

# MICHIGAN AIRPORT DEVELOPMENT PROGRAM

## AIP CAPITAL IMPROVEMENT PLAN 2012-2022

### FEDERAL/STATE/LOCAL



## Ann Arbor Municipal Airport

### Ann Arbor, MI

Date of Latest ALP - **2008**  
ACIP Airport Code - **A**  
Airport Identifier - ARB



MDOT-AERO  
2700 E AIRPORT SERVICE DRIVE  
LANSING, MICHIGAN 48906

Prepared by: URS Corporation  
Sponsor: City of Ann Arbor  
Submitted by: Matt Kulhanek  
Date: October 5, 2011

**TEN-YEAR AIRPORT CAPITAL IMPROVEMENT PROGRAM (CIP) FY-2012 to FY-2022**

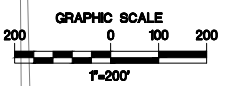
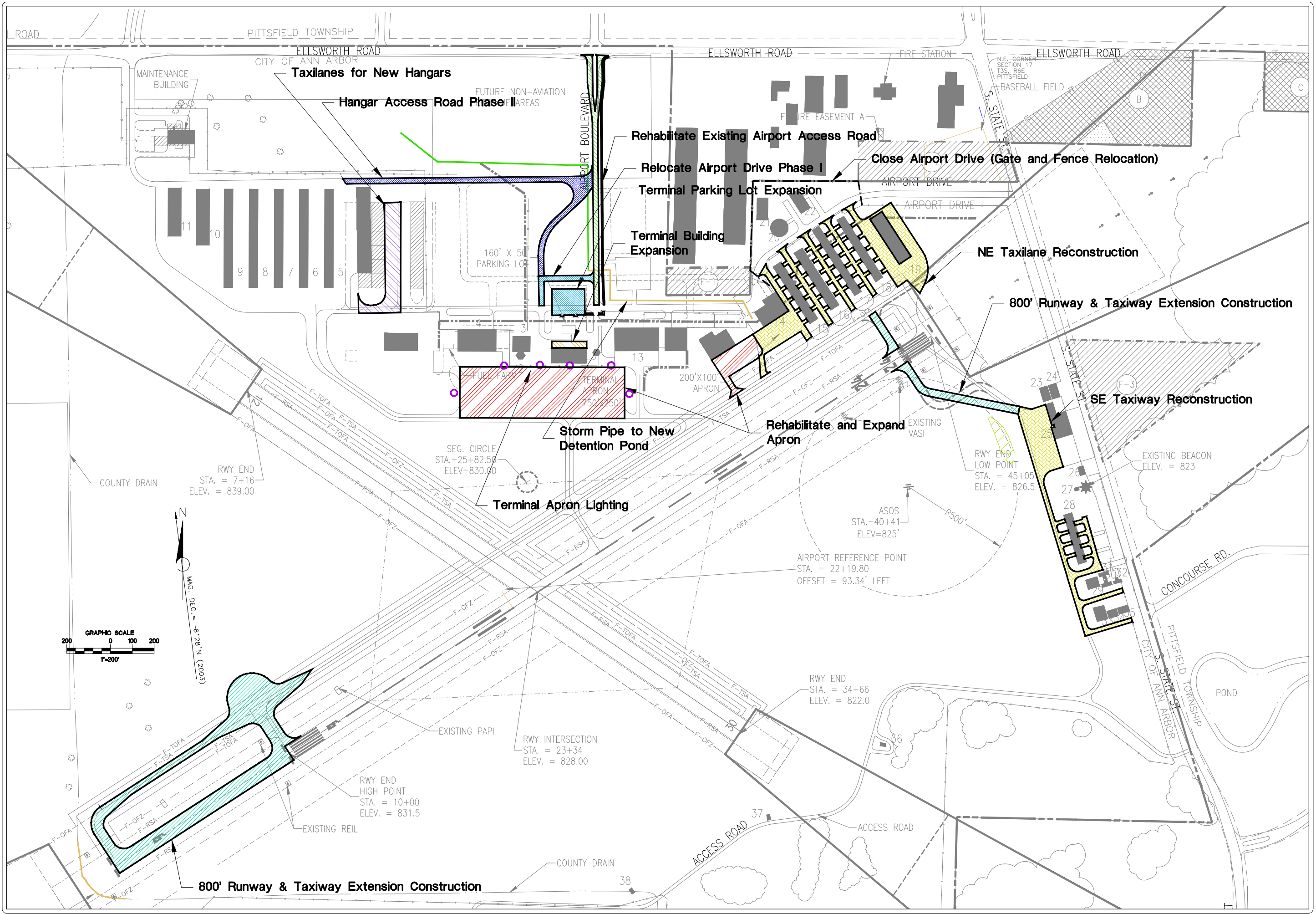
**ARB Ann Arbor Municipal Airport**

| Year   | Project Description   | Cost*        | Remarks/Item Justification   |
|--|---|--------------|--|
| 2012   | <i>Available Federal Entitlements (NPE) \$498,000 (\$348,000 Carryover from 2011)</i> |              |  |
|  | EA Phase II (Runway Extension)  | \$ 20,000    | EA will have all comments consolidated and answered. Final EA will be issued with FONSI  |
|  | Final Design and Approach Survey (Phase II) Runway Extension                          | \$ 165,000   | Final design will be done for the runway and taxiway extension project. An approach survey will also be completed to provide approach procedures for the new runway ends. An approach survey was started in 2009, but the data does not meet current standards.  |
|  | 800' Runway & Taxiway Extension Construction  | \$ 2,000,000 | Existing runway will be lengthened to 4300'. Runway will also be shifted 150' to the west to provide clearance over State Road on the East side of the airport. Parallel taxiway will be extended to match the new runway. Connector taxiway on the southeast side will be relocated to the new runway end. All taxiway and runway edge lights will be replaced with LED fixtures.   |
| <b>Fed \$2,075,750 - State \$54,625 - Local \$54,625 - Total \$2,185,000</b> |   |              | <i>Funds in addition to NPE are needed for this year.</i>  |
| 2013   | <i>Available Federal Entitlements (NPE) \$472,250</i>                                 |              |  |
|  | Terminal Parking Lot Expansion & Relocate Airport Drive Phase I                       | \$ 210,000   | The current parking lot is too small for daily usage. It is frequently at full capacity. To accommodate current demand additional space is needed. Airport Drive is located north of the parking lot and will need to be relocated to expand the parking lot. If the EA prevents the runway construction from occurring in 2012 this project will be designed and built in 2012.   |
|  | <b>Fed \$199,500 - State \$5,250 - Local \$5,250 - Total \$210,000</b>                |              |  |
|  |   |              | <i>Carryover \$272,750</i>   |
| 2014   | <i>Available Federal Entitlements (NPE) \$422,750</i>                                 |              |  |
|  | Close Airport Drive (Gate and Fence Relocation)                                       | \$ 81,000    | The current layout of the road and gates in the northeast corner of the airport makes it difficult to control access to the airport. A portion of this road will be closed and the fence and gates relocated to improve the control of access to the airport.  |
|  | <b>Fed \$76,950 - State \$2,025 - Local \$2,025 - Total \$81,000</b>                  |              |  |
|  |   |              | <i>Carryover \$345,800</i>   |
| 2015   | <i>Available Federal Entitlements (NPE) \$495,800</i>                                 |              |  |
|  | Rehabilitate Existing Airport Access Road   | \$ 327,000   | Existing access road is over 20 years old and needs rehabilitation. Bulvard will be added at north end for better visibility and signage. Signage will be a local only item.   |
|  | Airport Signage (Local Only)  | \$ 5,000     | Signage will be added at north end of access road to increase visibility   |
| <b>Fed \$315,400 - State \$8,300 - Local \$8,300 - Total \$332,000</b>       |   |              | <i>Carryover \$185,150</i>   |
| 2016   | <i>Available Federal Entitlements (NPE) \$335,150</i>                                 |              |  |
|  | Carryover for Future Project  | \$ -         | 0  |
|  | <b>Fed \$0 - State \$0 - Local \$0 - Total \$0</b>                                    |              |  |
|  |   |              | <i>Carryover \$335,150</i>   |
| 2017   | <i>Available Federal Entitlements (NPE) \$485,150</i>                                 |              |  |
|  | Terminal Building Expansion and Renovation  | \$ 304,000   | Existing terminal building is too small to meet current needs. Additional insulation will be added to existing building to conserve energy. Renovations will be necessary to meet current ADA and other codes.   |
|  | <b>Fed \$288,800 - State \$7,600 - Local \$7,600 - Total \$304,000</b>                |              |  |
|  |   |              | <i>Carryover \$196,350</i>   |
| 2018   | <i>Available Federal Entitlements (NPE) \$346,350</i>                                 |              |  |
|  | SRE Equipment (Tractor with Broom)  | \$ 179,000   | Existing equipment from city is aging and will need to be replaced. No FAA funding has been used for existing Snow Removal Equipment.  |
|  | <b>Fed \$170,050 - State \$4,475 - Local \$4,475 - Total \$179,000</b>                |              |  |
|  |   |              | <i>Carryover \$176,300</i>   |
| 2019   | <i>Available Federal Entitlements (NPE) \$326,300</i>                                 |              |  |
|  | Reconstruct SE and NE Taxiways  | \$ 1,138,000 | Pavements are aging and will need replacement. PCI was 80 and 82 for these pavements in 2005   |
|  | Taxilanes for New Box Hangars   | \$ 193,000   | New taxilanes will be needed for additional hangars. Hangars will be build with local funding. This will be on the back side of the existing Box Hangars built in 2009.  |
| <b>Fed \$1,264,450 - State \$33,275 - Local \$33,275 - Total \$1,331,000</b> |   |              | <i>Funds in addition to NPE are needed for this year.</i>  |
| 2020   | <i>Available Federal Entitlements (NPE) \$150,000</i>                                 |              |  |
|  | Rehabilitate and Expand Apron with Lighting   | \$ 1,557,000 | Apron pavement is aging and will need reconstruction. 6" concrete overlay will provide cost effective construction. There has been a steady growth in transient corporate flights into the airport along with the continual expansion of helicopter activity requiring increased aircraft parking. The airport is also experiencing a growth in tie-down activity in conjunction with an increased activity on football weekends and other similar community and University event days. The terminal aircraft parking apron is frequently full on many weekdays with large corporate aircraft and tie-down users. Apron lights are old and require replacement. LED replacement lights will be installed. PCI in the Apron was 90 in 2005. |
|  | SRE Equipment (Truck)   | \$ 321,000   | Existing equipment from city is aging and will need to be replaced. No FAA funding has been used for existing Snow Removal Equipment.  |
|  | <b>Fed \$1,784,100 - State \$46,950 - Local \$46,950 - Total \$1,878,000</b>          |              |  |
|  |   |              | <i>Funds in addition to NPE are needed for this year.</i>  |
| 2021   | <i>Available Federal Entitlements (NPE) \$150,000</i>                                 |              |  |
|  | Hangar Site Work  | \$ 128,000   | Currently, a detention pond is blocking development of additional corporate hangar space. Relocation of the pond will develop new corporate hangar space and apron. Pipe will need to tie into drainage system that outlets in pond to the northwest. Pavements will be crossed by pipe and will be restored.  |
|  | Rehabilitate Rwy and Txy Conc. Joint Seals and Remark                                 | \$ 80,000    | Preventative maintenance on existing pavements. Repair failed concrete joints. Markings will be faded. Remark all existing markings.   |
| <b>Fed \$197,600 - State \$5,200 - Local \$5,200 - Total \$208,000</b>       |   |              | <i>Funds in addition to NPE are needed for this year.</i>  |
| 2022   | <i>Available Federal Entitlements (NPE) \$178,400</i>                                 |              |  |
|  | Hangar Access Road Phase II   | \$ 353,000   | Road will provide better access for users of hangars. Will increase safety and security by providing them with separate access road.   |
| <b>Fed \$335,350 - State \$8,825 - Local \$8,825 - Total \$353,000</b>       |   |              | <i>Funds in addition to NPE are needed for this year.</i>  |

\* Includes Federal Cost of 95%, State Cost of 2.5%, and Local Cost of 2.5%. When costs exceed available Federal Entitlements (NPE), additional funding will be needed from Federal Apportionment or Federal Discretionary funds.



M:\Projects\12940723\CADD\PDSS\5 YEAR PLAN.dwg (PLOT) Jul 21, 2011 2:00pm Plotted by Joe Van Duinen  
 XREFS: ..\UTIL\GR34.dwg ..\CIVIL\PROP.dwg ..\CIVIL\BASE.dwg M:\Projects\12940723\CADD\CIVIL\FUT3.dwg



|          |                      |
|----------|----------------------|
| DATE     | ISSUED FOR           |
| 12/17/07 | MOOT DRAFT REVIEW    |
| 03/27/08 | EAM INSURANCE REVIEW |
| 06/27/08 | ALP PUBLICATION      |

|           |               |
|-----------|---------------|
| IN CHARGE | W. MALINOWSKI |
| QC        | CC            |
| SQC DR    | DR            |
| PM        | RUC           |
| D/E       | JW            |

CRANDALL ENGINEERING, INC.  
 9550 SPARKS DR. S.E.  
 616 574-8500

**ANN ARBOR MUNICIPAL AIRPORT**  
 AIRPORT LAYOUT PLAN  
 5 YEAR PLAN

ANN ARBOR, MICHIGAN

|              |      |
|--------------|------|
| STATE NUMBER | 81-1 |
| DRAWING      | 1    |
| 12940723     |      |

**MICHIGAN STATE BLOCK GRANT PROGRAM**  
**TEN-YEAR AIRPORT CAPITAL IMPROVEMENT PROGRAM (CIP) FY-2012\* to FY-2022**

\*ACIP includes current development year (2012 already programmed - minor changes acceptable)

| Airport Name: <b>Ann Arbor Municipal Airport</b> |   |                           |             |                         |                        |                       |   |           |           | Date prepared: 10-05-11  |  |
|--|---|---------------------------|-------------|-------------------------|------------------------|-----------------------|---|-----------|-----------|--|--|
| Associated City: <b>Ann Arbor, MI</b>            |   |                           |             |                         |                        |                       |   |           |           | Prepared By: <b>URS Corporation</b>                              |  |
| Sponsor: <b>City of Ann Arbor</b>                |   |                           |             |                         |                        |                       |   |           |           | Sponsor email address & phone: 734-994-2841 MJKulhanek@A2gov.org |  |
| Airport Identifier: <b>ARB</b>                   |   |                           |             |                         |                        |                       |   |           |           | <b>FINAL ACIP due to MDOT AERO: no later than 12/1/11</b>        |  |
| Development Year                                 | Project Description   | Shown on ALP? (Yes or No) | ACIP Code** | NPIAS Priority Rating** | Federal Entitlements   | Federal Apportionment | Federal Discretionary                                   | State     | Local     | Total  | Remarks/Item Justification - Provide as much detail as possible.   |
| <b>2012</b>                                      |   |                           |             |                         | Available Entitlements | \$ 498,000            | (\$150,000 NPE plus \$348,000 NPE carryover from 2011.) |           |           |  |  |
|  | EA Phase II (Runway Extension)                                  | Yes                       | CA-RW-EX    | 56                      | \$ 19,000              | \$ -                  |   | \$ 500    | \$ 500    | \$ 20,000  | EA will have all comments consolidated and answered. Final EA will be issued with FONSI.   |
|  | Final Design and Approach Survey (Phase II) Runway Extension    | Yes                       | CA-RW-EX    | 56                      | \$ 156,750             | \$ -                  |   | \$ 4,125  | \$ 4,125  | \$ 165,000   | Final design will be done for the runway and taxiway extension project. An approach survey will also be completed to provide approach procedures for the new runway ends. An approach survey was started in 2009, but the data does not meet current standards.  |
|  | 800' Runway & Taxiway Extension Construction                    | Yes                       | CA-RW-EX    | 56                      | \$ 322,250             | \$ 1,577,750          |   | \$ 50,000 | \$ 50,000 | \$ 2,000,000   | Existing runway will be lengthened to 4300'. Runway will also be shifted 150' to the west to provide clearance over State Road on the East side of the airport. Parallel taxiway will be extended to match the new runway. Connector taxiway on the southeast side will be relocated to the new runway end. All taxiway and runway edge lights will be replaced with LED fixtures.   |
| <b>2013</b>                                      |   |                           |             |                         | Available Entitlements | \$ 150,000            |   |           |           |  |  |
|  | Terminal Parking Lot Expansion & Relocate Airport Drive Phase I | No                        | OT-OT-PA    | 19                      | \$ 150,000             | \$ 49,500             |   | \$ 5,250  | \$ 5,250  | \$ 210,000   | The current parking lot is too small for daily usage. It is frequently at full capacity. To accommodate current demand additional space is needed. Airport Drive is located north of the parking lot and will need to be relocated to expand the parking lot. If the EA prevents the runway construction from occurring in 2012 this project will be designed and built in 2012.   |
| <b>2014</b>                                      |   |                           |             |                         | Available Entitlements | \$ 150,000            |   |           |           |  |  |
|  | Close Airport Drive (Gate and Fence Relocation)                 | Yes                       | ST-EQ-SE    | 43                      | \$ 76,950              | \$ -                  |   | \$ 2,025  | \$ 2,025  | \$ 81,000  | The current layout of the road and gates in the northeast corner of the airport makes it difficult to control access to the airport. A portion of this road will be closed and the fence and gates relocated to improve the control of access to the airport.  |
| <b>2015</b>                                      |   |                           |             |                         | Carryover              | \$ 73,050             |   |           |           |  |  |
| <b>2015</b>                                      |   |                           |             |                         | Available Entitlements | \$ 223,050            |   |           |           |  |  |
|  | Rehabilitate Existing Airport Access Road                       | Yes                       | OT-GT-AC    | 23                      | \$ 223,050             | \$ 87,600             |   | \$ 8,175  | \$ 8,175  | \$ 327,000   | Existing access road is over 20 years old and needs rehabilitation. Bulvard will be added at north end for better visibility and signage. Signage will be a local only item.   |
|  | Airport Signage (Local Only)                                    | Yes                       | OT-GT-AC    | 23                      | \$ -                   | \$ -                  |   | \$ -      | \$ 5,000  | \$ 5,000   | Signage will be added at north end of access road to increase visibility.  |
| <b>2016</b>                                      |   |                           |             |                         | Available Entitlements | \$ 150,000            |   |           |           |  |  |
|  | Carryover for Future Project                                    |                           |             |                         | \$ -                   | \$ -                  |   | \$ -      | \$ -      | \$ -   | 0  |
| <b>2017</b>                                      |   |                           |             |                         | Available Entitlements | \$ 300,000            |   |           |           |  |  |
|  | Terminal Building Expansion and Renovation                      | Yes                       | CA-TE-IM    | 44                      | \$ 288,800             | \$ -                  |   | \$ 7,600  | \$ 7,600  | \$ 304,000   | Existing terminal building is too small to meet current needs. Additional insulation will be added to existing building to conserve energy. Renovations will be necessary to meet current ADA and other codes.   |
| <b>2018</b>                                      |   |                           |             |                         | Carryover              | \$ 11,200             |   |           |           |  |  |
| <b>2018</b>                                      |   |                           |             |                         | Available Entitlements | \$ 161,200            |   |           |           |  |  |
|  | SRE Equipment (Tractor with Broom)                              | NA                        | ST-EQ-SN    | 48                      | \$ 161,200             | \$ 8,850              |   | \$ 4,475  | \$ 4,475  | \$ 179,000   | Existing equipment from city is aging and will need to be replaced. No FAA funding has been used for existing Snow Removal Equipment.  |
| <b>2019</b>                                      |   |                           |             |                         | Available Entitlements | \$ 150,000            |   |           |           |  |  |
|  | Reconstruct SE and NE Taxiways                                  | Yes                       | RE-TW-IM    | 68                      | \$ 150,000             | \$ 931,100            |   | \$ 28,450 | \$ 28,450 | \$ 1,138,000   | Pavements are aging and will need replacement. PCI was 80 and 82 for these pavements in 2005.  |
|  | Taxilanes for New Box Hangars                                   | Yes                       | ST-PB-MS    | 40                      | \$ -                   | \$ 183,350            |   | \$ 4,825  | \$ 4,825  | \$ 193,000   | New taxilanes will be needed for additional hangars. Hangars will be build with local funding. They will be on the back side of the existing Box Hangars built in 2009.  |
| <b>2020</b>                                      |   |                           |             |                         | Available Entitlements | \$ 150,000            |   |           |           |  |  |
|  | Rehabilitate and Expand Apron with Lighting                     | Yes                       | RE-AP-IM    | 62                      | \$ 150,000             | \$ 1,329,150          |   | \$ 38,925 | \$ 38,925 | \$ 1,557,000   | Apron pavement is aging and will need reconstruction. 6" concrete overlay will provide cost effective construction. There has been a steady growth in transient corporate flights into the airport along with the continual expansion of helicopter activity requiring increased aircraft parking. The airport is also experiencing a growth in tie-down activity in conjunction with an increased activity on football weekends and other similar community and University event days. The terminal aircraft parking apron is frequently full on many weekdays with large corporate aircraft and tie-down users. Apron lights are old and require replacement. LED replacement lights will be installed. PCI in the Apron was 90 in 2005. |
|  | SRE Equipment (Truck)   | NA                        | ST-EQ-SN    | 48                      | \$ -                   | \$ 304,950            |   | \$ 8,025  | \$ 8,025  | \$ 321,000   | Existing equipment from city is aging and will need to be replaced. No FAA funding has been used for existing Snow Removal Equipment.  |
| <b>2021</b>                                      |   |                           |             |                         | Available Entitlements | \$ 150,000            |   |           |           |  |  |
|  | Hangar Site Work  | Yes                       | ST-PB-MS    | 40                      | \$ 121,600             | \$ -                  |   | \$ 3,200  | \$ 3,200  | \$ 128,000   | Currently, a detention pond is blocking development of additional corporate hangar space. Relocation of the pond will develop new corporate hangar space and apron. Pipe will need to tie into drainage system that outlets in pond to the northwest. Pavements will be crossed by pipe and will be restored.  |
|  | Rehabilitate Rwy and Txy Conc. Joint Seals and Remark           | Yes                       | RE-RW-IM    | 72                      | \$ 28,400              | \$ 47,600             |   | \$ 2,000  | \$ 2,000  | \$ 80,000  | Preventative maintenance on existing pavements. Repair failed concrete joints. Markings will be faded. Remark all existing markings.   |
| <b>2022</b>                                      |   |                           |             |                         | Available Entitlements | \$ 150,000            |   |           |           |  |  |
|  | Hangar Access Road Phase II                                     | Yes                       | OT-GT-AC    | 23                      | \$ 150,000             | \$ 185,350            |   | \$ 8,825  | \$ 8,825  | \$ 353,000   | Road will provide better access for users of hangars. Will increase safety and security by providing them with separate access road.   |





**Ann Arbor Municipal Airport**

YEAR (PROJECT NUMBER): 2012(3)

**DESCRIPTION: 800' Runway & Taxiway Extension Construction**

| Work Item Description                     | Quantity | Unit     | Price         | Amount     |
|---|----------|----------|---------------|------------|
| Mobilization and Safety Security          | 1        | Lump Sum | \$ 150,000.00 | \$ 150,000 |
| Pavement Removal                          | 3,500    | SYD      | \$ 17.00      | \$ 59,500  |
| New Rwy Lights with LED Lamp              | 30       | Each     | \$ 950.00     | \$ 28,500  |
| New Txy Lights with LED Lamp              | 20       | Each     | \$ 950.00     | \$ 19,000  |
| #8 Cable in Conduit                       | 3,800    | LFT      | \$ 3.00       | \$ 11,400  |
| #6 Solid Counterpoise Wire                | 3,800    | LFT      | \$ 2.50       | \$ 9,500   |
| Replace Existing Txy Lights with LED Lamp | 218      | Each     | \$ 650.00     | \$ 141,700 |
| Replace Existing Rwy Lights with LED Lamp | 40       | Each     | \$ 650.00     | \$ 26,000  |
| Relocate Existing VAS                     | 1        | Each     | \$ 10,000.00  | \$ 10,000  |
| Relocate REIL                             | 2        | Set      | \$ 5,000.00   | \$ 10,000  |
| Relocate PAPI                             | 1        | set      | \$ 10,000.00  | \$ 10,000  |
| Unclassified Excavator                    | 40,000   | CYD      | \$ 4.00       | \$ 160,000 |
| Drainage                                  | 1        | Lump Sum | \$ 40,000.00  | \$ 40,000  |
| Underdrains                               | 3,800    | LFT      | \$ 8.00       | \$ 30,400  |
| 12 Inch Subbase                           | 5,400    | CYD      | \$ 14.75      | \$ 79,650  |
| 6 Inch Aggregate Base Course              | 2,700    | CYD      | \$ 30.00      | \$ 81,000  |
| 6 Inch Concrete Pavement                  | 15,000   | SYD      | \$ 45.00      | \$ 675,000 |
| Runway Grooving                           | 12,000   | SYD      | \$ 2.00       | \$ 24,000  |
| Turfing & Mulching                        | 5        | Acres    | \$ 2,500.00   | \$ 12,500  |
| Marking                                   | 1        | Lump Sum | \$ 50,000.00  | \$ 50,000  |
| Approach Markers                          | 8        | Each     | \$ 400.00     | \$ 3,200   |
| Centerline monument                       | 2        | Each     | \$ 1,200.00   | \$ 2,400   |
| Relocate ODALS Light                      | 1        | Lump Sum | \$ 30,000.00  | \$ 30,000  |
| FAA Reimbursable for ODALS Relocator      | 1        | Lump Sum | \$ 115,000.00 | \$ 115,000 |
|   |          |          |               | \$ -       |
|   |          |          |               | \$ -       |
|   |          |          |               | \$ -       |
|   |          |          |               | \$ -       |

|                          |    |                        |
|--------------------------|----|------------------------|
| TOTAL CONSTRUCTION       |    | \$ 1,778,750.00        |
| ENGINEERING FINAL DESIGN |    |                        |
| CONSTRUCTION ADMIN.      |    | \$ 140,000.00          |
| CONTINGENCY              | 5% | \$ 81,000.00           |
| <b>TOTAL*</b>            |    | <b>\$ 2,000,000.00</b> |

|                       |      |              |
|-----------------------|------|--------------|
| TOTAL FEDERAL DOLLARS | 95%  | \$ 1,900,000 |
| TOTAL STATE DOLLARS   | 2.5% | \$ 50,000    |
| TOTAL LOCAL DOLLARS   | 2.5% | \$ 50,000    |

\* Amount rounded up to the nearest thousand dollars.

**DESCRIPTION AND JUSTIFICATION:**

Existing runway will be lengthened to 4300'. Runway will also be shifted 150' to the west to provide clearance over State Road on the East side of the airport. Parallel taxiway will be extended to match the new runway. Connector taxiway on the southeast side will be relocated to the new runway end. All taxiway and runway edge lights will be replaced with LED fixtures.

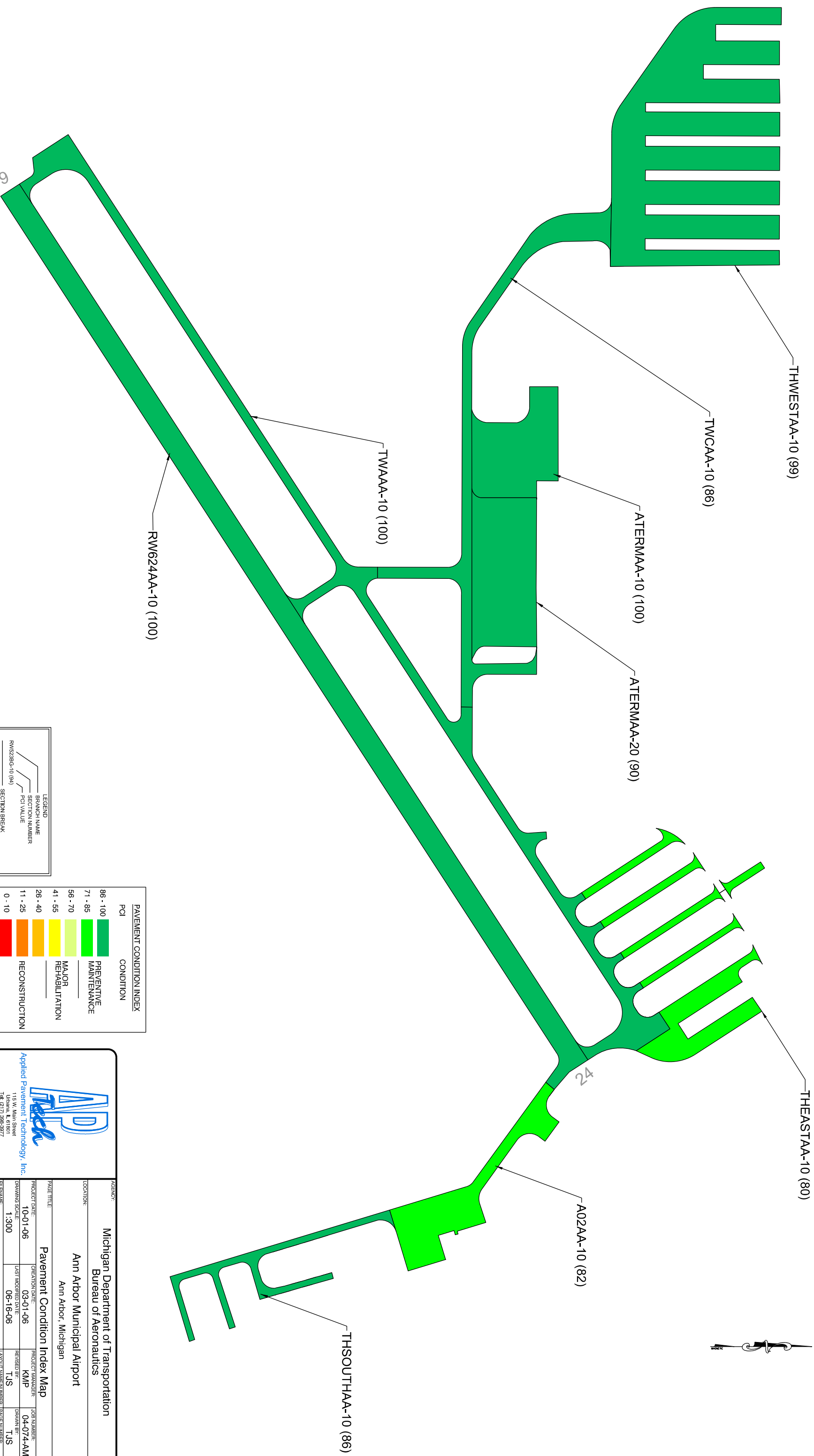
| ALP STATUS | ENV.                | PURPOSE:        |                     |    |
|------------|---------------------|-----------------|---------------------|----|
| Yes        | EA in previous year | PURPOSE:        | Capacity            | 7  |
|            |                     | COMPONENT:      | Runway              | 10 |
|            |                     | TYPE:           | Extension/Expansion | 6  |
|            |                     | PRIORITY NUMBER |                     | 56 |











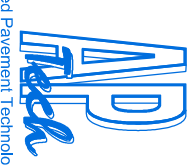
LEGEND

|   |                |
|---|----------------|
| — | BRANCH NAME    |
| — | SECTION NUMBER |
| — | PCI VALUE      |
| — | SECTION BREAK  |

RWS2B8G-10 (94)

PAVEMENT CONDITION INDEX

| PCI      | CONDITION              |
|----------|------------------------|
| 86 - 100 | PREVENTIVE MAINTENANCE |
| 71 - 85  | MAJOR REHABILITATION   |
| 56 - 70  | RECONSTRUCTION         |
| 41 - 55  |                        |
| 26 - 40  |                        |
| 11 - 25  |                        |
| 0 - 10   |                        |



Applied Pavement Technology, Inc.  
115 W. Main Street  
Ann Arbor, MI 48107  
Tel: (313) 998-8977  
Fax: (313) 998-4827

|   |                                     |                             |                               |
|---|-------------------------------------|-----------------------------|-------------------------------|
| <b>AGENCY:</b> Michigan Department of Transportation<br>Bureau of Aeronautics |                                     |                             |                               |
| <b>LOCATION:</b> Ann Arbor Municipal Airport<br>Ann Arbor, Michigan           |                                     |                             |                               |
| <b>PAGE/TITLE:</b> Pavement Condition Index Map                               |                                     |                             |                               |
| <b>PROJECT DATE:</b> 10-01-06   | <b>OPERATION DATE:</b> 03-01-06     | <b>PROJECT MANAGER:</b> KMP | <b>LOG NUMBER:</b> 04-074-AM1 |
| <b>DRAWING SCALE:</b> 1:300   | <b>USJ1 MODIFIED DATE:</b> 06-16-06 | <b>DESIGNED BY:</b> TJS     | <b>DRAWN BY:</b> TJS          |
| <b>FILE NAME:</b> AnnArborMunicipal.dwg                                       | <b>DATE/TIME:</b> PCI               | <b>PROJECT NUMBER:</b> PCI  | <b>PAGE NUMBER:</b> Figure 8  |