



CITY OF NOVI CITY COUNCIL
JUNE 26, 2023

SUBJECT: Approval of the request from Parc Vista subdivision for a variance from Design and Construction Standards Section 11-68(a) to allow a flow of approximately 1,900 gallons per minute instead of the 2,000 gallons per minute required for single-family residential subdivisions.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division

BACKGROUND INFORMATION:

The Parc Vista development consists of a 44-lot residential subdivision proposing to install a water main extending west from the Ballantyne subdivision. Parc Vista is proposing two points of connection and an extension along the Eight Mile frontage, per ordinance requirements. However, since this site is at the western extremities of the City's water system without an additional secondary connection available, flow rates are limited. Based on a hydrant flow test conducted on February 14, 2023, the calculated flow rate available in this area would be approximately 1,900 gallons per minute (GPM), which falls below the ordinance standard of 2,000 GPM.

This future condition of lower available flow rates was identified and evaluated in the 2014 Water Master Plan Update. Several projects were recommended at that time to address the need for improvements with additional development. One of the proposed improvements includes ~9,100 feet of water main along Eight Mile, Napier, and Nine Mile Roads (referred to as the Southwest Loop), which would increase flow rates by 400 GPM; thus, alleviating the flow concerns in this area. Now that development in this area is moving forward, staff anticipates including this project in the next Capital Improvement Plan (FY 2024-25 Budget).

Engineering Division staff approved this variance because there is no infrastructure the applicant can reasonably install to improve the flow rate to meet the standards. The City Attorney and the Community Development Department have also reviewed this request and have indicated no concerns. The Fire Marshal does not object to this development under the assumption that the additional water main infrastructure will be installed in the near future.

RECOMMENDED ACTION: Approval of the request from Parc Vista subdivision for a variance from Design and Construction Standards Section 11-68(a) to allow a flow of approximately 1,900 gallons per minute instead of the 2,000 gallons per minute required for single-family residential subdivisions.



Request for Variance Design and Construction Standards

Applicant Information

Name: Scott Hansen

Address: 26200 Town Center Drive
Suite 200, Novi, MI 48375

Phone No: 248-305-4020

Engineer Information

Name: Chris Rothhaar

Address: 311 N Main St, Ann Arbor, MI

Phone No: 989-488-0753

Applicant Status (please check one):

- Property Owner Developer Developer / Owner Representative
 Other _____

Project Name Parc Vista

Project Address/Location Eight Mile Road between Garfield Road and Napier Road

Variance Request Reduce Require Fire Flows for Development

Justification (attach additional pages if necessary)

Ordinance dictates that the minimum fire flows for single family residential developments are to be 2,000 gpm for 2 hours. The applicant conducted a hydrant test neighboring the site and the available flows were 1,897.5 gpm. The development will be extending the existing water main from the Ballantyne development to the east and looping to connect the Eight Mile Road water main to Ballantyne main. It is in the City's master plan to eventually loop the water main from Eight Mile Road to the existing main along Napier Road. Once this is complete, there will no longer be any low flow concerns.

INTERNAL USE

Date Submitted: _____

Code Section from which variance is sought: _____

Submittal Checklist: One (1) copy of plan on 8.5 x 11 size paper
 \$100 Filing Fee (No fee for driveway width variance requests)

Request Status: APPROVED DENIED

Authorized By: _____

Authorization Date: _____



CITY OF NOVI
Engineering Division

MEMORANDUM

To: Ben Croy, Department of Public Works
 Charles Boulard, Community Development
 Kevin Pierce, Fire Department
 Beth Saarela, City Attorney

From: Adam Yako, Engineering Division

Date: April 27, 2023


Re: Variance from Design & Construction Standards
 Parc Vista – Lower available water flow

Attached is a request for a Variance from the Design and Construction Standards. Please review for a future City Council Agenda. In accordance with Section 11-10 of the Ordinance, the following three conditions **must be met** for a variance to be granted by Council:

- 1) A literal application of the substantive requirement would result in exceptional, practical difficulty to the applicant;
- 2) The alternative proposed by the applicant would be adequate for the intended use and would not substantially deviate from the performance that would be obtained by strict enforcement of the standards; and,
- 3) The granting of the variance would not be detrimental to the public health, safety or welfare, nor injurious to adjoining or neighboring property.

Following review of the variance, check the appropriate box below and provide your signature. If you have no basis for recommending either approval or denial, please check the "No Exceptions Taken" box. If you are recommending approval or denial of the request, **please also complete the matrix on the reverse of this form.** Please return to my attention by **July 2, 2021.**

ROUTING

Delivered To	Returned On	RECOMMENDED ACTION			Signature
		Approval*	Denial*	No Exceptions Taken	
Ben Croy (Engineering)	5/12/2023	X			
Charles Boulard (Comm Dev.)					
Kevin Pierce (Fire Department)					
Beth Saarela (City Attorney)					

*** SEE REVERSE**

If recommending approval or denial, please complete the following:

1. Would a literal application of the substantive requirement of the ordinance result in an exceptional, practical difficulty to the application? Yes No

Explain:

The proposed design for this development provides a looped water system. It is not feasible to provide any additional looping or further connections to help increase flow and/or pressure.

2. Would the alternative proposed by the applicant be adequate for the intended use and not deviate from the performance that would be obtained by strict enforcement of the standards? Yes No

Explain:

The hydrant flow test conducted indicates ~1,900 gallons per minute (GPM) will be available, which is only 5% less than the 2,000 desired flow rate.

3. Would granting the variance not be detrimental to public health, safety, or welfare, and not injurious to adjoining or neighboring property? Yes No

Explain:

The Public Safety Department/Fire Marshal has reviewed this request, and finds the proposed design acceptable, with the understanding that future infrastructure improvements are planned to increase flow in the near future. The City plans to initiate a project involving the installation of additional water main (along 8 Mile and Napier) to create a looped system that will increase flows by an estimated 400 GPM.

ELIZABETH KUDLA SAARELA
esaarela@rsjalaw.com

2755 Executive Drive, Suite 250
Farmington Hills, Michigan 48331
P 248.489.4100 | F 248.489.1726
rsjalaw.com



ROSATI | SCHULTZ
JOPPICH | AMTSBUECHLER

May 3, 2023

Adam Yako, Project Engineer
City of Novi
Field Services Complex
26300 Lee BeGole Drive
Novi, MI 48375

Re: *Parc Vista Development*- Variance from Design and Construction Standards
Reduced Fire Flows for Development

Dear Mr. Yako:

Our office has reviewed the proposed request for a variance from the City's Design and Construction Standards as set forth in the City of Novi Code of Ordinances 11-68 (a)(1) for purpose of providing a lower fire flow than the required 2000 gpm for single-family developments, by temporarily providing flow from the adjacent development at 1,897.5 gpm, which states in relevant part:

(a) General requirements.

(1) Generally, the distribution system in all developments requiring more than eight hundred (800) feet of water main shall have a minimum of two (2) connections to a source of supply and shall be a looped system. Exceptions will be made in those instances when a second connection is not available, or it is not otherwise possible to provide a looped system, provided the system is designed to accommodate a second connection when made available. The ability to serve at least two thousand (2,000) gallons per minute in single-family detached residential; three thousand (3,000) gallons per minute in apartment, cluster residential and similar complexes, institutional and school areas; and at least four thousand (4,000) gallons per minute in office, industrial and shopping centers is essential. Water mains are required to be extended along all road frontages abutting the proposed development at the direction of the city in accordance with the City of Novi Master Plan current edition for water main construction.

All variances from the standards must be requested and are approvable in accordance with the procedure and standards set forth in the City of Novi Code of Ordinances. Section 11-10 of the Ordinance Code permits the City Council to grant a variance from the Design and Construction Standards when a property owner shows all of the following:

- (b) A variance may be granted when all of the following conditions are satisfied:
- (1) A literal application of the substantive requirement would result in exceptional, practical difficulty to the applicant;
 - (2) The alternative proposed by the applicant shall be adequate for the intended use and shall not substantially deviate from the performance that would be obtained by strict enforcement of the standards; and
 - (3) The granting of the variance will not be detrimental to the public health, safety or welfare, nor injurious to adjoining or neighboring property.

The applicant has indicated a looped main from Eight Mile to Napier Road is in the City's Master Plan and will eventually alleviate the variance.

In the event that City Council finds that the standards for a variance or waiver have been met, our office sees no legal impediment to granting the variance, subject to the condition that the Engineering Division finds that the alternative proposed by the applicant is adequate for the intended use, will not substantially deviate from the performance of the 2000 gpm flow and does not negatively impact the public health, safety or welfare, nor injurious to adjoining or neighboring property.

Please feel free to contact me with any questions or concerns in regard to this matter.

Very truly yours,

ROSATI SCHULTZ JOPPICH
& AMTSBUECHLER PC



Elizabeth Kudla Saarela

EKS

C: Cortney Hanson, Clerk
Charles Boulard, Director of Community Development
Kevin Pierce, Fire Department
Ben Croy, City Engineer
Humna Anjum, Project Engineer
Thomas R. Schultz, Esquire



CITY OF NOVI
Engineering Division

MEMORANDUM

To: Ben Croy, Department of Public Works
 Charles Boulard, Community Development
 Kevin Pierce, Fire Department
 Beth Saarela, City Attorney

From: Adam Yako, Engineering Division

Date: April 27, 2023

Re: Variance from Design & Construction Standards
 Parc Vista – Lower available water flow

Attached is a request for a Variance from the Design and Construction Standards. Please review for a future City Council Agenda. In accordance with Section 11-10 of the Ordinance, the following three conditions **must be met** for a variance to be granted by Council:

- 1) A literal application of the substantive requirement would result in exceptional, practical difficulty to the applicant;
- 2) The alternative proposed by the applicant would be adequate for the intended use and would not substantially deviate from the performance that would be obtained by strict enforcement of the standards; and,
- 3) The granting of the variance would not be detrimental to the public health, safety or welfare, nor injurious to adjoining or neighboring property.

Following review of the variance, check the appropriate box below and provide your signature. If you have no basis for recommending either approval or denial, please check the "No Exceptions Taken" box. If you are recommending approval or denial of the request, **please also complete the matrix on the reverse of this form.** Please return to my attention by **July 2, 2021.**

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Ben Croy (Engineering)					
Charles Boulard (Comm Dev.)					
Kevin Pierce (Fire Department)					
Beth Saarela (City Attorney)	5/3/23			x	/s/ Beth Saarela

*** SEE REVERSE**

If recommending approval or denial, please complete the following:

1. Would a literal application of the substantive requirement of the ordinance result in an exceptional, practical difficulty to the application? Yes No

Explain:

2. Would the alternative proposed by the applicant be adequate for the intended use and not deviate from the performance that would be obtained by strict enforcement of the standards? Yes No

Explain:

3. Would granting the variance not be detrimental to public health, safety, or welfare, and not injurious to adjoining or neighboring property? Yes No

Explain:



CITY OF NOVI
Engineering Division

MEMORANDUM

To: Ben Croy, Department of Public Works
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Kevin Pierce (Fire Department)					
Beth Saarela (City Attorney)					

*** SEE REVERSE**

FLOW TEST SUMMARY REPORT page 1

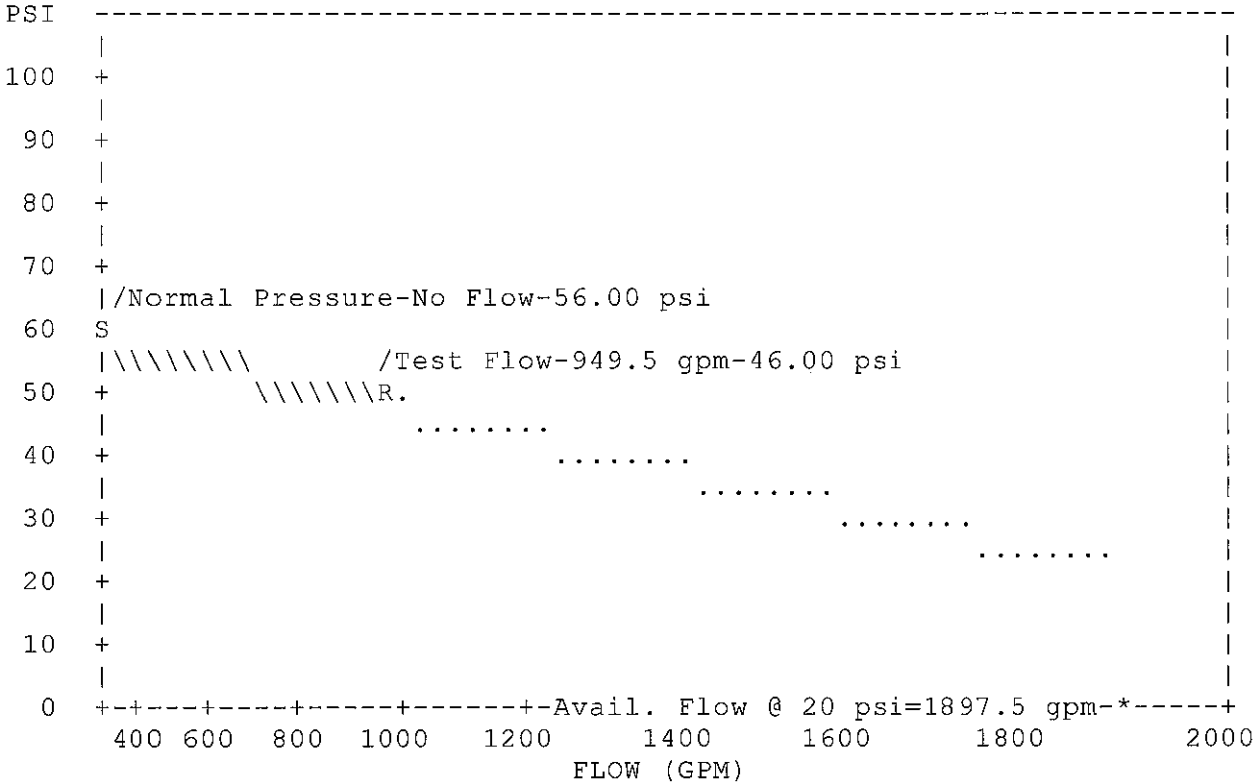
LOCATION: PARC VISTA

DATE:

TIME:

Static Hydrant Number:	1	Flowing Hydrant Number:	2
Elevation:	1	Elevation:	1
Dist. Between Hydrants:	300		
Diameter of Main:	8		
Outlet Diameter:	2.50 in	Number flowing: 1	Coeff.: 0.90
Static pressure:	56.00 psi	Residual pressure:	46.00 psi
Pitot Reading:	32.00 psi	Flow:	949.5 gpm
Flow at 20 psi:	1897.5 gpm		

GRAPH:



NOTES:

- (1) Flowing hydrant is assumed to be on a circulating main or downstream of the pressure test hydrant on a dead-end system.
- (2) Flow analysis assumes a gravity flow system with no distribution pumps and having no demand, other than the test flow.
- (3) Distance between hydrants, elevations & main diameter are for information only.

