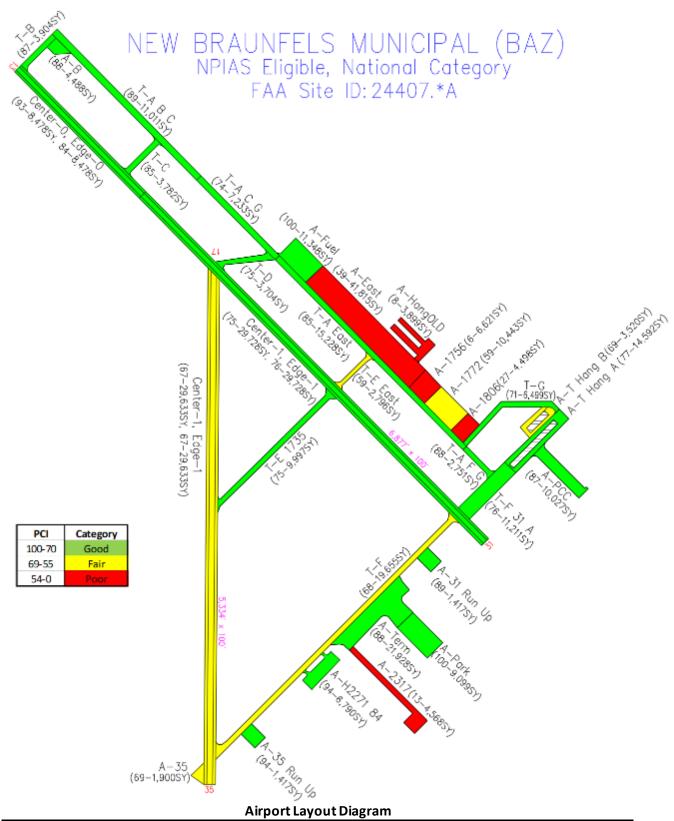


AVIATION DIVISION
125 E. 11TH STREET • AUSTIN, TEXAS 78701-2483 • 512/416-4500 • FAX 512/416-4510

ADDENDUM NO. 1 New Braunfels National Airport TxDOT Project ID#2215NEWBR Issued: June 15, 2022

<u>Attention to all Prospective Proposers</u>: Please note the following Pavement Condition Index (PCI) report is attached for informational purposes only. This Addendum consists of 73 pages.



Airport Layout Diagram

Date	Name	Type	Notes	Date	Name	Type	Notes
05/15/1992	TJF	Walk	Entered into DB	01/16/2019	TJF	Walk	Report produced
05/28/1998	TJF	Walk	Entered into DB	05/27/2021	CHT	Walk	Report produced
02/15/2013	TJF	Walk	Report produced				

Inventory Information

New Braunfels Municipal (BAZ)

05/27/2021

The Aviation Division

Texas Department of Transportation

125 E. 11th Street

Austin, TX 78701-2483

512-416-4500

Http://TxDOT.GOV/Inside-TxDOT/Division/Aviation.HTML

Prepared by:

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979-317-2322

Introduction

As part of the Federal Aviation Administration's (FAA) Airport Improvement Program (AIP) funds, Congress has mandated that facilities receiving federal monies for replacement or reconstruction of paved surfaces must create a pavement maintenance/ management program. Historically, the FAA and TxDOT have assisted sponsors in improving runways, taxiways, and aprons by contributing 90% of the project cost. Appropriate and timely maintenance will prolong pavement life, maintain a high level of ride quality, and reduce the lifetime cost of the pavement. Unfortunately, in the past, the pavement often did not receive any preventive or remedial maintenance after it was constructed.

Since January 1, 1995 airport sponsors that accept AIP funds for pavement replacement or reconstruction are required to commit to a grant assurance which stipulates that an effective pavement maintenance / management program will remain in effect throughout the useful life of the constructed pavement. Such a program will have four basic components:

- a pavement inventory which shows the dimensions, locations, and maintenance history of all paved surfaces,
- a prescribed inspection schedule, which will minimally involve detailed annual assessments, and monthly drive-by observations,
- record keeping which documents inspection dates, findings, locations of distress, and remedial actions scheduled and performed,
- a method of data retrieval which would permit a comprehensive presentation to the FAA if they request one.

A thoughtfully conceived pavement maintenance/management program creates a win-win situation. Your airport will have a logical and structured method of addressing maintenance requirements in a timely fashion. This will minimize your costs. And repairing and rehabilitating pavements, rather than reconstructing pavements, will allow TxDOT to maximize state and federal dollars for system improvements.

The Aviation Division of the Texas Department of Transportation has collected the known construction history for the pavements at your airport (which should be carefully reviewed and corrections provided to Clayton Treybig at TTI), conducted a complete PCI walking survey and provided this framework for the continued management of the pavement at your airport. TxDOT will continue to maintain the database and conduct walking PCI surveys every few years. Your duties required to keep this report current include:

- updating Table 1 for routine inspections
- updating Table 2 with any changes in the inventory
- o carefully reviewing Table 4 and providing updates, and
- o documenting in Table 5 any work performed since this inspection.

The link below documents your responsibilities associated with airport's Pavement Management Program. Should you have any questions, please contact the Aviation Division. http://ftp.dot.state.tx.us/pub/txdot-info/avn/pmp-2000.pdf

The link below has more information about RAMP Grants. https://ftp.txdot.gov/pub/txdot-info/avn/ramp grants.pdf

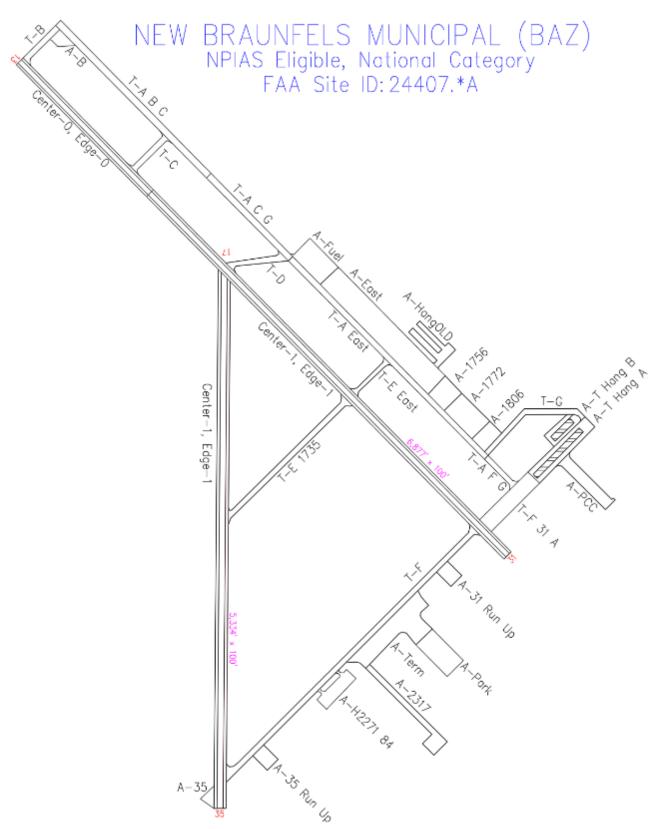


Table 1. Inspection Dates.

Date	Name	Type	Notes	Date	Name	Type	Notes
05/15/1992	TJF	Walk	Entered into DB	01/16/2019	TJF	Walk	Report produced
05/28/1998	TJF	Walk	Entered into DB	05/27/2021	CHT	Walk	Report produced
02/15/2013	TJF	Walk	Report produced				

Table 2. Inventory.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun13	Center-0	С	AC	13 End of RW	Past TW C	1,526	50	76,300
NewBraun13	Edge-0	E	AC	13 End of RW	Past TW C	1,526	50	76,300
NewBraun13	Center-1	С	AAC	TW C	31 End of RW	5,351	50	267,550
NewBraun13	Edge-1	E	AAC	TW C	31 End of RW	5,351	50	267,550
NewBraun17	Center-1	С	AAC	17 End of RW	35 End of RW	5,334	50	266,700
NewBraun17	Edge-1	E	AAC	17 End of RW	35 End of RW	5,334	50	266,700
NewBraun-A	A-1756	Т	AC	East Apron	Building 1756	241	248	59,589
NewBraun-A	A-1772	Т	AC	East Apron	Building 1772	380	248	93,987
NewBraun-A	A-1806	T	AC	East Apron	Building 1756	145	248	40,483
NewBraun-A	A-2317	Т	AC	Terminal Apron	Building 2317	650	38	41,110
NewBraun-A	A-31 Run Up	Т	AAC	Taxiway F	Near 31 End	150	85	12,750
NewBraun-A	A-35	S	AC	RW 35 End	Turn Around	206	133	17100
NewBraun-A	A-35 Run Up	T	AAC	Taxiway F	Near 35 End	150	85	12,750
NewBraun-A	A-B	S	AC	TW A	TW B	272	150	40,390
NewBraun-A	A-East	S	AC	Taxiway A	Main East Parking	1,513	248	376,331
NewBraun-A	A-Fuel	S	PCC	Taxiway F	NE East Apron	404	248	102,132
NewBraun-A	A-H2271 84	Т	AC	Taxiway F	Near 35 End	462	107	61,110
NewBraun-A	A-Hang OLD	Т	AC	Main East Parking	Old T Hangars	620	40	35,090
NewBraun-A	A-Park	T	AC	A-Term	East of Terminal Building	403	203	81,887
NewBraun-A	A-PCC	S	PCC	T Hangars	New Building	685	124	90,240
NewBraun-A	A-T Hang A	T	AC	Near 31 End of RW	T Hangars	775	150	131,331
NewBraun-A	A-T Hang B	Т	AC	Near A-T Hang A	Taxiway B	347	140	31,676
NewBraun-A	A-Term	T	AAC	Taxiway F	Parking at Terminal	893	170	197,353
	T-A B C	Р	AC	TW B	TW C	1,982	50	99,100
NewBraun-T	T-A C G	Р	AAC	TW C	TW D	1,302	50	65,100
NewBraun-T	T-A East	Т	AAC	Taxiway D	Taxiway C	2,741	50	137,050
NewBraun-T	T-A F G	S	AC	TW F	TW G	427	50	24,762
NewBraun-T	T-B	Р	AC	RW 13	TW A	465	70	35,138
NewBraun-T	T-C	S	AC	Near 13 End	TW A	465	50	34,040
NewBraun-T	T-D	T	AAC	17 End of RW	Taxiway A	582	50	33,332
NewBraun-T	T-E 1735	S	AC	Middle of RW 13/31	Middle of RW 17/35	1,665	50	89,973
NewBraun-T	T-E East	S	AAC	Middle of RW 13/31	Taxiway A	464	50	25,167
NewBraun-T	T-F	S	AAC	17 End of RW	Taxiway A	3,473	50	176,896
NewBraun-T	T-F 31 A	Р	AC	RW 31	TW A	696	146	100,902
NewBraun-T	T-G	S	AAC	TW A	T Hangars	1,144	49	58,490

Total Pavement Area (Asphalt)
Total Pavement Area (Concrete)

Total Pavement Asset Value

3,333,987 SF 370,443 SY 192,372 SF 21,375 SY

\$38,398,285

It should be noted that this airport pavement represents a substantial investment and should continue to be maintained at a high level. Routine, annual expenditures for maintenance will be needed to protect this investment and a plan should be developed for the inevitable major rehabilitation that will be needed.

Table 3. Funding History.

_	Table 3. Funding History.									
FY	Total \$	Close Dt	proj_dscr							
1977	\$160,200		Land; overlay RW, TW, and portion of apron; marking.							
1977	\$13,200		Resurface and correct profile on 85' portion of RW 13-31, stub TW, and apron.							
1977	\$3,150		NDB.							
1990	\$47,250		Conduct AMP.							
			Install MIRL RWs 13-31 & 17-35; reconstruct & rehab apron; install segmented circle,							
1992	\$635,666	3/21/1994	rotating beacon & tower; perimeter clearing & fencing; install PLASI on RW 13.							
			Reconstruct & mark TW 17-35 (5370 x 100), TW A & D to RW 13 (2500 X 50);							
			rehabilitate & mark TW 13-31 (5350 x 100), TW C (3600 x 50), taxilane 13-31, install							
1994			REIL RW 13 end, install TW reflectors.							
1998	\$48,656		Install security fence around terminal & ramp.							
1998			Design and construct new terminal building							
2000	\$33,570	7/13/2004	Prepare Airport Layout Plan.							
			Rehab & mark RW 17-35 (5370 x 125) & RW 13-31 (5350 x 100), TW E (400 x 50), TW							
			A (2000 x 50), TW F (5350 x 50), TW B (1100 x 50), TW C (600 x 50), TW D (600 x 50),							
			hangar apron & taxilane (2750 x 300); extend TW E to RW 17-35 (1650 x 50); construct							
2001	¢1 511 570	0/11/2003	terminal apron (400 x 70);install PAPI-4 RW 31, 2 threshold lights RW 17-35, RW signage & TW guidance signs, terminal apron tiedowns & lighted windcone & seg. circle.							
2001	\$198,000		Construct terminal building parking lot and entrance.							
2003	\$45, <i>3</i> 55	9/11/2003	Install security fencing (3000 lf) & gates (3 electronic, 3 manual, 4 pedestrian). Airport Master Plan (NPE) SBGP-026-2003; 135,659; SBGP-22-2002 45,180; SBGP-							
2004	\$348,849	12/1/2010	31-2005 63,410; SBGP-35-2005 67,575; SBGP-41-2007 2,139							
2004	\$60,000		RAMP: Grading and drainage improvement on grass ramp areas							
2004	ψου,υσο	0/31/2004	RAMP: City to contract for ramp repair/rejuvenation, misc. to be determined and added							
2005	\$60,000	8/31/2005	by amendment							
2000	ψου,σου	0,01,2000	RAMP: TxDOT to crackseal taxiways and apron, miscellaneous projects to be added by							
2006	\$10,360	8/31/2006	amendment							
			Construct new hangar access TWs (5520 sy) (NPE 05, 06 07); Engineering/Design for							
			taxiway construction SBGP-30-2004 \$9,514; SBGP-41-2007 \$118,334; SBGP-37-2006							
2007	\$720,498	1/31/2011	\$507,009; SBGP-26-2003 \$7,551							
			Engineering/design for 2010/2011 reconstruction Engineering/Design to overlay and							
			mark Runway 13-31; overlay and mark taxiway B, C, D, E and F; overlay/relocate jog in							
			taxilane A to taxiway A; reconstruct northeast parking apron- Phase 1 included slotted drain; replace precision approach path indicators 4 at Runway 13; install medium							
			intensity taxiway lights at taxiway A; relocate and replace lighting vault; improve							
			drainage; regrade ditches; replace inlets grates and install signage SBGP-2008-46							
2009	\$612,488	11/27/2013								
	·		RAMP-Sponsor to contract for building and fence maintenance and repairs; airport							
	.		appraisal; tower cost benefit analysis; and, ATIS replacement. Sponsor to contract to							
2009	\$104,191		relocate utilities.							
2009	\$122,932	12/21/2011	Airport Business Plan SBGP-49-2008 \$50,000							
			Reconstruct NE parking apron- Phase 1 (400 x 300) include slotted drain; Overlay RW							
			13-31 (5350 x 100); Mark RW 13-31 (33,425 sf); Overlay & mark TW F & terminal apron							
			(5350 X 50); Overlay TW A (1950 x 50) & relocate jog in taxilane A TW A (2800 x 50); Overlay & mark TW E (2125 X 50); Overlay & mark TW B (1000 x 50); Overlay & mark							
			TW D (700 x 50); Overlay & mark TW C (700 x 50); Terminal apron expansion and							
			drainage; corporate area taxiway SBGP-46-2008 \$153,994; SBGP-67-2010 \$1,461,893							
2010	\$4,849.952	2/19/2013	SBGP-41-2007 \$1,765,727							
	. , , - 32	,,	RAMP: PAVEMENTS-Pavement repairs and parking lot maintenance. MISC -							
			Imp/maint/rep to buildings, fencing, fuel system, tie-downs, airfield lighting, and							
			wind sock pole; painting of bldgs and airfield, signage, appraisal, ATCT cost ben. anal;							
2010	\$95,090	8/31/2010								
			Improve drainage/regrade ditches/replace inlets grates; Install signage (8);							
0044	M4 004 050	0/40/0040	Relocate/replace lighting vault; Replace MIRLs RW 13-31 (5350 lf); Replace PAPI-4 RW							
2011	\$1,034,059	2/19/2013	13; Install MITLs TW A (5350 lf) SBGP-49-2008 \$290,801; SBGP-67-2010 \$631,919							

			RAMP: TxDOT Contract for AWOS Maintenance, Sponsor to perform airport general
2011	\$174,161	8/31/2011	maintenance.
			Acquire/reimburse RW 35 RPZ (4.7 ac) Burris/Tubbs Tracts; EDDA for RW extension;
			Environmental assessment for Road Closure; Update Airport Layout Plan (in house);
			Runway Safety Area Determination; Acquire easement RW 17 (2 parcels/2 acs) MSSC
			Invest. Tracts; Engineering/design for RW extension; Acquire/Reimburse land for RWY 13-31 Extension (106ac); Acquire/reimburse RW 35 RPZ (5.0 ac) Timmerman Tract
2011	\$2,000,810	A/17/201A	SBGP-2011-73 \$31,532; SBGP-2008-46 \$350,917; SBGP-2009-57 \$1,660,930
2011	\$83,900		OBSTRUCTION SURVEY AT NEW BRAUNFELS
2011	Ψ05,900	0/0/2012	RAMP: TxDOT to contract for AWOS Maintenance, Sponsor to contract for airport
2012	\$100,000	8/31/2012	general maintenance projects.
2012	ψ100,000	0/01/2012	Acquire/reimburse RW 13 RPZ (29.337 ac) Guis Tract; Acquire ultimate RPZ RW 31 (50
			ac) including single family house/Deering Tract SBGP-095-2016 \$ 1,701,250.65; SBGP-
2013	\$2,029,109	6/17/2020	097-2016 \$ 124,947.55
2013	\$100,000	8/31/2013	RAMP: Sponsor to perform airport general maintenance.
			Construct hangar access apron (6100 sy) (60 lbs); RPR, Testing; Contingency.;
			Engineering/design apron/TW SBGP-073-2011 \$34,338.59; SBGP-084-2014
0040	¢4 444 450	44/04/0040	\$30,647.70; SBGP-087-2014 \$667,402.19; SBGP-088-2014 \$95,285.93; SBGP-089-
2013	\$1,141,452	11/21/2016	2015 \$150,000; SBGP-090-2015 \$49,632.24
			Install fencing (7100 lf); Terminate road w/signs & barricades; Abandon Westmeyer Road easement; Relocate utilities for RW extension; Relocate PAPI RW 13; Drainage
			study for terminal/ southeast development area; Reroute ditches along road; Install
			signage RW 13-31; Temporary thresholds; Extend RW 13 (1520 x 100) (75,000 DW);
			Contingency, mobilization, RPR, etc.; Mark RW 13-31; Extend MIRL RW 13 (1520 If) &
			relocate threshold RW 31; Construct holding apron RW 13 (100 x 200); Install MALS
			RW 13; Extend parallal TW A (2250 x 40) & MITLs; Extend/realign parallel TW to RW 31
			end (613 x 50); Widen TW F to hangar access (3670 sy)
2014			RAMP: Sponsor to perform airport general maintenance.
2015	\$100,000	8/31/2015	RAMP: Sponsor to perform airport general maintenance.
2016	\$100,000	8/31/2016	RAMP: Sponsor to perform airport general maintenance.
2017	\$100,000	8/31/2017	RAMP: Sponsor to perform airport general maintenance.
2018	\$100,000	8/31/2018	RAMP: Sponsor to perform airport general maintenance.
2019	\$100,000	8/31/2019	RAMP: Sponsor to perform airport general maintenance.
2020	\$100,000	8/31/2020	RAMP: Sponsor to perform airport general maintenance.

Table 4. Construction History.

Branch	Section	Const	Work1	Work2	Work3
NewBraun13	Center-0	12/1/2014			
NewBraun13	Edge-0	12/1/2014			
NewBraun13	Center-1	7/1/1977	Rehab 10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012
NewBraun13	Edge-1	7/1/1977	Rehab 10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012
NewBraun17	Center-1	10/12/1995	Slurry 09/11/2003	Thin Overlay 7/1/2019	
NewBraun17	Edge-1	10/12/1995	Slurry 09/11/2003	Thin Overlay 7/1/2019	
NewBraun-A	A-1756	3/21/1994			
NewBraun-A	A-1772	3/21/1994			
NewBraun-A	A-1806	3/21/1994	Slurry 09/11/2003		
NewBraun-A	A-2317	10/12/1995			
NewBraun-A	A-31 Run Up	10/12/1995	Overlay 07/01/2012		
NewBraun-A	A-35	7/1/2005	Thin Overlay 7/1/2019		
NewBraun-A	A-35 Run Up	10/12/1995	Overlay 07/01/2012		
NewBraun-A	A-B	12/1/2014			
NewBraun-A	A-East	3/21/1994	Slurry 09/11/2003		
NewBraun-A	A-Fuel	1/31/2011			
NewBraun-A	A-H2271 84	10/12/1995	Slurry 09/11/2003	Recon 07/01/2015	Coaltar seal 7/2/2015
NewBraun-A	A-Hang OLD	3/21/1994			
NewBraun-A	A-Park	7/1/2019			
NewBraun-A	A-PCC	1/31/2011			
NewBraun-A	A-T Hang A	1/31/2011	Coaltar seal 2/1/2012		
NewBraun-A	A-T Hang B	1/31/2011	Coaltar seal 2/1/2012		
NewBraun-A	A-Term	10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012	Coaltar seal 1/1/2014
NewBraun-T	Т-АВС	12/1/2014			
NewBraun-T	T-A C G	10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012	
NewBraun-T	T-A East	10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012	
NewBraun-T	T-A F G	12/1/2014			
NewBraun-T	T-B	12/1/2014			
NewBraun-T	T-C	12/1/2014			
NewBraun-T	T-D	10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012	
NewBraun-T	T-E 1735	9/11/2003			
NewBraun-T	T-E East	7/1/1977	Slurry 09/11/2003	Overlay 07/01/2012	
NewBraun-T	T-F	10/12/1995	Overlay 07/01/2012		
NewBraun-T	T-F 31 A	12/1/2014			
NewBraun-T	T-G	7/1/1977	Rehab 10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012

Table 5. Work Since 05/27/2021.

Branch	Section	Work1	Work2
NewBraun13	Center-0		
NewBraun13	Edge-0		
NewBraun13	Center-1		
NewBraun13	Edge-1		
NewBraun17	Center-1		
NewBraun17	Edge-1		
NewBraun-A	A-1756		
NewBraun-A	A-1772		
NewBraun-A	A-1806		
NewBraun-A	A-2317		
NewBraun-A	A-31 Run Up		
NewBraun-A	A-35		
NewBraun-A	A-35 Run Up		
NewBraun-A	A-B		
NewBraun-A	A-East		
NewBraun-A	A-Fuel		
NewBraun-A	A-H2271 84		
NewBraun-A	A-Hang OLD		
NewBraun-A	A-Park		
NewBraun-A	A-PCC		
NewBraun-A	A-T Hang A		
NewBraun-A	A-T Hang B		
NewBraun-A	A-Term		
NewBraun-T	T-A B C		
NewBraun-T	T-E East		
NewBraun-T	T-F		
NewBraun-T	T-F 31 A		
NewBraun-T	T-G		

Features and Pictures

Pictures and videos of the pavement inspection can be found on the included thumb drive.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun13	Center-0	С	AC	13 End of RW	Past TW C	1,526	50	76,300
NewBraun13	Edge-0	E	AC	13 End of RW	Past TW C	1,526	50	76,300
NewBraun13	Center-1	С	AAC	TW C	31 End of RW	5,351	50	267,550
NewBraun13	Edge-1	E	AAC	TW C	31 End of RW	5,351	50	267,550

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun13	Center-0	12/1/2014			
NewBraun13	Edge-0	12/1/2014			
NewBraun13	Center-1	7/1/1977	Rehab 10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012
NewBraun13	Edge-1	7/1/1977	Rehab 10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012



Figure 1. Runway 13-31, 13 End, Center.



Figure 2. Runway 13-31, 13 End, Inside Edge.



Figure 3. Runway 13-31, 13 End, Outside Edge.



Figure 4. Runway 13-31, 13 End Extended.

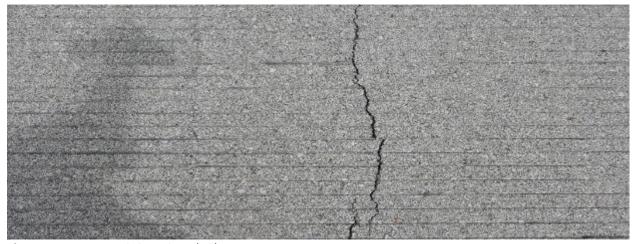


Figure 5. Runway 13-31, 13 End, Close.



Figure 6. Runway 13-31, 31 End, Center.



Figure 7. Runway 13-31, 31 End, Inside Edge.



Figure 8. Runway 13-31, 31 End, Outside Edge.



Figure 9. Runway 13-31, 31 End Extended.



Figure 10. Runway 13-31, 31 End, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun17	Center-1	С	AAC	17 End of RW	35 End of RW	5,334	50	266,700
NewBraun17	Edge-1	E	AAC	17 End of RW	35 End of RW	5,334	50	266,700

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun17	Center-1	10/12/1995	Slurry 09/11/2003	Thin Overlay 7/1/2019	
NewBraun17	Edge-1	10/12/1995	Slurry 09/11/2003	Thin Overlay 7/1/2019	



Figure 11. Runway 17-35, 17 End, Center.



Figure 12. Runway 17-35, 17 End, Inside Edge.



Figure 13. Runway 17-35, 17 End, Outside Edge.



Figure 14. Runway 17-35, 17 End Extended.



Figure 15. Runway 17-35, 17 End, Close.



Figure 16. Runway 17-35, 35 End, Center.



Figure 17. Runway 17-35, 35 End, Inside Edge.



Figure 18. Runway 17-35, 35 End, Outside Edge.



Figure 19. Runway 17-35, 35 End Extended.



Figure 20. Runway 17-35, 35 End, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-1756	Т	AC	East Apron	Building 1756	241	248	59,589

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-1756	3/21/1994			



Figure 21. Apron A-1756.



Figure 22. Apron A-1756, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-1772	Т	AC	East Apron	Building 1772	380	248	93,987

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-1772	3/21/1994			



Figure 23. Apron A-1772.



Figure 24. Apron A-1772, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-1806	Т	AC	East Apron	Building 1756	145	248	40,483

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-1806	3/21/1994	Slurry 09/11/2003		



Figure 25. Apron A-1806.



Figure 26. Apron A-1806, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-2317	T	AC	Terminal Apron	Building 2317	650	38	41,110

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-2317	10/12/1995			



Figure 27. Apron A-2317.



Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-31 Run Up	T	AAC	Taxiway F	Near 31 End	150	85	12,750

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-31 Run Up	10/12/1995	Overlay 07/01/2012		



Figure 29. Apron A-31 Run Up.



Figure 30. Apron A-31 Run Up, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-35	S	AC	RW 35 End	Turn Around	206	133	17100

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-35	7/1/2005	Thin Overlay 7/1/2019		



Figure 31. Apron A-35.



Figure 32. Apron A-35, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-35 Run Up	Т	AAC	Taxiway F	Near 35 End	150	85	12,750

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-35 Run Up	10/12/1995	Overlay 07/01/2012		



Figure 33. Apron A-35 Run Up.



Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-B	S	AC	TW A	TW B	272	150	40,390

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-B	12/1/2014			



Figure 35. Apron A-B.



Figure 36. Apron A-B, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-East	S	AC	Taxiway A	Main East Parking	1,513	248	376,331

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-East	3/21/1994	Slurry 09/11/2003		



Figure 37. Apron A-East.



Figure 38. Apron A-East, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-Fuel	S	PCC	Taxiway F	NE East Apron	404	248	102,132

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-Fuel	1/31/2011			



Figure 39. Apron A-Fuel.



Figure 40. Apron A-Fuel, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-H2271 84	Т	AC	Taxiway F	Near 35 End	462	107	61,110

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-H2271 84	10/12/1995	Slurry 09/11/2003	Recon 07/01/2015	Coaltar seal 7/2/2015



Figure 41. Apron A-H2271 84.



Figure 42. Apron A-H2271 84, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-Hang OLD	Т	AC	Main East Parking	Old T Hangars	620	40	35,090

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-Hang OLD	3/21/1994			



Figure 43. Apron A-Hang OLD.



Figure 44. Apron A-Hang OLD, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-Park	T	AC	A-Term	East of Terminal Building	403	203	81,887

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-Park	7/1/2019			



Figure 45. Apron A-Park.

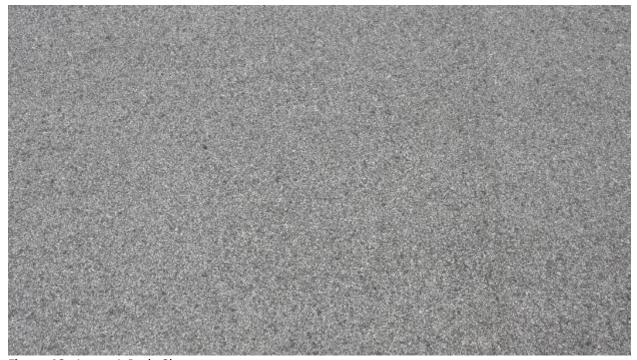


Figure 46. Apron A-Park, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-PCC	S	PCC	T Hangars	New Building	685	124	90,240

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-PCC	1/31/2011			



Figure 47. Apron A-PCC.



Figure 48. Apron A-PCC, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-T Hang A	Т	AC	Near 31 End of RW	T Hangars	775	150	131,331

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-T Hang A	1/31/2011	Coaltar seal 2/1/2012		



Figure 49. Apron A-T Hang A.



Figure 50. Apron A-T Hang A, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-T Hang B	Т	AC	Near A-T Hang A	Taxiway B	347	140	31,676

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-T Hang B	1/31/2011	Coaltar seal 2/1/2012		



Figure 51. Apron A-T Hang B.

Picture Missing

Figure 52. Apron A-T Hang B, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-A	A-Term	T	AAC	Taxiway F	Parking at Terminal	893	170	197,353

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-A	A-Term	10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012	Coal tar seal 1/1/2014



Figure 53. Apron A-Term.



Figure 54. Apron A-Term, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	T-A B C	Р	AC	TW B	TW C	1,982	50	99,100

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-T	T-A B C	12/1/2014			



Figure 55. Taxiway T-A B C.



Figure 56. Taxiway T-A B C, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	T-A C G	Р	AAC	TW C	TW D	1,302	50	65,100

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-T	T-A C G	10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012	

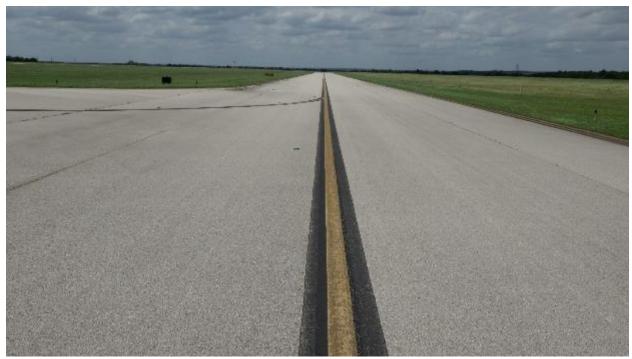


Figure 57. Taxiway T-A C G.



Figure 58. Taxiway T-A C G, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	T-A East	Т	AAC	Taxiway D	Taxiway C	2,741	50	137,050

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-T	T-A East	10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012	



Figure 59. Taxiway T-A East.



Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	T-A F G	S	AC	TW F	TW G	427	50	24,762

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-T	T-A F G	12/1/2014			



Figure 61. Taxiway T-A F G.



Figure 62. Taxiway T-A F G, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	Т-В	Р	AC	RW 13	TW A	465	70	35,138

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-T	T-B	12/1/2014			



Figure 63. Taxiway T-B.



Figure 64. Taxiway T-B, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	T-C	S	AC	Near 13 End	TW A	465	50	34,040

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-T	T-C	12/1/2014			



Figure 65. Taxiway T-C.



Figure 66. Taxiway T-C, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	T-D	Т	AAC	17 End of RW	Taxiway A	582	50	33,332

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-T	T-D	10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012	



Figure 67. Taxiway T-D.



Figure 68. Taxiway T-D, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	T-E 1735	S	AC	Middle of RW 13/31	Middle of RW 17/35	1,665	50	89,973

l	Branch ID	Section ID	Const	Work 1	Work 2	Work 3
ı	NewBraun-T	T-E 1735	9/11/2003			



Figure 69. Taxiway T-E 1735.



Figure 70. Taxiway T-E 1735, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	T-E East	S	AAC	Middle of RW 13/31	Taxiway A	464	50	25,167

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-T	T-E East	7/1/1977	Slurry 09/11/2003	Overlay 07/01/2012	



Figure 61. Taxiway T-E East.



Figure 62. Taxiway T-E East, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	T-F	S	AAC	17 End of RW	Taxiway A	3,473	50	176,896

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-T	T-F	10/12/1995	Overlay 07/01/2012		



Figure 61. Taxiway T-F.



Figure 62. Taxiway T-F, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	T-F 31 A	Р	AC	RW 31	TW A	696	146	100,902

Branch ID	Section ID	Const	Work 1	Work 2	Work 3
NewBraun-T	T-F 31 A	12/1/2014			



Figure 61. Taxiway T-F 31 A.



Figure 62. Taxiway T-F 31 A, Close.

Branch ID	Section ID	Rank	Surf	From	То	Length	Width	Area
NewBraun-T	T-G	S	AAC	TW A	T Hangars	1,144	49	58,490

	Branch ID	Section ID	Const	Work 1	Work 2	Work 3
ı	NewBraun-T	T-G	7/1/1977	Rehab 10/12/1995	Slurry 09/11/2003	Overlay 07/01/2012



Figure 61. Taxiway T-G.



Figure 62. Taxiway T-G, Close.



Figure 63. Entrance Area.



Figure 64. Office Area.



Figure 65. Fuel Area.



Figure 66. RW 17-35. Pumping Cracks



Figure 67. Taxiway, T-A C G. High Severity Crack.

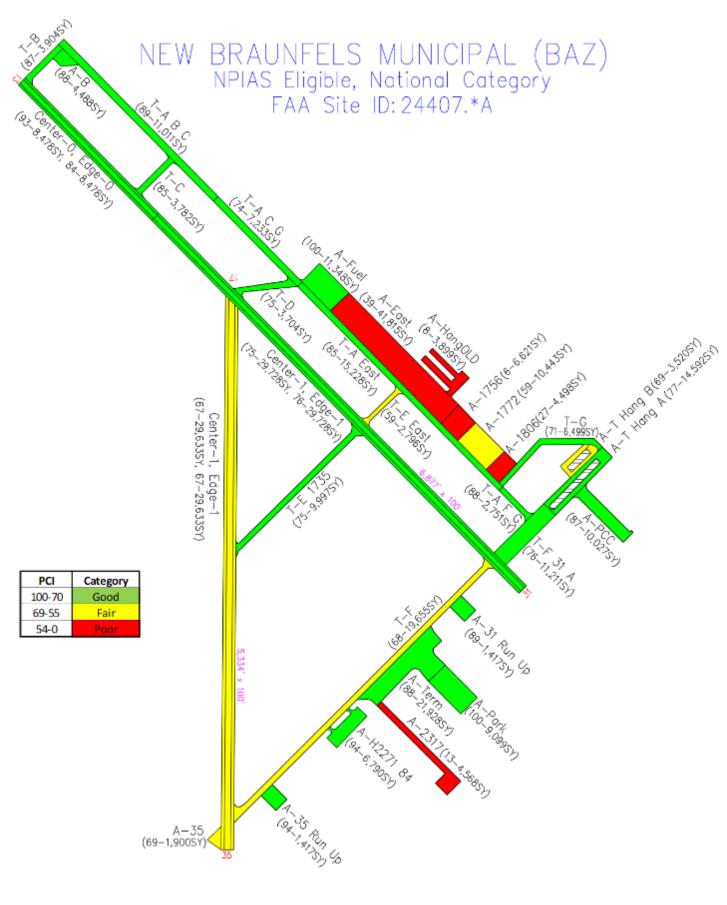


Figure 68. Taxiway, T-E East. Edge Damage



Figure 69. Traffic at the airport.

Inspection Results 05/27/2021 New Braunfels Municipal (BAZ)



Discussion and Recommendations 05/27/2021

The thumb drive associated with this report contains individual pictures of the entrance, features, office, and fuel area. These are the pictures in the previous section. In addition, the "Raw Files" directory has the original pictures which often includes pictures of signs and other features. In addition, there are Excel™ files and videos from the airport. These are described in Table 6.

The descriptions of the distress and conditions and the repair recommendations are included in Tables 7 and 8. Table 9 has the results of the deflection testing on the main apron, taxiway, and runway ends

The link below provides assistance on how to choose potential pavement maintenance treatments for an airport based on several factors. The appendices provide the user's guide, a field guide, a guidebook, and the asphalt and concrete distress manuals. https://ACRP-Pavement-Tool.TTI.TAMU.EDU/

The Runway 13-31 pavement at New Braunfels was overlaid in 2012 and extended in 2014. The pavement is good condition but beginning to weather and has some wide seam cracks. Figures 1-10 illustrate the extent and severity of the weathering and cracking. The runway is very strong (Table 9) and is fairly smooth (See High Speed Video). A crack and coal tar seal will improve the condition and help to extend the life of this pavement.

Runway 17-35 was constructed in 1995 and had a very thin overlay placed in 2019. The pavement appears to not have enough binder, causing the aggregate to dislodge and creating a FOD hazard. There is a high amount of raveling and the cracks have resurfaced quickly. Many of these cracks are pumping water and material from beneath the pavement. Figures 11-20 illustrate the extent and severity of the raveling and cracking. The runway is fairly weak (Table 9) and is mostly smooth (See High Speed Video). While it might be best to reconstruct the runway, a crack and fog seal will restore the functionality. The cracks that are pumping should be routed, filled with sealant, then crack sealed again at the top of the crack for a bond between both edges of pavement. A fog seal will help hold in some of the aggregate that is beginning to dislodge.

The condition and recommendation for the other pavement sections are included below.

Table 6. List of Selected Files.

File Name	Contents
New Braunfels.Airport PMS Report.2021.docx	This report
New Braunfels.Entrance Road.MP4	Video of airport entrance
New Braunfels.RW.13-31.13End.360.MP4	360 degree video from 13 end
New Braunfels.RW.13-31.Midfield.360.MP4	360 degree video from midfield on RW 13-31
New Braunfels.RW.13-31.Pavement.MP4	Video and commentary on RW 13-31 pavement condition
New Braunfels.RW.13-31.31End.360.MP4	360 degree video from 31 end
New Braunfels.RW.13-31.HighSpeed.MP4	Video of 60mph drive down RW 13-31
New Braunfels.RW.17-35.17End.360.MP4	360 degree video from 17 end
New Braunfels.RW.17-35.Midfield.360.MP4	360 degree video from midfield on RW 17-35
New Braunfels.RW.17-35.Pavement.MP4	Video and commentary on RW 17-35 pavement condition
New Braunfels.RW.17-35.35End.360.MP4	360 degree video from 35 end
New Braunfels.RW.17-35.HighSpeed.MP4	Video of 60mph drive down RW 17-35
New Braunfels.Apron.Tour.Northeast.MP4	Video of tour of Aprons Northeast
New Braunfels. Apron. Tour. Southeast. MP4	Video of tour of Aprons Southeast
New Braunfels.TW.Tour.T-A.MP4	Video of tour of Taxiway A
New Braunfels.TW.Tour.T-E.MP4	Video of tour of Taxiway E
New Braunfels.TW.Tour.T-F.MP4	Video of tour of Taxiway F
New Braunfels.TW.Tour.T-G.MP4	Video of tour of Taxiway G
New Braunfels.Air.Work.XLSX	Spreadsheet of dates, L, W, A, History, etc.
New Braunfels.Deflection.MPa-KSI.XLSX	Spreadsheet of deflection testing

Table 7. Predominant Distress.

Branch ID	Section ID	PCI	Predominant Distress	Contributing Factors
NewBraun13	Center-0	93	Weather 76,300SF, Crack 51LF	Good Performance
NewBraun13	Edge-0	84	Weather 76,300SF, Crack 3,052LF	Seam Cracks
NewBraun13	Center-1	75	Weather 267,550SF, Crack 14,740LF	Seam Cracks, Age
NewBraun13	Edge-1	76	Weather 267,550SF, Crack 14,643LF	Seam Cracks, Age
NaDuaa.17	Camban 1	C 7	David 200 70000 Crack 20 00415	Cracks Pumping, FOD Hazard-
NewBraun17	Center-1	67	Ravel 266, 700SF, Crack 26, 864LF	Surface Peeling
NewBraun17	Edge-1	67	Ravel 266,700SF, Crack 26,937LF	Cracks Pumping, FOD Hazard- Surface Peeling
NewBraun-A	A-1756	6	Weather 59,589SF, Fatigue Crack 59,589SF, Crack 14,301LF	Age, Load Damage
NewBraun-A	A-1772	59	Weather 93,987SF, Crack 22,557LF	Age
NewBraun-A	A-1806	27	Weather 40,483SF, Bleeding 2,664SF, Fatigue Crack 1,275SF, Crack 9,716LF	Age, Load Damage
NewBraun-A	A-2317	13	Weather 41,110, Rutting 82SF, Ravel 20,555SF, Depression 904SF, Fatigue Crack 8,305SF, Crack 5,344LF	Age, Load Damage
NewBraun-A	A-31 Run Up	89	Weather 12,750SF, Crack 110LF	Age
NewBraun-A	A-35	69	Ravel 17,100SF, Crack 410LF	Cracks Pumping, FOD Hazard- Surface Peeling
NewBraun-A	A-35 Run Up	94	Weather 12,750SF	Age
NewBraun-A	A-B	88	Weather 40,390SF, Crack 606LF	Age
NewBraun-A	A-East	39	Weather 137,988SF, Ravel 225,800SF, Fatigue Crack 11,792SF, Crack 82,241LF	Age, Surface Peeling, Load Damage
NewBraun-A	A-Fuel	100	Nothing	Nothing
NewBraun-A	A-H2271 84	94	Crack 733LF	Good Performance
NewBraun-A	A-Hang OLD	8	Ravel 35,090SF, Patch 316SF, Fatigue Crack 8,246SF	Age, Lack of treatment
NewBraun-A	A-Park	100	Nothing	New
NewBraun-A	A-PCC	87	Linear Crack 35SL, Corner Break 10SL, JT Spall 15SL	Load Damage
NewBraun-A	A-T Hang A	77	Weather 131,331SF, Crack 6,435LF	Checking, Wide cracks
NewBraun-A	A-T Hang B	69	Ravel 31,676SF, Crack 594LF	Surface Peeling
NewBraun-A	A-Term	88	Weather 197,353SF, Crack 3,035LF	Checking
NewBraun-T	Т-АВС	89	Weather 99,100SF, Crack 1,239LF	Good Performance
NewBraun-T	T-A C G	74	Weather 65,100SF, Ravel 260SF, Fatigue Crack 87SF, Crack 3,711LF	Load Damage
NewBraun-T	T-A East	85	Weather 137,050SF, Fatigue Crack 55SF, Crack 3,381LF	Load Damage
NewBraun-T	T-A F G		Weather 24,762SF, Crack 495LF	Age
NewBraun-T	T-B	87	Weather 35, 138SF, Crack 773LF	Age
NewBraun-T	T-C	85	Weather 34,040SF, Crack 749LF	Age
NewBraun-T	T-D	75	Weather 33,332SF, Ravel 33SF, Crack 1,533LF	Age
NewBraun-T	T-E 1735	75	Weather 89,973SF, Ravel 22SF, Crack 1,327LF	Age
NewBraun-T	T-E East	59	Weather 25,168SF, Ravel 164SF, Fatigue Crack 13SF, Crack 1,459LF	Age, Edge Cracks, Load Damage
NewBraun-T	T-F	68	Weather 176,896SF, Patch 758SF, Crack 22,542LF	Age, Edge Cracks
NewBraun-T		76	Weather 100,902SF, Crack 7,144LF	Age, Edge Cracks
NewBraun-T		71	Weather 58,490SF, Ravel 585SF, Crack 2,486LF	Age, Edge Damage

Table 8. Proposed Work.

Branch ID	Section ID	Last Const Date	PCI	Category	Treatment
NewBraun13	Center-0	12/1/2014	93	Good	Crack+Coal tar seal
NewBraun13	Edge-0	12/1/2014	84	Good	Crack+Coal tar seal
NewBraun13	Center-1	7/1/2012	75	Good	Crack+Coal tar seal
NewBraun13	Edge-1	7/1/2012	76	Good	Crack+Coal tar seal
NewBraun17	Center-1	7/1/2019	67	Fair	Rout+Fill cracks with seal+ Fog seal surface
NewBraun17	Edge-1	7/1/2019	67	Fair	Rout++Fill cracks with seal++Fog seal surface
NewBraun-A	A-1756	3/21/1994	6	Poor	Reconstruct
NewBraun-A	A-1772	3/21/1994	59	Fair	Mill+Overlay
NewBraun-A	A-1806	9/11/2003	27	Poor	Reconstruct
NewBraun-A	A-2317	10/12/1995	13	Poor	Reconstruct
NewBraun-A	A-31 Run Up	7/1/2012	89	Good	Crack+Coaltar seal
NewBraun-A	A-35	7/1/2019	69	Fair	Rout+Fill cracks with seal++Fog seal surface
NewBraun-A	A-35 Run Up	7/1/2012	94	Good	Coaltar seal
NewBraun-A	A-B	12/1/2014	88	Good	Crack+Coaltar seal
NewBraun-A	A-East	9/11/2003	39	Poor	Mill+Overlay+Patch Load damaged areas or Reconstruct
NewBraun-A	A-Fuel	1/31/2011	100	Good	Nothing
NewBraun-A	A-H2271 84	7/2/2015	94	Good	Crackseal
NewBraun-A	A-Hang OLD	3/21/1994	8	Poor	Reconstruct
NewBraun-A	A-Park	7/1/2019	100	Good	Wait for Coaltar seal
NewBraun-A	A-PCC	1/31/2011	87	Good	Patch+Crackseal
NewBraun-A	A-T Hang A	2/1/2012	77	Good	Crackseal
NewBraun-A	A-T Hang B	2/1/2012	69	Fair	Crack seal+Coal tar seal
NewBraun-A	A-Term	1/1/2014	88	Good	Crackseal
NewBraun-T	T-A B C	12/1/2014	89	Good	Crack+Coaltar seal
NewBraun-T	T-A C G	7/1/2012	74	Good	Patch+Crack seal+Coal tar seal
NewBraun-T	T-A East	7/1/2012	85	Good	Patch+Crack seal+Coal tar seal
NewBraun-T	T-A F G	12/1/2014	88	Good	Crack+Coaltar seal
NewBraun-T	T-B	12/1/2014	87	Good	Crack+Coaltar seal
NewBraun-T	T-C	12/1/2014	85	Good	Crack+Coaltar seal
NewBraun-T	T-D	7/1/2012	75	Good	Crack+Coaltar seal
NewBraun-T	T-E 1735	9/11/2003	75	Good	Patch+Crackseal+Coaltarseal
NewBraun-T	T-E East	7/1/2012	59	Fair	Patch+Crackseal+Coaltarseal
NewBraun-T	T-F	7/1/2012	68	Fair	Coaltar seal
NewBraun-T	T-F 31 A	12/1/2014	76	Good	Coaltar seal
NewBraun-T	T-G	7/1/2012	71	Good	Coaltar seal

PCI	Category
100-70	Good
69-55	Fair
54-0	Poor

As part of the evaluation, deflection testing was performed at six locations on each runway and at other selected locations. For a project-level FAA evaluation, (AC150/5370-11A) between 150-250 deflection tests would be conducted on a runway. For this evaluation, additional testing was performed at one location near the hold short line of the major taxiway, at one location on the main apron, and at three places on each runway end (left of center, center, right of center). This testing is ONLY intended to provide a relative indication of the strength of the pavements at this facility. No decisions should be made based on this testing. Results are displayed in Table 9.

Table 9. Approximate Pavement Strengths

Location	E-Modulus (ksi)
RW 13	216
RW 31	152
RW 17	40
RW 35	83
TW T-F 31 Outside	266
TW T-F 31 Inside	157
TW T-B 13	169
TW T-D	368
A-Term	195
A-Park	237
A-East	46

A high-speed run was conducted along each runway centerline. During these runs, a video was collected that can be used to provide a cursory evaluation of runway smoothness. If the airport manager or TxDOT has concerns on runway smoothness, additional profiling with an inertial profile can be done. Please advise if this is needed. An inertial profile provides the input data required for a FAA Boeing Bump Index analysis of the runway smoothness. The FAA Boeing Bump Index format currently uses highway type definitions for good (green), fair (yellow), and poor (red). If additional smoothness testing is desired, please contact TTI to coordinate.

PCI Figures

