
SHELBY AIRPORT

9/29/2015



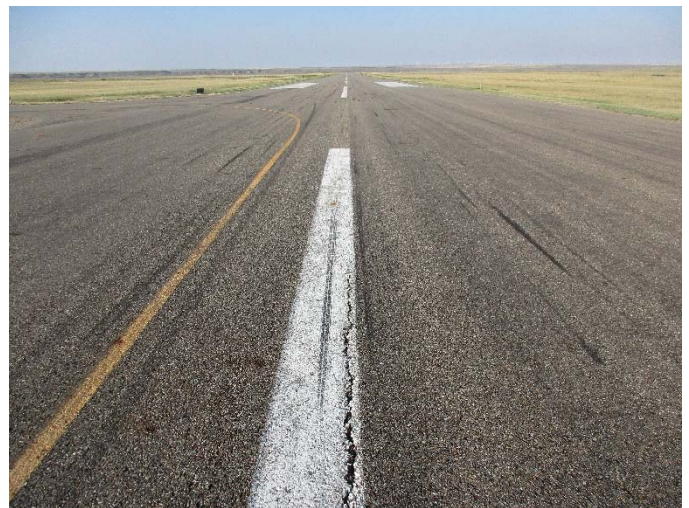
A-21, Overview



A-21, Surface detail with patch & swell



R-21, Surface detail



R-21, Overview

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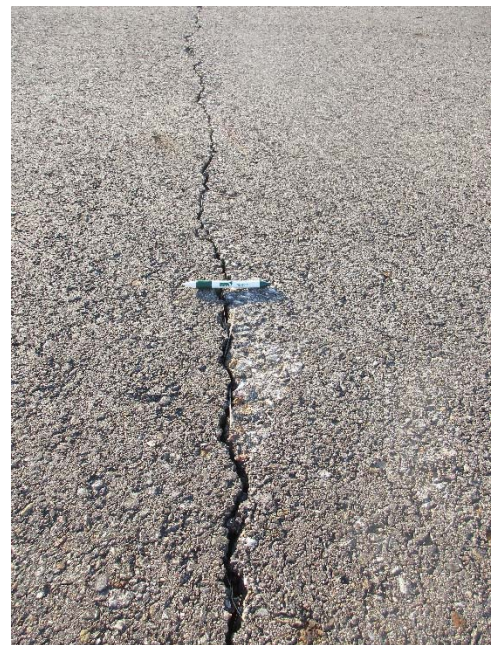
R-22, Overview with patching



R-22, Surface detail with depression



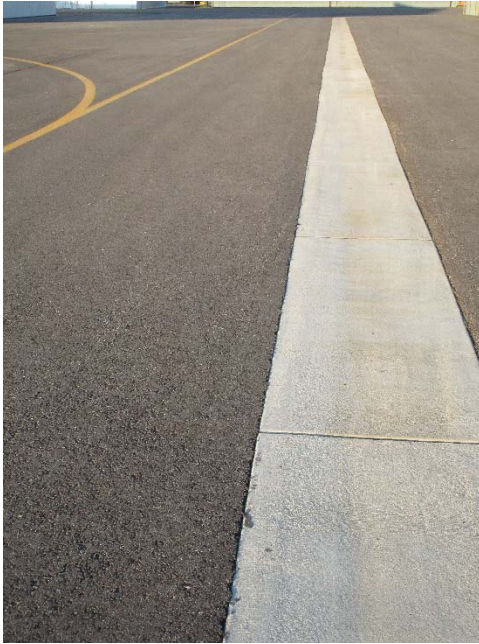
T-6, Overview



T-6, Surface detail with crack & scrape

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T-17, Overview



T-17, Surface detail with gouging



T-21, Overview



T-21, Surface detail with cracking

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T-22, Overview



T-22, Surface detail of gouge / ravel

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Branch: 14A

APRON

A-21

Length: 697 LF **Width:** 143 LF **Area:** 97,273 SF **Last Const. :** 2003 **Family:** ACAM15
From: T-22 **To:** TERMINAL **Surface:** AC

Inspections

Samples Surveyed: 5 **Total Samples:** 20 **Last Inspection Date (RPA)** 9/29/2015 **PCI:** 78

Sample # 4 **Area:** 5005 SF

Distress Description	Severity	Quantity
WEATHERING	L	1200 SF
RAVELING	L	500 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	112 LF
RAVELING	M	28 SF

Sample # 6 **Area:** 5005 SF

Distress Description	Severity	Quantity
WEATHERING	L	1200 SF
RAVELING	L	500 SF
RAVELING	M	80 SF
OIL SPILLAGE	N	2 SF

Sample # 12 **Area:** 4726 SF

Distress Description	Severity	Quantity
WEATHERING	L	1280 SF
RAVELING	L	472 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	104 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	12 LF
SWELLING	L	20 SF
PATCHING	L	7 SF
DEPRESSION	L	6 SF

Sample # 16 **Area:** 4726 SF

Distress Description	Severity	Quantity
WEATHERING	L	1280 SF
RAVELING	L	472 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	65 LF
PATCHING	L	17 SF
DEPRESSION	L	5 SF

Sample # 18 **Area:** 4726 SF

Distress Description	Severity	Quantity
WEATHERING	L	1280 SF
RAVELING	L	472 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	23 LF
PATCHING	L	21 SF
DEPRESSION	L	12 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
RAVELING	L	9716 SF	9.99 %	9.82
RAVELING	M	434 SF	0.45 %	5.92
LONGITUDINAL/TRANSVERSE CRACKING	L	1223 LF	1.26 %	5.52
LONGITUDINAL/TRANSVERSE CRACKING	M	48 LF	0.05 %	4.00
WEATHERING	L	25094 SF	25.80 %	3.32
PATCHING	L	181 SF	0.19 %	2.01
OIL SPILLAGE	N	8 SF	0.01 %	2.00
SWELLING	L	80 SF	0.08 %	1.00
DEPRESSION	L	92 SF	0.10 %	0.30

* 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 90.0 % Climate/Durability 10.0 % Other

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Branch: 14R1

RUNWAY

R-21

Length: 5,000 LF **Width:** 75 LF **Area:** 375,000 SF **Last Const. :** 2004 **Family:** ACRMU15
From: STA 12+00 RW 5-23 **To:** STA 62+00 RW 5-23 **Surface:** AC

Inspections

Samples Surveyed: 7 **Total Samples:** 77 **Last Inspection Date (RPA)** 9/29/2015 **PCI:** 70

Sample # 5 **Area:** 4875 SF

Distress Description	Severity	Quantity
WEATHERING	L	2438 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	179 LF
RAVELING	L	488 SF
RAVELING	M	50 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	12 LF
DEPRESSION	L	8 SF
SWELLING	L	7 SF

Sample # 17 **Area:** 4875 SF

Distress Description	Severity	Quantity
WEATHERING	L	2438 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	221 LF
RAVELING	L	488 SF
RAVELING	M	50 SF
SWELLING	L	20 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	6 LF
DEPRESSION	L	11 SF

Sample # 29 **Area:** 4875 SF

Distress Description	Severity	Quantity
WEATHERING	L	2438 SF
RAVELING	L	488 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	117 LF
RAVELING	M	20 SF

Sample # 41 **Area:** 4875 SF

Distress Description	Severity	Quantity
WEATHERING	L	2438 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	221 LF
RAVELING	L	488 SF
RAVELING	M	60 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	18 LF
DEPRESSION	L	15 SF
SWELLING	L	13 SF

Sample # 53 **Area:** 4875 SF

Distress Description	Severity	Quantity
WEATHERING	L	2438 SF
RAVELING	L	488 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	69 LF
RAVELING	M	20 SF
PATCHING	L	1 SF

Sample # 65 **Area:** 4875 SF

Distress Description	Severity	Quantity
WEATHERING	L	2438 SF
RAVELING	L	488 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	73 LF
LONGITUDINAL/TRANSVERSE CRACKING	M	20 LF
RAVELING	M	10 SF

Sample # 77 **Area:** 4875 SF

Distress Description	Severity	Quantity
WEATHERING	L	2438 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	156 LF
RAVELING	L	488 SF
RAVELING	M	20 SF

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	L	11385 LF	3.04 %	10.14
RAVELING	L	37538 SF	10.01 %	9.83
RAVELING	M	2527 SF	0.67 %	6.82
WEATHERING	L	187538 SF	50.01 %	4.81

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Branch: 14R1

RUNWAY

R-21

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	M	615 LF	0.16 %	4.59
PATCHING	L	11 SF	0.00 %	2.00
SWELLING	L	440 SF	0.12 %	1.17
DEPRESSION	L	374 SF	0.10 %	0.30

* 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**

96.0 % **Climate/Durability**

4.0 % **Other**

SHELBY AIRPORT

Branch: 14R2

RUNWAY

R-22

Length: 3,700 LF **Width:** 60 LF **Area:** 222,000 SF **Last Const. :** 2003 **Family:** ACRMU15
From: STA 12+00 RW 11-29 **To:** STA 49+00 RW 11-29 **Surface:** AC

Inspections

Samples Surveyed: 7 **Total Samples:** 44 **Last Inspection Date (RPA)** 9/29/2015 **PCI:** **64**

Sample # 2 **Area:** 4800 SF

Distress Description	Severity	Quantity
WEATHERING	L	1200 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	162 LF
RAVELING	L	240 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	24 LF
RAVELING	M	25 SF
ALLIGATOR CRACKING	L	15 SF
SWELLING	L	5 SF
DEPRESSION	L	5 SF

Sample # 9 **Area:** 4800 SF

Distress Description	Severity	Quantity
WEATHERING	L	1200 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	306 LF
RAVELING	L	240 SF
DEPRESSION	L	12 SF
RAVELING	M	2 SF

Sample # 16 **Area:** 4800 SF

Distress Description	Severity	Quantity
WEATHERING	L	1200 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	302 LF
RAVELING	L	240 SF
DEPRESSION	L	10 SF
RAVELING	M	6 SF
SWELLING	L	3 SF

Sample # 23 **Area:** 4800 SF

Distress Description	Severity	Quantity
WEATHERING	L	1200 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	284 LF
RAVELING	L	480 SF
DEPRESSION	L	95 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	19 LF
RAVELING	M	50 SF
SWELLING	L	22 SF

Sample # 30 **Area:** 4800 SF

Distress Description	Severity	Quantity
WEATHERING	L	1200 SF
RAVELING	L	480 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	72 LF
DEPRESSION	L	80 SF
RAVELING	M	25 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	6 LF

Sample # 37 **Area:** 4800 SF

Distress Description	Severity	Quantity
WEATHERING	L	1200 SF
RAVELING	L	480 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	128 LF
DEPRESSION	L	63 SF
LONGITUDINAL/TRANSVERSE CRACKING	M	17 LF
RAVELING	M	25 SF

Sample # 44 **Area:** 4800 SF

Distress Description	Severity	Quantity
WEATHERING	L	1200 SF
LONGITUDINAL/TRANSVERSE CRACKING	L	147 LF
RAVELING	L	480 SF
DEPRESSION	L	100 SF
PATCHING	M	75 SF
DEPRESSION	M	72 SF
SWELLING	L	15 SF
RAVELING	M	15 SF

SHELBY AIRPORT

Branch: 14R2

RUNWAY

R-22

Extrapolated Distress Quantities*

Distress Description	Severity	Quantity	Density	Deduct
LONGITUDINAL/TRANSVERSE CRACKING	L	9257 LF	4.17 %	12.92
RAVELING	L	17443 SF	7.86 %	8.68
PATCHING	M	496 SF	0.22 %	7.30
DEPRESSION	L	2412 SF	1.09 %	7.13
ALLIGATOR CRACKING	L	99 SF	0.04 %	7.00
DEPRESSION	M	476 SF	0.21 %	6.41
RAVELING	M	978 SF	0.44 %	5.89
LONGITUDINAL/TRANSVERSE CRACKING	M	436 LF	0.20 %	5.09
WEATHERING	L	55500 SF	25.00 %	3.26
SWELLING	L	297 SF	0.13 %	1.28

* 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

11.0 % **Load**

66.0 % **Climate/Durability**

23.0 % **Other**

SHELBY AIRPORT**FIFTEEN YEAR PROJECTIONS: ESTIMATED AVERAGE ANNUAL COST: \$353,479**

PLAN YEAR: 2016			ESTIMATED COST:			\$581,537	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-21	Prev. & Seal Coat	\$4,998	\$24,990			\$29,988	69	74
R-21	Prev. & Seal Coat	\$24,600	\$105,000			\$129,600	68	73
A-21	Prev. & Seal Coat	\$2,567	\$27,236			\$29,804	76	82
T-17	Basic Prev.	\$651				\$651	81	81
R-22	Prev. & Seal Coat	\$27,418	\$62,160			\$89,578	63	66
T-6	Basic Prev.	\$3,390				\$3,390	75	75
T-22	Local Repair				\$298,526	\$298,526	52	100

PLAN YEAR: 2017			ESTIMATED COST:			\$107,218	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-22	Basic Prev.	\$23,918				\$23,918	65	65
T-21	Basic Prev.	\$3,993				\$3,993	72	72
R-21	Basic Prev.	\$18,337				\$18,337	71	71
T-6	Prev. & Seal Coat	\$4,548	\$33,166			\$37,714	73	78
A-21	Basic Prev.	\$1,459				\$1,459	79	79
T-17	Prev. & Seal Coat	\$1,225	\$20,572			\$21,797	78	84

PLAN YEAR: 2018			ESTIMATED COST:			\$65,750	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-22	Basic Prev.	\$28,639				\$28,639	63	63
A-21	Basic Prev.	\$2,596				\$2,596	76	76
T-21	Basic Prev.	\$5,104				\$5,104	70	70
R-21	Basic Prev.	\$25,262				\$25,262	69	69
T-6	Basic Prev.	\$3,480				\$3,480	75	75
T-17	Basic Prev.	\$669				\$669	81	81

PLAN YEAR: 2019			ESTIMATED COST:			\$84,023	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-17	Basic Prev.	\$1,219				\$1,219	79	79
R-21	Basic Prev.	\$33,684				\$33,684	67	67
R-22	Basic Prev.	\$33,551				\$33,551	61	61
A-21	Basic Prev.	\$3,729				\$3,729	74	74
T-21	Basic Prev.	\$7,130				\$7,130	68	68
T-6	Basic Prev.	\$4,710				\$4,710	73	73

PLAN YEAR: 2020			ESTIMATED COST:			\$103,786	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-21	Basic Prev.	\$42,250				\$42,250	65	65
T-17	Basic Prev.	\$2,035				\$2,035	76	76
T-6	Basic Prev.	\$5,953				\$5,953	71	71
A-21	Basic Prev.	\$4,861				\$4,861	71	72
T-21	Basic Prev.	\$9,182				\$9,182	66	66
T-22	Basic Prev.	\$226				\$226	87	87
R-22	Basic Prev.	\$39,279				\$39,279	60	60

PLAN YEAR: 2021			ESTIMATED COST:			\$381,323	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-21	Prev. & Seal Coat	\$6,562	\$31,574			\$38,137	69	74
T-21	Prev. & Seal Coat	\$11,257	\$28,970			\$40,227	64	68
T-6	Basic Prev.	\$7,985				\$7,985	69	69
T-17	Basic Prev.	\$2,855				\$2,855	74	74
R-21	Prev. & Seal Coat	\$50,949	\$121,724			\$172,673	63	67
R-22	Prev. & Seal Coat	\$46,941	\$72,061			\$119,002	58	61
T-22	Basic Prev.	\$444				\$444	84	84

PLAN YEAR: 2022			ESTIMATED COST:			\$176,908	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-21	Basic Prev.	\$5,027				\$5,027	72	72
T-22	Basic Prev.	\$665				\$665	81	81
T-17	Prev. & Seal Coat	\$3,676	\$23,848			\$27,524	72	77
R-21	Basic Prev.	\$43,970				\$43,970	65	65
R-22	Basic Prev.	\$40,915				\$40,915	60	60
T-21	Basic Prev.	\$9,538				\$9,538	66	66
T-6	Prev. & Seal Coat	\$10,821	\$38,449			\$49,269	67	71

PLAN YEAR: 2023			ESTIMATED COST:			\$132,907	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-21	Basic Prev.	\$53,225				\$53,225	63	64
T-6	Basic Prev.	\$8,189				\$8,189	69	69
T-17	Basic Prev.	\$2,948				\$2,948	74	74
A-21	Basic Prev.	\$6,640				\$6,640	69	70
R-22	Basic Prev.	\$48,981				\$48,981	58	58
T-21	Basic Prev.	\$11,745				\$11,745	64	64
T-22	Basic Prev.	\$1,179				\$1,179	79	79
PLAN YEAR: 2024			ESTIMATED COST:			\$161,115	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-22	Basic Prev.	\$2,010				\$2,010	76	76
R-21	Basic Prev.	\$62,801				\$62,801	62	62
T-17	Basic Prev.	\$3,820				\$3,820	72	72
T-21	Basic Prev.	\$14,019				\$14,019	63	63
A-21	Basic Prev.	\$9,513				\$9,513	67	67
R-22	Basic Prev.	\$57,750				\$57,750	56	56
T-6	Basic Prev.	\$11,202				\$11,202	67	67
PLAN YEAR: 2025			ESTIMATED COST:			\$190,820	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-22	Basic Prev.	\$67,348				\$67,348	54	55
T-22	Basic Prev.	\$2,844				\$2,844	74	74
T-17	Basic Prev.	\$4,765				\$4,765	70	70
A-21	Basic Prev.	\$12,476				\$12,476	65	65
R-21	Basic Prev.	\$72,758				\$72,758	60	60
T-21	Basic Prev.	\$16,374				\$16,374	61	61
T-6	Basic Prev.	\$14,255				\$14,255	66	66
PLAN YEAR: 2026			ESTIMATED COST:			\$522,750	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-21	Prev. & Seal Coat	\$19,270	\$33,585			\$52,854	59	63
A-21	Prev. & Seal Coat	\$15,596	\$36,603			\$52,200	63	68
R-22	Prev. & Seal Coat	\$78,094	\$83,538			\$161,632	53	57
R-21	Prev. & Seal Coat	\$87,161	\$141,111			\$228,272	58	62
T-22	Basic Prev.	\$3,677				\$3,677	72	72
T-6	Basic Prev.	\$17,356				\$17,356	64	64
T-17	Basic Prev.	\$6,759				\$6,759	68	68
PLAN YEAR: 2027			ESTIMATED COST:			\$282,865	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-21	Basic Prev.	\$17,149				\$17,149	61	61
T-22	Basic Prev.	\$4,609				\$4,609	70	70
A-21	Basic Prev.	\$12,873				\$12,873	65	66
T-6	Prev. & Seal Coat	\$20,551	\$44,572			\$65,123	62	66
R-22	Basic Prev.	\$70,433				\$70,433	55	55
T-17	Prev. & Seal Coat	\$8,779	\$27,647			\$36,425	66	70
R-21	Basic Prev.	\$76,253				\$76,253	60	60
PLAN YEAR: 2028			ESTIMATED COST:			\$240,668	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
R-22	Basic Prev.	\$81,709				\$81,709	53	53
R-21	Basic Prev.	\$91,028				\$91,028	59	59
T-17	Basic Prev.	\$6,977				\$6,977	68	68
T-21	Basic Prev.	\$20,118				\$20,118	59	60
A-21	Basic Prev.	\$16,198				\$16,198	63	63
T-22	Basic Prev.	\$6,520				\$6,520	68	68
T-6	Basic Prev.	\$18,118				\$18,118	64	64
PLAN YEAR: 2029			ESTIMATED COST:			\$285,015	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
T-17	Basic Prev.	\$9,124				\$9,124	66	66
A-21	Basic Prev.	\$19,714				\$19,714	61	61
R-21	Basic Prev.	\$107,803				\$107,803	57	57
T-22	Basic Prev.	\$8,455				\$8,455	66	66
T-21	Basic Prev.	\$24,024				\$24,024	58	58
R-22	Basic Prev.	\$94,380				\$94,380	51	51
T-6	Basic Prev.	\$21,515				\$21,515	62	62

PLAN YEAR: 2030		ESTIMATED COST:				\$1,985,494	PCI	
SectionID	Maintenance	Local	Global	Major<Crit	Major>Crit	Total	before	after
A-21	Basic Prev.	\$24,256				\$24,256	59	59
T-22	Basic Prev.	\$10,413				\$10,413	64	64
T-21	Basic Prev.	\$28,248				\$28,248	56	56
R-21	Basic Prev.	\$126,177				\$126,177	55	55
R-22	Reconstruct			\$1,760,071		\$1,760,071	48	100
T-6	Basic Prev.	\$25,032				\$25,032	61	61
T-17	Basic Prev.	\$11,297				\$11,297	65	65