

To assist the City of Tacoma in its Land Use Compatibility and Aesthetics analysis, the City retained MAKERS to prepare a Visual Impact Assessment to identify impacts to open space, aesthetics and views from vantage points surrounding the existing golf course property. One aspect of this assessment was the preparation of a 3-D model. This 3-D model was used to prepare the figures contained in **Section 3.1.** of this DSEIS. The 3-D model was also used to prepare videos of the No Action Alternative (Alternative 1) and the Proposed Action (Alternative 2). The videos are included in this Appendix (see *Video Pathways Key Map and Appendix B View Analysis Video*). The views in the figures and in the video were selected to provide the best comprehensive representative of the variety of views, including territorial views from adjacent properties, views of the proposed development site, and views across the site to more distant or scenic viewpoints, such as the Cascade Mountains and Mount Rainier.

**How the Northshore View Analysis Model Was Composed  
and How to Interpret What You See in the Videos**

The 3-D model topography was created using two-foot contours from the City. The topography for the Proposed Action was provided by the Proponent via APEX Engineering, PLLC. The golf course (No Action - Alternative 1) and Proposed Action (Alternative 2) have different topography, as grading would be necessary for any new development. Therefore, two different topographic models were created to fit within the topography for the area surrounding the existing golf course. In weaving these different pieces to fit together, there are some minor peaks and valleys near the boundary line where the surrounding topography meets the Northshore study area that do not exactly relate.

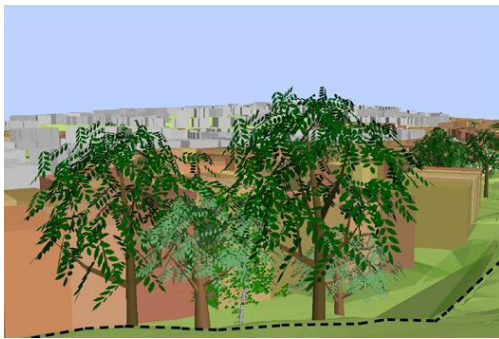
The massing for all of the buildings is represented as mass-blocks rather than with many varieties of peaked roofs. The image below shows a comparison of a building with a peaked roof and the mass-blocks. In all of the images, the existing buildings are grey and the Proposed Action buildings are a range of orange/brown colors. The height of the blocks is 35 feet, for both the existing and proposed homes and both the single-family homes and the townhouses.



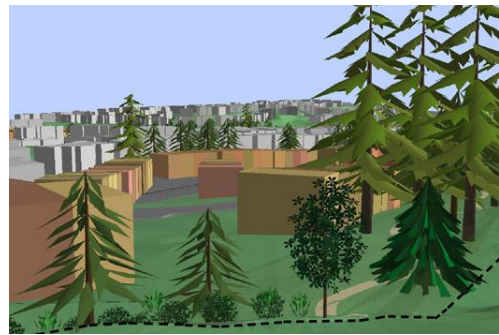
*Example of video image. "PATH" reference is in regard to the View Video Pathway shown in the view figures in Section 3.1 and in the Video Pathway-Key Map for this Appendix.* Within the model, the mass-block buildings often shield what would otherwise be visible. In reality, peaked roofs would expand visibility (i.e., result in a wider view spectrum). More of the golf course (i.e., the No Action view depictions) and proposed development (i.e., the Proposed

Action view depictions) would be visible from the existing homes than what this model represents. Conversely, more visible openness would possibly be available within the proposed development with peaked roofs than what this model represents. Simplifying the buildings as mass-blocks saved time and allowed for the widest range of building possibilities that may be developed by the Proponent to be visually analyzed within a similarly represented context.

Existing trees were located according to an aerial map. The variety and size of the trees were also estimated using the aerial image. The trees were grouped in six different categories to express the variety of existing trees without over-complicating the model. The existing tree categories are listed below (See III. TREES). As shown below, the trees included in the Proposed Action (Alternative 2) are shown as 20 to 30 feet tall, which would represent approximately 10 – 20 years' growth, depending on the variety of tree. The trees in the Open Space Transition Areas for the Proposed Action Alternative (Alternative 3) are in keeping with the landscape screening for each transition zone (See **Figure 3.1.40**). The height for the trees is 20 feet, representative of approximately 10 – 15 years' growth. The shrubs are shown at their respective required heights - 4 feet tall for visual screening and 6 feet tall for filtered screening. The spacing for the shrubs shows only half as many as would be required, due to model constraints.



Alternative 2 – Proposed Action



Alternative 3 - Proposed Action Alternative

## Assumptions for Creating the 3-D Model

### I. TERRAIN

Existing: Two-foot contours were used to create the TIN (Triangulated Irregular Networks) by using LIDAR data collected by the City of Tacoma.

Proposed: Two-foot contours were used to create the TIN, and were provided by Apex Engineering.

Existing + Proposed: Because there was not a perfect match between the two sets of contours, some weaving of the edges of the contours was necessary. This involved digitizing contour extensions within the existing layer to better line up with the proposed contours. This accounts for the occasional “rugged” terrain within a varying swath of land that connects the two separate terrain entities.

### II. BUILDINGS

Existing: 2002-2004 GIS data provided by the City of Tacoma was used to express and extrude the existing buildings. *Expression*: The existing homes are primarily expressed as grey massing, though in some cases expressed with colors to denote proximity to site alteration and degree of view alteration.

Proposed: CAD data of proposed parcel lines, setback assumptions, and zero-lot line grouping of townhouses were provided by Apex Engineering. The footprints for the single-family structures vary in their distance to the street edge (according to varying setbacks for garage/front porch orientation), and are orthogonal regardless of lot shape. All proposed single-family structures express the potential for maximum floor area and extrusion to the maximum height anticipated (35 ft.). These are all assumptions made per the guidance of Apex Engineering. The townhouse multi-homeplexes are expressed as single groupings in this mass model, though some differentiation of height may exist among groups once constructed. *Expression*: The proposed homes are primarily shown with a multitude of colors to express a diversity of form and/or materials. Some example views may include images with greater detail per photos provided by Apex Engineering.

Existing + Proposed: All buildings are extruded to their apex. The variety of rooflines among both the existing and proposed structures is instead shown as flat, with a maximum height equaling the top-most point of the roofline. There are more detailed examples of the proposed structures that include a front façade and roofline to better define the image of the proposed structures.

### III. TREES

Existing: The existing trees in the model were digitized using aerial images. The diversity of trees was then simplified to the following six categories:

- 20’ Small Evergreen
- 50’ Medium Evergreen
- 120’ Tall Evergreen
- 40’ Small Deciduous
- 60’ Large Deciduous
- 140’ Poplars

Saved: Existing trees within the CAD boundary of the proposed open spaces were isolated as a separate layer and included with all proposed views. A minimal reduction of

the original group of trees that could potentially be saved was then necessary according to drip line proximity to roadways, structures, and intense grading. The model expresses the best possible case for the number of trees that can be saved and errors on the side of showing more existing trees than would likely survive the stress of construction and site preparation.

Proposed: The proposed trees were created using the CAD landscape information. The diversity shown in the model follows the distinctions inherent in the information provided, though the actual representations do not necessarily match their intentions. Following is a list of trees represented as proposed:

- 20' Street Trees
- 15' Deciduous
- 30' Quick-growing Deciduous
- 20' Deciduous