Field Screening Preservation Projects

MPPP 2023 Agency Update
Saskatchewan Ministry of Highways
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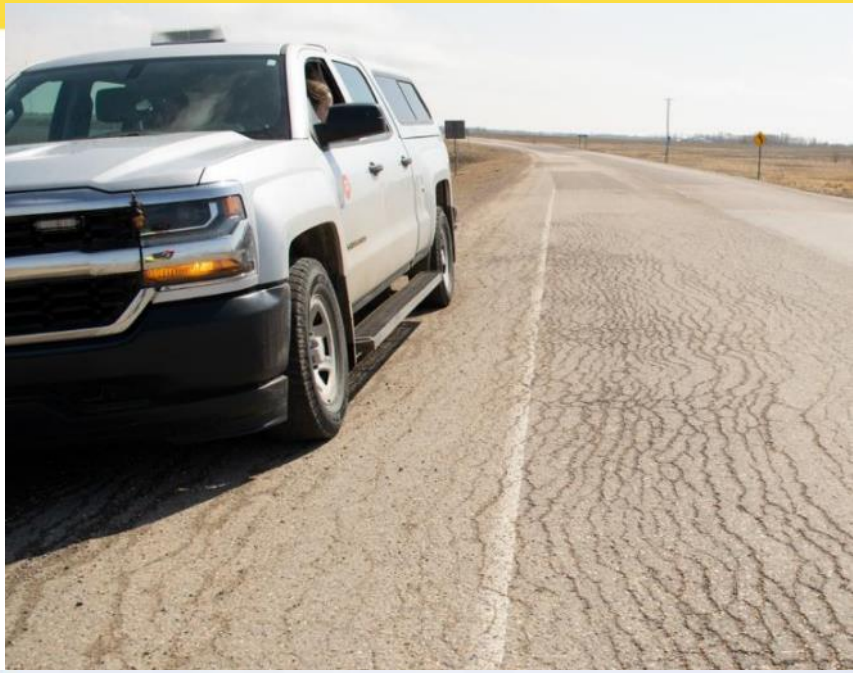
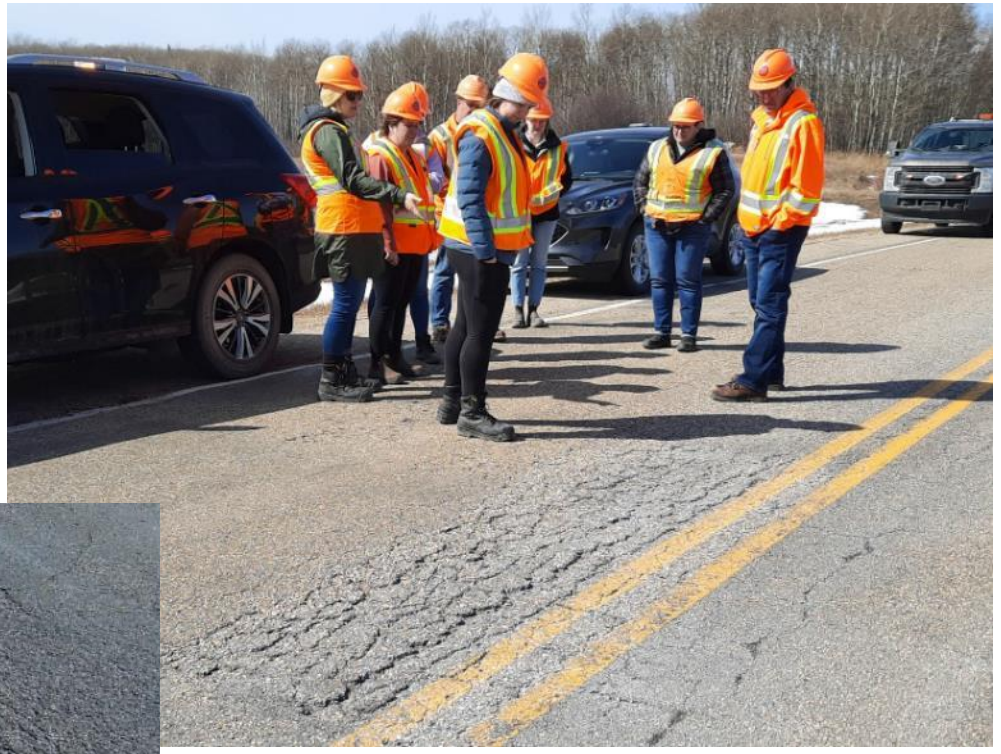
Saskatchewan

Field Screening

- Seal Coat
- Cape Seal
- Microsurfacing
- Thin Lift Overlay
- Rehabilitation





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PreTreatment Pavement Conditions		Fog Seal	Graded Agg Seal	Single Chip Seal	Racked-In Chip Seal	Fiber Seal Coat
Pavement Type	Asphalt Concrete	✓	✓	✓	✓	✓
	Granular	X	✓	✓	✓	✓
Traffic	AADT <2000	✓	✓	X	X	X
	AADT >2000	✓	X	✓	✓	✓
	TAADT > 150	✓	X	✓	✓	✓
Wheel Path Rutting	< 5 mm	X	✓	✓	✓	✓
	5 - 13 mm	X	?	?	?	?
	> 13 mm	X	X	X	X	X
Cracking	slight	✓	✓	✓	✓	✓
	low	X	√	√	√	√
	moderate	X	X	X	X	√
	fatigue	X	X	X	X	X
Surface Condition	MTD < 0.5	X	~	✓	✓	✓
	Ravelled	✓	✓	✓	✓	✓
	Bleeding	X	X	~	~	~
	Single Pickouts	✓	✓	✓	✓	✓
	Multi Pickouts	✓	✓	✓	✓	✓
	Delamination	X	X	X	X	X
	Shoving	X	X	X	X	X
Potholes	Moderate	X	X	X	X	X
	Severe	X	X	X	X	X
Ride	IRI 1.5-2.0	~	~	~	~	~
	Poor	X	X	X	X	X
	Bumps & Dips	X	X	X	X	X
Sealed Cracks	Present	X	✓	✓	✓	✓
Shoulders	Poor	X	X	X	X	X
					LIGHT	

✓ Standard Treatment (for problem indicated)

X DO NOT USE (will not address the problem / makes it worse)

~ Maybe Considered (requires technical guidence/expertise to evaluate merits of the tr

Features

- 2017 planning cost $7.26/m²
- Fills wheel path ruts up to 22mm deep
- 9-13 mm thick slurry (x2 layers in wheel path)
- Untreated cracks >10mm wide will reflect through the micro surface
- Full range of traffic volumes

Ideal Treatment for:

- Mid-life pavement treatment (12-16 yrs old)
- Fills wheel path ruts up to 13 mm
- Cracking is minimal with slight to low severity (up to 12 mm wide)
- Pickouts, ravelling and bleeding
- IRI is less than 2.0
- Structurally sound pavements

Benefits

- Micro surfacing provides a 10 year se
- Filling of wheel path rutting improves and safety by eliminating water pond
- Seals surface defects including stone binder degredation(ravelling), and ox
- Tough durable surface is resistant to
- Micro surfacing may provide a moder to the smoothness or ride experience
- Slurry cures quickly allowing release t

Use & Specifications

- MHI has been using this treatment si
- MHI specifies the International Slurry Association (ISSA) A116 "Recommend Guideline for Emulsified Asphalt Slurr Design Technical Bulletins, Annapolis,

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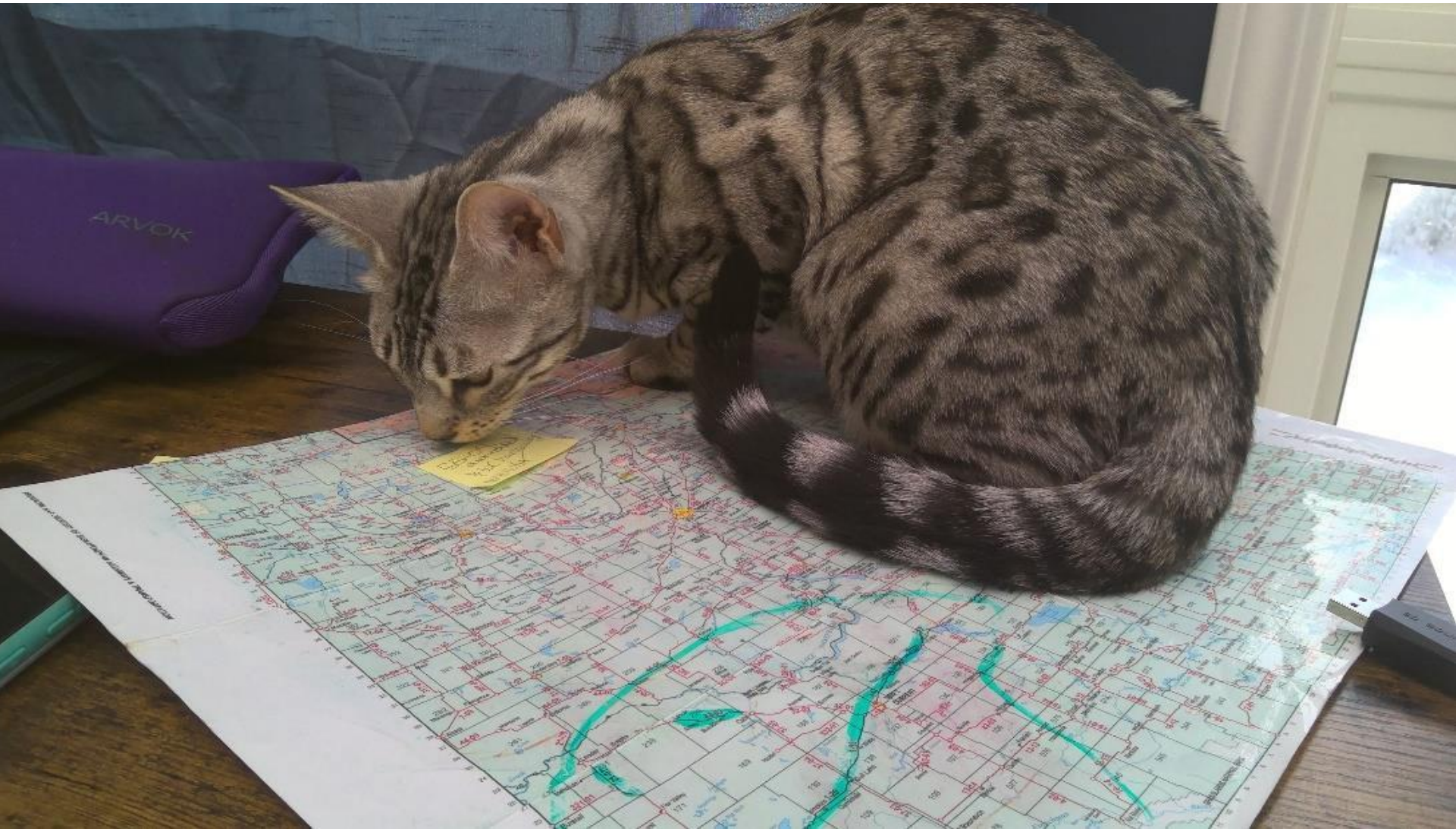
Trip Planning

207 sites 2023



Medium Review - CS 2-23 - Km 67.85 to 77.90

From	To	Length	LOS	AADT	TAADT	Rut60	IRI60	SCI60	5 Year Routine cost?	$/km
67.85	69.90	2.05	1	850	130	7.08	1.11	22.35	7582.01	3698.541
69.90	77.90	8.00	1	850	130	8.59	1.67	23.09	28772.73	3596.591

Treatment History:

Last Rehab

From KM	To KM	Length (km)	Year	Thickness Added (mm)
67.85	69.2	1.35	1976	127
69.2	70.5	1.3	1976	152
70.5	71.93	1.43	1984	50
71.93	72.26	0.33	1976	152
72.26	74.67	2.41	1976	127
74.67	74.8	0.13	1976	152
74.8	75.95	1.15	1984	50
75.95	76.38	0.43	1976	152
76.38	76.48	0.10	1984	50
76.48	77.9	1.42	1976	152

Seal History

From KM	To KM	Length (km)	Year	Treatment
47.95	68.00	20.05	2007	GAS
0.00	1.10	1.10	2016	GAS
19.95	27.65	7.70	2017	MICRO

Field Notes:

67.993 - pickouts, transverse cracking w/ and w/o sand sulphur, CL cracking, lots of cracking, meandering cracks connecting to T crack, segregation.

69.256 fatigue cracking forming in wheel path + ℄ segregation, lots of cracking, has been consistent throughout

2020 Heavy Field Review

Roadname: 0020500 MOA — Suggested Treatment: H1 Mill and Overlay

From KM: 0 — To KM: 16.45 — Needs RACS?: ______

Date: ______ — Inspected By: ______ — Surface: AC

Existing Pavement Conditions

Cracking: Comment on the below types of cracks	Distortion: Comment on the below distortions
Fatigue (Alligator):	Structural Rutting (Rutting into the base structure):
Transverse (Thermal):	Plastic Rutting (Rutting contained in the AC layer, dual rutting):
Longitudinal and Meandering: cracks on the wheel path	Corrugation (Shoving):
Block: Yes @ 12.18 Km (0.5-1) m	Depression:
Disintegration	**Other**
Raveling or Stripping (Loss of binder, fines, and aggregate):	Bleeding:
Potholes: @ 10.06 KM. @ 6.89 km.	Patching: on the shoulder @ 8 Km.
Road and ROW Conditions or Issues	
Road Cross Section & Profile:	Geometric (Shoulder width & drop-off, side slopes, turning lanes, site distance, etc.):
Grade Height (Adequate):	Moisture Conditions (Groundwater discharge area, ditch drainage, surrounding water):

Other Issues and Comments (Is this a suitable heavy candidate?)

@ 13.5 surface changed — Maybe a lower priority heavy.

Potholes on the shoulder @ 12.8 Km.

shoulder Edge start to creep. — cracking is bad @ 2.5 Km.

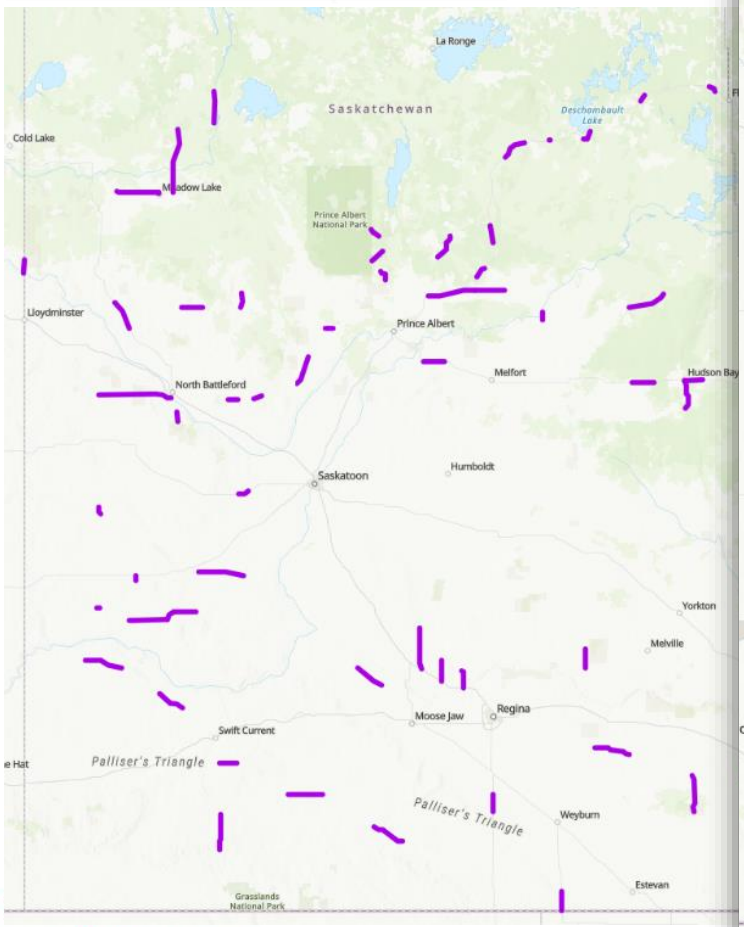
patches.

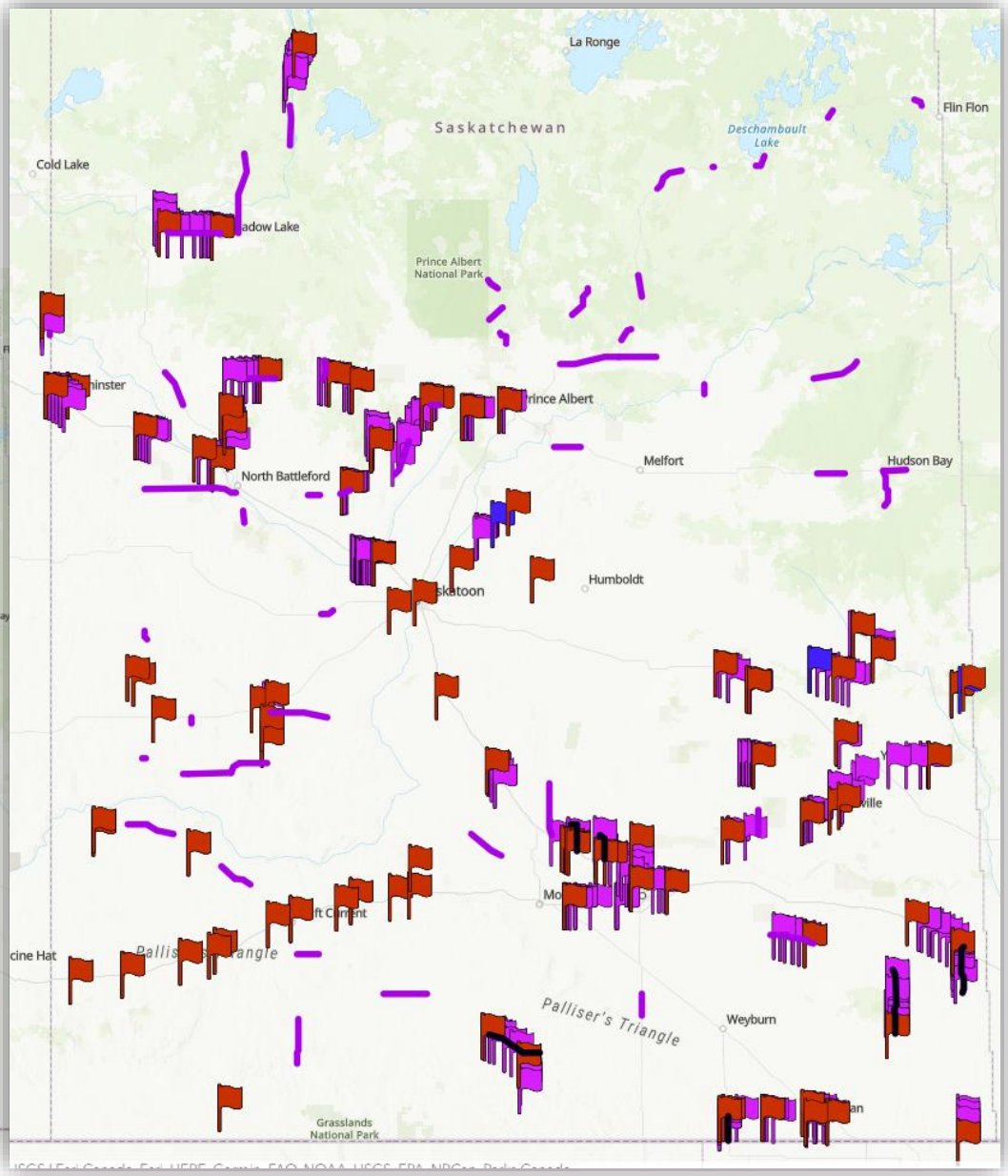
shoulder start to get worse @ 11.7 Km.

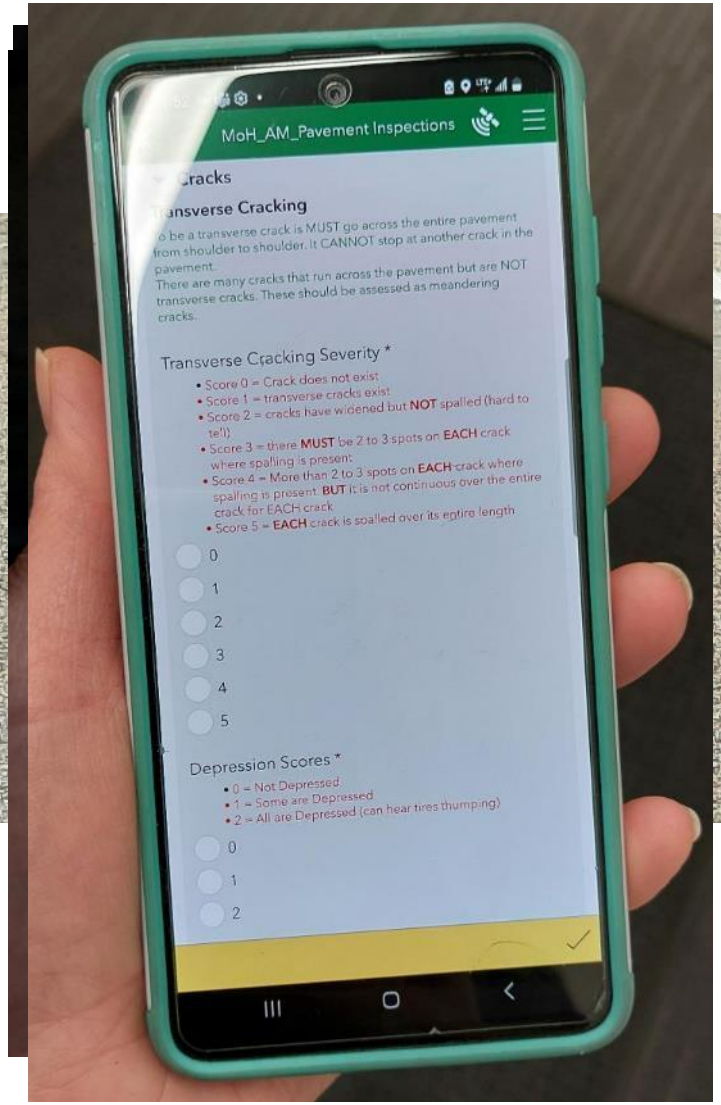
Seal start to wear off.

ArcGIS Survey123

Smart forms, better decisions







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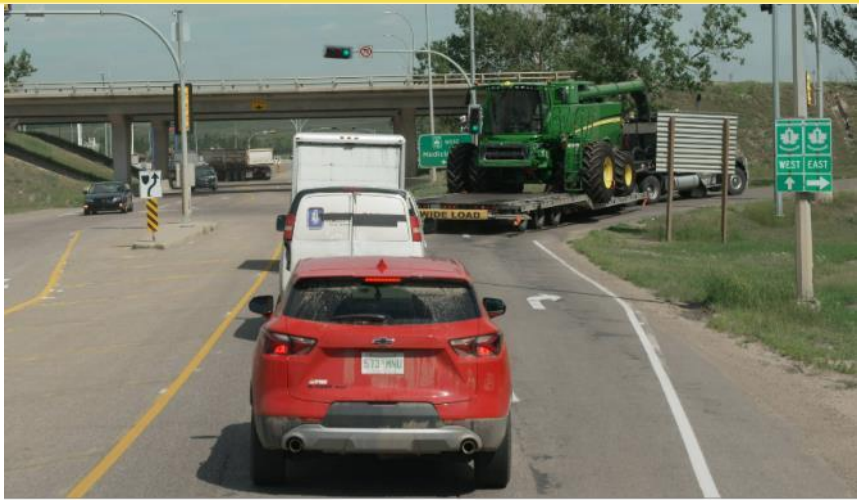
Additional Info



- Adjust limits?
- Urban Cross Section?
- Shoulder Conditions?
- Pretreatment Work?
- Crack Sealant?
- Pavement Width?
- Localize Failures?
- Culvert Slumps?
- Bridges/Rwy Xng?

THANKS!