

Exhibit A - Appellants

Executive Summary

Dark Sky Lighting Standard And Visual Character of Rural Area MCC 39.6850, MCC 37.7710, MCC 39.7735 (B) (2)

INTRODUCTION:

What is Dark Sky Lighting Standard?

According to **MCC 39.6850**: The purpose of Dark Sky Lighting Standards is **to protect and promote public health**, safety and welfare by preserving the use of exterior lighting for security and nighttime use and enjoyment of property while **minimizing the obtrusive aspects of exterior lighting uses that degrade the nighttime visual environment and negatively impact wildlife and human health.**

Also noted in MCLU staff report dated March 7, 2016, “**A dark sky is one of the many qualities that set rural areas apart from urban and suburban areas.** It also states that Multnomah County has the authority to require Dark Sky compliance for all new and existing lighting associated with a proposed development application.

What is definition of Visual Subordinate?

Multnomah County Land Use **MCC 39.7710** defines visually subordinate to be: The relative visibility of a wireless communication facility where the facility does not noticeably contrast with the surrounding landscape. Visibly subordinate facilities may be partially visible, **but not visually dominate in relation to their surroundings.**

MCC 39.7700 also states in its purpose for cell tower facilities that: The purpose and intent of 39.7700 through 39.7765 is to provide a process and uniform comprehensive standards for the development and regulation of wireless communications facilities. The regulations contained herein are designed to protect and promote public health, safety, community welfare, and the aesthetic quality of unincorporated Multnomah County as set forth within the State-wide Oregon Planning Goals and policies of the Comprehensive Plan; while at the same time not unduly restricting the development of needed wireless communications facilities and encouraging managed development of the evolving wireless communications network. It is furthermore intended that, to all extent permitted by law, the County shall apply these regulations to specifically accomplish the following:

- (A) Protect the visual character of the County from the potential adverse effects of wireless communications facilities development;
- (B) Insure (to protect) against the degradation of the County's scenic corridors and ridgelines and rural communities designated under local, state or federal law;

What FAA lighting is required for this proposed Cell Tower?

FAA requires a dual medium-intensity flashing lighting system that includes red lights (L-864) for nighttime and white lights (L-865) for daytime and twilight to be located use at the top of tower antenna at 156'. Red obstruction marker lights are required at mid-span.

Argument:

Multnomah County Land Use stated that in order for this cell tower to be permitted, the tower location must allow for it to blend with the surrounding existing natural setting and environment in such a manner so as to be visually subordinate. They also stated that the proposed tower protrudes out above the existing tree height so it was unclear to MCLU staff how this meets visual subordinate requirements.

BlackRock responded that the proposed cell tower will have concealment technology painted dark green. They also noted that it would be sited amongst mature trees and colored a dark green to blend with the surroundings. Lastly, they said that it will not be visually dominate in relation to the surrounding trees given the mature trees in the immediate area will provide significant screening.

We Disagree with BlackRock concerning visual aspects of the proposed cell tower:

The proposed Cell tower is designed to be 150' plus an additional 6' antenna for a total of 156'. The Douglas fir trees in this area according to US Department of Agriculture are an "Interior variety of Douglas fir and do not attain the growth rates, dimensions, or age of the coastal variety. Interior Douglas fir reach an average height of 100-to 120'." The Douglas fir in the area of proposed cell tower have an average height of 114' and will not get much higher than they already are. In contrast, BlackRock noted that Douglas fir reach a height of 175' – clearly **not in agreement** with US Department of Agriculture documented height for interior Douglas firs.

We strongly disagree with BlackRock's opinion that the cell tower will be visually subordinate. With the cell tower protruding 42' higher than the average tree in the surrounding area is one reason the tree will NOT be visually subordinate, but the fact that the cell tower is required to

have FAA marker/obstruction lighting on it at TWO heights will further exacerbates its visual dominance. At the 156' level there will be a continuous flashing white/red FAA marker light with the second light being red marker lights at mid-span. The continuous flashing red/white light will cause the cell tower to be visually dominant and **will not** blend in with surrounding trees. And since this tower protrudes 42' above the surrounding trees with a continuous blinking light, it will as a beacon drawing attention to it. We can't understand the requirement of the second marker light is at mid-span. At mid-span, it puts the lights well below the average height of surrounding trees. Again, it will noticeably contrast with surrounding landscape and is NOT subordinate. Because FAA flashing marker lights will be on the cell tower, it ultimately is not in compliance with **MCC 39.6850, MCC 39.7700 (A) (B), MCC 39.7710.**

In addition, MCLU received a visual study from BlackRock LLC with only pictures of the cell tower from different sites within a 5 mile radius during the day and not what the cell tower will actually look like in reality with continuous flashing FAA marker lights day and night. **MCC 39.7735** states to show graphic simulation of the appearance of the facility that ensures that various potential views are represented. The visual study **fails to show** in reality what the cell tower will actually look like with continuous flashing lights day and night. **The study submitted by BlackRock to MCLU does not show these potential views.**

MCC 39.7735 (B) (2) A visual study containing, at a minimum, a graphic simulation showing the appearance of the proposed tower, antennas, and ancillary facilities from at least five points within a five mile radius. Such points shall include views from public places including but not limited to parks, rights-of-way, and waterways and chosen by the Planning Director at the pre-application conference to ensure that various potential views are represented.

Lastly, Mr Hyle of BlackRock noted in his alternative site analysis that the location at Sunrise Park in Troutdale was not pursued for a cell tower site with the #1 noted reason being due to surrounding residents' view of Mt Hood being obstructed. If this was of concern for this urban neighborhood west of the Sandy River, **why is there no concern for the view of property owners on Chamberlain Hill and surrounding properties east of the Sandy River?**

The proposed tower will be situated 276' from the protected Columbia River Gorge Scenic Area boundary line. Unfortunately, the property owners who live in this protected area are not protected from this cell tower with continuous flashing white/red lights. It will destroy their unobstructed view of The Columbia River and surrounding territorial view westward. The area north of proposed cell tower construction is visited daily by many people just for the panoramic views day and night.

Conclusion:

Although FAA marker lights are required on the proposed cell tower, one dual medium-intensity red/white flashing light at 156' and red marker lights at mid-span, they cause the cell tower to be visually dominant even with concealment technology.

- The flashing lights will cause it **not to blend in** with surrounding trees and landscape
- The flashing lights will cause it **to be visually dominant**
- The flashing lights will cause it **to be incompatible** with character of our rural area east of the Sandy River
- The flashing lights **completely disrupts our dark skies**
- The flashing lights will **disrupt scenic views** for property owners located in the protected Columbia River Gorge Scenic area who live on Ogden Rd, Lampert Rd, and Seidel Rd as well as surrounding neighbors, and all the people who come to experience the beautiful territorial views , sunsets and celestial viewing. Also all Troutdale residents that face eastward toward Chamberlain Hill will have an obstructed dark sky view because of flashing red/white lights.

The visual study did not represent all potential views. It was only a comparison of before and after pictures at different locations around the neighborhood during daylight. It was unsuccessful at showing all potential views to include flashing red/white FAA marker lights and how obtrusive they will be both day and night.

It is concluded that the proposed cell tower is **not** ultimately compliant with **MCC 39.6850, MCC 39.7700 (A) (B), MCC 39.7710.**

Exhibits:

MAK1 – Drone pictures that show distinction between urban area west of the Sandy River versus rural area east of the Sandy River in addition to drone photos at 150' showing clearly how visible the cell tower with flashing lights will be.

MAK2 – A simulated picture of concealed cell tower with FAA flashing marker lights placed as noted by Verizon's elevation plan.

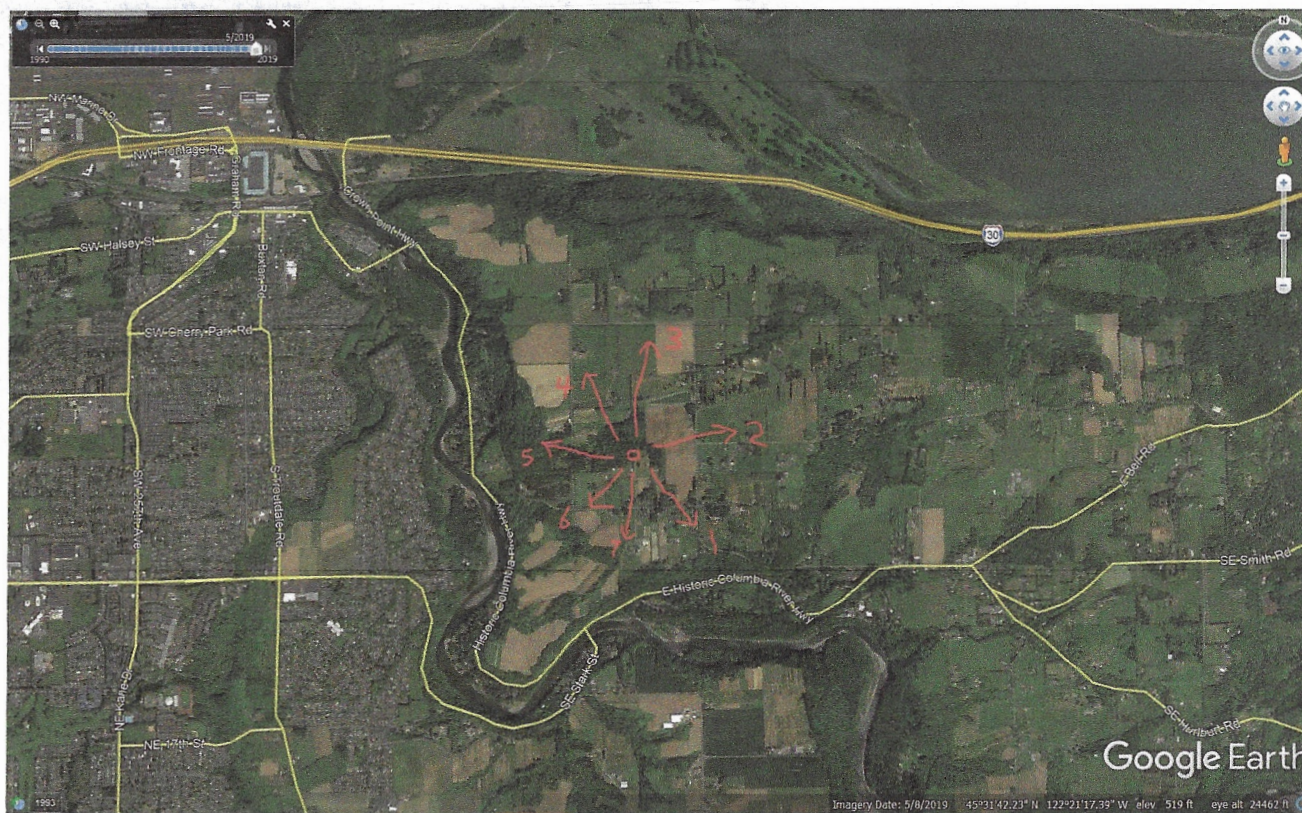
MAK3 – BlackRock's simple before and after photos.

MAK11 – US Department of Agriculture information about Douglas fir height

VIEW ALTERING CELL TOWER CONSTRUCTION ON WOODARD ROAD

Exhibit
MAK2

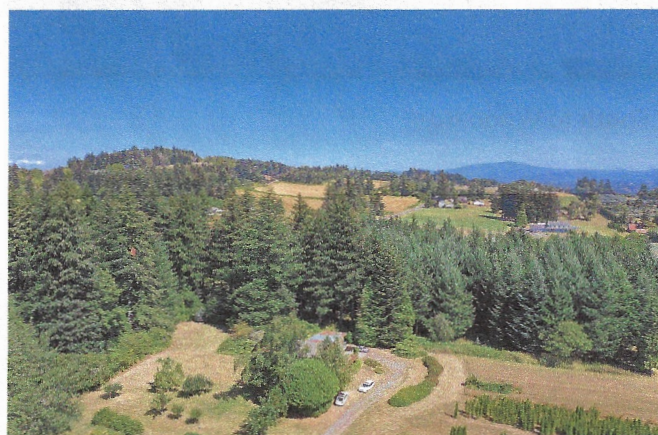
Note: Urban area west of Sandy River V.S.
rural area east of Sandy River
clear demarcation that needs to be protected.



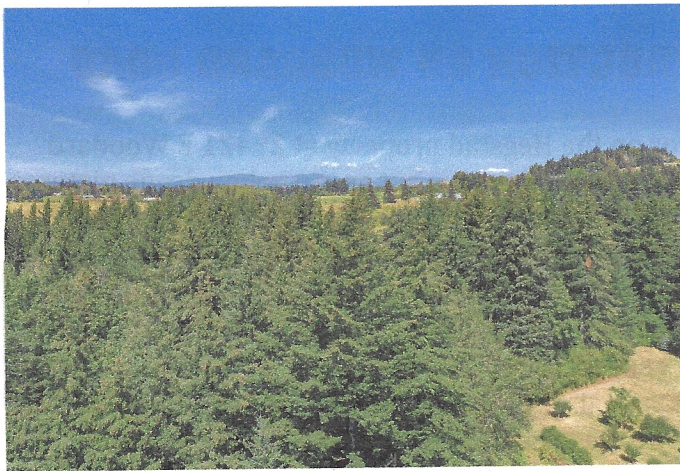
All photos below taken at 150 ft above ground, height of the proposed cell tower.



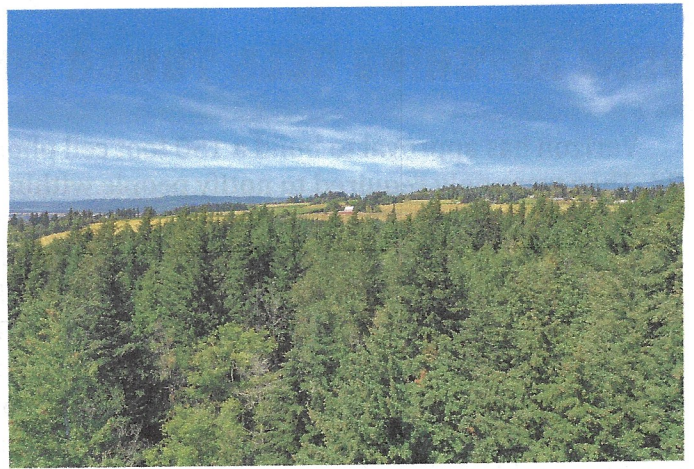
#1 Looking southeast towards Ogden Rd Hood in background



#2 East towards Ogden and Mershon



#3 North towards Lampert



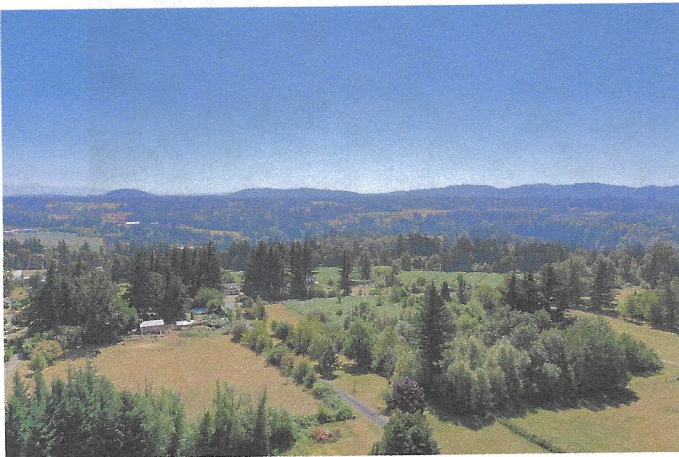
#4 Northwest towards corner of Seidl and Lampert



#5 West towards Troutdale



#6 Southwest towards Woodard



#7 South to Woodard

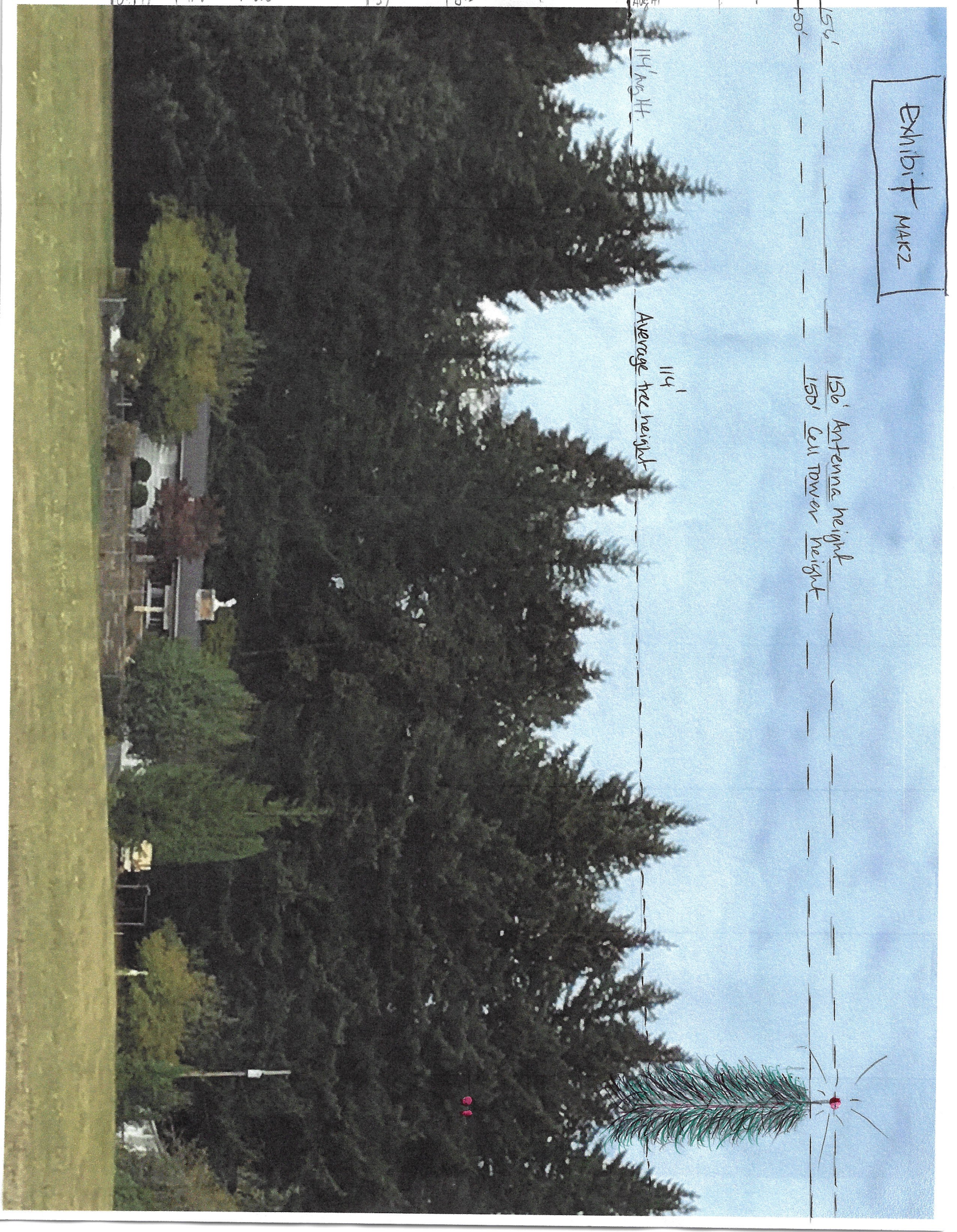
Exhibit Mark

156'

156' Antenna height
150' Cell tower height

114' avg Ht.

114'
Average tree height



mh
MORRISON HERSHFIELD

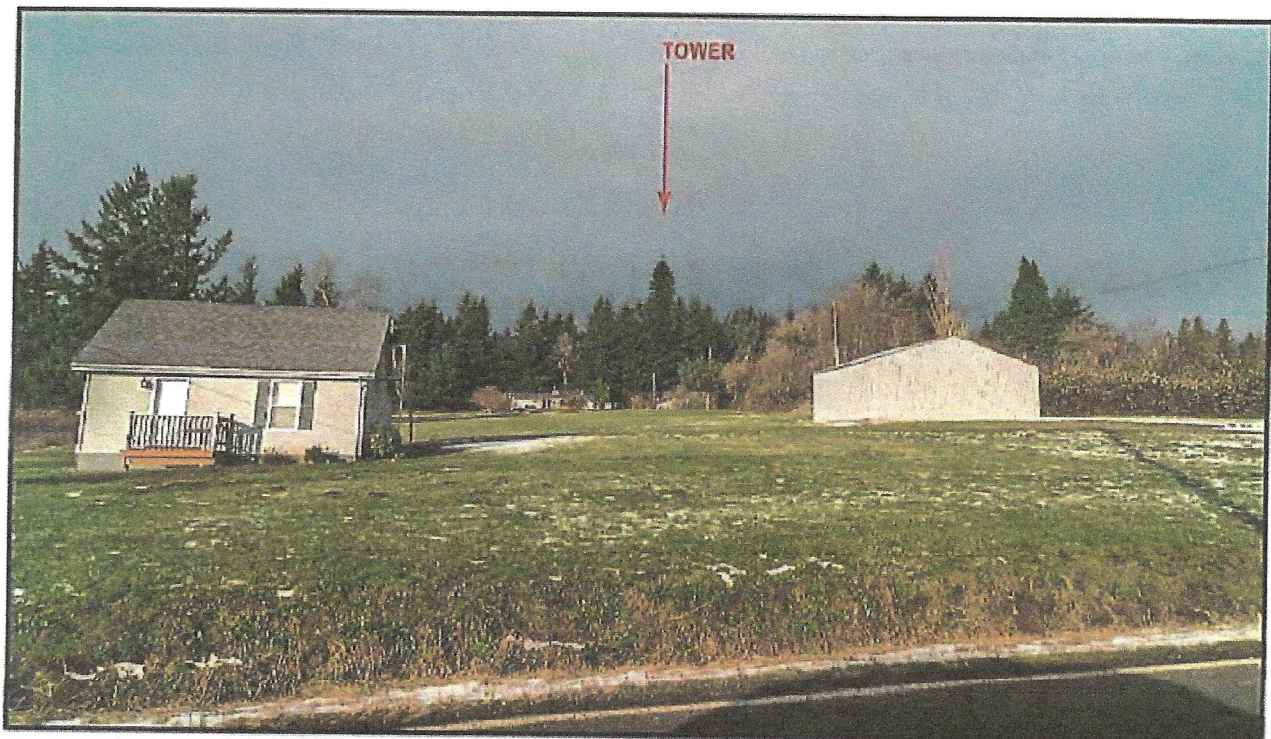
verizon✓

POR STINGER
29421 E. WOODARD RD., TROUTDALE, OR



CURRENT

VIEW #1 LOOKING NORTH
AT 29421 E. WOODARD RD.



PROPOSED

TIM BRADLEY IMAGING

Exhibit
MAK14

Imagery ©2020 Maxar Technologies, Metro, Portland Oregon, State of Oregon, U.S. Geological Survey, USDA Farm Service Agency, 1000 ft
Map data ©2020

Proposed
Cell Tower Site

Columbia River Gorge Scenic Area

Douglas-fir is very long lived; ages in excess of 500 years are not uncommon and some have exceeded 1,000 years. The oldest Douglas-fir of which there is an authentic record stood about 48 km (30 mi) east of Mount Vernon, WA. It was slightly more than 1,400 years old when cut (39).

Information about yields of coastal Douglas-fir under intensive management for an entire rotation is still limited. It is therefore necessary to rely either on estimates based on yields from unmanaged stands, or on yields from intensively managed stands in regions where Douglas-fir has been introduced as an exotic (12), or on growth models (16). If measured in cubic volume of wood produced, range in productivity between the best and poorest sites is more than 250 percent. Depending on site quality, mean annual net increments at age 50 vary from 3.7 to 13.4 m³/ha (53 to 191 ft³/acre) in unmanaged stands (39). Estimates of gross yields may increase these values as much as 80 percent, depending on mensurational techniques and assumptions. Comparisons of gross yields from unmanaged stands with those from managed stands of the same site indexes in Europe and New Zealand suggest that yields in managed stands will be considerably higher than would be indicated by estimates based on yields in unmanaged stands. Presumably, managed stands of coastal Douglas-fir can produce mean annual increments of 7 m³/ha (100 ft³/acre) on poor sites and exceed 28 m³/ha (400 ft³/acre) on the highest sites under rotations between 50 and 80 years (55). Although information on productivity of Douglas-fir in terms of total biomass production is still limited, indications are that it may reach 1000 t/ha (447 tons/acre) on high sites (22).

The interior variety of Douglas-fir does not attain the growth rates, dimensions, or age of the coastal variety. Site class for Rocky Mountain Douglas-fir is usually IV or V (site index 24 to 37 m or 80 to 120 ft at age 100) when compared with the growth of this species in the Pacific Northwest (1,43). On low sites, growth is sometimes so slow that trees do not reach saw-log size before old age and decadence overtake them. Interior Douglas-fir reaches an average height of 30 to 37 m (100 to 120 ft) with a d.b.h. between 38 and 102 cm (15 and 40 in) in 200 to 300 years. On the best sites, dominant trees may attain a height of 49 m (160 ft) and a d.b.h. of 152 cm (60 in) (23). Diameter growth becomes extremely slow and height growth practically ceases after age 200. Interior Douglas-fir, however, appears capable of response to release by accelerated diameter growth at any size or age (35). The interior variety is not as long lived as the coastal variety and rarely lives more than 400 years, although more than 700 annual rings have been counted on stumps (23).

Gross volume yields for Douglas-fir east of the Cascades in Oregon and Washington range from 311 m³/ha (4,442 ft³/acre) for site index 15.2 m or 50 ft (at age 50) to 1523 m³/ha (21,759 ft³/acre) for site index 33.5 m (110 ft) (14). In the northern Rocky Mountains, estimates of yield capabilities of habitat types where Douglas-fir is climax range from about 1.4 to 7 m³/ha (20 to 100 ft³/acre) per year to more than 9.8 m³/ha (140 ft³/acre) per year in some of the more moist habitat types where Douglas-fir is seral (46).

Information on yields of Douglas-fir in the southern Rocky Mountain region is scant. In New Mexico, a virgin stand of Douglas-fir (61 percent) and associated species averaged 182 m³/ha (13,000 fbm/acre). Occasionally, stands yield as high as 840 m³/ha (60,000 fbm/acre). Annual growth rates