

**MICHIGAN AIRPORT DEVELOPMENT  
AID PROGRAM**

TEN YEAR DEVELOPMENT PLAN  
2012-2022

FOR

**HURON COUNTY MEMORIAL AIRPORT  
BAD AXE, MICHIGAN**

July 2011  
Updated November 2011

Submitted by:

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Neal Hentsch  
Huron Co. Road Comm. Secretary/Manager

Prepared by:  
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G-3101 West Bristol Road  
Flint, Michigan 48507



**PRELIMINARY ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST**

**HURON COUNTY MEMORIAL AIRPORT  
BAD AXE, MICHIGAN**

**CONSTRUCT TAXIWAY "A3"**

ITEM NO.	WORK ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	Mobilization and General Conditions	LSUM	1	\$10,000.00	\$10,000.00
2	Safety and Security	LSUM	1	\$4,000.00	\$4,000.00
3	Bare Counterpoise Wire, #6 Stranded, Installed	LFT	900	\$2.00	\$1,800.00
4	Underground Cable, 1/C, #8, 5kV, L824, Type C, Installed	LFT	1,350	\$1.00	\$1,350.00
5	Misc. Concrete Encased Junction Box L-867D	EACH	2	\$600.00	\$1,200.00
6	Underground Electrical Duct, 2 Bank 4", Concrete Encased	LFT	45	\$20.00	\$900.00
7	Medium Intensity Edge Light, L861, (MIRL/MITL), Stake Mount	EACH	20	\$400.00	\$8,000.00
8	Lens & Lamp for MITL, Type L861T, 360 Blue Color	EACH	20	\$20.00	\$400.00
9	Guidance Sign, Single-Faced, Type L858Y, Size 1, Style 2, Mode 2, 2 Panels	EACH	4	\$4,000.00	\$16,000.00
10	Guidance Sign, Double-Faced, Type L858R, Size 1, Style 2, Mode 2, 3 Panels	EACH	1	\$5,000.00	\$5,000.00
11	Unclassified Excavation	CYD	800	\$3.50	\$2,800.00
12	Borrow Excavation, Furnished By Contractor From Off-Site Location	CYD	400	\$7.00	\$2,800.00
13	Subbase Course, Type 2 (Sand), Compacted Measure	CYD	400	\$10.00	\$4,000.00
14	Misc. Aggregate Base Course, MDOT 21AA, Compacted in Place	CYD	300	\$28.00	\$8,400.00
15	Bituminous Aggregate Surface Course, 20AAAX Composition	TON	400	\$65.00	\$26,000.00
16	Airport Pavement Marking, Solid, Black	SFT	2,000	\$0.40	\$800.00
17	Airport Pavement Marking, Solid, Yellow, With Reflective Beads	SFT	1,500	\$0.40	\$600.00
18	Concrete Culvert & Sewer Pipe 12", Reinforced, C76, Class III	LFT	50	\$30.00	\$1,500.00
19	Precast Concrete End Section for 12" Pipe	EACH	2	\$1,500.00	\$3,000.00
20	Misc. 6" Underdrain w/ Geotextile Fabric Pipe Wrap with Porous	LFT	800	\$8.00	\$6,400.00
21	Underdrain Backfill and Cleanouts As Specified				
22	Misc. Silt Fence	LFT	1,000	\$2.00	\$2,000.00
23	Misc. Erosion / Sedimentation Control Measures	LSUM	1	\$500.00	\$500.00
24	Misc. Hydroseed, Mixture B With Fertilizer and Wood Fiber Mulch	ACRE	0.5	\$1,500.00	\$750.00
25	Topsoiling from On-Site Cut or Stockpile	CYD	300	\$5.00	\$1,500.00
26	Misc. Mulch Blanket, As Specified	SYD	1,000	\$1.50	\$1,500.00
27	<i>Runway 22 End Improvements:</i>				
28	Medium Intensity Edge Light, L861, (MIRL/MITL), Stake Mount	EACH	8	\$400.00	\$3,200.00
29	Lens & Lamp for Existing MITL, Type L861T, 180 Green	EACH	8	\$20.00	\$160.00
30	Lens & Lamp for Existing MITL, Type L861T, 360 Red	EACH	8	\$20.00	\$160.00
31	Airport Pavement Marking, Striated, White, With Reflective Beads	SFT	9,300	\$0.40	\$3,720.00
32	Airport Pavement Marking, Solid, Black	SFT	2,400	\$0.40	\$960.00
33	Removal of Airport Pavement Marking	SFT	8,000	\$0.50	\$4,000.00
<b>Subtotal</b>					\$123,400
<b>10% Contingency</b>					\$12,340
<b>Total Preliminary Construction Cost - Taxiway A3 Construction</b>					<b>\$136,000</b>
Estimated Design Services					\$13,600
Estimated CA/RPR Services					\$12,200
<b>Taxiway A3 - Total Estimated Project Cost</b>					<b>\$161,800</b>

**JUSTIFICATION:** Taxiway "A3" will eliminate the need to back taxi on Runway 17-35, thereby increasing safety and efficiency







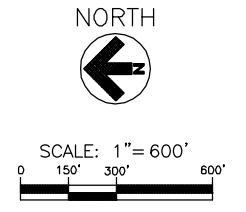
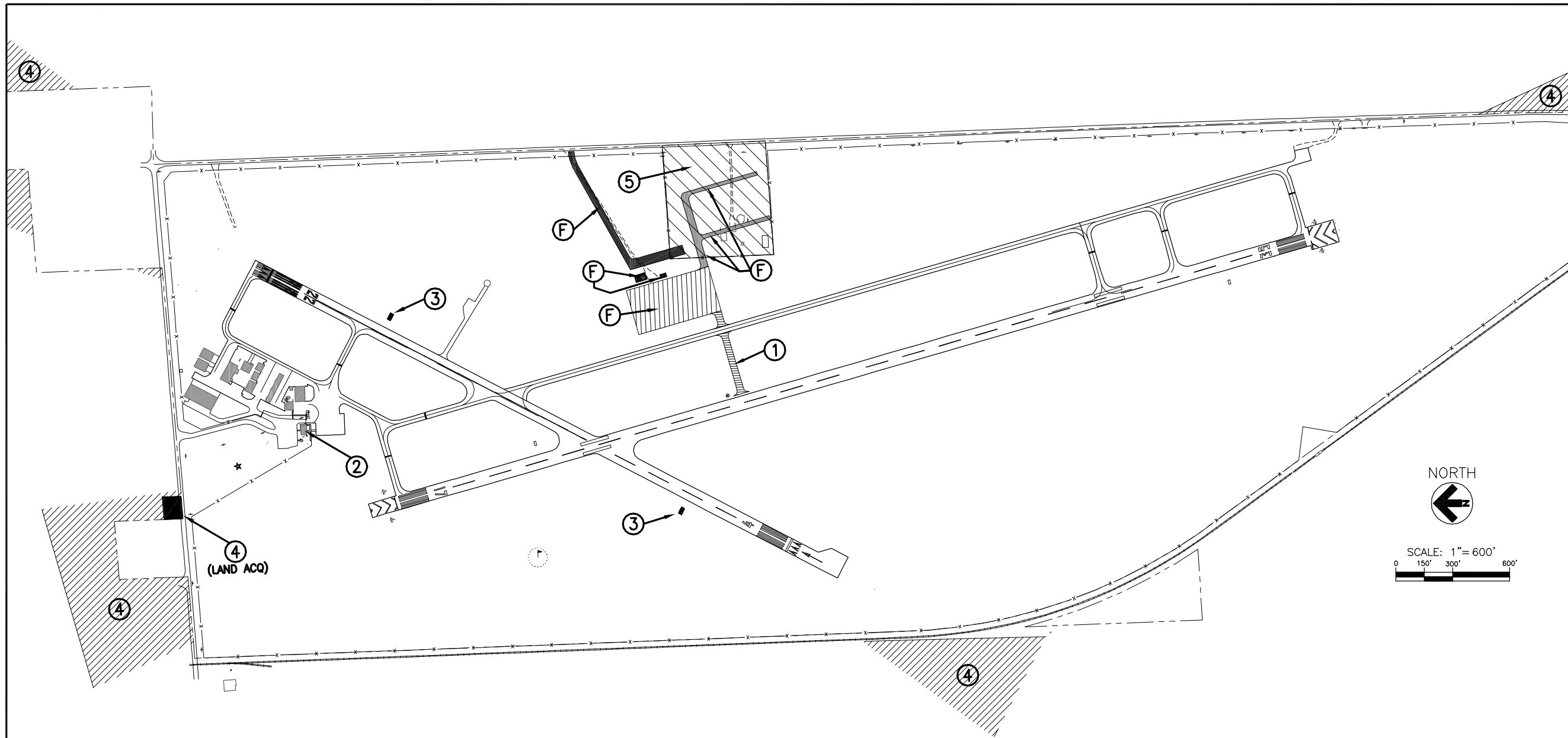












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| <p><u>2012</u></p> <p>① DESIGN &amp; CONSTRUCT TAXIWAY A3</p> <p>② TERMINAL IMPROVEMENTS</p> <p><u>2013</u></p> <p>③ DESIGN &amp; CONSTRUCTION RUNWAY 4-22 PAPIS</p> | <p><u>2014</u></p> <p>④ LAND ACQUISITION / UPDATE EXHIBIT A</p> <p><u>2015</u></p> <p>⑤ LAND ACQUISITION (BOOTH)</p> <p><u>2016</u></p> <p>F FUTURE TERMINAL DEVELOPMENT</p> |
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**HURON COUNTY  
 ROAD COMMISSION**

**HURON COUNTY  
 MEMORIAL AIRPORT**

**REVISIONS**

NO.	DESCRIPTION	DATE

**DATE ISSUED:** 11-28-2011  
**REVIEWED BY:** RTA  
**DRAWN BY:**  
**DESIGNED BY:** EMT

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**SHEET TITLE**

**AIRPORT  
 10 YEAR CIP**

**SHEET NUMBER**