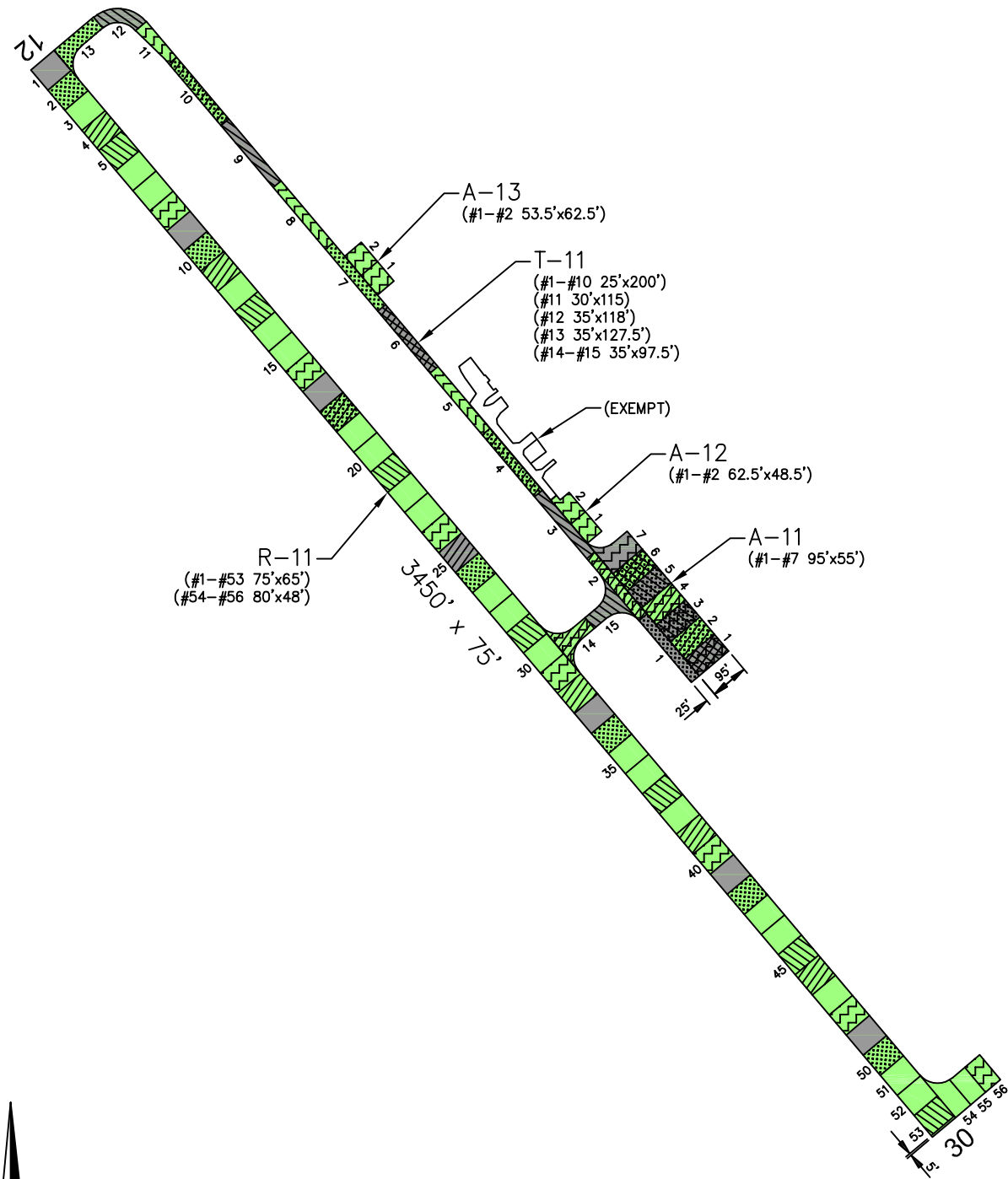


# SUPERIOR

SUPERIOR

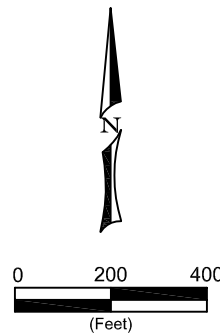
## PAVEMENT STRENGTH SURVEY/PAVEMENT CONDITION SURVEY



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	P-609	12,500			1,2,5
<b>TAXIWAYS</b>										
T-11			9" P-154	6" P-208	3" P-401	P-609	12,500			1,2,5
<b>APRONS</b>										
A-11			9" P-154	6" P-208	3" P-401	P-609	12,500			1,2,5
A-12				8" P-208	3" P-401		12,500			3,5
A-13				8" P-208	3" P-401		12,500			4,5

**REMARKS:**

1. AIP-005-2004, CONSTRUCT RUNWAY (R-11), TAXIWAYS (T-11), AND APRON (A-11).
2. AIP-007-2010, CRACK SEAL, FOG SEAL, AND REMARK ALL PAVEMENTS.
3. AIP-008-2011, CONSTRUCT HANGAR APRON (A-12).
4. AIP-009-2013, CONSTRUCT HANGAR APRON (A-13).
5. AIP-010-2016, CRACK SEAL, SURFACE SEAL AND REMARK ALL PAVEMENTS.



**LEGEND**

- 2006 SURVEY AREA
- 2009 SURVEY AREA
- 2012 SURVEY AREA
- 2015 SURVEY AREA
- 2018 SURVEY AREA
- MAINTAIN: PCI > 60
- TRANSITION: PCI 45 TO 60
- RECONSTRUCT: PCI < 45

DATE OF PAVEMENT STRENGTH SURVEY:	
EVALUATED BY:	
DATE OF MOST RECENT PAVEMENT CONDITION SURVEY:	OCT. 23, 2018
EVALUATED BY:	S. BROWN
LOCATION:	SUPERIOR MONTANA

**MONTANA AVIATION SYSTEM PLAN  
2018 UPDATE - PAVEMENT CONDITION INDEXES**

**MINERAL COUNTY AIRPORT  
(954)**

Date: Prepared For:

DECEMBER 2018 Prepared By:



**A-11, Overview**



**A-11, Depression**



**A-13, Overview**



**A-13, Depression**



**R-11, Overview**



**R-11, Sealed Crack**



**T-11, Overview**



**T-11, Depression and Sealed Crack**





**SUPERIOR AIRPORT**

Branch: 04A

APRON

**A-12**

**Length:** 145 LF  
**From:** HANGARS

**Width:** 50 LF

**Area:** 7,000 SF  
**To:** APRON

**Last Const:** 2011

**Family:** ACAM  
**Surface:** AC

**Inspections**

**Samples Surveyed:** 2      **Total Samples:** 2      **Last Inspection Date:** 10/23/2018      **PCI:** 90

**Sample # 1**

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	32 LF
DEPRESSION	L	35.1 SF

**Area:** 3,031 SF

**Sample # 2**

Distress Description	Severity	Quantity
PATCHING	L	0.2 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	32 LF

**Area:** 3,031 SF

**Extrapolated Distress Quantities\***

Distress Description	Severity	Quantity	Density	Deduct
DEPRESSION	L	41 SF	0.58%	3.90
LONGITUDINAL/TRANSVERSE CRACKING	L	74 LF	1.06%	5.06
PATCHING	L	0.2 SF	0.00%	2.00

\* 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

64.0 % Climate/Durability

36.0 % Other

**SUPERIOR AIRPORT**

Branch: 04A

APRON

**A-13**

**Length:** 135 LF

**Width:** 53.5 LF

**Area:** 7,223 SF

**Last Const:** 2013

**Family:** ACAM

**From:** T-11

**To:** HANGAR

**Surface:** AC

**Inspections**

**Samples Surveyed:** 2

**Total Samples:** 2

**Last Inspection Date:** 10/23/2018

**PCI: 95**

**Sample # 1**

**Distress Description**

LONGITUDINAL/TRANSVERSE CRACKING  
DEPRESSION

**Severity**

L  
L

**Quantity**

32 LF  
0.8 SF

**Area:** 3,343 SF

**Sample # 2**

**Distress Description**

LONGITUDINAL/TRANSVERSE CRACKING  
DEPRESSION

**Severity**

L  
L

**Quantity**

32 LF  
0.8 SF

**Area:** 3,343 SF

**Extrapolated Distress Quantities\***

**Distress Description**

DEPRESSION  
LONGITUDINAL/TRANSVERSE CRACKING

**Severity**

L  
L

**Quantity**

2 SF  
69 LF

**Density**

0.02%  
0.96%

**Deduct**

0.30  
4.86

\* 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

94.0 % Climate/Durability

6.0 % Other

<b>SUPERIOR AIRPORT</b>				Branch: 04R	<b>RUNWAY</b>	<b>R-11</b>
<b>Length:</b> 3,450 LF	<b>Width:</b> 75 LF	<b>Area:</b> 270,979 SF	<b>Last Const:</b> 2004	<b>Family:</b> ACRML		
<b>From:</b> STA 0+00 RWY 12/30	<b>To:</b> STA 34+50 RWY 12/30			<b>Surface:</b> AC		

**Inspections**

<b>Samples Surveyed:</b> 7	<b>Total Samples:</b> 56	<b>Last Inspection Date:</b> 10/23/2018	<b>PCI:</b> 92	
<b>Sample # 8</b>	<b>Distress Description</b> LONGITUDINAL/TRANSVERSE CRACKING	<b>Severity</b> L	<b>Quantity</b> 54 LF	<b>Area:</b> 4,875 SF
<b>Sample # 16</b>	<b>Distress Description</b> LONGITUDINAL/TRANSVERSE CRACKING	<b>Severity</b> L	<b>Quantity</b> 126 LF	<b>Area:</b> 4,875 SF
<b>Sample # 24</b>	<b>Distress Description</b> LONGITUDINAL/TRANSVERSE CRACKING	<b>Severity</b> L	<b>Quantity</b> 58 LF	<b>Area:</b> 4,875 SF
<b>Sample # 31</b>	<b>Distress Description</b> LONGITUDINAL/TRANSVERSE CRACKING RAVELING	<b>Severity</b> L H	<b>Quantity</b> 102 LF 0.5 SF	<b>Area:</b> 4,875 SF
<b>Sample # 40</b>	<b>Distress Description</b> LONGITUDINAL/TRANSVERSE CRACKING	<b>Severity</b> L	<b>Quantity</b> 119 LF	<b>Area:</b> 4,875 SF
<b>Sample # 48</b>	<b>Distress Description</b> LONGITUDINAL/TRANSVERSE CRACKING PATCHING	<b>Severity</b> L L	<b>Quantity</b> 120 LF 0.09 SF	<b>Area:</b> 4,875 SF
<b>Sample # 56</b>	<b>Distress Description</b> SWELL LONGITUDINAL/TRANSVERSE CRACKING	<b>Severity</b> L L	<b>Quantity</b> 0.4 SF 27 LF	<b>Area:</b> 4,875 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	94.0 % Climate/Durability	6.0 % Other
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# 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:** 10/23/2018      **PCI:** 95

<b>Sample #</b> 2	<b>Distress Description</b> LONGITUDINAL/TRANSVERSE CRACKING	<b>Severity</b> L	<b>Quantity</b> 135 LF	<b>Area:</b> 5,000 SF
<b>Sample #</b> 5	<b>Distress Description</b> LONGITUDINAL/TRANSVERSE CRACKING DEPRESSION	<b>Severity</b> L L	<b>Quantity</b> 14 LF 0.02 SF	<b>Area:</b> 5,000 SF
<b>Sample #</b> 8	<b>Distress Description</b> LONGITUDINAL/TRANSVERSE CRACKING	<b>Severity</b> L	<b>Quantity</b> 31 LF	<b>Area:</b> 5,000 SF
<b>Sample #</b> 11	<b>Distress Description</b> NO DISTRESSES	<b>Severity</b>	<b>Quantity</b>	<b>Area:</b> 3,450 SF
<b>Sample #</b> 14	<b>Distress Description</b> LONGITUDINAL/TRANSVERSE CRACKING DEPRESSION	<b>Severity</b> L L	<b>Quantity</b> 39 LF 20 SF	<b>Area:</b> 3,412 SF

**Extrapolated Distress Quantities\***

Distress Description	Severity	Quantity	Density	Deduct
DEPRESSION	L	66 LF	0.09%	0.30
LONGITUDINAL/TRANSVERSE CRACKING	L	725 SF	1.00%	4.95

\* 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      94.0 % Climate/Durability      6.0 % Other



**SUPERIOR AIRPORT (04)**

**FIFTEEN YEAR PROJECTIONS** **ESTIMATED AVERAGE ANNUAL COST: \$28,932**

Plan Year: 2019						Estimated Cost:	\$134,348	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	Global MR	\$0	\$2,456	\$0	\$0	\$2,456	95	98	
R-11	Global MR	\$0	\$92,132	\$0	\$0	\$92,132	92	94	
T-11	Global MR	\$0	\$24,620	\$0	\$0	\$24,620	95	96	
A-12	Preventive + Global MR	\$2	\$2,380	\$0	\$0	\$2,382	90	94	
A-11	Preventive + Global MR	\$81	\$12,676	\$0	\$0	\$12,758	88	90	
Plan Year: 2020						Estimated Cost:	\$18	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-12	None	\$0	\$0	\$0	\$0	\$0	93	93	
A-13	None	\$0	\$0	\$0	\$0	\$0	97	97	
R-11	None	\$0	\$0	\$0	\$0	\$0	93	93	
T-11	None	\$0	\$0	\$0	\$0	\$0	96	96	
A-11	Preventive	\$18	\$0	\$0	\$0	\$18	90	90	
Plan Year: 2021						Estimated Cost:	\$48	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-12	None	\$0	\$0	\$0	\$0	\$0	91	91	
A-13	None	\$0	\$0	\$0	\$0	\$0	96	96	
R-11	None	\$0	\$0	\$0	\$0	\$0	92	92	
T-11	None	\$0	\$0	\$0	\$0	\$0	95	95	
A-11	Preventive	\$48	\$0	\$0	\$0	\$48	89	89	
Plan Year: 2022						Estimated Cost:	\$80	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	None	\$0	\$0	\$0	\$0	\$0	95	95	
R-11	None	\$0	\$0	\$0	\$0	\$0	92	92	
T-11	None	\$0	\$0	\$0	\$0	\$0	95	95	
A-12	Preventive	\$2	\$0	\$0	\$0	\$2	90	90	
A-11	Preventive	\$79	\$0	\$0	\$0	\$79	88	88	
Plan Year: 2023						Estimated Cost:	\$120	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	None	\$0	\$0	\$0	\$0	\$0	94	94	
R-11	None	\$0	\$0	\$0	\$0	\$0	91	91	
T-11	None	\$0	\$0	\$0	\$0	\$0	95	95	
A-12	Preventive	\$11	\$0	\$0	\$0	\$11	88	88	
A-11	Preventive	\$109	\$0	\$0	\$0	\$109	87	87	
Plan Year: 2024						Estimated Cost:	\$134,424	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	Global MR	\$0	\$2,456	\$0	\$0	\$2,456	93	96	
R-11	Global MR	\$0	\$92,132	\$0	\$0	\$92,132	91	92	
T-11	Global MR	\$0	\$24,620	\$0	\$0	\$24,620	94	95	
A-12	Preventive + Global MR	\$20	\$2,380	\$0	\$0	\$2,400	87	91	
A-11	Preventive + Global MR	\$140	\$12,676	\$0	\$0	\$12,816	86	89	
Plan Year: 2025						Estimated Cost:	\$76	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	None	\$0	\$0	\$0	\$0	\$0	95	95	
R-11	None	\$0	\$0	\$0	\$0	\$0	92	92	
T-11	None	\$0	\$0	\$0	\$0	\$0	95	95	
A-12	Preventive	\$0	\$0	\$0	\$0	\$0	90	90	
A-11	Preventive	\$76	\$0	\$0	\$0	\$76	88	88	
Plan Year: 2026						Estimated Cost:	\$116	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	None	\$0	\$0	\$0	\$0	\$0	94	94	
R-11	None	\$0	\$0	\$0	\$0	\$0	91	91	
T-11	None	\$0	\$0	\$0	\$0	\$0	95	95	
A-12	Preventive	\$10	\$0	\$0	\$0	\$10	89	89	
A-11	Preventive	\$107	\$0	\$0	\$0	\$107	87	87	
Plan Year: 2027						Estimated Cost:	\$156	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	None	\$0	\$0	\$0	\$0	\$0	93	93	
R-11	None	\$0	\$0	\$0	\$0	\$0	91	91	
T-11	None	\$0	\$0	\$0	\$0	\$0	94	94	
A-12	Preventive	\$19	\$0	\$0	\$0	\$19	87	87	
A-11	Preventive	\$137	\$0	\$0	\$0	\$137	86	86	
Plan Year: 2028						Estimated Cost:	\$196	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	None	\$0	\$0	\$0	\$0	\$0	92	92	
R-11	None	\$0	\$0	\$0	\$0	\$0	90	90	
T-11	None	\$0	\$0	\$0	\$0	\$0	94	94	
A-12	Preventive	\$28	\$0	\$0	\$0	\$28	86	86	
A-11	Preventive	\$168	\$0	\$0	\$0	\$168	86	86	

**SUPERIOR AIRPORT (04)**

**FIFTEEN YEAR PROJECTIONS** ESTIMATED AVERAGE ANNUAL COST: **\$28,932**

Plan Year: 2029		Estimated Cost:					\$134,602	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	Global MR	\$0	\$2,456	\$0	\$0	\$2,456	91	94	
T-11	Global MR	\$0	\$24,620	\$0	\$0	\$24,620	94	95	
A-12	Preventive + Global MR	\$38	\$2,380	\$0	\$0	\$2,418	85	89	
R-11	Preventive + Global MR	\$101	\$92,132	\$0	\$0	\$92,233	90	91	
A-11	Preventive + Global MR	\$199	\$12,676	\$0	\$0	\$12,875	85	87	

Plan Year: 2030		Estimated Cost:					\$152	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	None	\$0	\$0	\$0	\$0	\$0	93	93	
R-11	None	\$0	\$0	\$0	\$0	\$0	91	91	
T-11	None	\$0	\$0	\$0	\$0	\$0	94	94	
A-12	Preventive	\$18	\$0	\$0	\$0	\$18	87	88	
A-11	Preventive	\$134	\$0	\$0	\$0	\$134	86	86	

Plan Year: 2031		Estimated Cost:					\$192	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	None	\$0	\$0	\$0	\$0	\$0	92	92	
R-11	None	\$0	\$0	\$0	\$0	\$0	90	90	
T-11	None	\$0	\$0	\$0	\$0	\$0	94	94	
A-12	Preventive	\$27	\$0	\$0	\$0	\$27	86	86	
A-11	Preventive	\$165	\$0	\$0	\$0	\$165	86	86	

Plan Year: 2032		Estimated Cost:					\$330	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-13	None	\$0	\$0	\$0	\$0	\$0	91	91	
T-11	None	\$0	\$0	\$0	\$0	\$0	94	94	
A-12	Preventive	\$36	\$0	\$0	\$0	\$36	85	85	
R-11	Preventive	\$98	\$0	\$0	\$0	\$98	90	90	
A-11	Preventive	\$196	\$0	\$0	\$0	\$196	85	85	

Plan Year: 2033		Estimated Cost:					\$523	PCI	
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
T-11	None	\$0	\$0	\$0	\$0	\$0	93	93	
A-13	Preventive	\$2	\$0	\$0	\$0	\$2	90	90	
A-12	Preventive	\$46	\$0	\$0	\$0	\$46	83	84	
A-11	Preventive	\$226	\$0	\$0	\$0	\$226	84	84	
R-11	Preventive	\$249	\$0	\$0	\$0	\$249	89	89	