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City of Aurora Public Works
1515 E. Alameda Pkwy.
Aurora, CO 80012

RE: Traffic Impact Letter Report
Pivot Solar 9,10 and 21 (#1544888)

To whom it may concern:

I. Introduction

In fulfillment of the City of Aurora Public Works requirements, Enertia Consulting Group (Enertia) has completed this Traffic Impact Letter Report for the proposed Pivot Solar 9, 10 and 21 solar facility (the Project) located at the northeast corner of E. 6th Avenue and Tower Road. The intent of this Report is to provide traffic related information and identify potential Project impacts to affected roadways within the City of Aurora and details information related to the site access driveway.

The following information is included in this letter report:

- Project Location, Components and Construction Schedule
- Designated Travel Route
- Daily Vehicle Trip Generation
- Conclusions

II. Existing Conditions

Location

The Project is located at on Parcel No. 1975-03-3-00-007, 1975-03-3-00-005 and 1975-03-3-00-008 within Arapahoe County and located generally north of E 6th Ave and east of Tower Road. The project is approximately 2.81 miles east of Interstate 225 and located north of Buckley Airforce Base. The ±46.89-acre solar facility is scheduled for construction in the spring of 2022. Figure 1 illustrates the Project location.

III. Proposed Condition

Components

The Project generally includes: an 9.9 MW solar facility with a maximum of 23,000 solar panels mounted on steel I-beams, concrete pad mounted transformer and inverter, an access drive with emergency turn-around and perimeter fence with gate.

Construction Schedule

It's currently anticipated that the Conditional Use Permit and Access Permit will be issued by City of Aurora on or before December 1, 2021. Accordingly, a construction start/mobilization date of February 15, 2021 has been established. It is anticipated the site will be constructed in two phases. Due to the size and scope of the Project, construction is planned to be split into two phases. It is anticipated the construction of the entire site (both phases) will be continuous. Based on this, the following preliminary schedule has been prepared:

Phase 1:

- Driveway and material staging area prep February 15, 2022 – February 30, 2022
- Solar Facility Component Delivery March 1, 2022 – March 31, 2022
- Perimeter Fence Installation March 15, 2022 – March 31, 2022
- Solar Panel Foundation Installation April 1, 2022– May 15, 2022
- Transformer and Inverter Installation May 1, 2022 – May 15, 2022
- Solar Panel Installation May 1, 2022 – June 30, 2022.

Phase 2:

- Driveway and material staging area prep included with Phase 1
- Solar Facility Component Delivery July 1, 2022 – July 30, 2022
- Perimeter Fence Installation July 15, 2022 – July 30, 2021
- Solar Panel Foundation Installation August 1, 2022 – September 15, 2022
- Transformer and Inverter Installation September 1, 2022 – September 15, 2022
- Solar Panel Installation September 1, 2022 – October 31, 2022.

Designated Travel Route

The designated travel route is: I-225 south to Exit 9 (6th Avenue); west on 6th Ave (2.8 mi) to Tower Road. North on Tower Road (0.2 mi) and east onto an existing private access drive to the

Project site. Figure 1 illustrates the travel route. The following is a brief description of the public roads and private access drive within the access route.

E. 6th Ave - The segment of E. 6th Avenue between I-225 and N. Airport Blvd (1.8 mi), designated as the “Western Section” herein, included in the travel route is generally described as four lane, asphalt-paved arterial with a posted speed limit of 40 mph. The drive lane width for the Western Section of E. 6th Ave is approximately 25’ in either direction with asphalt shoulders, turn lanes and variable width medians, generally used for turn lanes. The road surface appears to be in good condition. The segment of E. 6th Avenue between N. Airport Blvd and Project (1.0 mi) designated as the “Eastern Section” herein, included in the travel route is generally described as a 2-lane arterial with variable width pavement and asphalt and gravel shoulders. The road surface appears to be in good condition. It is anticipated portions the Eastern Section will be expanded or replaced in the future.

Tower Rd - The segment of Tower Rd included in the travel route is two lane and gravel. The pavement width is 25’ with gravel shoulders and the road surface appears to be in good condition.

Private Gravel Access Drive – The private access road is off Tower Rd, directly north of the Stub Ditch crossing and ditch rider road. The solar facility access driveway shall be designed as a private access road with a minimum width of 20 feet, comprised of a 4” gravel overlay over 8” compacted aggregate base course.

All design standards within Section 5 of the City of Aurora Roadway Design and Construction Specifications. Figure 2 illustrates the access drive alignment and proposed design details.

Daily Vehicle Trip Generation and Distribution

Project development may be divided into the following 3 phases: material and equipment delivery; solar facility construction; and solar facility maintenance). The following Table 1 illustrates the estimated average daily trip generation by vehicle type for each Project phase.

Table 1 – Vehicle Trip Generation Per Phase

Project Phase (Time Period)	Vehicle Type	Estimated Gross Vehicle Weight	Number of Vehicles Per Day	Maximum and Average Vehicle Trips Per Day
Material and Equipment Delivery (approx. 2 weeks)	Conex Container and Delivery Trucks	30,000-50,000 lbs	5-15	10-30
	Equipment Hauling Trucks	20,000-40,000 lbs	0-4	0-8
				Max – 38/Ave - 10
Solar Facility Installation (3 months)	Passenger Vehicles	2,000 to 10,000 lbs	5-15	20-30
	Fuel Truck	20,000 to 30,000 lbs	1	2
	Material Delivery Truck	20,000 to 30,000 lbs	1	2
				Max – 34/Ave - 24
Operations (Ongoing)	Utility Vehicle	2,000 to 10,000 lbs	1 per month or less	
				Max - 2/Ave - 0

As illustrated in Table 1, the majority of traffic generated as a result of solar facility installation shall occur during the 3-month solar facility installation (max 34/ave 24 vtpd). This traffic will generally be site worker passenger vehicles.

The majority of heavy truck traffic including conex container delivery (150-200 conex containers/delivery trucks) and equipment (rubber tire loader, pile driver, fork lift) delivery and pickup will travel to and from the Project between 9:30 AM and noon and 1:30PM and 4:00PM. Project related traffic during all phases will not be significant during AM and PM peak periods (7:30 – 9:00 AM and 4:30 – 6:00 PM, respectively).

IV. Intentionally omitted

V. Intentionally omitted

VI. Conclusions

1. The project is expected to generate 1 vehicle per month or less during solar facility operation. The driveway width, material, and grades will be designed in accordance with City of Aurora Roadway Design and Construction Specifications.
2. The solar facility components will generally be delivered in conex containers and the gross vehicle weight will be up to approximately 30,000 lbs (15 tons).
3. Equipment used to construct the access driveway will generally be delivered by flat bed trucks and the gross vehicle weight is expected to be up to 50,000 lbs (25 tons).
4. The Project is expected to generate up to 38 vehicle trips per day during material and equipment delivery (anticipated to be one week at the beginning of the project and one week at the end of the project), 34 vehicle trips per day during solar facility installation (4-6 months) for each phase.
5. Project installation is anticipated to begin in February 2022 (material and equipment delivery) and end in October 2022 (container and equipment pick-up). The phase with the greatest amount of traffic (solar facility installation) is expected to occur over two, 3-month periods (April 1, 2022-June 30, 2022, and August 1 2022 to October 31, 2022).
6. Daily Project related truck traffic is not expected to impact AM and PM peak traffic periods.
7. Site distance triangles have not been included in this plan. The proposed gravel road extends from the existing entrance and will not intersect with any existing roadways.
8. As proposed, the phased solar facility installation (material/equipment delivery – approx. 1 week, solar facility installation, 3 month and solar facility operations - ongoing) is not anticipated to create adverse traffic related impacts on public roads in the City of Aurora. Based on anticipated vehicle type and weight, the project is not anticipated to degrade/damage City of Aurora roads.
9. The access drive will be designed in accordance with Aurora Fire Rescue and City of Aurora requirements. Pivot will maintain the access driveway (from Tower Road to the eastern solar facility boundary. Landowners will execute a Road Maintenance Waiver with City of Aurora prior to an access permit being granted.

We trust that this Traffic Impact Letter Report for the Pivot 9, 10 and 21 Solar Facility is acceptable and complete. Please contact me at rick.hagmayer@enertiagc.com or (609) 234-5502 should you require additional information.

Sincerely,
ENERTIA CONSULTING GROUP, LLC



Rick Hagmayer, PE
Senior Project Manager

attachment



November, 9 2021



