



May 4, 2018

Steve McMurtry, Principal
De Novo Planning Group
1020 Suncoast Lane #106
El Dorado Hills, CA 95762

**RE: North Main Commons Subdivision Project
Trip Generation and Distribution Analysis**

RS18-3617

Dear Steve:

This Technical Memorandum presents the results of the trip generation and traffic analysis completed by Fehr & Peers for the North Main Commons Subdivision Project in the City of Manteca, CA. Using the tentative subdivision map (Figure 1) and project description documented in the North Main Commons Subdivision project Mitigated Negative Declaration and Initial Study (March 2018), a detailed AM peak hour, PM peak hour, and Daily trip generation and trip distribution analysis was completed for the following two roadway alternatives:

- 1) Extension of Aksland Drive from its current terminus at Andrew Lane to the future four legged signalized intersection at Main Street / Northgate Drive; and
- 2) Emergency Vehicle Access (EVA) gated access only between Aksland Drive and the future four legged signalized intersection at Main Street / Northgate Drive.

Trip Generation Analysis

The trip generation of the proposed project was estimated for Daily, AM peak hour, and PM peak hour conditions using trip rates published in the *Trip Generation 9th Edition* (ITE, 2012). Table 1 summarizes the estimated trip generation of the project. Based on the project's land use plan, the proposed project would generate the following:

- During the morning peak hour (7:00 to 8:00 AM) – A total of 117 vehicle trips, with 29 inbound and 88 outbound;
- During the evening peak hour (5:00 to 6:00 PM) – A total of 157 vehicle trips, with 99 inbound and 58 outbound; and
- On a Daily Basis (24 hours) – A total of 1,492 vehicle trips, with 746 inbound and 746 outbound.

Mr. Steve McMurtry
May 4, 2018
Page 2 of 5

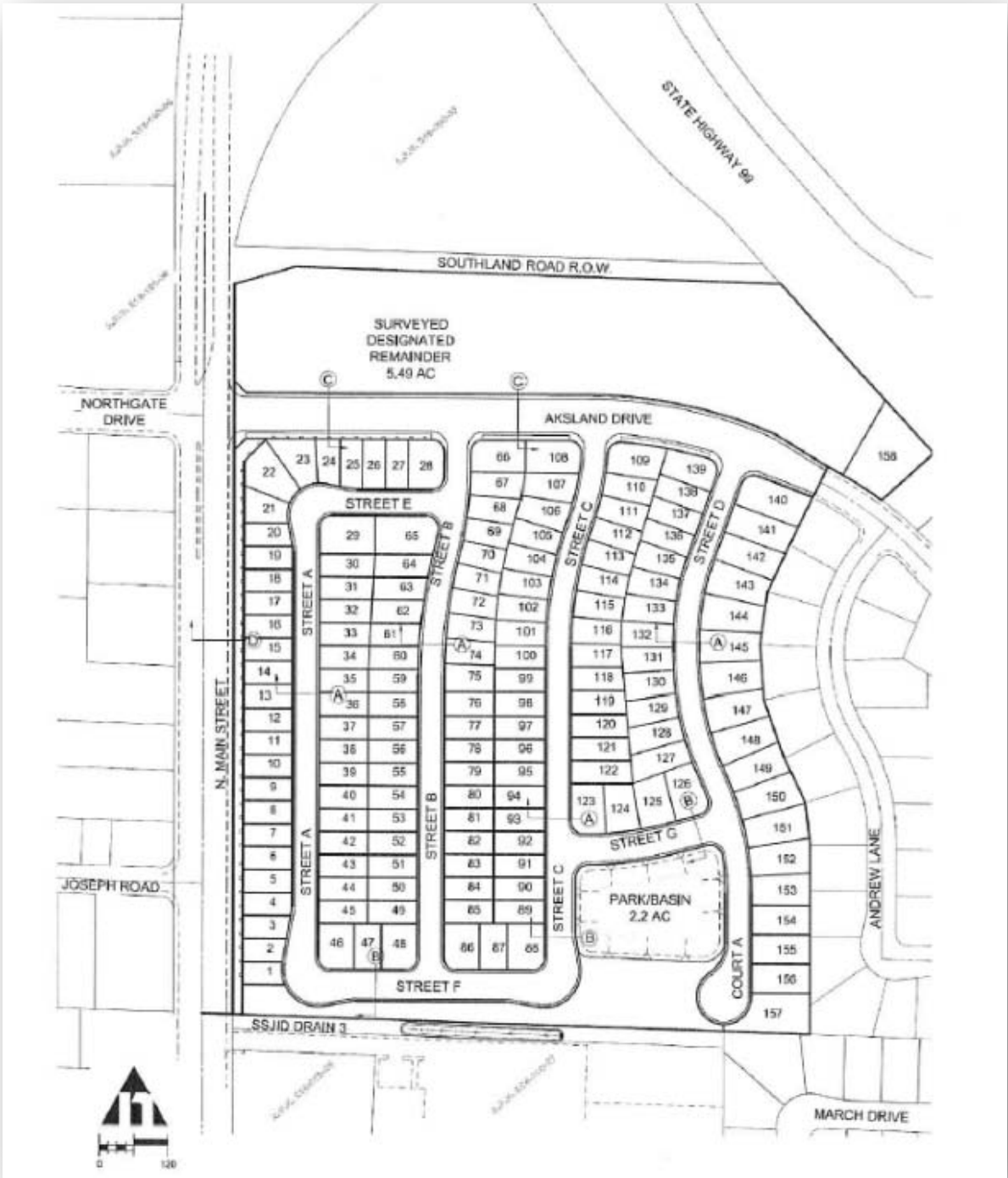


Figure 1
North Main Commons – Tentative Subdivision Map

Mr. Steve McMurtry
 May 4, 2018
 Page 3 of 5

TABLE 1														
PROJECT TRIP GENERATION														
Land Use	Quantity [1,000 sf]	ITE Land Use Code	Peak Hour Trip Rate ¹			Trips								
			AM	PM	Daily	AM Peak Hour			PM Peak Hour			Daily		
						In	Out	Total	In	Out	Total	In	Out	Total
Single Family Detached Housing	158	210	0.74	0.99	9.44	29	88	117	99	58	157	746	746	1,492

Notes:
 1 . Trip rates from Trip Generation (ITE, 10th Edition - 2017)
 Source: Fehr & Peers, 2018

Project Distribution and Assignment

The City of Manteca Travel Demand Forecasting Model was used to determine how project-generated traffic would enter and exit the North Main Commons Subdivision based on the following two roadway alternatives:

- 1) Alternative A - Extension of Aksland Drive from its current terminus at Andrew Lane to the four legged signalized intersection at Main Street / Northgate Drive; and
- 2) Alternative B - Emergency Vehicle Access (EVA) gated access only between Aksland Drive and the four legged signalized intersection at Main Street / Northgate Drive.

Results of Alternative A

The analysis shows that during all three time periods, a combination of the following parameters result in all project-generated traffic using the Main Street / Northgate Drive / Aksland Drive intersection:

- Proximity of the project site to Main Street;
- Signalized full access intersection
- Distribution of traffic to the following directions:
 - 60% NB Main Street towards Lathrop Road and the SR 99 / Lathrop Road Interchange
 - 35% SB Main Street towards downtown Manteca and the SR 120 / Main Street interchange
 - 5 % WB Northgate Drive towards Union Road and Airport Way
 - 0% EB Aksland Drive towards Springtime Avenue and Louise Avenue

Mr. Steve McMurtry
May 4, 2018
Page 4 of 5

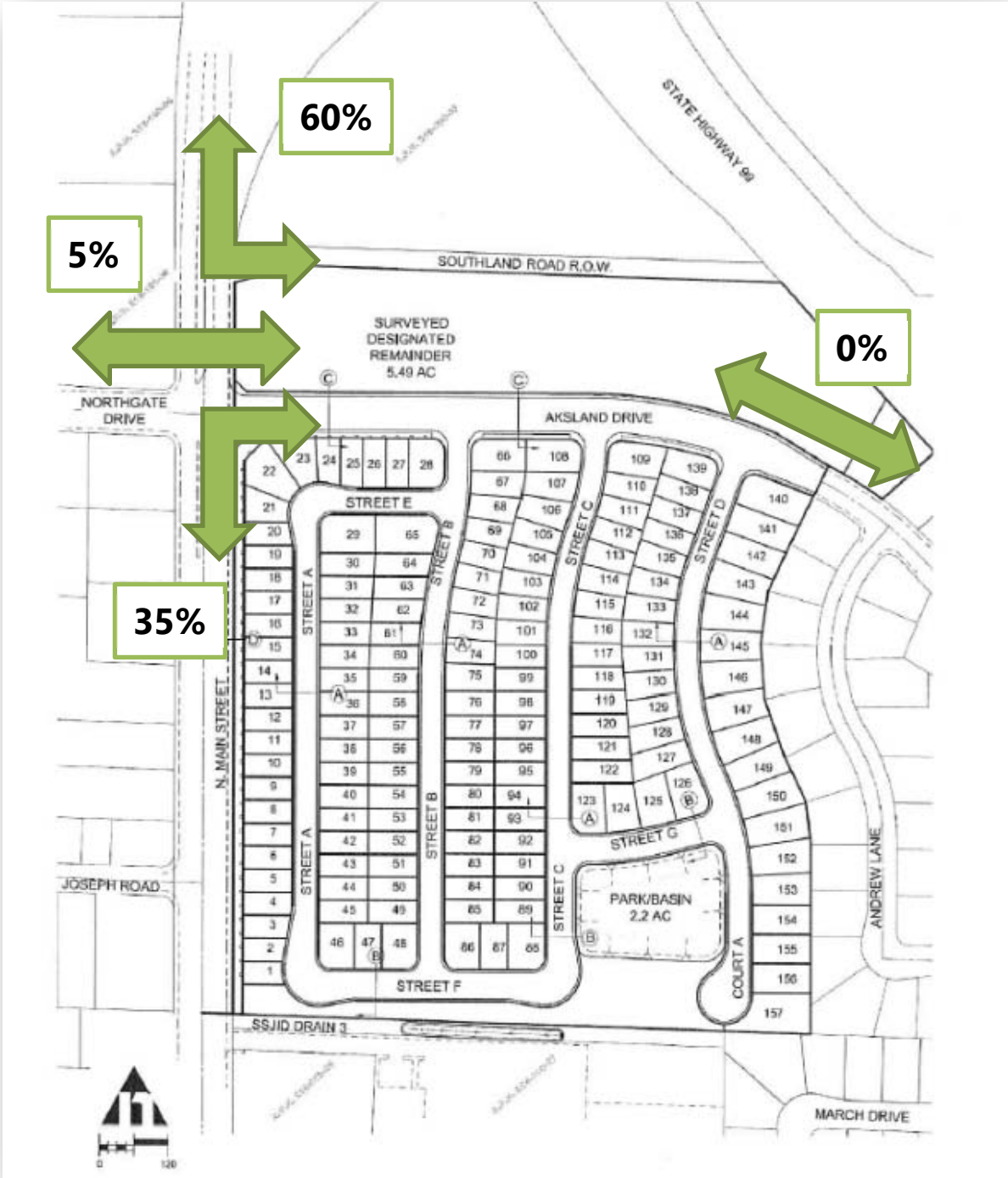


Figure 2
North Main Commons Project Trip Distribution

Mr. Steve McMurtry
May 4, 2018
Page 5 of 5

Results of Alternative A (Continued)

It should be noted that the extension of Aksland Drive from its current terminus at Andrew Lane to the Main Street / Northgate Drive / Aksland Drive intersection would also result in the following traffic circulation changes:

- A small percentage of the existing residences located in the neighborhood bounded by Louise Avenue to the south, Ward Avenue / April Avenue to the East and Springtime Avenue would use Aksland Drive to and from the Main Street / Northgate Drive / Aksland Drive intersection. This would be approximately 10 vehicle trips during morning and evening peak hours; and
- No cut through traffic from Louise Avenue or Main Street would use Aksland Drive to and from the Main Street / Northgate Drive / Aksland Drive intersection.

Results of Alternative B

If an Emergency Vehicle Access (EVA) gate access is only provided between Aksland Drive and the four legged signalized intersection at Main Street / Northgate Drive, response times would be increased as fire personnel would be required to stop, exit their emergency vehicle, and unlock the gate. Under ideal conditions, this can add an additional 60 to 90 seconds to the total emergency response time. During evening or weather conditions, this has the potential to add an additional 60 to 180 seconds to the total emergency response time.

And because no (0%) of North Main Commons traffic is projected to use Aksland Drive east of the project site, the EVA gate access alternative would negatively impact emergency response times to and from the existing neighborhood and Springtime Park. Therefore, Alternative B (EVA gate access only) is not recommended based on traffic circulation and potential adverse impacts to emergency response times.