Alaska DOT&PF

Statewide Design and Engineering Services
Pavement Management and Preservation Office
5800 East Tudor Road, Anchorage AK 99507-1286

Pavement Inspection Report
Gulkana Airport

Airport Name	IATA	ICAO	Latitude	Longitude	Elevation (ft)
Gulkana Airport	GKN	PAGK	62° 09' 18" N	145° 27' 16" W	1,586

Please refer all questions or for further information about this report, please contact the AKDOT&PF Pavement Management and Preservation Office as follows:

Point of Contact	Phone	Email	Date Inspected	Date Published
Mr. Andrew Pavey, Pavement Management Engineer	(907) 269 6213	andrew.pavey@alaska.gov	June 2023	September 2023*

*PCR Revised February 2024

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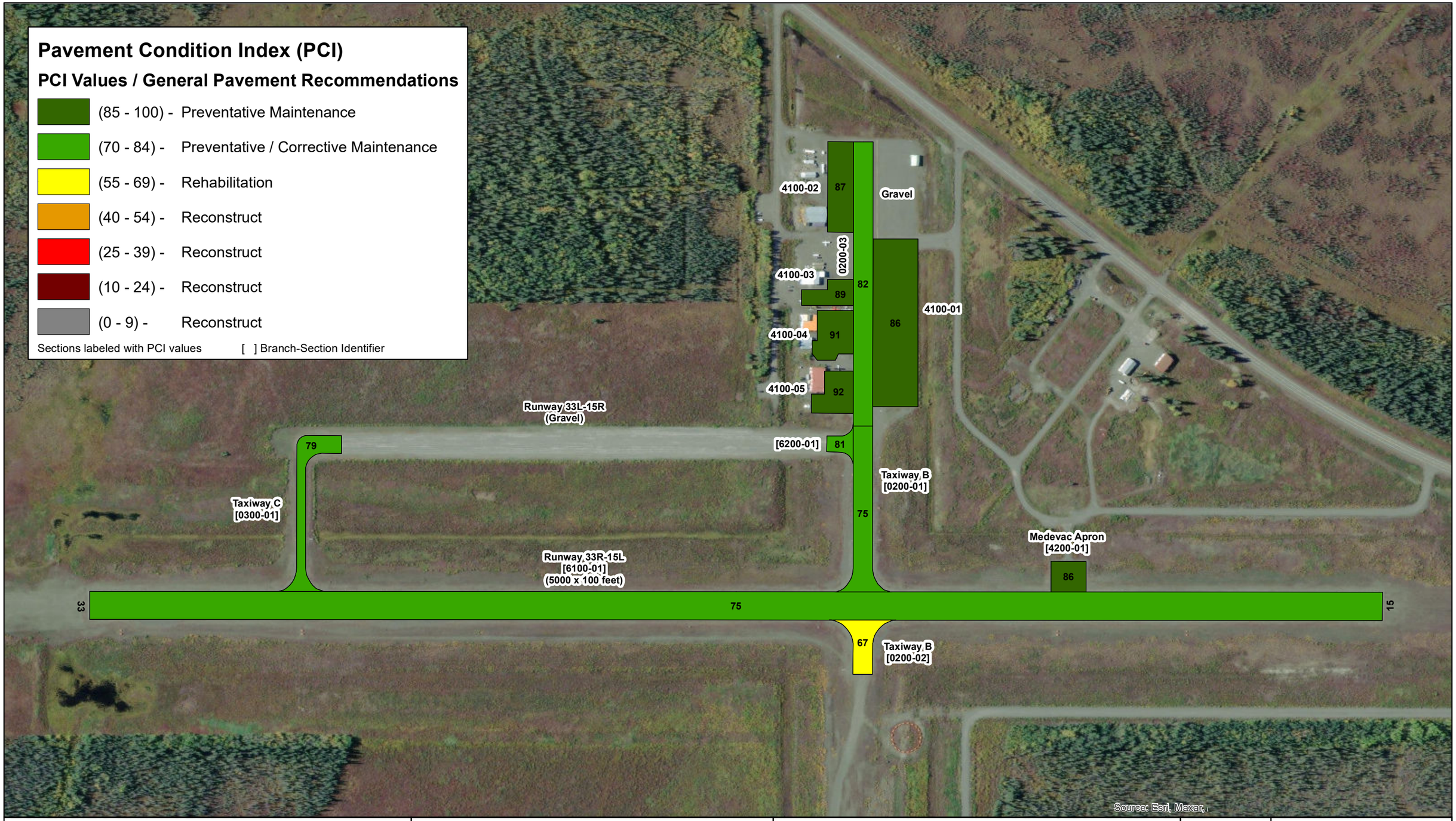
Pavement Condition Index (PCI)

PCI Values / General Pavement Recommendations

- (85 - 100) - Preventative Maintenance
- (70 - 84) - Preventative / Corrective Maintenance
- (55 - 69) - Rehabilitation
- (40 - 54) - Reconstruct
- (25 - 39) - Reconstruct
- (10 - 24) - Reconstruct
- (0 - 9) - Reconstruct

Sections labeled with PCI values [ ] Branch-Section Identifier



Gulkana Airport

Airport Code: GKN
Site Number: 50281.*A

Pavement Condition Index (PCI)

Target PCI Range for Runways: 70 to 100
Target PCI Range for Taxiways and Aprons: 60 to 100

W S N E

2023 Pavement Inspection Results

0 250 500 1,000
Feet

Map Created by
State of Alaska DOT&PF

Map 1 of 6

Pavement Condition Index (PCI)

PCI Values / General Pavement Recommendations

- (85 - 100) - Preventative Maintenance
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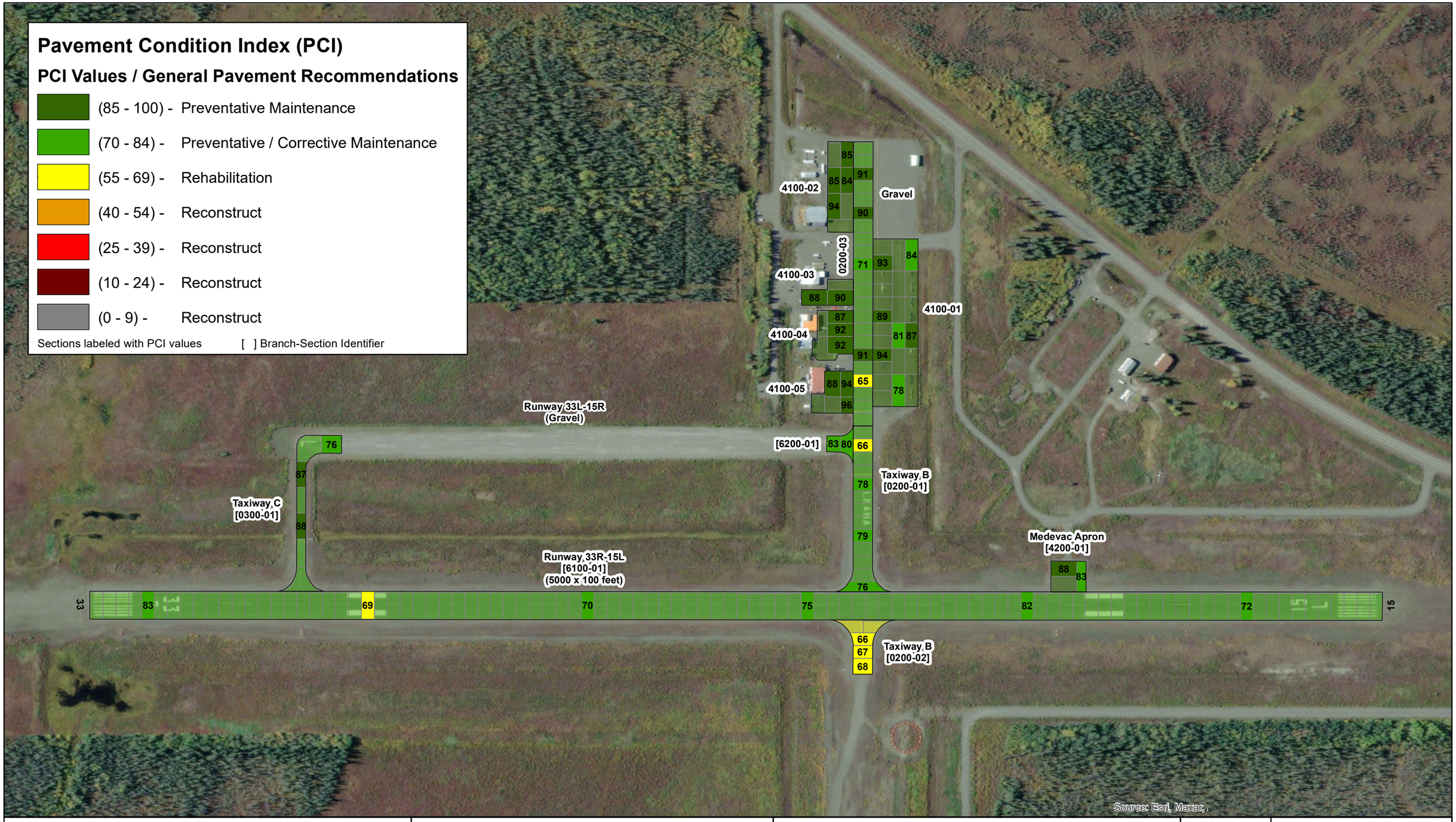

Gulkana Airport

Airport Code: GKN
Site Number: 50281.*A

Sample Unit
Pavement Condition Index (PCI)
Target PCI Range for Runways: 70 to 100
Target PCI Range for Taxiways and Aprons: 60 to 100

2023 Pavement Inspection Results

0 250 500 1,000
Feet

Map Created by
State of Alaska DOT&PF

Map 2 of 6

Pavement Condition Index (PCI)

PCI Values / General Pavement Recommendations

- (85 - 100) - Preventative Maintenance
- (70 - 84) - Preventative / Corrective Maintenance
- (55 - 69) - Rehabilitation
- (40 - 54) - Reconstruct
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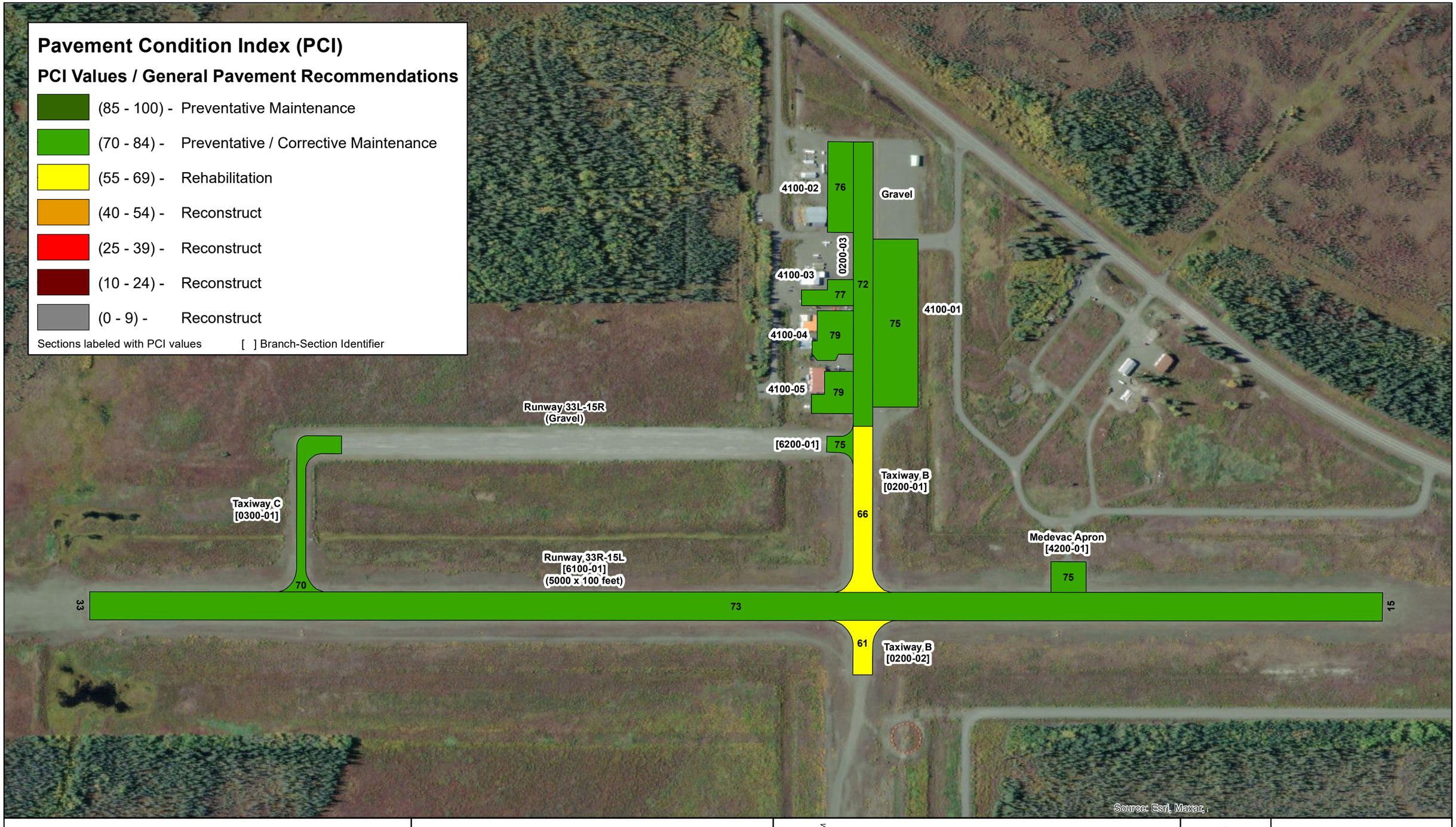
Sections labeled with PCI values [ ] Branch-Section Identifier



Gulkana Airport

Airport Code: GKN
Site Number: 50281.*A

5 Year Predicted Pavement Condition Index (PCI)

Target PCI Range for Runways: 70 to 100
Target PCI Range for Taxiways and Aprons: 60 to 100

2023 Pavement Inspection Results

0 250 500 1,000
Feet

Map Created by
State of Alaska DOT&PF

Map 3 of 6

Pavement Condition Index (PCI)

PCI Values / General Pavement Recommendations

- (85 - 100) - Preventative Maintenance
- (70 - 84) - Preventative / Corrective Maintenance
- (55 - 69) - Rehabilitation
- (40 - 54) - Reconstruct
- (25 - 39) - Reconstruct
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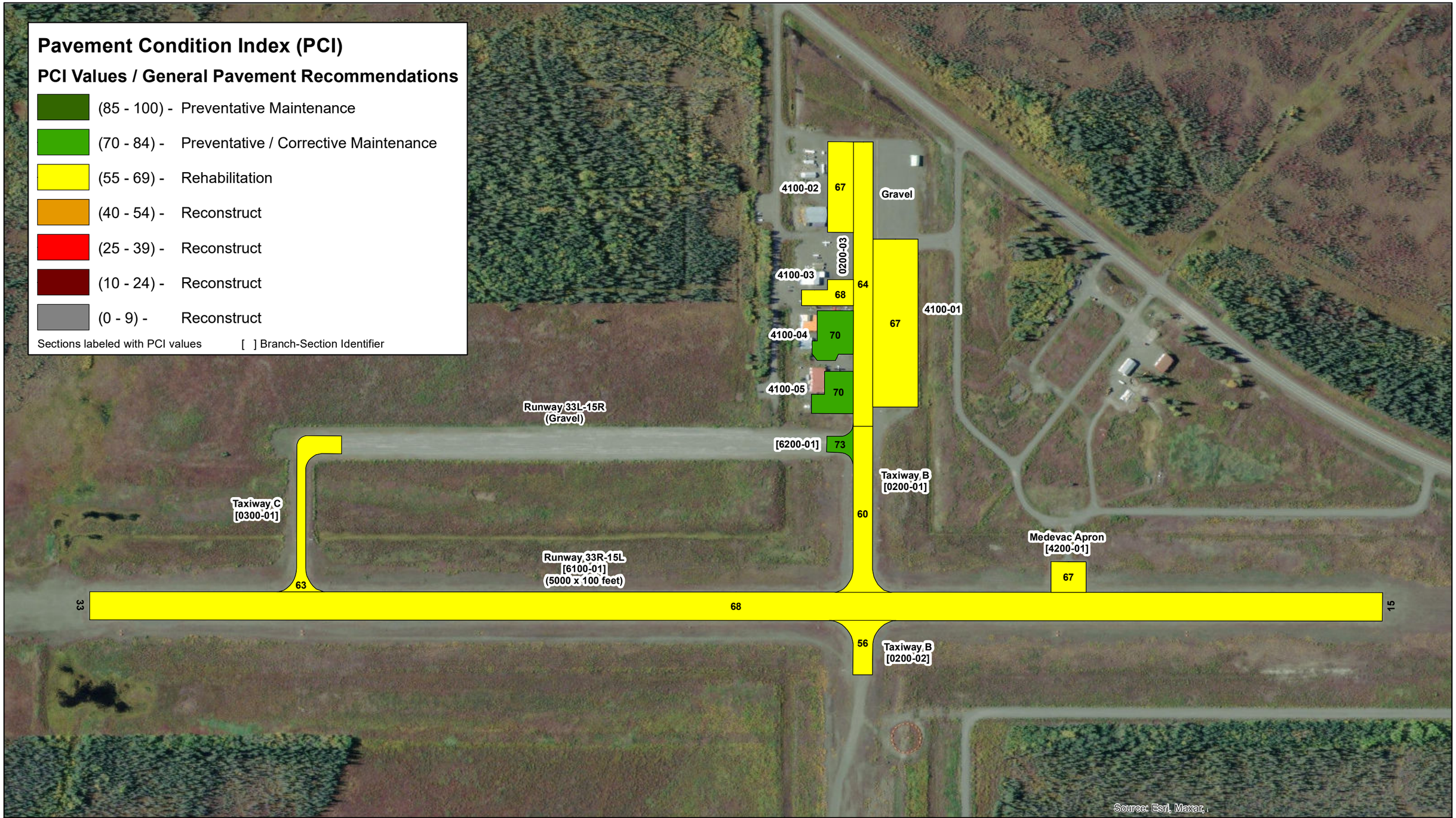
Sections labeled with PCI values [ ] Branch-Section Identifier



Gulkana Airport

Airport Code: GKN
Site Number: 50281.*A

10 Year Predicted Pavement Condition Index (PCI)

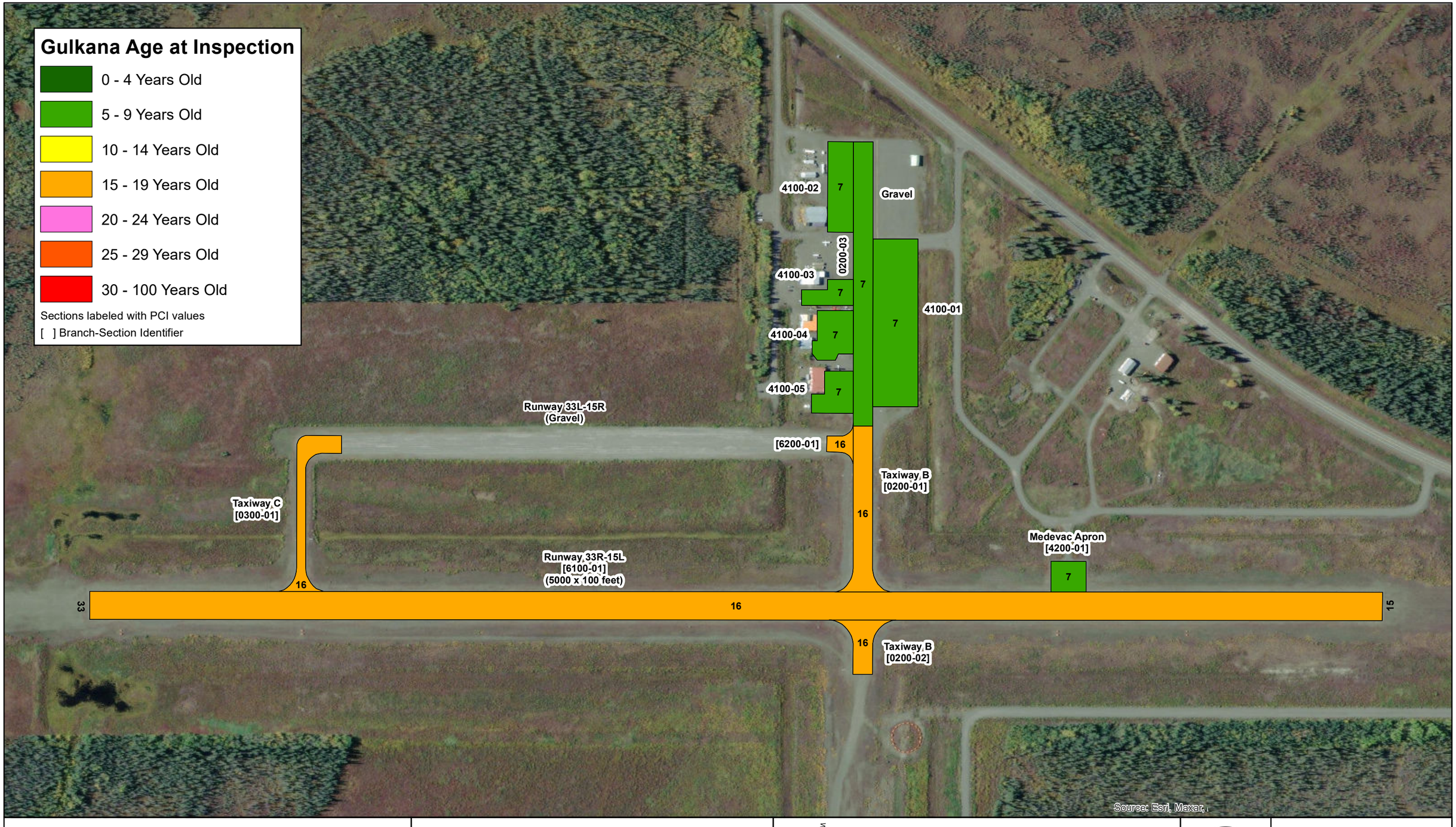
Target PCI Range for Runways: 70 to 100
Target PCI Range for Taxiways and Aprons: 60 to 100

2023 Pavement Inspection Results

0 250 500 1,000
Feet

Map Created by
State of Alaska DOT&PF

Map 4 of 6



Gulkana Airport

Airport Code: GKN
Site Number: 50281.*A

Pavement Condition Index (PCI)

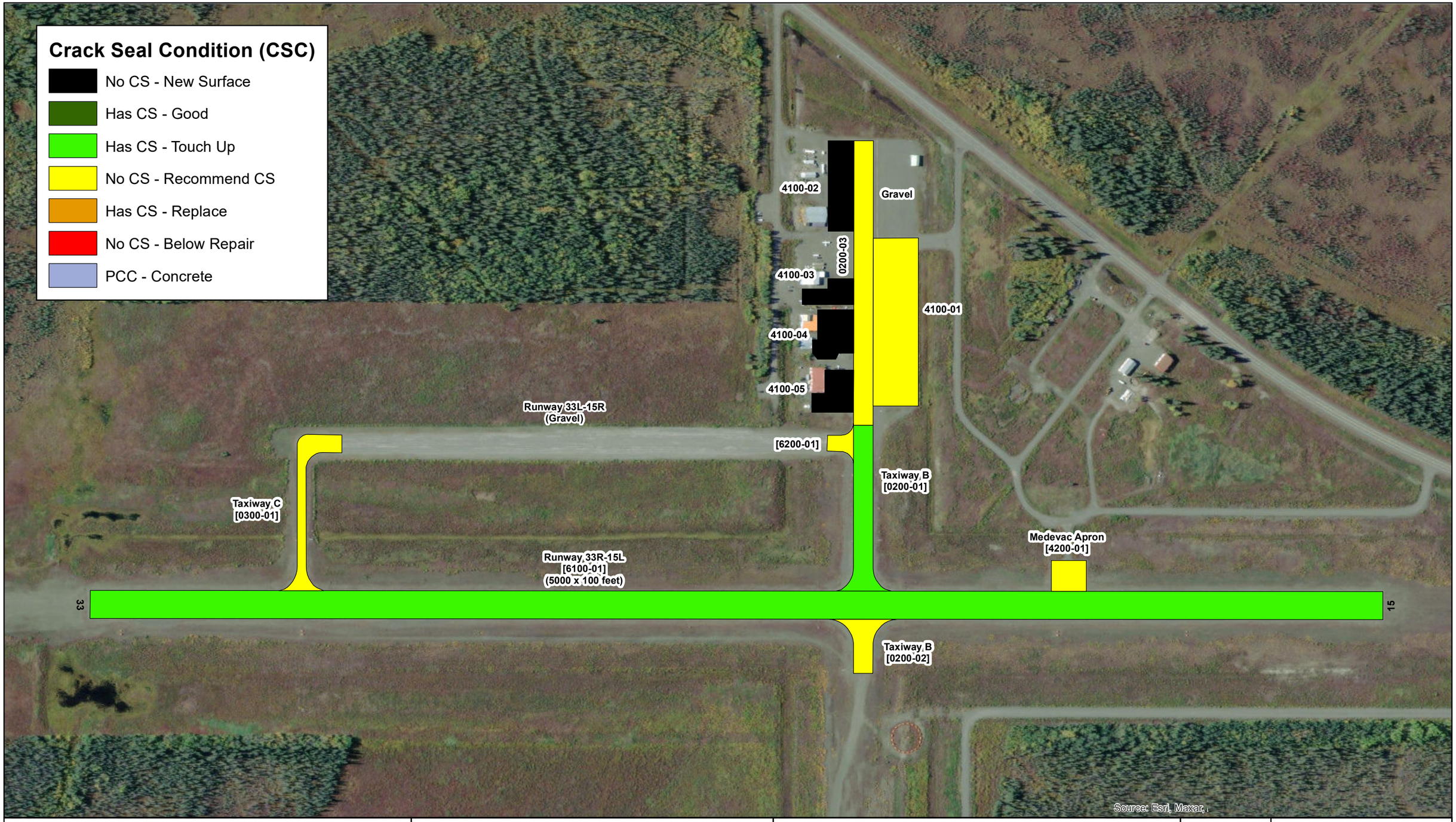
Target PCI Range for Runways: 70 to 100
Target PCI Range for Taxiways and Aprons: 60 to 100

2023 Pavement Inspection Results

0 250 500 1,000
Feet

Map Created by
State of Alaska DOT&PF

Map 5 of 6



Gulkana Airport

Airport Code: GKN
Site Number: 50281.*A

Pavement Crack Seal Condition (CSC)

W S N E

2023 Pavement Inspection Results

0 250 500 1,000
Feet

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Map 6 of 6

AIRPORT PAVEMENT INSPECTION NOTES BY BRANCH

Branch ID	Branch Name	Branch Use	No. of Sections	Area (sf)	Weight Average PCI
0200	Taxiway B	Taxiway	3	154,138	77

Taxiway B is composed of three sections. The two connecting to Runway 33R-15L were constructed in 2007 while the section adjacent to the apron was constructed in 2016. The most common distresses observed are low to medium to high severity longitudinal and transverse cracking, low severity raveling, and low severity weathering. Field observations include wearing of the pavement around longitudinal and transverse cracks from snowplows.

Branch ID	Branch Name	Branch Use	No. of Sections	Area (sf)	Weight Average PCI
0300	Taxiway C	Taxiway	1	34,241	79

Taxiway C was constructed in 2007 and connects runway 33R-15L to the gravel runway 33L-15R. The most common distresses low severity longitudinal and transverse cracking and low severity weathering. Adjacent to the gravel runway is an area with high severity longitudinal and transverse cracking. Field observations include the development of new unsealed cracks.

Branch ID	Branch Name	Branch Use	No. of Sections	Area (sf)	Weight Average PCI
4100	General Aviation Apron	Parking Apron	5	213,222	87

The apron was constructed in 2016. Crack seal operations have not been performed on the branch. The most common distresses observed are low to medium severity longitudinal and transverse cracking, low severity weathering and isolated areas of raveling. Field observations include initiation of new unsealed cracks and widening of previously filled cracks.

Branch ID	Branch Name	Branch Use	No. of Sections	Area (sf)	Weight Average PCI
4200	Medevac Apron	Parking Apron	4	15,930	86

The Medevac Apron was constructed in 2006. The most common distresses are low severity longitudinal and transverse cracking and low severity weathering. Raveling from snowplows was observed along the pavement edge.

Branch ID	Branch Name	Branch Use	No. of Sections	Area (sf)	Weight Average PCI
6100	Runway 15L/33R	Runway	1	500,000	75

The runway was constructed in 2007, receives crack seal operations approximately every three years and the crack seal needs touched up. The most common distresses are low to medium to high severity longitudinal and transverse cracking, low to medium severity raveling, and low severity weathering. Field observations include widening of previously filled cracks and snowplow damage around transverse cracks from where they heave and catch plows during the winter.

Branch ID	Branch Name	Branch Use	No. of Sections	Area (sf)	Weight Average PCI
6200	Runway 15R/33L	Runway Approach	1	7,421	81

This branch is the approach to gravel runway 15R/33L and was constructed in 2007. The most common distresses observed are low to medium severity longitudinal and transverse cracking and low severity weathering. Field observations include development of new unsealed cracks.

BRANCH CONDITION REPORT

Branch ID	No. of Sections	Sum Section Length (Ft)	Avg Section Width (Ft)	True Area (Sq Ft)	Use	Average PCI	Standard Deviation PCI	Weighted Average PCI
0200	3	1,970	75	154,138	TAXIWAY	74.37	5.92	77.30
0300	1	600	35	34,241	TAXIWAY	79.20	0	79.20
4100	5	1,554	139	213,222	APRON	88.88	2.26	87.49
4200	1	118	1355	15,930	APRON	86.00	0	86.00
6100	1	5,000	100	500,000	RUNWAY	75.00	0	75.00
6200	1	100	60	7,421	RUNWAY	81.10	0	81.10

Note: the dimensions in the Branch Condition Report are derived from area calculations and may not reflect actual dimensions of individual sections. Refer to the maps for actual section dimensions.

BRANCH USE CONDITION REPORT

Use Category	No. of Sections	Total Area (Sq Ft)	Arithmetic Average PCI	Standard Deviation PCI	Weighted Average PCI
APRON	6	229,152	88.40	2.32	87.38
RUNWAY	2	507,421	78.05	3.05	75.09
TAXIWAY	4	188,379	75.58	5.54	77.65
ALL	12	924,952	82.40	7.15	78.66

SECTION CONDITION REPORT

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	True Area (Sq Ft)	Last Inspection Date	Age At Inspection	PCI
200	0200-01	6/1/2007	AAC	TAXIWAY	P	51,504	6/26/2023	16	75
200	0200-02	6/1/2007	AAC	TAXIWAY	P	20,134	6/26/2023	16	67
200	0200-03	9/10/2016	AC	TAXIWAY	P	82,500	6/26/2023	7	82
300	0300-01	6/1/2007	AAC	TAXIWAY	P	34,241	6/26/2023	16	79
4100	4100-01	9/10/2016	AC	APRON	P	113,750	6/26/2023	7	86
4100	4100-02	9/10/2016	AC	APRON	P	35,000	6/26/2023	7	87
4100	4100-03	9/10/2016	AC	APRON	P	16,062	6/26/2023	7	89
4100	4100-04	9/10/2016	AC	APRON	P	26,538	6/26/2023	7	91
4100	4100-05	9/10/2016	AC	APRON	P	21,872	6/26/2023	7	92
4200	4200-01	9/10/2016	AC	APRON	P	15,930	6/26/2023	7	86
6100	6100-01	6/1/2007	AC	RUNWAY	P	500,000	6/26/2023	16	75
6200	6200-01	6/1/2007	AAC	RUNWAY	P	7,421	6/26/2023	16	81

SECTION CONDITION REPORT (SUMMARY BY AGE CATEGORY)

Age Category	Average Age at Inspection	Total Area (Sq Ft)	Number of Sections	Arithmetic Average PCI	Standard Deviation PCI	Weighted Average PCI
06-10	7	311,652	7	87.41	3.23	85.83
16-20	16	613,300	5	75.38	4.86	75.01
ALL	11	924,952	12	82.40	7.15	78.66

Pavement Database: StatewidePAVER_6_29_23

Network: Gulkana Airport **Branch:** 0200 Taxiway B **Section:** 0200-01 **Surface:**AAC
L.C.D. 6/1/2007 **Use:** TAXIWAY **Rank:** P **Length:** 660.00 (Ft) **Width:** 75.00 (Ft) **True Area:** 51504.00001 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
6/1/2007	OL-AS	Overlay - AC Structural	272,600.00	3.00	☑	(Funded via AIP)
8/15/1980	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Network: Gulkana Airport **Branch:** 0200 Taxiway B **Section:** 0200-02 **Surface:**AAC
L.C.D. 6/1/2007 **Use:** TAXIWAY **Rank:** P **Length:** 210.00 (Ft) **Width:** 75.00 (Ft) **True Area:** 20134.00000 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
6/1/2007	OL-AS	Overlay - AC Structural	40,320.00	3.00	☑	(Funded via AIP)
8/15/1993	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Network: Gulkana Airport **Branch:** 0200 Taxiway B **Section:** 0200-03 **Surface:**AC
L.C.D. 9/10/2016 **Use:** TAXIWAY **Rank:** P **Length:** 1,100.00 (Ft) **Width:** 75.00 (Ft) **True Area:** 82500.00002 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
9/10/2016	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Network: Gulkana Airport **Branch:** 0300 Taxiway C **Section:** 0300-01 **Surface:**AAC
L.C.D. 6/1/2007 **Use:** TAXIWAY **Rank:** P **Length:** 600.00 (Ft) **Width:** 35.00 (Ft) **True Area:** 34241.00001 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
6/1/2007	OL-AS	Overlay - AC Structural	0.00	3.00	☑	(Funded via AIP)
8/15/1992	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Network: Gulkana Airport **Branch:** 4100 Apron along T/W **Section:** 4100-01 **Surface:**AC
L.C.D. 9/10/2016 **Use:** APRON **Rank:** P **Length:** 650.00 (Ft) **Width:** 175.00 (Ft) **True Area:** 113750.0014 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
9/10/2016	MOL-2	Cold Mill and Overlay - 2 Inches	0.00	2.00	☑	(Funded via AIP)
8/15/1975	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Network: Gulkana Airport **Branch:** 4100 Apron along T/W **Section:** 4100-02 **Surface:**AC
L.C.D. 9/10/2016 **Use:** APRON **Rank:** P **Length:** 350.00 (Ft) **Width:** 100.00 (Ft) **True Area:** 35000.00001 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
9/10/2016	CM-OL-2	2 in Cold Mill & Overlay	57,750.00	2.00	☑	(Funded via AIP)
8/15/1975	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Network: Gulkana Airport **Branch:** 4100 Apron along T/W **Section:** 4100-03 **Surface:**AC
L.C.D. 9/10/2016 **Use:** APRON **Rank:** P **Length:** 200.00 (Ft) **Width:** 100.00 (Ft) **True Area:** 16062.00000 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
9/10/2016	CM-OL-2	2 in Cold Mill & Overlay	26,400.00	2.00	☑	(Funded via AIP)
8/1/1975	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Network: Gulkana Airport **Branch:** 4100 Apron along T/W **Section:** 4100-04 **Surface:**AC
L.C.D. 9/10/2016 **Use:** APRON **Rank:** P **Length:** 192.00 (Ft) **Width:** 160.00 (Ft) **True Area:** 26538.00000 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
9/10/2016	CM-OL-2	2 in Cold Mill & Overlay	43,890.00	2.00	☑	(Funded via AIP)
8/15/1975	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Network: Gulkana Airport **Branch:** 4100 Apron along T/W **Section:** 4100-05 **Surface:**AC
L.C.D. 9/10/2016 **Use:** APRON **Rank:** P **Length:** 162.00 (Ft) **Width:** 162.00 (Ft) **True Area:** 21872.00000 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
9/10/2016	CM-OL-2	2 in Cold Mill & Overlay	36,300.00	2.00	☑	(Funded via AIP)
7/1/2000	SS-CT	Surface Seal - Coal Tar	0.00	0.00	☐	(Funded via AIP)
8/15/1975	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Network: Gulkana Airport **Branch:** 4200 MedEvac Apron **Section:** 4200-01 **Surface:**AC
L.C.D. 9/10/2016 **Use:** APRON **Rank:** P **Length:** 118.00 (Ft) **Width:** 135.00 (Ft) **True Area:** 15930.00039 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
9/10/2016	MOL-2	Cold Mill and Overlay - 2 Inches	0.00	2.00	☑	(Funded via AIP)
8/1/1975	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Network: Gulkana Airport **Branch:** 6100 15/33 **Section:** 6100-01 **Surface:**AC
L.C.D. 6/1/2007 **Use:** RUNWAY **Rank:** P **Length:** 5,000.00 (Ft) **Width:** 100.00 (Ft) **True Area:** 500000.0001 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
6/1/2007	CR-AC	Complete Reconstruction - AC	0.00	3.00	☑	(Funded via AIP)
8/15/1992	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Network: Gulkana Airport **Branch:** 6200 15R/33L **Section:** 6200-01 **Surface:**AAC
L.C.D. 6/1/2007 **Use:** RUNWAY **Rank:** P **Length:** 100.00 (Ft) **Width:** 60.00 (Ft) **True Area:** 7421.000002 (SqFt

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
6/1/2007	OL-AS	Overlay - AC Structural	0.00	3.00	☑	(Funded vis AIP)
9/15/1995	NC-IN	New Construction - Initial	0.00	0.00	☑	(Funded via AIP)

Summary:

Work Description	Section Count	Area Total (SqFt)	Thickness Avg (in)	Thickness STD (in)
2 in Cold Mill & Overlay	4	99,472.00	2.00	0.00
Cold Mill and Overlay - 2 Inches	2	129,680.00	2.00	0.00
Complete Reconstruction - AC	1	500,000.00	3.00	0.00
New Construction - Initial	12	924,952.00	0.00	0.00
Overlay - AC Structural	4	113,300.00	3.00	0.00
Surface Seal - Coal Tar	1	21,872.00	0.00	0.00

PHYSICAL PROPERTY DATA

		Pavement		Base		Subbase		Subgrade	
Branch ID	Section ID	Thick (in)	Type	Thick (in)	Type	Thick (in)	Type	Type	CBR
Taxiway B 0200	0200-01	2	P-401	6	P-208	32	P-154	CL	2.1
	0200-02	2	P-401	6	P-208	54	P-154	CL	2.1
	0200-03	3	P-401	3	P-208	54	P-154	CL	2.1
Taxiway C 0300	0300-01	3	P-401	3	P-208	36	P-154	CL	2.1
Apron 4100	4100-01	2	P-401	8	P-208	28	P-154	ML	2.1
	4100-02	2	P-401	6	P-208	28	P-154	ML	2.1
	4100-03	2	P-401	6	P-208	28	P-154	ML	2.1
	4100-04	2	P-401	6	P-208	28	P-154	ML	2.1
	4100-05	2	P-401	6	P-208	28	P-154	ML	2.1
Medivac Apron 4200	4200-01	2	P-401	6	P-208	48	P-154	CL	2.1
Runway 15L-33R 6100	6100-01	3	P-401	6	P-208	57	P-154	CH	2.1
Runway 15R-33L 6200	6200-01	2	P-401	4	P-208	36	P-154	ML	2.1

AIRCRAFT FLEET MIX

No.	Aircraft	Gross Wt (lb)	% Gross Wt on Main Gear	Tire Pressure (psi)	Annual Departures	20 Yr Coverages
1	Cessna 206 Stationair	3,612	95	52	396	1598
2	Cessna 208B Grand Caravan	8,750	95	75	2	9
3	PA-31-325 Navajo C/R	6,536	95	66	211	908
4	D-15	16,765	95	61	2	15

PAVEMENT CLASSIFICATION RATINGS

Runway	Critical Aircraft	Max Allowable Wt (lb)	Subgrade Mr (psi)	Evaluation Thickness (in)	Pass to Traffic Cycle Ratio	PCR
15L-33R	PA-31-325 Navajo C/R	54,491	21,000	9	1.0	156F/B/X/T

PCR CALCULATION NOTES

- 1% traffic growth assumed
- Subgrade strength reduction for frost applied

REFERENCES

Year	Reference No.	Document Title
2015	61452	Gulkana Airport Apron and Taxiway Repaving As-Built
2010	61452	Gulkana Airport Improvements Geotechnical Report
2006	60618	Gulkana Airport Permanent Repairs As-Built
2005	60618	Gulkana Airport Permanent Repairs Geotechnical Report
1991	65153	Gulkana Airport Improvements As-Built
1984	D15212	Gulkana Airport Plans