

## Memorandum

**TO:** Martha Fritzie

**FROM:** Development Engineering, Robert Hixson

**DATE:** June 26, 2017

**RE:** Z0115-17-CP & Z0116-17-C, Duus Road Solar Facility  
T3S., R4E., Section 17, Tax Lot 105

### REVISED MEMORANDUM

**THIS MEMORANDUM SHALL BE SUBSTITUTED FOR THE JUNE 22, 2017, MEMORANDUM.**

Development Engineering staff have visited the site and reviewed the submitted materials, including the revised site plan with a revision date of June 1, 2017. We have the following comments:

#### Facts and Findings:

1. The applicant has proposed the construction of a photovoltaic solar powered commercial power generation facility. In addition, the applicant proposes a gated driveway approach intersecting with Duus Road, an onsite access road along the easterly portion of the property, and an onsite parking area. The proposed access location has changed from near the center of the property frontage to immediately adjacent to the easterly property line. This new access location creates additional challenges for the applicant that did not exist for the originally proposed access location.
2. A pre-application meeting to discuss the proposed development occurred on August 25, 2016.
3. Onsite improvements will require the review of construction plans by Engineering staff prior to construction, and inspection services will be required during construction. Therefore, the applicant shall obtain a Development Permit from the Engineering Division prior to the initiation of any construction activities associated with the proposed project.
4. The applicant is subject to the provisions of *Clackamas County Zoning and Development Ordinance (ZDO)* section 1007, pertaining to roads and connectivity, section 1015, pertaining to parking and loading, section 1203 pertaining to conditional uses, and section 1008 and Roadway Standards chapter four pertaining to surface water management. Additionally, the applicant is subject to other *ZDO*

requirements, the *Clackamas County Comprehensive Plan* and *Clackamas County Roadway Standards*.

5. The subject property is located adjacent to the northerly side of Duus Road just easterly from Eagle Creek Road. The Comprehensive Plan classifies Duus Road as a collector roadway.
6. Minimum frontage improvements on the Duus Road frontage include, but are not necessarily limited to, a paved driveway approach in accordance Roadway Standards Drawing D500, which shall also comply with the sight distance requirements of Roadway Standards section 240, and a gate located a minimum of 20 feet from the edge of pavement. The gate shall swing away from Duus Road or shall slide parallel to the road.
7. The applicant shall provide adequate on site circulation for the parking and maneuvering of all vehicles anticipated to use the parking and maneuvering areas in accordance with ZDO section 1015 and applicable Roadway Standards requirements. The applicant proposes a 20-foot wide driveway from Duus Road connecting to a 20-foot wide access road. These widths are in accordance with County standards and Engineering staff has no objection to the proposed 20-foot widths. The inside radii for turns associated with an onsite perimeter road shall be a minimum of 28 feet and the outside radii shall be a minimum of 48 feet, in order to accommodate fire apparatus.
8. Vehicle parking spaces shall comply with ZDO section 1015 dimensional requirements and shall be surfaced with screened gravel or better.
9. The applicant shall provide and maintain adequate intersection sight distances for the site driveway approach intersection with Duus Road in accordance with Roadway Standards section 240. A minimum of 665 feet of intersection sight distance shall be provided and maintained both easterly and westerly.

Some vegetation along the Duus Road frontage requires trimming and maintenance or removal to allow for the required intersection sight distance westerly. Easterly, at least one large tree limits the intersection sight distance to less than the minimum requirement of 665 feet. Due to the grade of Duus Road to the east and the tree's location, the tree canopy obstructs a portion of Duus Road for drivers entering onto Duus Road at the proposed driveway approach location.

In addition, without survey information the limits of the right-of-way are unknown and the tree may be in the right-of-way, on private property, or possibly on both. A sight line easement over the property to the east may also be required. Based on two site visits made by Engineering staff, which included measurements of sight distances, the minimum required intersection sight distances are feasible to achieve and maintain at many locations along the subject property frontage, but not necessarily at the location currently proposed by the applicant.

10. Applicant shall comply with County Roadway Standards clear zone requirements in accordance with Roadway Standards subsection 245. Based on Roadway Standards Table 2-11, the minimum clear zone, measured from the northerly edge of pavement, is 15 feet.
11. The applicant shall provide a copy of the storm water management plan details to the Engineering Division.
12. Based on ZDO subsection 1007.09 C3, the use qualifies for an exemption regarding transportation facilities concurrency. The principal safety concern relates to sight distances at the site driveway approach with Duus Road. Based on Engineering staff's site visits, sight distance measurements made by staff and the concurrency exemption, this proposal is able to comply with the requirements of ZDO subsection 1203.03 C.

**Preface to recommended conditions of approval:**

The preface language in the next two paragraphs which follow this paragraph shall not be interpreted as a condition of approval or included by Planning staff as a condition of approval.

The following items are project requirements from the Department of Transportation and Development's Development Engineering Division. These conditions of approval are not intended to include every engineering requirement necessary for the successful completion of this project, but are provided to illustrate to the applicant specific details regarding the required improvements that may prove helpful in determining the cost and scope of the project. These conditions are based upon the requirements detailed in the County's Comprehensive Plan (Comp Plan), the County's Zoning and Development Ordinance (ZDO) and the County's Site Development and Roadway Construction Standards (Roadway Standards). Additional requirements beyond those stated in the conditions of approval may be required. The applicant may discuss the requirements of the project with staff at any time.

The requirements specifically required by the Comp Plan and the ZDO cannot be modified by the Development Engineering Division. However, the requirements detailed in these conditions of approval, derived from the Roadway Standards, are based upon nationally accepted standards and engineering judgment and may be modified pursuant to Section 170 of the Roadway Standards. The applicant is required to provide sufficient justification to staff in the request. Staff shall determine if a modification is warranted.

**Development Engineering recommended conditions of approval:**

- 1) All frontage and onsite improvements shall be in compliance with *Clackamas County Roadway Standards*.

- 2) The applicant shall obtain a Development Permit from Clackamas County Department of Transportation and Development prior to the initiation of any construction activities associated with the project.
- 3) The applicant shall design and construct one minimum 20-foot wide paved driveway approach to Duus Road in conformance with Roadway Standards Drawing D500. The driveway approach shall be constructed at a location where the minimum required intersection sight distances are feasible to achieve and maintain both easterly and westerly. Storm water runoff shall not be permitted to flow over the paved driveway approach onto Duus Road.
- 4) If the applicant chooses to gate the driveway approach, the applicant shall design and construct the gate a minimum of 20 feet from the northerly edge of pavement and the gate shall either swing back into the property, away from Duus Road, or shall slide parallel to Duus Road.
- 5) The applicant shall design and construct a 20-foot wide access road approximately as shown on the submitted revised preliminary site plan. Turn and curve radii shall comply with local Fire District requirements which require a minimum 28-foot inside radius and a minimum 48-foot outside radius for a 20-foot wide road. The access road shall comply with ZDO subsection 1015.03 C and Roadway Standards Drawing R100 in regards to structural section and the required surfacing with screened gravel or better.
- 6) The applicant shall provide a copy of the storm water management plan details to DTD Engineering. The storm water management plan shall comply with the requirements found in Zoning and Development Ordinance Section 1008 and Roadway Standards chapter four.
- 7) The applicant shall provide adequate on site circulation areas for the parking and maneuvering of all vehicles anticipated to use the parking and maneuvering areas. Parking layout geometry shall be in accordance with ZDO Table 1015-1 and Figure 1015-1.
- 8) Parking spaces shall meet ZDO section 1015 dimensional requirements.
- 9) The applicant shall provide and maintain adequate intersection sight distances for the driveway approach intersection with Duus Road in accordance with Roadway Standards section 240. Minimum intersection sight distances for the site driveway approach shall be 665 feet both easterly and westerly. In addition, no plantings at maturity, retaining walls, embankments, fences or any other objects shall be allowed to obstruct minimum sight distance requirements. The applicant shall provide a plan and profile sight distance exhibit for the site driveway approach intersection with Duus Road. The exhibit shall be based on survey data. If a sight line easement is required over the property to the east, the applicant shall obtain the easement prior to the issuance of a Development Permit.

- 10) Applicant shall comply with County Roadway Standards clear zone requirements in accordance with Roadway Standards section 245. The minimum clear zone shall extend 15 feet from the northerly edge of pavement of Duus Road.
- 11) Prior to the issuance of a building permit or the initiation of any construction activities associated with the project, the applicant shall submit to Clackamas County Engineering Office:
  - a) Written approval from the local Fire District for the planned access, circulation, fire lanes and water source supply. The approval shall be in the form of site and utility plans stamped and signed by the Fire Marshal.
  - b) A set of site improvement construction plans, for review, in conformance with *Clackamas County Roadway Standards* Section 140, to Clackamas County's Engineering Office and obtain written approval, in the form of a Development Permit.
    - i) The permit will be for driveway, drainage, parking and maneuvering areas, and other site improvements.
    - ii) The fee for the Development Permit will be calculated in accordance with the current fee structure existing at the time of the Development Permit application.
    - iii) The applicant shall have an Engineer, registered in the state of Oregon, design and stamp construction plans for all required improvements, or provide alternative plans acceptable to the Engineering Division.