


OFFICE OF THE CITY MANAGER

October 2, 2006

**To:** Honorable Mayor and  
Members of the City Council

**From:**  Phil Kamlarz, City Manager

**Subject:** **POTENTIAL ADELINE STREET DIVERSION – ASHBY BART STATION**

This memo is intended to introduce and summarize the attached traffic report, which discusses the feasibility of closing a portion of Adeline Street on weekends. This study was commissioned by the City Manager only to answer a specific, traffic-related question. From a traffic engineering perspective, would it be feasible to close a portion of Adeline Street, south of Ashby Avenue, on weekends, to accommodate the flea market, which currently resides in a portion of the west parking lot at the Ashby BART station?

The report concludes that it is technically feasible to close the westerly side of Adeline Street on weekends, providing two-way traffic is maintained on the easterly portion. The traffic consultant roughly estimated the area needed for the flea market and concluded that, in their opinion, approximately 80% of the area currently occupied by the flea market in the westerly Ashby BART parking lot could be available. The area needed for the flea market and how it could best be accommodated should the flea market be relocated would need to be further evaluated should the City wish to explore relocation more fully. It should also be recognized that the traffic study was highly limited in its scope. Other possible options for relocation of the flea market, such as locating it further north on Adeline above Ashby, were not considered.

While traffic diversion is technically feasible from a traffic perspective, the logistics of blocking off the westerly portion of Adeline Street, and protecting public safety every weekend would be an expensive proposition and would need further study to determine the most cost-effective way of implementing such a strategy, should the City choose to consider this further.

The attached report is intended to only answer the basic question of technical traffic feasibility, and is not intended to pursue the project relative to desirability of relocating the flea market, or calculating the risks and costs of such a project.

If you have questions concerning the study, please contact Hamid Mostowfi, Supervising Traffic Engineer, at 981-7010.

Attachment: Traffic report on feasibility of Adeline Street diversion on weekends

cc: Claudette Ford, Director of Public Works  
Sherry Kelly, Acting City Clerk  
Ann-Marie Hogan, City Auditor  
Dan Marks, Director of Planning  
Manuela Albuquerque, City Attorney

## MEMORANDUM

**TO:** Hamid Mostowfi  
**FROM:** Farid Javandel, Fred Kelley  
**DATE:** July 31, 2006  
**SUBJECT:** Berkeley Flea Market - Adeline Street Traffic Diversion  
**PROJECT NO.** 806050X0

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### **Introduction**

The purpose of this technical memorandum is to present the results of an analysis detailing the impacts of traffic diversions on Adeline Street due to various Berkeley flea market relocation scenarios.

### **Background**

Korve Engineering was asked to develop various scenarios to accommodate the potential relocation of the Berkeley Flea Market from the Ashby BART west parking lot to Adeline Street. Each weekend, the northerly portion of the west parking lot of the Ashby BART station is utilized by local vendors from 7:00 AM to 7:00 PM under the auspices of a non profit co-operative. Due to the potential development of the north lot, Korve was asked to determine the feasibility of relocating approximately 1,900 linear s.f. of merchant space to Adeline Street, directly adjacent to the BART station. KORVE developed multiple strategies ranging from a full closure to a partial closure of Adeline Street to accommodate this request. The full closure alternative would effectively close Adeline Street to all traffic between Ashby Avenue and Martin Luther King Jr. Way. The partial closure alternatives would however, allow the opportunity to maintain two-way traffic on the eastern half of Adeline Street. As such, the partial closure scenario(s) were deemed more appropriate than the full closure scenario because the traffic impact would be less.

This memo reports the potential intersection impacts of two traffic handling options, resulting from the partial closure of Adeline Street. Both traffic handling options presented below allow for operation of the flea market on the west side of Adeline Street between Ashby Avenue and Woolsey Street. They are illustrated on the attachment.

**Option 1** diverts all southbound Adeline Street through traffic onto Martin Luther King Jr. Way via Ashby Avenue.

**Option 2** provides for two way traffic on the eastside of Adeline Street (between Ashby Avenue and Woolsey Street) with the westside of Adeline Street being utilized for flea market patrons.

### **Intersection Analysis**

Saturday mid-day intersection counts were used in this analysis as surrogates for the Sunday mid-day period. The two intersection counts available in the vicinity of the flea market were Adeline Street at Ashby Avenue and Ashby Avenue at Martin Luther King Jr. Way.

#### **Option 1**

In this option southbound traffic on Adeline Street is diverted at Ashby Avenue onto Martin Luther King Jr. Way. Left turns from the southbound Adeline Street approach would continue to operate normally. Southbound through traffic, however, would be forced to turn right onto Ashby Avenue and then left onto Martin Luther King Jr. Way to continue in the southbound direction. The peak hour demand for this westbound left turn movement would be approximately 635 vehicles compared to 34 left turn vehicles currently under existing mid-day weekend conditions.

Operationally, the through lanes on southbound Adeline Street would be used as right turn lanes during the diversion. Diverted traffic would flow onto the two receiving lanes on Ashby Avenue. Today, the eastbound and westbound approaches operate as a single phase. Left turns operate as "permitted" during this phase from shared through/left turn lanes. Given the relatively low number of vehicles turning left, level of service at the Martin Luther King Jr. Way and Ashby Avenue intersection is LOS D. However given the new "diverted" demand of 635 left turns, the intersection would obviously experience operational challenges.

To address these challenges, Korve analyzed several phasing and/or restriping options to mitigate the impact of the increased left turn demand at Martin Luther King Jr. Way and Ashby Avenue. As shown in Table 1, none of the tested options effectively mitigates the increased left turn demand. Although Alternatives 1 and 4 reflect the best overall intersection level of service (LOS E), the resulting queue would spill back into the intersection of Adeline Street and Ashby Avenue and obstruct intersection operations there.

**Table 1  
Martin Luther King Jr. Way and Ashby Avenue  
Alternatives Analysis (Option 1)**

<b>Alternative</b>	<b>Striping*</b>	<b>Phasing</b>	<b>LOS</b>	<b>Left-turn</b>	<b>Storage**</b>
Existing	Left/through	Permitted	C	10	200'
1	Left/through	Permitted	E	36	720'
2	Exclusive left	Permitted	F	55	1,100'
3	Exclusive left	Protected	F	36	720'
4	Left/through	Split phase	E	32	640'
5	Exclusive left	Protected/permitted	F	29	580'

\* Left turn lane striping.

\*\* Assumes 20 feet per vehicle.

### Option 2

In Option 2, southbound through traffic on Adeline Street is shifted onto one northbound lane of Adeline Street by way of a median break, just south of Ashby Avenue. This reduces the northbound through lane capacity by one lane and has both southbound and northbound traffic operating on the eastern portion of Adeline Street between Ashby Avenue and Woolsey Street.

As this shift in traffic occurs south of the intersection, all turning movements on the northbound approach of Adeline Street are maintained. Existing level of service at this intersection is LOS C. To accommodate the "shift" in traffic onto the eastern half of Adeline Street, the southbound through lanes would need to be reduced from two lanes to one lane north of Ashby Avenue. Level of service under this scenario would continue to operate at LOS C. TRAFFIX has calculated a queue of 16 vehicles or 320 feet for this through movement.

Under Existing Conditions the average through southbound queue is 8 vehicles per cycle, or 160 feet. Given the nature of the transition however (through a median break south of the intersection), this queue may exceed that calculated by TRAFFIX, because of the delay encountered in completing this maneuver. Overall level of service on the southbound approach remains relatively unchanged (see Table 2).

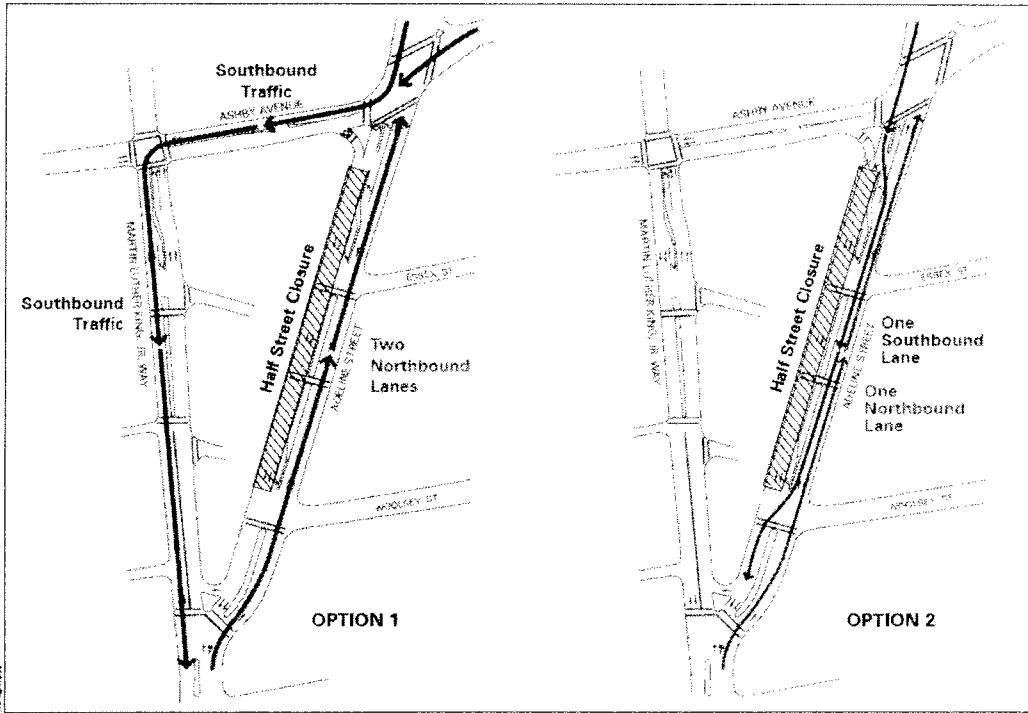
**Table 2  
Adeline Street and Ashby Avenue Analysis (Option 2)**

<b>Alternative</b>	<b>Southbound Striping</b>	<b>Intersection LOS</b>	<b>Average Delay</b>	<b>Through Queue</b>	<b>Movement LOS</b>
Existing	1 Left/2 through/1 right	C	28.0	8	C
1	1 left/1 through/ 1 right	C	29.8	16	C

## **Conclusion**

The partial closure of Adeline Street (Option 2) allows for two way traffic to be maintained between Ashby Avenue and Martin Luther King Jr. Way during the weekend while providing space for flea market vendors. Option 2 provides approximately 80% of the needed capacity for the relocated vendors while allowing two way traffic to be maintained on the eastern half of Adeline Street. This alternative, while feasible, does however have certain limitations;

- The alternative would require significant manual labor to set up and take down the temporary traffic handling devices each weekend.
- Temporary fencing would need to be erected along the Adeline Street median to separate pedestrian and vehicular traffic.
- Neighborhood opposition to the perceived potential cut through traffic on Woolsey may result.
- The partial street closure conflicts with future construction phasing of the Ed Roberts campus



**K** Korve  
Engineering

ASHBY BART FARMERS MARKET TRAFFIC STUDY

Figure 1  
OPTIONS FOR REROUTED TRAFFIC