

To: Mayor and Members of Council

February 21, 2012

Re: McKenzie Pointe Pavement

Background

The Developers of McKenzie Pointe, Mauri Gwyn Developments, paved McKenzie Pointe Road during the fall of 2011. The pavement was tested by 4 core samples taken throughout the road surface. The results of those core tests were as follows:

- a. One of the four (25%) core samples was below the minimum 5mm tolerance in thickness.
- b. The average compaction test of the 4 core samples is 97% which is below the 98% minimum specification.
- c. The contractor did not apply Bituminous Prime, Tack and Flush coat

Council passed the following motion at the November 28, 2011 Council meeting:

292/11 MCKENZIE POINTE PAVEMENT

Schultz/Schwartz: THAT WHEREAS the pavement that was installed in McKenzie Pointe does not meet specifications;
AND THAT there was no Bituminous Prime, Tack and Flush Coat applied;
THEREFORE BE IT RESOLVED THAT asphalt be removed and the Bituminous Prime, Tack and Coat be applied and the asphalt replaced as per specifications.

The Developer, Mauri Gwyn, is requesting alternative measures to remedy the deficiencies. Therefore this item of business has been brought back to the January 23, 2012 and February 6, 2012 council meetings where it has been further tabled to this meeting.

Discussion

On February 8, 2012 Blair Arn, Jeff Halliday from Genivar, Ken Vander Vinne from KGS, and I met to discuss alternatives to removing the pavement at McKenzie Pointe.

The proposal that Mauri Gwyn is offering is:

1. Extend the warranty to 2 years to cover the lack of prime coat.

2. Densities – Re-roll the pavement on the entire subdivision once the weather is warm. After the re-roll, have Clifton perform density testing again.
3. Thickness – 1 of the 4 thicknesses were below the specs as per City of Regina specifications. Therefore they are proposing a penalty be applied as per Regina spec book of 10%. *(Therefore they are proposing a 10% penalty on the value of their lot that is being held as security. Last summer we estimated the value of that lot at \$80,000, therefore they are suggesting an \$8,000 penalty which would be paid to the Town.)*
4. Examine asphalt for signs of segregation in the spring and provide a surface treatment to seal as needed.

Budget Implications

No direct budget implications.

Conclusion

After further consideration and consultation with our Engineering firm, Administration would recommend further testing of the pavement by completing another 4 test holes on McKenzie Pointe Road as per attached sketch. KGS proposes that 2 of the test holes be taken from the driving lane of the road, alternating sides for each test.

After further review of the core samples, the Town could use the City of Regina pay factors, which are attached, to calculate a penalty.

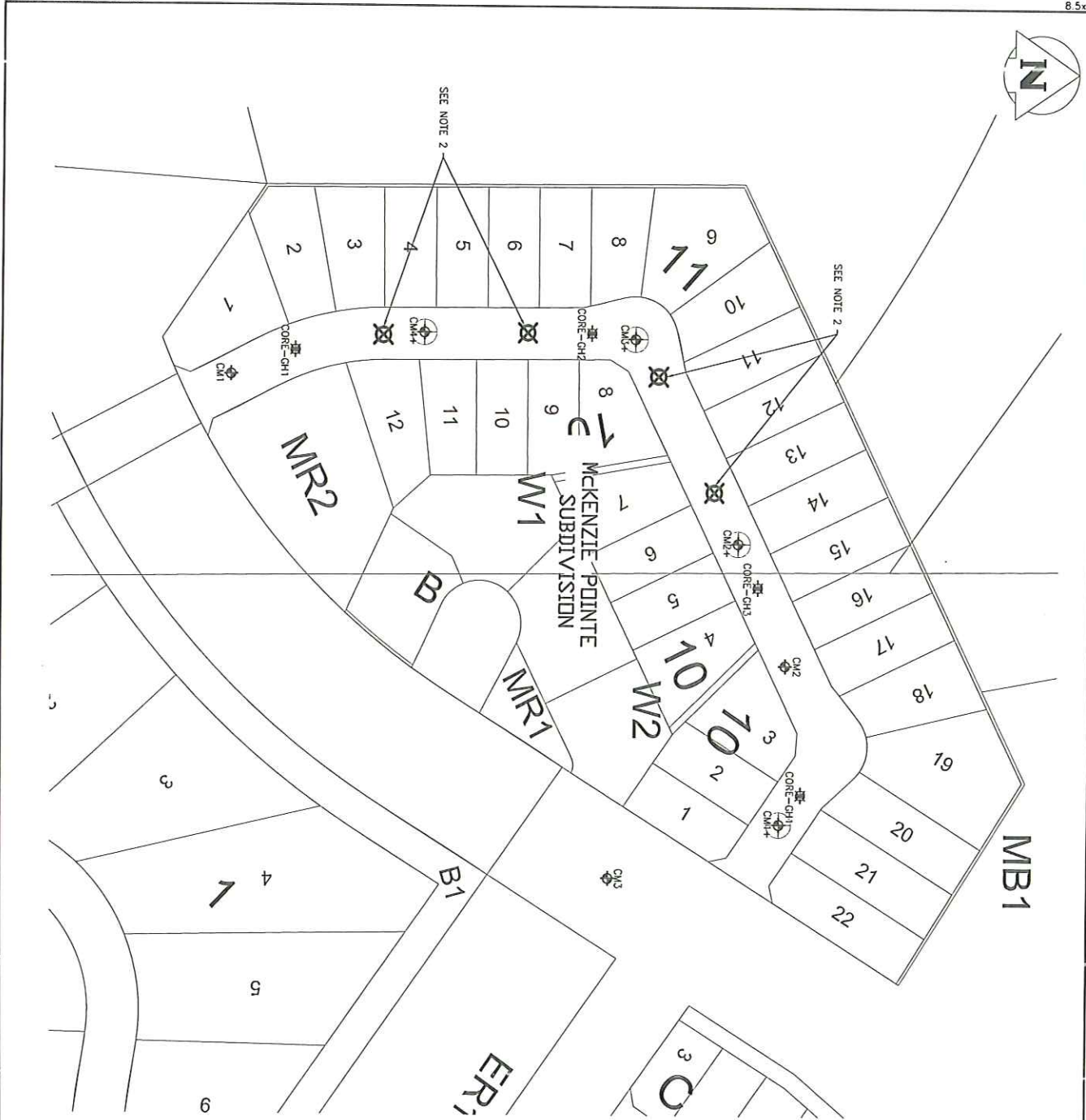
Recommendation

Administration recommends Council require Mauri Gwyn to complete additional core testing of McKenzie Pointe Road, locations to be as per recommended by KGS. Administration recommends Council delay the decision on further remediation such as extended warranty, penalties, and surface sealing until after review of the additional core tests has been completed.

Respectfully submitted,



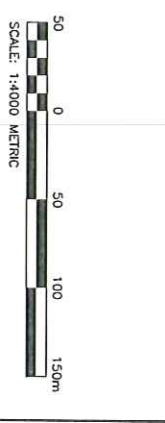
Shauna Bzdel,
Town Manager



- LEGEND:**
- ⊕ BASE DENSITY TEST SITE
 - ⊕+ RECOMMENDED BASE DENSITY TEST SITES (+)
 - ⊕- PAVEMENT CORE TEST SITE
 - ⊕-x RECOMMENDED ADDITIONAL CORE TEST SITES

NOTES:

1. DENSITY/CORE TEST COORDINATES PROVIDED BY CLIFTON ASSOCIATES LTD.
2. ADDITIONAL CORE SAMPLES TO BE TAKEN AT ROAD CENTRELINE AND IN DRIVING LANE. ALTERNATE DRIVING LANE SIDE FOR EACH TEST SITE. COMPLETE PAVEMENT THICKNESS AND DENSITY TESTING ON EACH CORE SAMPLE.



→ A 12/02/10 FOR TOWN INFORMATION

NO.	Y/M/A/00	REVISIONS / ISSUE	DESCRIPTION	KDV	BY

KGGS GROUP
 CONSULTING ENGINEERS

TOWN OF WHITE CITY

MCKENZIE POINTE SUBDIVISION

DENSITY/CORE TEST SITES

- 3.1.25 The average asphalt concrete thickness must meet or exceed the required thickness and if any individual core thickness is less than the required thickness the following pay reductions shall apply:

THICKNESS DEFICIENCY (mm)	PAY FACTOR (%) NEW CONSTRUCTION	PAY FACTOR (%) REHABILITATION CONSTRUCTION
Up to 3	100	100
3 to 5	98	100
6	95	95
7	90	90
8	80	80
9	70	70
10	50	50
Over 10	Remove and replace	Remove and replace

* The minimum area for pay reductions, including removal and replacement, shall be the full width of the paved lane and a minimum length of 10 lineal meters.

- 3.1.26 When deviations in excess of the above tolerances are found the pavement surface shall be corrected by methods satisfactory to the Engineer.
- 3.1.27 The completed pavement shall have an average density of ninety-eight percent (98%) and in no case shall any individual density test be less than ninety-six percent (96%) of the laboratory compacted density as determined by ASTM Designation D1559 or AASHTO T245, Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus, using a compaction of fifty blows for each face. The intent is that a long term durable product be provided. The following table represents payment reduction based on average density of cores not meeting minimum values.

COMPACTED DENSITY % OF MARSHALL	PAY FACTOR (%)
98 to 100	100
97.6 to 97.9	98
97.0 to 97.5	96
96.6 to 96.9	93
96.0 to 96.5	90
94.0 to 95.9	75
92.0 to 93.9	50
Less than 92%	Remove and replace

If a core density on any individual test is less than 96%, a pay reduction of 90% will be applied to a minimum area of 100 m².