PLANNING COMMISSION MEMORANDUM

RE: 182 Warner Parrott Rd. Oregon City, Oregon 97045
GLUA-20-00020:
CU-20-00002 Conditional Use / SP-20-00043 Site Plan and Design Review

The City of Oregon City does not have a code requirement for solar shading. For the purposes of this voluntary exploration, we have used the standards adopted by other Jurisdictions, such as the City of Lake Oswego, in order to determine what the maximum allowed height at the shade point for the proposed structure would be in order to demonstrate that although the structure is far below the maximum allowed building height for the R10 zone, it is also at or below the maximum shade point height that would be required in other jurisdictions. The following standards, tables, and formulas were used from the City of Lake Oswego development code Section 50.06.007 Solar Access:

c. Maximum Shade Point Height Standard

The height of the shade point shall comply with either subsection 2.c.i or ii of this section.

i. Basic Requirement

The height of the shade point shall be less than or equal to the height specified in Table 50.06.007-1 or computed using the following formula. If necessary, interpolate between the five-ft. dimensions listed in Table 50.06.007-1.

TABLE 50.06.007-1: CALCULATION OF HEIGHT OF SHADE POINT		
H	=	$\frac{(2 \times SRL) - N + 150}{5}$
Where H	=	The maximum allowed height of the shade point.
SRL	=	Shade reduction line (the distance between the shade point and the northern lot line); and
N	=	The north-south lot dimension; provided, that a north-south lot dimension more than 90 ft. shall use a value of 90 ft. for this section.

Provided, the maximum allowed height of the shade point may be increased one ft. above the amount calculated using the formula or Table 50.06.007-2 for each ft. that the average grade at the rear property line exceeds the average grade at the front property line.

TABLE 50.06.007-2: MAXIMUM PERMITTED SHADE POINT HEIGHT													
Distance to Shade Reduction Line from Northern Lot Line (in ft.)	**North-South Lot Dimension (in ft.)**												
	100+	**95**	**90**	**85**	**80**	**75**	**70**	**65**	**60**	**55**	**50**	**45**	**40**
70	40	40	40	41	42	43	44						
65	38	38	38	39	40	41	42	43					
60	36	36	36	37	38	39	40	41	42				
55	34	34	34	35	36	37	38	39	40	41			
50	32	32	32	33	34	35	36	37	38	39	40	41	42
45	30	30	30	31	32	33	34	35	36	37	38	39	40
40	28	28	28	29	30	31	32	33	34	35	36	37	38
35	26	26	26	27	28	29	30	31	32	33	34	35	36
30	24	24	24	25	26	27	28	29	30	31	32	33	34
25	22	22	22	23	24	25	26	27	28	29	30	31	32
20	20	20	20	21	22	23	24	25	26	27	28	29	30
15	18	18	18	19	20	21	22	23	24	25	26	27	28
10	16	16	16	17	18	19	20	21	22	23	24	25	26
5	14	14	14	15	16	17	18	19	20	21	22	23	24

Based on the formula these are he figures that were used:

- SRL (Shade Reduction Line; the distance between the shade point and the northern lot line) = 40 – This figure was taken from table 50.06.007-2 where the north-south lot dimensions is 100'+ and the distance from the shade reduction line (shown on the Shade Point Height Site Plan provided) being over 70'.
- N = 90 – this value was given based on the north-south lot dimension being over 90' in length and therefore the formula states to use the value of 90'.
- The formula then is computed as follows:
  H = {(2x40)-90+150} / 5

  H = (80-90+150) / 5

  H = 140 / 5 = 28'

H = 28’ (The maximum shade point height). The proposed building height at its highest point (on the northern side of the lot) is 28’-11-1/2” the majority of the building height is 27’-6” or less.

In the Solar Access code from the City of Lake Oswego under section 50.06.007.1.c that was also used for this study, it states that a lot automatically complies with the standard if the lot has a north-south dimension of 90’ or more (the subject property has a dimension of 199.78’); and if the front lot line is oriented within 30 degrees or less of a true east-west axis (the subject property is oriented to within 5 degrees or less of the east-west axis).

At the first planning commission hearing there was a concern about shading onto the property located at 18621 Boynton St. however, that property has a large tree that far exceeds the height of the proposed structure, in this development, that is located on that neighbor’s property. That tree will far exceed the shade creation it casts on that individual’s property than the proposed building given its height and width. The proposed building is located 12’-35’+ away from that property line at the location with the existing tree being located on the neighbor’s property between their yard and the proposed building addition. We do not believe that this proposal will cause any solar loss to the adjacent properties as outlined in this study and given the setbacks and heights of the proposed building.