

ASHLAND MUNICIPAL AIRPORT – SUMNER PARKER FIELD

This report describes how your Pavement Maintenance Management Program (PMMP) was developed. Your Program was developed as part of the Oregon Continuous Aviation System Plan sponsored in part by the Oregon Department of Aviation and the Federal Aviation Administration (FAA). The information and data contained in this report ensures you comply with the requirements of FAA Grant Assurance Number 11 which states that any airport requesting federal funds for pavement improvement projects must have implemented a pavement maintenance management program.

DATA COLLECTION

To determine how your pavements were constructed and their age, a records review was conducted. Figure AS-1 shows the records review results. This figure identifies pavement boundaries, dimensions, pavement layer types, thicknesses and dates of construction. The most recent construction date for each pavement can also be found in the Section Condition Report in Appendix 2. Figure AS-1 and the information contained in Appendices 1, 2 and 4 ensure that your airport complies with the “pavement inventory” requirement of FAA’s PMMP guidelines.

The pavements at your airport were divided into branches, sections and sample units in accordance with the methodology outlined in the current edition of ASTM D5430, *Standard Test Method for Airport Condition Index Surveys*. The branches, sections and sample units established at your airport are shown in Figure AS-2. A Branch Condition Report showing all branches, their associated areas, and their area-weighted average condition is provided in Appendix 1. Additionally, the Appendix 2 Section Condition Report provides information used to define each branch and section in the PAVER database.

Using the branch, section and sample unit divisions established, a visual condition survey was conducted at Ashland Municipal Airport in May 2019. During the inspection, pavement defects were identified and measured in accordance with the methodology outlined in ASTM D5430. This inspection ensures your airport complies with the “detailed inspection” requirement of FAA’s PMMP guidelines. After collection, the data were entered into the PAVER software for analysis. These data are reproduced in the Re-Inspection Report attached as Appendix 4.

The PAVER database updated during this project ensures your airport complies with the “record keeping and information retrieval” requirements of FAA’s PMMP guidelines.

Figure AS-1A. Airport Layout, Dimensions and Pavement Cross-Sections.
Ashland Municipal Airport (Sumner Parker Field)

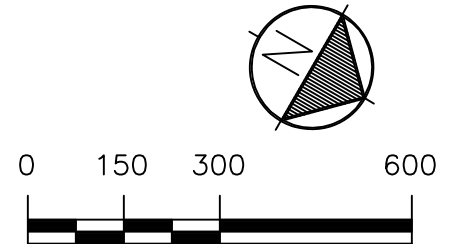
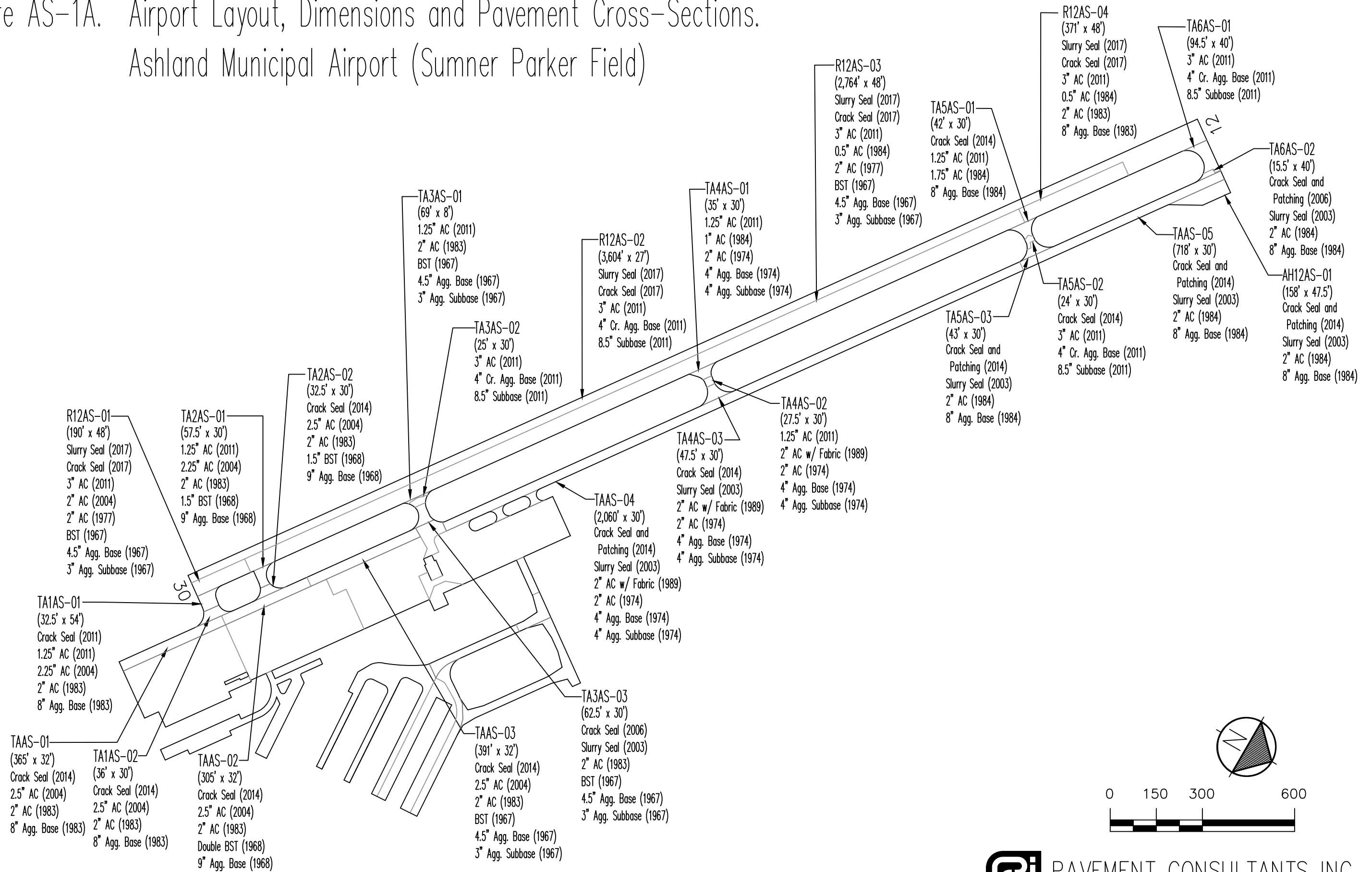


Figure AS-1B. Airport Layout, Dimensions and Pavement Cross-Sections.
Ashland Municipal Airport (Sumner Parker Field)

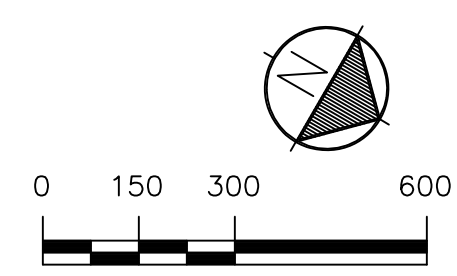
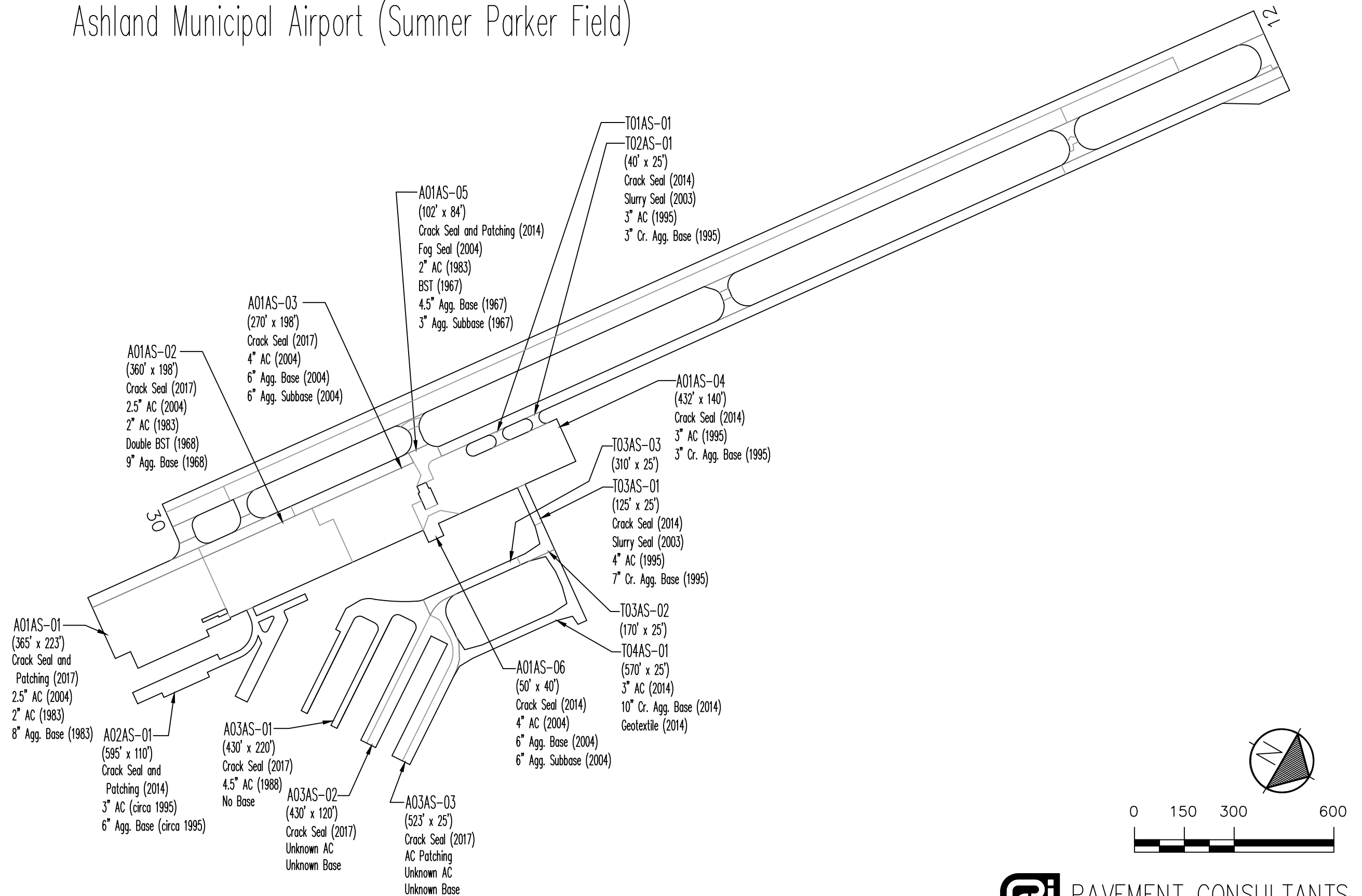
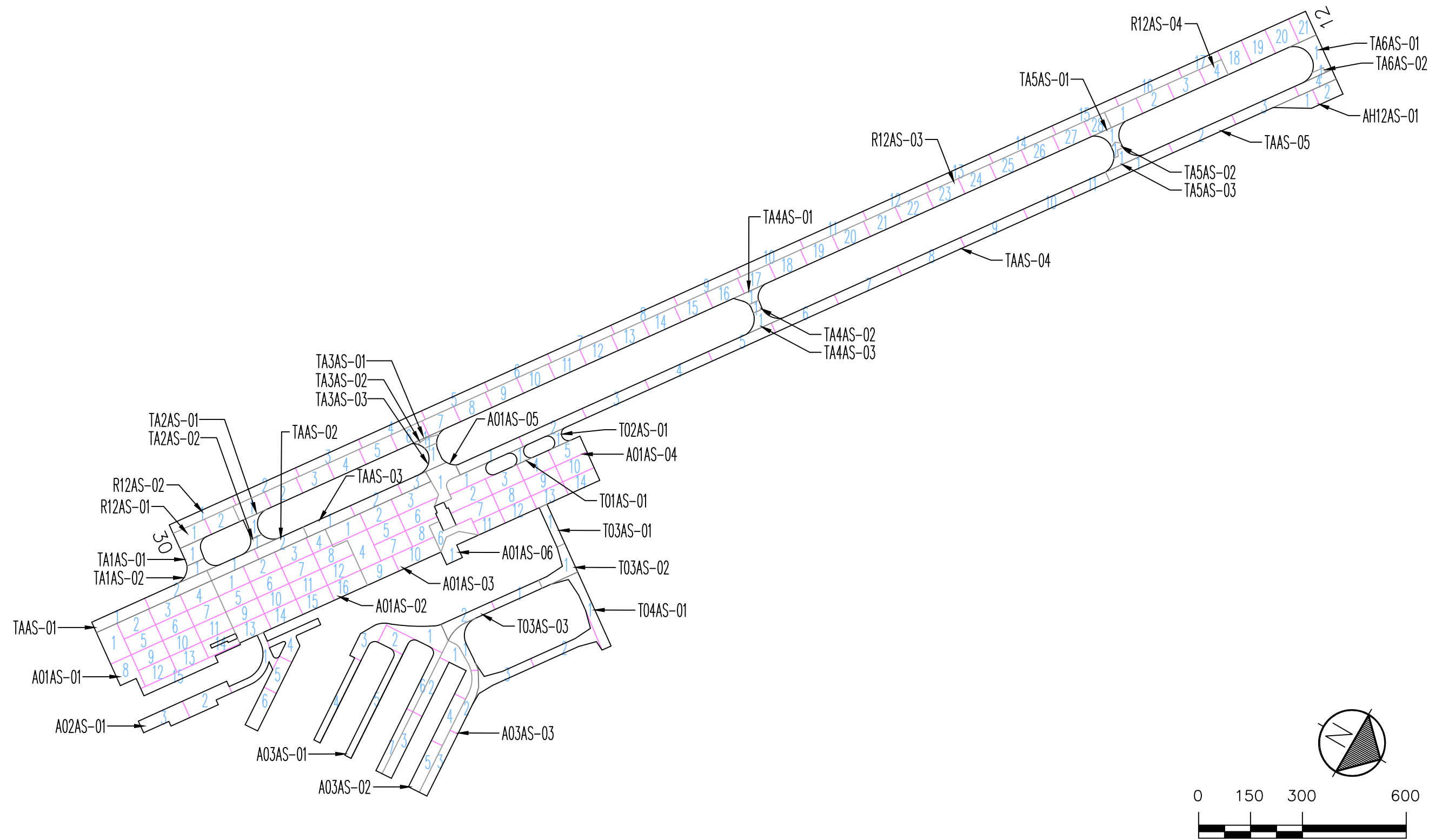


Figure AS-2. Pavement Branch, Section and Sample Unit Layout.
Ashland Municipal Airport (Sumner Parker Field)



RESULTS

Using the data collected during the visual inspection, the PAVER software was used to calculate an area-weighted average Pavement Condition Index (PCI) for each pavement section inspected using the sample units evaluated. Using each section’s PCI, a Pavement Condition Rating (PCR) was assigned. The PCIs measured during this inspection are shown in Table 1. The table also contains PCIs from past inspections as well as projected PCIs for 2024 and 2029. The projections were based on pavement deterioration models developed by PAVER using the inspection data from other pavements in the same airport category as your airport, located in the same climatic region, and with the same surface type and use.

The Branch Condition Report in Appendix 1 summarizes current pavement condition by branch while the Section Condition Report in Appendix 2 lists pavement condition by section. The current Pavement Condition Rating (PCR) is shown graphically in Figure AS-3.

Table 1. Past, Present and Future Pavement Condition Indices.

Branch	Section	Inspections			Forecast	
		2013	2016	2019	2024	2029
A01AS	1	75	75	65	56	48
A01AS	2	76	70	64	55	48
A01AS	3	79	69	54	53	52
A01AS	4	72	60	54	53	52
A01AS	5	81	55	55	54	53
A01AS	6	84	61	63	62	61
A02AS	1	71	32	35	34	33
A03AS	1	73	53	68	65	64
A03AS	2	98	85	82	75	69
A03AS	3	68	73	62	61	60
AH12AS	1	56	69	61	60	59
R12AS	1	100	94	94	93	85
R12AS	2	99	96	95	91	87
R12AS	3	100	94	93	85	80
R12AS	4	98	93	89	85	81
T01AS	1	63	62	58	32	7
T02AS	1	61	64	56	30	5
T03AS	1	60	30	33	8	0
T03AS	2	---	100	100	98	90
T03AS	3	---	52	50	24	0
T04AS	1	---	100	100	98	90
TA1AS	1	100	96	95	83	75
TA1AS	2	85	83	66	59	52
TA2AS	1	100	91	91	79	74

Table 1. Past, Present and Future Pavement Condition Indices.

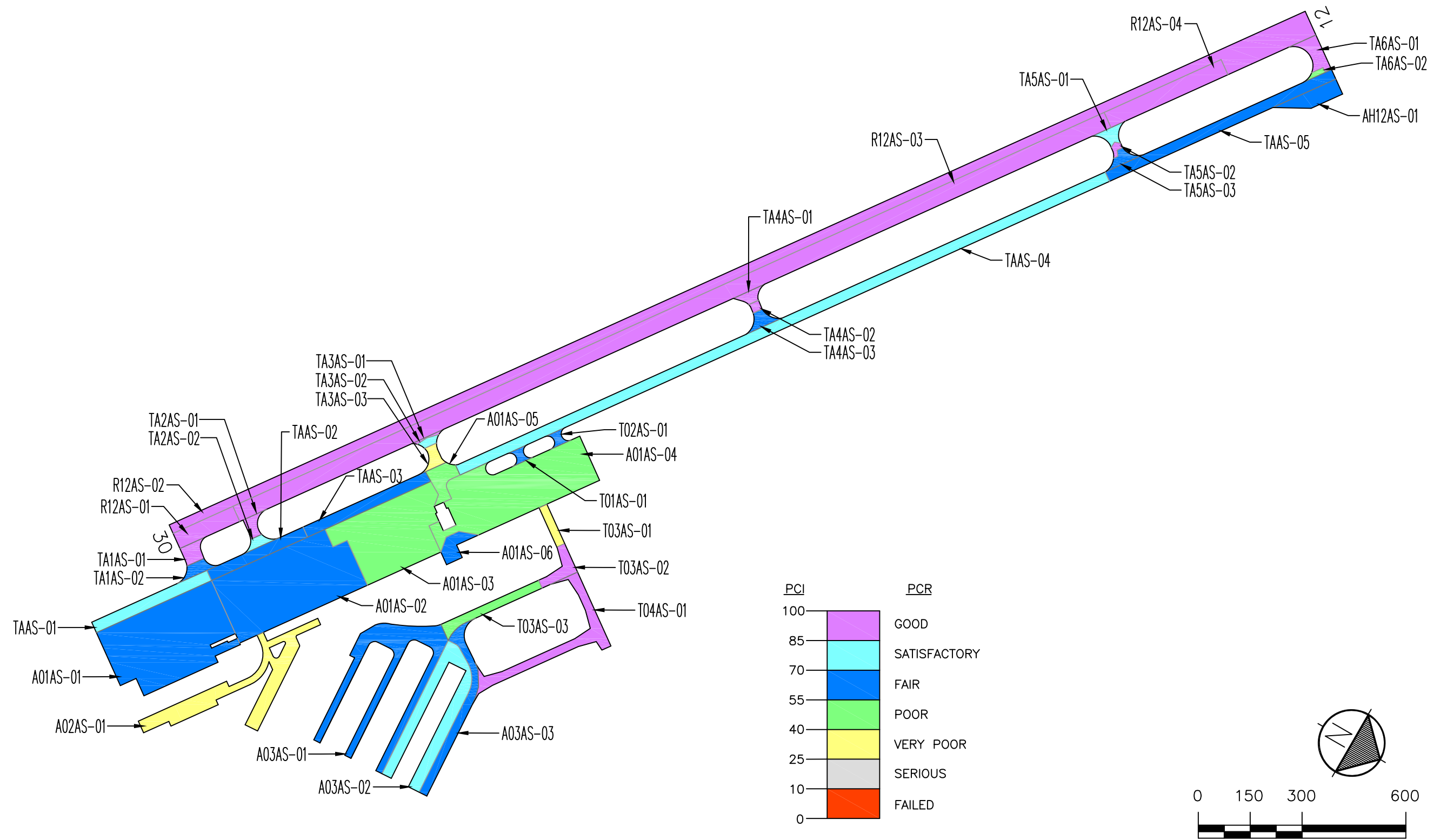
Branch	Section	Inspections			Forecast	
		2013	2016	2019	2024	2029
TA2AS	2	65	56	72	66	59
TA3AS	1	100	83	95	85	74
TA3AS	2	100	90	82	72	67
TA3AS	3	54	14	38	13	0
TA4AS	1	100	88	89	78	74
TA4AS	2	100	98	91	79	74
TA4AS	3	72	75	70	63	56
TA5AS	1	100	91	78	69	67
TA5AS	2	100	100	100	98	90
TA5AS	3	50	72	60	35	10
TA6AS	1	96	92	94	84	73
TA6AS	2	38	70	45	20	0
TAAS	1	75	75	72	66	59
TAAS	2	69	72	67	60	53
TAAS	3	76	71	69	62	55
TAAS	4	76	80	79	74	73
TAAS	5	49	75	64	42	18

Section PCIs at Ashland Municipal Airport range from a low of 33 (a PCR of “Very Poor”) to a high of 100 (a PCR of “Good”). The area-weighted average PCI for all airport pavements is 74, corresponding to an overall PCR of “Satisfactory”. Figure AS-4 shows how much pavement area is associated with each Pavement Condition Rating category and also shows pavement condition distribution from the inspections conducted in 2013 and 2016.

The primary distresses observed during the inspection were: longitudinal and transverse cracking, weathering, patching, alligator cracking, block cracking, depressions and an isolated occurrence of raveling.

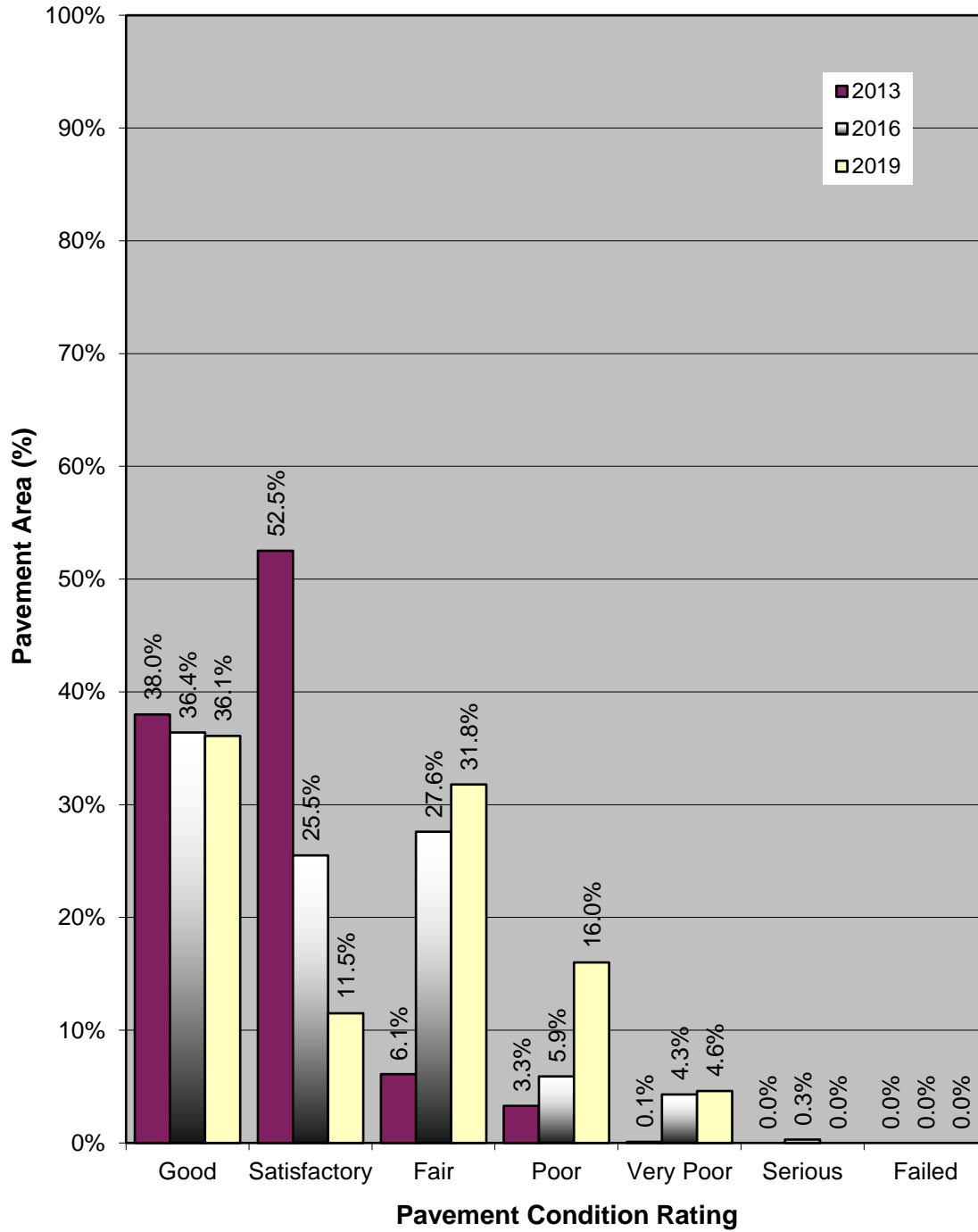
A graphical representation of the projected PCIs listed in Table 1 is shown in Figure AS-5.

Figure AS-3. Pavement Condition in May 2019.
Ashland Municipal Airport (Sumner Parker Field)

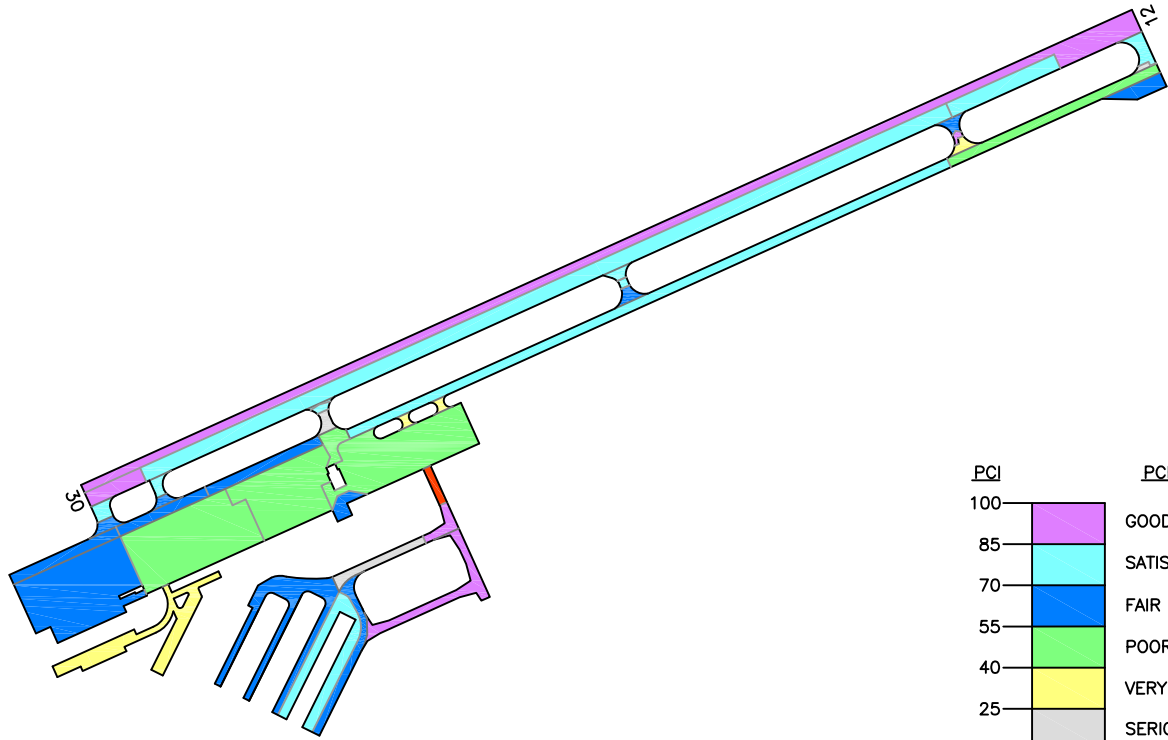


Drawing Date: June 2019

**Figure AS-4. Pavement Condition Distribution
Ashland Municipal Airport**

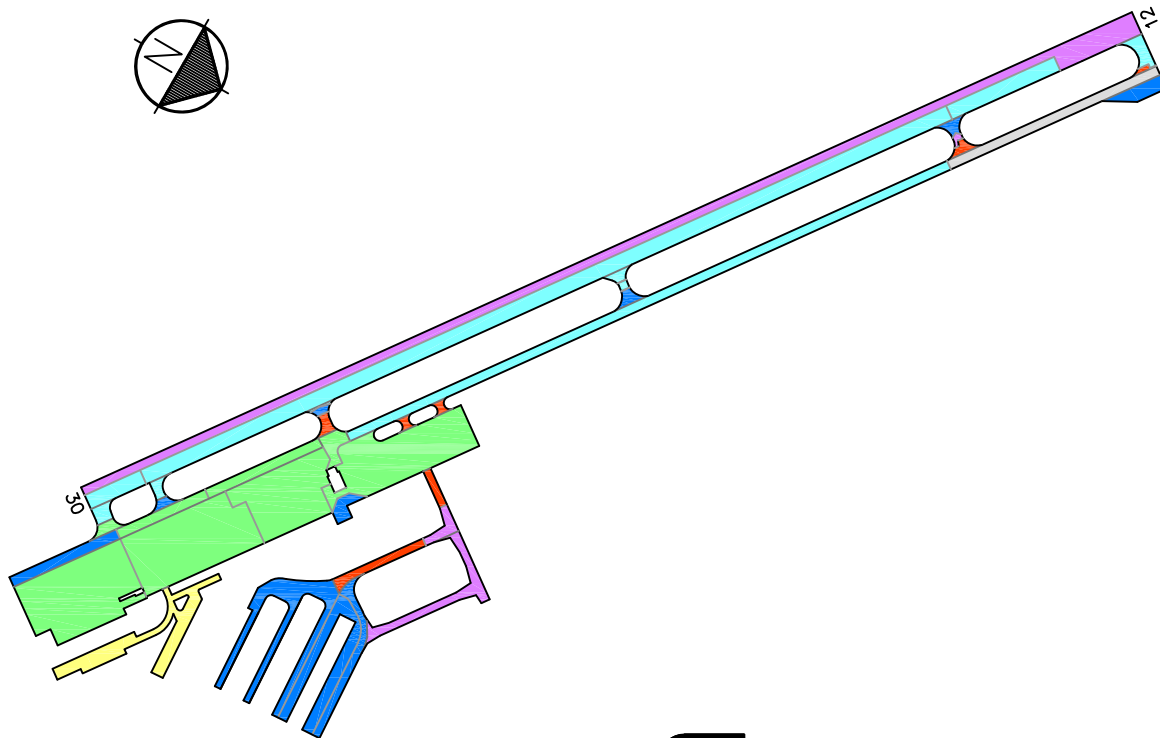


Predicted Condition in 2024.



PCI	PCR
100	GOOD
85	SATISFACTORY
70	FAIR
55	POOR
40	VERY POOR
25	SERIOUS
10	FAILED
0	

Predicted Condition in 2029.



Drawing Date: June 2019

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Figure AS-5. Future Pavement Condition.

RECOMMENDATIONS

Data collected during the visual condition survey were used by the PAVER software to generate the Network Maintenance Report contained in Appendix 3. This report identifies, for each pavement section, the recommended localized maintenance activities (i.e.-crack sealing, patching) that should be completed to repair the defects observed during the visual inspection. The repair quantities identified in the report were extrapolated to cover the entire pavement section, based on the distresses measured in the inspected sample units. If the repair activities identified are completed, the pavement deterioration rate will be slowed.

The recommended localized maintenance activities to be applied are selected by the PAVER software based on a Distress Maintenance Policy established for the Oregon airport system. The report results indicate that, over your entire airport, the following quantities of localized maintenance are needed:

- 28,850 linear feet of asphalt concrete crack sealing
- 59 square feet of deep asphalt patching

The PAVER software can also identify and schedule recommended global (applied over an entire section) maintenance activities such as fog seals, slurry seals and other surface treatments, as well as major rehabilitation activities such as asphalt concrete overlays and complete reconstruction. PAVER schedules global maintenance on a user-defined interval. To schedule major rehabilitation PAVER uses pavement deterioration models developed during this project. These models are used to estimate future pavement condition and to schedule rehabilitation based on a trigger PCI.

During this project a 5-year program outlining recommended global maintenance and rehabilitation was developed. The program begins in the year 2020 to allow time for project development. These recommendations are presented in Table 2, which identifies the pavement section requiring rehabilitation, the year the action should be completed, the type of action, and an associated cost. This information is also presented graphically in Figure AS-6.

Table 2. Five-Year Global Maintenance and Rehabilitation Plan.

Year	Branch	Section	Action	Area (sf)	Unit Cost (\$/sf)	Total Cost (\$)
2020	A01AS	01	Slurry Seal	76,095	\$0.31	\$23,589
2020	A01AS	02	Slurry Seal	77,707	\$0.31	\$24,089
2020	A01AS	03	Slurry Seal	54,121	\$0.31	\$16,777
2020	A01AS	04	Slurry Seal	67,518	\$0.31	\$20,931
2020	A01AS	05	Slurry Seal	5,930	\$0.31	\$1,838
2020	A01AS	06	Slurry Seal	4,640	\$0.31	\$1,438

Table 2. Five-Year Global Maintenance and Rehabilitation Plan.

Year	Branch	Section	Action	Area (sf)	Unit Cost (\$/sf)	Total Cost (\$)
2020	A02AS	01	Reconstruct with 3" AC / 4" Crushed Aggregate Base / 8.5" Aggregate Subbase	33,552	\$7.93	\$266,067
2020	A03AS	01	Slurry Seal	36,136	\$0.31	\$11,202
2020	A03AS	02	Slurry Seal	27,939	\$0.31	\$8,661
2020	A03AS	03	Slurry Seal	13,305	\$0.31	\$4,125
2020	AH12AS	01	Slurry Seal	7,625	\$0.31	\$2,364
2020	T01AS	01	Slurry Seal	1,343	\$0.31	\$416
2020	T02AS	01	Slurry Seal	1,343	\$0.31	\$416
2020	T03AS	01	Reconstruct with 3" AC / 4" Crushed Aggregate Base / 8.5" Aggregate Subbase	3,125	\$7.93	\$24,781
2020	T03AS	03	2" AC Overlay	8,303	\$2.50	\$51,495
2020	TA1AS	02	Slurry Seal	2,629	\$0.31	\$815
2020	TA2AS	01	Slurry Seal	2,250	\$0.31	\$697
2020	TA2AS	02	Slurry Seal	1,736	\$0.31	\$538
2020	TA3AS	02	Slurry Seal	1,179	\$0.31	\$365
2020	TA3AS	03	Reconstruct with 3" AC / 4" Crushed Aggregate Base / 8.5" Aggregate Subbase	2,508	\$7.93	\$19,888
2020	TA4AS	01	Slurry Seal	1,935	\$0.31	\$600
2020	TA4AS	02	Slurry Seal	800	\$0.31	\$248
2020	TA4AS	03	Slurry Seal	2,512	\$0.31	\$779
2020	TA5AS	01	Slurry Seal	2,392	\$0.31	\$742
2020	TA5AS	03	Slurry Seal	2,197	\$0.31	\$681
2020	TA6AS	02	Reconstruct with 3" AC / 4" Crushed Aggregate Base / 8.5" Aggregate Subbase	797	\$7.93	\$6,320
2020	TAAS	01	Slurry Seal	12,008	\$0.31	\$3,722
2020	TAAS	02	Slurry Seal	9,760	\$0.31	\$3,026
2020	TAAS	03	Slurry Seal	12,472	\$0.31	\$3,866
2020	TAAS	04	Slurry Seal	52,944	\$0.31	\$16,413
2020	TAAS	05	Slurry Seal	22,650	\$0.31	\$7,021
2020 Total						\$493,175
2023	TA1AS	01	Slurry Seal	3,140	\$0.31	\$973

Table 2. Five-Year Global Maintenance and Rehabilitation Plan.

Year	Branch	Section	Action	Area (sf)	Unit Cost (\$/sf)	Total Cost (\$)
2023	TA3AS	01	Slurry Seal	467	\$0.31	\$145
2023	TA6AS	01	Slurry Seal	4,844	\$0.31	\$1,502
2023	R12AS	01	Slurry Seal	9,120	\$0.31	\$2,827
2023	R12AS	02	Slurry Seal	110,703	\$0.31	\$34,318
2023	R12AS	03	Slurry Seal	132,672	\$0.31	\$41,128
2023	R12AS	04	Slurry Seal	17,808	\$0.31	\$5,520
2023 Total						\$86,414
5-Year Total						\$579,589

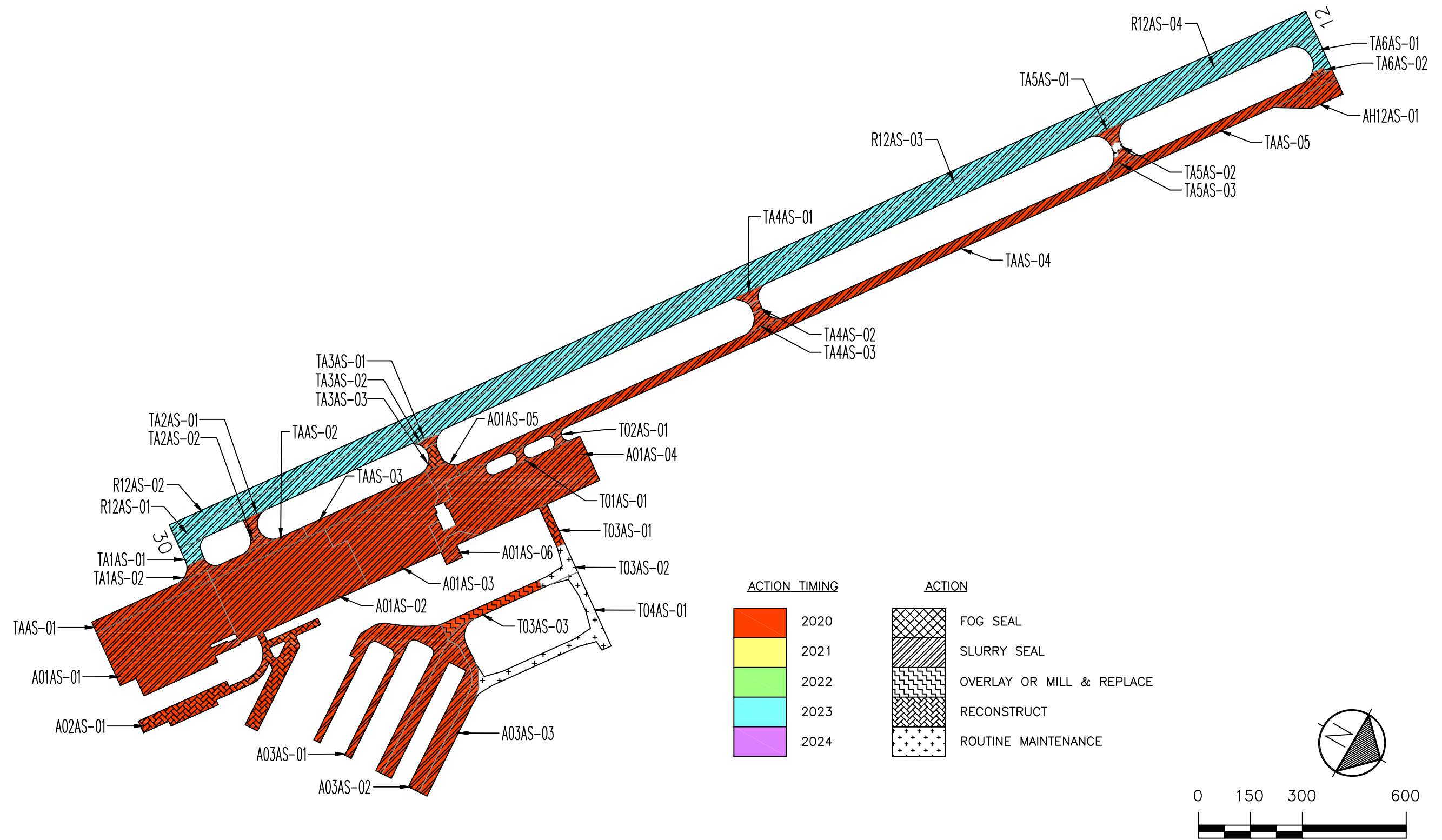
If the global maintenance and/or rehabilitation activities recommended in Table 2 are not completed, the localized maintenance activities identified in the Network Maintenance Report (Appendix 3) for that section should be done. Additionally, for those sections not listed in Table 2 as requiring global maintenance or rehabilitation, the localized maintenance activities outlined in the Network Maintenance Report should be completed. By completing the localized maintenance activities, pavement condition is improved, life is extended, deterioration is slowed and the length of time until major repair or rehabilitation is required is increased.

INSPECTION SCHEDULE

To comply with the inspection schedule requirement of FAA Grant Assurance Number 11, a detailed visual inspection should be conducted every 3 years using the methodology described in ASTM D5430. The next scheduled detailed visual inspection should take place in 2022.

In addition, the FAA requires that a drive-by inspection be conducted monthly to detect unforeseen changes in pavement condition. The results of each drive-by inspection should be recorded and kept in a file. At a minimum, the date of the inspection and an indication of any maintenance performed since the last drive-by inspection should be recorded.

Figure AS-6. Five-Year Pavement Management Plan.
Ashland Municipal Airport (Sumner Parker Field)



Drawing Date: June 2019