



HAYWARD USKOSKI
& ASSOCIATES

MEMORANDUM

To: City of La Center
From: Valerie Uskoski, PE
Date: December 13, 2021
RE: Stephens Hillside Farm – Road Modification for intersection spacing

Hayward Uskoski & Associates, Inc. (HUA) is submitting this engineering Design Modification on behalf of New Tradition Homes (the applicant) to request relief from intersection spacing standards along W 19th St and W 20th Drive for the Stephens Hillside Farm Subdivision project, which is undergoing a reconfiguration as part of a Post Decision Review application. Relief is necessary due to the topographical constraints of the site and will have no adverse impacts to the roadway networks function. The modification meets the approval criteria of the La Center Engineering Standards (LCES) section 1.16(D) and thus warrants approval.

W 19th St and W 20th Drive are proposed roadways with a design speed limits of 25 mph. The roadways are proposed to follow the Rural Major Collector and Local Access standards respectively which are set forth in Table 2.1 Street Design Standards.

The intersection standards of 2.14 Intersections and Curb Returns allow a maximum centerline offset for both Rural Major Collector and Local Access roads of 500 feet. The applicant is requesting relief to allow an increased intersection spacing between proposed streets.

LCES 1.16(D) outlines the approval criteria for a road modification, which is as follows:

The City Engineer may grant a modification to the adopted specifications or standards when any one of the following conditions are met:

- 1. Topography, right-of-way, existing construction or physical conditions, or other geographic conditions impose an unusual hardship on the applicant and an equivalent alternative which can accomplish the same design is available.*
- 2. A minor change to a specification or standard is required to address a specific design or construction problem which, if not enacted, will result in an unusual hardship.*
- 3. An alternative design is proposed which will provide a plan equal to or superior to these standards.*
- 4. Application of the Engineering Standards to the development would be grossly disproportional to the impacts created.*

The following narrative details how the application meets the approval criteria set forth in the Engineering Standards and thus warrants approval.

Criteria to Grant Modification

1. *Topography, right-of-way, existing construction or physical conditions, or other geographic conditions impose an unusual hardship on the applicant and an equivalent alternative which can accomplish the same design is available.*

Existing topography and physical conditions make compliance impractical for the circumstances. The project has been reconfigured as part of a Post Decision Review application so that the layout responds better to the existing topography of the site which drops steeply from the north east corner to a creek following the south property line. Steep slopes of between 15-25% are found on site which preclude the inclusion of roadways in locations on site. W Bluebird Ave has been located as far east to provide a roadway grade of less than 15% and remain in compliance with block length spacing to W Avocet Ave to the east. W Dove Ave is proposed in the same location as the approved plan due to offsite access requirements to a neighboring parcel to the north. The project is also providing another access location to a property to the north, close to the outparcel, which is significantly encumbered by critical areas. As the locations of roads are restricted by physical conditions and requirements based on the approved plan, the applicant is required to provide roadways in locations which lead to an inability to comply with street spacing standards. Additional cross circulation which would be excessive given the circumstances. The proposed reconfiguration provides significantly improved cross circulation over the approved plan as described below.

2. *A minor change to a specification or standard is required to address a specific design or construction problem which, if not enacted, will result in an unusual hardship.*

The request to increase block size standards is related to one block. Street spacing along W 19th St is approximately 617 feet and 599 feet along W 20th Drive in the western-most block in the subdivision. When viewed from a project-wide perspective, the average roadway spacing along W 19th is 438 feet, which is compliant with the standards and meets the intent of the code. Along W 20th Drive the average block length is 516 feet when considering the cul-de-sac as a block which is only minorly uncompliant but would not be noticeable when traversing the development. The average spacing through the development meets the intent of the code.

Adding additional north-south streets to meet block length requirements would not improve circulation and transportation efficiency within the subdivision and may cause additional capacity and turning movement issues for W 19th St in the future when the roadway eventually serves the area to the west of the project site and is used by a significantly greater amount of vehicles. Other standards, such as the one used in the Clark County jurisdiction, require a minimum intersection spacing of 500 feet for Rural Major Collectors to limit such turning movement conflicts and provide fewer connection points onto roads of higher classification. Relief to the standards would eliminate additional, obsolete cross circulation roadways, provision of which causes an unusual hardship though additional design and construction requirements for no reasonable gain to the area.

The issue of intersection spacing is not a self-imposed hardship. The roadways have been located based on existing agreements, location of subject property lines and as a response to the topography of the site.

3. *An alternative design is proposed which will provide a plan equal to or superior to these standards.*

The approved plan from the original subdivision application achieved compliant block length standards by providing multiple cul-de-sacs along W 19th Street. While the approved plan achieved compliance with the spacing standards, the proposed layout further improves safety, circulation and allows future roadway extension through elimination of steep, disconnected dead-end streets. The proposed roadway layout provides a design superior to one deemed compliant with the standards and improves the project's ability to meet the goals of the Comprehensive Plan.

Safety is improved through the elimination of the cul-de-sacs close to the north property boundary of the site which were designed at greater than 12% in places. Additionally, emergency vehicles are provided multiple access opportunities when traversing the subdivision through the inclusion of additional circulation streets in case a street were to become blocked. Additional junctions on W 19th St could lead to further turning movement conflicts and would require additional City maintenance in the future.

4. Application of the Engineering Standards to the development would be grossly disproportional to the impacts created.

Application of the standards would be disproportional in this case. As discussed, the average roadway spacing proposed in the subdivision meets or just minorly exceeds the standards but meets the intent of the standard by providing good cross circulation connections, unlike the approved plan. Topography in the area severely limits the provision of roadways due to steep slopes. Providing additional cross circulation would not significantly improve safety or function of the roadway and may inhibit capacity in the future. The applicant would be required to provide additional streets, stormwater infrastructure and utilities if relief is not granted as well as dedicate potential lot area in a site which includes a significant amount of critical areas being preserved within critical area tracts. The application of the standards in this case would be disproportional to the impacts.

Conclusion

The modification request meets the criteria for modification as set forth by the La Center Engineering Standards Section 1.16 Design Modifications and thus warrants approval.