

ELMWOOD TOWNSHIP FIRE AND RESCUE DEPARTMENT

10090 EAST LINCOLN ROAD, TRAVERSE CITY, MI 49684

PHONE: (231) 941-1647 / FAX: (231) 941-9927

TO: Planning Commission, Charter Township of Elmwood
Sarah Clarren, Planning and Zoning Administrator, Charter Township of Elmwood

FIRE DEPARTMENT SITE PLAN REVIEW – SUPPLEMENTAL REVIEW

REVIEW DATE: January 27, 2023 **REVIEWED BY:** Keith Tampa, Fire Chief

PROJECT NAME: Wellevity LLC
LOCATION: 0 S. Timberlee Dr., 0 S Timberwoods Dr., 10901 and 10800 S. Cottonwood Rd.
PROP. TAX ID: 004-113-014-26, 004-113-014-16, 004-113-014-29, 004-113-014-51
APPLICANT: Wellevity, LLC

This is a follow up review to my original review, which I have attached to this memo. The purpose of this memo is to further address recommendation 3 as stated within my 12/20/2022 memo per the request of Marc McKellar, an attorney for the proposed project. The request was submitted to me by Attorney McKellar via email on 1/10/2023.

The request was for an increase in the slope of the drive from my original recommendation of 11% to 11.3%. This request was made based on design issues that the project engineers discovered that "...in order to get the road to never exceed 11% we are running into changes that could materially impact soil erosion and stormwater. But most importantly, the integrity of the road could be jeopardized, as a result of the side cut backs and washout potential. It would also be better to not disturb any compacted soils. We have been advised that the best solution for the road, the project and for the quality and integrity of the road for the apparatuses, is a design that will not exceed 11.3%. We recognize that 0.3 may not be a net result in slope much different, but the domino effect of getting those few areas below it has greater consequences than expected."

In consideration of this request, I re-examined the plans and reviewed several reference documents for comparison: the Township's Private Road Ordinance (PRO), the International Fire Code (IFC), and standards from the National Fire Protection Association (NFPA). I also discussed the matter with Ken Schwerdt of Wade Trim, the Township's engineering firm.

My original research into an appropriate slope recommendation found maximum grades of 8-10%, depending on the reference. Since the Township's PRO did not apply, I chose to use the IFC as a standard as it is referenced within the Michigan Building Code. The IFC states:

1. 503.2.7 Grade. The grade of the fire apparatus access road shall be within the limits established by the fire code official based on the fire department's apparatus. IFC (2012) – Chapter 5 Fire Service Features – Section 503: *Fire Apparatus Access Roads*.
2. D103.2 Grade. Fire apparatus access roads shall not exceed 10 percent in grade.
Exception: Grades steeper than 10 percent as *approved* by the fire chief. IFC (2012) – Appendix D Fire Apparatus Access Roads – Section D103: *Minimum Specifications*.

The original slope of 11% was recommended to allow reasonable adjustment of the drive to the terrain without exceeding the grade of the access road, Timberwoods Drive. The exception would also only be needed in limited areas where the short steeper sections exist.

After consulting with Mr. Schwerdt, we concluded that the minimal increase of 0.3% should not have a noticeable effect on fire department access and still does not exceed the slope of Timberwoods Drive. The increase still only impacts those limited steep areas and appears to result in an overall improvement over the existing grade at the mid and upper areas of the drive, bringing the grade down from points as steep as 11.7% and 12.9%. In other words, the proposed elevation of 11.3% will be better than existing elevations. To ensure that our vehicles can make the trip, we did a trial run and had no issues with accessing the site under current conditions. Further supporting the exception is a drive that is fairly straight and lacks sharp curves and intersections. Additionally, there is a reasonable expectation that the installation of automatic fire protection in all structures and the provision of on-site water for fire suppression will result in a reduced risk to emergency vehicle traffic.

In conclusion, I am amending my initial review, which is attached to this Supplemental Review, to accept an increase in the drive slope to 11.3%. Under my original review dated 12/20/2022, under Fire Department Access / Water Supply Recommendations, #3 should now read as:

3. The slope of the entrance drive shall not exceed 11.3% at any point along its length.

ELMWOOD TOWNSHIP FIRE AND RESCUE DEPARTMENT
10090 EAST LINCOLN ROAD, TRAVERSE CITY, MI 49684
PHONE: (231) 941-1647 / FAX: (231) 941-9927

Office of the Fire Chief

TO: Planning Commission, Charter Township of Elmwood
Sarah Clarren, Planning and Zoning Administrator, Charter Township of Elmwood

REVIEW DATE: December 20, 2022 **REVIEWED BY:** Keith Tampa, Fire Chief

PROJECT NAME: Wellevity LLC
LOCATION: 0 S. Timberlee Dr., 10901 and 10800 S. Cottonwood Road
PROP. TAX ID: 004-113-014-26, 004-113-014-16, 004-113-014-29, 004-113-014-51
APPLICANT: Wellevity LLC

I have had the opportunity to review the submitted plans. The following recommendations are based on documents listed under Reviewed Documents.

The following are broken into two main groups, Fire Department access / Water Supply and Facilities. Fire Department access will encompass all roadways within the submitted plans. Facilities will encompass all enclosed facilities within the submitted plan that exceed 400 square feet.

Fire Department Access / Water Supply Recommendations:

1. Vehicle access is constructed and maintained in accordance with the International Fire Code including the maintenance of a 20' wide by 13.5' tall clear width for all roads.
2. The entrance gate shall be moved to the upper part of the entrance driveway to provide a more level surface.
3. The slope of the entrance drive shall not exceed 11% at any point along its length.
4. All driving surfaces must be capable of supporting the anticipated loads of fire apparatus. Driving surfaces includes reinforced "turf block" areas and culverts.
5. A water system shall be installed onsite to provide for fire suppression activities. The system can consist of wells, tanks, and/or impoundments.
6. The water system shall be capable of supporting both daily use and fire flow needs for the AFS and any minimum hydrant flow requirements.
7. The flows and pressures of the fire suppression system, including hydrants, shall be verified for compliance with codes and a report provided to the Fire Chief.
8. EFD should be consulted on the placement of fire hydrants, FDCs, and exterior control valves within the complex.
9. Signage shall be provided identifying roads and structures. The Fire Chief shall be consulted prior to installation.
10. A minimum of one key box ("Knox Box") shall be installed at the gated entrance. Additional boxes may be required at specific buildings to support fire department access.

ELMWOOD TOWNSHIP FIRE AND RESCUE DEPARTMENT

10090 EAST LINCOLN ROAD, TRAVERSE CITY, MI 49684

PHONE: (231) 941-1647 / FAX: (231) 941-9927

Facilities:

1. An automatic fire suppression system (AFS) shall be installed and maintained in all buildings.
2. A dry standpipe system shall be installed on the slope side of the lodge and wellness buildings. (Consult EFD on the final number and placement of connections)
3. All enclosed buildings within the submitted plan over 400sqft should be equipped with a fire alarm system in accordance with National Fire Protection Association (NFPA).

The rural nature of this project requires rapid notification of any fire and the ability to address a fire immediately, within the incipient stage. The greatest concern is the delay in response created by the remoteness of the project. It is imperative that the developer place focus on early notification systems, automatic fire suppression, maintained access, and the availability of onsite water.

Reviewed Documents

- Wellevity Pre-Application– Sherwood Design Engineers, Date: 7/15/2022, Project No: 21-112
 - Sheet C2, Site Fire Protection Plan - Overall
 - Sheet C2.10, Site Fire Protection Plan - Detailed
 - Sheet C2.20, Site Fire Protection Plan – Detailed
- Wellevity – Environmental Architects
 - Sheet C-1, Plan Profile (Entry Drive)
 - Sheet C-2, Sections 0+00 To 13+50 (Entry Drive)
 - Sheet C-1, S Cottonwood Drive Profile