

**SUPERIOR AIRPORT**

Branch: 04A

APRON

**A-11**

Length: 385 LF    Width: 95 LF    Area: 37,284 SF    Last Const: 2004    Family: ACAM  
 From: APRON    To: OFF OF T-11    Surface: AC

**Inspections**

Samples Surveyed: 4    Total Samples: 7    Last Inspection Date: 8/28/2012    **PCI: 68**

Sample #	Distress Description	Severity	Quantity	Area:
1	LONGITUDINAL/TRANSVERSE CRACKING	L	115 LF	5,225 SF
	OIL SPILLAGE	N	50 SF	
	PATCHING	L	9 SF	
	RAVELING	L	100 SF	
3	LONGITUDINAL/TRANSVERSE CRACKING	L	108 LF	5,225 SF
	OIL SPILLAGE	N	750 SF	
	PATCHING	L	12 SF	
	RAVELING	L	200 SF	
5	BLEEDING	N	20 LF	5,225 SF
	LONGITUDINAL/TRANSVERSE CRACKING	L	63 SF	
	OIL SPILLAGE	N	2,600 SF	
	PATCHING	L	15 SF	
6	LONGITUDINAL/TRANSVERSE CRACKING	L	49 LF	5,225 SF
	OIL SPILLAGE	N	2,650 SF	
	PATCHING	L	49 SF	
	RAVELING	L	200 SF	

**Extrapolated Distress Quantities\***

Distress Description	Severity	Quantity	Density	Deduct
BLEEDING	N	36 SF	0.34%	0.00
LONGITUDINAL/TRANSVERSE CRACKING	L	598 SF	78.08%	6.37
OIL SPILLAGE	N	10,793 LF	3.93%	25.81
PATCHING	L	152 LF	1.35%	2.29
RAVELING	L	892 LF	4.25%	4.44

\* Multiple deduct values are scaled down from their algebraic sum to keep the model consistent with experimental data.

**Percent of Deduct Values Based on Distress Mechanism**

0.0 % Load    34.0 % Climate/Durability    66.0 % Other

**SUPERIOR AIRPORT**

Branch: 04A

APRON

**A-12**

Length: 140 LF    Width: 50 LF

Area: 7,000 SF

Last Const: 2011

Family: ACAM

From: HANGARS

To: APRON

Surface: AC

**Inspections**

Samples Surveyed: 0

Total Samples: 0

Last Inspection Date:

**PCI: 100**

NONE

**Extrapolated Distress Quantities\***

Distress Description

Severity

Quantity

Density

Deduct

NONE

\* Multiple deduct values are scaled down from their algebraic sum to keep the model consistent with experimental data.

**Percent of Deduct Values Based on Distress Mechanism**

0.0 % Load

34.0 % Climate/Durability

66.0 % Other

**SUPERIOR AIRPORT**

Branch: 04R

RUNWAY

**R-11**

**Length:** 3,450 LF    **Width:** 75 LF    **Area:** 270,979 SF    **Last Const:** 2004    **Family:** ACRML  
**From:** STA 0+00 RWY 12/30    **To:** STA 34+50 RWY 12/30    **Surface:** AC

**Inspections**

**Samples Surveyed:** 7    **Total Samples:** 56    **Last Inspection Date:** 8/28/2012    **PCI:** 91

Sample #	Distress Description	Severity	Quantity	Area:
5	LONGITUDINAL/TRANSVERSE CRACKING	L	50 LF	4,875 SF
	RAVELING	L	95 SF	
13	LONGITUDINAL/TRANSVERSE CRACKING	L	25 LF	4,875 SF
	RAVELING	L	105 SF	
21	LONGITUDINAL/TRANSVERSE CRACKING	L	29 LF	4,875 SF
	RAVELING	L	95 SF	
29	LONGITUDINAL/TRANSVERSE CRACKING	L	42 LF	4,875 SF
	RAVELING	L	100 SF	
37	LONGITUDINAL/TRANSVERSE CRACKING	L	32 LF	4,875 SF
	RAVELING	L	97 SF	
45	LONGITUDINAL/TRANSVERSE CRACKING	L	55 LF	4,875 SF
	RAVELING	L	109 SF	
53	LONGITUDINAL/TRANSVERSE CRACKING	L	45 LF	4,875 SF
	RAVELING	L	89 SF	

**Extrapolated Distress Quantities\***

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	L	2,208 LF	0.03%	4.58
RAVELING	L	5,479 SF	9.99%	4.01

\* Multiple deduct values are scaled down from their algebraic sum to keep the model consistent with experimental data.

**Percent of Deduct Values Based on Distress Mechanism**

0.0 % Load

100.0 % Climate/Durability

0.0 % Other

**SUPERIOR AIRPORT**

Branch: 04T

TAXIWAY

**T-11**

Length: 2,556 LF    Width: 25 LF    Area: 72,414 SF    Last Const: 2004    Family: ACRML  
 From: NORTHWEST END RWY 12/30    To: A-11    Surface: AC

**Inspections**

Samples Surveyed: 5    Total Samples: 15    Last Inspection Date: 8/28/2012    **PCI: 81**

Sample # 3	Distress Description LONGITUDINAL/TRANSVERSE CRACKING	Severity L	Quantity 200 LF	Area: 5,075 SF
Sample # 6	Distress Description RAVELING	Severity L	Quantity 1,750 SF	Area: 5,075 SF
Sample # 9	Distress Description RAVELING RAVELING	Severity L M	Quantity 1,500 SF 100 SF	Area: 5,075 SF
Sample # 12	Distress Description RAVELING WEATHERING	Severity L L	Quantity 1,200 SF 3,100 SF	Area: 5,075 SF
Sample # 15	Distress Description LONGITUDINAL/TRANSVERSE CRACKING RAVELING WEATHERING	Severity L L L	Quantity 35 LF 340 SF 1,650 SF	Area: 3,238 SF

**Extrapolated Distress Quantities\***

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	L	335 SF	0.29%	4.00
RAVELING	L	18,407 SF	1.00%	15.26
RAVELING	M	384 SF	0.37%	6.27
WEATHERING	L	18,253 LF	0.24%	3.28

\* Multiple deduct values are scaled down from their algebraic sum to keep the model consistent with experimental data.

**Percent of Deduct Values Based on Distress Mechanism**

0.0 % Load

100.0 % Climate/Durability

0.0 % Other

## SUPERIOR AIRPORT

### FIRST YEAR LOCAL: 2013

LOCAL REPAIR COST: \$224,298

Section	Distress Description	Severity	Quantity	Work Description	Quantity	Cost	Poliv
A-11	OIL SPILLAGE	N	10,793 SF	Patching - AC Shallow	11,215 SF	\$224,298	PREV.

### FIFTEEN YEAR PROJECTIONS

ESTIMATED AVERAGE ANNUAL COST: \$52,848

Plan Year: 2013		Estimated Cost: \$90,139				PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-11	Preventive	\$3,080	\$0	\$0	\$0	\$3,080	67	67
R-11	Global MR + Preventive	\$325	\$67,745	\$0	\$0	\$68,070	89	97
T-11	Global MR + Preventive	\$886	\$18,103	\$0	\$0	\$18,989	79	85
Plan Year: 2014		Estimated Cost: \$4,494				PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-11	Preventive	\$3,913	\$0	\$0	\$0	\$3,913	65	65
A-12	Preventive	\$5	\$0	\$0	\$0	\$5	89	90
T-11	Preventive	\$576	\$0	\$0	\$0	\$576	82	82
Plan Year: 2015		Estimated Cost: \$5,951				PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-11	Preventive	\$4,758	\$0	\$0	\$0	\$4,758	63	63
A-12	Preventive	\$30	\$0	\$0	\$0	\$30	86	86
R-11	Preventive	\$299	\$0	\$0	\$0	\$299	89	89
T-11	Preventive	\$864	\$0	\$0	\$0	\$864	80	80
Plan Year: 2016		Estimated Cost: \$8,579				PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-11	Preventive	\$5,635	\$0	\$0	\$0	\$5,635	61	61
A-12	Preventive	\$55	\$0	\$0	\$0	\$55	83	83
R-11	Preventive	\$1,282	\$0	\$0	\$0	\$1,282	86	86
T-11	Preventive	\$1,608	\$0	\$0	\$0	\$1,608	77	78
Plan Year: 2017		Estimated Cost: \$11,251				PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-11	Preventive	\$6,654	\$0	\$0	\$0	\$6,654	59	60
A-12	Preventive	\$81	\$0	\$0	\$0	\$81	80	80
R-11	Preventive	\$2,221	\$0	\$0	\$0	\$2,221	83	83
T-11	Preventive	\$2,295	\$0	\$0	\$0	\$2,295	75	76
Plan Year: 2018		Estimated Cost: \$113,704				PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-11	Preventive	\$7,968	\$0	\$0	\$0	\$7,968	58	58
A-12	Preventive	\$172	\$0	\$0	\$0	\$172	77	77
R-11	Global MR + Preventive	\$3,114	\$78,535	\$0	\$0	\$81,649	80	86
T-11	Global MR + Preventive	\$2,928	\$20,987	\$0	\$0	\$23,915	74	78
Plan Year: 2019		Estimated Cost: \$14,262				PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-11	Preventive	\$9,356	\$0	\$0	\$0	\$9,356	56	56
A-12	Preventive	\$262	\$0	\$0	\$0	\$262	75	75
R-11	Preventive	\$2,270	\$0	\$0	\$0	\$2,270	83	83
T-11	Preventive	\$2,375	\$0	\$0	\$0	\$2,375	76	76
Plan Year: 2020		Estimated Cost: \$17,460				PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-11	Preventive	\$10,826	\$0	\$0	\$0	\$10,826	54	54
A-12	Preventive	\$351	\$0	\$0	\$0	\$351	72	72
R-11	Preventive	\$3,229	\$0	\$0	\$0	\$3,229	80	80
T-11	Preventive	\$3,053	\$0	\$0	\$0	\$3,053	74	74
Plan Year: 2021		Estimated Cost: \$22,732				PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-11	Preventive	\$12,391	\$0	\$0	\$0	\$12,391	53	53
A-12	Preventive	\$441	\$0	\$0	\$0	\$441	70	70
R-11	Preventive	\$6,231	\$0	\$0	\$0	\$6,231	78	78
T-11	Preventive	\$3,670	\$0	\$0	\$0	\$3,670	73	73
Plan Year: 2022		Estimated Cost: \$28,246				PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After
A-11	Preventive	\$14,083	\$0	\$0	\$0	\$14,083	51	51
A-12	Preventive	\$641	\$0	\$0	\$0	\$641	68	68
R-11	Preventive	\$9,289	\$0	\$0	\$0	\$9,289	76	76
T-11	Preventive	\$4,233	\$0	\$0	\$0	\$4,233	71	71

**SUPERIOR AIRPORT**

Plan Year: 2023		Estimated Cost: \$392,412					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-11	Major Below Critical	\$0	\$0	\$259,327	\$0	\$259,327	49	100	
A-12	Preventive	\$848	\$0	\$0	\$0	\$848	66	66	
R-11	Global MR + Preventive	\$12,119	\$91,044	\$0	\$0	\$103,163	74	78	
T-11	Global MR + Preventive	\$4,745	\$24,329	\$0	\$0	\$29,074	70	73	

Plan Year: 2024		Estimated Cost: \$15,094					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-12	Preventive	\$1,057	\$0	\$0	\$0	\$1,057	64	64	
R-11	Preventive	\$9,587	\$0	\$0	\$0	\$9,587	76	76	
T-11	Preventive	\$4,450	\$0	\$0	\$0	\$4,450	71	71	

Plan Year: 2025		Estimated Cost: \$18,881					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-12	Preventive	\$1,270	\$0	\$0	\$0	\$1,270	62	62	
R-11	Preventive	\$12,609	\$0	\$0	\$0	\$12,609	74	74	
T-11	Preventive	\$5,001	\$0	\$0	\$0	\$5,001	70	70	

Plan Year: 2026		Estimated Cost: \$22,777					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-11	Preventive	\$115	\$0	\$0	\$0	\$115	88	88	
A-12	Preventive	\$1,491	\$0	\$0	\$0	\$1,491	61	61	
R-11	Preventive	\$15,376	\$0	\$0	\$0	\$15,376	73	73	
T-11	Preventive	\$5,795	\$0	\$0	\$0	\$5,795	70	70	

Plan Year: 2027		Estimated Cost: \$26,732					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-11	Preventive	\$303	\$0	\$0	\$0	\$303	85	85	
A-12	Preventive	\$1,785	\$0	\$0	\$0	\$1,785	59	59	
R-11	Preventive	\$17,886	\$0	\$0	\$0	\$17,886	72	72	
T-11	Preventive	\$6,758	\$0	\$0	\$0	\$6,758	69	69	



---

---

# SUPERIOR AIRPORT

---

---

9/12/2012



**A-11, Overview**



**A-11, Surface detail with depression**



**R-11, Overview**



**R-11, Surface detail with crack**

---

---

# SUPERIOR AIRPORT

---

---

9/12/2012



**R-11**, Surface detail with depressions



**T-11**, Overview



**T-11**, Surface detail with crack

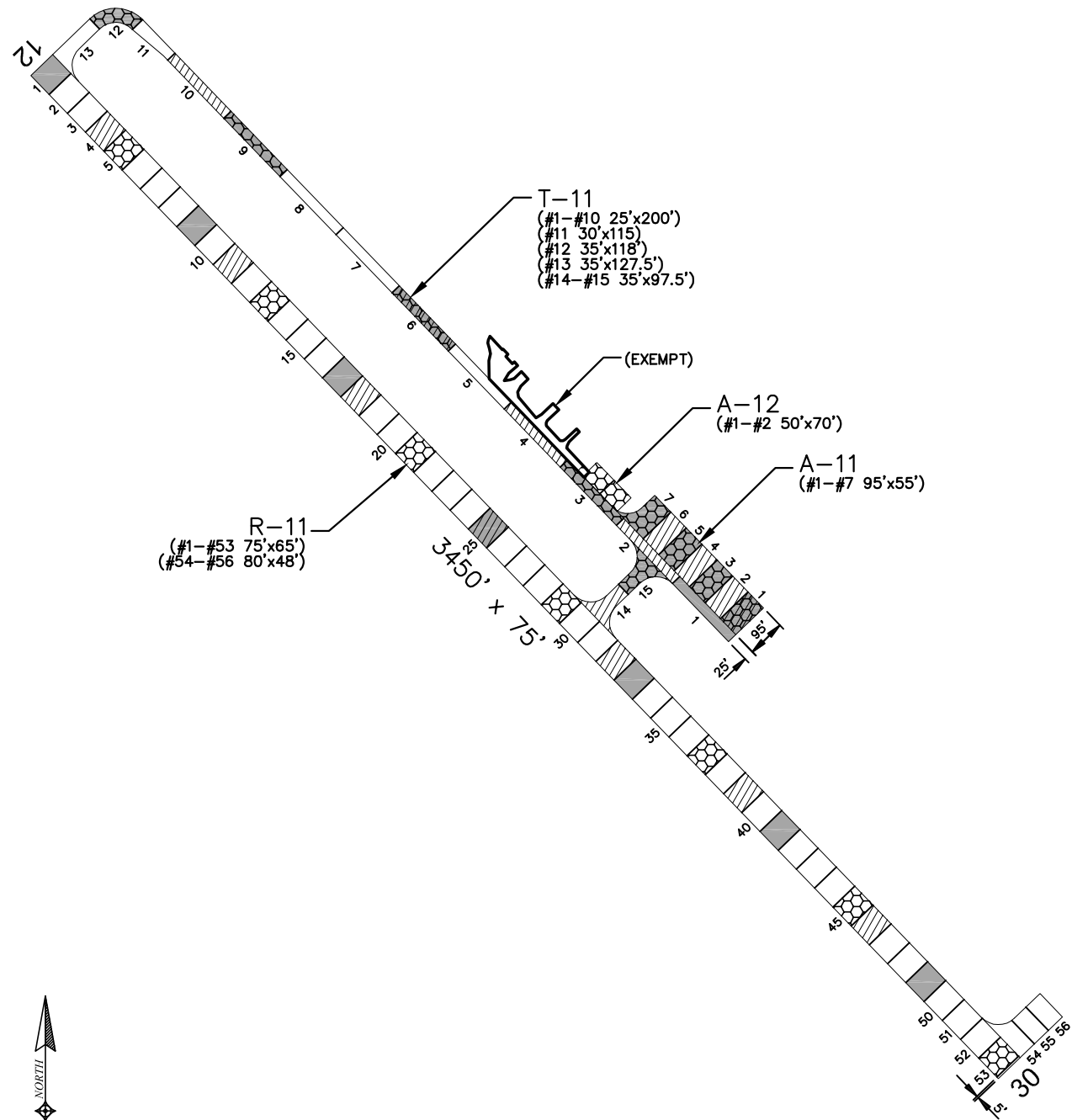


**T-11**, Surface detail with raveling



# SUPERIOR

SUPERIOR




## PAVEMENT STRENGTH SURVEY/PAVEMENT CONDITION SURVEY

PAVE. IDENT.	SOIL CLASS	SUB GRADE CLASS	SUBBASE COURSE	BASE COURSE	SURFACE COURSE	OVERLAY	PAVEMENT STRENGTH			REMARKS
							MAX. GROSS LOAD (LBS)			
							SINGLE	DUAL	DUAL TAN.	
<b>RUNWAYS</b>										
R-11			9" P-154	6" P-208	3" P-401		12,500			◀▶
<b>TAXIWAYS</b>										
T-11			9" P-154	6" P-208	3" P-401		12,500			◀▶
<b>APRONS</b>										
A-11			9" P-154	6" P-208	3" P-401		12,500			◀▶
A-12			9" P-154	6" P-208	3" P-401		12,500			◀▶

**REMARKS:**

- ▶ AIP-005, 2004, CONSTRUCT RUNWAY (R-11), TAXIWAYS (T-11), AND APRON (A-11).
- ▶ AIP-007, 2010, CRACK SEAL, FOG SEAL, AND REMARK ALL PAVEMENTS.
- ▶ AIP-008, 2011, CONSTRUCT HANGAR APRON.

<b>LEGEND</b> ◻ 1997 SURVEY AREA ◻ 2000 SURVEY AREA ◻ 2003 SURVEY AREA (NOT SURVEYED) ◻ 2006 SURVEY AREA ◻ 2009 SURVEY AREA ◻ 2009 SURVEY AREA	DATE OF PAVEMENT STRENGTH SURVEY:	SEPT. 8, 1988	<b>MONTANA AVIATION SYSTEM PLAN 2012 UPDATE - PAVEMENT CONDITION INDEXES</b>
	EVALUATED BY:	J. STYBA	
DATE OF MOST RECENT PAVEMENT CONDITION SURVEY:	SEPT. 12, 2012	PREPARED FOR:	SUPERIOR MONTANA
EVALUATED BY:	J. WALLA		
			DATE: DEC. 2012

