

Memorandum

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To: Karl Ley, Van Trust

From: Paul Plotas, P.E., PTOE

CC:

Date: 12-03-15

File Number:

Re: Meadowbrook Redevelopment – Luxury Apartments

The purpose of this memo is to model traffic conditions reflective of the approved configuration of the Luxury Apartments portion of the Meadowbrook Development. When the traffic study was performed, the apartments were configured (July 29, 2015 report) such that vehicular access was via a driveway on the south side of the building. The approved configuration is such that the driveway is now on the north side of the building.

On the original configuration a vehicle travelling from the Private Street J and Public Street A intersection could either travel north to Roe Avenue or to the west then south to 95th Street to travel to the Roe Avenue and 95th Street intersection. The distance between the two intersections with the original configuration is as follows:

For the original study it was estimated that traffic between the two intersections will split evenly between Roe Avenue and 95th Street. The approved configuration makes Roe Avenue more convenient to access the Roe Avenue and 95th Street intersection and points beyond. In an effort to analyze the most conservative scenario, all Luxury Apartment traffic projected to use the Roe Avenue and 95th Street intersection was assigned to Roe Avenue. Note, that this resulted in no net change to traffic assigned to the Roe Avenue and 95th Street intersection, traffic was simply moved from the west leg to the north leg of the intersection.

With all Roe Avenue and 95th Street intersection traffic from the Luxury Apartments assigned to Roe Avenue, the overall distributions of the Luxury Apartment trips to Roe Avenue are as follows:

- AM Entering 30% (versus 15% in the Original analysis)
- AM Exiting 40% (versus 20% in the Original analysis)
- PM Entering 35% (versus 20% in the Original analysis)
- PM Exiting 35% (versus 15% in the Original analysis)

Traffic projections for both the A.M. and P.M. peak hours for the existing plus development plus park conditions were generated, see **Figure 1**, and levels of service were analyzed at all Roe Avenue intersections. The results of the analysis are shown in **Table 1**.

**Table 1: Existing Plus Development Plus Park Condition
Luxury Apartment Access to the North**

Intersection	Movement	A.M. Peak Hour		P.M. Peak Hour	
		LOS ¹	Delay ²	LOS ¹	Delay ²
Roe Avenue/95 th Street	<i>All Movements (Signalized)</i>	D	37.9	D	38.9
Roe Avenue/93 rd Street	<i>NB Thru/Right</i>	A	0	A	0
	<i>WB Left/Right</i>	C	15.2	C	15.5
	<i>SB Left/Thru</i>	A	8.0	A	8.4
Roe Avenue/92 nd Terrace	<i>NB Thru/Right</i>	A	0	A	0
	<i>WB Left/Right</i>	C	15.6	C	17.5
	<i>SB Left/Thru</i>	A	8	A	8.6
Roe Avenue/91 st Street	<i>NB Left/Thru</i>	A	0	A	0
	<i>WB Left/Thru/Right</i>	B	11.7	B	13.1
	<i>SB Left/Thru</i>	A	8.0	A	8.6
Roe Avenue/90 th Street	<i>NB Left/Thru</i>	A	8.4	A	8.4
	<i>EB Left/Thru/Right</i>	C	16.6	C	22.0
	<i>WB Left/Thru/Right</i>	C	16.1	C	18.5
	<i>SB Left/Thru</i>	A	8	A	8.4

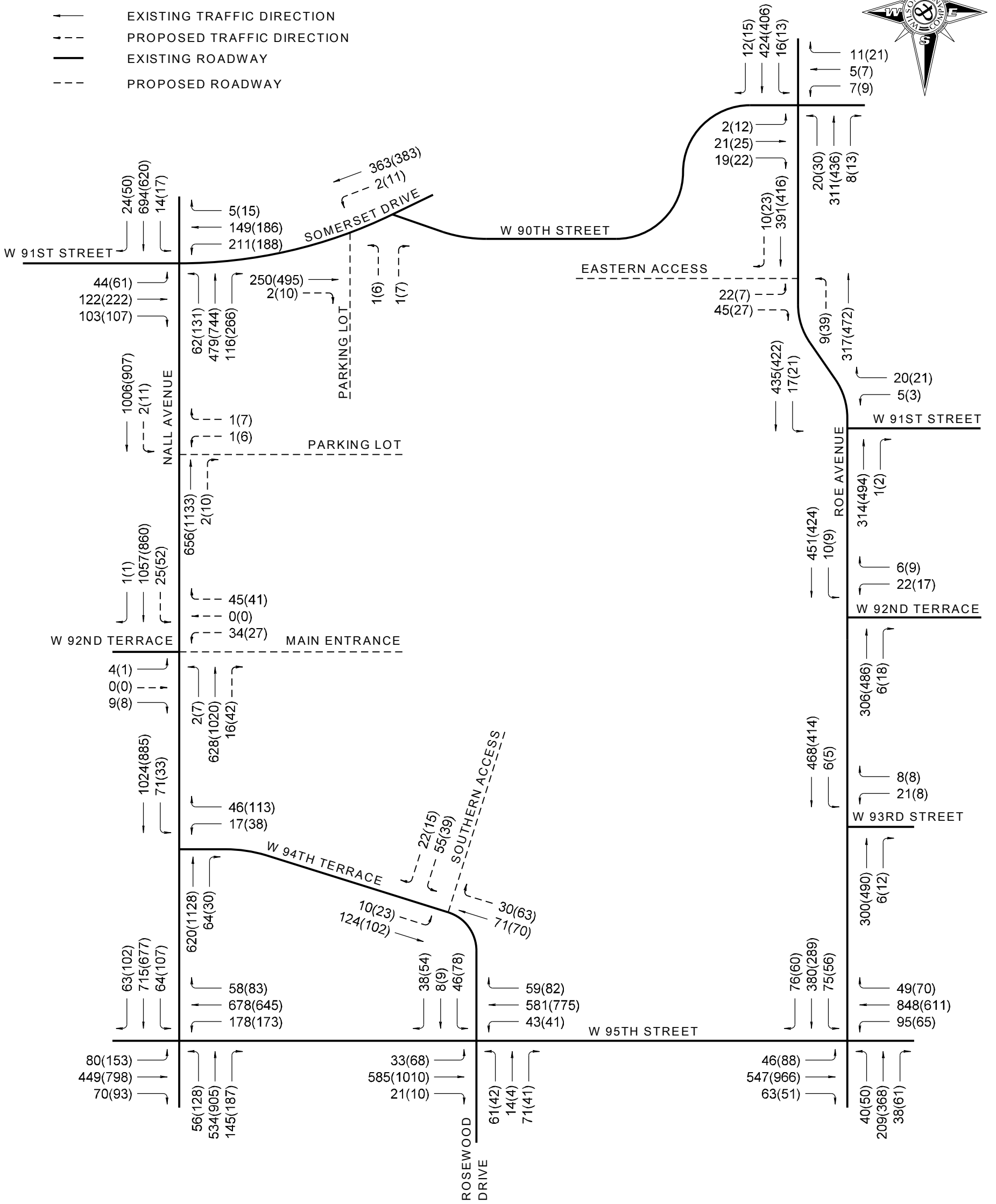
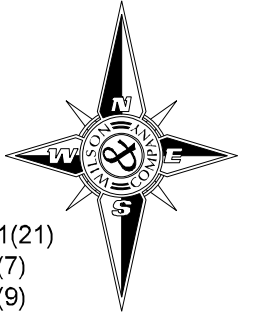
1 - Level of Service

2 - Delay in Seconds per Vehicle

The level of service of all locations remains acceptable, therefore, no additional improvements are required due to the reconfiguration of the Luxury Apartments.

LEGEND

- 121(99) AM (PM) PEAK HOUR TRAFFIC VOLUME
- ← EXISTING TRAFFIC DIRECTION
- - - PROPOSED TRAFFIC DIRECTION
- EXISTING ROADWAY
- - - PROPOSED ROADWAY



Date: \$DATES\$ File: \$FILE\$

By: \$USERNAM\$



FULL DEVELOPMENT
LUXURY APARTMENTS
PEAK HOUR TRAFFIC COUNTS

MEADOWBROOK DEVELOPMENT
PRAIRIE VILLAGE, KANSAS

DECEMBER 2015

NO SCALE

FIGURE 1