

Please complete the following information as applicable to support your request. Use additional paper if necessary.

1. Quality:

See attached

2. Strength

See attached

3. Effectiveness:

See attached

4. Fire Resistance:

See attached

5. Durability:

See attached

6. Safety:

See attached

Additional evidence of proof: See attached

Applicant Signature:

Kurt Zoubrigt

Date:

12/09/22

The above application has been reviewed and has been:

ACCEPTED

REJECTED

Signature:

Fire Official:

[Signature]

Date:

1/18/2023

Building Official:

Date:

12/02/2022

Santa Clara County Fire Department

Exception Request for Building Permit B22-0025

Property: 144 Wood Road, Los Gatos, CA 95030

Dear Sir / Madam:

This exception request application is per 14 California Code of Regulations (CCR) 1270.06 relative to building permit B22-0025. This building permit submitted December 8, 2021 is for the construction of a single family residence. In plan review comments dated February 3, 2022, June 27, 2022 and November 30, 2022 (attached) Santa Clara County Fire Department (SCCFD) noted that the application should satisfy requirements pursuant to California Public Resources Code (PRC) 4290.

Specifically, in the most recent plan review comments dated November 30, 2022 SCCFD noted that requirements related to PRC 4290 should be addressed in the following areas:

- Grades
- Radius
- Turnaround

Through consistent communication with representatives from SCCFD, the applicants believe that they have sufficiently addressed the requests for information related to code requirements with the exception to requirements related to these three areas. As such, the exception request reviews potential deficiencies related to the grades, radius and turnaround requirements and presents and defines mitigating measures.

Grades

In its plan review letter dated November 30, 2022 SCCFD noted under point number four that: “(a) At no point shall the grade for all roads and driveways exceed 16 percent. (b) The grade may exceed 16%, not to exceed 20%, with approval from the local authority having jurisdiction and with mitigations to provide for same practical effect.”

Based on feedback from SCCFD representatives, the applicants had a third party professional surveying firm conduct a comprehensive topographic survey of Wood Road leading from Santa Cruz Avenue to the subject property.

The survey (attached) shows that the distance from the intersection of Wood Road and South Santa Cruz Avenue is approximated at 1,737 feet. The average grade across the 1,737 feet is 14.97% and more than 65% of Wood Road has a grade below 15 percent. There are, however, segments of road with grades up to 19%.

Dividing the road into seven different segments (or sections) with straight paths shows the following, beginning from South Santa Cruz Avenue:

- Section 1: 170 feet in length with 10.00 percent grade
- Section 2: 412 feet in length with 12.14 percent grade
- Section 3: 220 feet in length with 19.09% grade
- Section 4: 240 feet in length with 12.92% grade
- Section 5: 210 feet in length with 19.05% grade
- Section 6: 175 feet in length with 19.43% grade
- Section 7: 310 feet in length with 14.85% grade

Reviewing the section analysis shows that three of the sections exceed the 16 percent stipulated in the requirement, however do not exceed 20 percent.

Re-engineering the road to get these sections of road below 16% is not feasible due to significant topographical constraints. Reducing the grade would require lengthening the road and with significant geological mass on either side of the road in these sections, it is not feasible to create additional curvature in the road such that road lengthening and associated grade reduction might be achieved. Additionally, introduction of additional curvature to the road would result in tighter radii and create a new conflict with the stated requirements. Additional curvature would also make it more difficult for fire apparatus navigation.

As such, mitigating measures have been evaluated to support acceptance of road grades in excess of 16 percent across certain sections of Wood Road. In the proposed (final) State Minimum Fire Safe Regulations (<https://bof.fire.ca.gov/regulations/proposed-rule-packages/>), section 1273.04 notes that for roads with grades of 16 to 20 percent that they satisfy the requirement if they have been treated to prevent slippage and highlights paving as a mitigating factor. Wood Road has incorporated paving from South Santa Cruz Avenue up to the property in question, which serves as a mitigating factor for the sections evaluated as more than 16 percent grade.

We have also included a SCCFD approved turnout at our proposed new driveway entrance and the applicants will not install a driveway gate, so there will be no obstructions for the turnout (attached). Permit plans have been revised to indicate that no gate shall be installed in the driveway. The turnout serves as additional mitigation to the grade, as it is designed to allow fire apparatuses to more easily navigate the road.

Radius

In its plan review letter dated November 30, 2022, SCCFD noted under point number five that: (a) No road or road structure shall have a horizontal inside radius of curvature of less than fifty (50) feet. An additional surface width of four (4) feet shall be added to curves of 50-100 feet radius; two (2) feet to those from 100-200 feet.

As part of the previously referenced third party professional survey, radii along Wood Road from South Santa Cruz Avenue to the subject property were assessed. The radii demonstrate broad compliance with requirement as noted below by segment (or section) and depicted in the attached survey:

- Section 2: Radius of 188.2 with additional two feet surface width
- Section 3: Radius of 60.3 with additional four feet surface width
- Section 4: Radius of 114.6 with additional two feet surface width
- Section 4: Radius of 59.1 with additional four feet surface width
- Section 5: Radius of 54.4 with additional four feet surface width
- Section 5: Radius of 101.1 with additional two feet surface width
- Section 7: Radius of 179.0 with additional two feet surface width

These are the primary radii along the stretch of road that fire apparatuses would need to navigate for site access and each demonstrates compliance with the radius requirements.

There is one more radius that appears at the initial access / entrance to Wood Road from South Santa Cruz Avenue. This radius measures 36.7 feet, which is below the 50 feet requirement.

Re-engineering this section of road (section 1) to increase the radius to 50 feet is not feasible due to significant constraints. The entrance to the road would need to be pushed out in the Northeast direction, into significant topography and geological mass, which is not feasible. The push out would also disrupt sidewalks, trees and electrical systems that are in place. The road push out would require significant disruption to private lands, which is not feasible for the applicants. It would also require re-engineering of South Santa Cruz Avenue at the connecting point.

Mitigating measures have been evaluated and the width of Wood Road leading into the radius in question provides significant mitigation. The width of Wood Road leading into the radius junction measures over 30 feet, providing significant space for navigation. Practical evaluation (discussed further below) demonstrated confirmation of ability for successful navigation of a fire apparatus.

Turnaround

There is a SCCFD turnaround at the driveway of 138 Wood Road that is listed in a recorded easement #23549384, recorded January 3, 2017 (attached), which provides another point that enables fire apparatuses to circumnavigate the road and serves as a mitigating factor.

As a practical evaluation of current road conditions, SCCFD had a fire apparatus drive up and down Wood Road and turn around at the terminus. The apparatus was able to navigate the entire road segments successfully.

The applicants have dutifully responded to all inquiries regarding its building permit submission and believe they should be granted an exception based on the cited mitigations.

We appreciate the consideration.

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