



**CITY OF NOVI CITY COUNCIL  
JULY 25, 2022**

**SUBJECT:** Consideration of approval of Change Order No. 1 to Mattioli Cement Company, Inc. for the 2022 Neighborhood Road Program – Concrete Streets in the amount of \$637,283.75.

**SUBMITTING DEPARTMENT:** Department Of Public Works – Engineering Division

<b>EXPENDITURE REQUIRED</b>	<b>\$ 637,283.75</b>
<b>AMOUNT BUDGETED</b>	<b>\$ 624,460.00 FY 2021-22 BA Rollover</b> <b>\$ 1,444,967.00 FY 2022-23 Budget</b> <b>\$ 2,069,427.00 Total</b>
<b>APPROPRIATION REQUIRED</b>	<b>\$ 0</b>
<b>LINE ITEM NUMBER</b>	<b>203-203.00-864.231</b>

**BACKGROUND INFORMATION:**

Spalding DeDecker and Testing Engineers and Consultants assisted the Engineering Division with developing a list of potential streets for the 2022 and 2023 Neighborhood Road Program (NRP). The program was divided into two contracts, concrete roads and asphalt roads. The programs were also advertised for a two-year contract to secure unit prices and lower the overall costs of bidding and design.

With the 2014 Neighborhood Road Program, our contractor removed and replaced nearly a third of the Cumberland Drive roadway while the remainder appeared to be in decent condition. It appears all the roadway suffers from a chemical condition called ASR or Alkali-Silica Reaction or more commonly known as “concrete cancer”. ASR is a deleterious swelling reaction that occurs over time in concrete between the highly alkaline cement paste and the reactive silica found in many aggregates. This chemical reaction causes the expansion of the altered aggregate by the formation of a soluble and viscous gel and ultimately causes spalling and loss of strength of the concrete. The rate of deterioration from ASR can vary greatly from location to location. The final stages of this reaction can take place in a rapid 10 years to a slow 40+ years. The viscous gel is normally not visible until the concrete has reached its total loss of structural integrity.

In just a couple years prior to this request, only 16 to 20 concrete panels exhibited this late stage ASR which meant the City's maintenance contract could handle that amount of work. One year later, the number of panels affected by this concrete disease had tripled and many more showed early signs before they would be past the point of simple maintenance. Therefore, the Maintenance Division requested Cumberland Drive be added to this years' concrete Neighborhood Road Program. Although, Ironside Court (landlocked by Cumberland Drive) doesn't show the same type of deterioration, it is still a PASER 4 rated street. Including Ironside Court with the reconstruction of Cumberland Drive will avoid the City having to mobilize a future contract for a small cul-de-sac street.

The contract administration and geotechnical engineering services related to these project additions will be granted to the following pre-qualified firms using the fee percentages in the Agreements for Professional Engineering Services and Geotechnical Engineering Services for Public Projects.

<b>Spalding DeDecker</b>			
Cumberland Drive and Ironside Court	Contract Administration	5.5% of the Change Order value (\$637,283.75 X 0.055)	\$ 35,050.61
	Crew Days	\$700 daily inspection fee x 58 days	\$ 40,600.00
<b>Testing Engineers &amp; Consultants, Inc. (TEC)</b>			
Cumberland Drive and Ironside Court	Material testing services	1.9% of the Change Order value (\$637,283.75 X 0.019)	\$ 12,108.39

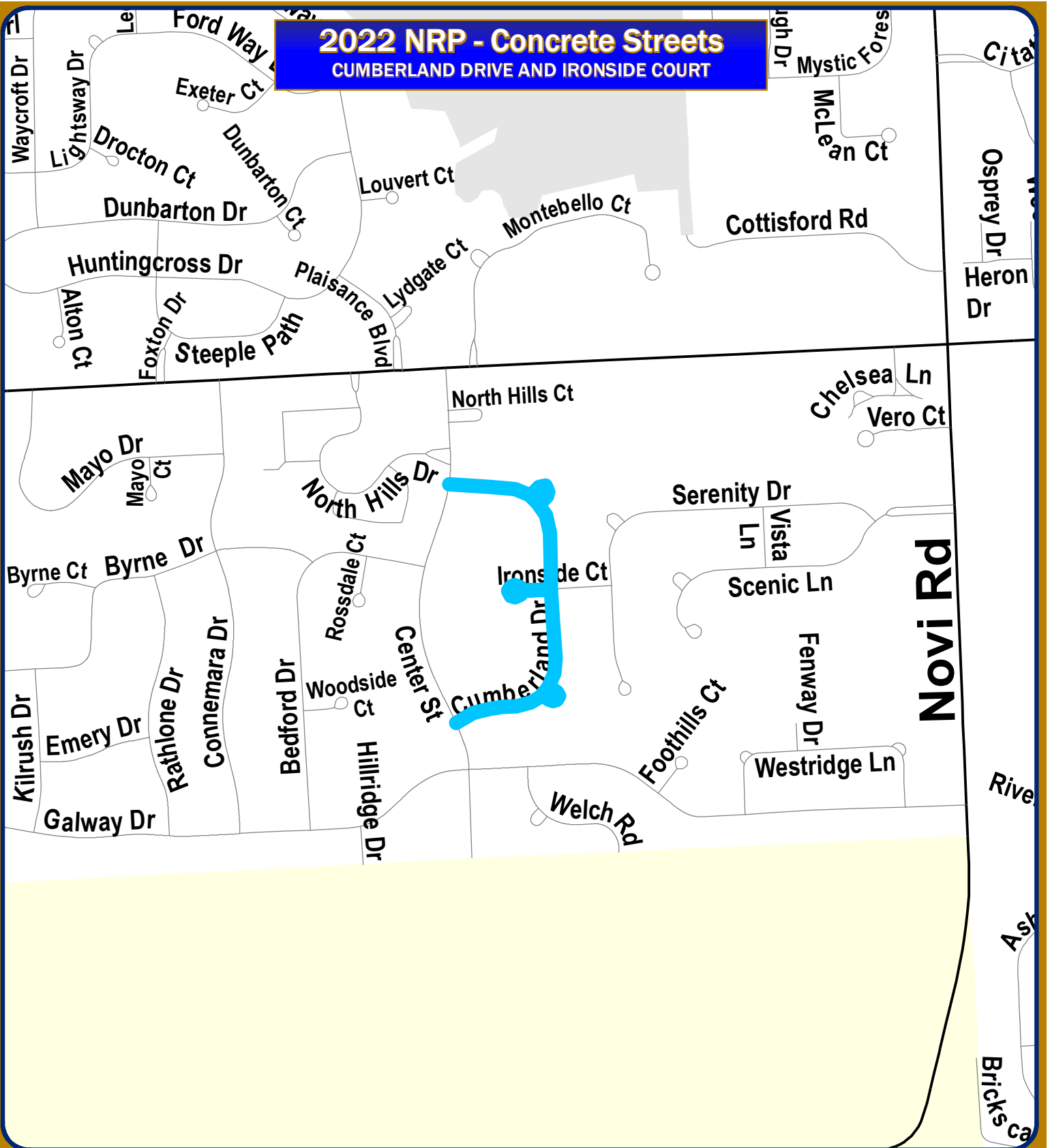
**RECOMMENDED ACTION:** Approval Of Change Order No. 1 to Mattioli Cement Company, Inc. for the 2022 Neighborhood Road Program – Concrete Streets in the amount of \$637,283.77.










# 2022 NRP - Concrete Streets

CUMBERLAND DRIVE AND IRONSIDE COURT



## Map Legend

-  Minor Road
-  Major Road
-  Expressway
-  City of Novi
-  Novi Township



## City of Novi

Engineering Division  
 Department of Public Works  
 26300 Lee BeGole Drive  
 Novi, MI 48375  
[cityofnovi.org](http://cityofnovi.org)



1 inch = 703 feet



Map Author: Aaron J. Staup  
 Date: 7/13/22  
 Project: 2022 NRP - Concrete Streets  
 Version #: 1

Amended By:  
 Date:  
 Department:

### MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.