



# COLSTRIP

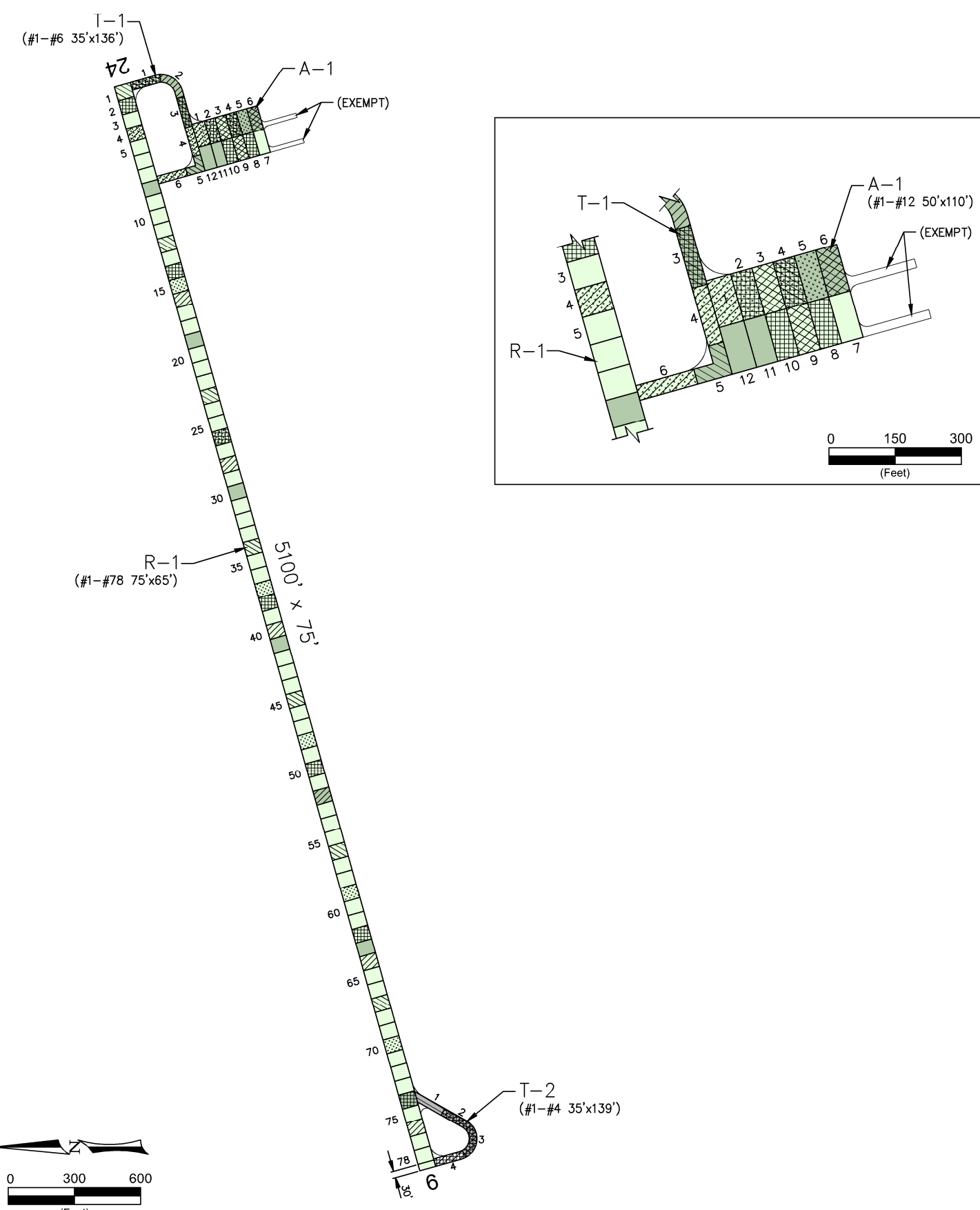
# PAVEMENT STRENGTH SURVEY/PAVEMENT CONDITION SURVEY

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-1		CBR=2.8	6" P-152	9" P-208	3" P-401	2.5"P-403,P-608	12,500			1,2,3,4
<b>TAXIWAYS</b>										
T-1		CBR=2.8	6" P-152	9" P-208	3" P-401	2.5"P-403,P-608	12,500			1,2,3,4
T-2		CBR=2.8	6" P-152	9" P-208	3" P-401	2.5"P-403,P-608	12,500			1,2,3,4
T-3		CBR=2.8		P-208	P-401	P-608	12,500			4
<b>APRONS</b>										
A-1		CBR=2.8	6" P-152	9" P-208	3" P-401	2.5" P-403	12,500			1,2,3,4
A-2		CBR=2.8		P-208	P-401	P-608	12,500			4

**REMARKS:**

- AIP-06, SEPTEMBER 1990, ALL NEW CONSTRUCTION.
- AIP-08, 2001, CRACK SEAL, FOG SEAL, AND REMARK ALL PAVEMENTS.
- AIP-011-2008, REHABILITATE (OVERLAY) RUNWAY 6/24 (R-1), TAXIWAY (T-1), TURNAROUND (T-2), AND APRON (A-1).
- AIP-015-2015, CRACK SEAL, SEAL COAT, AND REMARK RUNWAY (R-1), TAXIWAYS (T-1,T-2), AND APRON (A-1); CONSTRUCT TAXIWAY (T-3); EXPAND APRON (A-2) [INSPECTED PRIOR TO MAINTENANCE PROJECT].

<b>LEGEND</b> ■ 2003 SURVEY AREA ■ 2006 SURVEY AREA ▨ 2009 SURVEY AREA ▩ 2012 SURVEY AREA ▤ 2015 SURVEY AREA ■ MAINTAIN: PCI > 60 ■ TRANSITION: PCI 45 TO 60 ■ RECONSTRUCT: PCI < 45	DATE OF PAVEMENT STRENGTH SURVEY:		<b>MONTANA AVIATION SYSTEM PLAN</b> <b>2015 UPDATE - PAVEMENT CONDITION INDEXES</b>	
	EVALUATED BY:			
	DATE OF MOST RECENT PAVEMENT CONDITION SURVEY:	SEPT. 15, 2015	Date:	Prepared For:
	EVALUATED BY:	D. SCHANDEL	DECEMBER 2015	Prepared By:
	LOCATION:	COLSTRIP MONTANA	 	



COLSTRIP

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# COLSTRIP AIRPORT

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9/15/2015



**A-1**, Overview with tie downs



**A-1**, Surface detail with gouge



**T-1**, Overview



**T-1**, Surface detail



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# COLSTRIP AIRPORT

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9/15/2015



**R-1, Overview**



**R-1, Surface detail with cap**

**COLSTRIP AIRPORT**

Branch: 48A

APRON

**A-1**

**Length:** 220 LF **Width:** 300 LF **Area:** 66,000 SF **Last Const. :** 2008 **Family:** ACAM15  
**From:** ENTIRE APRON **To:** **Surface:** AAC

**Inspections**

**Samples Surveyed:** 4 **Total Samples:** 12 **Last Inspection Date (RPA)** 9/15/2015 **PCI:** 74

**Sample # 1** **Area:** 5500 SF

Distress Description	Severity	Quantity
WEATHERING	L	275 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	38 LF
RAVELING	L	55 SF
RAVELING	H	1 SF
PATCHING	L	1 SF

**Sample # 2** **Area:** 5500 SF

Distress Description	Severity	Quantity
WEATHERING	L	275 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	40 LF
RAVELING	L	55 SF
PATCHING	L	20 SF
RAVELING	H	16 SF
SWELLING	L	6 SF
DEPRESSION	H	5 SF
SWELLING	M	2 SF
OIL SPILLAGE	N	1 SF

**Sample # 4** **Area:** 5500 SF

Distress Description	Severity	Quantity
LONGITUDINAL/TRANSVERSE CRACKING	L	139 LF
WEATHERING	L	275 SF
RAVELING	L	55 SF
PATCHING	L	21 SF
DEPRESSION	H	5 SF
RAVELING	H	3 SF
OIL SPILLAGE	N	1 SF

**Sample # 5** **Area:** 5500 SF

Distress Description	Severity	Quantity
WEATHERING	L	275 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	35 LF
RAVELING	L	55 SF
PATCHING	L	20 SF
DEPRESSION	H	5 SF
OIL SPILLAGE	N	1 SF

**Extrapolated Distress Quantities\***

Distress Description	Severity	Quantity	Density	Deduct
DEPRESSION	H	45 SF	0.07 %	12.00
SWELLING	M	6 SF	0.01 %	10.00
RAVELING	H	60 SF	0.09 %	6.00
LONGITUDINAL/TRANSVERSE CRACKING	L	756 LF	1.15 %	5.26
RAVELING	L	660 SF	1.00 %	2.62
PATCHING	L	186 SF	0.28 %	2.09
OIL SPILLAGE	N	9 SF	0.01 %	2.00
WEATHERING	L	3300 SF	5.00 %	1.09
SWELLING	L	18 SF	0.03 %	1.00

\* 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 41.0 % Climate/Durability 59.0 % Other



**COLSTRIP AIRPORT**

Branch: 48T

**TAXIWAY**

**T-1**

**Length:** 780 LF **Width:** 35 LF **Area:** 27,300 SF **Last Const. :** 2008 **Family:** ACRML15  
**From:** RWY 6-24 STA 50+88 **To:** RWY 6-24 STA 47+75 **Surface:** AAC

**Inspections**

**Samples Surveyed:** 3 **Total Samples:** 6 **Last Inspection Date (RPA)** 9/15/2015 **PCI:** 84

**Sample # 1** **Area:** 4760 SF

Distress Description	Severity	Quantity
WEATHERING	L	714 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	96 LF
RAVELING	L	48 SF
PATCHING	L	1 SF

**Sample # 4** **Area:** 4760 SF

Distress Description	Severity	Quantity
WEATHERING	L	714 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	96 LF
RAVELING	L	48 SF
PATCHING	L	1 SF

**Sample # 6** **Area:** 6696 SF

Distress Description	Severity	Quantity
WEATHERING	L	1004 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	105 LF
RAVELING	L	67 SF
RAVELING	H	2 SF
PATCHING	L	2 SF

**Extrapolated Distress Quantities\***

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	L	500 LF	1.83 %	6.96
RAVELING	H	3 SF	0.01 %	6.00
RAVELING	L	274 SF	1.01 %	2.63
WEATHERING	L	4094 SF	15.00 %	2.30
PATCHING	L	7 SF	0.02 %	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 100.0 % Climate/Durability 0.0 % Other

## COLSTRIP AIRPORT

**FIFTEEN YEAR PROJECTIONS: ESTIMATED AVERAGE ANNUAL COST: \$47,890**

PLAN YEAR: 2016			ESTIMATED COST:			\$136,603	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-1	Prev. & Seal Coat	\$218	\$7,644			\$7,862	82	88
R-1	Prev. & Seal Coat	\$391	\$107,100			\$107,491	89	98
A-1	Prev. & Seal Coat	\$2,770	\$18,480			\$21,250	72	77
PLAN YEAR: 2017			ESTIMATED COST:			\$2,275	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-1	Basic Prev.	\$149				\$149	85	85
A-1	Basic Prev.	\$2,126				\$2,126	75	75
PLAN YEAR: 2018			ESTIMATED COST:			\$3,426	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-1	Basic Prev.	\$223				\$223	82	82
R-1	Basic Prev.	\$343				\$343	89	89
A-1	Basic Prev.	\$2,860				\$2,860	72	72
PLAN YEAR: 2019			ESTIMATED COST:			\$5,523	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-1	Basic Prev.	\$291				\$291	80	80
R-1	Basic Prev.	\$1,635				\$1,635	86	86
A-1	Basic Prev.	\$3,597				\$3,597	70	70
PLAN YEAR: 2020			ESTIMATED COST:			\$8,625	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-1	Basic Prev.	\$2,820				\$2,820	83	84
A-1	Basic Prev.	\$5,311				\$5,311	68	68
T-1	Basic Prev.	\$494				\$494	78	79
PLAN YEAR: 2021			ESTIMATED COST:			\$166,128	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-1	Prev. & Seal Coat	\$7,093	\$21,423			\$28,517	66	70
T-1	Prev. & Seal Coat	\$703	\$8,862			\$9,564	77	81
R-1	Prev. & Seal Coat	\$3,889	\$124,158			\$128,047	81	87
PLAN YEAR: 2022			ESTIMATED COST:			\$8,768	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-1	Basic Prev.	\$498				\$498	79	79
R-1	Basic Prev.	\$2,856				\$2,856	84	84
A-1	Basic Prev.	\$5,414				\$5,414	68	68
PLAN YEAR: 2023			ESTIMATED COST:			\$12,027	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-1	Basic Prev.	\$721				\$721	77	77
R-1	Basic Prev.	\$4,008				\$4,008	81	82
A-1	Basic Prev.	\$7,298				\$7,298	66	66
PLAN YEAR: 2024			ESTIMATED COST:			\$15,950	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-1	Basic Prev.	\$935				\$935	76	76
R-1	Basic Prev.	\$5,735				\$5,735	80	80
A-1	Basic Prev.	\$9,280				\$9,280	64	64
PLAN YEAR: 2025			ESTIMATED COST:			\$21,753	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-1	Basic Prev.	\$11,384				\$11,384	62	62
T-1	Basic Prev.	\$1,147				\$1,147	74	75
R-1	Basic Prev.	\$9,222				\$9,222	78	78
PLAN YEAR: 2026			ESTIMATED COST:			\$206,730	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-1	Prev. & Seal Coat	\$1,365	\$10,273			\$11,638	73	76
R-1	Prev. & Seal Coat	\$12,498	\$143,934			\$156,432	76	80
A-1	Prev. & Seal Coat	\$13,824	\$24,836			\$38,660	60	64
PLAN YEAR: 2027			ESTIMATED COST:			\$22,373	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-1	Basic Prev.	\$11,821				\$11,821	62	62
T-1	Basic Prev.	\$1,191				\$1,191	75	75
R-1	Basic Prev.	\$9,361				\$9,361	78	78

PLAN YEAR: 2028			ESTIMATED COST:			\$28,583	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-1	Basic Prev.	\$14,271				\$14,271	60	60
T-1	Basic Prev.	\$1,423				\$1,423	73	73
R-1	Basic Prev.	\$12,889				\$12,889	77	77
PLAN YEAR: 2029			ESTIMATED COST:			\$35,898	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-1	Basic Prev.	\$16,287				\$16,287	75	75
T-1	Basic Prev.	\$1,671				\$1,671	72	72
A-1	Basic Prev.	\$17,940				\$17,940	58	58
PLAN YEAR: 2030			ESTIMATED COST:			\$43,685	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-1	Basic Prev.	\$19,721				\$19,721	74	74
T-1	Basic Prev.	\$1,951				\$1,951	71	71
A-1	Basic Prev.	\$22,013				\$22,013	55	55