

BROADUS AIRPORT

Branch: 62A **APRON**

A-1

Length: 268 LF **Width:** 360 LF **Area:** 99,855 SF **Last Const:** 2005 **Family:** ACAM
From: ENTIRE APRON **To:** OFF T-1 **Surface:** AC

Inspections

Samples Surveyed: 5 **Total Samples:** 20 **Last Inspection Date:** 9/5/2012 **PCI:** 95

Sample # 3	Distress Description RAVELING WEATHERING	Severity L L	Quantity 48 SF 482 SF	Area: 4,824 SF
Sample # 7	Distress Description PATCHING RAVELING WEATHERING WEATHERING	Severity L L L L	Quantity 15 SF 22 SF 22 SF 482 SF	Area: 4,824 SF
Sample # 11	Distress Description RAVELING WEATHERING	Severity L L	Quantity 48 SF 482 SF	Area: 4,824 SF
Sample # 15	Distress Description RAVELING WEATHERING	Severity L L	Quantity 48 SF 482 SF	Area: 4,824 SF
Sample # 19	Distress Description PATCHING RAVELING WEATHERING	Severity L L L	Quantity 1 SF 48 SF 241 SF	Area: 4,824 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
PATCHING	L	66 SF	7.07%	2.00
RAVELING	L	886 SF	0.35%	2.44
WEATHERING	L	9,071 SF	77.86%	1.61

* 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

BROADUS AIRPORT

Branch: 62R RUNWAY

R-1

Length: 4,400 LF Width: 75 LF Area: 330,000 SF Last Const: 2005 Family: ACRML
 From: 12+00 RWY 10-28 To: 56+00 RWY 10-28 Surface: AC

Inspections

Samples Surveyed: 7 Total Samples: 67 Last Inspection Date: 9/5/2012 **PCI: 92**

Sample #	Distress Description	Severity	Quantity	Area:
5	RAVELING	L	49 SF	4,875 SF
15	LONGITUDINAL/TRANSVERSE CRACKING RAVELING	L L	46 LF 48 SF	4,875 SF
25	LONGITUDINAL/TRANSVERSE CRACKING RAVELING	L L	65 LF 49 SF	4,875 SF
35	LONGITUDINAL/TRANSVERSE CRACKING RAVELING RAVELING	L L H	57 LF 49 SF 1 SF	4,875 SF
45	LONGITUDINAL/TRANSVERSE CRACKING RAVELING	L L	24 LF 49 SF	4,875 SF
55	RAVELING	L	49 SF	4,875 SF
65	LONGITUDINAL/TRANSVERSE CRACKING RAVELING RAVELING	L L M	48 LF 49 SF 1 SF	4,875 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	L	2,321 LF	0.06%	4.39
RAVELING	L	3,307 SF	0.18%	2.62
RAVELING	M	5 SF	3.18%	4.00
RAVELING	H	5 SF	1.11%	6.00

* 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

BROADUS AIRPORT

Branch: 62T TAXIWAY

T-1

Length: 1,300 LF Width: 35 LF Area: 45,500 SF Last Const: 2005 Family: ACRML
 From: R/W 12 NORTH & SOUTH ENDS To: SOUTHWEST CORNER A-1 Surface: AC

Inspections

Samples Surveyed: 4 Total Samples: 11 Last Inspection Date: 9/5/2012 **PCI: 94**

Sample #	Distress Description	Severity	Quantity	Area:
3	RAVELING	L	37 SF	3,680 SF
	RAVELING	M	1 SF	
6	RAVELING	L	30 SF	3,045 SF
	RAVELING	L	30 SF	
9	RAVELING	L	38 SF	3,750 SF
	RAVELING	H	4 SF	
12	RAVELING	L	30 SF	3,050 SF
	RAVELING	M	1 SF	

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
RAVELING	L	454 SF	0.38%	2.61
RAVELING	M	7 SF	6.31%	4.00
RAVELING	H	13 SF	0.55%	6.00

* 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

BROADUS AIRPORT

FIRST YEAR LOCAL: 2013 **LOCAL REPAIR COST: \$0**

Section	Distress Description	Severity	Quantity	Work Description	Quantity	Cost	Policy
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FIFTEEN YEAR PROJECTIONS **ESTIMATED AVERAGE ANNUAL COST: \$38,300**

Plan Year: 2013		Estimated Cost: \$118,895					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Global MR	\$0	\$24,964	\$0	\$0	\$24,964	93	100	
R-1	Global MR + Preventive	\$55	\$82,501	\$0	\$0	\$82,556	90	98	
T-1	Global MR	\$0	\$11,375	\$0	\$0	\$11,375	92	100	

Plan Year: 2014		Estimated Cost: \$0					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	

Plan Year: 2015		Estimated Cost: \$0					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	

Plan Year: 2016		Estimated Cost: \$1,622					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Preventive	\$230	\$0	\$0	\$0	\$230	88	88	
R-1	Preventive	\$1,286	\$0	\$0	\$0	\$1,286	86	87	
T-1	Preventive	\$106	\$0	\$0	\$0	\$106	88	88	

Plan Year: 2017		Estimated Cost: \$3,330					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Preventive	\$605	\$0	\$0	\$0	\$605	85	85	
R-1	Preventive	\$2,453	\$0	\$0	\$0	\$2,453	83	84	
T-1	Preventive	\$272	\$0	\$0	\$0	\$272	85	85	

Plan Year: 2018		Estimated Cost: \$142,737					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Global MR + Preventive	\$973	\$28,940	\$0	\$0	\$29,913	82	88	
R-1	Global MR + Preventive	\$3,565	\$95,641	\$0	\$0	\$99,206	81	87	
T-1	Global MR + Preventive	\$431	\$13,187	\$0	\$0	\$13,618	82	88	

Plan Year: 2019		Estimated Cost: \$3,362					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Preventive	\$600	\$0	\$0	\$0	\$600	85	85	
R-1	Preventive	\$2,489	\$0	\$0	\$0	\$2,489	84	84	
T-1	Preventive	\$272	\$0	\$0	\$0	\$272	85	85	

Plan Year: 2020		Estimated Cost: \$5,119					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Preventive	\$996	\$0	\$0	\$0	\$996	82	82	
R-1	Preventive	\$3,680	\$0	\$0	\$0	\$3,680	81	81	
T-1	Preventive	\$442	\$0	\$0	\$0	\$442	82	82	

Plan Year: 2021		Estimated Cost: \$9,124					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Preventive	\$1,751	\$0	\$0	\$0	\$1,751	79	79	
R-1	Preventive	\$6,688	\$0	\$0	\$0	\$6,688	79	79	
T-1	Preventive	\$685	\$0	\$0	\$0	\$685	80	80	

Plan Year: 2022		Estimated Cost: \$14,943					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Preventive	\$3,183	\$0	\$0	\$0	\$3,183	76	77	
R-1	Preventive	\$10,520	\$0	\$0	\$0	\$10,520	76	77	
T-1	Preventive	\$1,239	\$0	\$0	\$0	\$1,239	77	77	

Plan Year: 2023		Estimated Cost: \$180,123					PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Global MR + Preventive	\$4,612	\$33,549	\$0	\$0	\$38,161	74	80	
R-1	Global MR + Preventive	\$14,050	\$110,874	\$0	\$0	\$124,924	75	79	
T-1	Global MR + Preventive	\$1,751	\$15,287	\$0	\$0	\$17,038	75	80	

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Plan Year: 2024						Estimated Cost: \$15,315	PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Preventive	\$3,233	\$0	\$0	\$0	\$3,233	77	77	
R-1	Preventive	\$10,817	\$0	\$0	\$0	\$10,817	77	77	
T-1	Preventive	\$1,264	\$0	\$0	\$0	\$1,264	77	78	

Plan Year: 2025						Estimated Cost: \$21,167	PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Preventive	\$4,750	\$0	\$0	\$0	\$4,750	74	74	
R-1	Preventive	\$14,604	\$0	\$0	\$0	\$14,604	75	75	
T-1	Preventive	\$1,813	\$0	\$0	\$0	\$1,813	76	76	

Plan Year: 2026						Estimated Cost: \$26,649	PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
A-1	Preventive	\$6,264	\$0	\$0	\$0	\$6,264	72	72	
R-1	Preventive	\$18,067	\$0	\$0	\$0	\$18,067	73	73	
T-1	Preventive	\$2,317	\$0	\$0	\$0	\$2,317	74	74	

Plan Year: 2027						Estimated Cost: \$32,113	PCI		
Section	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	Before	After	
R-1	Preventive	\$21,225	\$0	\$0	\$0	\$21,225	72	72	
A-1	Preventive	\$8,111	\$0	\$0	\$0	\$8,111	70	70	
T-1	Preventive	\$2,777	\$0	\$0	\$0	\$2,777	72	72	

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9/5/2012



A-1, Overview



A-1, Surface detail



R-1, Overview



R-1, Surface detail filled crack

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9/5/2012



R-1, Surface detail high intensity raveling



T-1, Overview (turnaround)

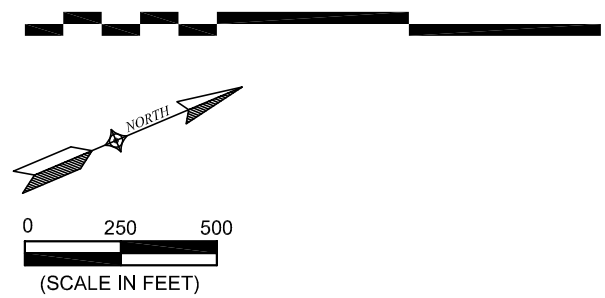
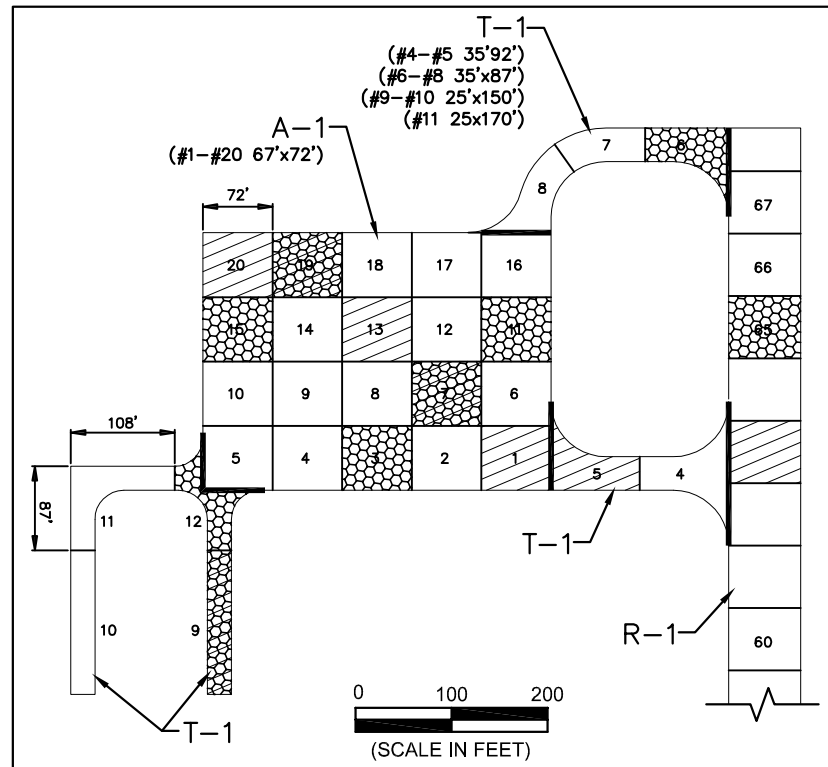
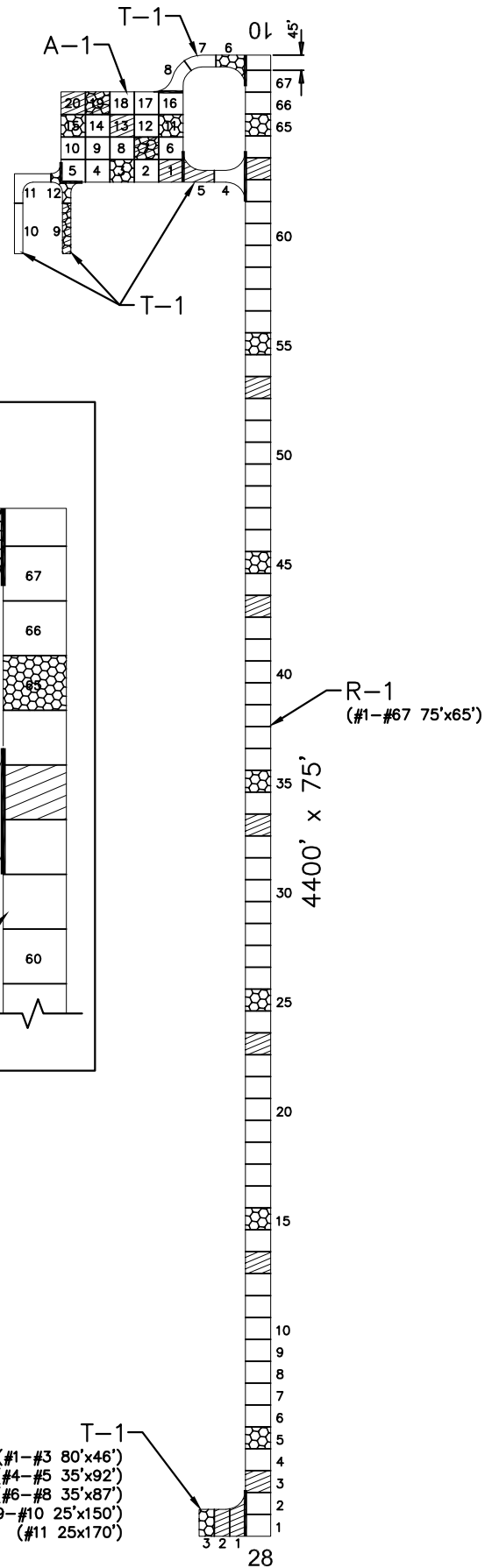


T-1, Overview



T-1, Surface detail

BROADUS



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.	
RUNWAYS										
R-1		8" P-152	6" P-154	4" P-208	3.5" P-401		12,500			1 2
TAXIWAYS										
T-1		8" P-152	6" P-154	4" P-208	3.5" P-401		12,500			1 2
APRONS										
A-1		8" P-152	6" P-154	4" P-208	3.5" P-401		12,500			1 2

REMARKS:

1 AIP-002, 2005, ALL NEW CONSTRUCTION: CONSTRUCT RUNWAY 10-28 (R-1), TAXIWAYS (T-1), AND APRON (A-1).

2 AIP-005, 2011, SEAL COAT, CRACK SEAL AND REMARK ALL PAVEMENTS.

LEGEND [Pattern] 1997 SURVEY AREA (NOT SURVEYED) [Pattern] 2000 SURVEY AREA (NOT SURVEYED) [Pattern] 2003 SURVEY AREA (NOT SURVEYED) [Pattern] 2006 SURVEY AREA (NOT SURVEYED) [Pattern] 2009 SURVEY AREA [Pattern] 2012 SURVEY AREA	DATE OF PAVEMENT STRENGTH SURVEY:		MONTANA AVIATION SYSTEM PLAN 2012 UPDATE - PAVEMENT CONDITION INDEXES	
	EVALUATED BY:			BROADUS
	DATE OF MOST RECENT PAVEMENT CONDITION SURVEY:	SEPT. 5, 2012		PREPARED FOR:
EVALUATED BY:	M. BECKHOFF	PREPARED BY: 	BROADUS MONTANA DATE: DEC. 2012	

BROADUS