MERRILL FIELD AIRPORT MASTER PLAN UPDATE AND NOISE STUDY APPENDIX

Prepared for:

Merrill Field Airport
Municipality of Anchorage
Final December 2016

Prepared by:

HDR, Inc.

with

Harris Miller Miller & Hanson Inc. (HMMH), Hattenburg Dilley & Linnell LLC (HDL), and McClintock Land Associates (MLA), Inc.

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Appendix A

Public Involvement Chronology

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Chronology of Public Involvement Activities
03-01-12 through present

Date	Public Involvement Tool/Location	Purpose	Person Attending	Documentation	Facilitated by Team	External Milestone (for publication)
03-01-12	**Meeting** MRI Airport Advisory Commission Meeting	Attended the meeting. Alex announced we were working on the plan.	McPherson, Siebe	None	No	No
03-02-12	**Review**	PIP, AAG Membership and Mailing List sent to MRI for review and edits	McPherson, Schmidt	AIP-54 MRI Public Involvement Plan	Yes	No
03-07-12	**Web Site** Web site launched	Public involvement	Schmidt, Wood	030712	Yes	Yes
03-08-12	**Newsletter** Merrill Field Bulletin Announcement	Announce kick-off meeting to airport users	Schmidt	030812 Merrill Field Bulletin Master Plan Announcement	Yes	Yes
03-14-12	**Correspondence** Airport Heights Community Council	Phone conversation and follow up email with Geran Tarr, President to schedule April and May project team participation on the agenda and request community council representation on the AAG	Schmidt	Merrill Field Airport Master Plan Update and Noise Study	Yes	No
03-14-12	**Correspondence** Fairview Community Council	Phone conversation and follow up email with SJ Klein, Chair to schedule April and May project team participation on the agenda and request community council representation on the AAG	Schmidt	Merrill Field Airport Master Plan Update and Noise Study	Yes	No
03-14-12	**Correspondence** Mountain View Community Council	Phone conversation and follow up email with Niki Burrows, Secretary to schedule April and May project team participation on the agenda and request community council representation on the AAG	Schmidt	Merrill Field Airport Master Plan and Noise Study	Yes	No
03-14-12	**Correspondence** Rogers Park Community Council	Email to David Morgan, President to schedule April and May project team participation on the agenda and request community council representation on the AAG	Schmidt	Merrill Field Airport Master Plan and Noise Study	Yes	No

Chronology of Public Involvement Activities
03-01-12 through present

Date	Public Involvement Tool/Location	Purpose	Person Attending	Documentation	Facilitated by Team	External Milestone (for publication)
03-14-12	**Correspondence** Russian Jack Community Council	Phone conversation and follow up email with Ed Leach, President to schedule April and May project team participation on the agenda and request community council representation on the AAG	Schmidt	Merrill Field Airport Master Plan and Noise Study	Yes	No
03-15-12	**Correspondence** Rogers Park Community Council	Phone conversation and follow up email with Jim Wright, Past President to schedule April and May project team participation on the agenda and request community council representation on the AAG due to non-response from David Morgan	Schmidt	FW Merrill Field Airport Master Plan and Noise Study	Yes	No
03-15-12	**Web Site**	Changes to site to reflect new project name "Merrill Field Airport Master Plan Update and Noise Study"	Schmidt		Yes	No
03-15-12	**Mailing List**	Added Alaska Sales and Service contacts to mail list	Schmidt	FW AIP-54 Add contact list	Yes	No
04-09-12	**Newsletter**	Newsletter drafted and approved	Wood	Z:\08706 Muni of Anchorage\178086 Merrill Field AMP Update\Graphics\Newsletters\040912Newsletter1.pdf	Yes	No
04-09-12	**Community Council Meeting** Rogers Park	Introduce project and project team	McPherson, Jumao-as		Yes	Yes
04-09-12	**Community Council Meeting** Mountain View	Introduce project and project team	McPherson, Jumao-as	Mountainview CC newsletter agenda 10_14_13	Yes	Yes
04-11-12	**Community Council Meeting** Russian Jack	Introduce project and project team	McPherson, Jumao-as		Yes	Yes
04-12-12	**Community Council Meeting** Fairview	Introduce project and project team	McPherson, Jumao-as		Yes	Yes

Chronology of Public Involvement Activities
03-01-12 through present

Date	Public Involvement Tool/Location	Purpose	Person Attending	Documentation	Facilitated by Team	External Milestone (for publication)
04-19-12	**Community Council Meeting** Airport Heights	Introduce project and project team	McPherson, Jumao-as		Yes	Yes
04-23-12	**Newsletter/Advertisement**	Newsletters mailed out ~750 recipients, project introduction and public meeting announcement	Gunkel, Schmidt		Yes	Yes
04-24-12	**Advertisement/Community Presentation Offer**	Phone conversation and follow-up email to Eastridge Condo Association inviting to public meeting and/or the project team delivering a presentation at the next meeting	Schmidt	Eastridge 4 Condos Merrill Field Airport Master Plan and Noise Study Open House Invite	Yes	Yes
04-25-12	**Advertisement**	Request to AAG to help advertise the public meeting on May 10 and post flyers	Schmidt		Yes	Yes
04-27-12	**Advertisement**	Print advertisement published in the Anchorage Daily News	Schmidt	Merrill April 27 Ad 041712a	Yes	Yes
04-30-12	**Correspondence** AAG Reminder	Reminder and directions sent to the Airport Advisory Group	Schmidt		Yes	Yes
05-03-12	**Meeting** MRI Airport Advisory Commission Meeting	Attended the meeting. John gave a brief update.	McPherson, Siebe	None	No	No
05-02-12	**AAG Meeting #1**	Introduced the project and project team, gathered feedback from the group regarding issues and concerns with the airport	Cummings, McPherson, Schmidt, Jumao-as, Lundeby	050212 AAG Meeting #1	Yes	Yes
05-02-12	**Mailing List** Updates	Received mailing list updates from Merrill Field. Community council information also updated after April elections.	Schmidt		Yes	Yes
05-03-12	**MAAAC Meeting**	Introductory project presentation delivered	McPherson		Yes	Yes
05-09-12	**Community Council Meeting** Russian Jack	Noise program presentation	McPherson, Jumao-as	050912 Noise Presentation	Yes	Yes

Chronology of Public Involvement Activities
03-01-12 through present

Date	Public Involvement Tool/Location	Purpose	Person Attending	Documentation	Facilitated by Team	External Milestone (for publication)
05-10-12	**Public Meeting #1**	Open house from 6 to 8pm in the lobby/atrium of the UAA Aviation Technology Division, introduced the project and gathered public feedback	Cummings, McPherson, Siebe, Schmidt, Jumao-as, Lundeby	051012 Public Meeting #1	Yes	Yes
05-10-12	**Community Council Meeting** Fairview	Noise program presentation	McPherson, Jumao-as		Yes	Yes
05-14-12	**Community Council Meeting** Rogers Park	Noise program presentation	McPherson, Jumao-as	051412 Noise Presentation	Yes	Yes
05-14-12	**Community Council Meeting** Mountain View	Noise program presentation	McPherson, Jumao-as	051412 Noise Presentation	Yes	Yes
05-14-12	**Correspondence** Humphreys IT Issue	Geoffrey Humphreys brought up that the online comment form was not working at the Russian Jack CC Meeting and attended the Open House to bring up the same issue. The IT team looked into the problem and it was an issue with Mr. Humphreys firewall. He can now access the form.	Waite, McPherson, Schmidt	Humphreys IT Issue		
05-15-12	**Web Site** Update	Removed open house information and past documents, posted noise workshop information, open house materials, and AAG membership list	Schmidt			
05-15-12	**Correspondence** Phone Call	Left message for SJ Klein to work out details of the June 6, 2012 Fairview Community Council Workshop	Schmidt		Yes	No
05-17-12	**Community Council Meeting** Airport Heights	Noise program presentation	McPherson		Yes	Yes
05-17-12	**Mailing List**	Added most recent electronic sign-ups	Schmidt			
	Correspondence AAG meeting follow-up	Email sent to AAG members with meeting notes and materials from meeting #1	Schmidt	Merrill Field Airport Advisory Group Meeting 1 Notes and Materials	Yes	Yes

Chronology of Public Involvement Activities
03-01-12 through present

Date	Public Involvement Tool/Location	Purpose	Person Attending	Documentation	Facilitated by Team	External Milestone (for publication)
	Advertisement	Request to AAG to share noise workshop information	Schmidt	AAG Request to Advertise Noise Workshop	Yes	Yes
05-22-12	**Advertisement** Fairview Noise Workshop Postcard	Fairview Noise Workshop postcard drafted, approved and sent to printer	Adair, Schmidt	052212 Merrill Field Postcard	Yes	Yes
05-23-12	**Advertisement**	Mark Butler with the FCC picked up the Fairview postcard for processing and mailing due to rules surrounding community council mailing lists	Federation of Community Councils, postage and handling by Speedy Mail		Yes	No
05-29-12	**Advertisement**	Noise workshop information sent to Merrill Field Business owners, community council presidents, federation of community councils, Municipal Airports Aviation Advisory Commission, Commission distribution and T-hangar owners	Sivyer	Merrill Field Noise Study Workshop Information RE AIP-54 Noise Workshop information for posting to the MOA web site and flyer for distribution	Yes	Yes
05-29-12	**Advertisement**	Federation of Community Councils Posting about Noise Workshop	Federation of Community Councils	FW Merrill Field Master Plan and Noise Study Workshop Thursday 6 7 12	No	Yes
05-30-12	**Mailing List**	Added Dan Rathert and Wende Wilber to electronic sign-ups	Schmidt			
05-30-12	**Advertisement**	Alaska Airport Association paragraph in newsletter about the noise workshop	Jane Dale	May AkAA Newsletter 2012	No	Yes
05-30-12	**Website**	Added the following line to the comment form: If you are having trouble with this form. Please send comments to the following email: contact@merrillfieldmasterplan.com.	Schmidt			
05-30-12	**Advertisement**	Email sent to e-newsletter list advertising the noise workshop	Schmidt	Merrill Field Noise Workshop - June 7 2012	Yes	Yes
06-01-12	**Advertisement**	Postcard mailed to all individuals that have complained about noise at Merrill Field to invite them to the noise workshop ~75 recipients	Schmidt, Meade		Yes	Yes

Chronology of Public Involvement Activities 03-01-12 through present						
Date	**Public Involvement Tool/Location**	**Purpose**	**Person Attending**	**Documentation**	**Facilitated by Team**	**External Milestone (for publication)**
06-01-12	**Newsletter** Merrill Field Bulletin	Information on AMP, public open house, and noise workshops	Sivyer	http://www.muni.org/Departments/merrill_field/Documents/June%202012.pdf		
06-06-12	**Individual Interview**	Data collection with Merrill Field Airport Staff	Cummings, Behr	Summary_Meeting_with_Airport_Staff_20120606		
06-06-12	**Individual Interview**	Data collection with Merrill Field Air Traffic Control Tower staff	Cummings, Behr	Summary_Meeting_with_ATCT_20120606		
06-06-12	**Individual Interview**	Data collection with FAA staff	Cummings, Behr	Summary_Meeting_with_FAA_20120606		
06-06-12	**Individual Interview**	Data collection with UAA staff	Cummings, Behr	Summary_Meeting_with_UAA_20120606		
06-06-12	**Public Meeting** Fairview Community Council Noise Workshop	This workshop provided an opportunity for the public to provide input on potential noise monitoring locations, noise levels, and to meet Harris Miller Miller & Hanson Inc., the sub consultant that performed the noise monitoring program in June.	McPherson, Cummings	060612 Fairview Community Council Noise Workshop		
06-07-12	**Public Meeting** Noise Workshop	This workshop provided an opportunity for the public to provide input on potential noise monitoring locations, noise levels, and to meet Harris Miller Miller & Hanson Inc., the sub consultant that performed the noise monitoring program in June.	McPherson, Cummings	060712 Noise Workshop		
06-07-12	**Individual Interview**	Data collection with Spernak Aviation Staff	Behr	Summary_Meeting_with_Spernak_20120607		
06-14-12	**Individual Interview**	Data collection with Evergreen Helicopters	Behr	Summary_Meeting_with_Evergreen_20120614		
06-25-12	**Individual Interview**	Data collection with Alyeska Helicopters staff	Behr	Summary_Meeting_with_Alyeska_Helicopters_20120625		

Chronology of Public Involvement Activities 03-01-12 through present						
Date	**Public Involvement Tool/Location**	**Purpose**	**Person Attending**	**Documentation**	**Facilitated by Team**	**External Milestone (for publication)**
07-12-12	**Meeting** MRI Airport Advisory Commission Meeting	Attended the meeting. No update offered	McPherson, Siebe	None	No	No
09-06-12	**Meeting** MRI Airport Advisory Commission Meeting	Attended the meeting. No update offered	Siebe	None	No	No
11-01-12	**Meeting** MRI Airport Advisory Commission Meeting	Attended the meeting. Gave an update on the noise monitoring effort	McPherson, Siebe	None	No	No
11-16-12	**Advertisement**	Email invitation sent to AAG for Meeting #2 on Thursday, November 29, 2012	Schmidt	Save the Date! Airport Advisory Group Meeting on Thursday November 29th	Yes	Yes
11-16-12	**Website**	Website updated to advertise AAG Meeting 2 and to publish the first 3 chapters of the AMP for review, comment period ending December 31 COB	Schmidt		Yes	Yes
11-20-12	**Mailing List**	Merrill Field Mailing List updated - state legislature, local assembly, community councils and MAAAC	Abbott, Schmidt	112012 Merrill Field Mailing List	Yes	Yes
11-26-12	**Advertisement**	Reminder sent to AAG for Meeting #2	Schmidt	Reminder! Airport Advisory Group Meeting this Thursday November 29th	Yes	Yes
11-29-12	**Meeting** AAG Meeting #2	Discussed Aviation Demand Forecast, Airport Inventory, Part 150 Noise Study and next steps	McPherson, Cummings, Siebe, Schmidt	112912 AAG Meeting #2	Yes	Yes
12-4-12	**Website**	Removed AAG Meeting #2 Information	Schmidt		Yes	Yes
12-14-12	**Website**	Posted AAG Meeting #2 documents – agenda, meeting notes, presentation, also published PI Chronology to appendices	Schmidt		Yes	Yes

Chronology of Public Involvement Activities 03-01-12 through present						
Date	**Public Involvement Tool/Location**	**Purpose**	**Person Attending**	**Documentation**	**Facilitated by Team**	**External Milestone (for publication)**
12-14-12	**Newsletter**	Project updated emailed to newsletter list with links to the draft Aviation Demand Forecast, Airport Inventory, Part 150 Noise Study	Schmidt			
12-16-12	**Newsletter**	Merrill Field Bulletin with AMP project update mailed to stakeholders	Sivyer			
01-03-13	**Meeting** MRI Airport Advisory Commission Meeting	Attended the meeting. Updated on the winter noise monitoring effort	McPherson, Siebe	None	No	No
01-04-13	**Individual Interview**	Interviewed Jayhawk about plans to expand their helicopter fleet and operations.	Siebe	010413 Jayhawk Telephone Record		
01-08-13	**Individual Interview**	Interviewed Group 3 Aviation about their helicopter fleet, operations, expansion plans and issues that should be addressed in the AMP.	Siebe	010813 Group 3 Aviation Telephone Record		
03-01-13	**Newsletter** Merrill Field Bulletin	AMP update and notice of open house, submitted by John McPherson	Sivyer	http://www.muni.org/Departments/merrill_field/Documents/March%202013.pdf		
03-07-13	**Meeting** MRI Airport Advisory Commission Meeting	Attended the meeting.	Siebe	None	No	No
05-02-13	**Meeting** MRI Airport Advisory Commission Meeting	Attended the meeting.	Siebe	None	No	No
06-01-13	**Newsletter** Merrill Field Bulletin	"For current information, please visit [website]"	Sivyer	http://www.muni.org/Departments/merrill_field/Documents/June%202013.pdf		
07-11-13	**Meeting** MRI Airport Advisory Commission Meeting	Attended the meeting.	Siebe	None	No	No

Chronology of Public Involvement Activities
03-01-12 through present

Date	Public Involvement Tool/Location	Purpose	Person Attending	Documentation	Facilitated by Team	External Milestone (for publication)
07-13-13	Fairview Block Party	To inform neighborhood of plan and take input	McPherson	fairview-block-party-anchorage-ak-2013	Yes	
09-01-13	**Newsletter** Merrill Field Bulletin	AMP update, notice of public meeting	Sivyer	http://www.muni.org/Departments/merrill_field/Documents/September%202013.pdf		
09-05-13	**Meeting** MRI Airport Advisory Commission Meeting	Attended the meeting. Gave a very brief update on the alternatives.	Siebe	None	No	No
10-7-13	**Newsletter** Newsletter #2	AMP update, notice of public meeting	Jessen	pw:\\PWAPPSEA01:NorthWest_Seattle\Documents\Municipality_of_Anchorage\Merrill_Field_AMP_Update\06.00_Public_Involvement\06.04 Newsletters\091513 Issue 2\	Yes	Yes
10-7-13	**Website** Update	Posted newsletter	Hudson		Yes	
10-9-13	**Advertisement** What's Up	Notice of Public Meeting	Jessen	pw:\\PWAPPSEA01:NorthWest_Seattle\Documents\Municipality_of_Anchorage\Merrill_Field_AMP_Update\06.00_Public_Involvement\06.03 Public Meetings\102213 Public Meeting #2\B) Advertisements\FW whatsup_What's Up 10 9 13 Email Version		
10-9-13	**Community Council** Russian Jack	AMP update, notice of public meeting	McPherson	Russain Jack Agenda	Yes	
10-10-13	**Community Council** Fairview	AMP update, notice of public meeting	McPherson, Bowers	Fairview Agenda 10-10-13	Yes	
10-14-13	**Community Council** Rogers Park	AMP update, notice of public meeting	McPherson	RPCC Agenda 2013-10	Yes	

Chronology of Public Involvement Activities 03-01-12 through present						
Date	**Public Involvement Tool/Location**	**Purpose**	**Person Attending**	**Documentation**	**Facilitated by Team**	**External Milestone (for publication)**
10-14-13	**Community Council** Mountain View	AMP update, notice of public meeting	Mayo	Mountainview CC newsletter agenda 10_14_13	Yes	
10-17-13	**Community Council** Airport Heights	AMP update, notice of public meeting	McPherson, Bowers	Airport Hts Agenda 10-17-13	Yes	
10-20-13	**Advertisement** ADN	Publicize Open House	Jessen		Yes	
10-21-13	**Meeting** Airport Advisory Group #3	AMP update	All		Yes	Yes
10-21-13	**Meeting** Fairview Noise Workshop	AMP update	All		Yes	Yes
10-22-13	**Meeting** Open House	AMP update	All		Yes	Yes
10-23-13	**Website**	Update with meeting materials	Hudson		Yes	
11-22-13	**Correspondence**	Draft resolution from Fairview Community Council/Klein sent to Paul Bowers (proposed for action at Dec 21 meeting)	Bowers	Draft-FCC merrilfieldresolution2013-xx	No	No
12-05-13	**Correspondence**	Response to Klein/FCC	Bowers	120513 Klein FCC Response-Bowers	No	No
12-12-13	**Community Council** Fairview	AMP update	McPherson		Yes	No
5.5.16	**Website**	Updated to reflect the start of Phase 2		EDITS Merrill Field MPU Website		

Chronology of Public Involvement Activities 03-01-12 through present						
Date	**Public Involvement Tool/Location**	**Purpose**	**Person Attending**	**Documentation**	**Facilitated by Team**	**External Milestone (for publication)**
5.19.16	**Email** Message sent to Airport Advisory Group Members re: commencement of Phase 2, and asking for interest in remaining on the AAG, and reviewing document chapters	Update on project status and solicit feedback	Biastock	Merrill Field Master Plan Update Phase 2 - Airport Advisory Group RSVPs and Final Copy of May 2015 REVISED AAG Invite Tracking Phase 2 (3)	Yes	Yes
6.4.15	**Email** AAG members who expressed interest in continuing were emailed.	Remaining AAG members were sent the alternatives chapter for review. Comments were requested by June 19, 2015.	Siebe	Merrill Field Airport Master Plan AGG Phase 2 positive response list, June 2015 xlsx	Yes	Yes
4.11.16	**Presentation** Rogers Park Community Council	Project update, solicit feedback (primarily on the facilities implementation (or proposed improvements) chapter of the plan.	Siebe, Cummings		Yes	Yes
4.11.16	**Presentation** Mountain View Community Council	Project update, solicit feedback (primarily on the facilities implementation (or proposed improvements) chapter of the plan.	Siebe, Cummings		Yes	Yes
4.14.16	**Presentation** Fairview Community Council	Project update, solicit feedback (primarily on the facilities implementation (or proposed improvements) chapter of the plan.	Siebe, Cummings		Yes	Yes
4.13.16	**Presentation** Russian Jack Community Council	Project update, solicit feedback (primarily on the facilities implementation (or proposed improvements) chapter of the plan.	Siebe, Cummings		Yes	Yes
4.21.16	**Presentation** Airport Heights Community Council	Project update, solicit feedback (primarily on the facilities implementation (or proposed improvements) chapter of the plan.	Siebe, Cummings		Yes	Yes

Chronology of Public Involvement Activities 03-01-12 through present						
Date	**Public Involvement Tool/Location**	**Purpose**	**Person Attending**	**Documentation**	**Facilitated by Team**	**External Milestone (for publication)**
4.27.16	**Newsletter #3/ Website Update** Newsletter was uploaded onto the project website.	To share information about the facilities implementation and financial implementation chapter, as well as provide a general project update. The newsletter also solicited feedback on the draft chapters, particularly the chapters on Facilities and Financial Implementation (Ch. 6 and Ch. 7).	Biastock	Newsletter #3	Yes	Yes
4.27.16	**Email** The general project email list an all AGG members (all who were invited to participate in Phase 2)	Stakeholders were emailed the newsletter and specifically asked to review Chapters 6&7. Comments were requested by May 31, 2016	Biastock	Newsletter #3	Yes	Yes

Appendix B

2012 Airfield Inspection Report

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MUNICIPALITY OF ANCHORAGE

Merrill Field Airport

2013 AIRPORT

INSPECTION REPORT

Prepared By:

Hattenburg Dilley & Linnell
3335 Arctic Boulevard, Suite 100
Anchorage, Alaska 99503

August 2013

2013 AIRPORT INSPECTION REPORT
Municipality of Anchorage
Merrill Field Airport

August 2013

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NOTICE

The ongoing maintenance and repair of Merrill Field airfield, roadway, and building facilities is of crucial importance in protecting the airport's capital investment and enhancing airport safety and security. This 2013 Airport Inspection Report documents the current condition of existing lighting, signage, marking, pavement, fencing, and security system infrastructure. Improvements and upgrades to airport owned buildings were not analyzed or included herein. This report revises the recommendations provided in the Merrill Field Airport 2007 Annual Airport Inspection Report, dated May 2008. An order of magnitude cost estimate is included with each recommendation.

SECTION 1

Runways, Taxiways, Aprons

1.1 Lighting & Navaids

1.1 LIGHTING AND NAVIGATIONAL AIDS

Introduction

An inspection of the airfield lighting and navigational aid (NAVAID) equipment on Merrill Field Airport was performed on July 23 through July 25, 2013. The inspection of airport lighting components included evaluation of the existing condition of the airport lighting vault, standby generator, and runway and taxiway edge lighting for Runway 16/34, Runway 7/25, Taxiways A, B, C, G, N, Q, and interlink taxiways. The NAVAID inspection included the airport beacon, lighted wind cones, runway end identifier lights (REILs), and visual approach slope indicators (VASIs). The equipment was also checked for compliance with applicable FAA advisory circulars and local, state, and federal code requirements. Maintenance records, technical manuals, and spare parts inventories were not verified during this inspection.

The airport lighting vault is located in a concrete block room on the east end of the airport manager's office building. The vault contains power distribution panels for the airport manager's office, the standby power generator, and seven constant current regulators for the runway and taxiway edge light circuits. The 2013 inspection evaluated the vault for conformance with FAA AC 150/5340-26B and the Municipal Electrical Code. Multiple code violations were identified during the inspection and are noted in the Updated Electrical Inspection Checklist included in this section. Most violations were caused by the cramped nature of the vault and inadequate clear spaces in front of and around equipment. Recent construction in the vault has consisted of replacement of existing electrical components with new equipment. New installations have been installed in conformance with FAA AC 150/5340-26B and the Municipal Electrical Code.

The runway and taxiway edge lights consist of mid-intensity fixtures elevated 24 inches above grade. The fixtures are equipped with varying lens attachment methods including twist lock, clamp band, and pop top style attachments. The lighting was checked for conformance with FAA AC 150/5340-30G for color, siting criteria, and installation. The general condition and operation of the edge lighting were also evaluated. Non-conforming elements of the airport lighting system are noted in the Updated Electrical Inspection Checklist included in this section.

The rotating beacon and wind cones were inspected for conformance with FAA AC 150/5345-12F and 150/5345-27D and general operational performance. The rotating beacon is located adjacent to the south wall of the Merrill Field maintenance building, near the intersection of Taxiway Q and Merrill Field Drive. A general inspection of the beacon was performed from ground level. In 2011, Merrill Field maintenance noted that the beacon was not rotating consistently. Beacon upgrade work performed in 2012 consisted of replacing the bearings, re-building the gear box, and installing new bulbs. Beacon malfunctions have not been reported since the upgrades. The primary wind cone is located to the southeast of the intersection of Runway 7/25 and Runway 16/34, with 4 secondary wind cones located at the east end of Runway 7/25, south end of Runway 16/34, east end of Runway 5/23, and east end of Taxiway Q near the helipad. The primary lighted wind cone and secondary lighted wind cone at the south end of Runway 16/34 were replaced in 2010 with new LED L-807 lighted wind cones.

Merrill Field opted to install 12-foot, non-frangible, wind cones at both locations for improved visibility and functionality.

The 2013 inspection also included evaluation of the REILs and approach aids at each runway end. Each end of Runway 7/25 is equipped with VASIs and omni-directional REILs. Runway 34 was equipped with a precision approach path indicator (PAPI) and uni-directional REILs that face approaching aircraft. Runway 16 is equipped with a VASI and uni-directional REILs. The FAA owns and maintains the VASI and REIL navigational aids on both the runways at the airfield. The Runway 34 PAPI is owned and maintained by Merrill Field. The inspection verified that all NAVAIDs were operational and noted the general condition of the equipment. Equipment aiming and signal intensity were not measured during the inspection. New runway lighting conductors which supply power to the REILs were installed in the 2010 project. FAA technicians serviced the REILs on Runway 16/34 after the lighting conductors were installed but deficiencies identified in the 2007 Annual Airport Inspection were not addressed.

Recommended Corrective Action

The corrective action list consists of (7) items to be completed including: 1) removing and replacing the standby generator with a new enclosure outside the airport lighting vault; 2) rearranging the regulator layout and hydronic heat piping in the airport lighting vault to meet code; 3) fixing broken or missing lights and junction boxes; 4) replacing edge light lamps, 5) upgrading remaining runway and taxiway edge lighting to LED fixtures; 6) improving grounding and bonding of beacon tower; and 7) replacing remaining lighted wind cones with LED, tilt down, fixtures. Action item descriptions are listed in the attached Updated Electrical Inspection Checklist. The locations of action items are depicted on Sheet 1.1. Preliminary construction costs are included below (2013 dollars).

Completed Corrective Action Cost Summary

Install New Standby Generator in New Enclosure Outside of Lighting Vault; Rearrange Lighting Vault	$670,000
Repair Damaged/Missing Edge Lights and Junction Boxes 6 @ $925	$5,550
Replace Edge Light Lamps 11 @ $30	$330
Upgrade Airport Edge Lighting to LED Fixtures (approximately 150) @ $750	$112,500
Improve Beacon Tower Grounding and Bonding	$2,500
Replace Lighted Wind Cones 2 @ $25,000	$50,000
	==========
Total	$840,880

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Airfield Inspection Report

Merrill Field Airport

Updated Electrical Inspection Checklist

Various Locations on Merrill Field Airport
Equipment Checked: Equipment Vault, Taxiway and Runway Edge Lighting, Lighted Wind Cones, NAVAIDs, Standby Generator
Inspection Date(s): 7/23/2013 - 7/25/2013

N/A = Not Applicable

N/V = Not Verified due to item being not readily accessible, not visible, not identifiable, etc.

Updated Electrical Inspection Checklist							
✓	Item	Location	Inspection Activity	Code Reference	*YES*	*NO*	Comments
	1	Equipment Vault	Is the Facility Structurally Adequate?	AC 150/5340-26B	X		No evidence of settling, cracking, leaks or water damage
	2	Equipment Vault	Is There Adequate Ventilation and Heating?	AC 150/5340-26B	X		
	3	Equipment Vault	Are All Necessary Safety Devices Located in Electric Room?	AC 150/5340-26B	X		The facility was equipped with fire extinguisher, hearing protection, eye wash station, and heat detectors.
	4	Equipment Vault	Was Electrical Equipment Properly Secured?	NFPA 70-Chapter 3	X		
	5	Equipment Vault	Were All Required Electrical Covers in Place?	NFPA 70 - Article 314	X		
	6	Equipment Vault	Was Electrical Equipment Properly Bonded and Grounded?	NFPA 70 - Article 250	X		Equipment was properly bonded and grounded where observed. An in-depth investigation of the bonding and grounding of each device was not performed.
	7	Equipment Vault	Is There Adequate Lighting?	AC 150/5340-26B	X		
	8	Equipment Vault	Is There Proper Access and Working Space Around Equipment?	NFPA 70 - Article 110.26		X	The regulators are stacked, one above the other, and block access to the panelboards and wireways. Hydronic heat piping is installed in the dedicated space required above the panelboards.
	9	Runway and Taxiway Edge Lights	Are Runway and Taxiway Edge Lights the Required Color?	AC 150/5340-30E	X		

Updated Electrical Inspection Checklist						
✓	Item	Location	Inspection Activity	Code Reference	*YES*	*NO*	Comments
	10	Runway and Taxiway Edge Lights	Are all Inspected Edge Lights Intact, Secured, Sealed, and Gasketed?	AC 150/5345-46D		X	Defects Were Noted in the Following Locations: -Runway 7/25: Runway Light located near the northwest intersection with Taxiway E, lamp significantly dimmed or burned out. -Taxiway A, North of Runway 7/25: Taxiway Light located between Taxiway J and Taxiway K, lamp significantly dimmed or burned out. -Taxiway B, West of Runway 16/34: Taxiway Light near the north intersection with Taxiway R, stem and light fixture are missing. -Taxiway C, East of Runway 16/34: Taxiway Light located near the south intersection with Taxiway N, top of light can is above surrounding ground in excess of 3 inches. -Taxiway C, East of Runway 16/34: Taxiway Light located between Taxiway Q and Taxiway R, light is out of alignment. -Taxiway C, East of Runway 16/34: Taxiway Light located near the south intersection with Taxiway R, top of light can is above surrounding ground in excess of 3 inches. -Taxiway F, North of Runway 7/25: Taxiway Light located near the east intersection with Runway 7/25, lamp significantly dimmed or burned out. -Taxiway H, North of Runway 7/25: Taxiway Light located near the west intersection with Runway 7/25, lamp significantly dimmed or burned out. -Taxiway H, North of Runway 7/25: Taxiway Light located near the east intersection with Runway 7/25, lamp significantly dimmed or burned out. -Taxiway K, South of Runway 7/25: Taxiway Light located near the west intersection with Runway 7/25, lamp significantly dimmed or burned out.

Updated Electrical Inspection Checklist							
✓	Item	Location	Inspection Activity	Code Reference	*YES*	*NO*	Comments
	10 cont.	Runway and Taxiway Edge Lights	Are all Inspected Edge Lights Intact, Secured, Sealed, and Gasketed?	AC 150/5345-46D		X	-Taxiway N, South of Runway 7/25: Taxiway Light located between Taxiway C and Taxiway D, lamp significantly dimmed or burned out. -Taxiway N, South of Runway 7/25: Taxiway Light located near east intersection with Taxiway E, lamp significantly dimmed or burned out. -Taxiway N, South of Runway 7/25: Taxiway Light located near east intersection with Taxiway H, lamp significantly dimmed or burned out. -Taxiway K, South of Runway 7/25: Taxiway Light located near west intersection with Runway 7/25, lamp significantly dimmed or burned out.
	11	Runway and Taxiway Edge Lights	Are all inspected J-Boxes and Wiring Components Intact and in Working Condition?	AC 150-5345-42G		X	Defects were noted in the Following Locations: -South side of Runway 7/25, Between Taxiway C and Taxiway D Intersections: Abandoned wire and plug exposed on edge of runway. An orange cone was placed over the exposed wires. -South side of Runway 7/25, Between Taxiway C and Taxiway D Intersections: Abandoned sign/light base exposed on edge of runway. An orange cone was placed over the sign/light base.
	12	Airport Beacon	Is the Structure in Good Physical Condition?	AC 150-5345-12F	X		Inspection of beacon took place from ground level. Close Inspection of light fixture was impossible without a manlift.
	13	Airport Beacon	Is Tower Equipped with Lightning Protection?	AC 150-5345-12F	X		
	14	Airport Beacon	Is the Down Conductor Secured to the Tower at Maximum intervals of 3-foot?	AC 150-5345-12F		X	Conductor was secured at intervals larger than 3-foot.
	15	Airport Beacon	Is the Down Conductor Exothermically Welded to the Top of the Pile Foundation Cap?	AC 150-5345-12F		X	Conductor was bonded underneath the pile cap
	16	Lighted Wind Cones	Are Wind Cones in Good Physical Condition?	AC 150-5345-27D	X		

Updated Electrical Inspection Checklist						
✓	Item	Location	Inspection Activity	Code Reference	*YES*	*NO*	Comments
	17	Lighted Wind Cones	Are internal Wind Cone Lights and Obstruction Lights in Good Condition?	AC 150-5345-27D	X		
	18	Lighted Wind Cones	Do Wind Cones Rotate Freely?	AC 150-5345-27D	X		
	19	Lighted Wind Cones	Is Wind Cone Fabric in Good Condition?	AC 150-5345-27D	X		
	20	Lighted Wind Cones	Do Wind Cone Towers Tilt Down for Maintenance?	AC 150-5345-27D		X	Wind cones located on the east ends of Runway 25 and Runway 23 do not tilt down.
	21	Lighted Wind Cones	Do Wind Cone Towers Have Frangible Bases?	AC 150-5345-27D		X	Wind cones located on the east ends of Runway 25 and Runway 23 are not frangible.
	22	Lighted Wind Cones	Is there Adequate Lightning Protection at Each Wind Cone Tower?	AC 150-5345-27D		X	Wind cones located on the east ends of Runway 25 and Runway 23 do not have adequate lightning protection and grounding and wire connections could not be observed.
	23	REILs	Are REILs Operational?	AC 150-5345-51B	X		
	24	REILs	Are REILs in Good Physical Condition?	AC 150-5345-51B		X	Cabinets for REILS located on the Runway 34 are severely rusted and paint is significantly pitted and peeling. REILS are of an older style that is no longer typically used.

Updated Electrical Inspection Checklist						
✓	Item	Location	Inspection Activity	Code Reference	*YES*	*NO*	Comments
	25	PAPI	Is PAPI Operational?	AC 150/5340-26B	X		
	26	PAPI	Is PAPI in Good Physical Condition?	AC 150/5340-26B	X		
	27	VASIs	Are VASIs Operational?	AC 150/5340-26B	X		
	28	VASIs	Are VASIs in Good Physical Condition?	AC 150/5340-26B	X		Runway 16 VASI, nearest to the intersection of Taxiway M and Runway 16/34, has a cracked/broken concrete foundation.
	29	Standby Generator	Is Generator Operational?	AC 150/5340-26B	X		Generator is an older style generator that is not typically used anymore.
	30	Standby Generator	Is Generator in Good Physical Condition?	AC 150/5340-26B	X		There are 2 bolts missing from the generator floor mounts.
	31	Standby Generator	Does Battery Charger Operate Effectively?	AC 150/5340-26B		X	Battery charger does not automatically keep the batteries charged.

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H:\jobs\12-002 Merrill Master Plan\2013 Airfield Inspection\CAD\Drawings\12-002-FIG-1.1 Elect Sketch 1, 1=200, 08/05/13 at 09:18 by unknown
LAYOUT: Layout1

XREF: 12-002_00_B001

2013 AIRPORT INSPECTION REPORT

MUNICIPALITY OF ANCHORAGE

ANCHORAGE, ALASKA

SHEET TITLE: ELECTRICAL DEFICIENCY LOCATION MAP

SHEET: 1.1

DRAWN BY: RSB
CHECKED BY: AMS
DATE: 7/24/13
SCALE: AS SHOWN
JOB NUMBER: 12-002

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1.2 Pavement

1.2 AIRFIELD PAVEMENT

Introduction

Merrill Field manages approximately 2.5 million square feet of runway, taxiway, and apron asphalt concrete pavement. Paved surfaces north and west of, and including Runways 7/25 and 16/34, are generally founded on relatively clean gravel soils. Pavements south and east of Runways 7/25 and 16/34 are generally founded on poor soils and landfill garbage. The ages and condition of pavements are found in the attached 2012 Pavement Inspection Report (James Horn, Alaska DOT&PF). The Alaska DOT&PF performs airport pavement inspections typically every 3 years.

Runways. Runway 7/25 pavement was rehabilitated in 2005. An approximate 75-foot by 15-foot area of pavement along the south edge of Runway 7/25, between Taxiways C and D, contains multiple 1-inch diameter divots. These divots were formed from separation of the hot mix asphalt mixture during paving operations due to poor quality batch mixture or low temperature application. Repair of the area should be made within the next 24 months. Coating this area with a pavement sealer is recommended to fill in the existing divots and prevent future pavement degradation and water intrusion. Runway 7/25 contained extensive longitudinal, transverse and diagonal cracking that has been previously been sealed. Several cracks were severely spalled and aggregate was loose or missing causing definite FOD potential. Other Runway 7/25 pavement is generally in good condition and no signs of pavement heave or rutting were found.

Runway 16/34 pavement was rehabilitated in 2010. Existing pavement was milled and used as surfacing on the runway shoulders. New leveling course and pavement were installed and compacted to 100% maximum density and 94% maximum density, respectively, as specified. A 508-foot long by 28-foot wide area located along the western edge of the runway pavement, between the newly installed PAPIs and demolished Taxiway R, was excavated to a depth of 5.6' below runway surface. This excavation was necessary to remove silty soils that caused frost heaving during winter. The excavation was backfilled with non frost susceptible classified fill. Runway 16/34 contained extensive longitudinal, transverse and diagonal cracking that have not been previously been sealed. Runway 16/34 pavement is generally in good condition and no signs of pavement heave or rutting have been reported since the rehabilitation.

The Runway 7/25 and Runway 34 blast pad dimensions do not meet AC 150/5300-13A table A7-3 requirements. See Table 1.2a below.

Table 1.2a: Runway Blast Pad Deficiencies

Runway	Existing Conditions		Standard	
	Width	Length	Width	Length
7	100	75	95	150
25	100	75	95	150
34	75	50	80	60

Taxiways. Taxiway pavements were inspected by Alaska DOT&PF in 2012 and HDL in July 2013. The DOT&PF report recommends ongoing preventative maintenance. Merrill Field implements ongoing preventative maintenance using a crack sealing program to extend the life of its pavement. Taxiway pavement was visually inspected by HDL in July 2013.

The 2007 Annual Airport Inspection Report identified eight (8) locations on Taxiways A, C, K, and N that contained severely cracked pavement, poor drainage, or frost heaves. These areas were rehabilitated in 2010 as part of the Rehabilitate Runway 16/34 project. The project rehabilitated approximately 34,700 square feet of existing pavement and underlying subgrade. Pavement was removed, subgrade soils were excavated to a depth of 4 feet, and the structural sections were rebuilt with classified fill, leveling course, and pavement. Since 2010, the shoulder of the southeast intersection of Taxiway C and Taxiway N still experiences frost heaving in the winter according to Merrill Field maintenance personnel. Also, the northern pavement joint of Taxiway N, between Taxiway J and Taxiway K, has separated from the existing shoulder in excess of ½ inch along the entire length.

Areas of severe pavement raveling and mechanical damage caused by snowplows were identified on Taxiway A and Taxiway C.

Aprons. Paved aircraft aprons range from good to very poor depending on the location. Aprons located over landfill garbage are performing the worst and include portions of Golf East, Quebec, and Whiskey aprons.

The medevac apron and helipad are currently under construction. This project will rehabilitate 71,000 square feet of apron area located over the Merrill Field Landfill.

The Rehabilitate Taxiway Q, Phase 4 is anticipated to be constructed in 2014. This project will rehabilitate approximately 93,300 square feet of Golf East Apron. The remaining portion of Golf East Apron should be rehabilitated as funding becomes available.

Recommended Corrective Action

Apron improvements should be focused in apron areas constructed above the closed Merrill Field Landfill. Dynamic compaction of the underlying refuse prior to apron reconstruction has shown positive results and extended the life of rehabilitated pavement. Dynamic compaction over remaining paved areas above refuse is recommended with priority given to the Golf East and Quebec aprons, as funding becomes available. It is anticipated that these rehabilitation projects will be phased over multiple years.

Immediate crack sealing is recommended (runways, taxiways, and aprons) where crack widths and/or depths are 1 inch or greater or where aggregate is loose or missing. Perform routine routing and crack sealing annually.

Rehabilitation of approximately 6,625 square feet of Taxiway A, and 6,250 square feet of Taxiway C, 2,500 square feet of Taxiway E, and 1,000 square feet of Taxiway J is

recommended. The area is severely cracked, portions are raveling, and there is evidence of frost heaving.

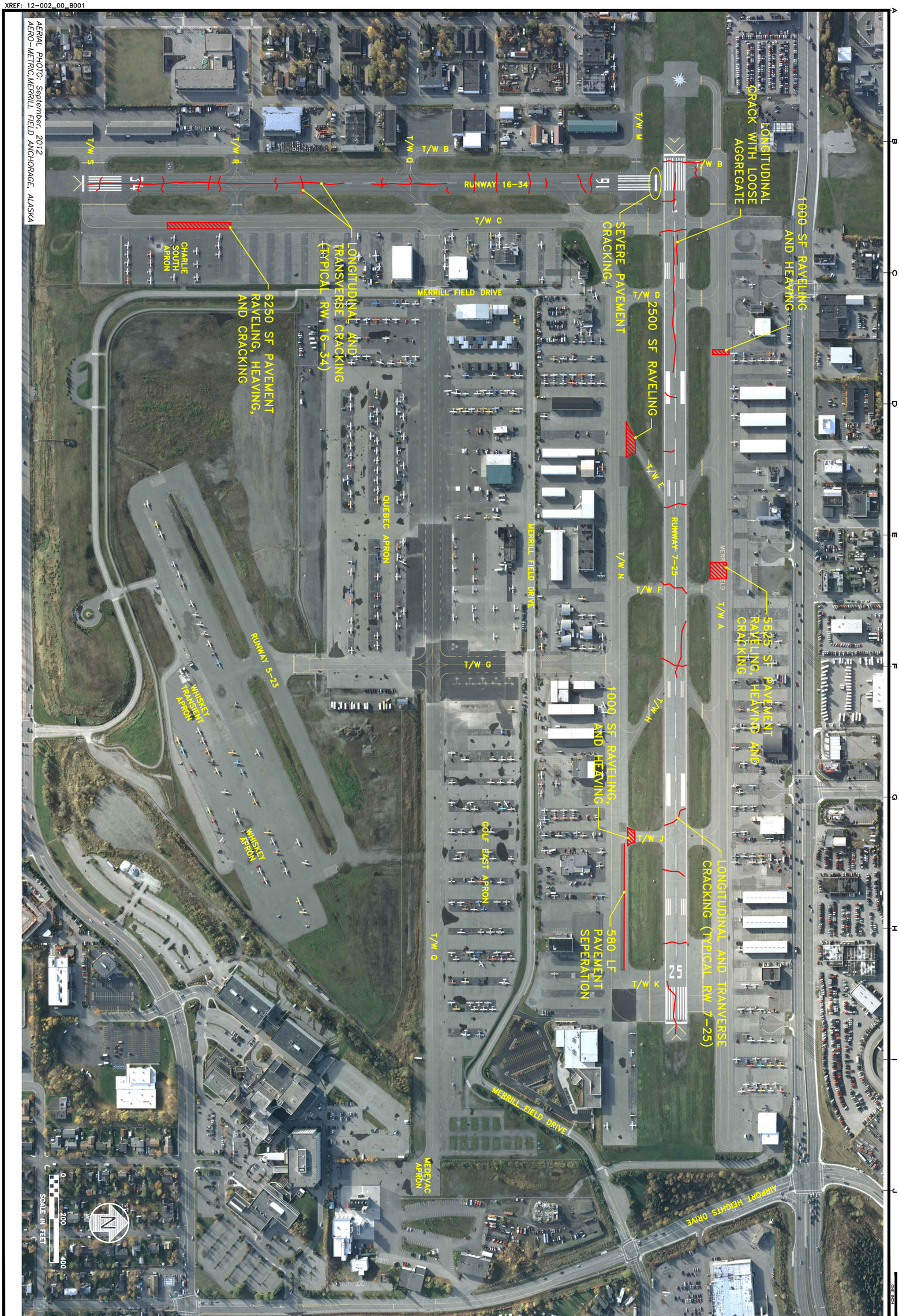
The following corrective action summary includes pavement in critical areas that need repair as soon as possible to improve safety and functionality at the airport. The locations of action items are depicted on Sheet 1.2.

Corrective Action Cost Summary

Runway 7/25 Immediate Crack Sealing 150 LF @ $9.00	$1,350
Runway 16/34 Immediate Crack Sealing 300 LF @ $9.00	$2,700
Runway 7/25 Pavement Edge Repairs 1,125 SF @ $7.50	$8,440
Taxiway A Pavement Repairs 6,625 SF @ $7.50	$49,690
Taxiway C Pavement Repairs 6,250 SF @ $7.50	$46,875
Taxiway E Pavement Repairs 2,500 SF @ $7.50	$18,750
Taxiway J Pavement Repairs 1,000 SF @ $7.50	$7,500
Taxiway N Crack Sealing 580 LF @ $9.00	$5,220
	==========
Total	$140,525

H:\jobs\12-002 Merrill Master Plan\2013 Airfield Inspection\CAD\Drawings\12-002-FIG-1.2-AIRFIELD-PAVEMENT-IMMEDIATE-CORRECTIVE-ACTION, 1=100, 08/05/13 at 10:20 by unknown
LAYOUT: Layout1

XREF: 12-002_00_B001



2013 AIRPORT INSPECTION REPORT

MUNICIPALITY OF ANCHORAGE

ANCHORAGE, ALASKA

SHEET TITLE: AIRFIELD PAVEMENT IMMEDIATE CORRECTIVE ACTION ITEMS

SHEET: 1.2

DRAWN BY: RSB
DATE: 7/24/13
JOB NUMBER: 12-002

CHECKED BY: AMS
SCALE: AS SHOWN

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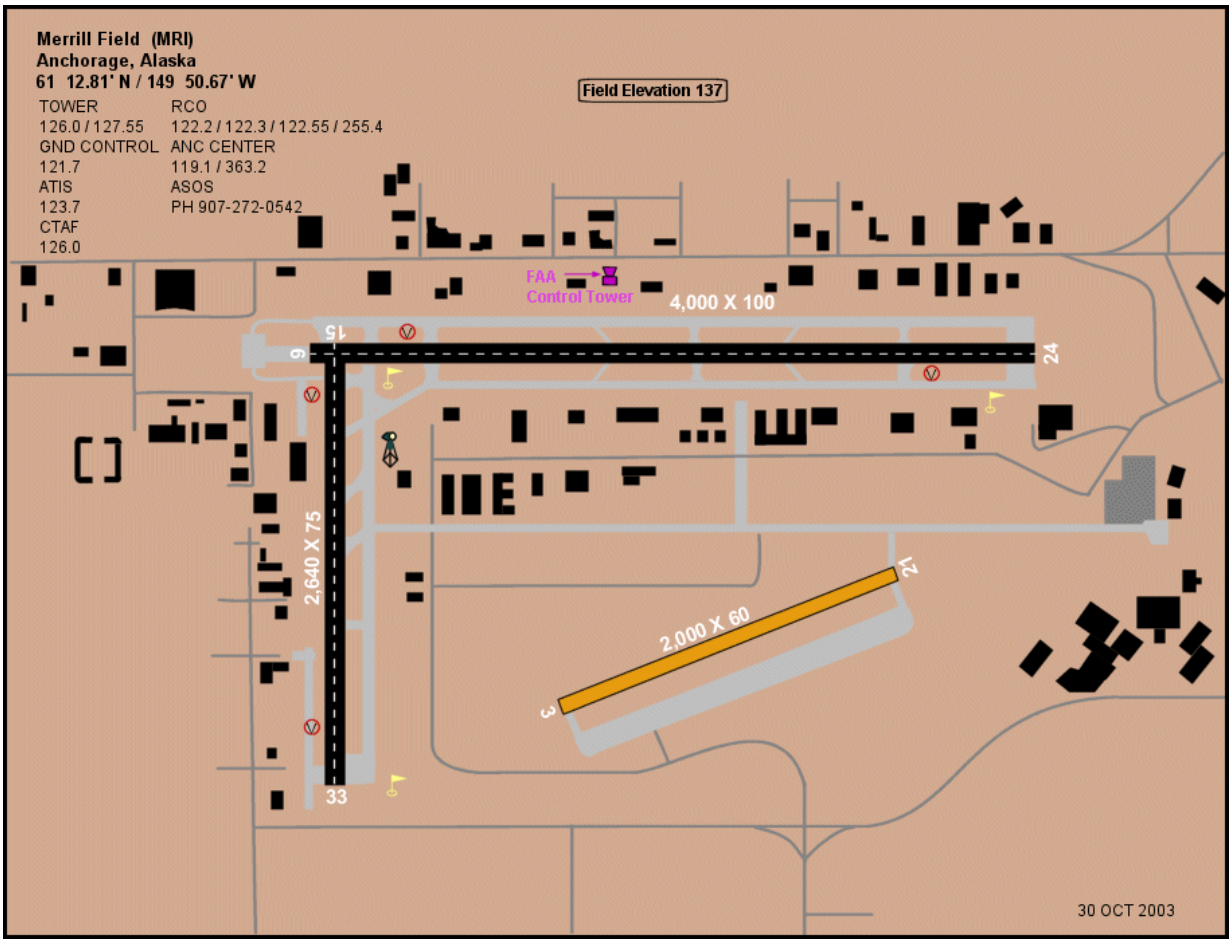


MERRILL FIELD AIRPORT

Alaska Airport Pavement Inspection Report

Published July 2012

James Horn
Project Manager
Central Region Materials, Alaska DOT&PF
5750 E. Tudor Road
Phone: (907) 269-6237 Fax: (907) 269-6201
Email: jim.horn@alaska.gov

Date: 7 /26/2012

Branch Condition Report

Pavement Database: PAVERDB_ALL NetworkID: Merrill

Branch ID	Number of Sections	Sum Section Length (Ft)	Avg Section Width (Ft)	True Area (SqFt)	Use	Average PCI	PCI Standard Deviation	Weighted Average PCI
0100 (Taxiway A)	3	4,970.00	56.67	347,575.00	TAXIWAY	83.33	3.09	79.98
0200 (Taxiway B)	4	1,625.00	45.00	66,125.00	TAXIWAY	89.25	6.30	88.43
0300 (Taxiway C)	3	2,790.00	70.00	182,270.00	TAXIWAY	86.00	2.94	87.26
0400 (Taxiway D)	2	285.00	70.00	23,675.00	TAXIWAY	87.00	2.00	86.81
0500 (Taxiway E)	2	490.00	35.00	25,200.00	TAXIWAY	88.50	2.50	88.07
0600 (Taxiway F)	2	285.00	35.00	12,125.00	TAXIWAY	85.50	1.50	85.25
0700 (Taxiway G)	3	1,425.00	75.00	114,210.00	TAXIWAY	74.00	11.43	76.29
0800 (Taxiway H)	2	530.00	37.50	24,980.00	TAXIWAY	90.00	1.00	89.86
1000 (Taxiway J)	2	285.00	62.50	20,375.00	TAXIWAY	77.00	0.00	77.00
1100 (Taxiway K)	2	505.00	172.50	79,675.00	TAXIWAY	84.00	2.00	84.00
1300 (Taxiway M)	3	632.00	40.00	27,650.00	TAXIWAY	85.33	8.18	83.88
1400 (Taxiway N)	2	3,530.00	57.50	280,050.00	TAXIWAY	87.00	8.00	79.40
1700 (Taxiway Q)	4	4,495.00	52.50	295,570.00	TAXIWAY	92.00	6.32	88.32
1800 ()	1	200.00	50.00	13,450.00	TAXIWAY	100.00	0.00	100.00
1900 (Taxiway S)	2	200.00	150.00	33,950.00	TAXIWAY	97.50	2.50	96.67
4100 (TW G Apron)	1	450.00	1,700.00	765,000.00	APRON	77.00	0.00	77.00

Branch Condition Report

Pavement Database: PAVERDB_ALL NetworkID: Merrill

Branch ID	Number of Sections	Sum Section Length (Ft)	Avg Section Width (Ft)	True Area (SqFt)	Use	Average PCI	PCI Standard Deviation	Weighted Average PCI
4200 (TW Q Apron)	2	2,005.00	225.00	601,900.00	APRON	69.50	5.50	64.46
4300 (Transient Apron 1)	1	260.00	200.00	51,250.00	APRON	66.00	0.00	66.00
4400 (Tower Apron)	1	475.00	90.00	42,750.00	APRON	63.00	0.00	63.00
4500 (Twy S Apron)	1	520.00	260.00	135,200.00	APRON	96.00	0.00	96.00
5000 (Compass Rose)	1	160.00	160.00	25,600.00	APRON	95.00	0.00	95.00
5100 (Medivac Helipad)	1	165.00	165.00	27,225.00	HELIPAD	63.00	0.00	63.00
6100 (16/34)	1	2,670.00	75.00	203,325.00	RUNWAY	96.00	0.00	96.00
6200 (07/25)	1	4,000.00	100.00	400,000.00	RUNWAY	86.00	0.00	86.00

Use Category	Number of Sections	Total Area (SqFt)	Arithmetic Average PCI	Average PCI STD.	Weighted Average PCI
APRON	7	1,621,700.00	76.57	12.95	73.50
HELIPAD	1	27,225.00	63.00	0.00	63.00
RUNWAY	2	603,325.00	91.00	5.00	89.37
TAXIWAY	37	1,546,880.00	86.59	8.14	83.63
All	47	3,799,130.00	84.79	10.12	80.07

Date: 7 /26/2012

Section Condition Report

Pavement Database: PAVERDB_ALL NetworkID: Merrill

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	Lanes	True Area (SqFt)	Last Inspection Date	Age At Inspection	PCI
0100 (Taxiway A)	0100-01	09/01/1997	AC	TAXIWAY	A	0	13,375.00	07/17/2012	15	85.00
0100 (Taxiway A)	0100-02	09/01/2003	AAC	TAXIWAY	A	0	297,000.00	07/17/2012	9	79.00
0100 (Taxiway A)	0100-03	09/01/2003	AAC	TAXIWAY	A	0	37,200.00	07/17/2012	9	86.00
0200 (Taxiway B)	0200-01	09/01/2003	AAC	TAXIWAY	A	0	10,300.00	07/17/2012	9	84.00
0200 (Taxiway B)	0200-02	07/01/1998	AC	TAXIWAY	A	0	34,400.00	07/17/2012	14	87.00
0200 (Taxiway B)	0200-03	09/01/1996	AC	TAXIWAY	A	0	10,925.00	07/17/2012	16	86.00
0200 (Taxiway B)	0200-04	06/01/2006	AAC	TAXIWAY	A	0	10,500.00	07/17/2012	6	100.00
0300 (Taxiway C)	0300-01	09/01/1978	AC	TAXIWAY	A	0	131,450.00	07/17/2012	34	89.00
0300 (Taxiway C)	0300-02	08/01/1999	AC	TAXIWAY	A	0	43,120.00	07/17/2012	13	82.00
0300 (Taxiway C)	0300-03	09/01/2003	AAC	TAXIWAY	A	0	7,700.00	07/17/2012	9	87.00
0400 (Taxiway D)	0400-01	08/01/1999	AAC	TAXIWAY	A	0	12,975.00	07/17/2012	13	85.00
0400 (Taxiway D)	0400-02	09/01/2003	AAC	TAXIWAY	A	0	10,700.00	07/17/2012	9	89.00
0500 (Taxiway E)	0500-01	08/01/2001	AC	TAXIWAY	A	0	14,750.00	07/17/2012	11	86.00
0500 (Taxiway E)	0500-02	08/01/2001	AC	TAXIWAY	A	0	10,450.00	07/17/2012	11	91.00
0600 (Taxiway F)	0600-01	08/01/2001	AC	TAXIWAY	A	0	7,075.00	07/17/2012	11	84.00
0600 (Taxiway F)	0600-02	08/01/2001	AC	TAXIWAY	A	0	5,050.00	07/17/2012	11	87.00
0700 (Taxiway G)	0700-01	09/01/1996	AC	TAXIWAY	A	0	32,360.00	05/11/2009	13	60.00
0700 (Taxiway G)	0700-02	09/01/1980	AC	TAXIWAY	A	0	30,775.00	07/17/2012	32	74.00
0700 (Taxiway G)	0700-03	07/01/2005	AAC	TAXIWAY	A	0	51,075.00	07/17/2012	7	88.00
0800 (Taxiway H)	0800-01	08/01/2001	AC	TAXIWAY	A	0	14,200.00	07/17/2012	11	89.00
0800 (Taxiway H)	0800-02	08/01/2001	AC	TAXIWAY	A	0	10,780.00	07/17/2012	11	91.00
1000 (Taxiway J)	1000-01	08/01/1999	AAC	TAXIWAY	A	0	10,300.00	07/17/2012	13	77.00
1000 (Taxiway J)	1000-02	09/01/2003	AAC	TAXIWAY	A	0	10,075.00	07/17/2012	9	77.00
1100 (Taxiway K)	1100-01	08/01/1999	AAC	TAXIWAY	A	0	39,900.00	07/17/2012	13	86.00
1100 (Taxiway K)	1100-02	09/01/2003	AAC	TAXIWAY	A	0	39,775.00	07/17/2012	9	82.00
1300 (Taxiway M)	1300-01	09/01/2002	AAC	TAXIWAY	A	0	7,425.00	07/17/2012	10	95.00

Section Condition Report

Pavement Database: PAVERDB_ALL NetworkID: Merrill

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	Lanes	True Area (SqFt)	Last Inspection Date	Age At Inspection	PCI
1300 (Taxiway M)	1300-02	09/01/1996	AC	TAXIWAY	A	0	11,400.00	07/17/2012	16	75.00
1300 (Taxiway M)	1300-03	09/01/1997	AC	TAXIWAY	A	0	8,825.00	07/17/2012	15	86.00
1400 (Taxiway N)	1400-01	08/01/1999	AAC	TAXIWAY	A	0	273,000.00	07/17/2012	13	79.00
1400 (Taxiway N)	1400-02	09/01/2002	AAC	TAXIWAY	A	0	7,050.00	07/17/2012	10	95.00
1700 (Taxiway Q)	1700-01	09/01/1997	AC	TAXIWAY	A	0	279,900.00	07/17/2012	15	88.00
1700 (Taxiway Q)	1700-02	09/01/2002	AAC	TAXIWAY	A	0	4,570.00	07/17/2012	10	84.00
1700 (Taxiway Q)	1700-03	09/01/1978	AC	TAXIWAY	A	0	5,030.00	07/17/2012	34	96.00
1700 (Taxiway Q)	1700-04	06/01/2006	AAC	TAXIWAY	A	0	6,070.00	07/17/2012	6	100.00
1800 ()	1800-01	09/01/2010	AAC	TAXIWAY	A	0	13,450.00	07/17/2012	2	100.00
1900 (Taxiway S)	1900-01	09/01/2002	AAC	TAXIWAY	A	0	22,600.00	07/17/2012	10	95.00
1900 (Taxiway S)	1900-02	07/01/1998	AAC	TAXIWAY	A	0	11,350.00	07/17/2012	14	100.00
4100 (TW G Apron)	4100-01	06/01/1985	AAC	APRON	A	0	765,000.00	07/17/2012	27	77.00
4200 (TW Q Apron)	4200-01	06/01/1985	AAC	APRON	A	0	576,900.00	07/17/2012	27	64.00
4200 (TW Q Apron)	4200-02	06/01/1985	AAC	APRON	A	0	25,000.00	07/17/2012	27	75.00
4300 (Transient Apron 1)	4300-01	09/01/1978	AC	APRON	A	0	51,250.00	07/17/2012	34	66.00
4400 (Tower Apron)	4400-01	09/01/1978	AC	APRON	A	0	42,750.00	07/17/2012	34	63.00
4500 (Twy S Apron)	4500-01	09/01/2010	AAC	APRON	A	0	135,200.00	07/17/2012	2	96.00
5000 (Compass Rose)	5000-01	09/01/1997	AC	APRON	A	0	25,600.00	07/17/2012	15	95.00
5100 (Medivac Helipad)	5100-01	09/01/1997	AC	HELIPAD	A	0	27,225.00	07/17/2012	15	63.00
6100 (16/34)	6100-01	09/01/1985	AC	RUNWAY	A	0	203,325.00	07/17/2012	27	96.00
6200 (07/25)	6200-01	06/01/2004	AAC	RUNWAY	A	0	400,000.00	07/17/2012	8	86.00

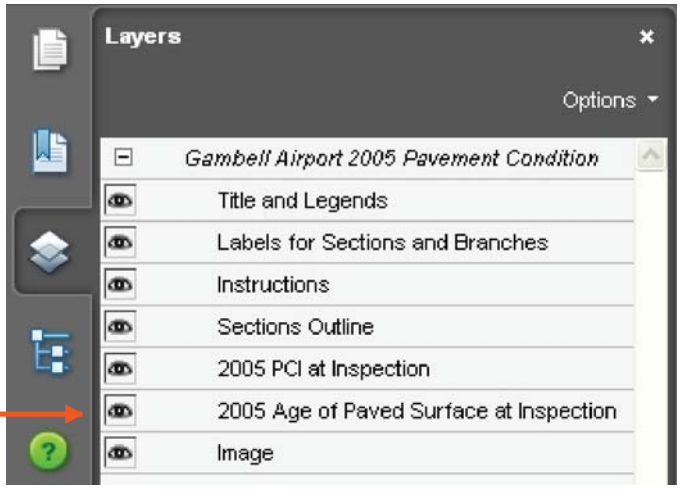
Section Condition Report

Pavement Database: PAVERDB_ALL

Age Category	Average Age At Inspection	Total Area (SqFt)	Number of Sections	Arithmetic Average PCI	PCI Standard Deviation	Weighted Average PCI
0-02	**2.00**	**148,650.00**	**2**	**98.00**	**2.00**	**96.36**
06-10	**8.67**	**922,040.00**	**15**	**88.47**	**6.89**	**84.21**
11-15	**13.00**	**874,635.00**	**19**	**84.26**	**9.30**	**83.09**
16-20	**16.00**	**22,325.00**	**2**	**80.50**	**5.50**	**80.38**
26-30	**27.00**	**1,570,225.00**	**4**	**78.00**	**11.51**	**74.65**
31-35	**33.60**	**261,255.00**	**5**	**77.60**	**12.88**	**78.60**
All	**14.66**	**3,799,130.00**	**47**	**84.79**	**10.12**	**80.07**

Instructions for Viewing Map Layers

- The map contains layers, and must be opened with Adobe Reader version 8 or later.



- Click on Adobe's Layer Tab to View Layer Controls
- Click in a layer's box to turn it on/off
- The "eye" symbol shows that the layer is visible.
- These layers draw from the bottom up, which means that a layer higher in the list might block out the information on a lower layer. Turn off the higher layer to see the information on a visible lower layer.

Merrill Field Municipal Airport

Airport Code: MRI
Site Number: 50035.*A

2012 Pavement Inspection Results

Map Compiled by Central Region Materials, AK DOT&PF

Pavement Condition Index (PCI)

Target PCI Range for Runways: 70 to 100
Target PCI Range for Taxiways and Aprons: 60 to 100

PCI Values	General Pavement Recommendations
85 - 100	Do Nothing or Preventative Maintenance
70 - 84	Preventative Maintenance
60 - 69	Corrective Maintenance
55 - 59	Rehabilitate
40 - 54	Rehabilitate
25 - 39	Reconstruct
10 - 24	Reconstruct
0 - 9	Reconstruct

Pavement Surface Age

- 0 - 4 years
- 5 - 9 years
- 10 - 14 years
- 15 - 19 years
- 20 - 24 years
- 25 - 29 years
- >30 years

[ ] Branch-Section Identifier

Image Source: Digital Globe 2011 aerial

0 250 500 1,000
Feet

Pavement Condition -- PCI

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1.3 Signage

1.3 AIRFIELD SIGNAGE

Introduction

107 lighted and unlighted airfield signs were inspected on July 23, 24, and 25, 2013 for condition and compliance with FAA AC 150/5340-18F "Standards for Airports Sign Systems". FAA AC 150/5340-18F (the standard) provides recommendations for standardized airport signs and should be followed to the greatest extent practicable.

The 2013 inspection work included evaluation of signage for Runway 7/25, Runway 16/34, Runway 5/23, Taxiways A, N, C, G, and Q, and interlink taxiways. Signs were checked for compliance with FAA criteria including presentation, sighting criteria, height, lettering size, and whether they were functioning. The signs included 72 lighted signs and 35 unlighted signs. An Inspection Checklist was prepared to evaluate the condition of each sign and determine its conformance with AC 150/5340-18F and is included in this section.

Merrill Field airfield signs are sized in accordance with Category 1 sign criteria listed in Table 2 of AC 150/5300-13. Category 1 signs have maximum height 30 inches above finish grade. The signs inspected on Merrill Field contained 12-inch lettering and were between 28 and 30 inches high. The signs were installed 10 to 20 feet from the runway or taxiway edge in accordance with AC 150/5300-13. Raising the height of existing signs would cause the signs to exceed the Category 1 sign criteria standards. Signs that exceed these standards require larger sign panels, printed with larger lettering, and installed farther from the runway or taxiway edge to avoid contact with low-wing aircraft. The existing sign size and location meet the needs of a general aviation airport. Installing larger signs farther from the runways and taxiways is not recommended.

The 2013 Airport Inspection identified 17 airfield sign items that did not meet standards and are candidates for corrective action. The FAA regulations allow the Airport Manager to deviate from the standard where the standard signage application is impractical or presents additional safety concerns or confusion. Locations and explanations for noted items where no corrective action was taken are included in Table 1.3a below.

Table 1.3a: Noted Items Where No Corrective Action was Taken

Item Number	Location	Description of Existing Deficiency	Reasoning For "No Corrective Action" Determination
7 - 8	Runway Hold Position Signs on Runway 16/34 & Runway 5/23	Distance of Runway Hold Position Sign should be 125 feet from Runway centerline -all signs are located approximately 100 feet from Runway Centerline.	Hold position signs installed 125' from Runway centerline would position holding aircraft within the traveled ways of Taxiway C and Taxiway K. The non-standard hold position location is identified on the approved ALP and Modification to Standards letter dated February 10, 2009.
10-13	Intersection of Taxiway W with Taxiways T & L	A Taxiway Direction Sign located on the back of another Taxiway Direction Sign.	Existing signage is effective and additional signage could be confusing for pilots navigating the taxiways.
14-17	Intersection of Taxiway W with Taxiways T, G, & L	Sign needed for traffic exiting runway.	Existing signage is effective and additional signage could be confusing for pilots navigating the taxiways.

Recommended Corrective Action

The Updated Airfield Signs Corrective Action List, Existing Airport Sign Layout Diagram, and Airfield Sign Inspection Checklist are included with this report. The Updated Corrective Action List identifies 17 items that did not meet the standard and are candidates for corrective action. No action was recommended on Items 1, 5, 6, 10, 11, 12, 13, 14, 15, 16, and 17 because the existing sign configuration provides clear information to the pilot, and reconfiguration to the standard would likely make information more confusing. The remaining 4 work items identified on the checklist were consolidated into 3 corrective action categories. These corrective action categories include fixing broken or missing signs, constructing new signs, and relocating existing signs to standardize sign layout in the vicinity of the intersecting runways and taxiways.

Corrective Action Cost Summary

Repair Existing Sign Panels (1) @ $1,500 ..... $1,500

Construct New Signs (1) @ $8,000 ..... $8,000

Relocate Existing Lighted Signs (2) @ $4,000 ..... $8,000

==========

Total ..... $ 17,500

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2013 Airfield Signs Corrective Action List

Item	Sign Type	Location	Description of Deficiency	Existing Sign		Referenced AC	Recommended Corrective Action	Number of Signs Effected	Recommended Sign	
				Runway Side	Taxiway Side				Runway Side	Taxiway Side
1	**RW Location Sign**	North Intersection Taxiway B and Runway 7-25 **(East)**	Runway Location Sign located on back of Taxiway Direction/Runway Exit Sign			AC 150/5340-18F. Paragraph 12.c	No Action	1		
2	**Approach Hold Position**	East Intersection of Taxiway A and Runway 16 Approach	Approach Clearance is 150' From Runway Centerline at Taxiway location. Sign is only located 100' from Runway centerline. Taxiway Destination Signs on the Back of a Hold Position Sign			AC 150/5300-13 Appendix 2, Table A2-1 & AC 150/5340-18F. Paragraph 12.c	Relocate Hold Position Sign 125' from Rwy 16-34 centerline. Install new taxiway directional sign on S side of Txy A.	1	C →	16-APCH
3	**RW Hold Position**	North Intersection Taxiway C and Runway 7-25	Taxiway Direction Sign located on back of Hold Position Sign			AC 150/5340-18F. Paragraph 12.c	Remove Taxiway Directional sign and install new taxiway directional sign left side	1	C	C 25 - 7
4	**TW Destination**	Intersection Taxiway D and Taxiway A	Tape patch on sign face			N/A	Replace Sign Face	1	← A →	NA
5	**Informational**	Run-up Sign Located at North Intersection of Taxiway K and RW 25 Threshold **(Left)**	Informational Sign collocated with mandatory, location, destination, or directional sign			AC 150/5340-18F. Paragraph 12.k	No Action	1		
6	**Informational**	Run-up Sign Located at North Intersection of Taxiway K and RW 25 Threshold **(Right)**	Informational Sign collocated with mandatory, location, destination, or directional sign			AC 150/5340-18F. Paragraph 12.k	No Action	1		
7	**RW Hold Position**	All Runway Hold Position Signs on Runway 16-34	Distance of Runway Hold Position Sign and Marker should be 125' from Runway centerline -all signs are located approximately 100 feet from Runway Centerline			150/5340-1J Table 4 and 150-5340-18F Table 1 and ALP	No Action	9		
8	**RW Hold Position**	All Runway Hold Position Signs on Runway 5-23	Distance of Runway Hold Position Sign and Marker should be 125' from Runway centerline -all signs are located approximately 100 feet from Runway Centerline			150/5340-1J Table 4 and 150-5340-18F Table 1 and ALP	No Action	8		
9	**RW Hold Position**	West Intersection of Taxiway M and Runway 16-34	Runway Location Sign located on back of Taxiway Direction/Runway Exit Sign - Not listed as a Sign that May be installed on the back of another			AC 150/5340-18F. Paragraph 12.c	Relocate Taxiway Directional Sign to Left Side.	1	← B	Blank

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2013 Airfield Signs Corrective Action List

Item	Sign Type	Location	Description of Deficiency	Existing Sign		Referenced AC	Recommended Corrective Action	Number of Signs Effected	Recommended Sign	
				Runway Side	Taxiway Side				Runway Side	Taxiway Side
10	**TW Destination**	Intersection Taxiway T and Taxiway W	A Taxiway Direction Signs located on the back of another Taxiway Direction Sign: Arrow for upcoming taxiway Points Strait ahead			150/5340-18F Paragraph 12.c	No Action	1		
11	**TW Destination**	Intersection Taxiway G and Taxiway W **(West)**	A Taxiway Direction Signs located on the back of another Taxiway Direction Sign: Arrow for upcoming taxiway Points Strait ahead			150/5340-18F Paragraph 12.c	No Action	1		
12	**TW Destination**	Intersection Taxiway G and Taxiway W **(East)**	A Taxiway Direction Signs located on the back of another Taxiway Direction Sign: Arrow for upcoming taxiway Points Strait ahead			150/5340-18F Paragraph 12.c	No Action	1		
13	**TW Destination**	Intersection Taxiway L and Taxiway W	A Taxiway Direction Signs located on the back of another Taxiway Direction Sign: Arrow for upcoming taxiway Points Strait ahead			150/5340-18F Paragraph 12.c	No Action	1		
14	**TW Destination**	Intersection Taxiway T and Taxiway W	Sign needed for traffic exiting runway.			150/5340-18F Paragraph 12.c	No Action	1		
15	**TW Destination**	Intersection Taxiway G and Taxiway W **(West)**	Sign needed for traffic exiting runway.			150/5340-18F Paragraph 12.c	No Action	1		
16	**TW Destination**	Intersection Taxiway G and Taxiway W **(East)**	Sign needed for traffic exiting runway.			150/5340-18F Paragraph 12.c	No Action	1		
17	**TW Destination**	Intersection Taxiway L and Taxiway W	Sign needed for traffic exiting runway.			150/5340-18F Paragraph 12.c	No Action	1		

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ITEM 2
ITEM 3
ITEM 4
ITEM 9
ITEM 7
T/W A
T/W B
T/W C
T/W D
T/W E
T/W F
T/W G
T/W H
T/W J
T/W K
T/W M
T/W N
T/W Q
T/W R
T/W S
RUNWAY 7–25
RUNWAY 16–34
RUNWAY 5–23
MERRILL FIELD DRIVE
AIRPORT HEIGHTS DRIVE
GOLF EAST APRON
QUEBEC APRON
MEDEVAC APRON
MEDEVAC GATE
WHISKEY APRON
WHISKEY TRANSIENT APRON
CHARLIE SOUTH APRON
ENGINE RUNUPS PROHIBITED UNLESS PARALLEL TO RUNWAY
DANGER AIRCRAFT ONLY BEYOND THIS POINT VIOLATORS PROSECUTED
PROCEED ONLY ON RECEIPT OF ATC CLEARANCE CONTACT TOWER AT 271-2688
STOP

NOTE:
ITEMS ON MAP CORRESPOND WITH THE 2013 AIRFIELD SIGN CORRECTIVE ACTION LIST

LEGEND:
- LIGHTED SIGN (YELLOW)
- LIGHTED SIGN (RED)
- UNLIGHTED SIGN (YELLOW)
- UNLIGHTED SIGN (RED)

0 200 400
SCALE IN FEET

REVISIONS		
MARK	DATE	DESCRIPTION
1		
2		
3		
4		
5		

NOT FOR CONSTRUCTION

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2013 AIRPORT INSPECTION REPORT

MUNICIPALITY OF ANCHORAGE

ANCHORAGE, ALASKA

SHEET TITLE
EXISTING AIRPORT SIGN LAYOUT DIAGRAM & CORRECTIVE ACTION ITEMS

SHEET: 1.3

DRAWN BY: RSB | CHECKED BY: AMS
DATE: 7/24/13 | SCALE: 1"=200'
JOB NUMBER: 12-002

H:\Jobs\12-002 Merrill Master Plan\2013 Airfield Inspection\CAD\Drawings\12-002-FIG-1.3-Airfield Sign Map, 1=1, 08/06/13 at 09:18 by jkk
LAYOUT: Layout1
VIEW: SIGNS01_F_D0800, SIGNS01_H_L50000, SIGNS01_H_X7700
XREF: 12-002_00_B001

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Item	Location	Left or Right	Meets FAA Sighting Criteria	Sign Hieght And Lettering Meet FAA Standards	Runway Side		Taxiway Side		Lighted	Operational	Break-Away Couplings	Correct Signage	Notes
					Left Panel	Right Panel	Left Panel	Right Panel					
1	**Approach:** West Intersection of TW A and RW 16 Approach	L	Yes	Yes	A		16-APCH		Yes	Yes	Yes	Yes	
2	**RW Direction:** North Intersection TW B and RW 7-25	L	Yes	Yes	B		B	7	Yes	Yes	Yes	Yes	
3	**TW Direction:** North Intersection TW B and RW 7-25 (East)	R	Yes	Yes	**B ->**		7		Yes	Yes	Yes	Yes	Sign can not be placed on the back of the other
4	**Approach:** East Intersection of TW A and RW 16 Approach	L	No	Yes	A	**C->**	16-APCH		Yes	Yes	Yes	Yes	Sign can not be placed on the back of the other
5	**RW Direction:** North Intersection TW C and RW 7-25	L	Yes	Yes	C	**<-A->**	C	25-7	Yes	Yes	Yes	Yes	Sign can not be placed on the back of the other
6	**TW Direction:** North Intersection TW C and RW 7-25 (East)	R	Yes	Yes	**C->**				Yes	Yes	Yes	Yes	
7	**TW Direction:** North Intersection TW D and RW 7-25 (West)	L	Yes	Yes	**<-D**				Yes	Yes	Yes	Yes	
8	**TW Direction:** Intersection TW D and TW A	L	Yes	Yes	**<-A ->**				Yes	Yes	Yes	Yes	Face of Sign was damaged
9	**RW Direction:** North Intersection TW D and RW 7-25	L	Yes	Yes	D		D	25-7	Yes	Yes	Yes	Yes	
10	**TW Direction:** North Intersection TW D and RW 7-25 (East)	R	Yes	Yes	**D->**				Yes	Yes	Yes	Yes	
11	**TW Direction:** Intersection TW E and TW A	L	Yes	Yes	**<-A ->**				Yes	Yes	Yes	Yes	
12	**RW Direction:** North Intersection TW E and RW 7-25	L	Yes	Yes	E		E	25-7	Yes	Yes	Yes	Yes	
13	**TW Direction:** North Intersection TW E and RW 7-25 (East)	R	Yes	Yes	**E /**				Yes	Yes	Yes	Yes	
14	**TW Direction:** Intersection TW F and TW A	L	Yes	Yes	**<-A ->**				Yes	Yes	Yes	Yes	
15	**TW Direction:** North Intersection TW F and RW 7-25 (East)	R	Yes	Yes	**F->**				Yes	Yes	Yes	Yes	
16	**RW Direction:** North Intersection TW F and RW 7-25	L	Yes	Yes	F		F	25-7	Yes	Yes	Yes	Yes	

Item	Location	Left or Right	Meets FAA Sighting Criteria	Sign Hieght And Lettering Meet FAA Standards	Runway Side		Taxiway Side		Lighted	Operational	Break-Away Couplings	Correct Signage	Notes
					Left Panel	Right Panel	Left Panel	Right Panel					
17	**TW Direction:** North Intersection TW F and RW 7-25 (West)	L	Yes	Yes	**<-F**				Yes	Yes	Yes	Yes	
18	**TW Direction:** North Intersection TW H and RW 7-25 (West)	L	Yes	Yes	**\ H**				Yes	Yes	Yes	Yes	
19	**RW Direction:** North Intersection TW H and RW 7-25	L	Yes	Yes	H		H	25-7	Yes	Yes	Yes	Yes	
20	**TW Direction:** North Intersection TW J and RW 7-25 (West)	L	Yes	Yes	**<-J**				Yes	Yes	Yes	Yes	
21	**RW Direction:** North Intersection TW J and RW 7-25	L	Yes	Yes	J		J	25-7	Yes	Yes	Yes	Yes	
22	**TW Direction:** North Intersection TW J and RW 7-25 (East)	R	Yes	Yes	**J->**				Yes	Yes	Yes	Yes	
23	**Informational Sign**	R	No	Yes			Engine Runups Prohibited Unless Parallel to Runway		No	N/A	Yes	Yes	
24	**RW Direction:** North Intersection TW K and RW 7-25	R	Yes	Yes			25	K	Yes	Yes	Yes	Yes	
25	**TW Direction:** North Intersection TW K and RW 7-25 (West)	L	Yes	Yes	**<-K**				Yes	Yes	Yes	Yes	
26	**RW Direction:** North Intersection TW K and RW 7-25	L	Yes	Yes	K		K	25	Yes	Yes	Yes	Yes	
27	**Informational Sign**	L	No	Yes			Engine Runups Prohibitted Unless Parallel to Runway		No	N/A	Yes	Yes	
28	**RW Direction:** South Intersection TW K and RW 7-25	R	Yes	Yes	K		25	K	Yes	Yes	Yes	Yes	Need Corresponding Runup Sign
29	**RW Direction:** South Intersection TW K and RW 7-25	L	Yes	Yes			K	25	Yes	Yes	Yes	Yes	Need Corresponding Runup Sign
30	**TW Direction:** South Intersection TW K and RW 7-25 (West)	R	Yes	Yes	**K->**				Yes	Yes	Yes	Yes	
31	**TW Direction:** South Intersection TW J and RW 7-25 (East)		Yes	Yes					Yes	Yes	Yes	Yes	Sign Broken: Not There
32	**TW Direction:** South Intersection TW J and RW 7-25 (West)	R	Yes	Yes	**J->**				Yes	Yes	Yes	Yes	

Item	Location	Left or Right	Meets FAA Sighting Criteria	Sign Hieght And Lettering Meet FAA Standards	Runway Side		Taxiway Side		Lighted	Operational	Break-Away Couplings	Correct Signage	Notes
					Left Panel	Right Panel	Left Panel	Right Panel					
33	**RW Distance Remaining:** South Intersection TW J and RW 7-25 (West)		Yes	Yes	3	1			Yes	Yes	Yes	Yes	
34	**RW Direction:** South Intersection TW J and RW 7-25	L	Yes	Yes	J		J	7-25	Yes	Yes	Yes	Yes	
35	**TW Direction:** Intersection TW H and TW N	L	Yes	Yes	**<-N ->**				Yes	Yes	Yes	Yes	
36	**RW Direction:** South Intersection TW H and RW 7-25	L	Yes	Yes	H		H	7-25	Yes	Yes	Yes	Yes	
37	**TW Directional:** Infield Area between TW F and TW H across from TW G	R	Yes	Yes	N	**G ->**	N	**7 ↑**	No	N/A	Yes	Yes	
38	**TW Directional:** East of TW N and TW G Intersection	L	Yes	Yes			N	**<- G**	No	N/A	Yes	Yes	
39	**Informational:** South of TW N and TW G Intersection	R	Yes	Yes	**↑MEDEVAC**		G	**<- N->**	No	N/A	Yes	Yes	
40	**TW Directional:** Infield Area between TW F and TW H across from TW G	Ahead	Yes	Yes			**<-7-25- >**		No	N/A	Yes	Yes	
41	**TW Direction:** South Intersection TW H and RW 7-25 (West)	R	Yes	Yes	**H /**				Yes	Yes	Yes	Yes	
42	**TW Direction:** South Intersection TW F and RW 7-25 (East)	L	Yes	Yes	**<-F**				Yes	Yes	Yes	Yes	
43	**TW Direction:** Intersection TW F and TW N	L	Yes	Yes	**<-N ->**				Yes	Yes	Yes	Yes	
44	**RW Distance Remaining:** South Intersection TW F and RW 7-25 (West)	R	Yes	Yes	2	2			Yes	Yes	Yes	Yes	
45	**TW Direction:** South Intersection TW F and RW 7-25 (West)	R	Yes	Yes	**F->**				Yes	Yes	Yes	Yes	
46	**RW Direction:** South Intersection TW F and RW 7-25	L	Yes	Yes	F		F	7-25	Yes	Yes	Yes	Yes	
47	**TW Direction:** South Intersection TW E and RW 7-25 (East)	L	Yes	Yes	**<-E**				Yes	Yes	Yes	No	Incorrect Directional Arrow
48	**TW Direction:** Intersection TW E and TW N	L	Yes	Yes	**<-N ->**				Yes	Yes	Yes	Yes	

Item	Location	Left or Right	Meets FAA Sighting Criteria	Sign Hieght And Lettering Meet FAA Standards	Runway Side		Taxiway Side		Lighted	Operational	Break-Away Couplings	Correct Signage	Notes
					Left Panel	Right Panel	Left Panel	Right Panel					
49	**RW Direction:** South Intersection TW E and RW 7-25	L	Yes	Yes	E		E	7-25	Yes	Yes	Yes	Yes	
50	**RW Distance Remaining:** Between TW D and TW E on RW 7-25 (South)	R	Yes	Yes	1	3			Yes	Yes	Yes	Yes	
51	**TW Direction:** South Intersection TW D and RW 7-25 (East)	L	Yes	Yes	**<-D**				Yes	Yes	Yes	Yes	
52	**TW Direction:** Intersection TW D and TW N	L	Yes	Yes	**<-N /**				Yes	Yes	Yes	Yes	
53	**TW Direction:** South Intersection TW D and RW 7-25 (West)	R	Yes	Yes	**D->**				Yes	Yes	Yes	Yes	
54	**RW Direction:** South Intersection TW D and RW 7-25	L	Yes	Yes	D		D	7-25	Yes	Yes	Yes	Yes	
55	**TW Direction:** South Intersection TW C and RW 7-25 (East)	L	Yes	Yes	**<-C**				Yes	Yes	Yes	Yes	
56	**TW Directional:** Intersection of TW C and TW N	L	Yes	Yes	C	**<-N**			No	N/A	Yes	Yes	
57	**RW Direction:** South Intersection TW C and RW 7-25	L	Yes	Yes	C		C	7-25	Yes	Yes	Yes	Yes	
58	**RW Direction:** East Intersection of TW M and RW 16-34	L	No	Yes	M		M	16	Yes	Yes	Yes	Yes	
59	**TW Direction:** East Intersection TW M and RW 16-34 (South)	R	Yes	Yes	**M ->**				Yes	Yes	Yes	Yes	
60	**Informational / Directional:** Intersection TW N and TW C Intersection	R	Yes	Yes	**TRANSIENT↑**		C	**N /**	No	N/A	Yes	Yes	
61	**Informational / Directional:** Intersection TW N and TW C Intersection	L	Yes	Yes	**TRANSIENT ↑**				No	N/A	Yes	Yes	
62	**RW Direction:** East Intersection of TW N and RW 16-34	L	No	Yes	N		N	34-16	Yes	Yes	Yes	Yes	
63	**TW Direction:** East Intersection TW N and RW 16-34 (South)	R	Yes	Yes	**N /**				Yes	Yes	Yes	Yes	
64	**TW Direction:** Intersection TW Q and TW C (North-West)		Yes	Yes			**<-34**	**16 ->**	Yes	Yes	Yes	Yes	

Item	Location	Left or Right	Meets FAA Sighting Criteria	Sign Hieght And Lettering Meet FAA Standards	Runway Side		Taxiway Side		Lighted	Operational	Break-Away Couplings	Correct Signage	Notes
					Left Panel	Right Panel	Left Panel	Right Panel					
65	**TW Direction:** South Intersection TW Q and RW 16-34 (East)				**<-Q**								
66	**TW Direction:** Intersection TW Q and TW C (North-East)	R	Yes	Yes	**↑TRANSIENT⟶**		C	**<-Q /**	No	N/A	Yes	Yes	Sign can not be placed on the back of the other
67	**RW Direction:** East Intersection of TW Q and RW 16-34	L	No	Yes	Q		Q	34-16	Yes	Yes	Yes	Yes	
68	**TW Direction:** Intersection TW Q and TW C (East)	R	Yes	Yes	Q	**<-C ->**			No	N/A	Yes	Yes	
69	**TW Direction:** West Intersection TW Q and RW 16-34 (North)	R	Yes	Yes	**Q->**				Yes	Yes	Yes	Yes	
70	**TW Direction:** Intersection TW Q and TW C (East)	L	Yes	Yes			C	**Q ->**	Yes	Yes	Yes	Yes	
71	**TW Direction:** East Intersection of Taxiway R and RW 16-34	L	Yes	Yes	**<-R**				Yes	Yes	Yes	Yes	
72	**RW Direction:** East Intersection of Taxiway R and RW 16-34	L	No	Yes	R		R	34-16	Yes	Yes	Yes	Yes	
73	**TW Direction:** East Intersection Taxiway S and RW 16-34 (North)	L	Yes	Yes	**<-S**				Yes	Yes	Yes	Yes	
74	**RW Direction:** East Intersection of Taxiway S and RW 16-34	R	No	Yes	S		34	S	Yes	Yes	Yes	Yes	
75	**Informational Sign**	L	Yes	Yes			Engine Runups Prohibitted Unless Parallel to Runway		No	N/A	Yes	Yes	
76	**RW Direction:** East Intersection of TW S and RW 16-34	L	No	Yes	S		S	34	Yes	Yes	Yes	Yes	
77	**RW Direction:** West Intersection of TW S and RW 16-34	L	No	Yes	S		S	34	Yes	Yes	Yes	Yes	
78	**TW Direction:** West Intersection TW S and RW 16-34 (North)	R	Yes	Yes	**S->**				Yes	Yes	Yes	Yes	
79	**RW Direction:** West Intersection of TW R and RW 16-34	L	No	Yes		R	R	16-34	Yes	Yes	Yes	Yes	
80	**TW Direction:** West Intersection of TW R and RW 16-34	L	Yes	Yes	**R->**				Yes	Yes	Yes	Yes	

Item	Location	Left or Right	Meets FAA Sighting Criteria	Sign Hieght And Lettering Meet FAA Standards	Runway Side		Taxiway Side		Lighted	Operational	Break-Away Couplings	Correct Signage	Notes
					Left Panel	Right Panel	Left Panel	Right Panel					
81	**TW Direction:** West Intersection TW Q and RW 16-34 (South)	L	Yes	Yes	**<-Q**				Yes	Yes	Yes	Yes	
82	**RW Direction:** West Intersection of TW Q and RW 16-34	L	No	Yes	Q		Q	16-34	Yes	Yes	Yes	Yes	
83	**TW Direction:** East Intersection TW Q and RW 16-34 (South)	R	Yes	Yes	**Q /**				No	N/A	Yes	Yes	
84	**TW Direction:** West Intersection TW M and RW 16-34 (South)	L	Yes	Yes	**<-M**		7		Yes	Yes	Yes	Yes	Sign can not be placed on the back of the other
85	**RW Direction:** West Intersection of TW M and RW 16-34	L	No	Yes	M	**<-B**	M	16	Yes	Yes	Yes	Yes	Sign can not be placed on the back of the other
86	**Highway Directional Sign:** Intersection of W Apron and TW **(WEST)**		Yes	Yes			STOP: Proceed Only On Reciept of ATC Clearance Contact Tower at 271-2698		No	N/A	Yes	Yes	
87	**RW Direction:** South Intersection of TW T and RW 5-23	L	No	Yes	**Hold Sign**	T	T	5	No	N/A	Yes	Yes	
88	**TW Direction**: Intersection TW T and RW 5-23	L	Yes	Yes	**<-T**				No	N/A	Yes	Yes	
89	**RW Direction:** South Intersection of TW T and RW 5-23	R	No	Yes	T	**Hold Sign**	5	T	No	N/A	Yes	Yes	
90	**TW Direction**: Intersection TW T and TW W		Yes	Yes	**↑ G**	W	W	**↑T**	No	N/A	Yes	No	Incorrect Directional Arrow - Sign can not be placed on the back
91	**TW Direction**: Intersection TW W and TW G		Yes	Yes	**↑T**	W	W	**↑ G**	No	N/A	Yes	No	Incorrect Directional Arrow - Sign can not be placed on the back
92	**RW Direction:** South Intersection of TW G and RW 5-23	L	No	Yes	**Hold Sign**	G	G	5-23	No	N/A	Yes	Yes	
93	**TW Direction**: Intersection TW G and RW 5-23 (South-West)	R	Yes	Yes	**G->**				No	N/A	Yes	Yes	
94	**TW Direction**: Intersection TW G and RW 5-23 (South-East)	L	Yes	Yes	**<-G**				No	N/A	Yes	Yes	
95	**RW Direction:** South Intersection of TW T and RW 5-23	R	No	Yes	G	**Hold Sign**	5-23	G	No	N/A	Yes	Yes	
96	**TW Direction**: Intersection TW T and TW W		Yes	Yes	W	**↑G**	**↑ L**	W	No	N/A	Yes	No	Incorrect Directional Arrow - Sign can not be placed on the back

Item	Location	Left or Right	Meets FAA Sighting Criteria	Sign Hieght And Lettering Meet FAA Standards	Runway Side		Taxiway Side		Lighted	Operational	Break-Away Couplings	Correct Signage	Notes
					Left Panel	Right Panel	Left Panel	Right Panel					
97	**TW Direction**: Intersection TW W and TW L		Yes	Yes	W	↑G	↑ L	W	No	N/A	Yes	No	Incorrect Directional Arrow - Sign can not be placed on the back
98	**RW Direction: South Intersection of TW L and Runway 4-22**	L	No	Yes	**Hold Sign**	L	L	23	No	N/A	Yes	Yes	
99	**Highway Directional Sign:** Intersection of W Apron and TW **(East)**	R	Yes	Yes			STOP: Proceed Only On Reciept of ATC Clearance Contact Tower at 271-2698		No	N/A	Yes	Yes	
100	**RW Direction:** South Intersection of TW L and RW 5-23	R	No	Yes	L	**Hold Sign**	23	L	No	N/A	Yes	Yes	
101	**TW Direction**: Intersection TW L and RW 5-23	R	Yes	Yes	**L->**				No	N/A	Yes	Yes	
102	**TW Direction**: Intersection TW G and RW 5-23 (North-East)	R	Yes	Yes	**G->**				No	N/A	Yes	Yes	
103	**RW Direction:** North Intersection of TW G and RW 5-23	L	No	Yes	**Hold Sign**	G	G	23-5	No	N/A	Yes	Yes	
104	**Highway Directional Sign:** North Intersection of TW G and RW 5-23	L	Yes	Yes			Danger Aircraft Only Beyond This Point Violators Prosecuted		No	N/A	Yes	Yes	
105	**Highway Directional Sign:** North Intersection of TW G and RW 5-23	R	Yes	Yes			Danger Aircraft Only Beyond This Point Violators Prosecuted		No	N/A	Yes	Yes	
106	**RW Direction:** North Intersection of TW G and RW 5-23	R	No	Yes	G	**Hold Sign**	23-5	G	No	N/A	Yes	Yes	
107	**TW Direction**: Intersection TW G and RW 5-23 (North-West)	L	Yes	Yes	**<-G**				No	N/A	Yes	Yes	

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1.4 Markings

1.4 AIRFIELD MARKINGS

Introduction

An airfield pavement marking inspection took place between July 22 and July 26, 2013. The marking inspection utilized a September 2012 aerial photo of Merrill Field Airport provided by Aero-Metric, Inc. The photo was taken on a clear day with the airfield pavement markings clearly visible. The photo was scaled using AutoCAD computer software to an accuracy of approximately 0.5 feet. The inspection evaluated the existing runway and taxiway pavement markings for condition and compliance with AC 150/5340-1K "Standards for Airports Markings".

Runway 7/25 is a visual runway marked with precision runway markings. Precision markings include threshold bars, threshold markings, runway designation markings, centerline and edge striping, aiming points, and touchdown markings. The precision marking of this runway exceeds the FAA standards for Merrill Field's circling GPS approach. The runway also contains lead-in chevrons on unusable pavement beyond the runway thresholds. The runway markings consist of white paint. The chevron markings consist of yellow paint. The attached Updated Airfield Marking Deficiency List indentifies that touchdown zone markings and aiming point markings on Runway 7/25 are located approximately 20 feet down runway from the preferred location listed in AC 150/5340-1K. In 2010, the Runway 7/25 markings were re-applied in their current location to correct old and faded markings. Through discussions with the Owner, the decision was made to not relocate the aiming points and touchdown zone markings during the 2010 project because removal of the existing markings would damage the runway surface. Also, the VASIs, which are co-located with the aiming point markings, can be negatively impacted when the markings are shifted. It is recommended the 7/25 marking configuration be revaluated during the next 7/25 runway surface rehabilitation project and relocation of the existing runway markings be performed at that time.

Runway 16/34 is marked with non-precision runway markings meeting the requirements of a visual runway. The runway contains threshold markings, runway designation markings, and centerline striping. Lead-in chevrons are installed on the unusable pavement beyond the threshold of Runway 34. Aiming points, touchdown zone markings, and edge striping are not required on Runway 34 because it is a visual runway less than 4,000 feet long with full width available for aircraft operations. The runway markings consist of white paint. The chevron markings consist of yellow paint. This runway was rehabilitated in 2010 to include new pavement markings and lighting.

Paved taxiways are marked full length with centerline striping. Dashed edge striping is implemented on taxiway edges abutting paved aprons. Aircraft hold position markings are installed on interlink taxiways between runways and parallel taxiways and also prior to taxiway gates and on Taxiways G and Q at intersections with parallel Taxiways N and C. Runway 16/34 hold position markings are located 100 feet from runway centerline, which is 25 feet less than the standard distance specified in AC 150/5300-13. The hold lines are installed in this location

to keep holding traffic out of the traveled way of the parallel taxiways. The non-standard hold position location is identified on the approved ALP and the Modification to Standards letter dated February 10, 2009 and corrective action is not recommended.

Taxiway gate markings also include gate approach markings on the air-side pavement prior to the gate location. Edges of roadways that intersect taxiways are delineated with dashed “zipper” markings for enhanced visibility. “Zipper” roadway markings consist of white paint. Taxiway centerline stripes, edge stripes, hold position markings, and gate approach markings are installed with yellow paint.

Recommended Corrective Action

Removal and reinstallation of the Touchdown Zone and Aiming Point Markings is recommended when funding becomes available or during the next Runway 7/25 pavement rehabilitation project. The attached Updated Airfield Marking Deficiency List and Sheet 1.4 identify the corrective action items and locations.

Corrective Action Cost Summary

Remove and Relocate Touchdown Zone Markings (4) @ $4,000	$16,000
Remove and Relocate Aiming Point Markings (2) @ $10,000	$20,000
	==========
Total	$36,000

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Airfield Inspection Report

Merrill Field Airport

2013 Airfield Marking Deficiency List

Various Locations on Merrill Field Airport
Areas Checked: Paved Runways and Taxiways

Inspection Date(s): 7/23/2013 - 7/25/2013

Updated Airfield Marking Deficiency List					
✓	Item	Location	Deficiency Noted	Code Reference	Recommended Corrective Action
	1	Interlink Taxiways to Runway 16/34	Runway Hold Position Markings: Hold position markings for Runway 16/34 are offset approximately 125 feet from Runway centerline. Standard Hold Position markings for a B-II runway are offset 150 from centerline.	AC 150/5300-13 Table A7-3 and AC 150/5340-18F Table 1	None: Hold position location necessary due to non-standard Taxiway seperation distance
	2	Runway 7/25	Touchdown Zone Markings: Markings are required to be installed 500 feet from beginning of Threshold Markings (which start 20 feet beyond Threshold Bar). Touchdown Zone Markings on Runway 7-25 are spaced 480 feet from the beginning of threshold markings (500 feet from the Threshold Bar).	AC 150/5340-1K	Remove and Relocate (4) Touchdown Zone Markings to meet standards
	3	Runway 7/25	Aiming Point Markings: Markings are required to be installed 1,000 feet from beginning of Threshold Markings (which start 20 feet beyond Threshold Bar). Aiming Point Markings on Runway 7-25 are spaced 980 feet from the beginning of threshold markings (1,000 feet from the Threshold Bar).	AC 150/5340-1K	Remove and Relocate (2) Aiming Point Markings to meet standards

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ITEM 1
RUNWAY 16/34
HOLD MARKINGS

ITEM 2
RUNWAY 7/25
TOUCHDOWN
MARKINGS

ITEM 2
RUNWAY 7/25
TOUCHDOWN
MARKINGS

ITEM 2
RUNWAY 7/25
TOUCHDOWN MARKINGS

ITEM 2
RUNWAY 7/25
TOUCHDOWN MARKINGS

ITEM 3
RUNWAY 7/25
AIMING POINT MARKINGS

ITEM 3
RUNWAY 7/25
AIMING POINT MARKINGS

ITEM 1
RUNWAY 16/34
HOLD MARKINGS

ITEM 1
RUNWAY 16/34
HOLD MARKINGS

ITEM 1
RUNWAY 16/34
HOLD MARKINGS

ITEM 1
RUNWAY 16/34
HOLD MARKINGS

ITEM 1
RUNWAY 16/34
HOLD MARKINGS

ITEM 1
RUNWAY 16/34
HOLD MARKINGS

RUNWAY 7-25
RUNWAY 16-34
RUNWAY 5-23
MERRILL FIELD DRIVE
AIRPORT HEIGHTS DRIVE
T/W A
T/W B
T/W C
T/W D
T/W E
T/W F
T/W G
T/W H
T/W J
T/W K
T/W M
T/W N
T/W P
T/W Q
T/W R
T/W S
GOLF EAST APRON
MEDEVAC APRON
QUEBEC APRON
WHISKEY APRON
WHISKEY TRANSIENT APRON
CHARLIE SOUTH APRON

AERIAL PHOTO: September, 2012
AERO-METRIC,MERRILL FIELD ANCHORAGE, ALASKA

NOTES:

1. ITEMS ON MAP CORRESPOND WITH THE UPDATED AIRFIELD MARKING DEFICIENCY LIST.

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SCALE IN FEET

ONE INCH

REVISIONS		
MARK	DATE	DESCRIPTION
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2013 AIRPORT INSPECTION REPORT

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ANCHORAGE, ALASKA

SHEET TITLE
AIRFIELD MARKINGS CORRECTIVE ACTION ITEMS

SHEET
1.4

DRAWN BY:	CHECKED BY:
RSB	AMS
DATE:	SCALE:
7/24/13	AS SHOWN

JOB NUMBER:
12-002

H:\jobs\12-002 Merrill Master Plan\2013 Airfield Inspection\CAD\Drawings\12-002-FIG-1.4-Airfield Pavement Marking, 1=100, 08/05/13 at 11:22 by unknown
LAYOUT: Layout1
XREF: 12-002_00_B001

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SECTION 2

Access Roads

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2.1 Pavement

2.1 ACCESS ROAD PAVEMENT

Introduction

The asphalt concrete (AC) pavement on Merrill Field Drive was inspected between July 22 and July 26, 2013 for condition and compliance with the Alaska Department of Transportation (DOT&PF) and Municipality of Anchorage (MOA) standards. The inspection work included evaluation of the pavement along the Merrill Field Drive corridor. Pavement was checked for rutting, settlement, heaving, cracks, potholes, raveling, and pavement wear.

Segments of Merrill Field Drive were rehabilitated during the summer of 2000 to repair pavement damage from settlement of underlying landfill refuse. The project included reconstruction of approximately 1,080 linear feet of road between Taxiway G and the UAA Aviation Complex and approximately 3,200 linear feet of road near the south airport entrance. The reconstruction of the area to the east of Taxiway G included removing existing road structural section and performing high energy dynamic compaction of underlying landfill refuse. Granular fill was placed over the consolidated refuse to re-establish crown and grade prior to installing new AC pavement. Reconstruction of the road near the south airport entrance included rotomilling existing pavement, placing of granular fill to re-establish crown and grade, and installing new AC pavement. Dynamic compaction was not used in this area.

The 2007 pavement inspection revealed that the 1,080 linear feet of Merrill Field Drive to the east of Taxiway G performed well over the course of the past 8 years. This area was reconstructed using dynamic compaction to consolidate underlying refuse. Very little settlement, cracking, and rutting was noticed in this pavement section. However, settlement and pavement cracking was witnessed in the area near the south airport entrance that was also rehabilitated in 2000. Dynamic compaction was not used in the reconstruction of this area. The performance of the pavement in this area indicates continued settlement of the underlying soils from degradation, decomposition, and settlement of landfill refuse. Other pavement areas not located over landfill refuse showed signs of wear after years of routine airport traffic, heavy studded tire wear, and heavy construction vehicle traffic for airport improvement projects.

A 74 foot by 25 foot section of Merrill Field Drive near the end of Runway 34 was rehabilitated in 2009. Subgrade settlement of the road section caused a below-grade, abandoned, manhole to differentially settle yielding an uneven driving surface. The pavement was removed, the abandoned structure was completely demolished, backfill was compacted, and new pavement was installed. Continued settlement in this area has resulted in slight grade changes since the 2009 work.

In 2009, two (2) new taxiway aircraft gates were installed on Taxiway G and Taxiway Q at intersections with Merrill Field Drive. The existing asphalt was removed from the intersection to perform conduit trenching work and traffic loop installation work. New leveling course was installed, graded, and compacted. New pavement was installed. The pavement in these areas is performing well since the work.

Recommended Corrective Action

Two airport access road rehabilitation projects are recommended based on the 2007 pavement inspection. The first project is to rehabilitate 3,830 LF of Merrill Field Drive from Taxiway Quebec to the intersection at 15th Avenue. Approximately 3,260 LF of this road section is located above the old landfill. Dynamic compaction of the landfill waste is recommended in this area to prolong the life of the pavement based on the results of the 2000 Merrill Field Drive rehabilitation projects. Construction of this project would include removing the existing road structural section to a depth of 3 feet, performing high energy dynamic compaction of underlying landfill refuse, placing granular fill to re-establish crown and grade, and installing new AC pavement. This project should be performed within the next three years to repair damaged pavement areas that continue to degrade. The second project is to rehabilitate approximately 1,900 LF of Merrill Field Drive from the intersection at Airport Heights Drive to the limits of the 2000 Airport Access Road Rehabilitation Project. Approximately 450 LF of access road to west of Airport Heights entrance is founded on good gravel and dynamic compaction is not recommended. The remaining 1,450 LF of Merrill Field Drive is constructed above the old landfill and dynamic compaction is recommended to consolidate the underlying refuse. Sheet 2.1 attached at the end of this section identifies the project locations. Construction methods for the dynamic rehabilitation of the dynamic compaction areas and rehabilitation of the gravel areas will be the same as described above. It is recommended that the remaining portions of Merrill Field Drive be rehabilitated within 10 years.

Summary of Costs for Rehabilitation

Rehabilitate 3,830 LF of Road from Taxiway Quebec to East 15th Avenue –
Dynamically Compact 3,260 LF (within 3 Years) ..... $2,500,000 + $500,00 = $3,000,000

Rehabilitate 1,900 LF of Road from Airport Heights Drive to UAA Building –
Dynamically Compact 1,450 LF (within 3 Years) ..... $1,500,000 + $250,000 = $1,750,000

Rehabilitate Remaining Portion of Merrill Field Drive
(within 10 Years) @ $7.55 psf $1,000,000

==========

Total $ 5,750,000

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MERRILL FIELD T/W A

T/W B

REHAB 450 LF MERRILL FIELD DRIVE

RUNWAY 7-25

7

25

T/W D

T/W E

T/W F

T/W H

T/W J

T/W K

T/W M

T/W N

16

MERRILL FIELD DRIVE

MERRILL FIELD DRIVE

T/W G

GOLF EAST APRON

T/W Q

T/W Q

MEDEVAC APRON

AIRPORT HEIGHTS DRIVE

MERRILL FIELD DRIVE

T/W B

T/W Q

QUEBEC APRON

REHAB 1,450 LF MERRILL FIELD DRIVE

RUNWAY 16-34

T/W C

REHAB 570 LF MERRILL FIELD DRIVE

RUNWAY 5-23

WHISKEY APRON

WHISKEY TRANSIENT APRON

T/W R

CHARLIE SOUTH APRON

T/W B

REHAB 3,260 LF MERRILL FIELD DRIVE

34

T/W S

LEGEND:

PROPOSED ROAD REHAB AREA OVER LANDFILL (REQUIRES DYNAMIC COMPACTION)

PROPOSED ROAD REHAB AREA OVER GRAVEL (NO DYNAMIC COMPACTION)

N

0 200 400

SCALE IN FEET

AERIAL PHOTO: September 2012
AERO-METRIC,MERRILL FIELD ANCHORAGE, ALASKA

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2013 AIRPORT INSPECTION REPORT

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SHEET TITLE
ACCESS ROAD PAVEMENT CORRECTIVE ACTION ITEMS

SHEET
2.1

DRAWN BY:	CHECKED BY:
RSB	AMS
DATE: 7/24/13	SCALE: AS SHOWN

JOB NUMBER: 12-002

H:\Jobs\12-002 Merrill Master Plan\2013 Airfield Inspection\CAD\Drawings\12-002-FIG-2.1-Access Road Pave Rehab, 1=100, 08/05/13 at 10:52 by unknown
LAYOUT: Layout1
XREF: 12-002_00_B001

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2.2 Signage & Markings

2.2 SIGNAGE AND MARKINGS

Introduction

Road signs and pavement markings along Merrill Field Drive were inspected between July 22 and July 26, 2013 for condition and compliance with the Alaska Department of Transportation (DOT&PF) and the 2003 edition of the Manual on Uniform Traffic Control Devices (MUTCD). The inspection work included evaluation of signage along the Merrill Field Drive corridor and at taxiway and apron intersections. Signs were checked for compliance with presentation, reflective standards, effective application, siting criteria, height, condition, and size. A deficiency list was prepared to identify sign applications that fail to meet MUTCD and Alaska DOT&PF standards. This inspection report was updated to included recent roadway signage improvements on Merrill Field Drive. The updated road sign deficiency list is included at the end of this section.

Access road signage is an important component of airport safety and reducing runway incursions. Informational and directional signs posted along Merrill Field Drive help direct unfamiliar airport users to their intended destinations without inadvertent travel into the aircraft movement area. Proper signage, used in combination with the established Merrill Field Driver Safety Training Program, improves airport safety and security and reduces the risk of runway incursions.

Recommended Corrective Action

The Updated Inspection Checklist was reduced to 10 items that did not meet the standard and are candidates for corrective action. The corrective action items include: 1) upgrading all signs to meet new reflective standards; 2) removing unwarranted signs; 3) adding markings and signs as required to meet standards; 4) placing informational signs at apron entrances; 5) general maintenance; and 6) standardizing sign layout. See the attached Updated Access Road Signs and Markings Deficiency List and the corresponding Sheet 2.2 location map.

Summary of Costs

Upgrade Signs to New Reflective Standards	$12,000
Place Stop Bars and Crosswalk Ladder @ $625 each	$3,000
Install Informational Signs @ $70 per sq. ft.	$3,500
Aircraft Turn Around Warning Sign @ $70 per sq. ft.	$2,800
Replace Taxiway Stop Signs @ $70 per sq. ft.	$4,500
Remove Unwarranted Signs @ $225 each	$1,800
Update Reader Boards	$3,000
	==========
Total	$ 30,600

Inspection Dates: July 22 - 26, 2013

2013 Updated Access Roads Signs and Markings Deficiency List

Item	Sign or Making Type	Location	Description of Deficiency	Pictures	Referenced Standard	Recommended Corrective Action	Number of Signs
1	**Crosswalk**	See attached Sign Deficiency Location Map.	Excessive use of signs.		2A.04 of MUTCD	Remove	1
2	**Crosswalk**	See attached Sign Deficiency Location Map.	Excessive use of signs.		2A.04 of MUTCD	Remove sign.	1
3	**Informational**	See attached Sign Deficiency Location Map.	Missing informational sign at Golf Apron entrance.		N/A	Install informational sign at Golf Apron entrance.	1
4	**Stop Bar Markings**	See attached Sign Deficiency Location Map.	Missing stop bars at entrance to apron.		3B.16 of MUTCD	Add stop bars on pathway both sides of entrance to apron.	1
5	**Street Name**	See attached Sign Deficiency Location Map.	Street sign of Airport Heights on Merrill Field Drive.		N/A	Remove non street name [Airport Heights] on top of stop sign.	1
6	**Informational**	See attached Sign Deficiency Location Map.	Missing informational sign at Quebec Apron entrance.		N/A	Add informational sign at Quebec Apron entrance.	1
7	**Crosswalk**	See attached Sign Deficiency Location Map.	Excessive use of crosswalks.		2A.04 of MUTCD	Remove extra crosswalk at reader board on west side.	1
8	**Crosswalk**	See attached Sign Deficiency Location Map.	Sign not located at crosswalk.		2C.41of MUTCD	Relocate pedestrian crossing sign adjacent to crosswalk on east side of entrance.	1

Inspection Dates: July 22 - 26, 2013

2013 Updated Access Roads Signs and Markings Deficiency List

Item	Sign or Making Type	Location	Description of Deficiency	Pictures	Referenced Standard	Recommended Corrective Action	Number of Signs
9	**Informational**	See attached Sign Deficiency Location Map.	Missing informational sign at Whiskey Apron entrance.		N/A	Add informational sign at Whiskey Apron entrance.	1
10	**Flashing Light**	See attached Sign Deficiency Location Map.	Warning beacon not warranted.		4K.03 & 4K.04 of MUTCD	Remove warning beacon from speed limit sign.	1

8	7	6	5	4	3	2	1	

DRAWN BY: RSB
DATE: 7/24/13
JOB NUMBER: 12-002
SHEET: 2.2
CHECKED BY: AMS
SCALE: AS SHOWN

SHEET TITLE: ACCESS ROAD SIGNAGE & MARKINGS CORRECTIVE ACTION ITEMS

2013 AIRPORT INSPECTION REPORT

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SECTION 3

Airport Security

3.1 Gates & Fencing

3.1 SECURITY GATES AND FENCING

Introduction

Thirty-four (33) electronic vehicle gates, eighteen (18) pedestrian gates, three (3) taxiway barrier gates, and fourteen (14) non-electrical manual vehicle gates were inspected in July 2013 for general condition and functional performance. A map of the gate locations is attached at the end of this section. The results of the HDL and Merrill Field maintenance staff inspections are contained in the field inspection checklist located at the end of this section.

Electronic Vehicle Gates. Electronic gate operator components were visually inspected including the gate rollers, pinion shafts, chains, sprockets, gear boxes, fuses, power supplies, key pads, manual overrides, motion detectors, heaters, edge sensors, and electric eyes. Merrill Field maintenance staff independently inspected fuses, wiring, thermostats, timer clocks relays, and limit switches in May 2013. There were no significant operational problems reported with the electronic vehicle gates, other than edge sensors that were not functional. Poor edge sensor functionality was likely due to dead batteries in the wireless unit.

Pedestrian Gates. Components of eighteen (18) pedestrian gates were inspected in October 2007, including the rollers, cables, combination locks, latches, grease fittings, and counter weights. Most south, east, and west pedestrian gates were generally in good condition with a few that need minor adjustments. Currently (June 2012), several of the north pedestrian gates do not have controls installed (combo locks, automatic closers, handles, etc.) These north gates were relocated during the ADOT&PF 2008 project and the controls were not re-installed. The gates are locked with chains and pad-locks. Attached is an updated list of inspection items.

Taxiway Barrier Gates. Taxiway barrier gates at Merrill Field are rolling cantilever-style gates with mesh panels. The gates are in excellent shape and function properly. In 2010, two new taxiway barrier gates were constructed at the intersection of Merrill Field Drive and Taxiway Q and the intersection of Merrill Field Drive and Taxiway G. The taxiway barrier gate located at the south end of Taxiway G was constructed in 2005. One square-tube structural member on the east panel of this gate has split from water intrusion and freezing.

Non-Electronic Vehicle Gates. The non-electric vehicle gates were all pad-locked and generally in fair to good condition with no deficiencies that would pose a security concern.

Fencing. Merrill Field operates and maintains approximately 28,200 lineal feet of airport perimeter and internal security fencing. The north, east, and south perimeter fencing is typically 6-foot high. The west perimeter fencing, parallel to Orca Street and the Fairview community, includes sections of 7-foot and 8-foot high fence. The perimeter fencing on the west side of the field consists of either galvanized chain-link or vinyl coated fence meeting FAA material specifications. The fencing is in reasonably good condition and no deficiencies were noted.

Recommended Corrective Action

Recommended corrective action includes: 1) repair non functional edge sensors, key pads, and manual over-rides on the electronic vehicle gates, particularly the safety devices as soon as practicable; 2) reinstall locking and automatic closure components on the pedestrian gates; and 3) repair the damage aluminum tubing on the Gravel/Ski Runway gate, and drill weep holes at the bottom of all the vertical tubing to allow water to escape. The recommended gate improvements will enhance safety and security at the airport.

Summary of Costs

Maintenance to Edge Sensors, Key Pads, Manual Overrides (15 gates)	$8,620
Installation of security components on pedestrian gates (approx 4 gates)	$2,500
Total	$13,620

Items Noted That May Require Corrective Action

Item 1: ***Gate N4***

Location. Alpha Transient ***Deficiency.*** Edge sensor not functioning.

Recommended Corrective Action. Replace sensor batteries or replace sensor.

Estimated Cost. $1,000

Item 2: ***Gate N5***

Location. Hangar.net ***Deficiency.*** Chain is very loose.

Recommended Corrective Action. Tighten chain to manufacturer's tolerances.

Estimated Cost. $120

Item 4: ***Gate S4***

Location. Pacific Airways ***Deficiency.*** Edge sensor not functioning.

Recommended Corrective Action. Replace sensor batteries or replace sensor.

Estimated Cost. $1,000

Item 5: ***Gate W2***

Location. Aero Center Partnership ***Deficiency.*** Manual override not functioning.

Recommended Corrective Action. Repair or replace manual override, sensor batteries or sensor.

Estimated Cost. $1,500

Item 6: ***Gate GS1***

Location. Taxiway G at Gravel Ski Runway ***Deficiency.*** Edge sensor not functioning.

Recommended Corrective Action. Replace sensor batteries or replace sensor.

Estimated Cost. $1,000

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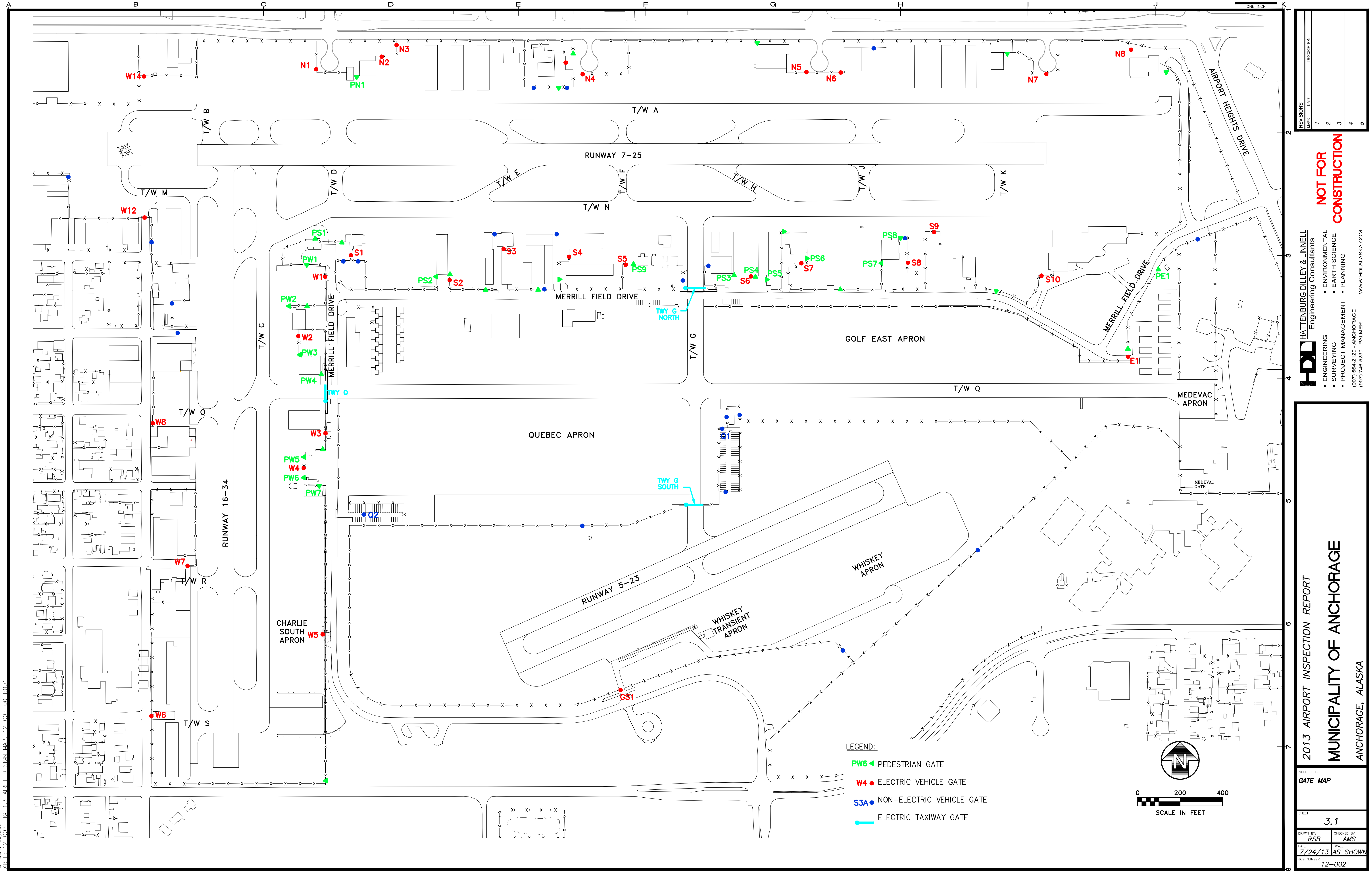

RUNWAY 7-25
RUNWAY 16-34
RUNWAY 5-23
T/W A
T/W B
T/W C
T/W D
T/W E
T/W F
T/W G
T/W H
T/W J
T/W K
T/W M
T/W N
T/W Q
T/W R
T/W S
MERRILL FIELD DRIVE
AIRPORT HEIGHTS DRIVE
GOLF EAST APRON
QUEBEC APRON
MEDEVAC APRON
WHISKEY APRON
WHISKEY TRANSIENT APRON
CHARLIE SOUTH APRON
TWY G NORTH
TWY G SOUTH
TWY Q
MEDEVAC GATE
N1
N2
N3
N4
N5
N6
N7
N8
PN1
W1
W2
W3
W4
W5
W6
W7
W8
W12
W14
PW1
PW2
PW3
PW4
PW5
PW6
PW7
PS1
PS2
PS3
PS4
PS5
PS6
PS7
PS8
PS9
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
PE1
E1
Q1
Q2
GS1
LEGEND:
PW6 PEDESTRIAN GATE
W4 ELECTRIC VEHICLE GATE
S3A NON-ELECTRIC VEHICLE GATE
ELECTRIC TAXIWAY GATE
0
200
400
SCALE IN FEET
N
NOT FOR CONSTRUCTION
HATTENBURG DILLEY & LINNELL
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2013 AIRPORT INSPECTION REPORT
MUNICIPALITY OF ANCHORAGE
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GATE MAP
3.1
RSB
AMS
7/24/13
AS SHOWN
12-002

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Merrill Field Airport
2007 Gate Inspection Checklist
Updated for Recent Airport Improvements June 2012

Inspected August 1, 2013

Electronic Vehicle Gates

Item #	Gate #	Location	Type	Height (ft)	Width (ft)	Gate Roller/Pinion Shaft	Chain and Sprockets	Gear Box/Leaks	Fuses	Wiring	Thermostat	Timer Clock	Relay Contacts/Smoke	Limit Switches	Power Supply	Key Pad	Manual Override	Motion Detector	Smart Pass Card Sensor	Heating Unit	Edge Sensor	Photo Beam	Physical Condition/Comments
1	N1	Fox Papa (Alyeska Air)	Roller	5	16	Not Inspected	Not Inspected	Not Inspected	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13			OK	OK	OK Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
2	N2	East of Lake and Pen Air	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	None	Enter and Exit reader	Not Inspected	OK	OK	Heater replaced 8-5-07 HDL inspection 7/2013
3	N3	Slipstream Hangars	Roller						OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13			OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
4	N4	Alpha Transient (Ardaiz Circle)	Roller	5	16	Not Inspected	Not Inspected	Not Inspected	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	Not Inspected	OK	OK	OK	OK Enter reader	Not Inspected	**Not Working**	OK	Gate is operational.
5	N5	State of Alaska (Hangar.net)	Roller	5	16	OK	**Chain is very loose**	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
6	N6	Reeve (West)	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	None	Enter and Exit reader	Not Inspected	OK	OK	HDL inspection 7/2013
7	N7	Hudson Circle	Roller	5	16	Not Inspected	Not Inspected	Not Inspected	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	Not Inspected	OK	OK	OK	Enter reader		OK	OK	HDL inspection 7/2013
8	N8	Stoddards	Roller						OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter and Exit Reader	Not Inspected	OK	OK	HDL inspection 7/2013
9	E1	Campground Transient	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
10	S1	Spernak	Roller	5	16	OK	OK	OK	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
11	S2	Roger's Park	Roller	5	16	OK	OK	OK	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	None	Enter and Exit reader	Not Inspected	OK	OK	Card Reader Inside and Outside HDL inspection 7/2013
12	S3	Dan's Hangars	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
13	S4	Pacific Alaskan Airways	Roller	5	16	OK	OK	OK	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	None	Enter and Exit reader	Not Inspected	**Not Working**	OK	Card Reader Inside and Outside HDL inspection 7/2013
14	S5	Kontor Development	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	None	Enter and Exit reader	Not Inspected	OK	OK	Gate catcher realigned 8-25-07 HDL inspection 7/2013
15	S6	Ace Hangars	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
16	S7	Aero Twin	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	Gate catcher realigned 8-25-07 HDL inspection 7/2013
17	S8	Lake Clark	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
18	S9	UAA (West)	Roller	5	16	OK	OK	OK	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	OK	Not Inspected	OK	OK	Edge Sensor not working on 6-16-07 - replaced 9-01-07 HDL inspection 7/2013
19	S10	UAA (East)	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
20	W1	Charlie Transient (CT)	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	Gate Control that turns off both backup batteries not working on 7-08-07 HDL inspection 7/2013
21	W2	Aero Center Partnership	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	Out of Order	Out of Order	Out of Order	Out of Order	Out of Order	Out of Order	Out of Order	Out of Order	Gate Control that turns off both backup batteries not working on 7-08-08 HDL inspection 7/2013
22	W3	Executive Hangars	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
23	W4	AeroTech	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
24	W5	Charlie South Parking (CS)	Roller	5	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 10/2/07
25	W6	Janssen Hangars	Roller	8	16	OK	OK	OK	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	None - 2 keypads	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013

Merrill Field Airport
2007 Gate Inspection Checklist
Updated for Recent Airport Improvements June 2012

Inspected August 1, 2013

Electronic Vehicle Gates

Item #	Gate #	Location	Type	Height (ft)	Width (ft)	Gate Roller/Pinion Shaft	Chain and Sprockets	Gear Box/Leaks	Fuses	Wiring	Thermostat	Timer Clock	Relay Contacts/Smoke	Limit Switches	Power Supply	Key Pad	Manual Override	Motion Detector	Smart Pass Card Sensor	Heating Unit	Edge Sensor	Photo Beam	Physical Condition/Comments
26	W7	Frostys	Roller	8	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	None - 2 keypads installed	None	Enter and Exit reader	Not Inspected	OK	OK	Card Reader Inside and Outside; Gate Control that turns off both backup batteries not working on 7-08-08. HDL insp. 7/2013
27	W8	Janssen North Lot	Roller	8	16	OK	OK	OK	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	HDL inspection 7/2013
28	W12	Orca	Roller	8	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	Gate Control that turns off both backup batteries not working on 7-08-08 HDL inspection 7/2013
29	W14	Holiday	Roller	8	16	OK	OK	Oil residue on bottom	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK	OK	OK	OK	Enter reader	Not Inspected	OK	OK	Gate Control that turns off both backup batteries not working on 7-08-08; Heater replaced 8-11-07. HDL insp.7/2013
30	GS1	Gravel/Ski Runway	Roller			OK	OK	Oil residue on bottom	OK - MRI Inspection 6-29-07	OK - MRI Inspection 6-29-07	OK - MRI Inspection 6-29-07	OK - MRI Inspection 6-29-07	OK - MRI Inspection 6-29-07	OK - MRI Inspection 6-29-07	OK	OK	OK	OK	Enter reader	Not Inspected	**Not functioning**	OK	HDL inspection 7/2013
31	Q1	Vehicle Parking (South)				Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	None	Not Inspected	Not Inspected	Not Inspected	Gate is operational.
32	TWY Q	Taxiway Q	Roller	8	36	Not Inspected	Not Inspected	Not Inspected	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	Not Inspected	Not Inspected	Not Inspected	Not Inspected	None	Not Inspected	Not Inspected	Not Inspected	Gate is operational.
33	TWY G NORTH	Taxiway G North	Roller	8	36	Not Inspected	Not Inspected	Not Inspected	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	OK -MRI Inspection 5/13	Not Inspected	Not Inspected	Not Inspected	Not Inspected	None	Not Inspected	Not Inspected	Not Inspected	Gate is operational.
34	TWY G SOUTH	Taxiway G South	Roller	8	36	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	Not Inspected	None	Not Inspected	Not Inspected	Not Inspected	Gate is operational.

Merrill Field Airport
2013 Pedestrian Gate Inspection

Pedestrian Gates													
Item #	Gate #	Location	Code	Type	Height (ft)	Width (ft)	Rollers	Cable	Combo Lock	Door Latches	Grease Zerks	Counter Weight	Physical Condition/Comments
1	PN1	Lake & Pen		Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
2	PS1	Manager's Office (North)	2,3,4	Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
3	PS2	Roger's Park		Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-08	OK	HDL inspection 8/1/2013.
4	PS3	Ace Hanger-West	2,3,1	Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
5	PS4	Ace Hanger-Mid	2,3,1	Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
6	PS5	Ace Hanger-East	4,3,2,1	Swing	5	4	OK	OK	OK	Missing catch	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
7	PS6	Aero Twin	3,1,5	Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
8	PS7	Lake Clark - West		Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
9	PS8	Lake Clark - East		Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
10	PS9	Kontor		Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
11	PE1	Campground	2,3,4	Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
12	PW1	Charlie Transient	2,3,4	Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
13	PW2	Aero Center (North)	1,3,5	Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
14	PW3	Aero Center (West)	1,3,5	Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
15	PW4	Aero Center (South)	1,3,5	Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
16	PW5	Executive Hangars (north)	5,2,3	Swing	5	4	OK	OK	OK	OK	1/2 Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
17	PW6	Aero Tech (North)	3,5,1	Swing	5	4	OK	OK	OK	OK	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.
18	PW7	Aero Tech (South)	3,5,1	Swing	5	4	OK	OK	OK	Missing catch	Greased - MRI Inspection 8-07	OK	HDL inspection 8/1/2013.

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Merrill Field Airport

2007 Non-Electronic Vehicle Gate Inspection

Updated for Recent Airport Improvements June 2012.

Manual Vehicle Gates						
Item #	Gate #	Location	Type	Height (ft)	Width (ft)	Physical Condition/Comments
1	Q1	Vehicle Parking	Roller	7	12	O.K.
2	Q2	Vehicle Parking	Roller	7	12	O.K.
3	VS2A	Dan's Hangars	Swing	6	12	O.K.
4	VS3A	Johnstone Hangar	Roller	7	12	O.K.
5	VS4A	Dan's Hangars	Swing	6	12	O.K.
6	VS5A	Aviation Wholesale	Swing	6	16	O.K.
7	VS13	15th Avenue Gravel Entrance	Roller	6	16	O.K.
8	VS14	Anchorage Regional Office	Roller	6	12	O.K.
9	VE2	AFD Training Center	Roller	8	12	O.K.
10	VW8	9th Avenue	Roller	6	12	O.K.
11	VW10	Trans-Alaska Helicopter / City Electric	Roller	8	16	O.K.
12	VW11	Merrill Field Hangars	Roller	8	16	O.K.
13	VW13	Alaska Sales Lot	Roller	8	16	O.K.
14	VW15	Quebec Apron Parking	Roller	8	16	O.K.

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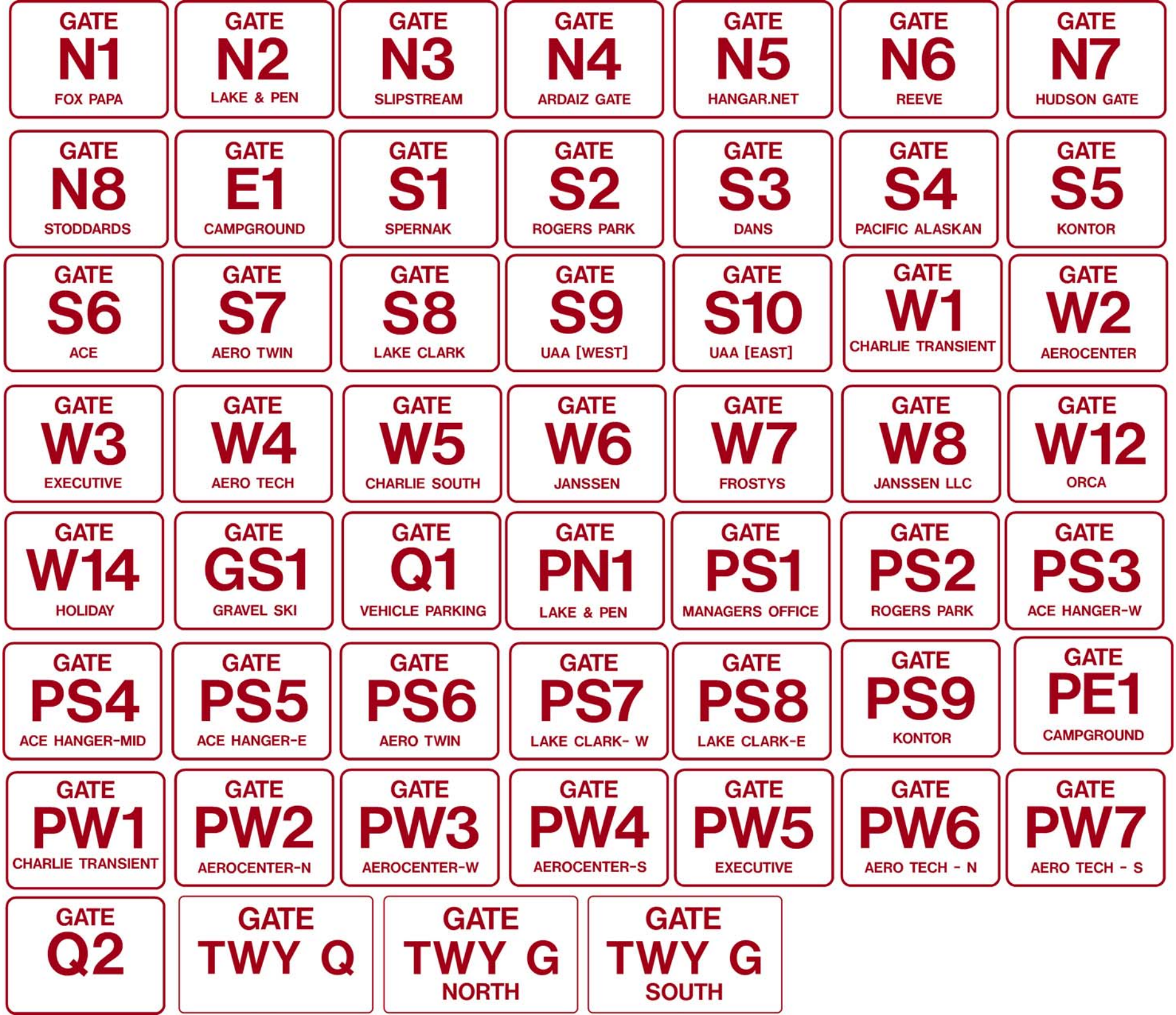
GATE N1 FOX PAPA
GATE N2 LAKE & PEN
GATE N3 SLIPSTREAM
GATE N4 ARDAIZ GATE
GATE N5 HANGAR.NET
GATE N6 REEVE
GATE N7 HUDSON GATE
GATE N8 STODDARDS
GATE E1 CAMPGROUND
GATE S1 SPERNAK
GATE S2 ROGERS PARK
GATE S3 DANS
GATE S4 PACIFIC ALASKAN
GATE S5 KONTOR
GATE S6 ACE
GATE S7 AERO TWIN
GATE S8 LAKE CLARK
GATE S9 UAA [WEST]
GATE S10 UAA [EAST]
GATE W1 CHARLIE TRANSIENT
GATE W2 AEROCENTER
GATE W3 EXECUTIVE
GATE W4 AERO TECH
GATE W5 CHARLIE SOUTH
GATE W6 JANSSEN
GATE W7 FROSTYS
GATE W8 JANSSEN LLC
GATE W12 ORCA
GATE W14 HOLIDAY
GATE GS1 GRAVEL SKI
GATE Q1 VEHICLE PARKING
GATE PN1 LAKE & PEN
GATE PS1 MANAGERS OFFICE
GATE PS2 ROGERS PARK
GATE PS3 ACE HANGER-W
GATE PS4 ACE HANGER-MID
GATE PS5 ACE HANGER-E
GATE PS6 AERO TWIN
GATE PS7 LAKE CLARK- W
GATE PS8 LAKE CLARK-E
GATE PS9 KONTOR
GATE PE1 CAMPGROUND
GATE PW1 CHARLIE TRANSIENT
GATE PW2 AEROCENTER-N
GATE PW3 AEROCENTER-W
GATE PW4 AEROCENTER-S
GATE PW5 EXECUTIVE
GATE PW6 AERO TECH - N
GATE PW7 AERO TECH - S
GATE Q2
GATE TWY Q
GATE TWY G NORTH
GATE TWY G SOUTH

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3.2 PA System

3.2 PUBLIC ADDRESS SYSTEM

Introduction

The public address (PA) system was rehabilitated under Airport Improvement Project 3-02-0015-042-2007. The project was finally accepted in July of 2009. The existing system consists of a transmitter mounted on the roof of the ATCT cab which transmits pages to six broadcast speakers located along the lengths of Runways 7/25 and 16/34. The primary function of the PA system is for the ATCT controllers to communicate directly to unauthorized vehicles and pedestrians who have inadvertently accessed the air operations area and direct them clear of the controlled area. The PA system was. Siemens Building Technologies (Siemens) was the equipment supplier and installer. New hardware installed consisted of the following:

- Base Transceiver: New base transceiver installed on the roof of the FAA Air Traffic Control Tower. Installed an uninterrupted power supply (UPS) at the transceiver to limit disruption from power spikes.
- Pole-Mounted Panel and Speaker Assembly Located Near UAA Building: New antenna, receiver, amplifier, and speaker installed and incorporated new components with existing heater, cable, and conduit.
- Pole-Mounted Panel and Speaker Assembly Located Near ACE Hangar Building: New antenna, receiver, amplifier, and speaker installed and incorporated new components with existing heater, cable, and conduit.
- Pole-Mounted Panel and Speaker Assembly Located Near Airport Manager's Office Parking Lot: New speaker and heater installed and incorporated new components with existing antenna, receiver, amplifier, cable, and conduit.
- Speaker Assembly Mounted on North Exterior Wall of Airport Manager's Office: Installed new speaker and incorporated new speaker with existing components.
- Pole-Mounted Panel and Speaker Assembly Located in 1209 Orca St. Parking Lot: Installed a new pole-mounted speaker assembly including speaker, pole, control panel, antenna, power supply, and associated appurtenances in the parking lot of the 1209 Orca Street building. Replaced the existing meter base in the parking lot and connected the new speaker assembly to the new meter base.
- Building-Mounted Speaker on 917 Orca Street: Installed a new speaker assembly including speaker, control panel, antenna, power supply, and associated appurtenances on the east side of the 917 Orca Street building. Connected the new speaker assembly to an existing panel board inside building.

Currently, the speaker located at the near the UAA building is not broadcasting. The receiver at the speaker location is showing a steady "SYNC" light indicating the transmitter and receiver are communicating. Initial investigation suggests that the amplifier has likely reached end of life and

needs replacing. The speaker will also need to be function checked during field correction of this broadcast location.

Recommended Corrective Action

The PA system components are expected to reach end of life within the next five years and an equipment upgrade will be required. Future Merrill Field developments are anticipated to include a fiber optic backbone looping the airfield property. During the design of the future PA system rehabilitation, options should be explored for providing a hardwire vs. wireless backbone for PA system transmissions.

Summary of Costs

Public Address System Rehabilitation $800,000

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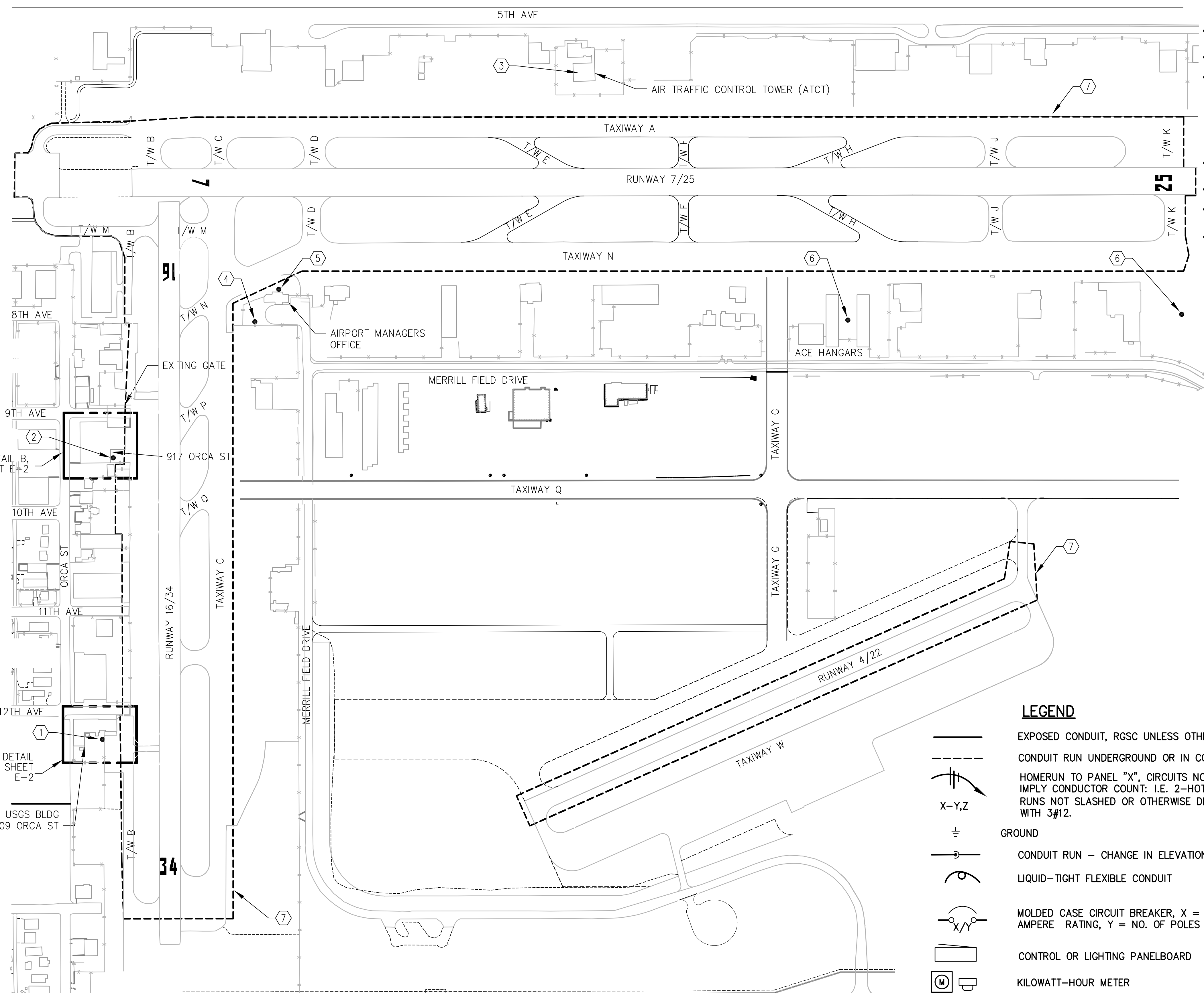

ELECTRICAL SITE PLAN

0 200 400

NOTES

1. LOCATION OF EXISTING METERBASE AND NEW PA SPEAKER IN PARKING LOT OF 1209 ORCA ST. BLDG.
2. NEW PA SPEAKER LOCATION, BLDG 917 ORCA STREET.
3. AIR TRAFFIC CONTROL TOWER. EXISTING INOPERABLE PA SYSTEM BASE TRANSCEIVER (MADAHCOM WAVES MODEL CRLU-201) LOCATED IN ENCLOSURE ON ROOF OF ATCT CAB TO BE REPLACED W/ A NEW MADAHCOM WAVES CRLU-201, 4 FLASH TYPE, BASE TRANSCEIVER OR APPROVED EQUAL. PROVIDE NEW TRANSCEIVER WITH THE SAME FIRMWARE VERSION AS THE EXISTING TRANSCEIVER AND INSTALL IN EXISTING ENCLOSURE.
4. REPLACE EXISTING POLE MOUNTED SPEAKER, SEE SHEET E-2 AND INSTALL NEW 100W HEATER IN EXISTING CONTROL PANEL.
5. REPLACE SPEAKER MOUNTED ON WALL OF AIRPORT MANAGER'S OFFICE.
6. LOCATION OF EXISTING PA SYSTEM TOWER. PROVIDE PA SYSTEM WITH NEW SPEAKER, AMP, RECEIVER AND ANTENNA.
7. MOVEMENT AREA, DO NOT ENTER WITHOUT ATC CLEARANCE. SEE SPECS.

GENERAL NOTES

1. CALL BEFORE YOU DIG. ALL UTILITIES MAY NOT BE SHOWN IN THE PLANS. THE CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES WITHIN WORK AREA PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY UTILITY CONFLICTS BETWEEN PROPOSED STRUCTURES & UTILITIES. ADJUSTMENTS OF ALL STRUCTURES MAY BE NECESSARY TO AVOID UTILITY CONFLICTS. ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
2. ALL NEW PA SYSTEM EQUIPMENT SHALL BE COMPATIBLE WITH THE EXISTING PA SYSTEM EQUIPMENT SCHEDULED TO REMAIN.
3. "CAUTION!! A CLASS 1, DIVISION 1, HAZARDOUS LOCATION EXISTS IN ALL AREAS BELOW GRADE. LANDFILL GAS MAY BE PRESENT DURING CONSTRUCTION. SEE PROJECT SAFETY MANUAL FOR SAFETY SPECIFICATIONS".

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISH FLOOR
ATCT	AIR TRAFFIC CONTROL TOWER
BCU	BARE COPPER
C	CONDUIT
DWG	DRAWING
G	GROUND CONDUCTOR
GFI	GROUND FAULT INTERRUPTING
GRC	GALVANIZED RIGID (STEEL) CONDUIT
H	HOT CONDUCTOR
KVA	KILO-VOLT-AMPERES
LTF	LIQUID TIGHT FLEXIBLE CONDUIT (METALLIC)
MDP	MAIN DISTRIBUTION PANEL
N	NEUTRAL CONDUCTOR
PA	PUBLIC ADDRESS
TYP	TYPICAL
V	VOLTS

LEGEND

- EXPOSED CONDUIT, RGSC UNLESS OTHERWISE SHOWN
- CONDUIT RUN UNDERGROUND OR IN CONCRETE
- X-Y,Z — HOMERUN TO PANEL "X", CIRCUITS NO. Y AND Z SLASHES IMPLY CONDUCTOR COUNT: I.E. 2-HOT, 1-NEUTRAL CONDUIT RUNS NOT SLASHED OR OTHERWISE DEFINED ARE 3/4"C WITH 3#12.
- GROUND
- CONDUIT RUN – CHANGE IN ELEVATION
- LIQUID-TIGHT FLEXIBLE CONDUIT
- X/Y — MOLDED CASE CIRCUIT BREAKER, X = AMPERE RATING, Y = NO. OF POLES
- CONTROL OR LIGHTING PANELBOARD
- M — KILOWATT-HOUR METER
- $ — SINGLE POLE SWITCH.
- 120V DUPLEX RECEPTACLE, NEMA CONFIGURATION 5 – 20R.

RECORD DRAWING
THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF SUCH INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.
DATE: 7/15/09 ENGINEER: EDC, Inc.

ONE INCH

REVISIONS		
REV	DATE	DESCRIPTION
1	7/15/09	RECORD DRAWINGS
2		
3		
4		
5		

STATE OF ALASKA ★ 49TH ★ John H. Faschan EE 8286 REGISTERED PROFESSIONAL ENGINEER

EDC, Inc.
213 W. FIREWEED LANE
ANCHORAGE, AK 99503
(907) 276-7933

MERRILL FIELD IMPROVEMENTS
AIRFIELD PA SYSTEM IMPROVEMENTS
AIP 3-02-0015-042-2007
MUNICIPALITY OF ANCHORAGE
ANCHORAGE, ALASKA

SHEET TITLE
ELECTRICAL LEGEND, ABBREVIATIONS & SITE PLAN

SHEET
E-1

DRAWN BY:	CHECKED BY:
J KISSEL	J FASCHAN
DATE: 7/15/09	SCALE: AS NOTED
JOB NUMBER: HDLMER	

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3.3 Video Surveillance

3.3 VIDEO SURVEILLANCE SYSTEM

Introduction

At the time of this report, Phase 1 of the video surveillance system upgrade is underway using funding from the FAA's Airport Improvement Program (AIP) 3-02-0015-058-2012. The scope of this project includes the installation of a fiber optic backbone local area network (LAN) along Merrill Field Drive to connect 17 new high definition (HD) cameras in 7 locations. New HD cameras will have license plate capture and general surveillance capabilities. A state-of-the-art video surveillance operating platform with new computer stations, hard drive data storage arrays, power supplies, software, and associated equipment will be installed in the Airport Manager's Office to manage the new surveillance system. Existing security cameras located throughout the airport that will not be tied into the new fiber optic backbone will be updated with new encoders to utilize the existing wireless LAN system and tie the existing cameras into the new system operating platform.

Merrill Field's existing video surveillance system represented the state-of-the-art in video camera, wireless local area network (LAN), and video management software systems in 2005 when the system was designed. Originally 63 analog day/night capable cameras were placed at strategic positions around the airfield with video from these cameras stored digitally for a 30-day minimum period on servers located at the airport management office. Most of the cameras are connected into the system using a point to multi-point wireless LAN internet protocol (IP) radio network system. The video management software was provided by Verint Loronix and runs on a Verint proprietary digital video recorder (DVR) hardware based platform. A public web page is provided for the viewing of camera still frame images which are updated every 5 minutes. Since 2007, the system has become increasingly unreliable and has many obsolete parts that cannot be repaired or replaced. The LAN is using wireless technology that is operating at its maximum data throughput capacity at all base station locations, severely compromising the overall system performance and stability. The analog cameras installed are 5 years old and are not providing acceptable video resolution. In addition, the Verint Loronix video management software currently used is no longer supported by the manufacturer, and does not provide an internal supervisory function to automatically identify system faults such as loss of camera video input. Loss of camera video data has routinely gone for months before it is identified and repaired. All DVR and computer hardware used in the video management and display system is reaching end of life and is no longer supported by the manufacturer.

HDL inspected the existing video surveillance system in April and June of 2011. The system was found to be working, but with an unsatisfactory level of reliability and video camera resolution. Camera video data inputs are often unknowingly lost for months at a time and frequently computer and wireless LAN components must be restarted to reacquire camera transmissions. Cameras that have failed or gone off-line with no video provided are typically only identified when a system user tries to view that specific camera and then notifies airport personnel of a failure. The system originally consisted of 63 cameras as shown in Drawing E1.0 attached. The condition of each camera is noted in the attached Merrill Field Camera Inventory

dated June 15, 2011. The system has degraded since the 2011 inspection and currently is not recording or storing video images.

The wireless LAN system was found to be operating at its maximum data transmission capacity at all five radio sector base stations, and as a result all camera frame rates have been locked at a 1 frame per second and camera video encoder MPEG4 compression rates are set very high to stay within the stable data rate capacity of the LAN. The wireless LAN system is also being used to support 33 gate access control systems widely dispersed around the airfield. In order to provide a line of sight radio path for all of the gate control wireless subscriber units, a second wireless base station location was added at the rotating beacon tower to support two 120 degree wide radio sectors. All beacon tower wireless LAN data is then sent via a single subscriber unit to the airport traffic control tower's (ATCT) south facing base station. All wireless base station data received at the ATCT is transmitted to the LAN server system via a buried fiber cable between the ATCT and the airport manager's office building.

Recommended Corrective Action

During design of the AIP 3-02-0015-058-2012 project, four phases of fiber optic cable installation were designed for future development (Sheet E1.1 Fiber Optic Cable Routing Master Plan attached). As funding becomes available, it is recommended to continue the additional three phases of installing the fiber optic backbone and installing up-to-date cameras along the fiber path. During each phase of design, technical products should be reviewed in order to provide state-of-the-art equipment that can be supported by the network software installed during the first phase of fiber optic upgrade and new surveillance camera installation.

Summary of Costs

Video Surveillance System Upgrades (Phase 2, 3, & 4) $3,000,000

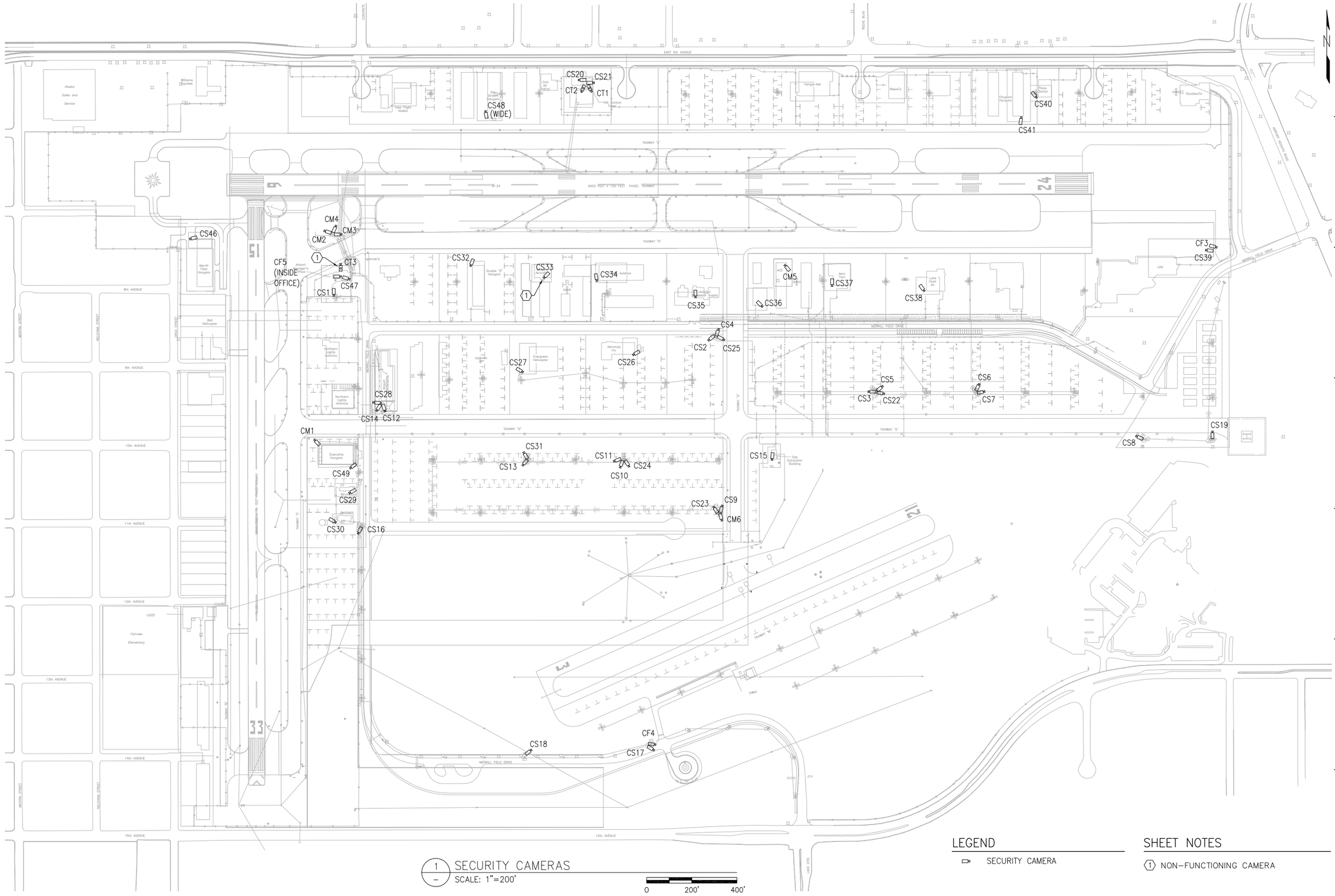
Merrill Field Camera Inventory

Last Updated: 6/15/11

Item	Quadrant	Camera Name	Operational	Public/Private	Notes
1	Northwest	CS20	Yes	Public	Civil Air Patrol
2	Northwest	CT2	Yes	Public	Civil Air Patrol
3	Northwest	CT1	Yes	Public	FAA Control Tower
4	Northwest	CS21	Yes	Public	FAA Control Tower
5	Northwest	CM4	Yes	Public	Runway 7/Taxiway N
6	Northwest	CM2	Yes	Public	Runway 16 Threshold/Taxiway C
7	Northwest	CM3	Yes	Public	Taxiway N/Spernaks
8	Northwest	CS1	Yes	Public	C-Transient Apron
9	Northwest	CS46	Yes	Private	Merrill Field Hangars
10	Northwest	CS47	Yes	Public	Manager's Office Parking
11	Northwest	CS48	Yes	Private	Slip Stream Hangars
12	Northwest	CT3	No	Public	Manager's Office-Camera Vandalized
13	Northwest	CS14	Yes	Public	Beacon Pole -Taxiway Q gate
14	Northwest	CS12	Yes	Public	Beacon Pole -Taxiway Q/Q Apron
15	Northwest	CF1	No	Public	Take Flight Gate -"Disabled due to Const. Maintenance"
16	Northwest	CF5	Yes	Private	Merrill Field Office
17	Northwest	CS45	No	Private	Take Flight -Blue Screen
18	Northwest	CS32	Yes	Private	Double 'D' Hangers
19	Northwest	CS33	No	Private	Dan's Aircraft - Power Problems-Intermittent Operation
20	Northwest	CS34	Yes	Private	Pacific Aviation
21	Northwest	CS27	Yes	Private	Evergreen Helicopters
22	Northwest	CS26	Yes	Private	Aerometric
23	Northwest	CS28	Yes	Public	Beacon Pole -Blue Screen
24	Northeast	CS44	No	Private	Hangar.Net
25	Northeast	CF2	No	Public	Hangar.net Gate -"Disabled due to Const. Maintenance"
26	Northeast	CS43	No	Private	Reeve's -"Disabled due to Const. Maintenance"
27	Northeast	CS42	No	Private	Stoddard's -"Disabled due to Const. Maintenance"
28	Northeast	CS41	Yes	Private	Chugach Hangers
29	Northeast	CS40	Yes	Private	Plane Doctor
30	Northeast	CF3	Yes	Public	Merrill Field Drive East Entrance
31	Northeast	CS39	Yes	Public	UAA Apron
32	Northeast	CS38	Yes	Private	Lake Clark Air
33	Northeast	CS37	Yes	Private	aero twin
34	Northeast	CM5	Yes	Public	Taxiway N/Taxiway G Intersection
35	Northeast	CS35	Yes	Private	Aviation Whole Sale
36	Northeast	CS36	Yes	Private	ACE Hangars
37	Northeast	CS4	Yes	Public	Taxiway G Gate
38	Northeast	CS2	Yes	Public	Block 5 Apron
39	Northeast	CS25	Yes	Public	Taxiway G/G Apron
40	Northeast	CS3	Yes	Public	G Apron
41	Northeast	CS5	Yes	Public	G Apron
42	Northeast	CS6	Yes	Public	G Apron
43	Northeast	CS7	Yes	Public	G Apron
44	Northeast	CS22	Yes	Public	G Apron
45	Southwest	CM1	Yes	Public	Taxiway C/Taxiway Q Intersection
46	Southwest	CS49	Yes	Private	Executive Hangers
47	Southwest	CS29	Yes	Private	Birchwood Hangers
48	Southwest	CS30	Yes	Private	Aerotech
49	Southwest	CS16	Yes	Public	Charlie South Apron
50	Southwest	CS31	Yes	Public	Taxiway Q - Block 5 West
51	Southwest	CS11	Yes	Public	Q Apron
52	Southwest	CS24	Yes	Public	Q Apron
53	Southwest	CS13	Yes	Public	Q Apron
54	Southwest	CS10	Yes	Public	Q Apron
55	Southwest	CS18	Yes	Public	Merrill Field Drive South Sidewalk
56	Southwest	CS17	Yes	Public	Merrill Field Drive Memorial
57	Southwest	CF4	Yes	Public	Merrill Field Drive South Entrance
58	Southeast	CS15	Yes	Public	Vehicle Storage South of Flare Shed
59	Southeast	CS9	Yes	Public	Taxiway G
60	Southeast	CS23	Yes	Public	Q Apron
61	Southeast	CM6	Yes	Public	Taxiway G-South Gate
62	Southeast	CS8	Yes	Public	Taxiway Q/Q Apron
63	Southeast	CS19	Yes	Public	Campground

=Removed from Service

= Damaged



1 — SECURITY CAMERAS
SCALE: 1"=200'

0 200' 400'

LEGEND

SECURITY CAMERA

SHEET NOTES

(1) NON-FUNCTIONING CAMERA

REVISIONS		
MARK	DATE	DESCRIPTION
	XX/XX/XX	TO BE REPLACED

NOT FOR CONSTRUCTION

HATTENBURG DILLEY & LINNELL
Engineering Consultants
• ENGINEERING • EARTH SCIENCE
• SURVEYING • PLANNING
• PROJECT MANAGEMENT • ENVIRONMENTAL
(907) 564-2120 - ANCHORAGE WWW.HDLALASKA.COM
(907) 746-5230 - PALMER

2011 MERRILL FIELD IMPROVEMENTS
SECURITY CAMERAS

MUNICIPALITY OF ANCHORAGE

ANCHORAGE, ALASKA

SHEET TITLE
SECURITY CAMERA LOCATION MAP

SHEET
E1.0

DRAWN BY:	CHECKED BY:
OM	JHF
DATE:	SCALE:
6/30/11	AS NOTED

JOB NUMBER: 11-003-03

Plotted 8/22/2011 12:23 PM P:\Projects\HDL\Merrill Field\Security Cameras\Dwgs\Elec\E1.0 Security Cameras.dwg

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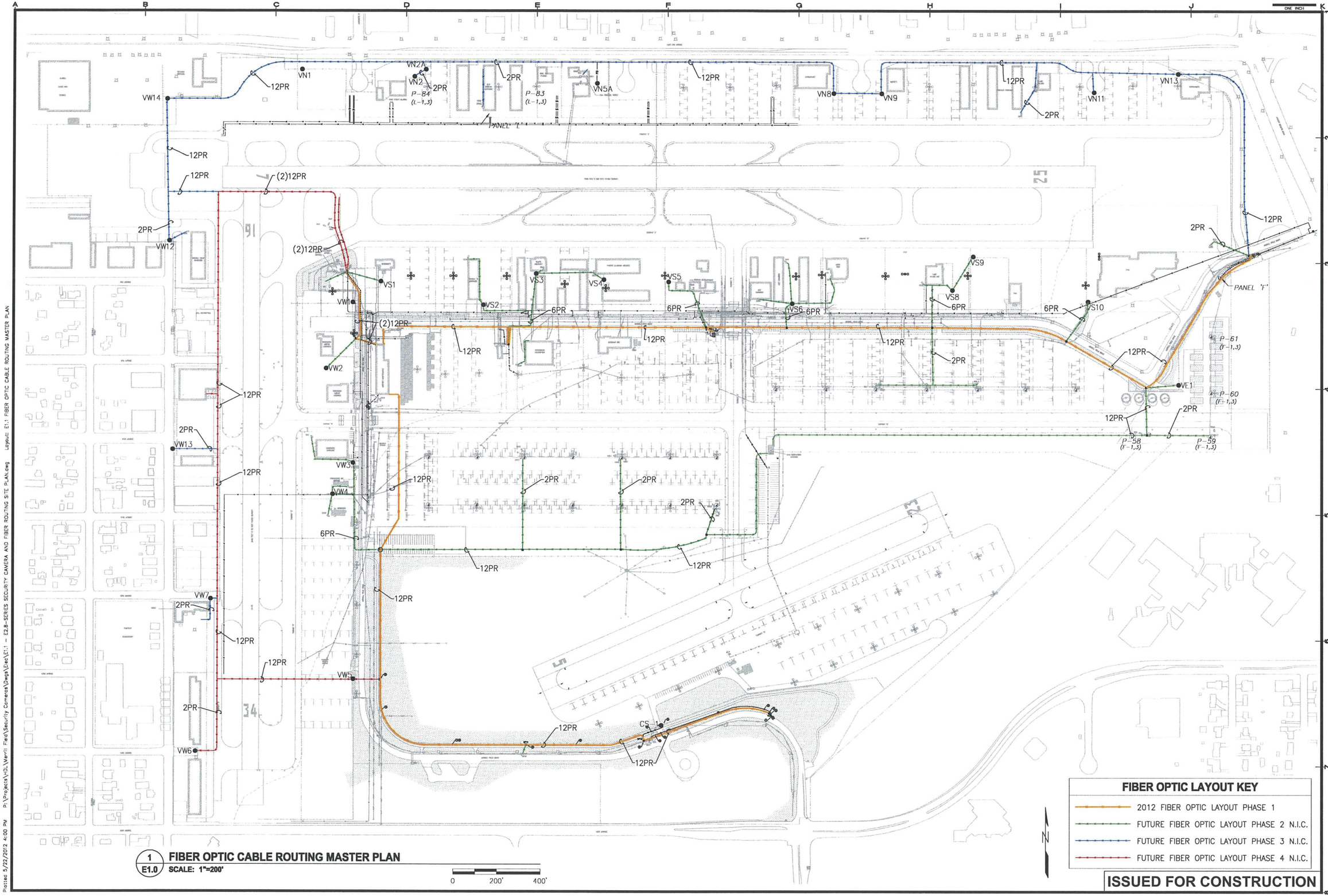

1 E1.0 **FIBER OPTIC CABLE ROUTING MASTER PLAN**
SCALE: 1"=200'

FIBER OPTIC LAYOUT KEY

- 2012 FIBER OPTIC LAYOUT PHASE 1
- FUTURE FIBER OPTIC LAYOUT PHASE 2 N.I.C.
- FUTURE FIBER OPTIC LAYOUT PHASE 3 N.I.C.
- FUTURE FIBER OPTIC LAYOUT PHASE 4 N.I.C.

ISSUED FOR CONSTRUCTION

REVISIONS		
MARK	DATE	DESCRIPTION
1		
2		
3		
4		
5		

STATE OF ALASKA — JOHN H. FEACHON — No. EE8286 — REGISTERED PROFESSIONAL ENGINEER — 4/20/12

EDC, INC.
213 W. FIREWEED LANE
ANCHORAGE, AK 99503
(907) 276-7933

2012 MERRILL FIELD AIRPORT SECURITY IMPROVEMENTS
CAMERA AND LIGHTING UPGRADES, PHASE 2

MUNICIPALITY OF ANCHORAGE

ANCHORAGE, ALASKA

SHEET TITLE: FIBER OPTIC CABLE ROUTING MASTER PLAN
SHEET: E1.1
DRAWN BY: | CHECKED BY:
DATE: 4/20/12 | SCALE:
JOB NUMBER: 11-003-10

Plotted: 5/22/2012 4:00 PM P:\Projects\VDL\Merrill Field\Security Cameras\Dwgs\Elec\E1.1 - EZ.8-SERIES SECURITY CAMERA AND FIBER ROUTING SITE PLAN.dwg Layout: E1.1 FIBER OPTIC CABLE ROUTING MASTER PLAN

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NOTES:

1. SEE SHEET G1.02 FOR PROJECT NOTES, ABBREVIATIONS AND LEGEND.
2. SEE SHEETS G2.01 FOR AIRPORT SAFETY AND WORK AREA RESTRICTIONS.
3. HAUL ROUTES SHOWN ON G2.01.

CALL BEFORE YOU DIG!

THE CONTRACTOR SHALL NOTIFY ALL AREA UTILITY COMPANIES PRIOR TO COMMENCEMENT OF EXCAVATION

LOCATE CALL CENTER OF ALASKA	1-800-478-3121
LOCATE CALL CENTER – ANCHORAGE BOWL	278-3121
MERRILL FIELD MAINTENANCE	343-6313
FAA	271-6785
STATE STORM/STREET LIGHTS	333-2411

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

PROJECT LAYOUT PLAN

SCALE: 1" = 200'

REVISIONS		
MARK	DATE	DESCRIPTION
1		
2		
3		
4		
5		

STATE OF ALASKA · 49th · Mark Robert Swenson · No. CE 12146 · REGISTERED PROFESSIONAL ENGINEER

HDL HATTENBURG DILLEY & LINNELL
Engineering Consultants
· ENGINEERING · EARTH SCIENCE
· SURVEYING · PLANNING
· PROJECT MANAGEMENT · ENVIRONMENTAL
(907) 564-2120 - ANCHORAGE
(907) 746-5230 - PALMER
WWW.HDLALASKA.COM

2012 MERRILL FIELD AIRPORT SECURITY IMPROVEMENTS
CAMERA AND LIGHTING UPGRADES, PHASE 2

MUNICIPALITY OF ANCHORAGE

ANCHORAGE, ALASKA

SHEET TITLE: PROJECT LAYOUT PLAN
SHEET: G1.03
DRAWN BY: KK | CHECKED BY: MRS
DATE: 5/21/12 | SCALE: 1"=200'
JOB NUMBER: 11-003-10

H:\jobs\11-003 Merrill Field Airport Engineering (MOA)\11-003-10 Security Imp, Ph 2 Design\CAD\Drawings\11003-3_10_G103, 1=1, 05/21/12 at 15:22 by jkk
LAYOUT: Layout1
XREF: 11003-3_10_B01

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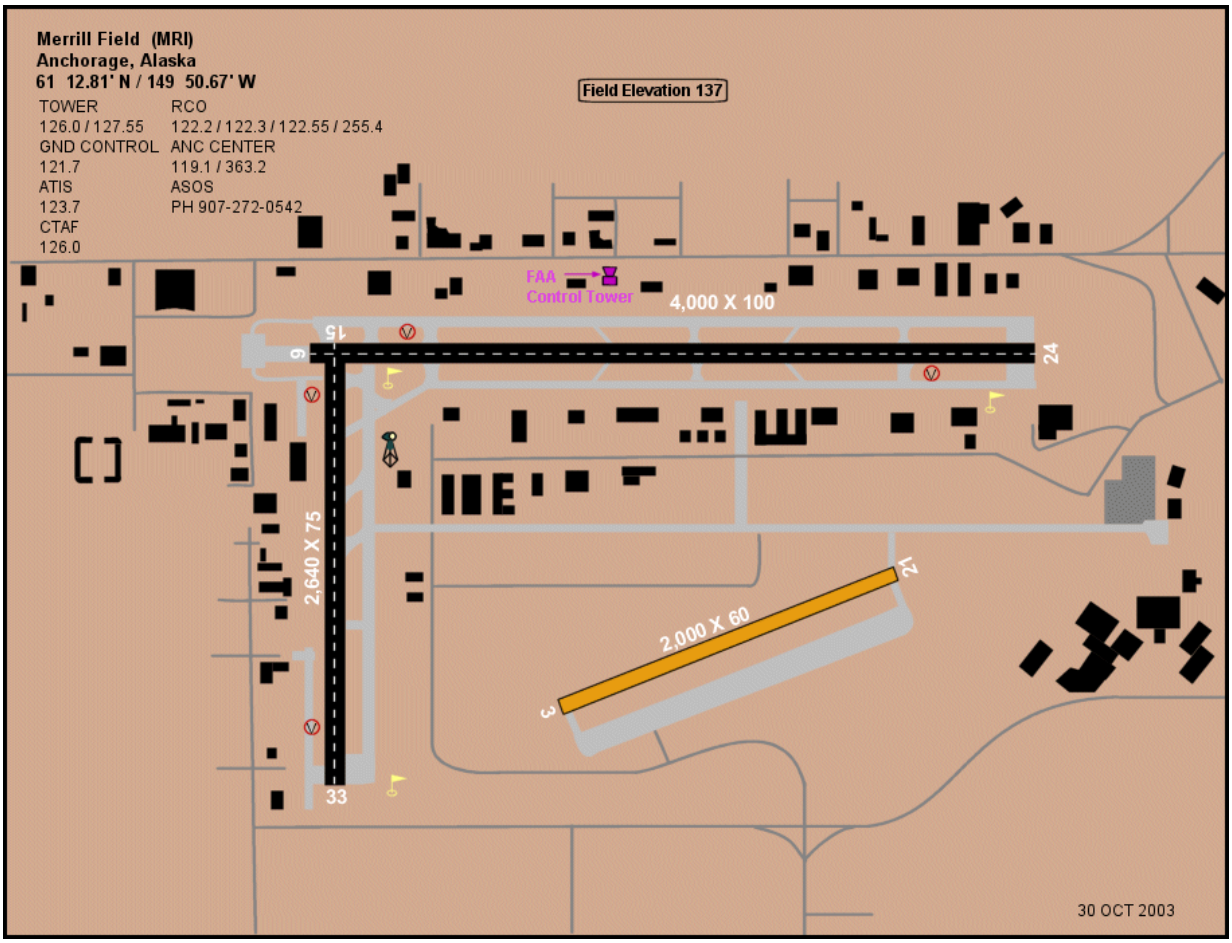
Appendix C

2015 Pavement Inspection Report



MERRILL FIELD AIRPORT

Alaska Airport Pavement Inspection Report

Published July 2015

James Horn
Project Manager
Central Region Materials, Alaska DOT&PF
5750 E. Tudor Road
Phone: (907) 269-6237 Fax: (907) 269-6201
Email: jim.horn@alaska.gov

Date: 10 /16/2015

Branch Condition Report

Pavement Database: PAVERDB_ALL NetworkID: Merrill

Branch ID	Number of Sections	Sum Section Length (Ft)	Avg Section Width (Ft)	True Area (SqFt)	Use	Average PCI	PCI Standard Deviation	Weighted Average PCI
0100 (Taxiway A)	3	4,970.00	56.67	347,575.00	TAXIWAY	85.00	0.82	84.18
0200 (Taxiway B)	4	1,625.00	45.00	66,125.00	TAXIWAY	89.25	5.31	87.69
0300 (Taxiway C)	3	2,790.00	70.00	182,270.00	TAXIWAY	84.67	2.62	85.54
0400 (Taxiway D)	2	285.00	70.00	23,675.00	TAXIWAY	87.00	2.00	86.81
0500 (Taxiway E)	2	490.00	35.00	25,200.00	TAXIWAY	87.00	4.00	86.32
0600 (Taxiway F)	2	285.00	35.00	12,125.00	TAXIWAY	83.00	1.00	83.17
0700 (Taxiway G)	3	1,425.00	75.00	114,210.00	TAXIWAY	87.00	12.57	87.89
0800 (Taxiway H)	2	530.00	37.50	24,980.00	TAXIWAY	90.00	1.00	89.86
1000 (Taxiway J)	2	285.00	62.50	20,375.00	TAXIWAY	79.00	2.00	78.98
1100 (Taxiway K)	2	505.00	172.50	79,675.00	TAXIWAY	86.50	1.50	86.50
1300 (Taxiway M)	3	632.00	40.00	27,650.00	TAXIWAY	84.00	9.42	82.33
1400 (Taxiway N)	2	3,530.00	57.50	280,050.00	TAXIWAY	86.00	8.00	78.40
1700 (Taxiway Q)	4	4,495.00	52.50	295,570.00	TAXIWAY	91.75	5.76	90.16
1800 (Taxiway R)	1	200.00	50.00	13,450.00	TAXIWAY	95.00	0.00	95.00
1900 (Taxiway S)	2	200.00	150.00	33,950.00	TAXIWAY	91.50	2.50	90.67
4100 (TW G Apron)	1	450.00	1,700.00	765,000.00	APRON	69.00	0.00	69.00

Branch Condition Report

Pavement Database: PAVERDB_ALL NetworkID: Merrill

Branch ID	Number of Sections	Sum Section Length (Ft)	Avg Section Width (Ft)	True Area (SqFt)	Use	Average PCI	PCI Standard Deviation	Weighted Average PCI
4200 (TW Q Apron)	2	2,005.00	225.00	601,900.00	APRON	69.00	6.00	63.50
4300 (Transient Apron 1)	1	260.00	200.00	51,250.00	APRON	64.00	0.00	64.00
4400 (Tower Apron)	1	475.00	90.00	42,750.00	APRON	61.00	0.00	61.00
4500 (Twy S Apron)	1	520.00	260.00	135,200.00	APRON	95.00	0.00	95.00
5000 (Compass Rose)	1	160.00	160.00	25,600.00	APRON	93.00	0.00	93.00
5100 (Medivac Helipad)	1	165.00	165.00	27,225.00	HELIPAD	100.00	0.00	100.00
6100 (16/34)	1	2,670.00	75.00	203,325.00	RUNWAY	91.00	0.00	91.00
6200 (07/25)	1	4,000.00	100.00	400,000.00	RUNWAY	86.00	0.00	86.00

Use Category	Number of Sections	Total Area (SqFt)	Arithmetic Average PCI	Average PCI STD.	Weighted Average PCI
APRON	7	1,621,700.00	74.29	13.19	69.14
HELIPAD	1	27,225.00	100.00	0.00	100.00
RUNWAY	2	603,325.00	88.50	2.50	87.69
TAXIWAY	37	1,546,880.00	87.05	6.69	85.28
All	47	3,799,130.00	85.49	9.32	78.87

Date: 10 /16/2015

Section Condition Report

Pavement Database: PAVERDB_ALL NetworkID: Merrill

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	Lanes	True Area (SqFt)	Last Inspection Date	Age At Inspection	PCI
0100 (Taxiway A)	0100-01	09/01/1997	AC	TAXIWAY	A	0	13,375.00	05/20/2015	18	86.00
0100 (Taxiway A)	0100-02	09/01/2003	AAC	TAXIWAY	A	0	297,000.00	05/20/2015	12	84.00
0100 (Taxiway A)	0100-03	09/01/2003	AAC	TAXIWAY	A	0	37,200.00	05/20/2015	12	85.00
0200 (Taxiway B)	0200-01	09/01/2003	AAC	TAXIWAY	A	0	10,300.00	05/20/2015	12	89.00
0200 (Taxiway B)	0200-02	07/01/1998	AC	TAXIWAY	A	0	34,400.00	05/20/2015	17	85.00
0200 (Taxiway B)	0200-03	09/01/1996	AC	TAXIWAY	A	0	10,925.00	05/20/2015	19	85.00
0200 (Taxiway B)	0200-04	06/01/2006	AAC	TAXIWAY	A	0	10,500.00	05/20/2015	9	98.00
0300 (Taxiway C)	0300-01	09/01/1978	AAC	TAXIWAY	A	0	131,450.00	05/20/2015	37	87.00
0300 (Taxiway C)	0300-02	08/01/1999	AC	TAXIWAY	A	0	43,120.00	05/20/2015	16	81.00
0300 (Taxiway C)	0300-03	09/01/2003	AAC	TAXIWAY	A	0	7,700.00	05/20/2015	12	86.00
0400 (Taxiway D)	0400-01	08/01/1999	AAC	TAXIWAY	A	0	12,975.00	05/20/2015	16	85.00
0400 (Taxiway D)	0400-02	09/01/2003	AAC	TAXIWAY	A	0	10,700.00	05/20/2015	12	89.00
0500 (Taxiway E)	0500-01	08/01/2001	AC	TAXIWAY	A	0	14,750.00	05/20/2015	14	83.00
0500 (Taxiway E)	0500-02	08/01/2001	AC	TAXIWAY	A	0	10,450.00	05/20/2015	14	91.00
0600 (Taxiway F)	0600-01	08/01/2001	AC	TAXIWAY	A	0	7,075.00	05/20/2015	14	84.00
0600 (Taxiway F)	0600-02	08/01/2001	AC	TAXIWAY	A	0	5,050.00	05/20/2015	14	82.00
0700 (Taxiway G)	0700-01	09/01/1996	AC	TAXIWAY	A	0	32,360.00	05/20/2015	19	100.00
0700 (Taxiway G)	0700-02	09/01/1980	AC	TAXIWAY	A	0	30,775.00	05/20/2015	35	70.00
0700 (Taxiway G)	0700-03	07/01/2005	AAC	TAXIWAY	A	0	51,075.00	05/20/2015	10	91.00
0800 (Taxiway H)	0800-01	08/01/2001	AC	TAXIWAY	A	0	14,200.00	05/20/2015	14	89.00
0800 (Taxiway H)	0800-02	08/01/2001	AC	TAXIWAY	A	0	10,780.00	05/20/2015	14	91.00
1000 (Taxiway J)	1000-01	08/01/1999	AAC	TAXIWAY	A	0	10,300.00	05/20/2015	16	77.00
1000 (Taxiway J)	1000-02	09/01/2003	AAC	TAXIWAY	A	0	10,075.00	05/20/2015	12	81.00
1100 (Taxiway K)	1100-01	08/01/1999	AAC	TAXIWAY	A	0	39,900.00	05/20/2015	16	88.00
1100 (Taxiway K)	1100-02	09/01/2003	AAC	TAXIWAY	A	0	39,775.00	05/20/2015	12	85.00
1300 (Taxiway M)	1300-01	09/01/2002	AAC	TAXIWAY	A	0	7,425.00	05/20/2015	13	95.00

Section Condition Report

Pavement Database: PAVERDB_ALL NetworkID: Merrill

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	Lanes	True Area (SqFt)	Last Inspection Date	Age At Inspection	PCI
1300 (Taxiway M)	1300-02	09/01/1996	AC	TAXIWAY	A	0	11,400.00	05/20/2015	19	72.00
1300 (Taxiway M)	1300-03	09/01/1997	AC	TAXIWAY	A	0	8,825.00	05/20/2015	18	85.00
1400 (Taxiway N)	1400-01	08/01/1999	AAC	TAXIWAY	A	0	273,000.00	05/20/2015	16	78.00
1400 (Taxiway N)	1400-02	09/01/2002	AAC	TAXIWAY	A	0	7,050.00	05/20/2015	13	94.00
1700 (Taxiway Q)	1700-01	09/01/1997	AC	TAXIWAY	A	0	279,900.00	05/20/2015	18	90.00
1700 (Taxiway Q)	1700-02	09/01/2002	AAC	TAXIWAY	A	0	4,570.00	05/20/2015	13	84.00
1700 (Taxiway Q)	1700-03	09/01/1978	AC	TAXIWAY	A	0	5,030.00	05/20/2015	37	93.00
1700 (Taxiway Q)	1700-04	06/01/2006	AAC	TAXIWAY	A	0	6,070.00	05/20/2015	9	100.00
1800 (Taxiway R)	1800-01	09/01/2010	AAC	TAXIWAY	A	0	13,450.00	05/20/2015	5	95.00
1900 (Taxiway S)	1900-01	09/01/2002	AAC	TAXIWAY	A	0	22,600.00	05/20/2015	13	89.00
1900 (Taxiway S)	1900-02	07/01/1998	AAC	TAXIWAY	A	0	11,350.00	05/20/2015	17	94.00
4100 (TW G Apron)	4100-01	06/01/1985	AAC	APRON	A	0	765,000.00	05/20/2015	30	69.00
4200 (TW Q Apron)	4200-01	06/01/1985	AAC	APRON	A	0	576,900.00	05/20/2015	30	63.00
4200 (TW Q Apron)	4200-02	06/01/1985	AAC	APRON	A	0	25,000.00	05/20/2015	30	75.00
4300 (Transient Apron 1)	4300-01	09/01/1978	AC	APRON	A	0	51,250.00	05/20/2015	37	64.00
4400 (Tower Apron)	4400-01	09/01/1978	AC	APRON	A	0	42,750.00	05/20/2015	37	61.00
4500 (Twy S Apron)	4500-01	09/01/2010	AAC	APRON	A	0	135,200.00	05/20/2015	5	95.00
5000 (Compass Rose)	5000-01	09/01/1997	AC	APRON	A	0	25,600.00	05/20/2015	18	93.00
5100 (Medivac Helipad)	5100-01	09/01/1997	AC	HELIPAD	A	0	27,225.00	05/20/2015	18	100.00
6100 (16/34)	6100-01	09/01/1985	AC	RUNWAY	A	0	203,325.00	05/20/2015	30	91.00
6200 (07/25)	6200-01	06/01/2004	AAC	RUNWAY	A	0	400,000.00	05/20/2015	11	86.00

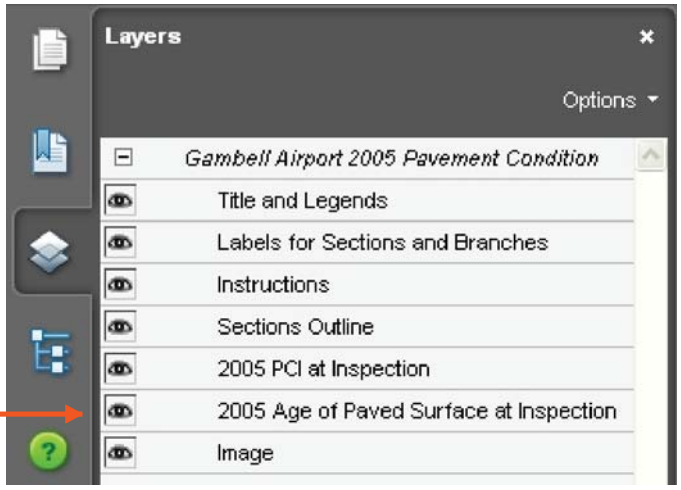
Section Condition Report

Pavement Database: PAVERDB_ALL

Age Category	Average Age At Inspection	Total Area (SqFt)	Number of Sections	Arithmetic Average PCI	PCI Standard Deviation	Weighted Average PCI
03-05	**5.00**	**148,650.00**	**2**	**95.00**	**0.00**	**95.00**
06-10	**9.33**	**67,645.00**	**3**	**96.33**	**3.86**	**92.89**
11-15	**12.83**	**916,700.00**	**18**	**87.06**	**3.91**	**85.56**
16-20	**17.40**	**834,655.00**	**15**	**86.60**	**7.70**	**85.50**
26-30	**30.00**	**1,570,225.00**	**4**	**74.50**	**10.43**	**69.74**
31-35	**35.00**	**30,775.00**	**1**	**70.00**	**0.00**	**70.00**
36-40	**37.00**	**230,480.00**	**4**	**76.25**	**13.95**	**77.19**
All	**17.72**	**3,799,130.00**	**47**	**85.49**	**9.32**	**78.87**

Instructions for Viewing Map Layers

- The map contains layers, and must be opened with Adobe Reader version 8 or later.



- Click on Adobe's Layer Tab to View Layer Controls
- Click in a layer's box to turn it on/off
- The "eye" symbol shows that the layer is visible.
- These layers draw from the bottom up, which means that a layer higher in the list might block out the information on a lower layer. Turn off the higher layer to see the information on a visible lower layer.

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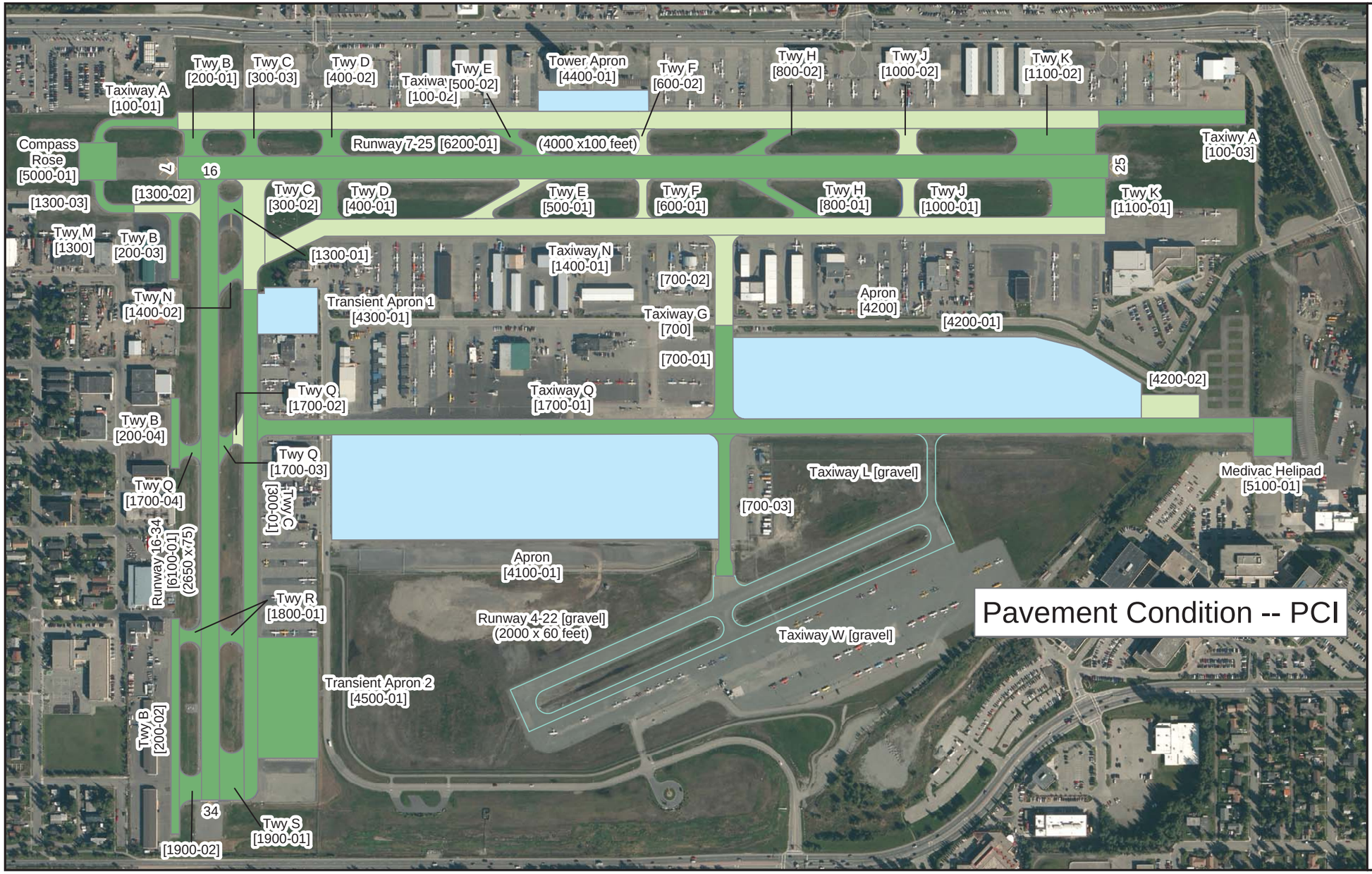
Merrill Field Municipal Airport

Airport Code: MRI
Site Number: 50035.*A

2015 Pavement Inspection Results

Map Compiled by Central Region Materials, AK DOT&PF



Pavement Condition -- PCI

Pavement Condition Index (PCI)

Target PCI Range for Runways: 70 to 100
Target PCI Range for Taxiways and Aprons: 60 to 100

PCI Values	General Pavement Recommendations
85 - 100	Do Nothing or Preventative Maintenance
70 - 84	Preventative Maintenance
60 - 69	Corrective Maintenance
55 - 59	Rehabilitate
40 - 54	Rehabilitate
25 - 39	Reconstruct
10 - 24	Reconstruct
0 - 9	Reconstruct

Pavement Surface Age

- 0 - 4 years
- 5 - 9 years
- 10 - 14 years
- 15 - 19 years
- 20 - 24 years
- 25 - 29 years
- >30 years

[ ] Branch-Section Identifier

Image Source: Digital Globe 2011 aerial

N

S

0 250 500 1,000

Feet

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Appendix D

Noise Study

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