

November 5, 2021

RE: Lee's Summit Processing Facility
Hg Project Number – 21.033

The purpose of this memo is to document the existing conditions and proposed trips generated by the improvements constructed for the Lee's Summit Processing Facility located on SW Hamblen Road in Lee's Summit, Missouri. The project location is shown below in **Figure 1**.



Figure 1: Project Site Location

Existing Conditions

Existing Hamblen Road is a two-lane roadway with generally flat terrain and a posted speed limit of 40 miles per hour. Drainage is conveyed by open ditches. ADT volumes were not available, but are assumed to be approximately 1,000-2,000 vehicles per day based on field observations. Hamblen Road is listed as a minor arterial on the Lee's Summit Roadway Classification Map.

Existing/Proposed Development

The Lee's Summit Processing Facility is a facility that takes solid waste of various compositions and then sorts and stockpiles the materials by type (metal, wood, cardboard, etc...). The proposed improvements will expand the facility, and also allow for more efficient sorting and hauling operations. The main building of the proposed site will be a 20,000 square foot building that will be the primary unloading bays for the facility. The proposed site plan is shown in **Figure 2**.

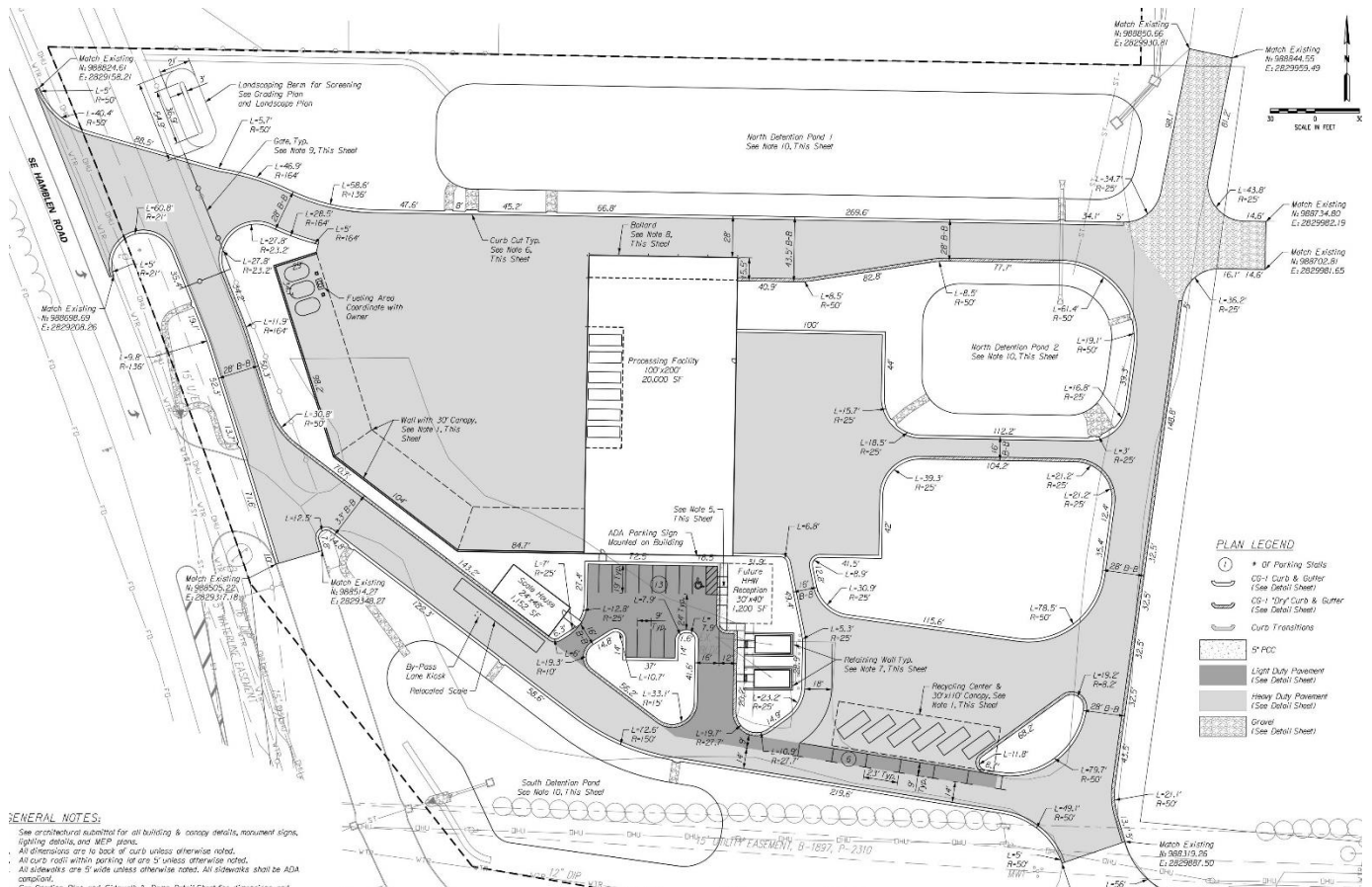


Figure 2: Proposed Site Plan

The proposed improvements meet the City’s criteria for driveway spacing and dimensions. Sidewalks were not included as a part of this project because there are no existing pedestrian facilities on Hamblen Road. No additional improvements are required to Hamblen Road to accommodate the future traffic demand.

Existing Traffic Characteristics

Although Hamblen Road is listed as a Minor Arterial on the City’s street classification map, the traffic volumes are relatively low between the site and the intersection of Bailey Road. Currently, the processing facility generates on average 150 vehicle trips on a given weekday based on actual data provided by the owner. There are approximately 10 large trucks hauling sorted waste out of the facility on a given day, spread throughout the day. These vehicles are hauling waste by the dumpster load. The hours of operation for the facility is 7:30am-4:00pm on weekdays and 7:30am-3:00pm on Saturdays, and is not anticipated to change with the proposed improvements. The processing facility also employs seven people currently.

The majority of the traffic movements coming into and departing the site are coming from SE Bailey Road and either the MO-291 or MO-150 interchanges. Very little traffic is coming from the east (Ranson Road) or from the south. The intersection with SE Bailey Road is stop-controlled with all directions stopping before proceeding through the intersection, and did not appear to have any capacity concerns based on field observations.

Proposed Traffic Characteristics

Through discussions with the Owner, after the site improvements are constructed, there is an expected increase of vehicles delivering materials to the site. The anticipated small vehicular traffic (light-duty trucks) is anticipated the stay the same. Vehicles utilizing pull-behind trailers is expected to increase by approximately 50 trucks, spread throughout the day. The facility will be able to accommodate larger semi-tractor traffic. Due to the processing facility being able to sort, process and load more efficiently (using semi-trucks), the daily number of semi-trucks hauling waste from the facility is not expected to increase. The number of employees is also anticipated to increase from seven to approximately 15 at maximum capacity. Also, the operators of the processing facility can schedule trucks such that it does not interfere with peak hour traffic for the surrounding roadway network. **Table 1** shows the difference between existing and proposed traffic generated by the site.

Table 1: Trip Generation Comparison (Typical Weekday)				
Scenario	Light Vehicles	Heavy-Duty Vehicles	Semi-Trucks	Employees
Existing	150 vehicles	10 vehicles	0 vehicles	8 employees
Proposed	150 vehicles	60 vehicles	10 vehicles	15 employees
Net Difference	0	50 vehicles	10 vehicles	7 employees

Recommendations and Conclusions

The Lee's Summit Processing Facility will have a negligible impact to the surrounding roadway network. This is due to a few factors including:

- More efficient loading/sorting operations which will only add approximately 50 trips per day.
- The outbound trips of semi-tractors that are full with material leaving the site can be scheduled during off-peak hours, as to avoid conflict with peak hour traffic movements.
- There are no noticeable capacity or operational deficiencies at the local intersections of Hamble Road/Baily Road and the interchanges with MO-291/Baily Road or Hamblen Road/MO-150.

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