



**TO:** VICTOR CARDENAS, CITY MANAGER  
**FROM:** AARON STAUP, CONSTRUCTION ENGINEER  
**SUBJECT:** REGIONAL CONCRETE SURFACE DETERIORATION  
**DATE:** MARCH 28, 2024

## MEMORANDUM

Mayor and Council –

Not what we wanted to hear regarding recent work on our concrete roads; however, our contractor appears to be completely invested to make the matter right. Please see the specifics below.

- Victor

Some recently reconstructed Novi roads are experiencing the industry-wide (at least in southeast Michigan) issue of severe concrete surface deterioration on both roads and curbing. Most of the confirmed damage has occurred with our Neighborhood Road Program (NRP), especially during the 2022 season. Several months after the concrete placement, staff and residents noticed a significant amount of pitting and scaling on the surface (see attached pics). So much so that the DPW had to send out street sweeping crews to remove the debris. Some residents have referred to the condition as "our roads are turning into gravel ones". Laramie Drive, Cumberland Drive/Ironside Court, Lancaster Court, and Gen-Mar Drive were hit the hardest.

Staff met with the NRP contractor, Mattioli Cement, last year to witness the scope of the damage. The contractor did not deny or try to deflect the blame and was ready to begin removal and replacement of the affected panels right away. The City asked the contractor to hold off immediate replacement and continue to monitor the situation to make sure the deterioration had run its course. This delay was certainly advantageous, as the pitting and scaling 'grew' considerably on the previously witnessed panels and seemed to spread to others that were not originally affected. At present staff can say with confidence the panels exhibiting this deterioration are well defined. There is no known topical solution for this issue and the only fix we are aware of is total removal and replacement of the affected panels of concrete.

For the last few months, the Engineering Division has been researching the problem to determine if it is specifically a Novi issue, or if other agencies are experiencing the same problem. Staff ascertained the City of Allen Park, City of Westland, and City of Livonia all have the same issues (some better and some worse). Recently a story ran on WWJ 950 News Radio on March 20<sup>th</sup> regarding the problem. The story was an interview with the Mayor of Allen Park, Gail McLeod, whereby announcing the wide-ranging problem and asking for the concrete industry to assume responsibility. The interview emphasized the additional fixes to their streets will greatly impact the adjacent residents, who will have to endure another reconstruction.

It appears the complete blame for the problem resides with the concrete suppliers and affiliated material source providers. Although no obvious proof exists, our industry sources believe there were significant alterations to the usual concrete mix designs that involved the use of inferior materials and/or changes in the volumes or weights of typical

ingredients. Concrete placement contractors, like Mattioli Cement, are obviously concerned about how these eventual fixes will be handled. They have agreements or contracts with both the suppliers and the municipal customers. The end game may or may not address time, labor, re-inspection, testing, etc. of the concrete replacements.

Staff met with Mattioli Cement and discussed the problem at length. Regardless of the possible fight our contractor may have with their concrete supplier, they are committed to replacing everything that has been affected and we expect a committal letter soon attesting to this expectation. Mattioli Cement even pledges to begin replacement work on Cumberland/Ironside, Lancaster Court and Gen-Mar this year (2024) and again on Laramie Drive in 2025. We also expect more discrete replacements on several other street segments, less impacted by the problem, sometime in 2025 and/or 2026.

Engineering will continue to monitor and facilitate replacement of the defective panels/roads, but the process may take a few construction seasons. Communication on the problem is currently being drafted and will be available on the website to answer questions and concerns from residents.