING, PLEASE CONTACT THE COMMISSION ADVISOR AT 517-335-9943.

NO.	DATE	REVISIONS	BY	CHK
2	0718	Changed Background Map	NB	JF
1	0307	Changed Background Map, Added Current Skis, Noise	NB	LS

LAND USE ZONING  
FOR  
**Traverse City, Cherry Capital**

PREPARED BY THE  
MICHIGAN DEPARTMENT OF TRANSPORTATION  
AIRPORTS DIVISION  
LANSING, MICHIGAN



DRAWN	NAB	04/01
ORIGINALY APPROVED BY THE MICHIGAN AERONAUTICS COMMISSION ON THE DATE:		07/19/01

**ZONING**



ACCIDENT SAFETY ZONES, LAND USE GUIDELINES AND PLANNING STRATEGIES FOR NEW DEVELOPMENT

Accident Safety Zone	Land Use Characteristics	Land Use Guidelines	Land Use Planning Strategies *All aviation uses are acceptable
Zone 1 (See Special Note)	Population Density	Avoid land uses which concentrate people indoors or outdoors.	1. 0-3 people/acre. 2. Airport sponsor should purchase property if possible. 3. Zone land uses, which by their nature, will be relatively unoccupied by people (i.e. mini-storage, small parking lots).
	Residential vs. Non-Residential Land Use	Prohibit all residential land uses. All non-residential land uses permitted outright subject to the Population Density and Special Function Land Use guidelines.	1. Create a height hazard overlay ordinance around the airport. 2. Airport sponsor should purchase property if possible. 3. Airport sponsor should obtain aviation and obstruction easements. 4. During the site development process, shift all structures away from the runway centerlines if possible. 5. Landscaping requirements shall establish only low growing vegetation. 6. Prohibit high overhead outdoor lighting. 7. Require downward shading of lighting to reduce glare. 8. Evaluate all possible permitted conditional uses to assure compatible land use.
	Special Function Land Use	Prohibit all Special Function Land Uses.	1. Prohibit overhead utilities and all noise sensitive land uses. 2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities and churches. 3. Limit storage of large quantities of hazardous or flammable material. 4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.

Special Note: Since the dimensions of Zone 1 are similar to the dimensions of the Runway Protection Zone (RPZ), those airports receiving federal grant dollars from the FAA's Airport Improvement Program, should strongly consider purchasing the RPZ, or otherwise acquire rights to the property for the RPZ.

COMPATIBLE LAND USE MATRIX

Accident Safety Zone	Land Use Characteristics	Land Use Guidelines	Land Use Planning Strategies *All aviation uses are acceptable
Zone 2	Population Density	Avoid land uses which concentrate people indoors or outdoors.	1. 0-5 people/acre. 2. Zone land uses, which by their nature, will be relatively unoccupied by people (i.e. mini-storage, small parking lots).
	Residential vs. Non-Residential Land Use	Prohibit all residential land uses. All non-residential land uses permitted outright subject to the Population Density and Special Function Land Use guidelines.	1. Create a height hazard overlay ordinance around the airport. 2. Obtain aviation and obstruction easements. 3. During site development process, shift all structures away from the runway centerlines if possible. 4. Prohibit mobile home parks. 5. Landscaping requirements shall establish only low growing vegetation. 6. Prohibit high overhead outdoor lighting. 7. Require downward shading of lighting to reduce glare. 8. Evaluate all possible permitted conditional uses to assure compatible land use.
	Special Function Land Use	Prohibit all Special Function Land Uses.	1. Prohibit overhead utilities and all noise sensitive land uses. 2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities and churches. 3. Limit storage of large quantities of hazardous or flammable material. 4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.

COMPATIBLE LAND USE MATRIX

Accident Safety Zone	Land Use Characteristics	Land Use Guidelines	Land Use Planning Strategies *All aviation uses are acceptable
Zone 3	Population Density	Avoid land uses which concentrate people indoors or outdoors.	1. < 25 people/acre. 2. Zone land uses, which by their nature, will be relatively unoccupied by people (i.e. mini-storage, small parking lots).
	Residential vs. Non-Residential Land Use	Limit residential development to Low Density housing standards. All non-residential land uses permitted outright subject to the Special Function Land Use guidelines.	1. Create a height hazard overlay ordinance around the airport. 2. Obtain aviation and obstruction easements. 3. During site development process, shift all structures away from the runway centerlines if possible. 4. Prohibit mobile home parks. 5. Landscaping requirements shall establish only low growing vegetation. 6. Prohibit high overhead outdoor lighting. 7. Require downward shading of lighting to reduce glare. 8. Evaluate all possible permitted conditional uses to assure compatible land use.
	Special Function Land Use	Prohibit all Special Function Land Uses.	1. Prohibit overhead utilities and all noise sensitive land uses. 2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities and churches. 3. Limit storage of large quantities of hazardous or flammable material. 4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.

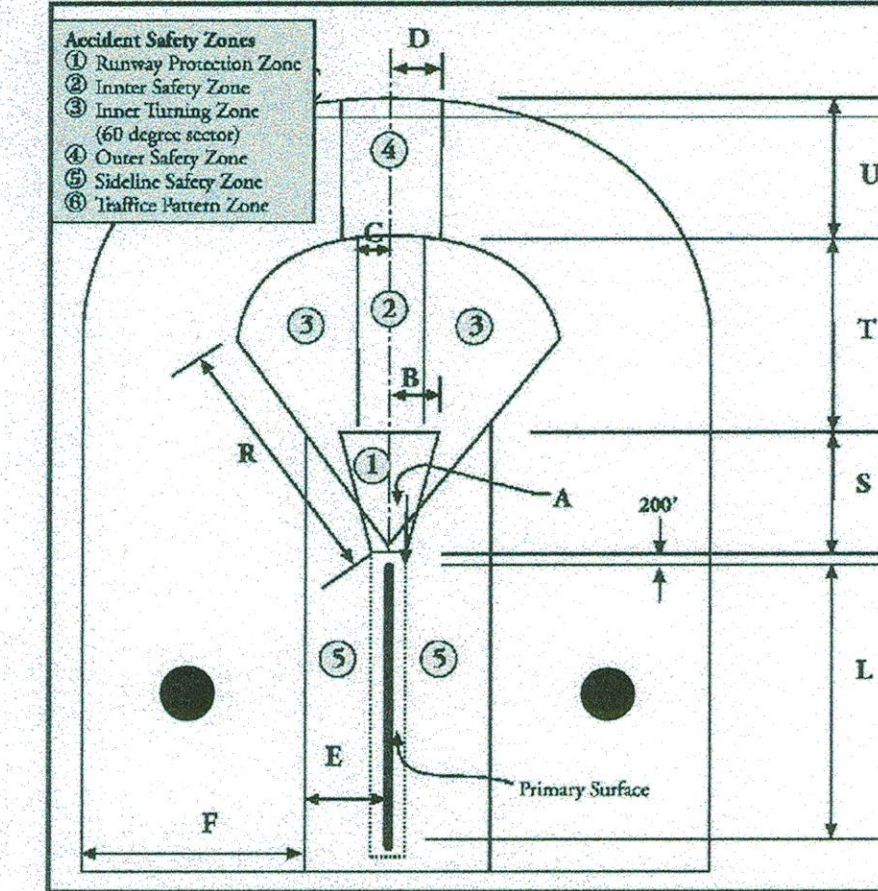
COMPATIBLE LAND USE MATRIX

Accident Safety Zone	Land Use Characteristics	Land Use Guidelines	Land Use Planning Strategies *All aviation uses are acceptable
Zone 4	Population Density	Limit population concentrations.	1. < 40 people/acre in buildings, < 75 persons/acre outside buildings.
	Residential vs. Non-Residential Land Use	Limit residential development to Low Density housing standards. All non-residential land uses permitted outright subject to the Special Function Land Use guidelines.	1. Create a height hazard overlay ordinance around the airport. 2. Obtain aviation easements. 3. Clustered development to maintain density as long as open space remains unutilized. Place clustered development away from extended runway centerline. 4. Prohibit mobile home parks. 5. Require downward shading of lighting to reduce glare. 6. Evaluate all possible permitted conditional uses to assure compatible land use.
	Special Function Land Use	Prohibit all Special Function Land Uses.	1. Evaluate noise sensitive land uses in light of aircraft noise contour lines (if available) when establishing new zoning. 2. Prohibit high overhead utilities and all noise sensitive land uses. 3. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities and churches. 4. Limit storage of large quantities of hazardous or flammable material. 5. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.

COMPATIBLE LAND USE MATRIX

Accident Safety Zone	Land Use Characteristics	Land Use Guidelines	Land Use Planning Strategies *All aviation uses are acceptable
Zone 5	Population Density	Avoid land uses which concentrate people indoors or outdoors.	1. 0-5 people/acre. 2. Zone land uses, which by their nature, will be relatively unoccupied by people (i.e. mini-storage, small parking lots).
	Residential vs. Non-Residential Land Use	Prohibit all residential land uses. All non-residential land uses permitted outright subject to the Population Density and Special Function Land Use guidelines.	1. Airport sponsor should purchase property if possible. 2. Create a height hazard overlay ordinance around the airport. 3. Obtain aviation and obstruction easements. 4. During site development process, shift all structures away from the runway centerlines if possible. 5. Landscaping requirements shall establish only low growing vegetation. 6. Prohibit high overhead outdoor lighting. 7. Require downward shading of lighting to reduce glare. 8. Evaluate all possible permitted conditional uses to assure compatible land use.
	Special Function Land Use	Prohibit all Special Function Land Uses.	1. Prohibit overhead utilities and all noise sensitive land uses. 2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities and churches. 3. Limit storage of large quantities of hazardous or flammable material. 4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.

APPENDIX A  
AIRCRAFT ACCIDENT SAFETY ZONE DIAGRAM



SAFETY ZONE DIMENSION (IN FEET)

Dimension	Runway Length Category (L)		
	Runway less than 4,000	Runway 4,000 to 5,999	Runway 6,000 or more
A	125	250	300
B	225	505	875
C	225	500	500
D	225	500	500
E	500	1,000	1,000
T	4,000	5,000	5,000
S (60°Sector)	2,500	4,000	5,000
S	1,000	1,700	2,500
T	1,500	2,000	2,500
U	2,500	3,000	5,000

Note:  
Data Source: NTSB Accident Investigations 1984-1991. Illustration Source: Hedges and Smart, Institute of Transportation Studies, University of California Berkeley, 1993.



AT THE SEPTEMBER 16, 2009 MICHIGAN AERONAUTICS COMMISSION MEETING, THESE LAND USE GUIDELINES WERE AMENDED AND APPROVED TO BE USED IN AIRPORT APPROACH PLANS FOR ALL LICENSED PUBLIC USE AIRPORTS. THIS DOCUMENT AMENDS ALL PREVIOUSLY APPROVED AIRPORT APPROACH PLAN LAND USE GUIDELINES APPROVED BY THE COMMISSION. FOR A COPY OF THE OFFICIAL MINUTES OF THE COMMISSION MEETING, PLEASE CONTACT THE COMMISSION ADVISOR AT 517-335-9568.

ANY AIRPORT SPONSOR OR DULY AUTHORIZED REPRESENTATIVE OF A ZONED LOCAL GOVERNMENTAL UNIT MAY REQUEST THAT THE MICHIGAN AERONAUTICS COMMISSION AMEND AN AIRPORT APPROACH PLAN. ALL SUCH REQUESTS MUST CLEARLY STATE THE CHANGE FROM THE CURRENT PLAN, THE REASON FOR THE REQUESTED CHANGE AND ANY STANDARDS USED TO JUSTIFY THE MODIFICATION. PLEASE CONTACT THE AIRPORT'S DIVISION ZONING SPECIALIST TO REQUEST ANY SUCH AMENDMENTS.



LAND USE GUIDELINES FOR STATE OF MICHIGAN AIRPORT APPROACH PLANS			
MICHIGAN DEPARTMENT OF TRANSPORTATION AIRPORTS DIVISION LANSING, MICHIGAN			
APPROVED			
E 11/28/09 CHANGED SPECIAL NOTE LPS RW ADDED MODIFICATION NOTE		D 10/26/09 ZONE 3 MODIFICATIONS, TITLE CHANGE LPS RW C 8/26/09 SAFETY ZONE DIAGRAM NAB	
B 4/16/09 Delete Zone 6 NAB		A 3/31/09 New guidelines / strategies NAB	
REVISIONS DATE BY CHK	DRAWN NAB 8/03 CHECKED PLOTTED		
AIRPORTS DIVISION ADMINISTRATOR		DATE 11/23/09	