

MICHIGAN AIRPORT DEVELOPMENT
AID PROGRAM PACKAGE

CHEBOYGAN COUNTY AIRPORT

Cheboygan, Michigan

Fiscal Years 2012 - 2017

Submitted By: Cheboygan County Airport Authority

Date: July 18, 2011

MAP Meeting Date: October 4, 2011

Revision Date: October 26, 2011



**MICHIGAN STATE BLOCK GRANT PROGRAM
FIVE-YEAR AIRPORT CAPITAL IMPROVEMENT PROGRAM (CIP) FY-2012* to FY-2017**

*ACIP includes current development year (2011 already programmed - minor changes acceptable)

Airport Name: Cheboygan County Airport										Date prepared: July 18, 2011	
Associated City: Cheboygan										Prepared By: QoE Consulting	
Sponsor: Cheboygan Airport Authority										Sponsor email address & phone: cheboyganairport@att.net / 231.627.5571	
Airport Identifier: SLH										FINAL ACIP due to MDOT AERO: no later than 12/1/11	
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.
					80,000						Carryover
2012	Snow Removal Equipment	YES	ST//EQ/SN	44	140,600			3,700	3,700	148,000	New equipment is needed due to size of runway and condition of existing equipment
2012	Design - Terminal renovation & expansion	YES	CA/TE/IM	39	46,550	0		1,225	1,225	49,000	Inadequate for general aviation usage and energy inefficient.
2012	Carryover funds				42,850						Carryover funds to assist in payment for future projects
2013	Construction - Terminal renovation & expansion	YES	CA/TE/IM	39	180,500	0		4,750	4,750	190,000	Inadequate for general aviation usage and energy inefficient.
2013	Runway rehab -crack seal & paint	YES	RE/RW/IM	66	12,350	0		325	325	13,000	Will maintain and prolong the pavement and safety of the airport users
2013	Carryover funds				0	0					Carryover funds to assist in payment for future projects
2014	Land for RPZ for Runway 28 Extension	YES	CA/RW/EX	51	52,250	0		1,375	1,375	55,000	Acquire RPZ for Runway 28 extension
	Carryover funds				97,750						Carryover funds to assist in payment for future projects
2015	300' runway 28 Extension	YES	CA/RW/EX	51	247,750	69,550		8,350	8,350	334,000	Increase safety & payload for aircraft currently using runway
2015	Carryover funds				0						Carryover funds to assist in payment for future projects
2016	EA & design for ditch relocation & twy extension	YES	CA/RW/EX	47	150,000	0		3,947	3,947	157,895	Taxiway extension to increase safety by eliminating back taxi
2016	Carryover funds				0						Carryover funds to assist in payment for future projects
2017	Taxiway extension phase 1 -ditch relocation	YES	CA/RW/EX	47	150,000	106,500		6,750	6,750	270,000	Taxiway extension to increase safety by eliminating back taxi
2017	Runway rehab -crack seal & paint	YES	RE/RW/IM	66	0	33,250		875	875	35,000	Will maintain and prolong the pavement and safety of the airport users
2017	Carryover funds				0						



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**FIVE-YEAR
 DEVELOPMENT PLAN
 2012 - 2017**

AIRPORT: Cheboygan County Airport
LOCATION: Cheboygan Michigan

10/26/2011

page 1 of 1

DEVELOPMENT YEAR	DEVELOPMENT ITEM		ITEM COST		F - Total Fed AIP Dollars S - Total State Dollars L - Total Local Dollars T - Total Dollars for Year
				F	\$187,150
2012	Snow removal equipment	FSL	148,000	S	\$4,925
	Design - terminal renovation and expansion		49,000	L	\$4,925
				T	\$197,000
				F	\$192,850
2013	terminal renovation and expansion -construction	FSL	190,000	S	\$5,075
	Runway rehab - crack seal and paint	FSL	13,000	L	\$5,075
				T	\$203,000
				F	\$52,250
2014	Land for RPZ for runway 28 extension	FSL	55,000	S	\$1,375
				L	\$1,375
				T	\$55,000
				F	\$317,300
2015	300' runway 28 extension	FSL	334,000	S	\$8,350
				L	\$8,350
				T	\$334,000
				F	\$150,000
2016	EA & design for ditch relocation & taxiway extension	FSL	157,895	S	\$3,947
				L	\$3,947
				T	\$157,895
				F	\$289,750
2017	Taxiway extension phase 1 - ditch relocation	FSL	270,000	S	\$7,625
	Runway rehab - crack seal and paint	FSL	35,000	L	\$7,625
				T	\$305,000

Snow Removal Equipment Calculations
Michigan State Block Grant Program - Non-Commercial Service
**Except for the Notes sections, the darkly shaded areas will automatically calculate*

Airport Name:
 Annual Aircraft Operations
 (MDOT AERO will provide upon request, if needed.)

Associated City:
 Average Annual Snowfall (inches):
 Source:

Current MASP Classification (i.e. CII, BII, etc.) (refer to Table 36)
 Clearance Time per AC 150-5200-30B (refer to Table 1-2) hours

Priority 1 (Critical) Snow Removal Areas

Primary Runway

Designation:	10/28	<input type="text" value="4000"/> length (ft) x	<input type="text" value="75"/> width (ft)	=	<input type="text" value="300,000"/> sq. ft.
Designation:		<input type="text"/> length (ft) x	<input type="text"/> width (ft)	=	<input type="text" value="0"/> sq. ft.
Designation:		<input type="text"/> length (ft) x	<input type="text"/> width (ft)	=	<input type="text" value="0"/> sq. ft.
TOTAL					300,000

Notes:

Parallel Taxiway and one or two principal connecting taxiways

Designation:	Twy A	<input type="text" value="1300"/> length (ft) x	<input type="text" value="35"/> width (ft)	=	<input type="text" value="45,500"/> sq. ft.
Designation:	Twy B (to apron)	<input type="text" value="940"/> length (ft) x	<input type="text" value="35"/> width (ft)	=	<input type="text" value="32,900"/> sq. ft.
Designation:		<input type="text"/> length (ft) x	<input type="text"/> width (ft)	=	<input type="text" value="0"/> sq. ft.
Designation:		<input type="text"/> length (ft) x	<input type="text"/> width (ft)	=	<input type="text" value="0"/> sq. ft.
TOTAL					78,400

Notes:

Terminal, Cargo, and/or General Aviation Aprons (Critical apron area assumed as 2/3 of the apron)

<input type="text" value="67"/> % Req' x	<input type="text" value="750"/> length (ft) x	<input type="text" value="200"/> width (ft)	=	<input type="text" value="100,500"/> sq. ft.
<input type="text" value="67"/> % Req' x	<input type="text"/> length (ft) x	<input type="text"/> width (ft)	=	<input type="text" value="0"/> sq. ft.
<input type="text" value="67"/> % Req' x	<input type="text"/> length (ft) x	<input type="text"/> width (ft)	=	<input type="text" value="0"/> sq. ft.
<input type="text" value="67"/> % Req' x	<input type="text"/> length (ft) x	<input type="text"/> width (ft)	=	<input type="text" value="0"/> sq. ft.
TOTAL				100,500

If more of apron(s) is considered critical, written justification must be provided.

Notes:

Other Critical Areas (i.e. emergency service roads, ARFF access roads, NAVAIDs, & other areas deemed essential)

Describe:	<input type="text"/> length (ft) x	<input type="text"/> width (ft)	=	<input type="text" value="0"/> sq. ft.
Describe:	<input type="text"/> length (ft) x	<input type="text"/> width (ft)	=	<input type="text" value="0"/> sq. ft.
Describe:	<input type="text"/> length (ft) x	<input type="text"/> width (ft)	=	<input type="text" value="0"/> sq. ft.
Describe:	<input type="text"/> length (ft) x	<input type="text"/> width (ft)	=	<input type="text" value="0"/> sq. ft.
TOTAL				0

Notes:

Total Priority 1 (Critical) Area	<input type="text" value="478,900"/> sq. ft.
Snow Density (using 1" of snow at 25 lbs/cu ft.)	<input type="text" value="499"/> tons
Minimum snow removal rate (70% efficiency)	<input type="text" value="178"/> tons/hr

Snow Removal Equipment Determination

AC 150-5220-20	Eligible SRE Items	Quantity	Requirements and Assumptions
Rotary Plows (Chapter 2)	Snow Blower	1	Class I up to 600 tons/hr <i>(Refer to Table 2-1 - Rotary Plow Capacities)</i> <i>The largest class is automatically populated based on tons/hr</i>
Displacement Plows (Chapter 6)	Plow	2	2 x the # of eligible snow blowers (equal capacity to blower) If annual snowfall > 30 " or > 10,000 annual operations and at least 15" of snow.
Snowsweepers (Chapter 8)	Sweeper	enter manually	Considered Supporting Equipment as needed to complete snow removal operations in accordance with FAA AC 150/5220-20
Carrier Vehicles (Chapter 5)	Front End Loader/Tractor	enter manually	Considered Supporting Equipment as needed to complete snow removal operations in accordance with FAA AC 150/5220-20

Above table based on AC 150/5220-20, Chapter 6, Paragraph 38 (b & c) for Minimum Equipment Requirements.

If an airport requests more than the eligible quantities of snow removal equipment, additional justification must be submitted for determination of eligibility.

Sponsor Remarks:

MDOT will review sheet and make final determination of eligible SRE.

MDOT Use ONLY

Airport Snow Removal Equipment Inventory Sheet

Airport Name: Cheboygan County Airport (KSLH)

The airport has the following snow removal equipment:

	Type Example: Blower	Make Example: John Deere	Model	Capacity Tons/Hour	Any Federal Funding?
1.	<u>Plow</u>	<u>GMC</u>	<u>2500HD</u>	<u>150</u>	<u>Yes B-26-0019-0401</u>
2.	* <u>Tractor w/ Blower</u>	<u>New Holland</u>	<u>TV-145</u>	<u>NA</u>	<u>Yes B-26-0019-0502</u>
3.	<u>Plow</u>	<u>Ford</u>	<u>F-800</u>		<u>NO</u>
4.	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____
7.	_____	_____	_____	_____	_____
8.	_____	_____	_____	_____	_____
9.	_____	_____	_____	_____	_____
10.	_____	_____	_____	_____	_____

Acquisition would be for:

1.	<u>Plow tracks</u>	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____

Del M. Reynolds 10/4/11 ✓
Signature of Airport Representative, Date

Attachment 1

* NO FEDERAL FUNDING FOR BLOWER

Cheboygan Weather

Average Temp in January: 18.5 degrees
 Average Temp in July: 67.4 degrees
 Average Snowfall: 117 inches
 Average Precipitation: 26.53 inches
 Average Sunny Days: 47

Retrieving Data. Please Wait.

Crime Risk

Cheboygan County Michigan

Personal Crime:	71	59	110
Property Crime:	49	37	107

Retrieving Data. Please Wait.

Cheboygan, MI had a personal crime rate of 71 per 10,000 residents and 49 property crime per 10,000 residents. Cheboygan County had a lower personal crime rate and a lower property crime rate. While Michigan had a higher personal crime rate and a higher property crime rate than Cheboygan, MI, a personal crime rate is a crime that is added upon a person.



ITEM: Land for RPZ for Runway 28 extension

FUNDING YEAR:

Local Plan: 2014
Mtg. Decision: _____

(One item per sheet, show pavement lengths and widths)

ITEM IS ON ALP? Yes X
No _____

FAA Approval Date: _____

ESTIMATED COST:

Total: \$55,000
Federal: 52,250
State: 1,375
Local: 1,375

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

The RPZ for runway 28 will be shifted 300' east with the runway extension. The property needs to be acquired to relocate the RPZ



ITEM: Runway 28 extension

FUNDING YEAR:
Local Plan: 2015
Mtg. Decision: _____

(One item per sheet, show pavement lengths and widths)

ITEM IS ON ALP? Yes X
No _____

FAA Approval Date: _____

ESTIMATED COST:
Total: \$334,000
Federal: 317,300
State: 8,350
Local: 8,350

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

The extension of runway 10/28 from 4000' to 4300' will improve safety and payload for aircraft currently using the airport.



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AIRPORT: CHEBOYGAN COUNTY
 LOCATION: CHEBOYGAN, MI
 PROJECT:
 CONTRACT:
 DATE: September 22, 2010

FINAL DESIGN
 PROJECT PROGRAM'
 FEASIBILITY STUDY
 STATE PLANNING

BASED ON FY 2011 DOLLARS

ENGINEERING COST ESTIMATE -

WORK DESCRIPTION: Extend Runway 28 300' x 75' with Turnaround

1

ITEM DESCRIPTION	UNIT	TOTAL QTY.	PRICE	AMOUNT
mobilization and general conditions	ls	1	25000	25,000
safety and security	ls	1	10000	10,000
unclassified excavation	cy	7400	7	51,800
subbase course, 12"	cy	1240	18	22,320
geotextile fabric underlayment	sy	0	3	0
base course, 8" aggregate base	cy	810	25	20,250
bituminous surface course, 4"	ton	950	70	66,500
saw joint in bit. surface	lf	150	4	600
underdrain, 4" perforated plastic	lf	800	5	4,000
underdrain cleanout	ea	2.0	200	400
pavement marking	sf	3000	1	3,000
shoulder construction	sta	8	200	1,540
turfing and mulching	ac	1	2000	2,000
2/C #6, 600v, installed	lf	800	3	2,400
2/C #8, 5kv, installed	lf	800	4	3,200
#8 bare copper counterpoise	lf	800	1.50	1,200
Relocate threshold lights	lf	8	150	1,200
Install new MIRL	ea	2	500	1,000
vault equipment	ls	1	1500	1,500
Relocate PAPI	ls	1	8000	8,000
Relocate REIL	ls	1	6000	6,000
miscellaneous	ls	1	35090	35,090
CONSTRUCTION SUBTOTAL:				267,000
engineering, administration	ls	1		67,000
TOTAL:				334,000



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LOCATION: Cheboygan County
 AIRPORT: Cheboygan, MI
 PROJECT:
 CONTRACT:
 DATE: June 26, 2009

FINAL DESIGN
 PROJECT PROGRAM'G.
 FEASIBILITY STUDY
 STATE PLANNING

BASED ON FY 2011 DOLLARS

ENGINEERING COST ESTIMATE -

WORK DESCRIPTION: Taxiway Extension Phase 1- Ditch Relocation

ITEM DESCRIPTION	UNIT	TOTAL QTY.	UNIT PRICE	TOTAL AMOUNT
mobilization and general conditions	ls	1	30000	30,000
safety and security	ls	1	8000	8,000
unclassified excavation	cy	11000	10	110,000
RCCP storm sewer	lf	500	45	22,500
RCCP end section	lf	2	1200	2,400
drainage structure w/cover	ea	2	2500	5,000
shoulder construction	sta	0	100	0
drainage ditch cleanout, area 1	sta	0	100	0
drainage ditch cleanout, area 2	sta	0	200	0
drainage ditch cleanout, area 3	sta	10	700	7,000
turfing & mulching	ac	10	1500	15,000
permits	ls	25000	1	25,000
miscellaneous	ls	1	14100	14,100
CONSTRUCTION SUBTOTAL:				239,000
construction engineering, administration	ls	1		31,000
design engineering pervious year				
TOTAL:				270,000



ITEM: Crack Seal & Paint Runways and
Taxiways

FUNDING YEAR:
Local Plan: 2017
Mtg. Decision: _____

(One item per sheet, show pavement lengths and widths)

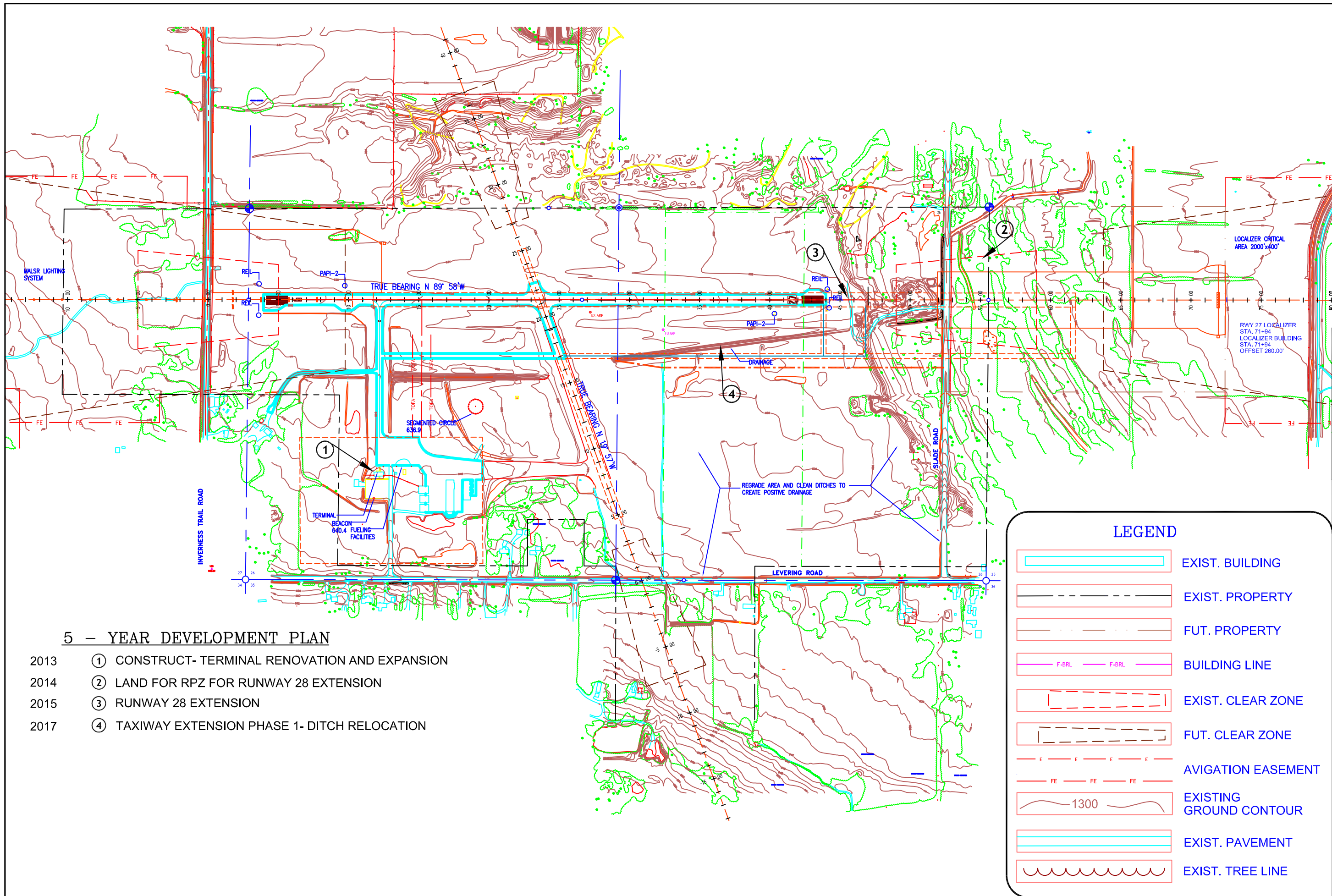
ITEM IS ON ALP? Yes Yes
No _____

FAA Approval Date: _____

ESTIMATED COST:
Total: \$35,000
Federal: 33,250
State: 875
Local: 875

List all reasons/needs for this project, including detailed descriptions of existing conditions, i.e. pavement age, thickness, distresses, increases in aircraft/vehicle weight and/or usage, etc. Use additional sheets, as needed.

To maintain and prolong the pavement and safety of the airport users.



5 - YEAR DEVELOPMENT PLAN

- 2013 ① CONSTRUCT- TERMINAL RENOVATION AND EXPANSION
- 2014 ② LAND FOR RPZ FOR RUNWAY 28 EXTENSION
- 2015 ③ RUNWAY 28 EXTENSION
- 2017 ④ TAXIWAY EXTENSION PHASE 1- DITCH RELOCATION

LEGEND	
	EXIST. BUILDING
	EXIST. PROPERTY
	FUT. PROPERTY
	BUILDING LINE
	EXIST. CLEAR ZONE
	FUT. CLEAR ZONE
	AVIGATION EASEMENT
	EXISTING GROUND CONTOUR
	EXIST. PAVEMENT
	EXIST. TREE LINE

MAG. DECL. = 6° 48' W (1983)

SCALE: N.T.S.

GoE CONSULTING

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Lansing, MI 48906
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QoEConsulting.com

CHEBOYGAN COUNTY AIRPORT

CHEBOYGAN, MI

CONTRACT NO:	DESIGNED	APPROVED	DATE
XX	RHL	RHL	07-01-07
DRAWN	REVIEWED		
SGS	RHL		