

**MICHIGAN AIRPORT DEVELOPMENT
PROGRAM PACKAGE
MDOT Airports Division**

**Ten Year Airport Capital Improvement Plan
2012-2022**

Prepared for:

**South Haven Area Regional Airport
South Haven, Michigan**

July 2011

Contact:

Mr. Dave Johnson
South Haven Area Regional Airport
73020 Cr 380
South Haven, MI 49090
269-637-7343
fax 269-637-4912

Prepared by:

Mead&Hunt

**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: South Haven Regional Airport		Date prepared: 6/9/2011 Rev. 9/30/2011										
Associated City: South Haven, Michigan		Prepared By: Rodney Nettleton										
Sponsor: South Haven Regional Airport Authority		Sponsor email address & phone: David Johnson, runway@2k.com, (269) 637-7343										
Airport Identifier: LWA		ACIP due to MDOT AERO: no later than 10/30/11										
Development Year	Shown on ALP? (Yes or No)	ACIP Code**	NPIAS Airport Code: B			Federal Entitlements	Federal Apportionment	Federal Discretionary	State	Local	Total	Remarks/Item. Justification - Provide as much detail as possible.
			NPIAS Priority Rating**									
2012	Rehabilitate Electrical System	NA	RE RW LI	70	\$380,657	\$379,343	\$0	\$20,000	\$20,000	\$800,000	Carry \$80,657 over from 2010, \$150,000 from 2011. The existing runway and taxiway electrical system has sustained damage due to lightning strikes over the past years. Existing runway and taxiway signs are faded and need replacing. All hold line signs do not meet current design standards. The beacon tower and beacon light need replacing. In 2009 several electrical circuits had emergency repairs made to them, however the repairs made were temporary in nature. The repairs brought some of the lighting system to the minimum reading required by the FAA is 50 megohms. See readings below. a. Taxiway circuit 0.6 MQ - not repaired under previous project b. PAPI 22-L1=0.8MQ L2=14.7 MQ c. PAPI 4-L1=60MQ L2=160 MQ d. REIL 22-L1=22MQ L2=2.2 MQ e. REIL 4- L1=C2.2GQ L2=C2.2GQ f. Runway circuit 55 MQ	
2013	Carryover Funding to 2014										Carryover \$150,000 to 2014	
2014	Rehabilitate Southern T-hangar taxistreet Crack Sealing & Pavement Marking	NA	RE TW IM	66	\$142,500	\$0	\$0	\$3,750	\$3,750	\$150,000	CAT-EX. The existing taxistreet has a surface that requires reconstruction, 2007 PCI = 40. The existing pavement will be removed, the aggregate base course fine graded and compacted, then 3" of bituminous surface course placed. Protect existing pavements from damage due to water infiltration by filling cracks in the pavement with jet fuel resistant sealant. Improve safety with new pavement markings.	
2014	Replace Existing 8,000 Gallon Fuel Tank with 8,000 Gallon Double Wall Fuel Tank	NA	OT OT FF	19	\$85,500	\$0	\$0	\$2,250	\$2,250	\$90,000	The existing single wall 8,000 gallon above ground fuel storage tank is showing signs of deterioration. When water is removed from the tank sump it is red in color indicating the tank is rusting from the inside out. The replacement tank will be a double wall, epoxy coated, above ground storage tank the same size as the existing tank.	
2014	Carryover Funding to 2015										Carryover \$72,000	
2015	SRE Equipment (vehicle with blower)	NA	ST EQ SN	45	\$222,000	\$15,500	\$0	\$6,250	\$6,250	\$250,000	This airport is located in a heavy lake effect snow belt area of Michigan therefore SRE equipment is required for maintaining clean pavement surfaces in the winter months.	
2016	Carryover Funding to 2017										Carryover to 2017 \$150,000	
2017	Crack Sealing & Pavement Marking	NA	RE RW IM	70	\$19,000	\$0	\$0	\$500	\$500	\$20,000	Protect existing pavements from damage due to water infiltration by filling cracks in the pavement with jet fuel resistant sealant. Improve safety with new pavement markings. Carryover \$281,000.	
2017	Carryover Funding to 2018										Carryover to 2018 \$281,000	
2018	Site Prep for 10 Unit T-Hangar	YES	CA TW CO	57	\$180,500	\$0	\$0	\$4,750	\$4,750	\$190,000	CAT_EX. The airport has a waiting list of people who want to rent t-hangar space for aircraft storage. Develop area for new T-Hangar and construct taxiways.	
2018	Carryover Funding to 2019										Carryover to 2019 \$250,500	
2019	Rehabilitate Taxistreet Between Hangar Areas and Taxiway B	NA	RE TW IM	64	\$400,500	\$30,800	\$0	\$11,350	\$11,350	\$454,000	CAT-EX. The existing taxistreet and Taxiway B have a surface that requires major rehabilitation, 2007 PCI = 70.	
2020	Construct 10 unit T-Hangar	YES	ST BD MS	31	\$131,000	\$0	\$0	\$11,375	\$312,625	\$455,000	CAT-EX. The airport has a waiting list of people who want to rent t-hangar space for aircraft storage. Construct new T-Hangar	
2020	Crack Sealing & Pavement Marking	NA	RE RW IM	70	\$19,000	\$0	\$0	\$500	\$500	\$20,000	Protect existing pavements from damage due to water infiltration by filling cracks in the pavement with jet fuel resistant sealant. Improve safety with new pavement markings.	
2021	Carryover Funding to 2022										Carryover \$150,000 to 2022	
2022	Runway 14/32 drainage improvements & turf enhancements	NA	ST OT IM	42	\$300,000	\$127,500	\$0	\$11,250	\$11,250	\$450,000	CAT-EX. The existing turf runway surface has a difficult time maintaining the grass surface due to the soils. This project would provide for underdrains and new grading to increase the amount of time the runway is open for departing and landing aircraft. Also an irrigation system to provide water to support additional growth of vegetation on the runway surface.	

*Proposed airport development must be shown on current FAA-approved ALP prior to funding project.

**In accordance with FAA Order 5100.39A, Appendix 6 - Fields should be completed (Refer to Airport Code spreadsheet provided on MDOT Aeronautics website under Block Grant Program for specific airport code)

ENGINEERING COST ESTIMATE

PROJECT: Rehabilitate Electrical System
 LOCATION: South Haven Regional Airport
 CITY: South Haven, MI
 DATE: 6/9/2011
 PREPARED BY: BJH

FINAL DESIGN
 PROJECT PROGRAMMING
 FEASIBILITY STUDY
 STATE PLANNING
 BASED ON FY 2011 DOLLARS

WORK DESCRIPTION: Rehabilitate all electrical; replace incandescent fixtures with LED base mounted lights, new regulators for twy and rwy circuits, new twy transformers, new LED windcone, new twy guidance signs, new beacon twr and refurbished beacon light, new underground electrical cable, 4 bank duct, and handholes

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM COST
Mobilization and General Conditions	LS	1	\$ 30,000.00	\$ 30,000
Safety and Security	LS	1	\$ 20,000.00	\$ 20,000
Permits	DLR	500	\$ 1.00	\$ 500
Rehabilitated Beacon and New Beacon Pole	EA	1	\$ 50,000.00	\$ 50,000
Remove Existing Beacon Tower	EA	1	\$ 5,000.00	\$ 5,000
New LED Windcone	LS	1	\$ 5,000.00	\$ 5,000
Remove Existing Windcone	LS	1	\$ 500.00	\$ 500
1/C #4, 600V, L-824	LF	12,500	\$ 2.75	\$ 34,375
1/C #8, 600V, L-824	LF	41,000	\$ 1.10	\$ 45,100
1/C #8, 5KV, L-824	LF	5,000	\$ 1.25	\$ 6,250
1/C #8, 5KV, L-824, CIC	LF	27,000	\$ 2.00	\$ 54,000
8/2 W/G, 600V, UF	LF	350	\$ 3.00	\$ 1,050
Counterpoise, #6, Solid, With Ground Rods	LF	38,000	\$ 1.00	\$ 38,000
Additional 3/4" X 10' Ground Rod	EA	10	\$ 75.00	\$ 750
Vault Equipment	LS	1	\$ 30,000.00	\$ 30,000
Electrical Manhole	EA	4	\$ 4,000.00	\$ 16,000
Electrical Handhole	EA	23	\$ 1,500.00	\$ 34,500
Electrical Duct, 1 Bank 3", Direct Burial	LF	325	\$ 15.00	\$ 4,875
Electrical Duct, 2 Bank 3", Direct Burial	LF	175	\$ 25.00	\$ 4,375
Electrical Duct, 4 Bank 3", Direct Burial	LF	550	\$ 40.00	\$ 22,000
Electrical Duct, 6 Bank 3", Direct Burial	LF	15	\$ 55.00	\$ 825
MIRL, Base Mounted	EA	62	\$ 500.00	\$ 31,000
MITL, Base Mounted, LED	EA	178	\$ 800.00	\$ 142,400
Remove Existing Stake Mounted Light	EA	204	\$ 50.00	\$ 10,200
Remove Existing Base Mounted Light	EA	34	\$ 150.00	\$ 5,100
Taxiway Guidance Sign, 2 Panel	EA	8	\$ 2,500.00	\$ 20,000
Taxiway Guidance Sign, 3 Panel	EA	5	\$ 3,000.00	\$ 15,000
Remove Existing Guidance Sign	EA	13	\$ 500.00	\$ 6,500
Lead-based Paint Abatement	DLR	10,000	\$ 1.00	\$ 10,000
CONSTRUCTION TOTAL =				\$ 643,300
CONSTRUCTION CONTINGENCIES (15%) =				\$ 96,495
CONSTRUCTION TOTAL =				\$ 739,795
ENGINEERING DESIGN =				\$ -
CONSTRUCTION ADMIN (10%) =				\$ 73,980
				\$ 813,775
PROJECT YEAR BUDGET ESTIMATE =				\$ 820,000



A final cost estimate will be dependent upon development of these items and further design.

ENGINEERING COST ESTIMATE

PROJECT: Rehabilitate Southern T-hangar Taxistreet
 LOCATION: South Haven Regional Airport
 CITY: South Haven, MI
 DATE: 6/9/2011
 PREPARED BY: BJH

FINAL DESIGN
 PROJECT PROGRAMMING
 FEASIBILITY STUDY
 STATE PLANNING
 BASED ON FY 2011 DOLLARS

WORK DESCRIPTION: Rehabilitate southern t-hangar taxistreet.

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM COST
Mobilization and General Conditions	LS	1	\$ 10,000.00	\$ 10,000
Safety and Security	LS	1	\$ 5,000.00	\$ 5,000
Cold Mill/Pulverize Existing Pavement	SY	2,700	\$ 2.00	\$ 5,400
Salvage Pulverized Material (3")	CY	700	\$ 7.00	\$ 4,900
Fine Grade & Compact Aggregate Base	SY	2,700	\$ 2.00	\$ 5,400
Bituminous Surface (3")	TON	500	\$ 120.00	\$ 60,000
Pavement Marking (Taxiway)	LS	1	\$ 2,500.00	\$ 2,500
Turfing and Mulching	AC	1	\$ 3,000.00	\$ 3,000
CONSTRUCTION TOTAL = \$				96,200
CONSTRUCTION CONTINGENCIES (15%) = \$				14,430
CONSTRUCTION TOTAL = \$				110,630
ENGINEERING DESIGN (7%) = \$				7,744
CONSTRUCTION ADMIN (10%) = \$				11,063
				\$ 129,437
PAVEMENT MARKING AND CRACK SEALING \$				20,000
PROJECT YEAR BUDGET ESTIMATE = \$				150,000



Note: These costs were developed without the benefit of field surveys or soils investigation.
 A final cost estimate will be dependent upon development of these items and further design.

ENGINEERING COST ESTIMATE

PROJECT: Replace Existing Fuel Tank with 8,000 Gallon Fuel Tank
 LOCATION: South Haven Regional Airport
 CITY: South Haven, MI
 DATE: 6/9/2011
 PREPARED BY: BJH

FINAL DESIGN
 PROJECT PROGRAMMING
 FEASIBILITY STUDY
 STATE PLANNING
 BASED ON FY 2011 DOLLARS

WORK DESCRIPTION: Replace existing 8,000 gallon, single wall, above ground fuel tank with new 8,000 gallon, double wall, above ground fuel tank.

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM COST
Mobilization and General Conditions	LS	1	\$ 2,500.00	\$ 2,500
Safety and Security	LS	1	\$ 1,500.00	\$ 1,500
Permit Fee Allowance	DLR	5,000	\$ 1.00	\$ 5,000
Install Above Ground Fuel Tank	LS	1	\$ 50,000.00	\$ 50,000
Remove Existing Above Ground Fuel Tank	LS	1	\$ 10,000.00	\$ 10,000
CONSTRUCTION TOTAL =				\$ 66,500
CONSTRUCTION CONTINGENCIES (10%) =				\$ 6,650
CONSTRUCTION TOTAL =				\$ 73,150
ENGINEERING DESIGN (7%) =				\$ 5,121
CONSTRUCTION ADMIN (10%) =				\$ 7,315
				\$ 85,586
PROJECT YEAR BUDGET ESTIMATE =				\$ 90,000



Note: These costs were developed without the benefit of field surveys or soils investigation.
 A final cost estimate will be dependent upon development of these items and further design.

SOUTH HAVEN AREA REGIONAL AIRPORT

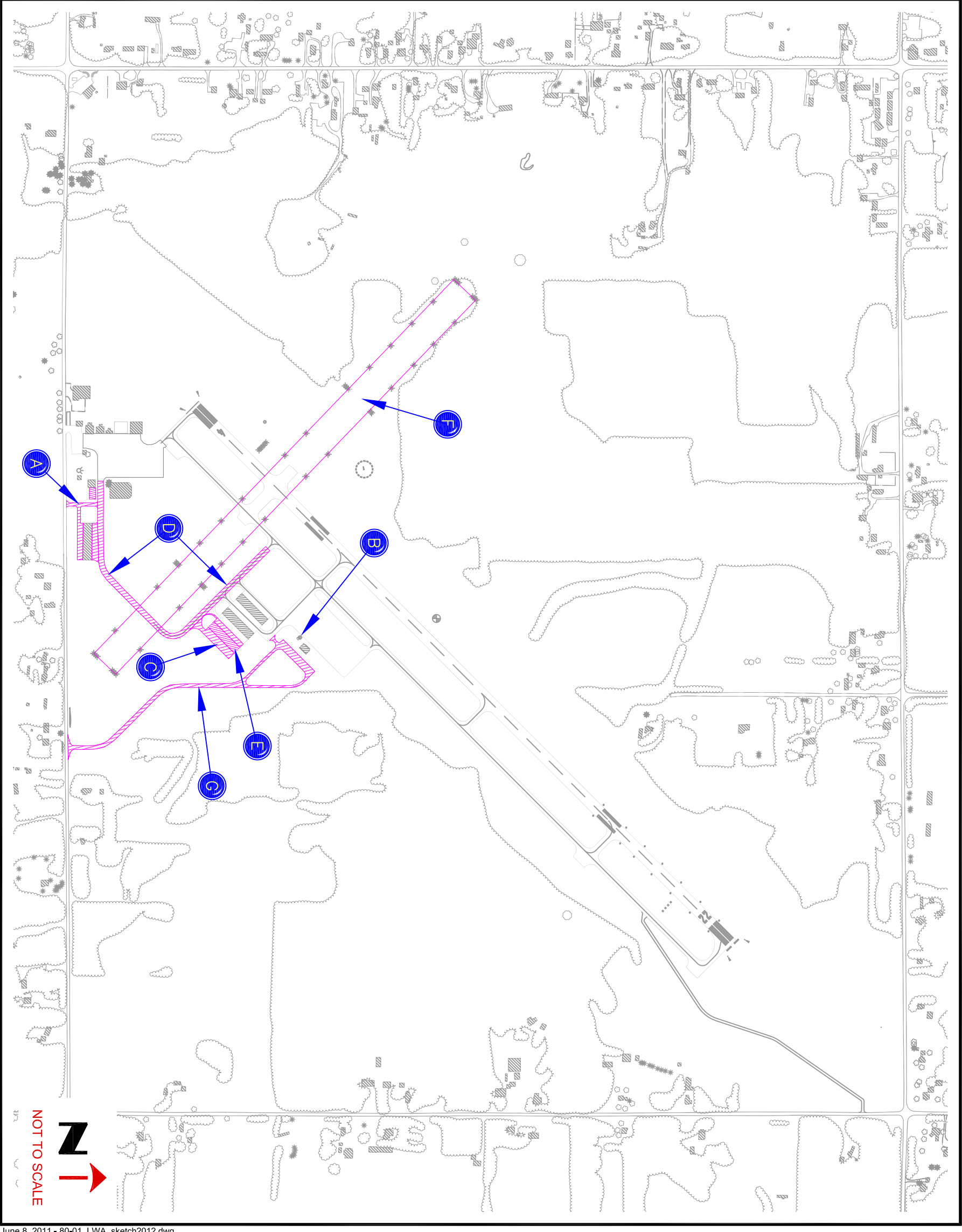
SOUTH HAVEN, MICHIGAN

TEN-YEAR DEVELOPMENT PLAN - YEARS 2012 TO 2023



FAA IDENTIFIER: LWA
STATE ID: 80-01

YEAR - 2012	REHABILITATE ELECTRICAL SYSTEM
YEAR - 2013	CARRY OVER TO 2014
YEAR - 2014	<p>A REHABILITATE SOUTHERN T-HANGAR TAXISTREET</p> <p>B REPLACE EXISTING FUEL TANK WITH 8,000 GALLON FUEL TANK</p> <p>CRACK SEALING & PAVEMENT MARKING</p>
YEAR - 2015	SRE EQUIPMENT (VEHICLE WITH BLOWER)
YEAR - 2016	C SITE PREP FOR 10 UNIT T-HANGAR
YEAR - 2017	CRACK SEALING & PAVEMENT MARKING
YEAR - 2018	CARRYOVER FUNDING TO 2019
YEAR - 2019	D REHABILITATE TAXISTREET BETWEEN HANGAR AREAS
YEAR - 2020	<p>E CONSTRUCT 10 UNIT T-HANGAR</p> <p>CRACK SEALING & PAVEMENT MARKING</p>
YEAR - 2021	CARRYOVER FUNDING TO 2022
YEAR - 2022	F RUNWAY 14/32 DRAINAGE IMPROVEMENTS AND TURF ENHANCEMENTS
YEAR - 2023	<p>G REHAB ENTRANCE ROAD</p> <p>CRACK SEALING & PAVEMENT MARKING</p>



Design By: RGN Drawn By: BJH Approved By: RGN