

**Michigan Department Of Transportation**

**BUREAU OF AERONAUTICS**

**Project Evaluation Process**



**July 1997**



# Project Evaluation Process Manual

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This manual is a cooperative effort of the following team members:

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The Bureau of Aeronautics (AERO), through Act 327, is responsible for directing state and federal funding to maintain, enhance, and expand Michigan airports, each serving a link to the National Transportation System.

AERO accepts responsibility and maintains an overview in evaluating and developing an efficient system, recognizing aviation requirements in concert with state and community interests. AERO is responsible for establishing *statewide* priorities in allocating airport development funds.

Limited resources require an evaluation system maximizing available federal and state dollars, consistent with national, state, and community needs. The Bureau exercises cost-effective evaluation, oversight, and administration of project funding. Projects will realistically match facilities with potential use, avoiding overdevelopment and imposing excessive maintenance and financial hardships on a community.

Air carrier airports benefit from wide ranging public and financial support. Community airports serving general aviation, drawing on limited resources, require special consideration and funding in support of the "*system concept*."

Wide varying special interests impact the evaluation process. The Bureau's system identifies airport projects best serving the broad public interest reflecting a statewide perspective. A rating system requires flexibility in situations not clearly adaptable to objective numerical rating. The Michigan Project Evaluation System allows for subjective analysis based on unique knowledge of specific situations not readily quantifiable.

This project rating system is intended to be used for determining state and federal funding in the federal/state/local program for non-primary airports. It will also be used to determine state funding in the state/local program.

***STATEMENT***

***OF***

***INTENT***



In carrying out these responsibilities, the Bureau of Aeronautics has identified the following objectives:



- ✈ Assist local communities in providing an airport environment that meets current state and/or federal safety standards.
- ✈ Preserve the existing airport infrastructure consistent with state and federal system plans.
- ✈ Encourage economic growth by assisting airport sponsors with new development and expansion projects where a clear and demonstrated need exists.
- ✈ Encourage airport sponsors to operate in compliance with state licensing standards, and state and federal grant assurances.
- ✈ Encourage sponsors to adopt local airport zoning ordinances, which are consistent with the state plan for approach protection.
- ✈ Provide assistance, where practical, with aeronautical projects that enhance multi-modal transportation systems.





Appendix A is a flow chart showing how the Airport Development Program is developed. Following are brief explanations of the different steps in the process:

***CALL FOR PROJECTS -***

Each year the Bureau will solicit requests from all airport sponsors for airport capital improvement projects. These requests will be evaluated based on this priority rating system.

***REQUEST FROM SPONSOR -***

Requests will be reviewed to determine eligibility before advancing them in the evaluation process.

***FUNDING CATEGORY -***

The Bureau may set aside a certain amount of funding for certain types of projects or airports. Projects would compete within this category. The categories may vary from year to year in type and number depending on the priorities of the Bureau.

***JUSTIFICATION -***

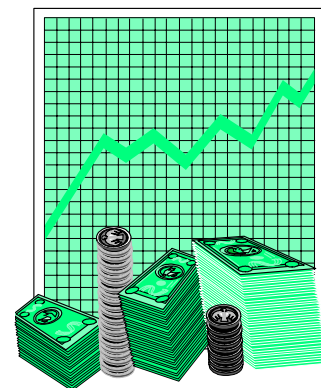
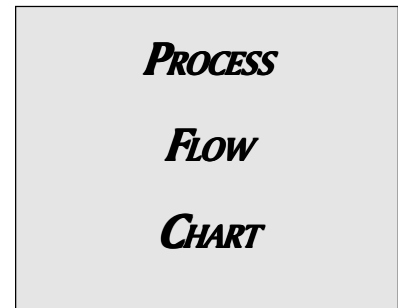
Once a project is determined eligible for funding, it will be rated by established guidelines and engineering judgement to assure it contains the necessary criteria before being further evaluated.

***PROJECT ANALYSIS -***

In this major part of the rating system, a project is rated strictly on its objective merits based on the priorities of the Bureau.

***ADDITIONAL CONSIDERATION -***

Items not easily quantified may be evaluated to determine if an unusual situation warrants giving a project special consideration. It could be to raise or lower the priority of the project.





Once a project has been determined eligible, it must then pass the test of being justified. If a project does not pass this test, it will not be considered in the project analysis phase and the sponsor will be notified that funding will not be available for the project. The following are guidelines that will be used when determining project justification. As with any decision we make, sound engineering judgment and common sense play a role in the decision making process.

**ELIGIBILITY/  
JUSTIFICATION**



**PAVEMENT REHABILITATION -**

The Pavement Condition Index (PCI) rating for the pavement should fall below the minimum service level. This can be modified if visual inspection by an AERO engineer indicates differently. With proper maintenance, normal life expectancy for asphalt is 20-years and 30-years for concrete.

**Pavement**

***RUNWAY EXTENSION OR WIDENING THAT DOES NOT CHANGE THE FEDERAL CLASSIFICATION OF THE AIRPORT (Typically, extensions up to 3500 X 75 ft.) -***

These projects are typically justified.

***CONSTRUCTING A PARALLEL TAXIWAY -***

This project would be justified for airports with at least 15,000 annual operations. It may be justified at an airport with lower operations if the administration area is at one end of the field, and/or if the mix of aircraft includes training flights, or if air carrier operations are taking place at the airport. Consideration would also be given at an airport with IFR operations and has peak operations on a regular basis.

***CONSTRUCT NEW ENTRANCE ROAD AND PARKING LOT -***

This is justified if it is being done to accommodate a new or revised administration area. Paving an existing gravel road or parking lot is justified if warranted by annual operations. If no access currently exists, constructing a new access road is justified.

***EXPAND PARKING LOT -***

This is justified if itinerant operations have significantly increased in recent years.



**CRACK SEALING PAVEMENTS -**

This is justified on structurally sound pavements.

**Pavement**

**PAVEMENT MARKING -**

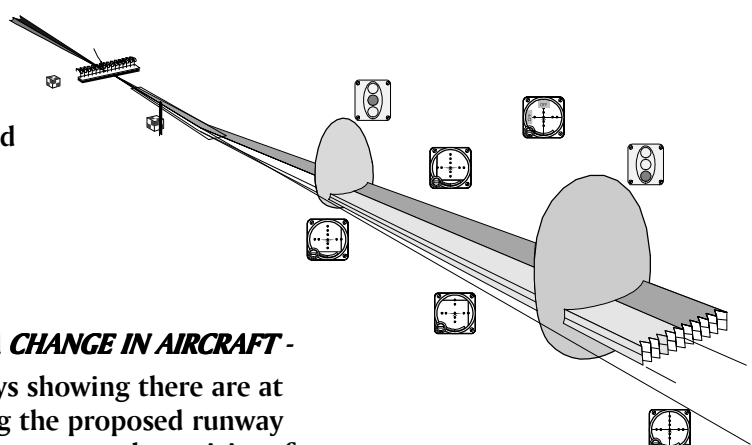
This is justified for pavements listed as fair or worse following an airport inspector's review.

**BLAST PADS -**

These are justified at airports with jet operations where soil conditions make it difficult to establish turf off-runway ends.

**CONSTRUCT TAXISTREETS -**

These are justified if there is a demonstrated need for new or upgraded hangar area development.



**RUNWAY EXTENSION TO ACCOMMODATE A CHANGE IN AIRCRAFT -**

Request should be supported by user surveys showing there are at least 500 annual aircraft operations needing the proposed runway length. The 500 annual operations should represent the activity of more than one business.

**EXPAND APRON -**

Request should be supported by an apron utilization plan (when requested) showing the need to retain existing aircraft using the airport and the forecasted growth for five years.

**CONSTRUCT/PAVE CROSSWIND RUNWAY -**

This project is justified when studied and depicted on an approved Airport Layout Plan (ALP) as being needed to meet the required wind coverage.

**PAVED SHOULDERS-**

These would be justified at commercial service and reliever airports that regularly receive heavy snowfall.



**REPLACE/REHABILITATE ELECTRICAL ITEMS (RUNWAY/TAXIWAY LIGHTS, PAPI, REIL, LIGHTED WINDCONE, BEACON, SIGNS, VAULT EQUIPMENT, ETC.)-**

**Electrical**

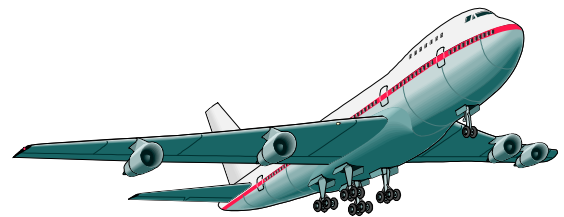
An item should be at least 20-years of age or the request should be supported by the previous 12-month repair cost incurred from outages. Outages should result from old/worn equipment or lightening strikes, NOT the result of frequent plow/mower damage, etc.

**INSTALL NEW PAPI OR REIL OR LIGHTED WINDCONE AND SEGMENTED CIRCLE -**

These projects are generally justified for any lighted runway/airport. REILs are typically placed only on a runway with an instrument approach.

**INSTALL NEW BEACON -**

This project would typically be justified at any airport with nighttime capabilities.



**INSTALL NEW RUNWAY/TAXIWAY EDGE LIGHTING/REFLECTORS -**

Lighting for newly constructed runways or taxiways is justified if the new pavements are justified. Installation of lighting on an existing runway or taxiway that does not currently have lighting is justified if there is expected use of the facility for nighttime operations.

**VEHICLE REPLACEMENT -**

**Equipment**

This would be for replacement of snow removal or aircraft rescue and fire fighting equipment only. Equipment should be at least 10-years of age. Annual repair costs should exceed one-tenth of the cost of a new piece of equipment.

**SNOW REMOVAL EQUIPMENT -**

See "Administrative Guidelines for Acquiring Snow Removal Equipment."

**AIRCRAFT RESCUE AND FIRE FIGHTING EQUIPMENT -**

This is justified when required to meet FAR Part 139 requirements. Requests for replacements should be supported by letter from a Part 139 inspector.





***BUILDING RENOVATIONS -***

The condition of a building is left to the judgment of local, state, and federal officials.

***AIRSPACE/LAND ACQUISITION FOR EXISTING AIRPORT -***

Existing property and easements must be cleared by the sponsor. Changes in standards may justify purchasing and clearing land to preserve the existing use of the airport.

***REPLACING EXISTING FENCING -***

Fencing should be at least 20-years old, collapsed or have holes in it, or be badly corroded.

***REPLACING EXISTING DRAINAGE -***

This can be done to protect the strength, integrity, and use of existing pavements, or allow use or maintenance of active turf areas.

***CONSTRUCT NEW OR EXPAND EXISTING ADMINISTRATION AREA -***

If capacity fails to meet current or projected five-year needs, or if no administration area presently exists, construction of a new administration area, including building, apron, and connecting taxiway, is justified.

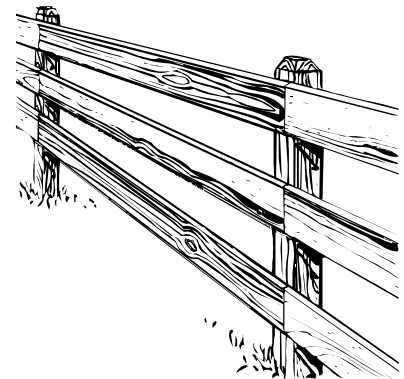
***GRADING RUNWAY SAFETY AREA -***

This is justified when required to meet the Federal Aviation Administration's (FAA) runway safety area standards.

***INSTALL NEW FENCING -***

Request should be supported by documented trespassing by the general public, which caused an unsafe situation. Requests for animal control fencing should be supported by documented incidents of animal strikes or near misses by aircraft.

***Miscellaneous***





Sponsors will be notified that funding will not be available for projects that do not meet the justification test. Projects that are justified will be prioritized based on the following categories. All projects falling into Category 1 will be given equal consideration, and so on. If funding is not available to fund all Category 1 projects, items in the Additional Analysis section will come into play.

Certain types of projects such as crack sealing, pavement marking, and snow removal equipment are not included in the following list. It is anticipated that these types of projects will be funded annually through a separate allocation (Funding Category). The size of the allocation will determine how many requests will be funded. Which sites will receive funding will be determined on the criteria established for the Funding Category. If a Funding Category is established for a certain type of airport, projects within that category would compete based on this rating system.

***PROJECT  
TYPE  
ANALYSIS***



- Runway Rehabilitation (Includes total reconstruction, crack/joint repair, sealcoat)
- Runway Lighting Replacement
- REIL, PAPI, Beacon, Lighted Windcone Replacement
- Land to Protect Existing Approaches
- Clearing to Protect Existing Approaches
- Existing Runway Safety Area Grading
- Drainage Rehabilitation
- Aircraft Rescue and Firefighting Equipment

***Category 1 - Primary  
Runway Preservation***

- Runway Rehabilitation
- Runway Lighting Replacement
- REIL & PAPI Replacement
- Land to Protect Existing Approaches
- Clearing to Protect Existing Approaches
- Existing Runway Safety Area Grading
- Drainage Rehabilitation

***Category 2- Secondary  
Runway Preservation***



Parallel or Connecting Taxiway Construction Rehabilitation

Taxistreet Rehabilitation  
Taxiway Lighting Replacement  
Apron Expansion Rehabilitation  
(Including replacing apron lighting)  
Drainage Rehabilitation

***Category 3 -  
Taxiway & Apron***

Runway Extensions  
Runway Extension Lighting  
PAPI & REIL for New Extension

***Category 4 - Primary  
Runway Extension***

Install New Runway Lighting  
Install New PAPI & REIL  
Install New Beacon  
Install New Lighted Windcone

***Category 5 -  
Miscellaneous Lighting***

Taxistreet Construction  
Administration Building Construction  
Construct New Entrance Road

***Category 6- Airside  
Support & Access***

Fencing - (When required by the FAA or AERO inspection report)

***Category 7- Fencing***



Runway Extension  
Runway Construction/Paving Existing Turf  
Apron Expansion  
Construct New Apron

***Category 8 - Secondary  
Runway & Apron***

Blast Pads Construction  
Paved Shoulders  
Animal Control/Perimeter Fencing  
Replace Existing Fencing

***Category 9 -  
Miscellaneous Items***

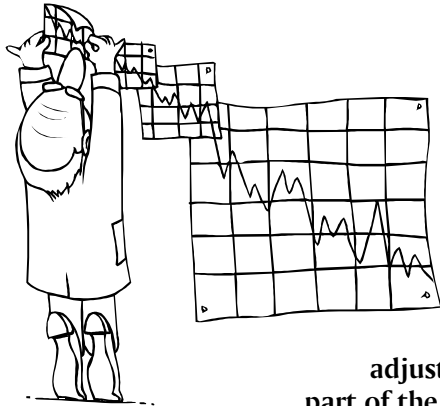
Entrance Road Rehabilitation  
Auto Parking Lot Rehabilitation

***Category 10 - Landside  
Preservation***

Auto Parking Expansion  
Administration Building Expansion/Structural Improvements -  
(Including heating and air conditioning)  
Utility Installation (i.e., sewer and water)  
(Electricity to serve a new facility would have same  
priority as new facility)

***Category 11 - Landside  
Improvements***

**Land Acquisition for any new development will be prioritized the same as the development for which it is needed.**



It is recognized that with some airports there are unique situations making it difficult to quantify the value of a particular project. Based on the knowledge of persons familiar with the airport/project, it is reasonable to adjust the priority of projects. This part of the evaluation system allows for judgements to be made in unusual cases.

**ADDITIONAL  
CONSIDERATIONS**

Justification for adjusting the priority of a project will need to be submitted by the sponsor along with their funding request. Letters from the airport facility's users expressing their needs could be very beneficial in the decision making process. Following is a list of items that may have an influence on changing the priority of a project. If the sponsors feel additional factors should be considered, that information should also be included in the request letter.

- ✈ Number of Annual Operations
- ✈ Number of Based Aircraft
- ✈ Emergency Services Available through the Airport
- ✈ Flight School Operations at the Airport
- ✈ Economic Impact of the Project/Airport
  - ✈ Based or Regular Itinerant FAR Part 135 Operations
  - ✈ Corporate Flight Operations - Based or Itinerant
  - ✈ FBO/Maintenance at the Airport
- ✈ Sponsors Performance on Past Projects
- ✈ Existence of Airport Zoning
- ✈ Maintenance Commitment on the Part of the Sponsor
- ✈ Year-round Operations
- ✈ Sponsor's Willingness to Rectify Deficiencies Noted During Inspections
- ✈ Inspection Letters Indicating a Need
- ✈ Type of Aircraft Regularly Using the Airport
- ✈ MDOT Island Policy

Considering this criteria, each project request should be listed in order of priority. Projects should be listed together based on the funding category that is most appropriate for the project/airport. Having already determined the amount of funding available for each funding category, it is now a matter of determining how many of the projects will receive funding.



Once the program has been established, it is important the sponsors be notified so they can begin the preliminary work necessary to get the project completed on schedule.

Certain types of projects do *not* typically qualify for funding assistance. For example, projects that generate revenue for the airport are *not* typically eligible for state or federal funding unless a special program has been approved by the Michigan Aeronautics Commission to fund these projects. Shown below is a list of projects typically not eligible for state funding:

***INELIGIBLE  
PROJECTS***

- ✈ Construction/Renovation of Hangars
- ✈ Installation/Renovation of Fuel Facilities
- ✈ Environmental Clean-Up Projects
- ✈ Radios (Unless purchased as part of eligible equipment)
- ✈ Projects at Basic Utility Airports (Unless the project will bring the airport up to General Utility standards)
- ✈ Mowing Equipment
- ✈ Airport Vehicles not related to Snow Removal or Aircraft Rescue and Fire Fighting
- ✈ Remodeling Terminal/Administration Buildings (Funding for this item at airports with scheduled service is available through other Bureau programs)
- ✈ AWOS, NDB, VOR - These items are not eligible under the federal/state/local or state/local programs (Funding for these items is available through other Bureau programs.)

