

# Appendix I

## Airport Layout Plan Set





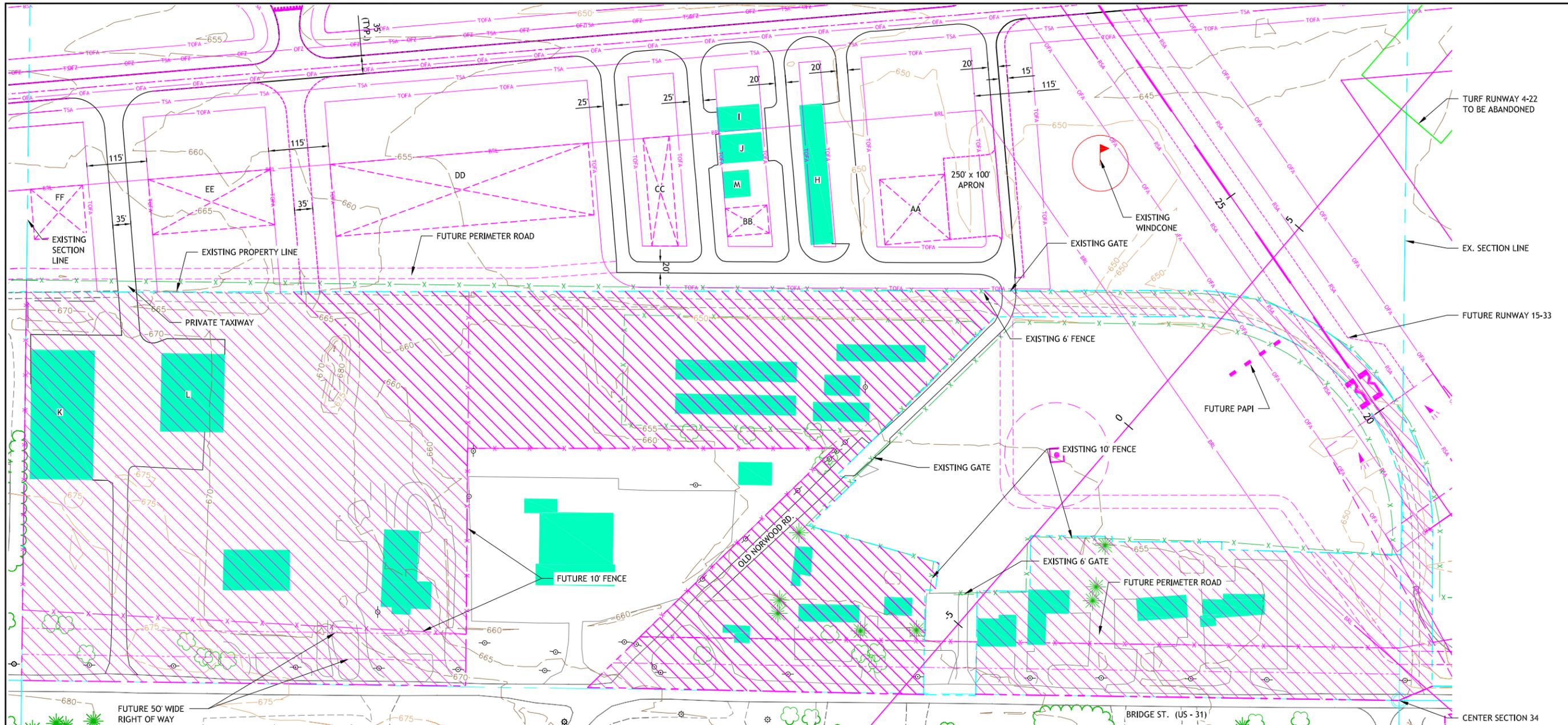








M:\2008\Charlevoix\ALP\CADD\Final Plans\06-EXISTING BUILDING LAYOUT-WEST SIDE.dwg - BUILD WEST  
 January 17, 2013 11:19:30 AM / ssmith  
 June 4, 2013 7:48:08 AM / Scott Smith

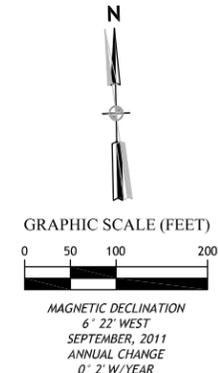


EXISTING BUILDING		
ID #	DESCRIPTION	ELEVATION
H	T-HANGAR	669.6'
I	HANGAR	675.0'
J	HANGAR	675.1'
K	HANGAR	705.7'
L	HANGAR	709.2'
M	HANGAR	675.1'

FUTURE BUILDINGS		
ID #	DESCRIPTION	
AA	BOX HANGAR	
BB	BOX HANGAR	
CC	HANGAR	
DD	HANGAR	
EE	HANGAR	
FF	HANGAR	

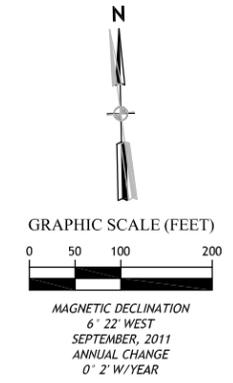
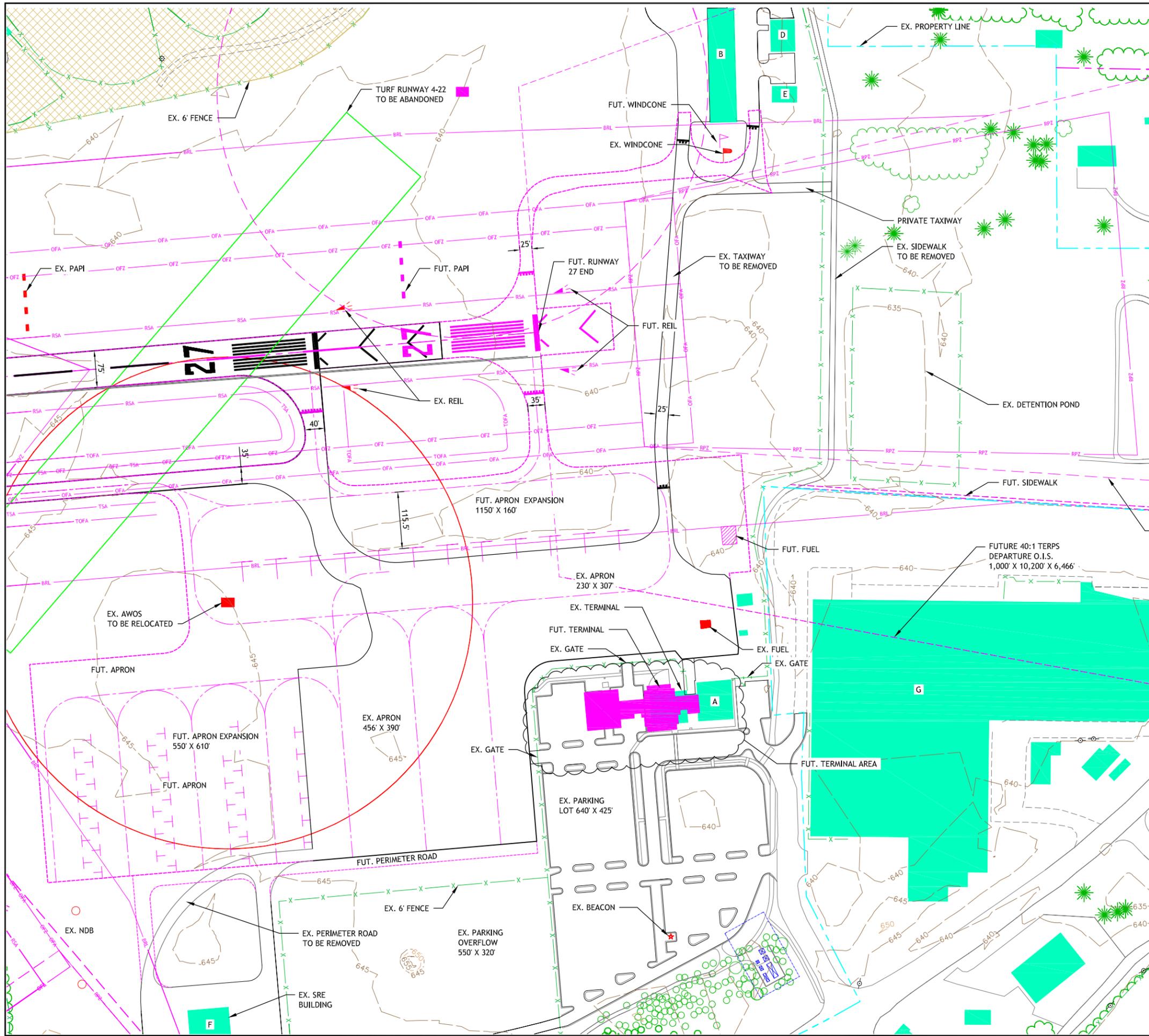
LEGEND		
DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE*	---	---
PROPERTY ACQUISITION AREA	NA	---
AVIGATION EASEMENT AREA	---	---
RUNWAY SAFETY AREA	NOT SHOWN **	---
RUNWAY OBJECT FREE AREA	NOT SHOWN **	---
RUNWAY OBJECT FREE ZONE	NOT SHOWN **	---
RUNWAY PROTECTION ZONE	NOT SHOWN **	---
RUNWAY VISIBILITY ZONE	NOT SHOWN **	---
TAXIWAY SAFETY AREA	NOT SHOWN **	---
TAXIWAY OBJECT FREE AREA	NOT SHOWN **	---
BUILDING RESTRICTION LINE	---	---
AIRPORT PAVEMENT	---	---
FENCE LINE*	---	---
SECTION LINE	---	---
CONTOURS	---	---
POWER POLE	---	---
TREE LINE	---	---
BUILDING	---	---
ROTATING BEACON	---	---
WIND CONE	---	---
TVOR	---	---
ARP	---	---
TAXIWAY EDGE LIGHTS	---	---
AWOS	---	---
PAPI	---	---
REIL	---	---
MRL/MTL	---	---

- NOTES:**
- AIRPORT PROPERTY IS LOCATED WITHIN SECTION 34 OF CHARLEVOIX TOWNSHIP, CHARLEVOIX COUNTY, MICHIGAN(T34N, R8W).
  - RUNWAY 15-33 OFA AND OFZ HAVE THE SAME DIMENSIONS.



 	CHARLEVOIX, MI DATE: 4-15-13 APPROVED: REVIEWED: DESIGNED: DRAWN: CONTRACT NO: NA
AIRPORT LAYOUT PLAN BUILDING LAYOUT WEST SIDE	CHARLEVOIX MUNICIPAL AIRPORT DRAFT 9 / 2011 DESCRIPTION REV DATE BY

File Name: M:\2008\Charlevoix\ALP\CADD\Final Plans\07-EXISTING BUILDING LAYOUT - EAST SIDE.dwg - BUILD EAST  
 Modified / By: January 17, 2013 11:23:55 AM / smith  
 Plotted / By: June 4, 2013 7:48:26 AM / Scott Smith



BUILDING/FACILITIES		
ID #	DESCRIPTION	ELEVATION
A	TERMINAL BUILDING	672.3'
B	HANGAR	660.7'
C	HANGAR	659.1'
D	HANGAR	664.8'
E	HANGAR	663.4'
F	SRE BUILDING	677.7'
G	HARBOR INDUSTRIES	696.9'
H	T-HANGAR	669.6'
I	HANGAR	675.0'
J	HANGAR	675.1'
K	HANGAR	705.7'
L	HANGAR	709.2'
M	HANGAR	675.1'

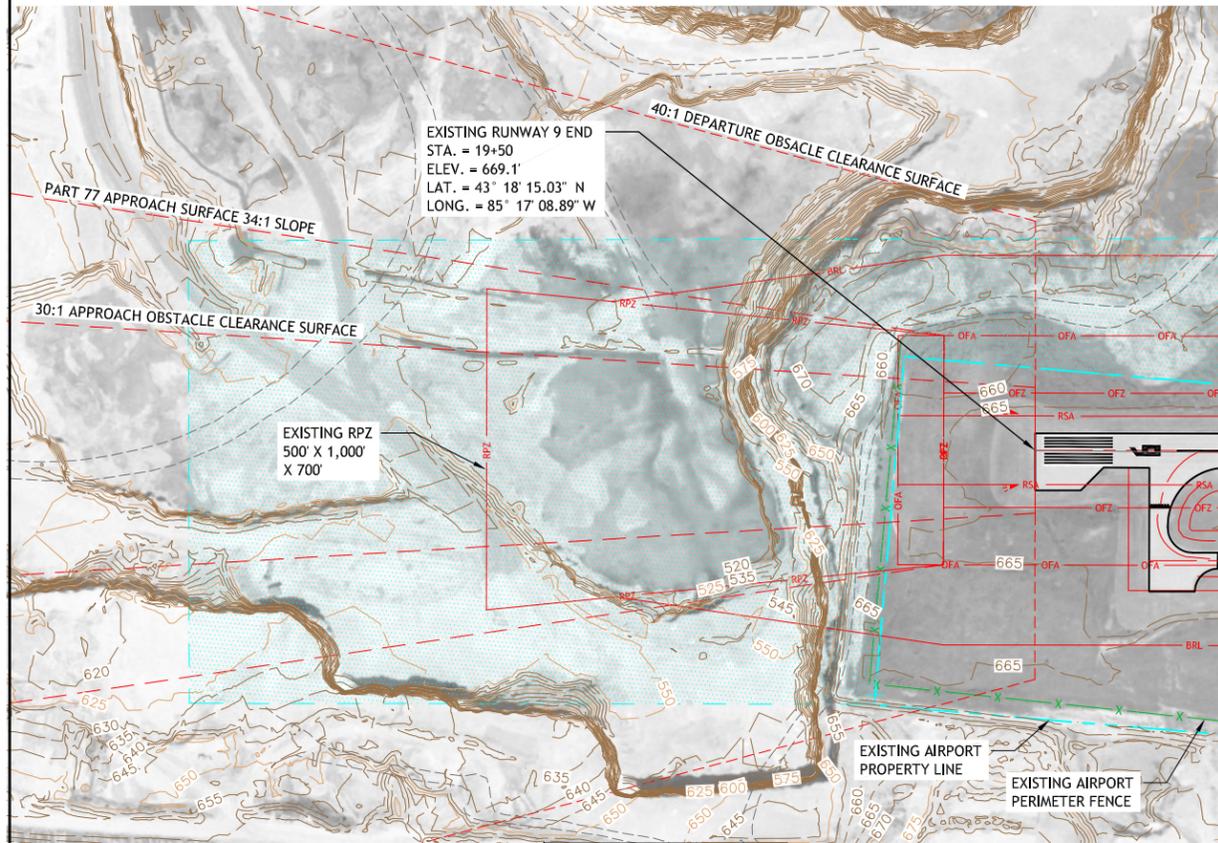
LEGEND		
DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE*	---	---
PROPERTY ACQUISITION AREA	NA	---
AVIGATION EASEMENT AREA	---	---
RUNWAY SAFETY AREA	NOT SHOWN**	--- RSA
RUNWAY OBJECT FREE AREA	NOT SHOWN**	--- OFA
RUNWAY OBJECT FREE ZONE	NOT SHOWN**	--- OFZ
RUNWAY PROTECTION ZONE	NOT SHOWN**	--- RPZ
RUNWAY VISIBILITY ZONE	NOT SHOWN**	--- RVZ
TAXIWAY SAFETY AREA	NOT SHOWN**	--- TSA
TAXIWAY OBJECT FREE AREA	NOT SHOWN**	--- OFA
BUILDING RESTRICTION LINE	NOT SHOWN**	--- BRL
AIRPORT PAVEMENT	---	---
FENCE LINE*	--- X ---	--- X ---
SECTION LINE	---	NA
CONTOURS	---	NA
POWER POLE	---	NA
TREE LINE	---	NA
BUILDING	---	---
ROTATING BEACON	---	NA
WIND CONE	---	NA
TVOR	---	NA
ARP	---	---
TAXIWAY EDGE LIGHTS	---	---
AWOS	---	---
PAPI	---	---
REIL	---	---
MRL/MTL	---	---

\* ESTIMATED ITEM  
 \*\* NOT SHOWN FOR CLARITY

- NOTES:  
 1. AIRPORT PROPERTY IS LOCATED WITHIN SECTION 34 OF CHARLEVOIX TOWNSHIP, CHARLEVOIX COUNTY, MICHIGAN(T34N, R8W).

BY	DATE	DESCRIPTION
REV		
4100 Capital City Blvd., Flr 2 Lansing, MI 48906 PH 517.327.1980 / F 517.327.1982 QoEconsulting.com		
CHARLEVOIX, MI	DATE:	4-15-13
AIRPORT LAYOUT PLAN	APPROVED	MLB
BUILDING LAYOUT	REVIEWED	REL
EAST SIDE	DESIGNED	PDS
CHARLEVOIX MUNICIPAL AIRPORT	DRAWN	SGS
CONTRACT NO:	NA	

M:\2008\Charlevoix\ALP\CADD\Final Plans\08- EXISTING RUNWAY 9 & 27 APPROACH.dwg - EX 9-27 APRCH  
 April 2, 2013 3:32:47 PM / pshaepfer  
 June 4, 2013 7:50:07 AM / Scott Smith

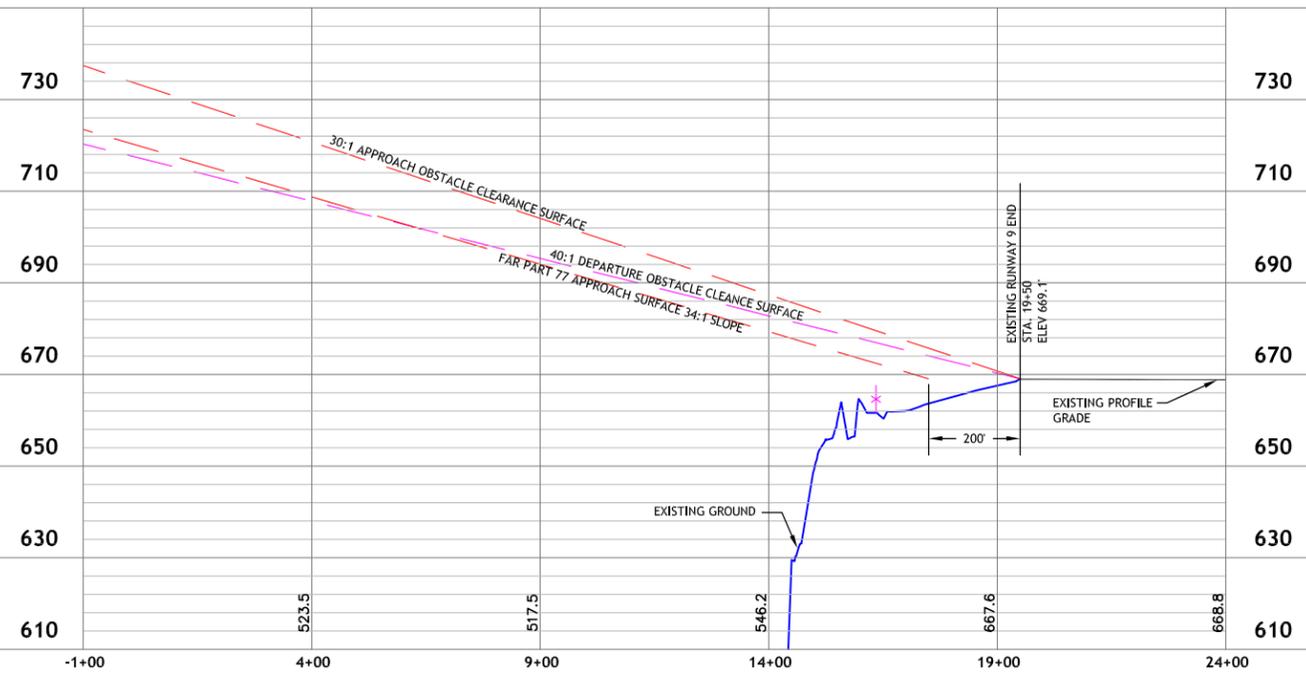


RUNWAY 9 PLAN VIEW

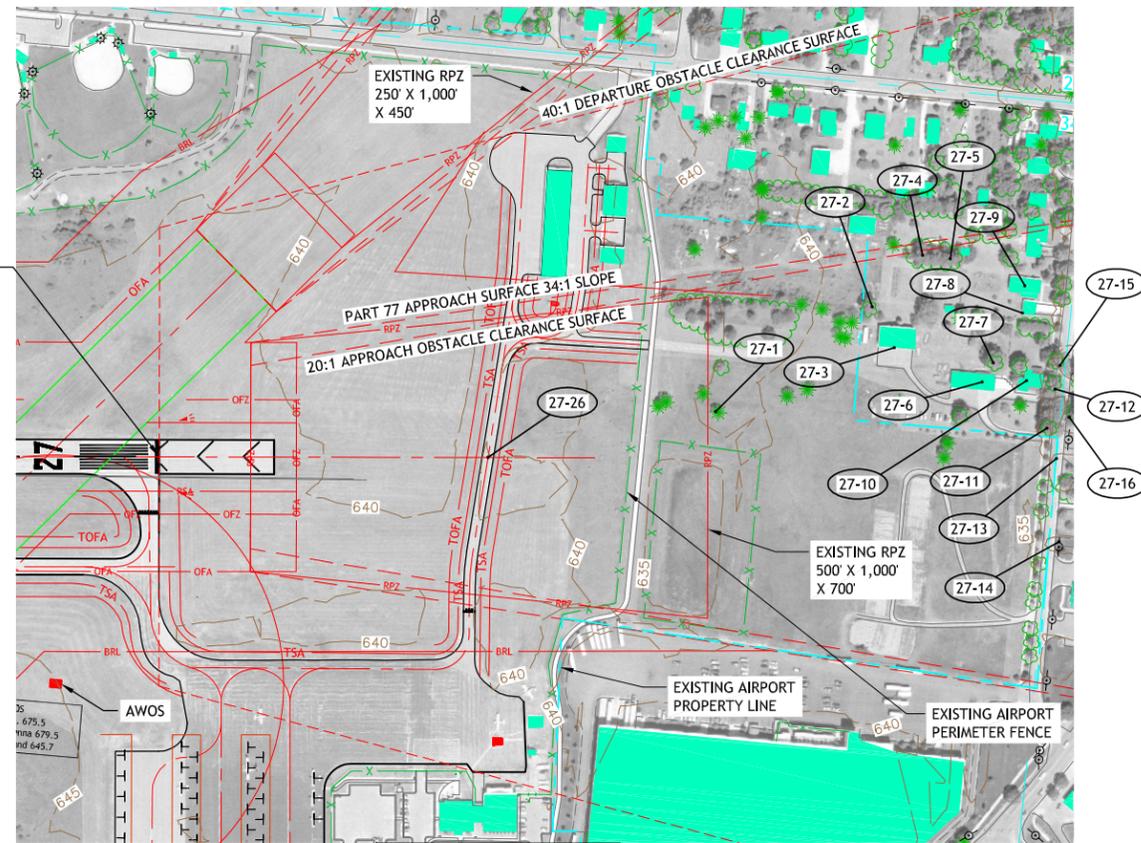
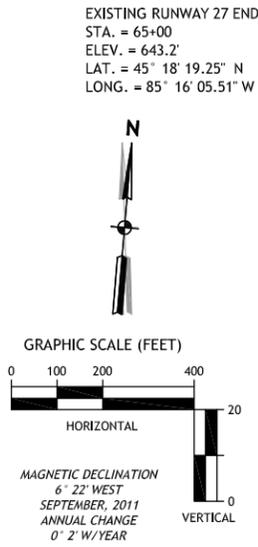
NOTES:

1. REFER TO SHEET 12 FOR OBSTRUCTION TABLE/DATA
2. TOUCHDOWN ZONE ELEVATION 669.1'
3. RUNWAY 9 APPENDIX 2 APPROACH SURFACE TYPE 7
4. RUNWAY 27 APPENDIX 2 APPROACH SURFACE TYPE 5

LEGEND - PLAN	
DESCRIPTION	EXISTING
PROPERTY LINE	---
RUNWAY SAFETY AREA	---RSA---
RUNWAY OBJECT FREE AREA	---OFA---
25' BUILDING RESTRICTION LINE	---BRL---
OBJECT FREE ZONE	---OFZ---
FAR APPROACH SURFACE	---
FAR APPENDIX 2 SURFACE	---
FENCE LINE	---X X---
TREE LINE	---X X---
BUILDING	---[ ]---
POWER POLE	---(o)---



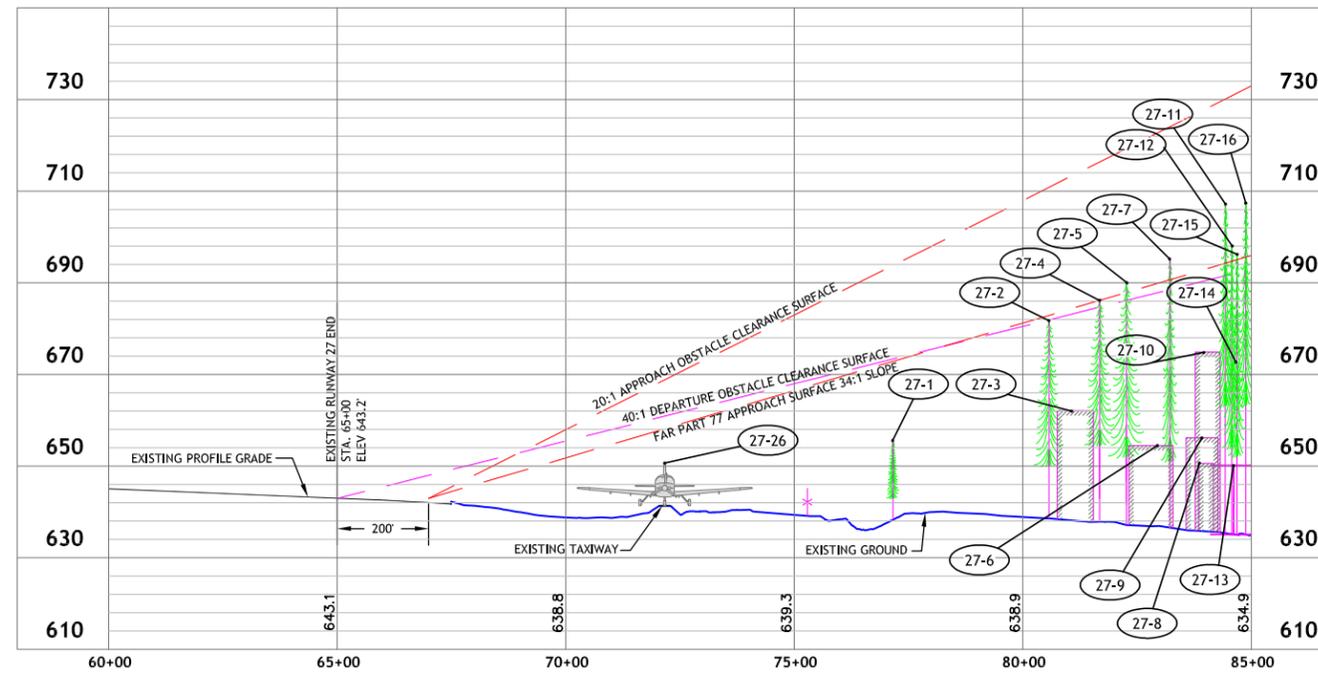
RUNWAY 9 PROFILE VIEW



RUNWAY 27 PLAN VIEW

LEGEND - PROFILE

- ROADWAY CLEAR HEIGHT (15')
- FENCE
- TREES



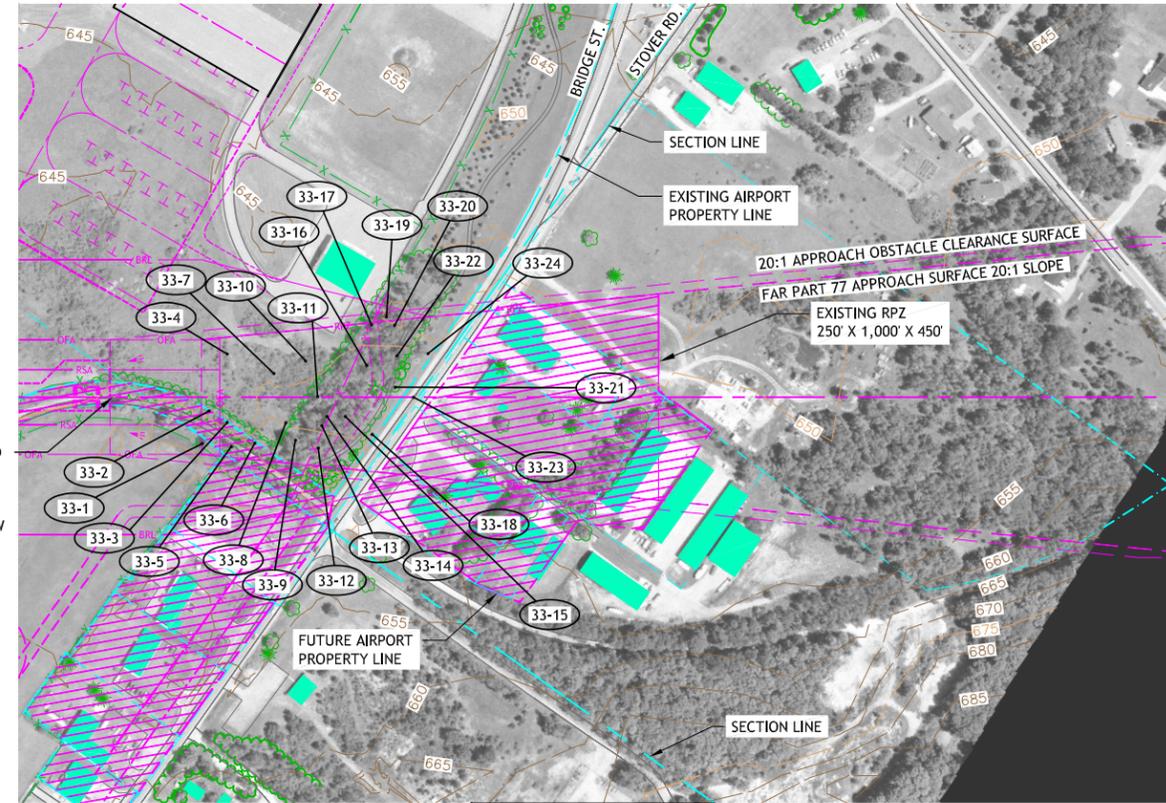
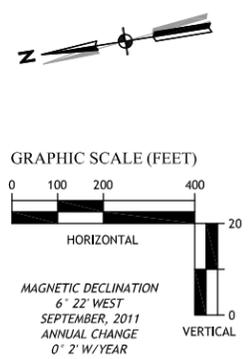
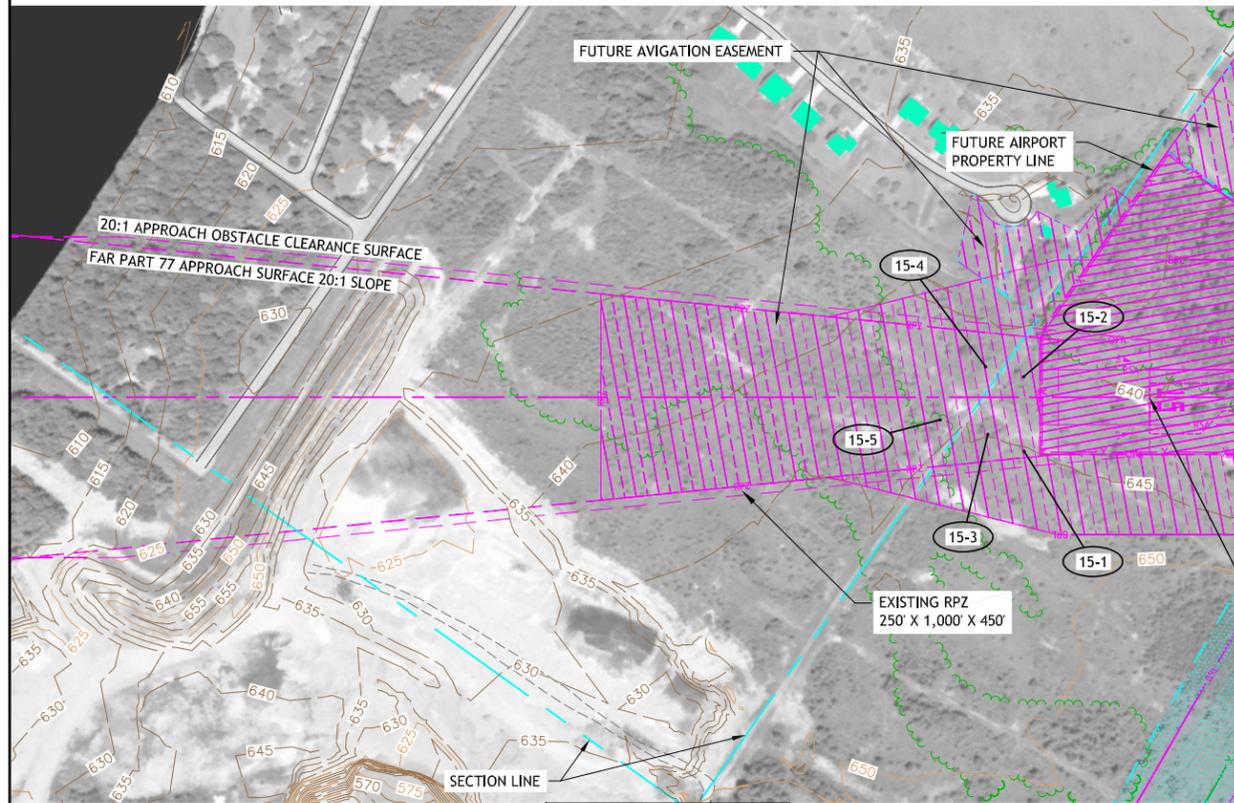
RUNWAY 27 PROFILE VIEW

ARMSTRONG		4100 Capital City Blvd., Flr 2 Lansing, MI 48206 PH 517.327.1980 / FX 517.327.1982 www.armstrong.com	
Goe CONSULTING		4100 Capital City Blvd., Flr 2 Lansing, MI 48206 PH 517.327.1980 / FX 517.327.1982 GoeConsulting.com	
CONTRACT NO:	NA	DRAWN:	SGS
DESIGNED:	PDS	REVIEWED:	REL
APPROVED:	MLB	DATE:	4-15-13
AIRPORT LAYOUT PLAN EXISTING RUNWAY 9 & 27 APPROACH		CHARLEVOIX, MI	
8 OF 15		DRAFT 9 / 2011	
REV	DESCRIPTION	DATE	BY





File Name: M:\2008\Charlevoix\ALP\CADD\Final Plans\11-FUTURE RUNWAY 15-33 APPROACH.dwg - FU 15-33-APPROCH  
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 Plotted / By: June 4, 2013 7:52:14 AM / Scott Smith

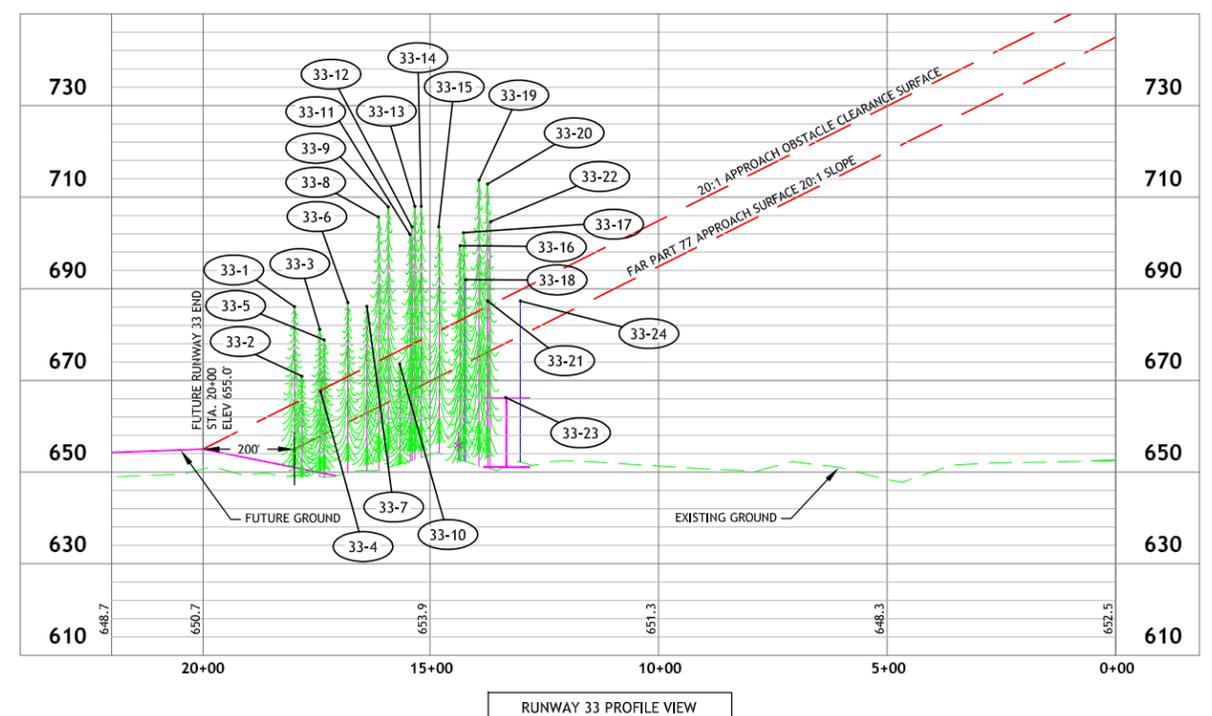
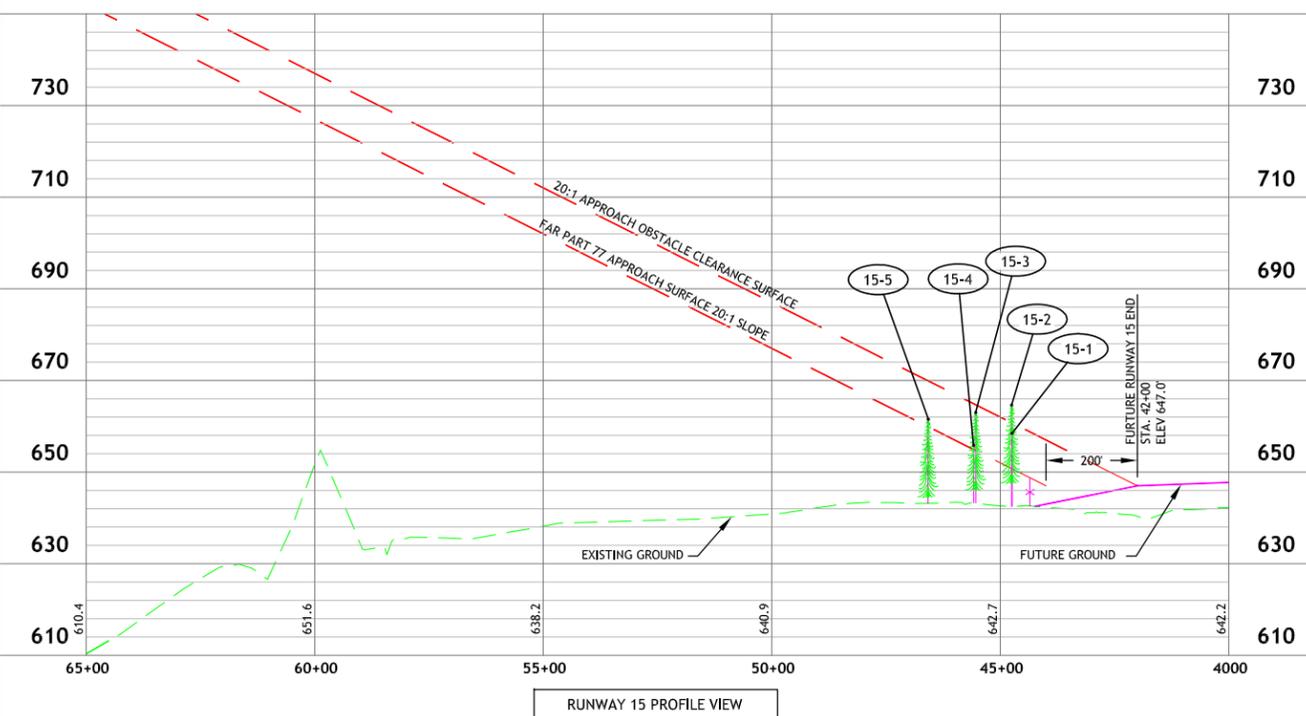


- NOTES:**
- REFER TO SHEET 12 FOR OBSTRUCTION TABLE/DATA
  - TOUCHDOWN ZONE ELEVATION 655.00'

**LEGEND - PLAN**

DESCRIPTION	EXISTING
PROPERTY LINE	—
RUNWAY SAFETY AREA	— RSA —
RUNWAY OBJECT FREE AREA	— OFA —
25' BUILDING RESTRICTION LINE	— BRL —
OBJECT FREE ZONE	— OFZ —
FAR APPROACH SURFACE	—
FAR APPENDIX 2 SURFACE	—
FENCE LINE	— X — X —
TREE LINE	—
BUILDING	—
POWER POLE	—

- LEGEND - PROFILE**
- ROADWAY CLEAR HEIGHT (15')
  - FENCE
  - TREES



**AIRPORT LAYOUT PLAN**

**FUTURE RUNWAY 15-33 APPROACH**

**CHARLEVOIX MUNICIPAL AIRPORT**

**CHARLEVOIX, MI**

CONTRACT NO: NA    DRAWN: SGS    DESIGNED: PDS    REVIEWED: REL    APPROVED: MLB    DATE: 4-15-13

DRAFT 9 / 2011    DESCRIPTION    REV    DATE    BY

4881 Lafayette Center Drive, Suite 210A  
 Charlevoix, MI 49826  
 PH 517.327.1980 / FX 517.327.1982  
 www.armstrong.com

11

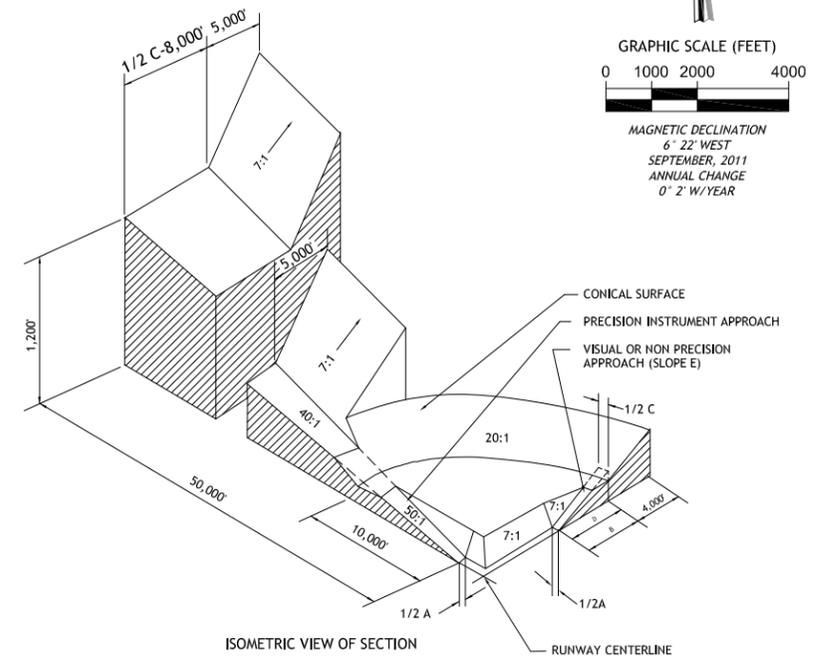
OF 15



File Name: M:\2008\Charlevoix\ALP\CADD\Final Plans\13-FAR PART 77.dwg - PART 77  
 Modified / By: January 2, 2013 5:25:27 PM / ssmith  
 Plotted / By: June 4, 2013 7:53:02 AM / Scott Smith



MAP SOURCE: USGS TOPOGRAPHICAL MAP



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY		PRECISION INSTRUMENT RUNWAY	
		A	B	A	B	C	D
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

- A - UTILITY RUNWAYS
- B - RUNWAYS LARGER THAN UTILITY
- C - VISIBILITY MINIMUMS GREATER THAN 3/4 MILES
- D - VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
- \* - PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 APPROACH SURFACE FOR INNER 10,000 FEET AND 40:1 APPROACH SURFACE FOR AN ADDITIONAL 40,000 FEET

TOWER	OBJECTS ON PART 77			
	LATITUDE	LONGITUDE	STRUCTURE HEIGHT	TOP ELEVATION
1	45° 18' 14.4" N	85° 15' 43.83" W	59' AGL	700' MSL
2	45° 17' 57.89" N	85° 16' 48.15" W	43' AGL	720' MSL
3	45° 18' 6" N	85° 16' 54" W	106' AGL	785' MSL
4	45° 18' 59" N	85° 18' 3" W	325' AGL	927' MSL
5	45° 18' 59" N	85° 17' 56" W	223' AGL	826' MSL
6	45° 18' 59" N	85° 17' 47" W	228' AGL	822' MSL
7	45° 19' 9" N	85° 15' 43" W	155' AGL	788' MSL
8	45° 18' 57" N	85° 14' 47" W	200' AGL	791' MSL
9	45° 19' 42.3" N	85° 14' 17" W	199' AGL	839' MSL

ARMSTRONG CONSULTING

4100 Capital City Blvd., Fl. 2  
Lansing, MI 48906  
Ph: 313.327.1980 // Fx: 517.327.1982  
GoEconsulting.com

DATE: 4-15-13

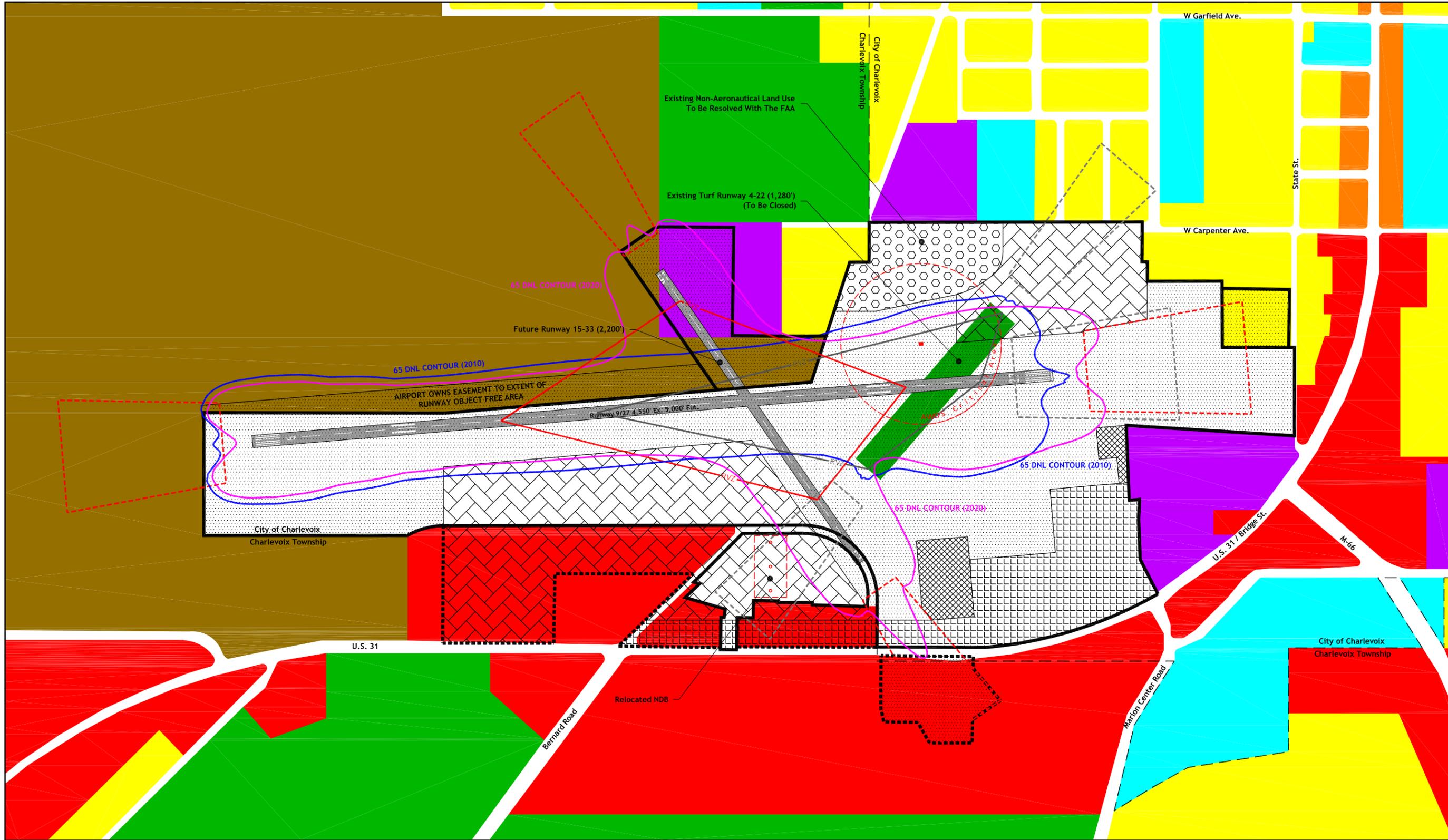
APPROVED: [Signature]

DESIGNED: [Signature]

DRAWN: [Signature]

CONTRACT NO.: NA

13 OF 15

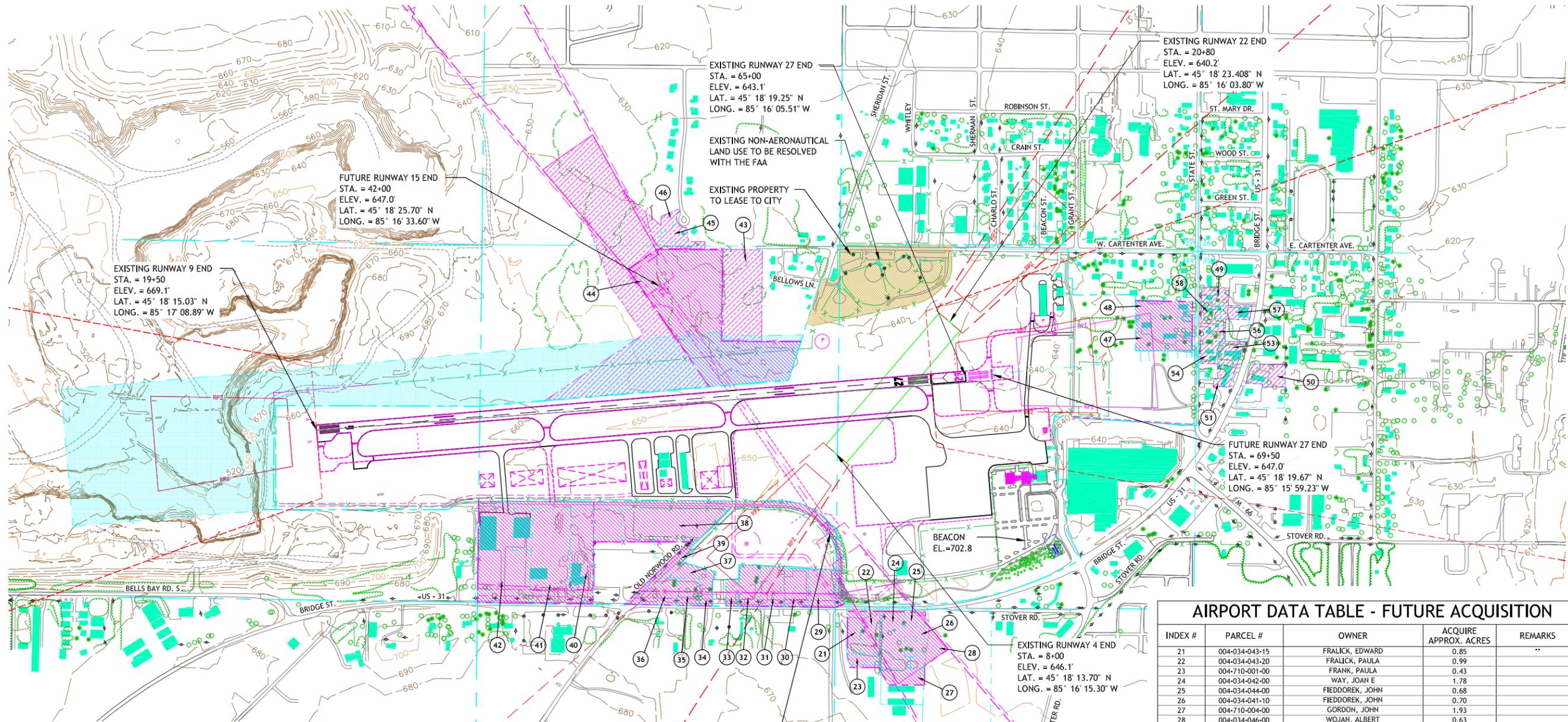


LEGEND		
DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE	— — — — —	— — — — —
RUNWAY PROTECTION ZONE	— — — — —	— — — — —
RUNWAY VISIBILITY ZONE	— RVZ — — — —	— RVZ — — — —
65 DNL	— — — — —	— — — — —
CITY OF CHARLEVOIX LIMITS	— — — — —	N/A

LAND USES			
OFF-AIRPORT		ON-AIRPORT	
RESIDENTIAL	[Yellow Box]	AIRFIELD OPERATIONS	[Diagonal Hatching]
COMMERCIAL	[Red Box]	GENERAL AVIATION	[Cross Hatching]
INDUSTRIAL	[Purple Box]	TERMINAL AREA	[Vertical Hatching]
PUBLIC FACILITIES	[Cyan Box]	SUPPORT FACILITIES	[Horizontal Hatching]
AGRICULTURAL	[Green Box]	NON-AVIATION RELATED USE	[Stippled]
MINERAL DISTRICT	[Brown Box]		

		4000 Capital City Blvd., Flr 2 Lansing, MI 48906 PH 517.327.1980 / F 517.327.1982 QoECConsulting.com
		4100 Capital City Blvd., Flr 2 Lansing, MI 48906 PH 517.327.1980 / F 517.327.1982 QoECConsulting.com
AIRPORT LAYOUT PLAN LAND USE		CHARLEVOIX, MI DATE: 4-15-13
CONTRACT NO: NA	DRAWN SGS	DESIGNED PDS
REVIEWED REL	APPROVED MLB	DATE: 4-15-13
REV	DESCRIPTION	DATE
BY	DESCRIPTION	DATE

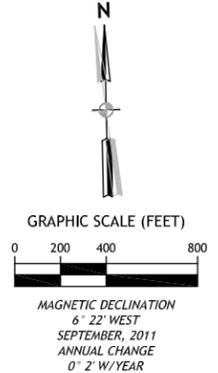
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 April 2, 2013 3:34:13 PM / pshaber  
 June 4, 2013 7:53:40 AM / Scott Smith



**LEGEND**

DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE*	---	---
PROPERTY ACQUISITION AREA	NA	---
AVIGATION EASEMENT AREA	---	---
RUNWAY SAFETY AREA	RSA	RSA
RUNWAY OBJECT FREE AREA	OFA	OFA
RUNWAY OBJECT FREE ZONE	OFZ	OFZ
RUNWAY PROTECTION ZONE	RPZ	RPZ
RUNWAY VISIBILITY ZONE	RVZ	RVZ
TAXIWAY SAFETY AREA	TSA	TSA
TAXIWAY OBJECT FREE AREA	OFA	OFA
BUILDING RESTRICTION LINE	BRL	BRL
AIRPORT PAVEMENT	---	---
FENCE LINE*	X X	X X
SECTION LINE	---	---
CONTOURS	---	---
POWER POLE	---	---
TREE LINE	---	---
BUILDING	---	---
ROTATING BEACON	★	★
WIND CONE	---	---
TVOR	---	---
ARP	---	---
TAXIWAY EDGE LIGHTS	---	---
AWOS	---	---
PAPI	---	---
REIL	---	---
THRESHOLD LIGHTS	---	---
MRL/MTL	---	---
SECTION CORNER	---	---

\*ESTIMATED ITEM



**AIRPORT DATA TABLE - FUTURE ACQUISITION**

INDEX #	PARCEL #	OWNER	ACQUIRE APPROX. ACRES	REMARKS
21	004-034-043-15	FRALICK, EDWARD	0.85	
22	004-034-043-20	FRALICK, PAULA	0.99	
23	004-710-001-00	FRANK, PAULA	0.43	
24	004-034-042-00	WAY, JOAN E	1.78	
25	004-034-044-00	FIEDDREK, JOHN	0.68	
26	004-034-041-10	FIEDDREK, JOHN	0.70	
27	004-710-004-00	GORDON, JOHN	1.93	
28	004-034-046-00	WOJAN, ALBERT	0.63	
29	004-034-008-25	K & K, LLC	1.34	
30	004-034-008-15	CENTER, CHARLES	1.24	
31	004-034-010-10	CHARLEVOIX INVESTMENTS, LLC	1.18	
32	004-034-009-00	KIPPE, KELLI	1.14	
33	004-034-012-00	DEYOUNG, RANDALL	0.46	
34	004-034-016-00	SCHAPERKOTTER, THOMAS	0.46	
35	004-034-015-00	SCHAPERKOTTER, THOMAS	0.73	
36	004-034-014-00	RANGER INVESTMENTS LLC	0.94	
37	004-034-011-25	TEAGUE, KEITH & RACHEL	0.58	
38	004-034-021-15	SCHAPERKOTTER, THOMAS	3.58	
39	004-034-020-20	MC KEOWN, PATRICK	0.52	
40	004-034-019-10	MC KEOWN, PATRICK	2.54	
41	004-034-017-50	CVX SKYDOMINIUMS LLC	4.85	
42	004-034-017-40	LATTITUDE 45 INC	6.60	
43	004-034-002-10	WHITLEY INVESTMENTS LTD	4.48	
44	004-034-004-00	ST BARBARA CEMENT INC	1.27	
45	004-110-015-00	SIEGWART BUILDING CO	0.46	
46	004-110-016-00	GRAHAM, CHARLES	0.32	
47	052-234-018-10	SEELYE, DONALD	2.58	
48	052-234-017-10	LEWIS, LOIS	1.27	
49	052-335-003-10	JAHN, SUSAN	0.61	
50	052-335-015-10	FERRELL, BRIAN	0.96	
51	052-335-014-00	D & L RICH LLC	0.48	
53	052-335-011-00	EPIPHANY REAL ESTATE VENTURE LLC	0.64	
54	052-335-010-00	DAVIS, REX	0.48	
56	052-335-008-00	DUPONT, WILLIAM	0.69	
57	052-335-006-00	SBWILLIAMS LLC	0.50	
58	052-335-007-00	MOTTARELLI, GILDA	0.32	

- NOTES:
1. AIRPORT PROPERTY IS LOCATED WITHIN SECTIONS 34 OF CHARLEVOIX ISLAND TOWNSHIP (T38N, R2W)
  2. SEE CURRENT EXHIBIT A FOR EXISTING PARCEL ACQUISITION AND EASEMENT INFORMATION INCLUDING DATE PROPERTY WAS ACQUIRED AND FEDERAL PROJECT NO.
  3. TYPE OF INTEREST (FEE SIMPLE LAND ACQUISITION OR AVIGATION EASEMENT) - TO BE DETERMINED AT TIME OF ACQUISITION.
  4. THIS PLAN SHEET DEPICTS FUTURE DEVELOPMENT
  5. ULTIMATE LAND ACQUISITION TO BE DETERMINED AT TIME OF ACQUISITION.

**AIRPORT LAYOUT PLAN  
PROPERTY PLAN**

**CHARLEVOIX MUNICIPAL AIRPORT**

**CHARLEVOIX, MI**

CONTRACT NO: NA  
 DRAWN: SGS  
 DESIGNED: PDS  
 REVIEWED: REL  
 APPROVED: MLB  
 DATE: 4-15-13

DRAFT 9 / 2011  
 DESCRIPTION  
 REV  
 DATE  
 BY

**15**  
OF  
**15**

**G&E CONSULTING**

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 Lansing, MI 48906  
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**ARMSTRONG**

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