Management Partnership Services, Inc.

9710 Traville Gateway Drive, #363, Rockville MD 20850
Office: (888) 518-3377 • Fax: (888) 348-0335

Date: September 7, 2007

To: Tai Williams, Town of Danville – Lead Agency

From: Tim Ammon, Management Partnership Services, Inc.

Subject: Summary of Preliminary Route Development Options

The following memorandum summarizes the preliminary routing efforts conducted in order to implement the provisions of the Measure J School Bus Program. The memorandum will detail the planning parameters utilized, the rationale for specific routing strategies, and a preliminary review of routes by school location.

REVIEW OF PLANNING PARAMETERS

The purpose of this review is to determine if the proposed plan form for routing presented in this document is acceptable as a strategy to promote the goals of the Measure J program. In evaluating the proposed routing approach it is critical to remember that the purpose of the program is traffic reduction. Consequently, not all students at all schools will receive service. Additionally, not all students at schools that are receiving service will receive service. This is due to two major constraints: the severity of traffic issues at and around the school site locations and the expected availability of school buses. The most recent discussions identified a set of 16 individual schools as first and second priority schools to be designated for service. In evaluating the prioritization, the severity of traffic issues at each location and the number of buses available, it became clear that the nine schools identified as priority one represented the best mix of identified program need and desire to participate. Therefore, the preliminary focus of the routing effort is on these nine schools. Individual route plans for each of the schools are attached to this document.

The planning of bus routes for this exercise involved trying to balance expected resource constraints and responses to regarding the parent survey. In order to maximize the utilization of the assets that are expected to be available (approximately 20 buses) the routing strategies proposed focus on the reuse of assets through a strategy known as route tiering. In a route tiering plan, the same bus is used to service multiple schools at different times, i.e., a high school, middle school, and an elementary school. This approach allows for the best use of seating capacity given that it is unlikely that multiple schools can be paired on an individual run.

Assuming a tiered routing strategy as the preferred approach to address resource constraints, it was also necessary to establish other basic planning constraints consistent with the results of the parent survey. These constraints basically addressed expectation regarding service levels and expectations of service utilization. The following guidelines were established for the development of each of the routes.

- Elementary school routes should be no longer 40 minutes with a tendency towards 20 or 30 minutes.
- Runs will be overloaded to approximately 110 to 120 percent of capacity on the expectation that approximately 50 percent of assigned students will not ride.
- Preliminary stops will be designed as congregated stops for middle school students with walk distances to stops of no greater than 1,000 feet or 10 minutes.
- Elementary school students will generally have stops close to their home locations with very short walk distances.

The results of the baseline constraints and the distribution of students resulted in limited options for varying routing solutions. Consequently, many of the runs appear as traditional home to school runs that can be altered to provide additional options. The following sections will describe the scenario developed for each of the schools included in the Priority 1 grouping.

MIDDLE SCHOOLS

Pine Valley Middle School

The critical element to address at Pine Valley is trying to address the severe traffic congestion in the immediate area of the school. In order to address this concern the approach to this area focused primarily on eliminating the need to travel to the area through putting students on buses. For purposes of planning 10 buses were assigned for use at this school. The following describes the basic characteristics for the 10 runs:

Run Number	Students Assigned	Unique Addresses	Stop Count
1	52	49	16
2	20	19	4
3	77	69	17
4	60	41	7
5	35	33	8
6	70	66	10
7	48	42	13
8	74	64	16
9	60	52	17
10	27	25	10
TOTAL	523	460	118

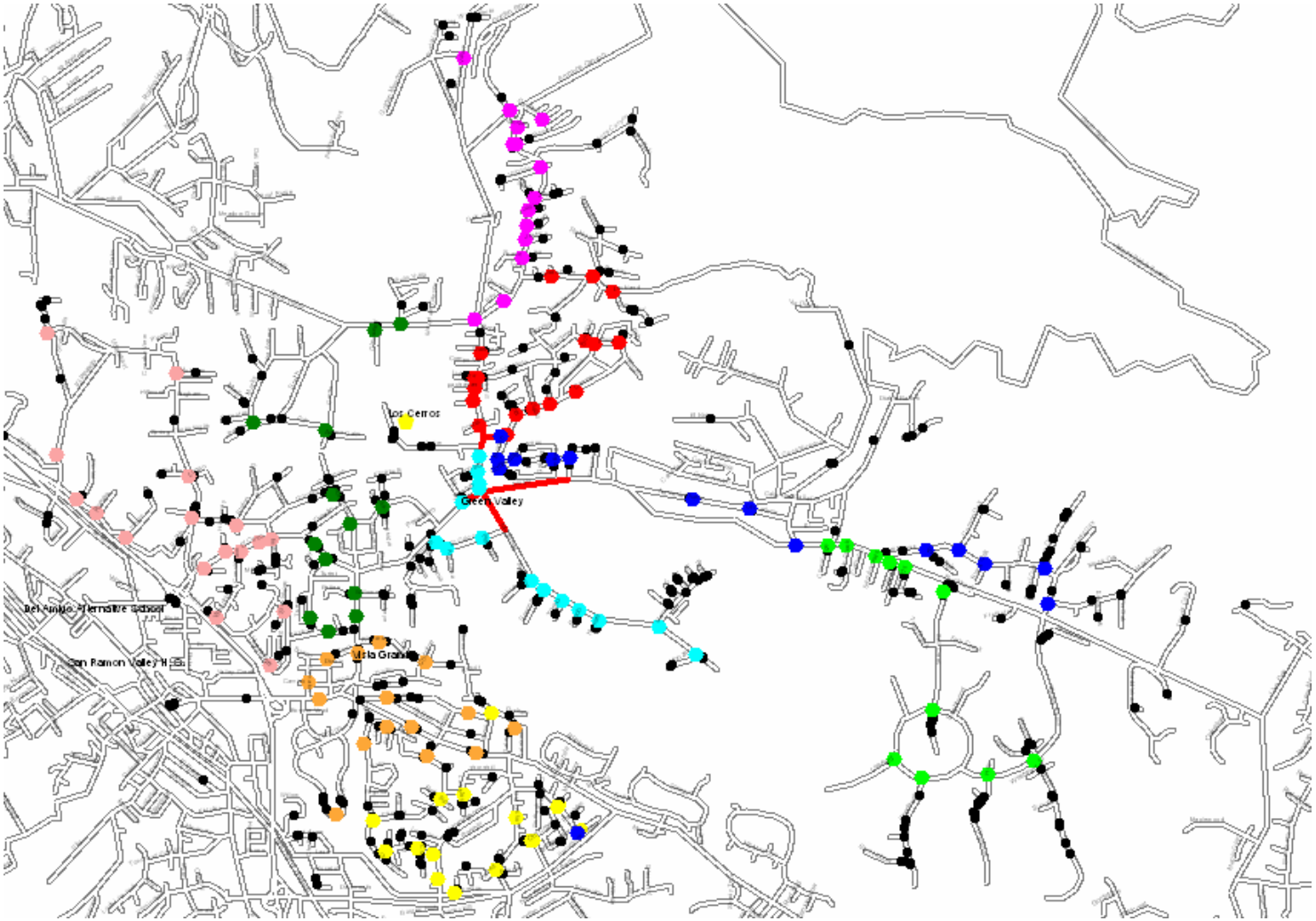
PINE VALLEY MIDDLE SCHOOL

Los Cerros Middle School

Los Cerros was identified as a First Priority school for both the County and the Town of Danville. Similar to Pine Valley, the primary issue to address at Los Cerros is how to eliminate the need for trips in the immediate area of the school. A strategy similar to Pine Valley was utilized here in that as many students as possible were put on bus routes. For purposes of planning 9 buses were assigned for use at this school. The following describes the basic characteristics for the 9 runs:

Run Number	Students Assigned	Unique Addresses	Stop Count
1	66	56	10
2	57	48	14
3	65	56	14
4	34	30	13
5	58	47	17
6	65	57	12
7	57	54	15
8	52	47	16
9	52	45	12
TOTAL	506	440	123

LOS CERROS MIDDLE SCHOOL



Middle School Summary

The results of the Middle School planning is that nearly 1,000 students at 900 different addresses would be eligible for service. As can be seen from the number of students assigned to each run there is an expectation that only a portion of these students will ride. The parent survey indicates that approximately 57 percent of the population responding to the survey would be at least somewhat willing to participate at Pine Valley Middle and 63 percent of participants at Los Cerros. Assuming those percentages to be representative, that would equate to 298 students being transported at Pine Valley and 319 students at Los Cerros. It can be expected that once service actually begins at these schools that any excess resources can be redirected to support other schools.

ELEMENTARY SCHOOLS

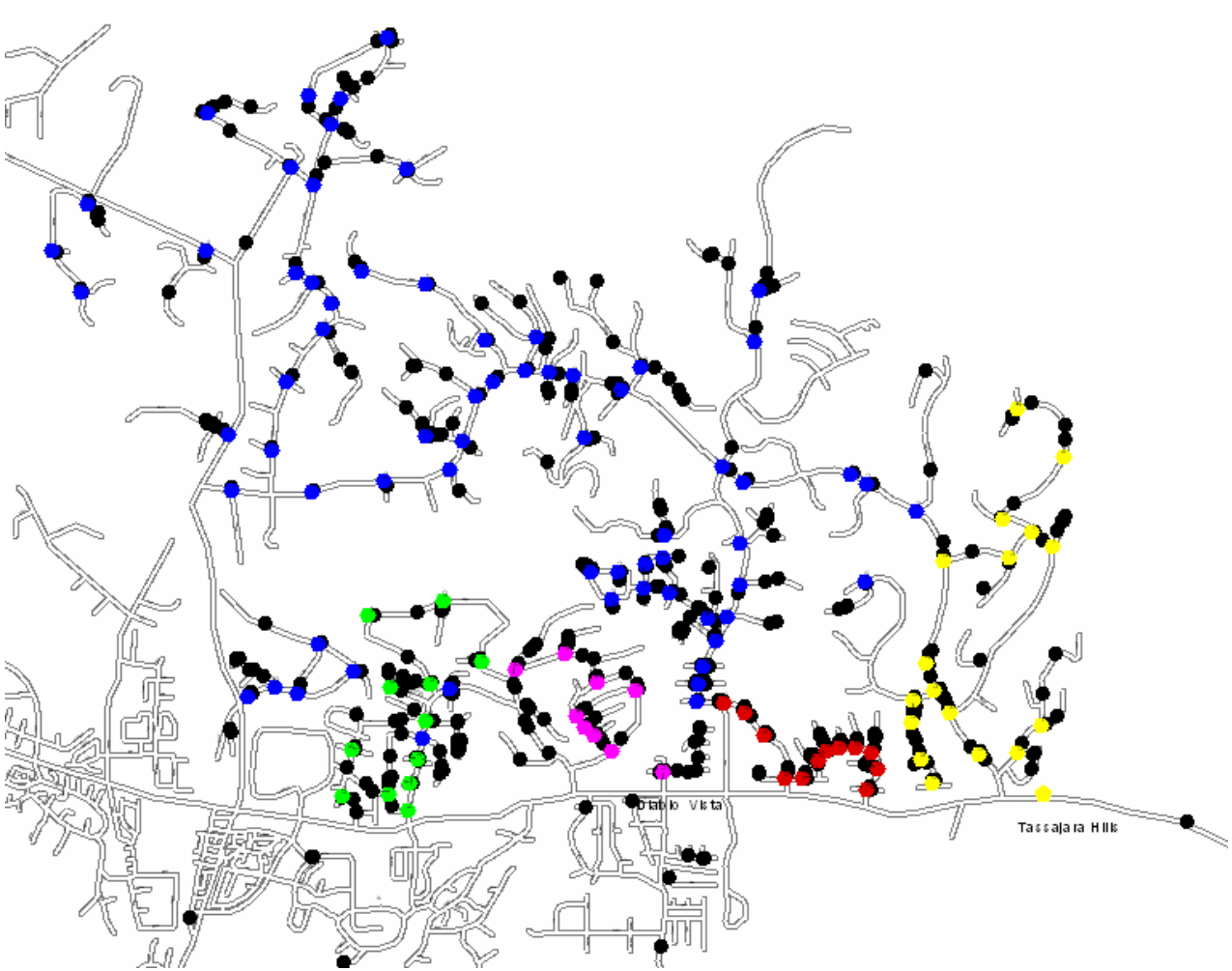
Tassajara Hills

Tassajara Hills is a first priority school for both the Town of Danville and Contra Costa County. The turning traffic into the school represents the particular traffic problem in that area. In evaluating the street network in the area it becomes clear that the lack of connectivity between the street will create issues related to route timing. This timing issue is due to the fact that many buses would have to turn around in neighborhoods to meet the short ride time and short walk distance requirements that were highlighted in the parent survey. Consequently, there are selected students that are unlikely to participate in the program or receive service because there were limited to no opportunities to efficiently collect the students given the constraints. For purposes of planning 5 buses were assigned for use at this school. The following describes the basic characteristics for the 5 runs:

Run Number	Students Assigned	Unique Addresses	Stop Count
1	79	57	11
2	68	51	11
3	79	61	12
4	61	84	8
5	60	47	14
TOTAL	347	300	56

Several of these runs are loaded above the standard 72 seats available on a Type C school bus. This loading factor is due to the expectation that some students will not participate in the program.

TASSAJARA HILLS ELEMENTARY SCHOOL



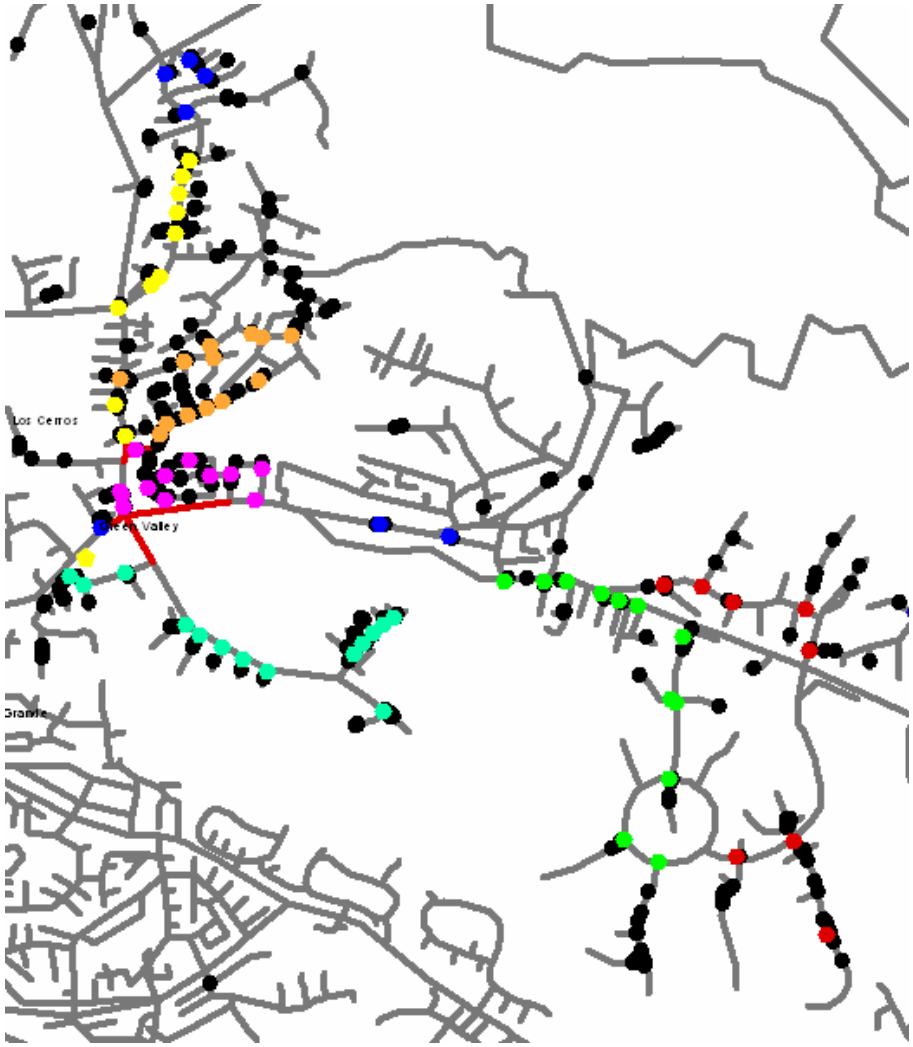
Green Valley

Green Valley also represents a first priority school for Contra Costa County and the Town of Danville. In the immediate vicinity of the school there are two severely impacted intersections. The strategy for servicing this school was to provide service to as many students as possible in order to eliminate any inclination for casual travel through these intersections. For purposes of planning 6 buses were assigned for use at this school. The following describes the basic characteristics for the 6 runs:

Run Number	Students Assigned	Unique Addresses	Stop Count
1	78	44	11
2	81	49	7
3	86	51	13
4	69	44	11
5	75	45	12
6	87	52	9
TOTAL	476	285	63

Again, these runs are generally loaded above the standard 72 seats available on a Type C school bus given expectations regarding program participation. .

GREEN VALLEY ELEMENTARY SCHOOL



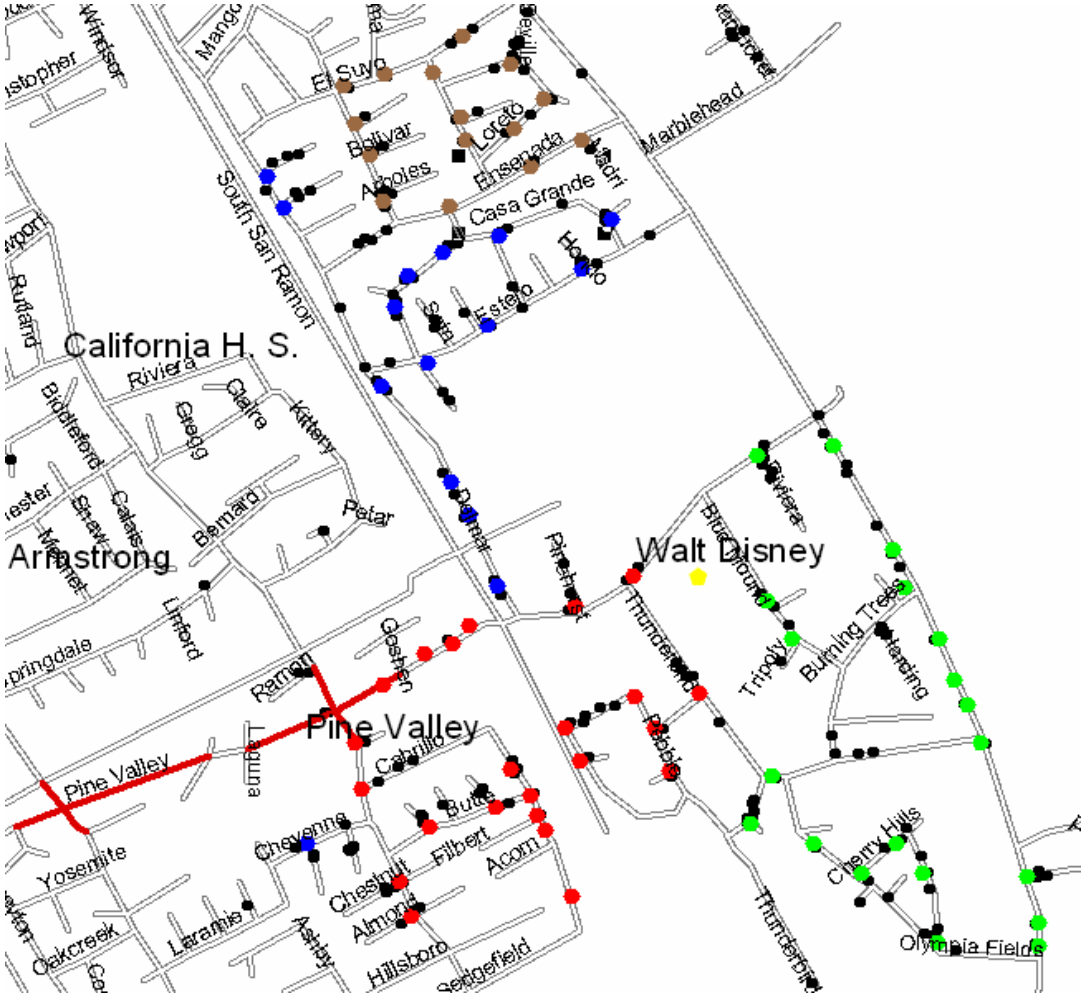
Walt Disney

Walt Disney is a second priority school in the San Ramon area that contributes to the severe traffic issues on Pine Valley Road. The strategy in servicing this area was to eliminate the need for traffic to travel on Pine Valley Road. Four buses were allocated for this area.

Run Number	Students Assigned	Unique Addresses	Stop Count
1	76	61	19
2	72	52	22
3	57	40	13
4	61	43	14
TOTAL	266	196	68

These routes are loaded somewhat lighter than other elementary routes due primarily to the density of students in areas outside the immediate vicinity of the school. The longer distances from the neighborhoods to the schools require a greater amount of time and results in lower capacity use.

WALT DISNEY ELEMENTARY SCHOOL



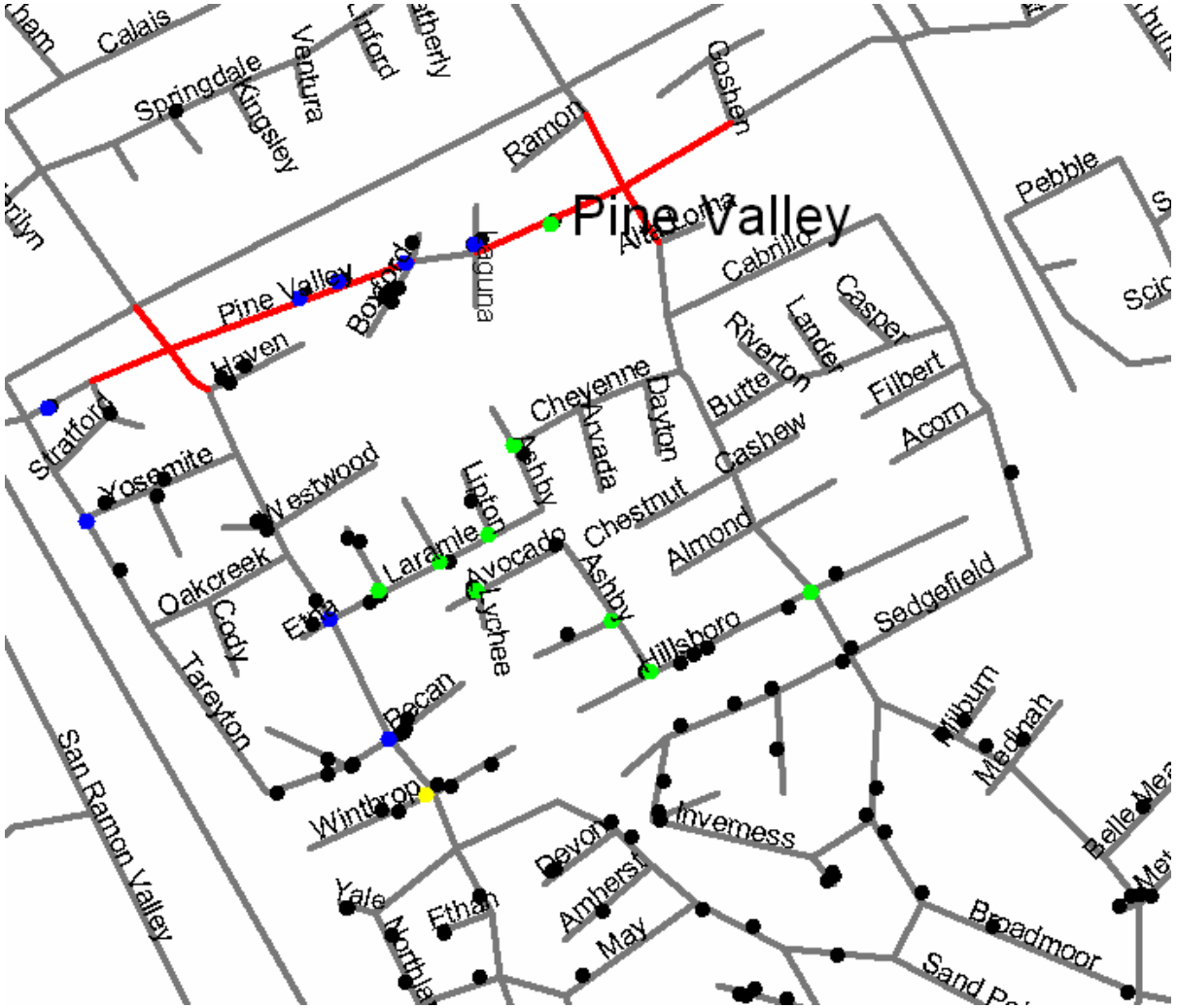
Country Club

The strategy used for Country Club elementary was to eliminate traffic in the area of Pine Valley Road. Students living in the northern part of the attendance area were designated for service in order to eliminate residual traffic on and around Pine Valley Road. Given the limited nature of the service requirement, two buses were allocated for this service. The basic characteristics of the routes are detailed below.

Run Number	Students Assigned	Unique Addresses	Stop Count
1	35	26	9
2	42	35	9
TOTAL	77	61	18

The limited service in this area is specifically targeted at the traffic issues on Pine Valley Road, which will result in only a limited portion of the student population being provided service. When routes are fully implemented it is likely additional capacity will be available to collect other students. The primary concern associated with expanding routes beyond the current approach is a consideration of the time required to complete the runs.

COUNTRY CLUB ELEMENTARY SCHOOL



Elementary School Summary

As part of this scenario, 17 total buses have been allocated for these elementary schools. It is expected that approximately three additional buses will be available for service. These buses have not been allocated anywhere else in the system due to the heavy capacity loads at several of the schools. In the event these overloads result in late buses it will be necessary to incorporate these three buses into the existing scenario. It would be unwise to allocate these resources elsewhere because it will create a service expectation that may not be available when the routes are implemented. Following implementation, if these resources are still available they can be allocated to other schools for traffic reduction purposes.