

SOUTH DAKOTA STATEWIDE STUDY

Executive Summary



2021 SOUTH DAKOTA AIRPORT PAVEMENT CONDITION INDEX (PCI) STUDY

Prepared By: Helms & Associates and Engineering & Research International, Inc.



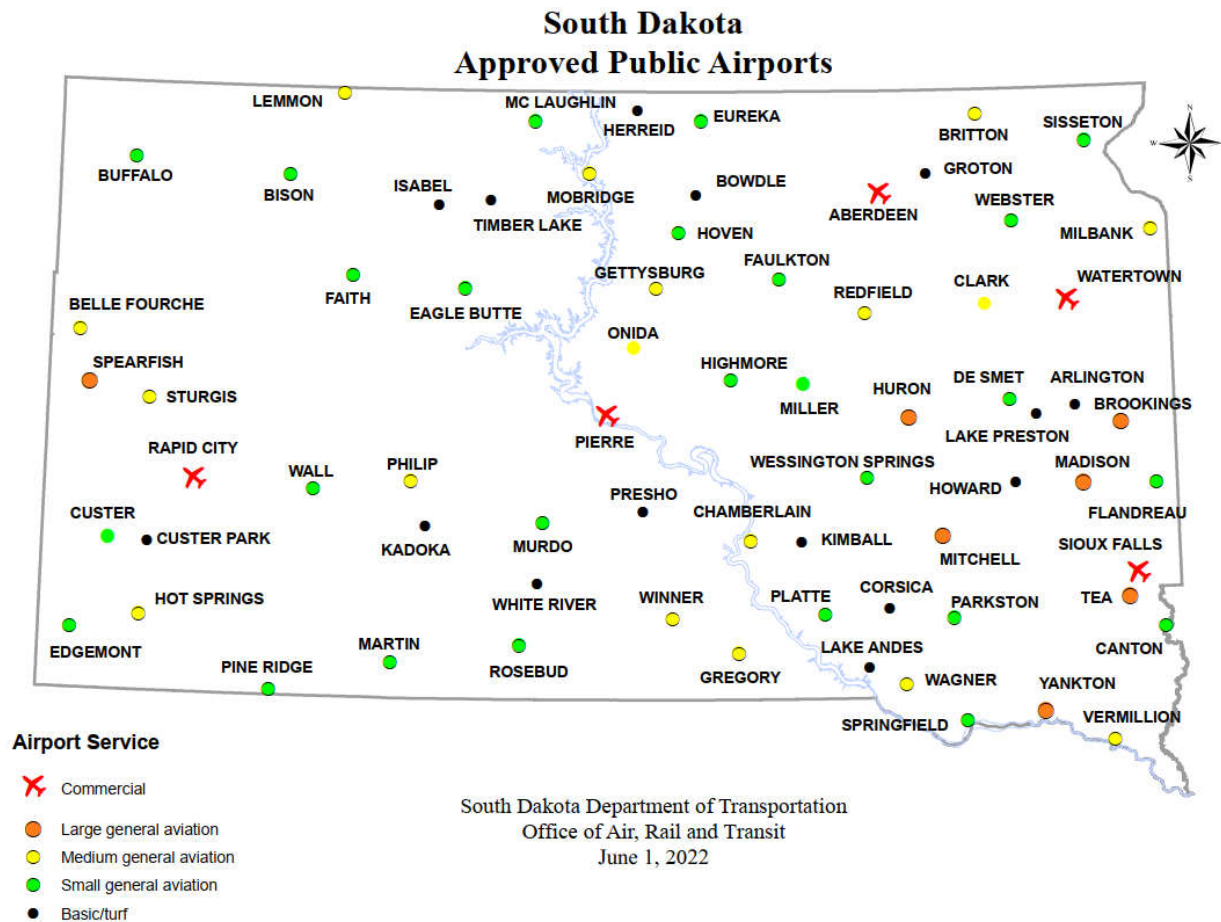
OVERVIEW

To comply with the Federal Aviation Administration (FAA) Airport Improvement Program (AIP) Grant Assurances, the South Dakota Department of Transportation (SDDOT) has implemented an Airport Pavement Management System to provide the tools for the decision makers for efficiently prioritizing pavement improvements, maximize return on the infrastructure investment, improve airport pavement system performance and extend the pavement useful life to provide a world-class safe and efficient aviation system in South Dakota.

The purpose of the SDDOT Airport Pavement Condition Index (PCI) study is to collectively assess the conditions and maintenance needs of the pavement infrastructure at the 55 public-use airports included in the South Dakota State Aviation System to maximize pavement life, and to identify projects and planning to support the SDDOT's mission. The state conducts a Statewide Airport PCI inspection every 3 years of all publicly-owned, paved airports in South Dakota and updates the pavement maintenance plan using the PAVER™ software. The survey was last completed in 2018.

SDDOT AVIATION SYSTEM

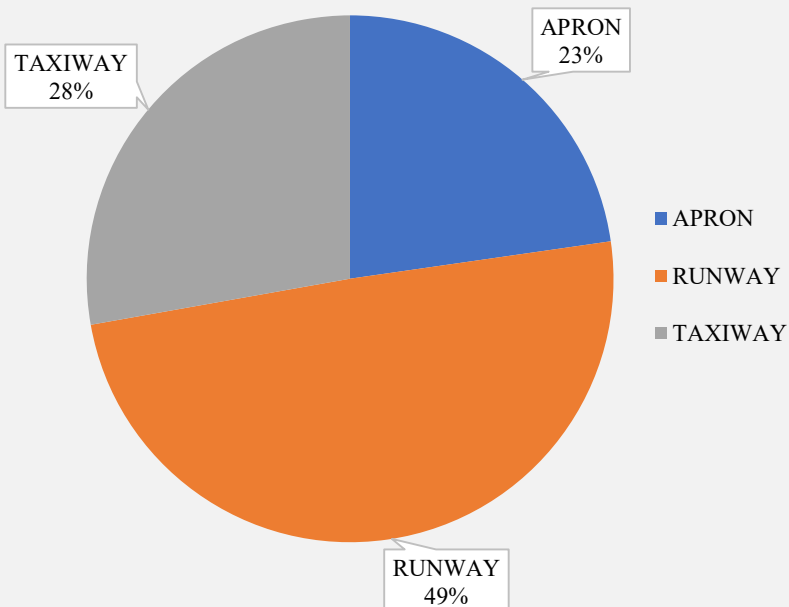
South Dakota's Airport System includes 55 airports that are publicly owned, and are included in the FAA's National Plan of Integrated Airport Systems (NPIAS). Five of the system airports support Commercial Service and the remaining 50 airports support General Aviation only.



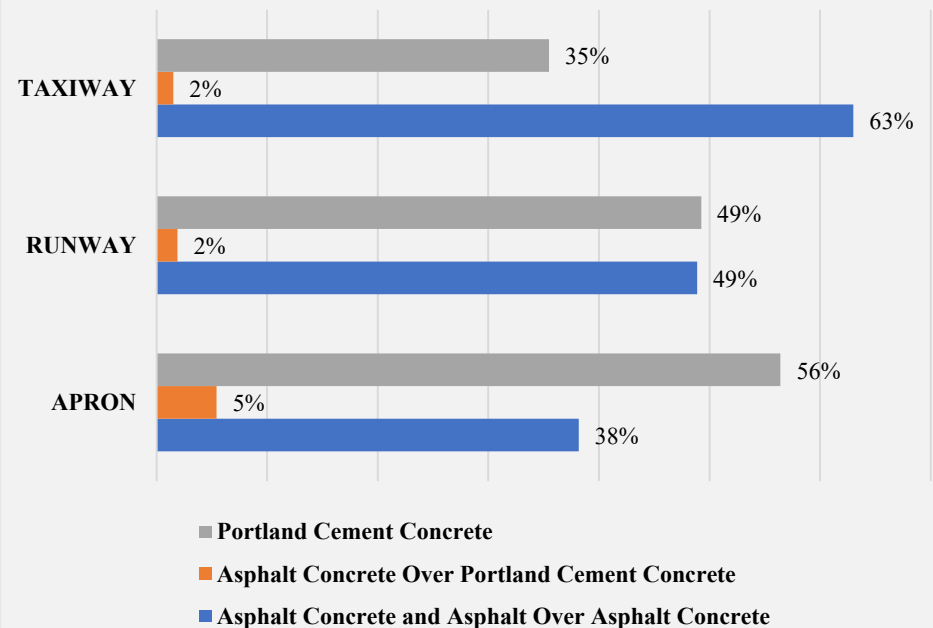
SDDOT AVIATION SYSTEM INVENTORY

For an efficient Pavement Management System, it is crucial to have an accurate airport facility inventory data to evaluate the System's pavement performance and for the development of a maintenance program. **The total systemwide airport pavement area which are subjected to aircraft loading is approximately 57,830,727 square feet out of which 30,621,036 square feet is asphalt surfaced pavements and 27,209,691 square feet is concrete pavements.** Charts below show the Percent Area of the System pavement network by Use and Surface Type.

Percent Area By Use



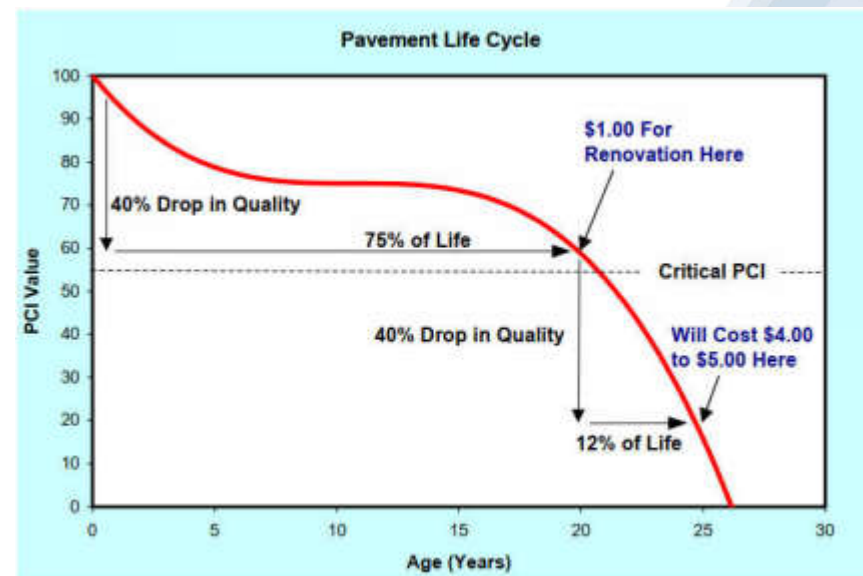
Percent Area By Use and By Surface Type



AIRPORT PAVEMENT EVALUATION

The PCI is a numerical indicator that rates the surface condition of the pavement on a 0-100 scale, with 100 being good condition and 0 being failed condition. The Pavement Life Cycle figure below illustrates how pavement typically deteriorates and the relative cost of rehabilitation at various times throughout its life. Maintaining and preserving a pavement in good condition versus rehabilitating a pavement in fair to poor condition is four to five times less expensive and increases pavement useful life. In order to extend the life of the pavement, the SDDOT will incorporate preventive maintenance strategies including crack sealing, rejuvenator, slurry seal coats, or joint seal replacement as part of their annual statewide airport pavement maintenance project. Major rehabilitation projects will likely include a mill and overlay or large scale panel replacement projects, which will likely be a standalone AIP project.

Standard PCI		Typical Repair Strategy
100	Good	PREVENTIVE MAINTENANCE
85	Satisfactory	
70	Fair	MAJOR REHABILITATION
55	Poor	
40	Very Poor	RECONSTRUCTION
25	Serious	
10	Failed	



TYPICAL ASPHALT PAVEMENT DISTRESS TYPES



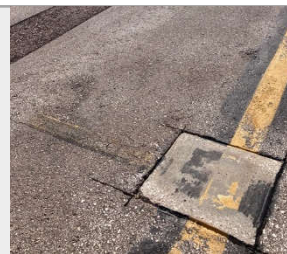
Alligator Cracking. Alligator cracking is a distress caused by repeated aircraft loading that causes cracking initially at the bottom of the asphalt, before propagating upward first as parallel cracks, then interconnecting into sharp-angled pieces resembling alligator skin.



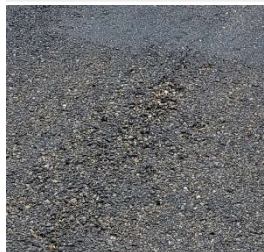
Depressions. Depressions are pavement areas with slightly lower elevation than surrounding pavement. Many times, this is only noticeable after rain, when water pools at the bottom of the depression. This water can cause hydroplaning.



Longitudinal/Transverse Cracking. Longitudinal/Transverse cracks (L & T cracks) can be caused by poorly constructed lane joints, shrinkage of the AC surface in low temperatures, or cracks reflecting from cracks below the surface layer.



Patch. Patches are considered distresses no matter their severity.



Raveling/Weathering. Raveling and weathering are distresses characterized by the wearing away of coarse aggregate, and asphalt binder and fine aggregate respectively.

TYPICAL CONCRETE PAVEMENT DISTRESS TYPES



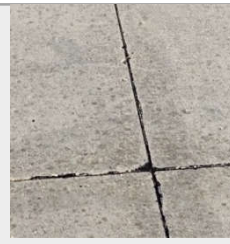
Corner Break. A corner break is a break that intersects the joints at less than half of the slab length on each side. This is usually caused by load repetition, loss of support below the corner, and curling stress.



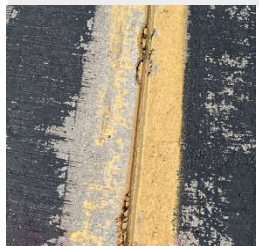
Corner Spall. Corner spalling is the raveling/breakdown of a slab at the corner of the slab. Unlike a corner break, which occurs vertically through the slab, spalling usually angles downward to intersect the joint.



Durability Cracking. Durability cracking is caused by environmental factors such as the freeze-thaw cycle. Typically appears as cracks parallel to a joint or linear crack, often accompanied by dark discoloring in the affected area.



Joint Seal Damage. Joint seal damage is anything allowing soil or rocks to accumulate in the joints, or allowing significant water infiltration. Incompressible materials in the joints can prevent the slab from expanding, and can cause buckling or spalling.



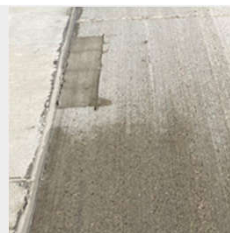
Joint Spalling. Joint spalling is breakdown of slab edges near the side of the joint. The spall usually intersects the joint at the angle. This distress is usually caused by cracking due to incompressible materials, or due to excessive stresses at the joint, or repeated loading.



Linear Cracking. Linear cracks divide the slab into two or three pieces, and are caused by load repetition, curling stress, and shrinkage stress. Medium- and high-severity distresses are usually considered major structural distresses.



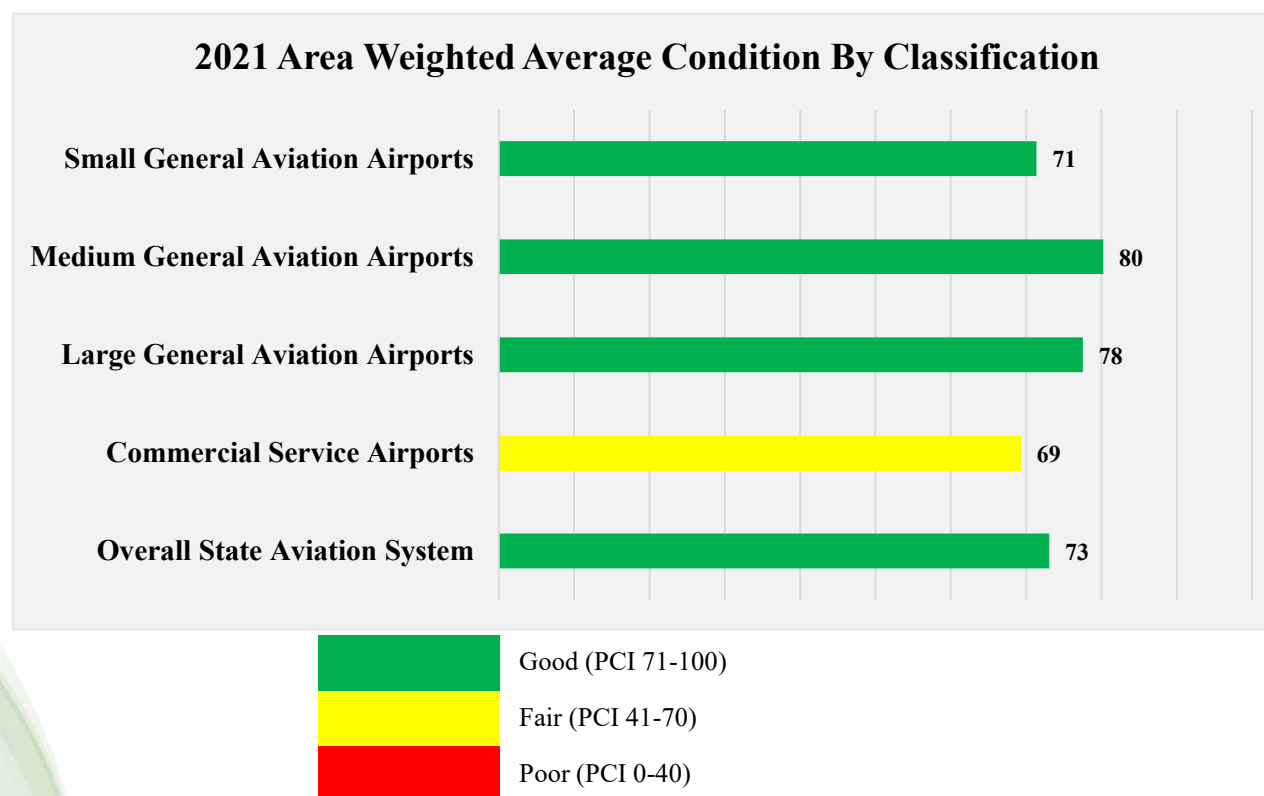
Shattered Slab. A shattered slab is a slab broken into 4 or 5 pieces with high-severity cracks, or 6 or more pieces with at least 15% medium- or higher severity cracks.



Small Patch. A small patch is defined as any patch smaller than 5 ft².

SYSTEMWIDE CURRENT PAVEMENT CONDITION

The Area Weighted Average PCI value by Airport Classification is shown in the chart below. The 2021 SDDOT Statewide Overall Pavement Area Weighted Average PCI is 73 which is at the same condition level compared to the nationwide average* PCI of 73. The General Aviation Airports pavements are generally in Good condition (PCI > 70) and the Commercial Service Airports are generally in Fair condition (40 > PCI < 70).



* The nationwide data was compiled from 18 Statewide APMS reports.

SYSTEMWIDE CURRENT PAVEMENT CONDITION BY USE

The 2021 SDDOT Systemwide Runway Pavement Area Weighted Average PCI is 76 which is at the same condition level compared to the nationwide average* PCI of 76. The Runway pavements are generally in Good condition (PCI >70).

The 2021 SDDOT Systemwide Taxiway Pavement Area Weighted Average PCI is 77 which is above the nationwide average* PCI of 74. The Taxiway pavements are generally in Good condition (PCI >70).

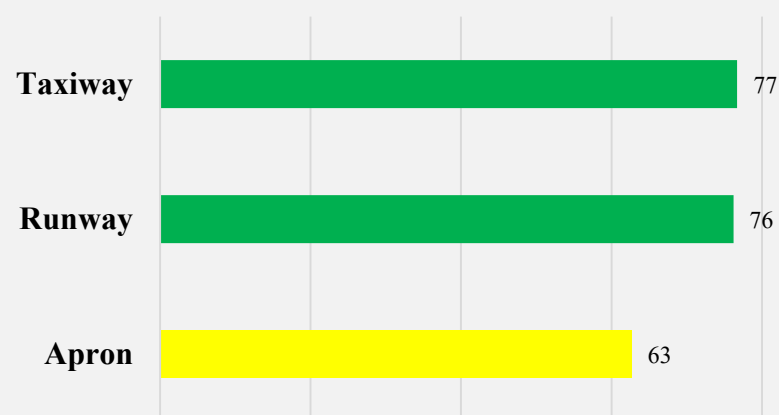
The 2021 SDDOT Systemwide Apron Pavement Area Weighted Average PCI is 63 which is below the nationwide average* PCI of 70. The Apron pavements are generally in Fair condition (40 > PCI < 70).

The Systemwide Runway Pavement Area distribution by PCI Category groups is shown in the chart. 60% of the systemwide total pavement area (all use) is in Good condition (PCI > 70). 30% of the systemwide total pavement area (all use) is in Fair condition (40 > PCI < 70). 9% of the systemwide total pavement area (all use) is in poor condition (PCI < 40).

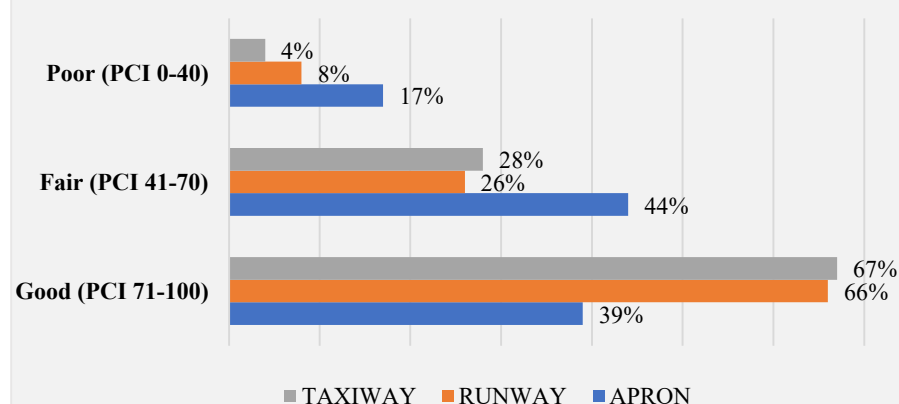
The 2021 SDDOT Area Weighted Average PCI Value by each Airport is shown in the chart on the next page.

* The nationwide data was compiled from 18 Statewide APMS reports.

2021 Area Weighted Average Condition (PCI) By Use

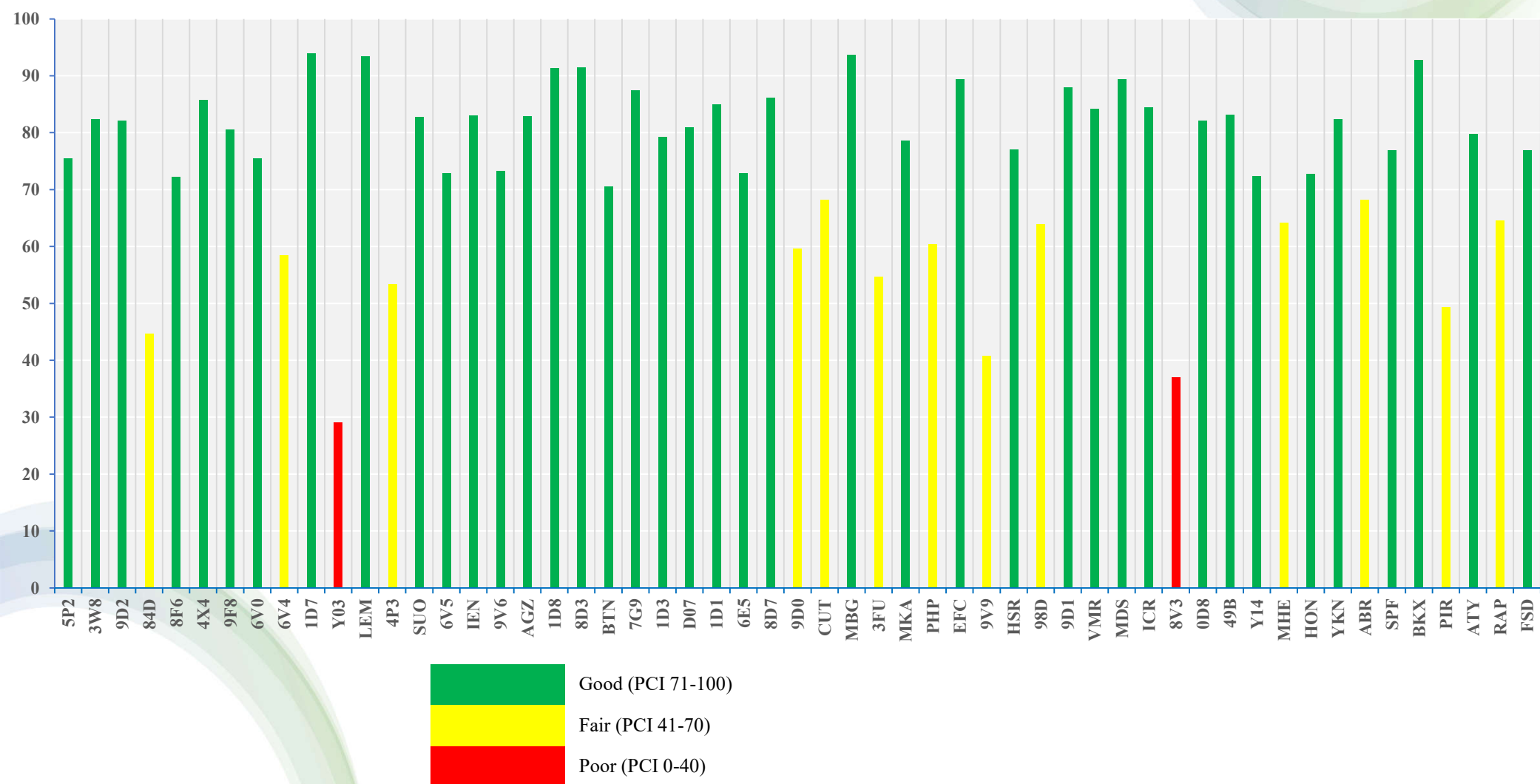


Total Systemwide Percent Area Distribution by PCI Category and Use



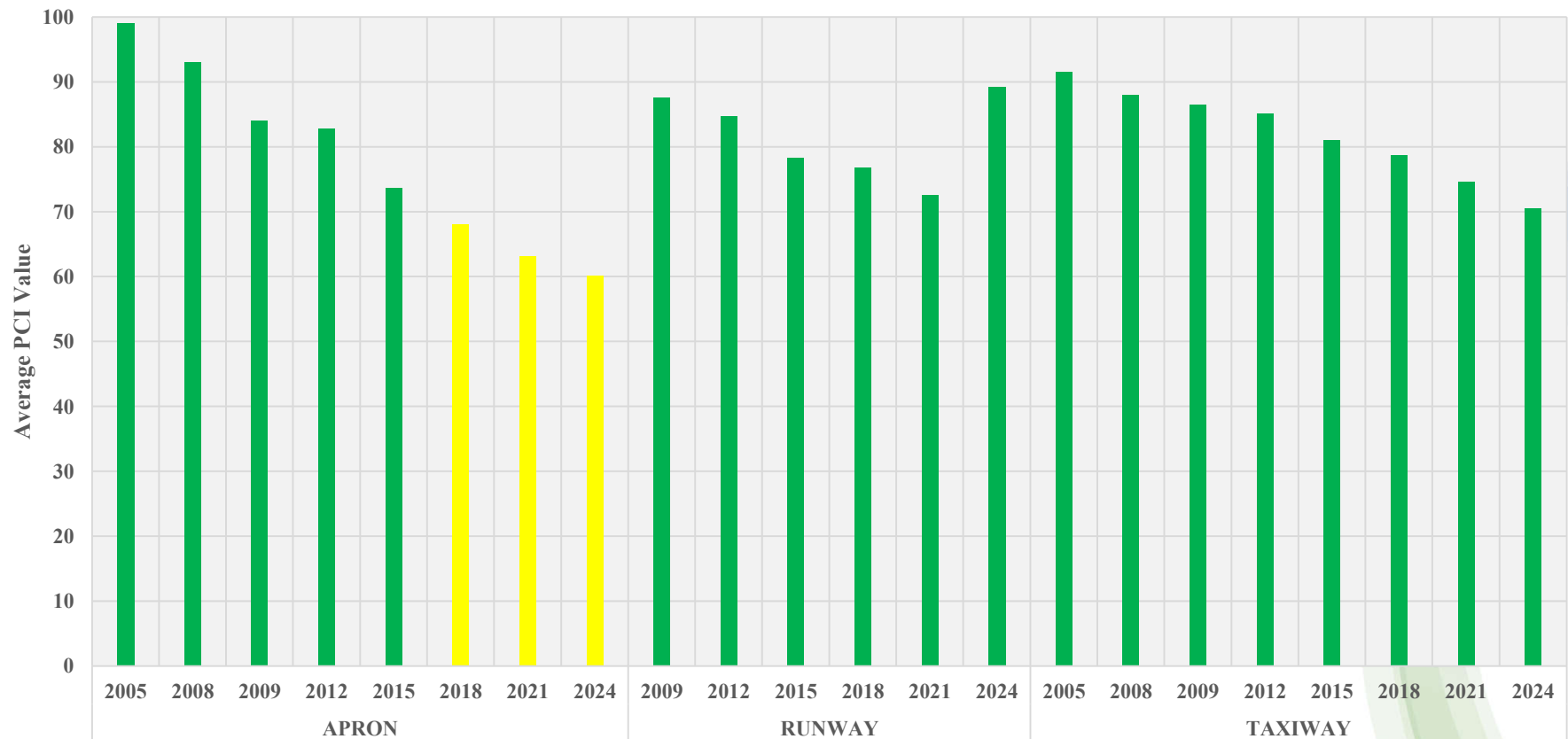
CURRENT PAVEMENT CONDITION BY AIRPORT

2021 Area Weighted Average Pavement Condition By Airport



SYSTEMWIDE PAVEMENT CONDITION PERFORMANCE

It is important that the data collected during each inspection can be compared with previous pavement inspections. The APMS is updated every three years and knowledge of how the pavements have performed over the years will be useful in improving the Pavement Management process. The Systemwide Historic (2005 thru 2018) Average PCI values, Current (2021) PCI values and Projected (2024) PCI Values by Use are shown in the chart below.



PAVEMENT FUNDING ASSESSMENT

A Maintenance and Repair (M&R) planning analysis was performed in order to determine the most cost-effective treatment and suggest the optimum utilization of available M&R funds over a 20-year period. Using the existing conditions and pavement deterioration models, an initial funding needs was determined with a goal to maintain the average network PCI at or above the established Critical PCI values for each airport type and Facility use while optimizing the funds globally across the SDDOT Aviation System. **The analysis showed that to reach the Critical PCI goal for each section at the end of 20 years, a total of \$457,370,000 M&R funds are needed for SDDOT Commercial Service Airports and a total of \$392,810,000 M&R funds are needed for SDDOT General Aviation Airports.** Tables on the next two pages show the unlimited budget funding needs for Pavement Maintenance, Resurfacing and Reconstruction through 2041 by Use. The future cost of work includes 3 percent inflation factor and are calculated based on the unit costs extracted from recent projects completed throughout the state. The Critical PCI Values established for SDDOT Airport pavement Management System are shown in the table below by Facility Use.

Critical PCI Values		
Branch (Facility) Use	Commercial Service	General Aviation
Runways	70	70
Taxiways	70	65
Apron	65	60

PAVEMENT FUNDING ASSESSMENT

YEAR/ USE	PAVEMENT MAINTENANCE COST	RECONSTRUCTION/ RESURFACING COST	TOTAL ESTIMATED COST	AVERAGE CONDITION BEFORE	AVERAGE CONDITION AFTER
2022					
Commercial Service	\$ 1,117,000	\$ 16,602,000	\$ 17,719,000	67	69
APRON	\$ 290,000	\$ -	\$ 290,000	57	58
RUNWAY	\$ 284,000	\$ 16,602,000	\$ 16,886,000	73	78
TAXIWAY	\$ 544,000	\$ -	\$ 544,000	71	72
General Aviation	\$ 2,909,000	\$ 23,713,000	\$ 26,622,000	71	75
APRON	\$ 491,000	\$ 1,488,000	\$ 1,979,000	63	66
RUNWAY	\$ 1,557,000	\$ 20,762,000	\$ 22,319,000	73	81
TAXIWAY	\$ 863,000	\$ 1,463,000	\$ 2,326,000	74	77
2023					
Commercial Service	\$ 28,000	\$ 18,307,000	\$ 18,335,000	67	69
APRON	\$ -	\$ -	\$ -	56	56
RUNWAY	\$ -	\$ 18,307,000	\$ 18,307,000	76	88
TAXIWAY	\$ 28,000	\$ -	\$ 28,000	70	70
General Aviation	\$ 589,000	\$ 25,421,000	\$ 26,010,000	72	74
APRON	\$ 87,000	\$ 17,000	\$ 104,000	64	64
RUNWAY	\$ 325,000	\$ 25,405,000	\$ 25,730,000	78	87
TAXIWAY	\$ 177,000	\$ -	\$ 177,000	74	75
2024					
Commercial Service	\$ 4,000	\$ 20,684,000	\$ 20,688,000	67	68
APRON	\$ -	\$ -	\$ -	54	54
RUNWAY	\$ -	\$ 19,371,000	\$ 19,371,000	87	90
TAXIWAY	\$ 4,000	\$ 1,313,000	\$ 1,317,000	68	68
General Aviation	\$ 307,000	\$ 23,337,000	\$ 23,644,000	72	73
APRON	\$ 58,000	\$ 13,000	\$ 71,000	62	62
RUNWAY	\$ 168,000	\$ 22,497,000	\$ 22,665,000	85	90
TAXIWAY	\$ 82,000	\$ 828,000	\$ 910,000	72	73
2025					
Commercial Service	\$ 385,000	\$ 38,062,000	\$ 38,447,000	66	69
APRON	\$ 7,000	\$ -	\$ 7,000	52	52
RUNWAY	\$ 200,000	\$ 22,826,000	\$ 23,026,000	89	92
TAXIWAY	\$ 179,000	\$ 15,237,000	\$ 15,416,000	66	72
General Aviation	\$ 1,138,000	\$ 4,758,000	\$ 5,896,000	71	73
APRON	\$ 141,000	\$ -	\$ 141,000	60	60
RUNWAY	\$ 877,000	\$ -	\$ 877,000	88	89
TAXIWAY	\$ 121,000	\$ 4,758,000	\$ 4,879,000	71	74

PAVEMENT FUNDING ASSESSMENT

YEAR/ USE	PAVEMENT MAINTENANCE COST	RECONSTRUCTION/ RESURFACING COST	TOTAL ESTIMATED COST	AVERAGE CONDITION BEFORE	AVERAGE CONDITION AFTER
2026					
Commercial Service	\$ 68,000	\$ 12,927,000	\$ 12,995,000	68	68
APRON	\$ -	\$ -	\$ -	50	50
RUNWAY	\$ 68,000	\$ 3,186,000	\$ 3,254,000	90	92
TAXIWAY	\$ -	\$ 9,741,000	\$ 9,741,000	70	70
General Aviation	\$ 894,000	\$ 30,439,000	\$ 31,333,000	71	72
APRON	\$ 50,000	\$ -	\$ 50,000	58	58
RUNWAY	\$ 701,000	\$ 28,832,000	\$ 29,533,000	87	91
TAXIWAY	\$ 144,000	\$ 1,607,000	\$ 1,751,000	72	73
2027					
Commercial Service	\$ 691,000	\$ 20,815,000	\$ 21,506,000	66	71
APRON	\$ 122,000	\$ -	\$ 122,000	49	49
RUNWAY	\$ 330,000	\$ -	\$ 330,000	91	91
TAXIWAY	\$ 240,000	\$ 20,815,000	\$ 21,055,000	68	77
General Aviation	\$ 3,435,000	\$ 19,381,000	\$ 22,816,000	70	76
APRON	\$ 511,000	\$ -	\$ 511,000	55	57
RUNWAY	\$ 2,044,000	\$ 2,492,000	\$ 4,536,000	89	90
TAXIWAY	\$ 882,000	\$ 16,890,000	\$ 17,772,000	70	79
2028					
Commercial Service	\$ 461,000	\$ 36,008,000	\$ 36,469,000	69	76
APRON	\$ -	\$ -	\$ -	47	47
RUNWAY	\$ 309,000	\$ 840,000	\$ 1,149,000	90	91
TAXIWAY	\$ 152,000	\$ 35,169,000	\$ 35,321,000	75	86
General Aviation	\$ 733,000	\$ 7,138,000	\$ 7,871,000	74	77
APRON	\$ 101,000	\$ 73,000	\$ 174,000	54	56
RUNWAY	\$ 377,000	\$ 2,567,000	\$ 2,944,000	88	89
TAXIWAY	\$ 256,000	\$ 4,498,000	\$ 4,754,000	77	83
2029					
Commercial Service	\$ 89,000	\$ 29,769,000	\$ 29,858,000	74	80
APRON	\$ -	\$ 23,715,000	\$ 23,715,000	45	56
RUNWAY	\$ -	\$ -	\$ -	90	90
TAXIWAY	\$ 89,000	\$ 6,055,000	\$ 6,144,000	84	90
General Aviation	\$ 454,000	\$ 13,975,000	\$ 14,429,000	75	80
APRON	\$ 67,000	\$ 2,587,000	\$ 2,654,000	54	57
RUNWAY	\$ 274,000	\$ 5,355,000	\$ 5,629,000	87	88
TAXIWAY	\$ 114,000	\$ 6,034,000	\$ 6,148,000	81	87

PAVEMENT FUNDING ASSESSMENT

YEAR/ USE	PAVEMENT MAINTENANCE COST	RECONSTRUCTION/ RESURFACING COST	TOTAL ESTIMATED COST	AVERAGE CONDITION BEFORE	AVERAGE CONDITION AFTER
2030					
Commercial Service	\$ 750,000	\$ 23,449,000	\$ 24,199,000	78	80
APRON	\$ 8,000	\$ 20,140,000	\$ 20,148,000	53	58
RUNWAY	\$ 232,000	\$ 3,068,000	\$ 3,300,000	88	90
TAXIWAY	\$ 511,000	\$ 242,000	\$ 753,000	88	89
General Aviation	\$ 1,346,000	\$ 18,754,000	\$ 20,100,000	78	80
APRON	\$ 150,000	\$ 8,276,000	\$ 8,426,000	55	57
RUNWAY	\$ 864,000	\$ 9,689,000	\$ 10,553,000	86	88
TAXIWAY	\$ 333,000	\$ 791,000	\$ 1,124,000	85	87
2031					
Commercial Service	\$ 274,000	\$ 12,827,000	\$ 13,101,000	78	80
APRON	\$ -	\$ 10,713,000	\$ 10,713,000	56	59
RUNWAY	\$ 79,000	\$ -	\$ 79,000	88	89
TAXIWAY	\$ 196,000	\$ 2,115,000	\$ 2,311,000	87	88
General Aviation	\$ 1,115,000	\$ 30,096,000	\$ 31,211,000	78	81
APRON	\$ 59,000	\$ 21,949,000	\$ 22,008,000	55	63
RUNWAY	\$ 813,000	\$ 5,844,000	\$ 6,657,000	86	88
TAXIWAY	\$ 244,000	\$ 2,304,000	\$ 2,548,000	84	86
2032					
Commercial Service	\$ 822,000	\$ 2,872,000	\$ 3,694,000	78	79
APRON	\$ 164,000	\$ 205,000	\$ 369,000	57	58
RUNWAY	\$ 382,000	\$ -	\$ 382,000	87	88
TAXIWAY	\$ 277,000	\$ 2,668,000	\$ 2,945,000	86	88
General Aviation	\$ 2,964,000	\$ 37,680,000	\$ 40,644,000	79	82
APRON	\$ 525,000	\$ 567,000	\$ 1,092,000	61	63
RUNWAY	\$ 1,502,000	\$ 35,343,000	\$ 36,845,000	86	89
TAXIWAY	\$ 938,000	\$ 1,770,000	\$ 2,708,000	84	87
2033					
Commercial Service	\$ 583,000	\$ 29,031,000	\$ 29,614,000	78	79
APRON	\$ 23,000	\$ 5,305,000	\$ 5,328,000	56	59
RUNWAY	\$ 359,000	\$ 23,041,000	\$ 23,400,000	87	88
TAXIWAY	\$ 202,000	\$ 687,000	\$ 889,000	86	87
General Aviation	\$ 950,000	\$ 13,762,000	\$ 14,712,000	80	82
APRON	\$ 148,000	\$ 10,937,000	\$ 11,085,000	62	67
RUNWAY	\$ 437,000	\$ 2,562,000	\$ 2,999,000	88	88
TAXIWAY	\$ 367,000	\$ 264,000	\$ 631,000	85	86

PAVEMENT FUNDING ASSESSMENT

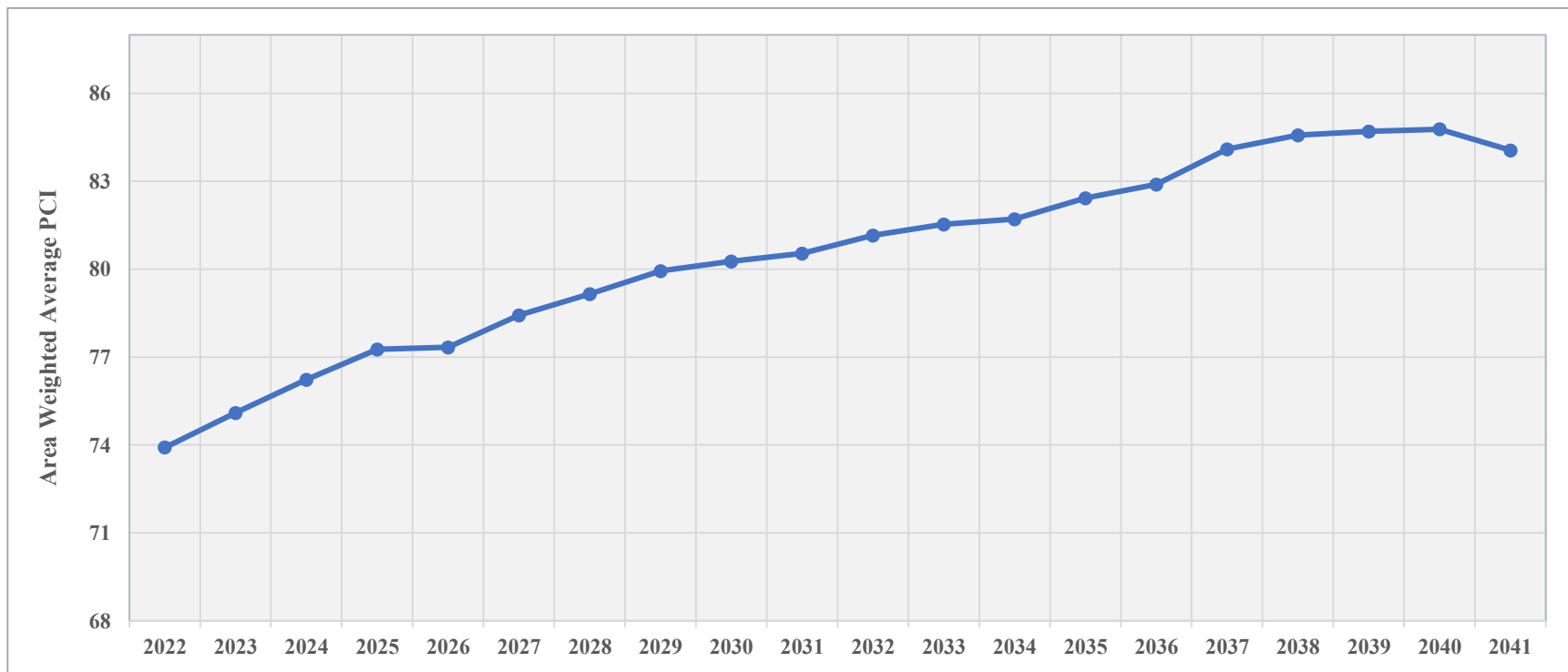
YEAR/ USE	PAVEMENT MAINTENANCE COST	RECONSTRUCTION/ RESURFACING COST	TOTAL ESTIMATED COST	AVERAGE CONDITION BEFORE	AVERAGE CONDITION AFTER
2034					
Commercial Service	\$ 144,000	\$ 35,863,000	\$ 36,007,000	77	78
APRON	\$ 41,000	\$ 29,305,000	\$ 29,346,000	57	58
RUNWAY	\$ -	\$ 1,003,000	\$ 1,003,000	87	88
TAXIWAY	\$ 103,000	\$ 5,556,000	\$ 5,659,000	85	86
General Aviation	\$ 599,000	\$ 7,725,000	\$ 8,324,000	80	81
APRON	\$ 110,000	\$ 721,000	\$ 831,000	65	67
RUNWAY	\$ 318,000	\$ 1,065,000	\$ 1,383,000	87	87
TAXIWAY	\$ 173,000	\$ 5,940,000	\$ 6,113,000	84	85
2035					
Commercial Service	\$ 890,000	\$ 24,034,000	\$ 24,924,000	77	79
APRON	\$ -	\$ 17,262,000	\$ 17,262,000	56	63
RUNWAY	\$ 269,000	\$ 5,907,000	\$ 6,176,000	86	87
TAXIWAY	\$ 622,000	\$ 866,000	\$ 1,488,000	84	85
General Aviation	\$ 2,002,000	\$ 17,375,000	\$ 19,377,000	79	81
APRON	\$ 185,000	\$ 9,235,000	\$ 9,420,000	66	70
RUNWAY	\$ 1,373,000	\$ 6,029,000	\$ 7,402,000	86	87
TAXIWAY	\$ 446,000	\$ 2,112,000	\$ 2,558,000	83	84
2036					
Commercial Service	\$ 415,000	\$ 12,746,000	\$ 13,161,000	78	79
APRON	\$ 74,000	\$ -	\$ 74,000	61	61
RUNWAY	\$ 92,000	\$ 9,104,000	\$ 9,196,000	86	88
TAXIWAY	\$ 250,000	\$ 3,643,000	\$ 3,893,000	84	85
General Aviation	\$ 1,680,000	\$ 29,490,000	\$ 31,170,000	79	82
APRON	\$ 144,000	\$ 9,760,000	\$ 9,904,000	68	73
RUNWAY	\$ 1,254,000	\$ 11,118,000	\$ 12,372,000	85	87
TAXIWAY	\$ 283,000	\$ 8,613,000	\$ 8,896,000	82	84
2037					
Commercial Service	\$ 892,000	\$ 19,332,000	\$ 20,224,000	77	80
APRON	\$ 190,000	\$ 13,943,000	\$ 14,133,000	60	65
RUNWAY	\$ 443,000	\$ -	\$ 443,000	87	88
TAXIWAY	\$ 261,000	\$ 5,390,000	\$ 5,651,000	84	85
General Aviation	\$ 2,908,000	\$ 21,112,000	\$ 24,020,000	80	85
APRON	\$ 550,000	\$ 18,808,000	\$ 19,358,000	71	86
RUNWAY	\$ 1,479,000	\$ -	\$ 1,479,000	85	86
TAXIWAY	\$ 881,000	\$ 2,304,000	\$ 3,185,000	82	85

PAVEMENT FUNDING ASSESSMENT

YEAR/ USE	PAVEMENT MAINTENANCE COST	RECONSTRUCTION/ RESURFACING COST	TOTAL ESTIMATED COST	AVERAGE CONDITION BEFORE	AVERAGE CONDITION AFTER
2038					
Commercial Service	\$ 765,000	\$ 35,831,000	\$ 36,596,000	78	81
APRON	\$ 109,000	\$ 26,056,000	\$ 26,165,000	64	70
RUNWAY	\$ 416,000	\$ -	\$ 416,000	86	86
TAXIWAY	\$ 241,000	\$ 9,775,000	\$ 10,016,000	84	85
General Aviation	\$ 879,000	\$ 6,862,000	\$ 7,741,000	83	84
APRON	\$ 125,000	\$ 2,735,000	\$ 2,860,000	84	86
RUNWAY	\$ 350,000	\$ 3,259,000	\$ 3,609,000	84	84
TAXIWAY	\$ 404,000	\$ 870,000	\$ 1,274,000	83	84
2039					
Commercial Service	\$ 172,000	\$ 29,652,000	\$ 29,824,000	80	82
APRON	\$ 47,000	\$ 15,076,000	\$ 15,123,000	68	73
RUNWAY	\$ -	\$ 11,142,000	\$ 11,142,000	85	86
TAXIWAY	\$ 125,000	\$ 3,434,000	\$ 3,559,000	84	85
General Aviation	\$ 998,000	\$ 13,332,000	\$ 14,330,000	83	84
APRON	\$ 233,000	\$ 2,505,000	\$ 2,738,000	84	86
RUNWAY	\$ 523,000	\$ 10,777,000	\$ 11,300,000	82	84
TAXIWAY	\$ 243,000	\$ 50,000	\$ 293,000	82	82
2040					
Commercial Service	\$ 942,000	\$ 21,907,000	\$ 22,849,000	80	85
APRON	\$ 8,000	\$ 20,055,000	\$ 20,063,000	71	85
RUNWAY	\$ 311,000	\$ -	\$ 311,000	84	84
TAXIWAY	\$ 623,000	\$ 1,853,000	\$ 2,476,000	83	84
General Aviation	\$ 2,253,000	\$ 5,663,000	\$ 7,916,000	82	83
APRON	\$ 404,000	\$ 572,000	\$ 976,000	84	85
RUNWAY	\$ 1,296,000	\$ 3,950,000	\$ 5,246,000	82	84
TAXIWAY	\$ 554,000	\$ 1,141,000	\$ 1,695,000	81	82
2041					
Commercial Service	\$ 736,000	\$ 6,424,000	\$ 7,160,000	83	84
APRON	\$ 208,000	\$ -	\$ 208,000	83	83
RUNWAY	\$ 106,000	\$ 5,671,000	\$ 5,777,000	83	85
TAXIWAY	\$ 422,000	\$ 753,000	\$ 1,175,000	83	84
General Aviation	\$ 1,932,000	\$ 12,712,000	\$ 14,644,000	81	82
APRON	\$ 207,000	\$ 2,776,000	\$ 2,983,000	83	84
RUNWAY	\$ 1,382,000	\$ 6,403,000	\$ 7,785,000	81	83
TAXIWAY	\$ 344,000	\$ 3,535,000	\$ 3,879,000	80	81

STATEWIDE BUDGET OF \$44.4 MILLION PER YEAR NEEDED TO REACH CRITICAL PCI GOALS FOR EVERY SECTION BY THE END OF 20 YEARS

If unlimited funds are available and if all the sections that are below Critical PCI value should be repaired, an **approximate total of \$850 million would be needed during the next twenty years**. The progression of the Systemwide Area Weighted Average PCI value after the repairs are completed is shown in the chart below.



STATEWIDE BUDGET OF \$55.1 MILLION PER YEAR NEEDED TO REACH CRITICAL PCI GOALS FOR EVERY SECTION BY THE END OF 10 YEARS

If unlimited funds are available and if all the sections that are below Critical PCI values should be repaired, an **approximate total of \$541 million would be needed during the next ten years.** The progression of the Systemwide Area Weighted Average PCI value after the repairs are completed is shown in the chart below.

