Menlo School

Enrollment Increase Project

Revised
Initial Study
and
Draft Mitigated Negative Declaration

Public Review Period: June 2 through June 22, 2011

Prepared for the Town of Atherton
Planning Department
91 Ashfield Road
Atherton, CA 94027

Prepared by Neal Martin and Associates
751 Laurel Street, Suite 622
San Carlos, CA 94070

June 2, 2011

DRAFT
MITIGATED NEGATIVE DECLARATION
Menlo School Enrollment Increase Project

Date _____

Town of Atherton, San Mateo County

NAME OF PROJECT/DESCRIPTION

Menlo School Enrollment Increase Project

The project consists of an amendment to a December 3, 2008 Conditional Use Permit, condition number 13, approved by the Atherton Planning Commission authorizing Menlo School to increase its maximum enrollment from 750 students to 795 students.

PROJECT PROPONENT
Menlo School, 50 Valparaiso Avenue

PROJECT LOCATION
50 Valparaiso Avenue
Atherton, CA 94027

FINDING

It is hereby found, that the above named project will not have a significant effect on the environment.

INITIAL STUDY

An initial study of this project was undertaken and prepared in accordance with the Town's environmental guidelines for the purpose of ascertaining whether this project might have a significant effect on the environment. A copy of the initial study is on file with the Town of Atherton, Building Department, 91 Ashfield Road, Atherton, CA 94027 and by reference incorporated herein. Such initial study documents reasons to support the above finding.

MITIGATION MEASURES
I hereby certify that this Mitigated Negative Declaration, along with the attached Initial Study and Mitigation Measures agreed to by the applicant before the proposed Negative Declaration and Initial Study were released for public review which would avoid the potentially significant effects on the environment, was adopted by the Atherton Planning Commission on _____.

Neal J. Martin
Town Planner

ENVIRONMENTAL CHECKLIST FORM

1.	Project Title:	Menlo School Phase Enrollment Increase Project
2.	Lead Agency Name and Address:	Town of Atherton 91 Ashfield Road Atherton, CA 94027
3.	Contact Person and Phone Number:	Neal Martin City Planner (650) 752-0560
4.	Project Location:	50 Valparaiso Avenue
5.	Project Sponsor's Name and Address:	Menlo School 50 Valparaiso Avenue Atherton, CA 94027
6.	General Plan Designation:	Public Facilities and Schools
7	Zoning:	PFS (Public Facilities and Schools)
8.	Project	The project consists of an amendment to a December 3, 2008 Conditional Use Permit, condition number 13, approved by the Atherton Planning Commission that limits the maximum enrollment to 750 students. Menlo School is requesting the Planning Commission allow an increase its maximum enrollment to 795 students.
9.	Surrounding land uses and setting:	The property is bounded by Valparaiso Avenue and residential uses in Menlo Park on the south, single family residential uses on the west (Michaels Way, Howard Way, and MacBain Avenue), Menlo College on the north , single family residential uses in the Victoria Manor neighborhood on the east and south east. The campus is relatively flat and tree covered. Numerous educational buildings are located on the site.
10.	Other public agencies who may be involved:	City of Menlo Park

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards & Dangerous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☒ Transportation/Traffic
☐ Utilities/Services Systems	☐ Mandatory Findings of Significance	

PROJECT DESCRIPTION

Project Location

The proposed project site is located within the Town of Atherton at 50 Valparaiso Avenue in San Mateo County, CA. The Town of Atherton is approximately 30 miles south of San Francisco; other neighboring urban areas include Palo Alto, Menlo Park and Redwood City. Menlo School is located at this site. Menlo School is divided into a middle school providing education for grades 6-8 and an upper school for grades 9-12. Current enrollment is approximately 809 students for both schools. The site contains numerous buildings and facilities for the education of students attending the school.The site fronts on both Valparaiso Avenue with the sides and rear of the property abutting residential neighborhoods in Atherton and Menlo College.

Project Description

The project consists of an amendment to a December 3, 2008 Conditional Use Permit, condition number 13, approved by the Atherton Planning Commission that limits the maximum enrollment to 750 students. Menlo School is requesting the Planning Commission allow an increase in its maximum enrollment to 795 students.

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

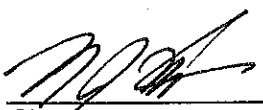
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on the attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

June 2, 2011
Date

Neal J. Martin, City Planner
Printed Name

Town of Atherton
For

EVALUATION OF ENVIRONMENTAL IMPACTS

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
I.	**AESTHETIC** - Would the project:					
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒	20
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒	5
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒	20
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒	16

AESTHETIC DESCRIPTION

a-d) **No Impact** - The project is not located in a major viewshed, therefore, would not have a substantial adverse effect on a scenic vista. The project is not located within a state scenic highway. The project would not substantially degrade the existing visual character or quality of the site. No tree removal is proposed as part of the project. The project does not include any new lighting or new sources of glare.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
II.	**AGRICULTURE RESOURCES** - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:					
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒	5
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	28
c)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒	5
	AGRICULTURAL RESOURCES DESCRIPTION					
a-c)	**No Impact** - There are no agricultural zones in the project vicinity.					

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
III.	**AIR QUALITY** - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒	38
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒	38
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒	38
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒	38
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒	38

AIR QUALITY DESCRIPTION

a-e) **No Impact** - The proposed project would not involve grading, paving or building construction. Illingworth & Rodkin, Inc. analyzed the proposed project for possible significant construction or operational air quality impacts or significant increases in greenhouse gas emissions (see Illingworth & Rodkin, Inc. letter of April 21, 2011 attached). They concluded that since the project would not involve construction, it would not have construction period emissions. They also concluded that the proposed project increase in enrollment is well below the project screening sizes identified by the Bay Area Air Quality Management District for operational criteria pollutant or operational greenhouse gas emissions. The proposed project would not alter air movement, moisture, or temperature, or cause a temperature change. It would not expose sensitive receptors to substantial pollutant concentrations. It would not create objectionable odors affecting a substantial number of people.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
IV.	**BIOLOGICAL RESOURCES** - Would the project:					
a)	Have a substantial adverse effect on either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game of U.S. Fish and Wildlife Services?	☐	☐	☐	☒	5
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Services?	☐	☐	☐	☒	5
c)	Have a substantial adverse effect on federally protected wetland as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, eetc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒	5
d)	Interfere substantially with the movement of any native resident of migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒	5
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒	5 & 6
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	5

BIOLOGICAL RESOURCES
DESCRIPTION

a-f) **No Impact** - Because the site is largely developed with buildings, structures and pavement, the site does not support any species of designated local significance. There are no species identified as a candidate, sensitive, or special status species known to exist in the project area. There is no riparian habitat or other sensitive natural community within the project vicinity. There are no federally-protected wetlands in or near the project site. The project would not interfere with movement of any native resident migratory fish or wildlife species. There is not habitat conservation plan or natural community conservation plan existing in the project area.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
V.	**CULTURAL RESOURCES** - Would the project:					
a)	Cause a substantial adverse change in the significant of a historical resource as defined in code 14064.5?	☐	☐	☒	☐	35
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to 14064.5?	☐	☐	☐	☒	20
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic features?	☐	☐	☐	☒	21
d)	Disturb any human remains, including those interred outside formal cemeteries?	☐	☐	☐	☒	21

CULTURAL RESOURCES

a) **Less Than Significant Impact** - Stent Family Hall (formerly Douglass Hall) a building that houses the school administrative functions and classrooms is an historic structure, although not listed on the National Register of Historic Places. The increased enrollment project would not adversely affect the Stent Family Hall and would have no effect on the historic nature of the structure.

b-d) **No Impact** - The proposed project site is not likely to be located within any sensitive archeological or paleontological resources, as the site is presently developed for schools land use. Therefore, no significant impacts to archaeological resources would be anticipated to occur upon implementation of the proposed project. The proposed project would not cause a physical change that would affect any known unique ethnic cultural values or restrict any existing religious or sacred uses within the project vicinity.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
VI.	**GEOLOGY AND SOILS** - Would the project:					
a)	Expose people or structures to potential substantial adverse effects, including the risk or loss, injury, or death involving:	☐	☐	☐	☒	5,23
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒	5,23
	ii) Strong seismic ground shaking.	☐	☐	☐	☒	5,23
	iii) Seismic-related ground failure, including	☐	☐	☐	☒	5,23
	iv) Landslides?	☐	☐	☐	☒	5,23
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒	17
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒	23
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒	23
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where an swers are not available for the disposal of wastwater?	☐	☐	☐	☒	17

Geology and Soils Description

a) **No Impact** - According to the Atherton General Plan, the project site does not lie within any Alquist Priolo Special Study Zones, areas designated by the State as active faults. Therefore, the proposed project would not expose people to potential impacts involving surface rupture.

The project site is located in a seismically active region which has experienced many strong earthquakes. The site is shown on the Atherton General Plan as being approximately 2.5 miles east of the San Andreas fault. While there are no known active or potentially active faults within the Town of Atherton, it is subject to periodic, very strong earthquakes which originate either on the San Andreas or from the Hayward and Calaveras faults in the East Bay. The project site has the potential for seismic ground shaking and has experienced such hazards during the 1906 and 1989 earthquakes. The existing improvements could be disrupted by strong seismic activity, however, this potential impact is avoided by design in accordance with the Seismic Engineering Standards for the Bay Area Region.

The proposed project would neither result in nor expose people to potential impacts involving a seiche, tsunami, or volcanic hazard. USGS studies indicate that the Project Area has no susceptibility to seiches or tsunamis.

Impacts from landslides or mudflows would not occur because the project is located on relatively flat land.

b-d) **No Impact** - The enrollment increase project has no potential for soil erosion, loss of topsoil, subsidence, liquefaction or damage from expansive soils

e) **No Impact** - Septic tank/drain field wastewater disposal is not required as part of this project.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
VII.	**HAZARDS AND HAZARDOUS MATERIALS** - Would the project:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒	16
b)	Emit hazardous emissions to handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of the existing proposed school?	☐	☐	☐	☒	16
c)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒	List per CAGC 65962.5
d)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airiport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	15
e)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	20
f)	Impair implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	13
g)	Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands?	☐	☐	☐	☒	5

HAZARDS AND HAZARDOUS MATERIALS DESCRIPTION

a-c) **No Impact** - The proposed project would not utilize hazardous materials or generate hazardous waste. Construction activities are not proposed. Therefore, the proposed project would not be expected to pose any risk of accidental explosion or release of hazardous substances.

d-f,h) **No Impact** - There are no hazardous materials or wastes known to currently exist on the subject property and approval of the proposed project would not result in a change in existing land use. The proposed project site, therefore, would not be anticipated to involve the exposure of people to existing sources of potential health hazards or substantially increase fire hazards.

g) **No Impact** - The project would not interfere with any emergency response or evacuation plans.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
VIII.	**HYDROLOGY AND WATER QUALITY -** What the project:					
a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒	4
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	☐	☐	☐	☒	No ground water withdrawal proposed
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒	16
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate of amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒	16
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒	16
f)	Otherwise substantially degrade water quality?	☐	☐	☐	☒	16
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒	8

h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒	8
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒	8
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒	23

HYDROLOGY AND WATER QUALITY

a-j)

No Impact - Wastewater generated at the project site would be collected and discharged into the municipal wastewater disposal system. It would not involve depletion of ground water supplies, would not alter the existing drainage pattern, and would not contribute runoff which would exceed the capacity of the storm drainage system. The Project site does not lie within the 100-year flood hazard area nor would it impede or redirect flood flows. The project area is not subject to inundation by seiche, tsunami, or mudflow and there are no nearby dams. The site is landscaped so the erosion potential is reduced to a no impact level.

The storm drainage runoff from the new gym, Performing Arts, and Creative Arts Buildings and from the new paved areas will be collected in an underground storm drainage system and retained in a proposed storm retention structure, located underground west of the existing Operations Shops. The retention structure will be designed to avoid contributing runoff in excess of current conditions during peak storm periods.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
IX	**LAND USE AND PLANNING** - Would the project:					
a)	Physically divide an established community?	☐	☐	☐	☒	5
b)	Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒	5
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒	5

LAND USE AND PLANNING

a) **No Impact** – Approval of the proposed project would not change the existing land use. However, it would slightly increase the intensity of use by increasing enrollment from 750 to 795 students. The project would not divide an established community.

b) **No Impact** - The proposed project would conform to the adopted Atherton General Plan.

c) **No Impact** - There is no habitat conservation plan or natural community conservation plan in effect within the proposed project area.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
X.	**MINERAL RESOURCES** - Would the project:					
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒	23
b)	Result in the loss of availability of a locally - important mineral resource recovery site delineated on a local general plan, specific	☐	☐	☐	☒	23

MINERAL RESOURCES DESCRIPTION

a-b) **No Impact** - The project site is located in an urban, developed area; therefore, no significant mineral deposits would be expected to occur within the vicinity.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
XI.	**NOISE** - Would the project:					
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒	5,38
b)	Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☐	☒	21
c)	A substantial permanent increase in ambient noise level in the project vicinity above the levels existing without the project?	☐	☐	☐	☒	38
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒	38
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	15
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	15

NOISE DESCRIPTION

a-f) **No impact** - Illingworth & Rodkin, Inc. (I & R) analyzed the proposed project for possible significant construction or operational noise impacts (see Illingworth & Rodkin, Inc. letter of April 21, 2011 attached). They concluded that since the project would not involve construction, it would not have any temporary construction noise impacts. They stated that operational noise from the proposed project would result from increased activity on site and increased traffic associated with the 9 % increase in student population. (Note: Subsequent to the I & R review and analysis the project has been reduced to a 6% increase in student population which would result in less impact than considered by I & R). I & R based their calculations on the assumption that on-site noise generated by students would be directly proportional to the 9% increase in student population. They calculated that such and increase in activity would increase noise levels by less than 0.4 dBA during the period that the school is active. I & R state that a 1 dBA increase is barely perceptible to the healthy human hearing in a laboratory setting and a 3 dBA increase is commonly used to describe noticeable noise increases in the ambient environment. I & R conclude that the predicted increase to the ambient noise environment would not be detectable to residents nearby.

I & R calculated the operational noise impacts associated with the predicted increase in the number of combined AM and PM peak hour traffic trips resulting from the increase in student population. Based on the number of increased traffic trips, the noise level increase would be less than 0.4 dBA on a peak hourly basis. The daily noise level would be less. I & R conclude that this would be an imperceptible increase in the noise level. Further, they state the increase would be so slight that it would not be considered to contribute to any cumulative noise increase.

The proposed project would not create any ground borne vibrations. It is not within the vicinity of a public or private airport.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
XII.	**POPULATION AND HOUSING** - Would the project:					
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒	5
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	5
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	5

POPULATION AND HOUSING DESCRIPTION

a) **No Impact** - The proposed project would not induce population growth because the current student enrollment would only increase by approximately 6%. The project is anticipated to result in minor employment increases, however, this would not substantially affect population growth.

b&c) **No Impact** - The project would not displace any housing or people.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
XIII.	**PUBLIC SERVICES** - Would the project:					
a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable services rations, response times or other performance objectives for any of the public services.	☐	☐	☐	☒	5
	i. Fire protection	☐	☐	☐	☒	9
	ii. Police protection	☐	☐	☐	☒	13
	iii. Schools	☐	☐	☐	☒	14
	iv. Parks	☐	☐	☐	☒	36
	v. Other Public Facilities	☐	☐	☐	☒	21

PUBLIC SERVICES DESCRIPTION

a) **No Impact** - Since the proposed project would not increase population, the demand for other governmental services would not be affected as a result of the proposed project.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
XIV	**RECREATION** - Would the project:					
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒	36
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒	No recrea-ational facilities included in project.

RECREATION DESCRIPTION

a-b) **No Impact** - The proposed project would not increase the demand for neighborhood or regional parks or other recreational facilities because it would not affect population growth or distribution. There are no public recreational facilities located at the project site that could be adversely impacted by the project.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
XV.	**TRANSPORTATION/TRAFFIC** - Would the project:					
a)	Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐	34
b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒	10
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒	15
d)	Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	☒	10
e)	Result in inadequate emergency access?	☐	☐	☐	☒	10
f)	Result in inadequate parking capacity?	☐	☐	☐	☒	10
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	☐	☐	☐	☒	5

TRANSPORTATION/TRAFFIC
DESCRIPTION

a) **Potentially Significant unless Mitigation Incorporated** - Two primary traffic studies were prepared addressing the proposed increased enrollment. Kimley-Horn and Associates was retained by the Town of Atherton to count existing trips entering and exiting the campus, to determine trip generation rates, to estimate entering and exiting trips with 750 students and 795 students, to determine levels of service and impacts to nearby intersections and to recommend mitigation measures for any impacts. It should be noted that the Kimley-Horn study was originally prepared when the proposed enrollment was a maximum of 815 students. The proposal has subsequently been reduced to a maximum of 795 students and the Kimley-Horn study has been revised based on the 795 student maximum enrollment.

In addition Menlo School retained Nelson/Nygaard Consulting Associates, a transportation consulting firm, to develop a proposed traffic and parking mitigation program for the school. The Nelson/Nygaard mitigation program was shared with neighbors of the school and a specific mitigation proposal was generally agreed upon by the School and its concerned neighbors. The specific mitigation proposal was peer reviewed by the Town's consultant Kimley-Horn.

The two primary traffic studies are described below.

First, an analysis of traffic impacts associated with a proposed amendment of a Conditional Use Permit to allow Menlo School to increase its enrollment from a maximum of 750 students to a maximum of 795 students was prepared by Kimley-Horn and Associates and presented in a report entitled, "Traffic Impact Study - Draft Report, Menlo School Atherton, CA", 31 May 2011. In the report it was concluded that three impacts would result from the Menlo School enrollment expansion:

Impact #1: The **Valparaiso Avenue/Emilie Avenue** intersection would operate at an unacceptable level of service F during the AM and school PM peak hours in the Approved Use (i.e. with 750 students) condition. With the addition of the increased enrollment traffic, the intersection will be subject to an increase in delay of more than 0.8 seconds due to the project. Since the project traffic results in an increase in delay of 0.8 seconds or more at an intersection which operates at unacceptable service levels without the project, this is a significant impact.

Impact #2: The **Valparaiso Avenue/Elena Avenue** intersection would operate at an unacceptable level of service F during the AM and school PM peak hours in the Approved Use (i.e. with 750 students) condition. With the addition of the increased enrollment traffic, the intersection will be subject to an increase in delay of more than 0.8 seconds due to the project. Since the project traffic results in an increase in delay of 0.8 seconds or more at an intersection which operates at unacceptable service levels without the project, this is a significant impact.

The mitigation measures proposed by Kimley-Horn and listed below would reduce the potentially significant impacts to a less-than-significant level.

Mitigation Measure #1: To mitigate the project impacts expected to occur in the Approved Use + Increased Enrollment condition, an exclusive left turn lane on the Emilie Avenue approach should be added and the left-shared-right lane should be restriped as a right turn lane. Because the Menlo School increased enrollment adds more than 0.8 seconds of delay to an intersection currently operating unacceptably, the project should be responsible for a proportionate share of the mitigation costs, based on the City of Menlo Park impact threshold. Modifying the intersection will reduce the

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
XV.	**TRANSPORTATION/TRAFFIC** - Would the project:					
a)	Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐	34
b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒	10
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒	15
d)	Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	☒	10
e)	Result in inadequate emergency access?	☐	☐	☐	☒	10
f)	Result in inadequate parking capacity?	☐	☐	☐	☒	10
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	☐	☐	☐	☒	5

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impact to less than significant and improve the level of service to better than Approved Use Conditions at LOS F and LOS E during the AM and PM peak hours. Because this improvement is included as mitigation in the Sacred Heart Master Plan, the cost of the improvement should be shared between the schools based on direction from the Town of Atherton.

Mitigation Measure #2: To mitigate the project impacts expected to occur in the Approved Use + Increased Enrollment condition, an exclusive left turn lane on the Elena Avenue approach should be added and the left-shared-right lane should be restriped as a right turn lane. Because the Menlo School increased enrollment adds more than 0.8 seconds of delay to an intersection currently operating unacceptably, the project should be responsible for a proportionate share of the mitigation costs, based on the City of Menlo Park impact threshold. Modifying the intersection will reduce the impact to less than significant and improve the level of service to better than Approved Use Conditions at LOS F and LOS D during the AM and PM peak hours. Because this improvement is included as mitigation in the Sacred Heart Master Plan, the cost of the improvement should be shared between the schools based on direction from the Town of Atherton.

In addition, Kimley-Horn studied the cumulative traffic effects on nearby intersections of combined enrollment increases proposed by Menlo School, Sacred Heart Schools and background traffic projected to the year 2030. The results of that study show additional cumulative impacts at three intersections with Valparaiso; Johnson Street, Emilie Avenue, and Elena Avenue. However, Kimley-Horn has stated that implementation of the Menlo School Transportation Demand Managment Program proposal and adoption of **Mitigation Measure #3** would reduce these impacts to a Less-than-Significant level.

Impact #3: The **Valparaiso Avenue/Johnson Street, Valparaiso Avenue/Emilie Avenue, and Valparaiso Avenue/Elena Avenue** intersections would operate at an unacceptable level of service F during the AM and school PM peak hours in the Cumulative Use (i.e. with 750 students) condition. With the addition of the increased enrollment traffic, the intersections will be subject to an increase in delay of more than 0.8 seconds due to the project. Since the project traffic results in an increase in delay of 0.8 seconds or more at an intersection which operates at unacceptable service levels without the project, this is a significant impact.

Second, Nelson/Nygaard developed a proposed traffic and parking mitigation program for Menlo School designed to reduce vehicle trips to and from the campus, to reduce parking demand and to effect an enforceable, verifiable and effective Transportation Demand Management program. The program consists of the elements listed below:

1. Busing students in School owned or leased buses
2. Incentivizing student carpooling
3. Incentivizing student bicycling and walking
4. Incentivizing parent carpooling
5. Incentivizing faculty and staff to not drive to work or to carpool
6. Use of other techniques to reduce trips and parking such as car sharing of school provided vehicles and guaranteed rides home

Nelson/Nygaard estimated (in their April 14, 2011 Memorandum) that implementation of the proposed TDM program would reduce AM peak hour trips by 150 to 487 (17% to 57% of the proposed 861 AM peak hour trips) with a "probable" reduction of 318 trips (37%). They estimate that implementation of the TDM proposed program would reduce PM peak hour trips by 80 to 307 (20% to 75% of the proposed 412 PM peak hour trips) with a "probable" reduction of 139 trips (34%). Further, they estimate that parking demand would be reduced by 38 spaces or 11% of the 350 designated spaces on campus.

Menlo School has developed a Transportation Demand Management Program based on the Nelson/Nygaard recommendations. This Program has been expressed as the mitigation measure described below. The mitigation measure listed below would further reduce the potentially significant impacts associated with increased project traffic and to cumulative traffic to a less-than-significant level.

Mitigation Measure #3

A. Menlo School (The School) shall implement a Transportation Demand Management (TDM) program to reduce the number of vehicle trips generated in the first year (i.e. 2011-12 academic year) to a maximum of 711 trips in the morning peak period and a maximum of 332 trips in the afternoon peak period, and to a maximum of 627 and 302 trips, respectively, by the end of the second year (i.e. 2012-13 academic year) and continuing thereafter for the life of the Phase III Conditional Use Permit proposed for approval by the Atherton Planning Commission on June 22, 2011. The School shall undertake annual monitoring with the results published in the Annual Update to the Master Plan submitted to the Town of Atherton. The peak periods are defined as 7:00 a.m. to 9:00 a.m. and 2:00 p.m. to 4:00 p.m.

B. The School shall maintain a parking capacity utilization rate equal to or less than 86.5%. Annual monitoring of this commitment shall be undertaken in conjunction with a vehicle trips study to be prepared by a qualified third party traffic consultant, with the results being published in the Annual Update to the Master Plan submitted to the Town of Atherton.

C. If as a result of the annual monitoring conducted in Spring 2013 it is determined that the School is not in compliance with Mitigation Measures #3A and #3B above the School shall be required to reduce its enrollment to a maximum of 755 students by the school year beginning in the Fall of 2016. If the School is found to be out of compliance with Mitigation Measures #3A and #3B above in any two successive years after 2013 the School will be required to reduce its enrollment to a maximum of 755 students by the Fall three calendar years later. Should the School be required to reduce its enrollment level, Mitigation Measure #3A and #3B above shall no longer apply.

D. Menlo School and Sacred Heart Schools shall commence work on intersection modifications at Elena Avenue/Valparaiso and Emilie Avenue/Vaparaiso intersections in the summer of 2011.

b-g) **No Impact** - The project would not exceed the level of service standard established by the San Mateo County Congestion Management Agency for any designated roads or highways. The project would not change air traffic patterns. The project would not substantially increase hazards due to design features. The project would not result in inadequate emergency access. The project would not result in inadequate parking capacity. The project would not conflict with adopted policies, plans, or programs supporting alternative transportation.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
XVI.	**UTILITIES & SERVICE SYSTEMS** - Would the project:					
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.	☐	☐	☐	☒	4
b)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒	10
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒	10
d)	Have suffcient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒	10
e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒	5
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒	10
g)	Comply with federal, state and local statutes and regulations related to solid waste.	☐	☐	☐	☒	5

UTILITIES & SERVICES SYSTEMS DESCRIPTION

a-g) **No Impact** - The proposed project would not result in a need for new systems or supplies or substantial alterations to power and natural gas, communications, water treatment or distribution faciltiies, sewer, storm water drainage, solid waste disposal or water supplies, which will continue to be provided by the existing service providers.

Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact	Source
XVII.	**MANDATORY FINDINGS OF SIGNIFICANCE**					
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or a wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or pre-history?	☐	☐	☐	☒	21
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒	21
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒	21

MANDATORY FINDINGS OF SIGNIFICANT DESCRIPTION

a) **No Impact** - The project would not degrade the quality of the environment. The project would not substantially reduce the habitat of a fish or wildlife species or cause such species to drop below self-sustaining levels. The project would not reduce the number or restrict the range of a rare or endangered plant or animal. Historic or prehistoric resources would not be effected by the increased enrollment.

b) **No Impact** - The project does not have impacts that are individually limited, but cumulatively considerable.

c) **No Impact** - The proposed project would not have environmental effects that would cause substantial adverse effects on human beings either directly or indirectly.

SOURCES

1. California Environmental Quality Act (CEQA)
2. State Planning and Zoning Law
3. Subdivision Map Act
4. National Pollution Discharge Elimination System (NPDES) Permit
5 General Plan
6. Municipal Zoning Code
7. Specific Plan
8. Composite Flood Hazard Areas - HUD National Flood Insurance Program
9. Menlo Park Fire Protection District
10. City Engineer
11. City Planner
12. Geologic Consultant
13. Police Department
14. School District
15. Airport Land Use Committee Plans
16. Project Plans and Reports
17. Soils Report
18. Environmental Impact Report
19. Environmental Checklist
20. Field Inspection
21. Experience with other projects of this size and nature
22. Aerial Photography
23. USGS Data Contribution
24. USGS Quadrangle Maps
25. San Mateo County Rare and Endangered Species Maps
26. Federal Environmental Standards
    a) Water Quality Standards 40 CFR 120
    b) Low-Noise Emission Standards 40 CFR 203
    c) General Effluent Guidelines & Standards 40 CFR 401
    d) National Primary & Secondary Ambient Air Quality Standards 40 CFR 50
27. State Federal Environmental Standards
    e) Ambient Air Quality Standards
    f) Noise Levels for Construction Equipment
28. Williamson Act Maps
29. Bay Area Air Pollution Control District Air Pollution Isopleth Maps
30. California Natural Areas Coordinating Council Maps
31. Census
32. City Geological Map
33. Phase 1 Preliminary Environmental Site Assessment
34. Traffic Study
35. Historical Resource Inventory
36. Parks and Recreation Department
37. Draft Housing Element
38. Illingworth & Rodkin, Inc. Analysis, April 21, 2011

MITIGATION MEASURES

Mitigation Measures

Transportation/Traffic

Mitigation Measure #1: To mitigate the project impacts expected to occur in the Approved Use + Increased Enrollment condition, an exclusive left turn lane on the Emilie Avenue approach should be added and the left-shared-right lane should be restriped as a right turn lane. Because the Menlo School increased enrollment adds more than 0.8 seconds of delay to an intersection currently operating unacceptably, the project should be responsible for a proportionate share of the mitigation costs, based on the City of Menlo Park impact threshold. Modifying the intersection will reduce the impact to less than significant and improve the level of service to better than Approved Use Conditions at LOS F and LOS E during the AM and PM peak hours. Because this improvement is included as mitigation in the Sacred Heart Master Plan, the cost of the improvement should be shared between the schools based on direction from the Town of Atherton.

Mitigation Measure #2: To mitigate the project impacts expected to occur in the Approved Use + Increased Enrollment condition, an exclusive left turn lane on the Elena Avenue approach should be added and the left-shared-right lane should be restriped as a right turn lane. Because the Menlo School increased enrollment adds more than 0.8 seconds of delay to an intersection currently operating unacceptably, the project should be responsible for a proportionate share of the mitigation costs, based on the City of Menlo Park impact threshold. Modifying the intersection will reduce the impact to less than significant and improve the level of service to better than Approved Use Conditions at LOS F and LOS D during the AM and PM peak hours. Because this improvement is included as mitigation in the Sacred Heart Master Plan, the cost of the improvement should be shared between the schools based on direction from the Town of Atherton.

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Mitigation Measures #3A and #3B above shall no longer apply.

D. Menlo School and Sacred Heart Schools shall commence work on intersection modifications at Elena Avenue/ Valparaiso and Emilie Avenue/Valparaiso intersections in the summer of 2011.

LIST OF PREPARERS

Neal J. Martin, AICP
Neal Martin and Associates

ATTACHMENTS

1. Kimley-Horn and Associates, Inc., *Draft Report - Traffic Impact Study - Draft Report, Menlo School, Atherton CA*, 31 May 2011

2. Illingworth & Rodkin, Inc., *Menlo School Enrollment Increase Mitigated Negative Declaration - Air Quality and Noise Issues,* Letter to Neal Martin, April 21, 2011

3. Nelson/Nygaard Consulting Associates, *Menlo School Traffic and Parking Mitigation Program, Community Meeting,* April 19, 2011

4. Nelson/Nygaard Consulting Associates, *Memorandum - Subject: Menlo School Trip Reduction Calculations*, April 14, 2011

Traffic Impact Study – Draft Report

MENLO SCHOOL
ATHERTON, CA

31 May 2011

Prepared for:

Town of Atherton, CA

Prepared by:

Kimley-Horn and Associates, Inc.

WARNING!

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INTRODUCTION

Kimley-Horn and Associates, Inc. was retained by the Town of Atherton to prepare a traffic study for the proposed amendment of a Conditional Use Permit at Menlo School approved by the Atherton Planning Commission on December 3, 2008. The amendment would allow Menlo School to increase its enrollment from a maximum of 750 students to a maximum of 795 students. It is understood that no new classrooms or buildings would be needed to accommodate the proposed enrollment increase.

This traffic study was prepared based on discussions with, and criteria set forth by, the Town of Atherton and the City of Menlo Park. Both agencies participated in the review of the scope of work for this study.

Study Methodology

Development Conditions

Contents of the traffic study and evaluation of the following development conditions:

- Existing Conditions – Based on current traffic counts and existing roadway geometry and traffic control with the existing student enrollment at Menlo School.
- Approved Use Permit Conditions – Based on existing conditions minus student enrollment greater than the 750 student total approved in the most recent use permit for Menlo School.
- Approved Use Permit Plus Proposed Increased Enrollment Conditions – Based on approved use permit traffic volumes and traffic generated by the proposed increased enrollment to 795 students at Menlo School.
- Cumulative Conditions – Based on 2030 + Sacred Heart Master Plan traffic conditions and the future roadway geometry and traffic control based on the mitigations determined in the *Sacred Heart Schools 2009 Master Plan Traffic Study*[1].
- Cumulative Conditions Plus Proposed Increased Enrollment Conditions – Based on cumulative traffic volumes and traffic generated by the proposed increased enrollment to 795 students at Menlo School.

This study evaluates the proposed project under the above development conditions for weekday AM and school PM peak periods.

[1] *Sacred Heart Schools 2009 Master Plan Traffic Study*, Crane Transportation Group, 2009.

Operating Conditions and Criteria for Intersections

Analysis of significant environmental impacts at intersections and roadway segments is based on the concept of Level of Service (LOS). The LOS of an intersection is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. Levels of Service for this study were determined using methods defined in the *Highway Capacity Manual, 2000* (HCM) and appropriate traffic analysis software.

Unsignalized intersections comprise two-way stop controlled (TWSC) and all-way stop controlled (AWSC) intersections. The TWSC procedure defines LOS as a function of average control delay for each minor street approach movement. Conversely, the AWSC and signalized intersection procedures define LOS as a function of average control delay for the intersection as a whole. **Table 1** relates the operational characteristics associated with each LOS category for signalized and unsignalized intersections.

Table 1 – Intersection Level of Service Definitions

Level of Service	Description	Signalized (Avg. control delay per vehicle sec/veh.)	Unsignalized (Avg. control delay per vehicle sec/veh.)
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream	≤ 10	≤ 10
B	Stable traffic. Traffic flows smoothly with few delays.	> 10 – 20	> 10 – 15
C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.	> 20 – 35	> 15 – 25
D	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles. Delays may be more than one cycle during peak hours.	> 35 – 55	> 25 – 35
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.	> 55 – 80	> 35 – 50
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.	> 80	> 50

Source: Transportation Research Board, *Highway Capacity Manual 2000*, National Research Council, 2000.

Thresholds of Significance

Project impacts were determined by comparing the Approved Use conditions with the Approved Use plus Proposed Enrollment Increase conditions. Significant impacts for intersections are created when traffic from the proposed project degrades the LOS to fall below a specific threshold.

The Town of Atherton does not have a minimum acceptable level of service standard, however they follow Menlo Park's standards for consistency of results. Based on the *City of Menlo Park Transportation Impact Analysis Guidelines*, The City of Menlo Park accepts LOS D as the minimum acceptable level of service standard at City arterial intersections and LOS C as the minimum acceptable at all collector and local street intersections.

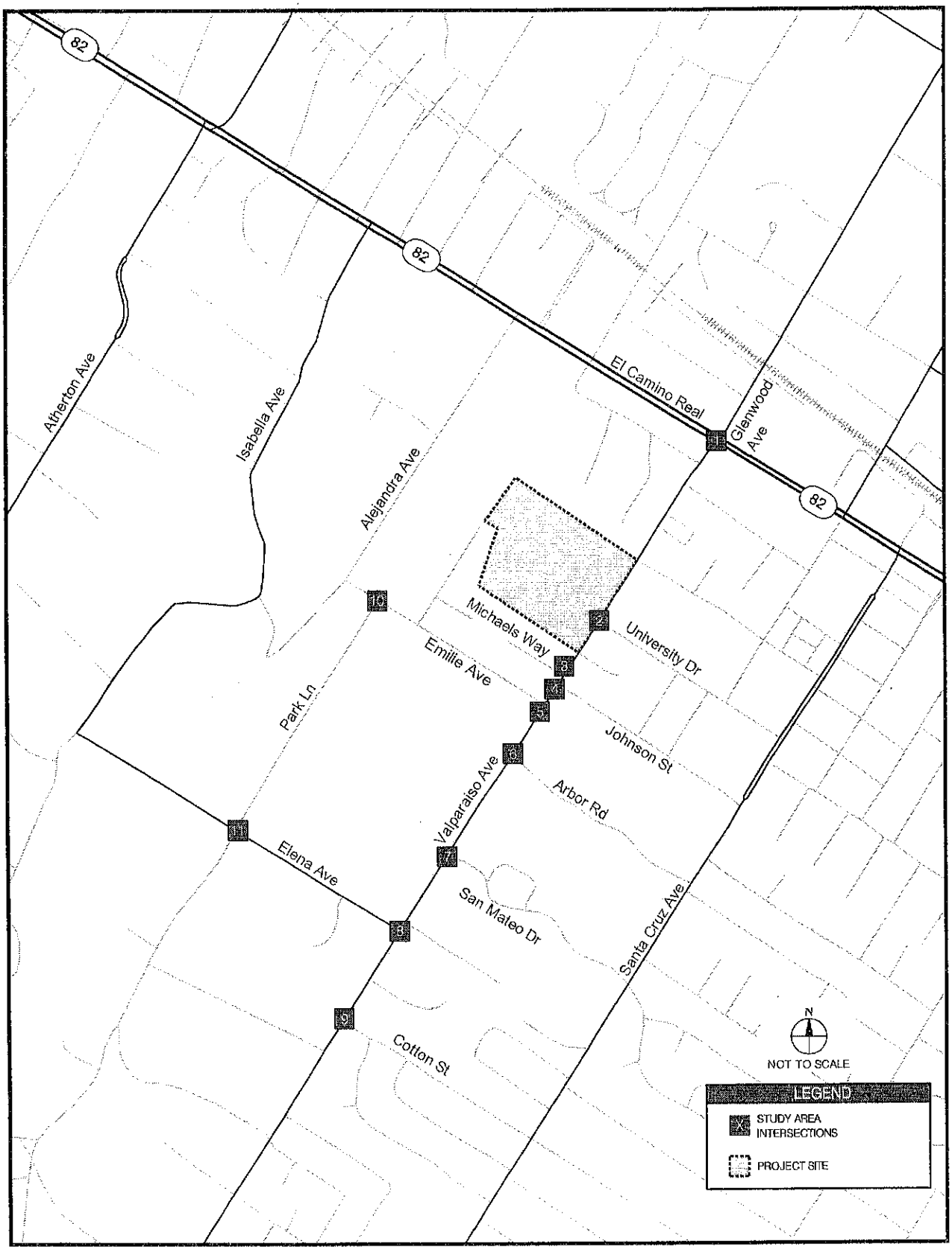
A project is considered to have a potentially "significant" impact if the addition of project traffic causes an intersection operating acceptably (LOS A, B or C) on a collector street to operate at an unacceptable level of service or have an increase of 23 seconds or greater in average vehicle delay, whichever comes first. A project is considered to have a potentially "significant" impact if the addition of project traffic causes an intersection operating acceptably (LOS A, B, C, or D) on an arterial street to operate at an unacceptable level of service or have an increase of 23 seconds or greater in average vehicle delay, whichever comes first.

A project is also considered to have a potentially "significant" impact if the addition of project traffic causes an increase of more than 0.8 seconds (4 seconds for intersections in the Town of Atherton) of average delay to vehicles on all critical movements for intersections at a near term LOS D, E, or F for collector streets and at a near-term LOS E or F for arterial streets.

Study Intersections Included in Analysis

To assess changes in traffic conditions associated with the proposed project, the following intersections listed with their jurisdiction, illustrated in **Figure 1**, were selected by the Town of Atherton (and confirmed with City of Menlo Park) for evaluation in this traffic study based on their location in relation to the project site and the amount of project traffic expected to pass through them:

1. Valparaiso Avenue/El Camino Real (Town of Atherton/City of Menlo Park)
2. Valparaiso Avenue/University Drive (Town of Atherton/City of Menlo Park)
3. Valparaiso Avenue/Michaels Way (Town of Atherton/City of Menlo Park)
4. Valparaiso Avenue/Johnson Street (Town of Atherton/City of Menlo Park)
5. Valparaiso Avenue/Emilie Avenue (Town of Atherton/City of Menlo Park)
6. Valparaiso Avenue/Arbor Road (Town of Atherton/City of Menlo Park)
7. Valparaiso Avenue/San Mateo Drive (Town of Atherton/City of Menlo Park)
8. Valparaiso Avenue/Elena Avenue (Town of Atherton/City of Menlo Park)
9. Valparaiso Avenue/Cotton Street (Town of Atherton/City of Menlo Park)
10. Park Lane/Emilie Avenue (Town of Atherton)
11. Park Lane/Elena Avenue (Town of Atherton)



Kimley-Horn and Associates, Inc.

FIGURE 1
STUDY AREA & INTERSECTION LOCATIONS

EXISTING CONDITIONS

Existing Roadway Network

Below is a description of the principal roadways included in this study:

Arbor Road

Arbor Road is a north-south two lane undivided residential roadway in the City of Menlo Park. The posted speed limit along Arbor Road is 25 mph.

Cotton Street

Cotton Street is a north-south two lane undivided residential roadway in the City of Menlo Park. The posted speed limit along Cotton Street is 25 mph.

El Camino Real

El Camino Real, also State Route 82, is a north-south four lane divided roadway. El Camino Real connects cities to the south to several cities north of Atherton.

Elena Avenue

Elena Avenue is a north-south two lane undivided residential roadway in the Town of Atherton. The posted speed limit along Elena Avenue is 25 mph.

Emilie Avenue

Emilie Avenue is a north-south two lane undivided residential roadway in the Town of Atherton. The posted speed limit along Emilie Avenue is 25 mph.

Johnson Street

Johnson Street is a north-south two lane undivided residential roadway in the City of Menlo Park. The speed limit along Johnson Street is 25 mph.

Michaels Way

Michaels Way is a north-south two lane undivided residential roadway in the Town of Atherton. The speed limit along Michaels Way is 25 mph.

Park Lane

Park Lane is an east-west two lane undivided residential roadway in the Town of Atherton. The posted speed limit along Park Lane is 25 mph.

San Mateo Drive

San Mateo Drive is a north-south two lane undivided residential roadway in the City of Menlo Park. The speed limit along San Mateo Drive is 25 mph.

University Drive

University Drive is a north-south two lane undivided residential roadway in the City of Menlo Park connecting Valparaiso Avenue with Santa Cruz Avenue in Menlo Park.

Valparaiso Avenue

Valparaiso Avenue is an east-west two lane undivided roadway that is split between the Town of Atherton and the City of Menlo Park. The posted speed limit along Valparaiso Avenue is 35 mph. Valparaiso Avenue is considered a minor arterial in the City of Menlo Park and a collector roadway in the Town of Atherton. The city-town limit line runs through the middle of the corridor.

Existing Lane Configurations and Traffic Control

Existing intersection lane configurations and traffic controls are illustrated in **Figure 2**. Traffic signals in the study area are located at the following study intersections:

- #1 – Valparaiso Avenue/El Camino Real
- #2 – Valparaiso Avenue/University Drive

The remaining study intersections are all Two-Way Stop Controlled (TWSC) with the exception of the intersection of Park Lane/Elena Avenue, which is All-Way Stop Controlled (AWSC).

Existing Peak Hour Turning Movement Volumes

Weekday intersection turning movement volumes were collected at the 11 study area intersections in December 2009 when the enrollment at Menlo School was 791 students as part of the *Sacred Heart Schools 2009 Master Plan Traffic Study*. The weekday AM and PM peak period traffic counts were collected between 7:00-9:00 AM and 2:00-4:00 PM, respectively. All traffic counts were conducted on typical weekdays (Tuesday through Thursday) while local schools were in session. Count periods coincide with the weekday period when the highest combined levels of background and project traffic are expected to occur.

The peak hour turning movement volumes for all study intersections are shown in **Figure 3**. Intersection volume data sheets are provided in the **Appendix**.

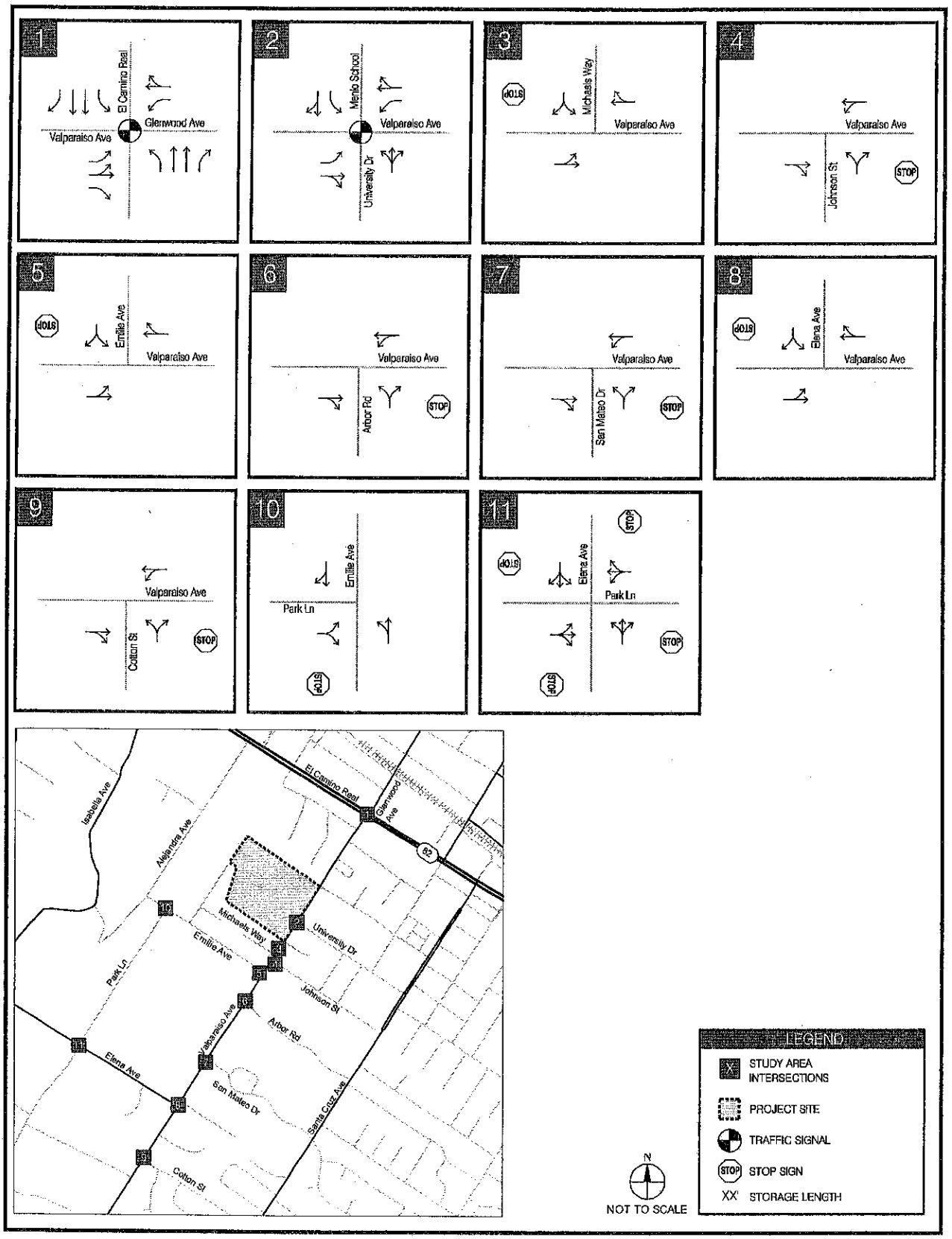


FIGURE 2

EXISTING CONDITION

LANE GEOMETRY AND TRAFFIC CONTROL

Kimley-Horn and Associates, Inc.

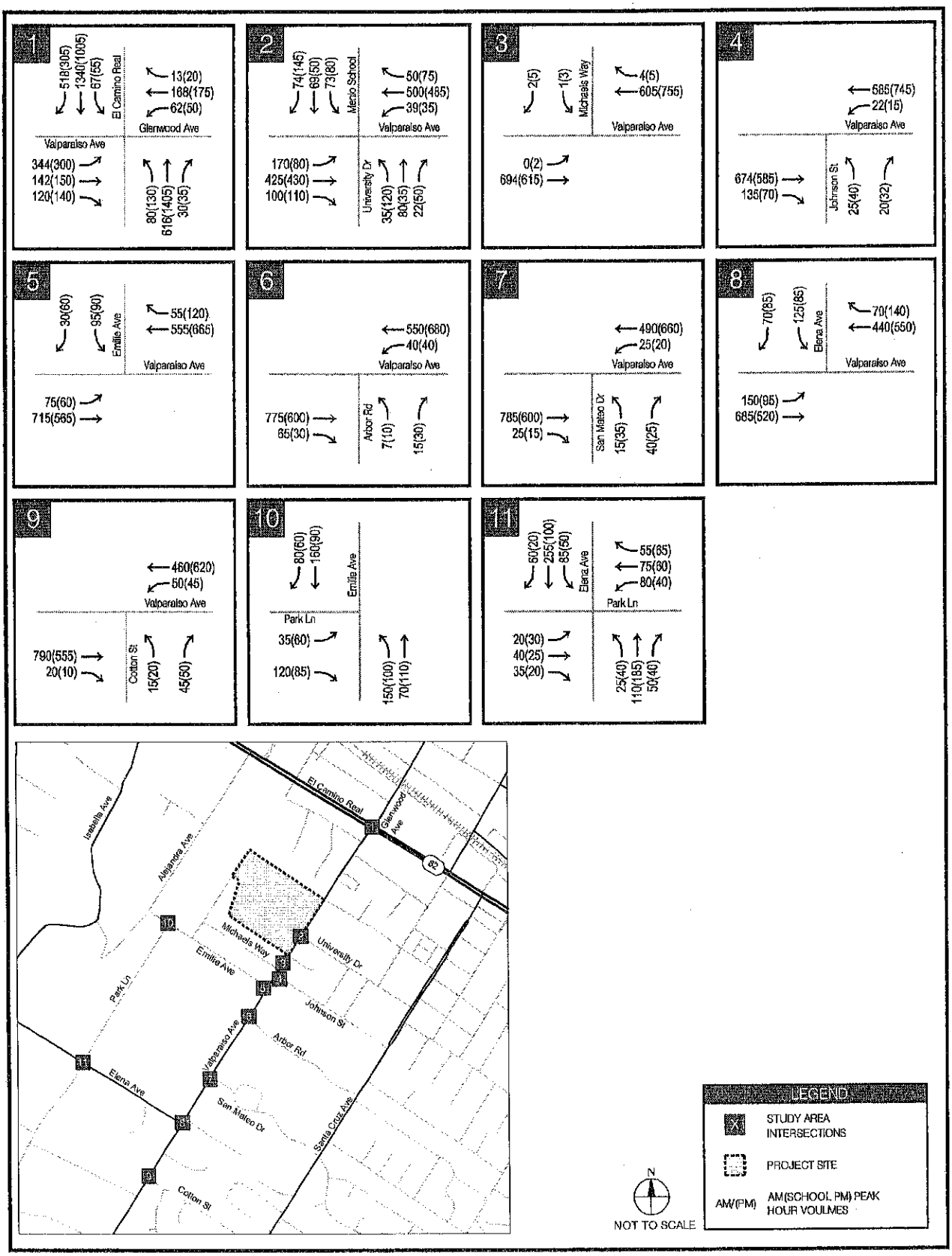


FIGURE 3

EXISTING CONDITION

PEAK HOUR TURNING MOVEMENT VOLUMES

Kimley-Horn and Associates, Inc.

Existing Transit Facilities

SamTrans provides bus service in Atherton, Menlo Park and throughout San Mateo County. Route 83 is the only route with a bus stop adjacent to Menlo School at Valparaiso Avenue/University Avenue with three buses stopping at the end of the school day. There are other routes with regular service that run along El Camino Real which include Routes 390 and 296.

Several students and employees ride Caltrain to get to Menlo School. The school operates a bus back and forth to the Caltrain station to encourage students to use the alternate mode of transportation.

Existing Bicycle and Pedestrian Facilities

Sidewalks are present on the south side of Valparaiso Avenue adjacent to Menlo School. There are Class II bicycle facilities on Valparaiso Avenue in the study area.

Existing Level of Service at Study Intersections

Traffic operations were evaluated at signalized and unsignalized intersections under existing traffic conditions with 791 students enrolled at Menlo School. Results of the analysis are presented in **Table 2**. In **Table 2**, the signal control is listed as Signal for a signalized intersection, AWSC for an all-way stop-controlled intersection, and TWSC for a two-way stop-controlled intersection. The overall level of service is reported for signalized intersections as well as AWSC intersections and the worst approach is reported for TWSC intersections. Intersections operating unacceptably under existing conditions are bolded.

As shown in **Table 2**, the following intersections are currently performing below acceptable levels:

- #5 – Valparaiso Avenue/Emilie Avenue
- #8 – Valparaiso Avenue/Elena Avenue

Additional detail of the analysis is provided in the **Appendix**.

Table 2 – Existing Intersection Levels of Service Summary

#	Intersection	Intersection Control	Existing Conditions			
			AM Peak		School PM Peak	
			LOS	Delay	LOS	Delay
1	Valparaiso Avenue/El Camino Real	Signal	C	28.8	C	32.2
2	Valparaiso Avenue/University Drive	Signal	D	41.2	C	24.6
3	Valparaiso Avenue/Michaels Way	TWSC	C	16.1	C	19.2
4	Valparaiso Avenue/Johnson Street	TWSC	D	26.3	D	28.3
5	Valparaiso Avenue/Emilie Avenue	TWSC	**F**	**102.4**	**F**	**79.9**
6	Valparaiso Avenue/Arbor Road	TWSC	C	21.0	C	17.2
7	Valparaiso Avenue/San Mateo Drive	TWSC	C	21.4	C	24.7
8	Valparaiso Avenue/Elena Avenue	TWSC	**F**	**225.8**	**F**	**58.9**
9	Valparaiso Avenue/Cotton Street	TWSC	C	24.1	C	18.5
10	Park Lane/Emilie Avenue	TWSC	B	12.6	B	11.8
11	Park Lane/Elena Avenue	AWSC	D	26.0	B	11.9

Intersections operating unacceptably are bolded.

MENLO SCHOOL WITH INCREASED ENROLLMENT

Proposed Enrollment

The Menlo School has an approved use permit for 750 students. The enrollment was 791 in December 2009 when the traffic counts were collected. The main school driveway is at the intersection of Valparaiso Avenue / University Avenue. During the AM peak, there is a gate east of University Avenue and just west of Crane Street that is opened each day from about 7:00 AM to 8:30 AM as an inbound-only driveway to help alleviate some of the congestion at the University Avenue entrance. Additional counts were collected at the two school driveways in October and December 2010 when the enrollment was 810 students.

Project Trip Generation

Typically, trip generation for a proposed project is calculated through utilization of the Institute of Transportation Engineers *Trip Generation* publication. *Trip Generation* is a standard reference used by jurisdictions throughout the country for the estimation of trip generation potential of proposed developments. The reference is based on numerous studies throughout the country of various land uses such as shopping centers, restaurants, gas stations, schools, and many more. Trip Generation includes the Land Use 536 – Private School (K-12) that could be applied to this study, however the amount of sites studied is limited to 3 or less, with no studies greater than 670 students

at a school. Therefore, to better approximate the potential impact of increased traffic at the Menlo School due to increased traffic, a specific trip generation study was completed for Menlo School.

To determine a trip generation rate for application to the proposed Menlo School enrollment increase, morning (7:00 – 9:00 AM) and afternoon (2:00 – 4:00 PM) vehicular traffic volumes were collected. The vehicular volume and site characteristics collected were used to calculate the following average trip generation rates and directional distributions:

- Independent Variable: Students
  Weekday, AM Peak Hour
  Weekday, PM Peak Hour of Generator

Traffic counts at the two project driveways were collected on one day in October 2010 during the AM peak period and school PM peak period and again during the AM peak period on one day in December 2010 when school was in session with an enrollment of 810 students. The traffic counts and the current enrollment were used to determine a trip rate per student at Menlo School as shown in **Table 3**.

It is interesting to note that the results on this site specific trip generation compared to the limited ITE dataset have similarities and differences. The inbound and outbound distributions in the AM and PM peak periods are very similar. For example, ITE lists an AM distribution of 61% entering and 39% exiting, while this site specific study shows 64% entering and 36% exiting. PM directional distributions are also similar. However, the overall trip rate was found to be higher for this specific site than the ITE data. The per student rate is 1.06 trips in the AM and 0.51 trips in the PM versus 0.81 trips and 0.17 trips in the AM and PM, respectively in the ITE data. No further conclusions should be made since both data sets are so limited and average results for the small ITE data set only meet the minimum requirements for a data sample to be included in the ITE text.

Table 3 – Menlo School Trip Generation Rate

Date	Students	AM Peak					School PM Peak				
		Trips		Trip Rate			Trips		Trip Rate		
		In	Out	In	Out	Total	In	Out	In	Out	Total
Oct-10	810	548	308	0.68	0.38	1.06	173	237	0.21	0.29	0.51
Dec-10	810	543	312	0.67	0.39	1.06					
Average	810	546	310	0.67	0.38	1.06					

Once the trip generation rate was determined, it was applied to the three scenarios of varying enrollment to determine the trips generated by Menlo School as shown in **Table 4**. In the existing condition with 791 students, Menlo School generates 836 AM peak hour trips and 400 School PM peak hour trips. In the Approved Use condition with 750 students, Menlo School is calculated to generate 792 AM peak hour trips (44 less than

the existing condition) and 379 School PM peak hour trips (21 less than the existing condition). In the Approved Use plus Proposed Increased Enrollment condition with 795 students, Menlo School is calculated to generate 839 AM peak hour trips (3 more than the existing condition) and 403 School PM peak hour trips (3 more than the existing condition).

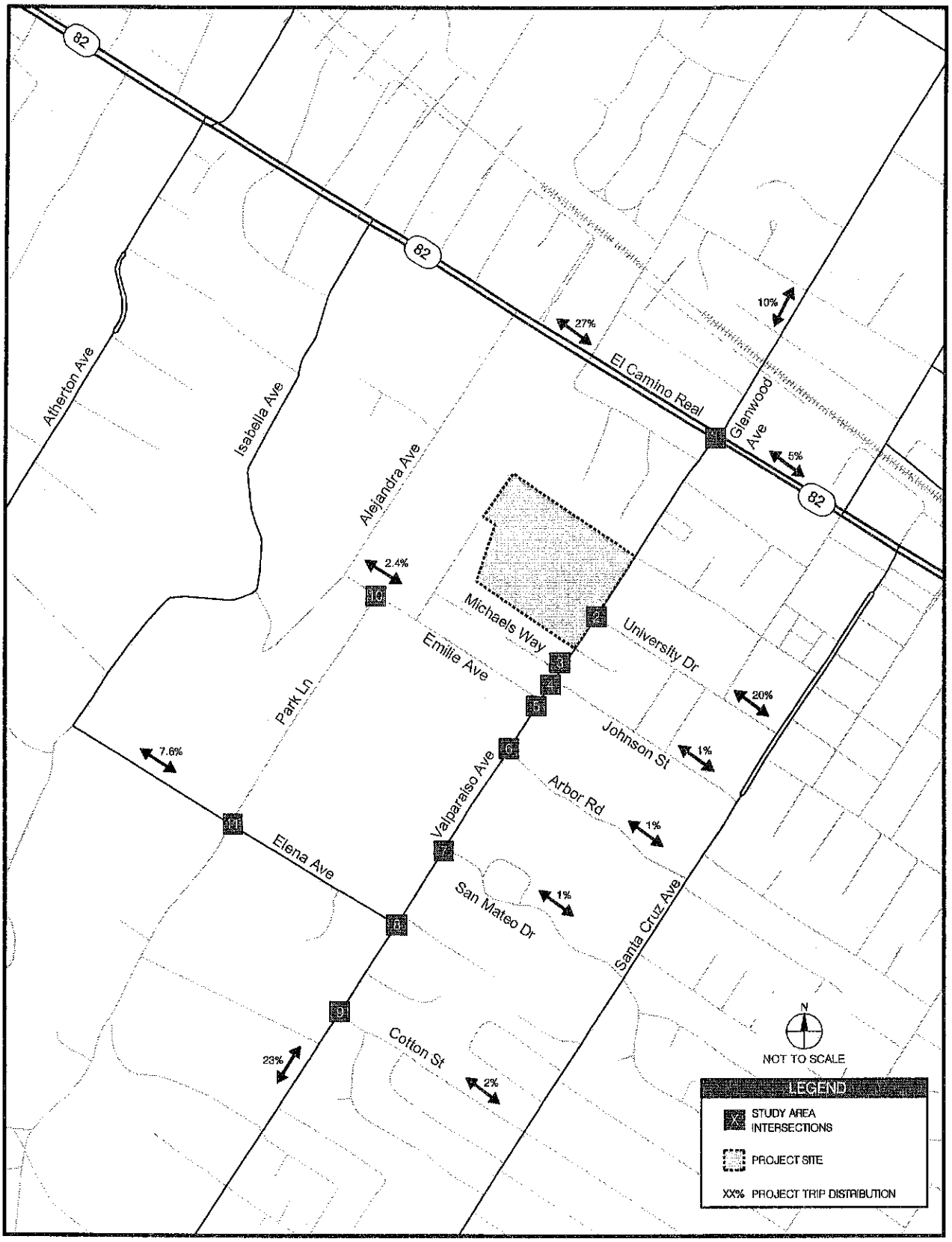
Additional trip generation calculations are provided in the **Appendix**.

Table 4 – Menlo School Trip Generation

Scenario	Students	Trips						Difference					
		AM Peak			School PM Peak			AM Peak			School PM Peak		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Approved Use	750	505	287	792	160	219	379	-28	-16	-44	-9	-12	-21
Existing	791	533	303	836	169	231	400	0	0	0	0	0	0
Approved Use + Increased Enrollment	795	535	304	839	170	233	403	2	1	3	1	2	3

Project Trip Distribution and Assignment

Trip distribution was developed based on the street name and city of residence of all of the currently enrolled students to best estimate the potential impact to roadways and intersections in the study area. This limited but wholly adequate information was provided by the Menlo School administration to assist with the traffic study but retains student confidentiality. Based on this data the most likely travel route was selected for each student, making assumptions about roadways used for travel to and from school. **Figure 4** presents the traffic distributions assumed for this traffic study.



Kimley-Horn and Associates, Inc.

FIGURE 4
PROJECT TRIP DISTRIBUTION

Approved Use Level of Service at Study Intersections

Existing traffic volumes (with 791 students enrolled) with vehicle trips expected to be generated by the 41 students taken off of the street network to reach the approved use enrollment of 750 students, were evaluated at the study intersections and are presented in **Figure 5**. The lane geometry included in this scenario is the same as the existing condition and can be seen in **Figure 2**. In **Table 5**, the signal control is listed as Signal for a signalized intersection, AWSC for an all-way stop-controlled intersection, and TWSC for a two-way stop-controlled intersection. The overall level of service is reported for signalized intersections as well as AWSC intersections and the worst approach is reported for TWSC intersections. Intersections operating unacceptably under Approved Use conditions are bolded.

As shown in **Table 5** the following study intersections do not function within acceptable standards at the approved use level under this analysis scenario:

- #5 – Valparaiso Avenue/Emilie Avenue
- #8 – Valparaiso Avenue/Elena Avenue

Approved Use + Proposed Increased Enrollment Level of Service at Study Intersections

Existing traffic volumes (with 791 students enrolled) combined with vehicle trips expected to be generated by the 4 students added to the street network to reach the approved use plus proposed increased enrollment of 795 students, were evaluated at the study intersections and are presented in **Figure 6**. The lane geometry included in this scenario can be seen in **Figure 2**. In **Table 5**, the signal control is listed as Signal for a signalized intersection, AWSC for an all-way stop-controlled intersection, and TWSC for a two-way stop-controlled intersection. The overall level of service is reported for signalized intersections as well as AWSC intersections and the worst approach is reported for TWSC intersections. Intersections operating unacceptably under Approved Use + Proposed Increased Enrollment conditions are bolded.

As shown in **Table 5** the following study intersections do not function within acceptable standards with the addition of the increased enrollment. The intersections will operate unacceptably and will experience an increase in delay above the allowable thresholds with the addition of the increased enrollment over the approved use level, thus creating significant impacts at the two intersections below.

- #5 – Valparaiso Avenue/Emilie Avenue
- #8 – Valparaiso Avenue/Elena Avenue

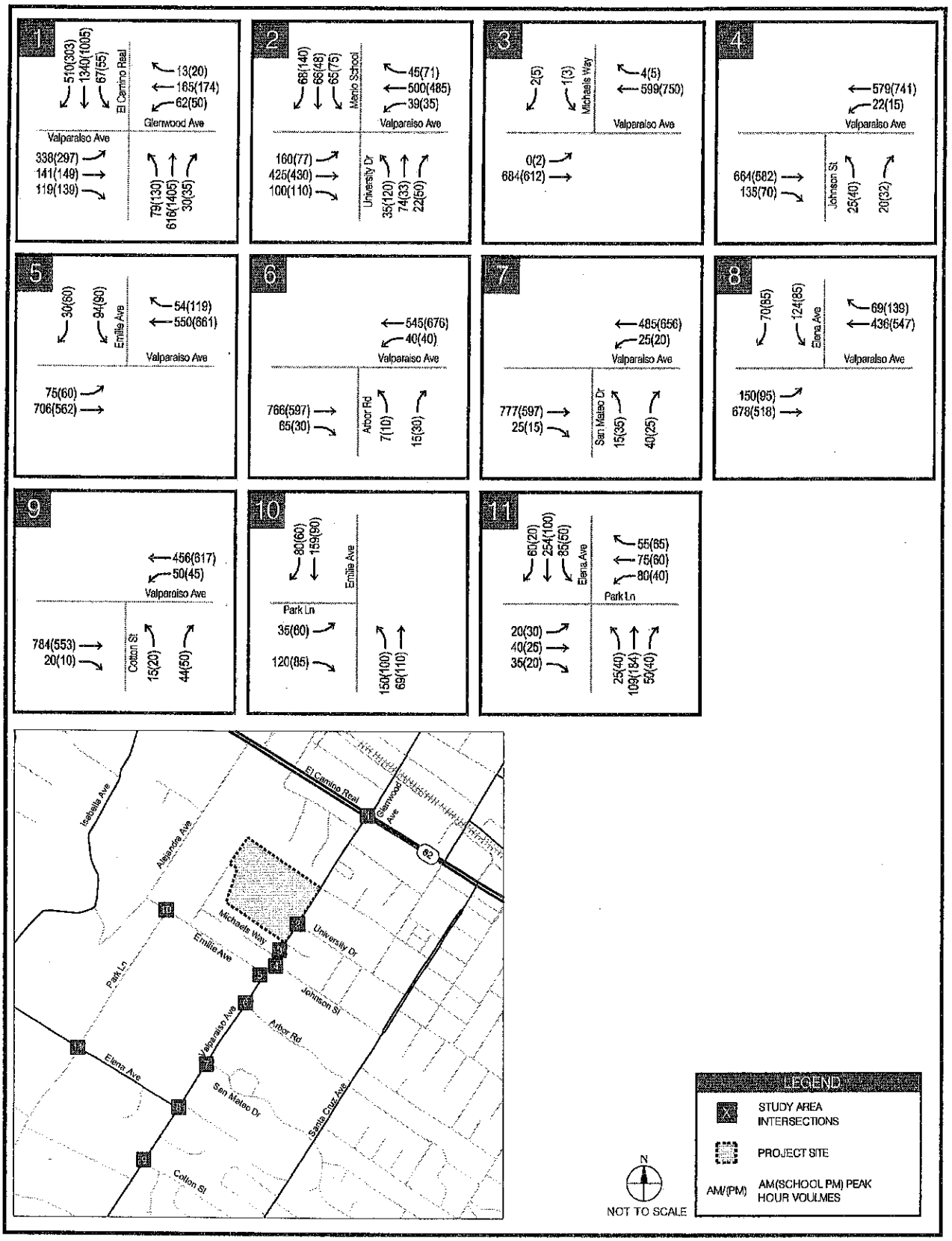


FIGURE 5

APPROVED USE CONDITION

PEAK HOUR TURNING MOVEMENT VOLUMES

Kimley-Horn and Associates, Inc.

Table 5 – Near-Term Level of Service Summary

#	Intersection	Intersection Control	Existing Conditions				Approved Use Conditions				Approved Use + Increased Enrollment Conditions			
			AM Peak		School PM Peak		AM Peak		School PM Peak		AM Peak		School PM Peak	
			LOS	Delay	LOS	Delay	LOS	Δ in Delay[1]	LOS	Δ in Delay[1]	LOS	Δ in Delay[2]	LOS	Δ in Delay[2]
1	Valparaiso Avenue/El Camino Real	Signal	C	28.8	C	32.2	C	-0.9	C	-0.2	C	0.3	C	0.2
2	Valparaiso Avenue/University Drive	Signal	D	41.2	C	24.6	D	-3.9	C	-0.5	D	3.9	C	0.3
3	Valparaiso Avenue/Michaels Way	TWSC	C	16.1	C	19.2	C	-0.3	C	-0.2	C	0.2	C	0.2
4	Valparaiso Avenue/Johnson Street	TWSC	D	26.3	D	28.3	D	-0.8	D	-0.3	D	0.6	D	0.3
5	Valparaiso Avenue/Emilie Avenue	TWSC	**F**	**102.4**	**F**	**79.9**	**F**	**-9.7**	**F**	**-2.1**	**F**	**7.1**	**F**	**2.4**
6	Valparaiso Avenue/Arbor Road	TWSC	C	21	C	17.2	C	-0.4	C	-0.1	C	0.3	C	0.1
7	Valparaiso Avenue/San Mateo Drive	TWSC	C	21.4	C	24.7	C	-0.5	C	-0.2	C	0.3	C	0.3
8	Valparaiso Avenue/Elena Avenue	TWSC	**F**	**225.8**	**F**	**58.9**	**F**	**-18.3**	**F**	**-1.1**	**F**	**12.5**	**F**	**1.3**
9	Valparaiso Avenue/Cotton Street	TWSC	C	24.1	C	18.5	C	-0.5	C	0.0	C	0.2	C	0.0
10	Park Lane/Emilie Avenue	TWSC	B	12.6	B	11.8	B	-0.1	B	0.0	B	0.0	B	0.0
11	Park Lane/Elena Avenue	AWSC	D	26.0	B	11.9	D	-1.1	B	0.0	D	0.3	B	0.0

Intersections operating unacceptably are bolded and significant impacts are highlighted.

[1] Increase in delay from Existing Conditions

[2] Increase in delay from Approved Use Conditions

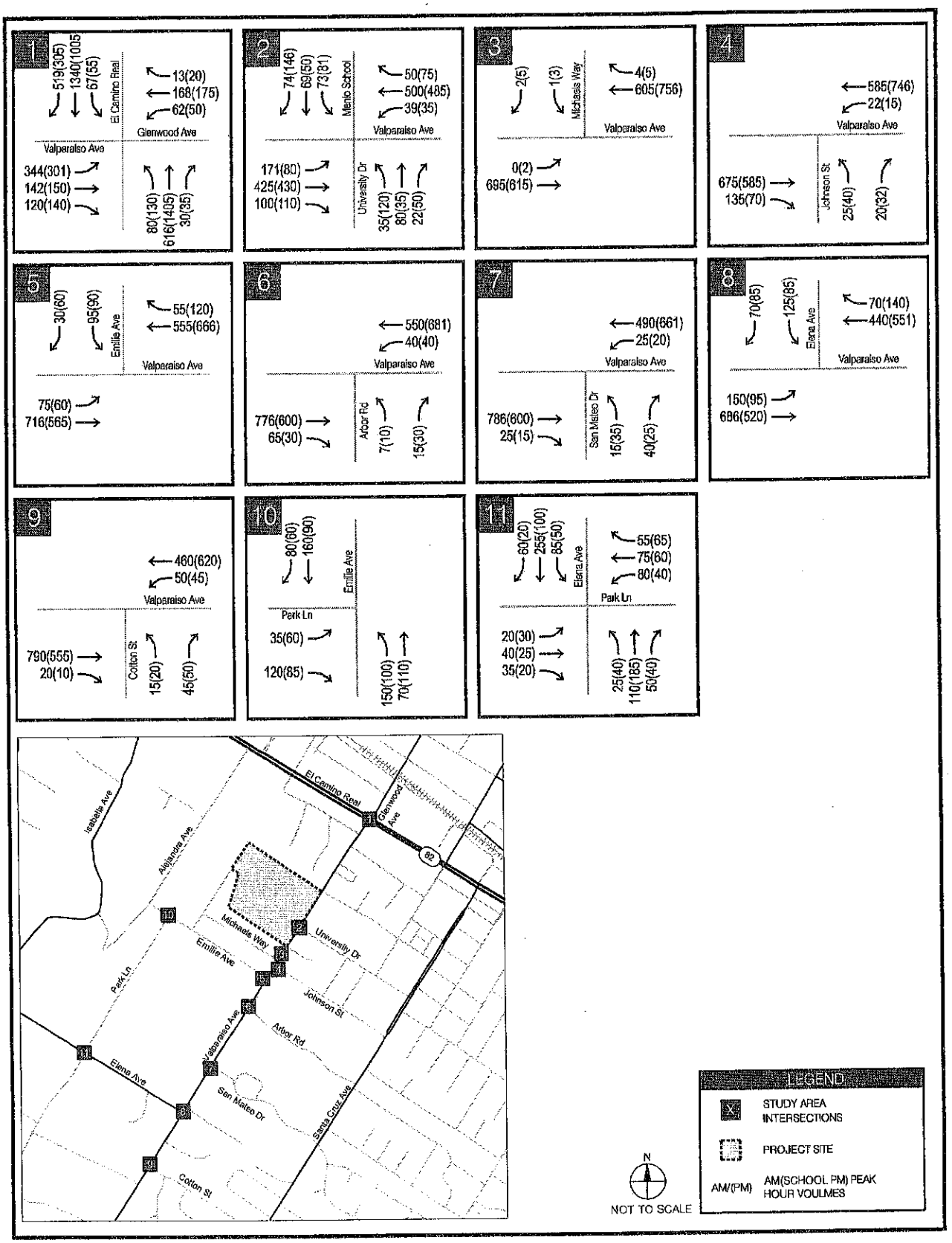


FIGURE 6

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APPROVED USE + INCREASED ENROLLMENT CONDITION
PEAK HOUR TURNING MOVEMENT VOLUMES

Cumulative Lane Geometry and Traffic Control

The improvements that Sacred Heart and Menlo School is responsible for as mitigation in the near-term condition were assumed to be in place in the long-term cumulative condition. These improvements include an additional lane on the southbound approach to both the Valparaiso Avenue/Emilie Avenue and Valparaiso Avenue/Elena Avenue intersections. In addition, an additional lane on the southbound approach of the Park Avenue/Elena Avenue intersection was included. The cumulative lane geometry can be seen in **Figure 7**.

Cumulative Level of Service at Study Intersections

2030 + Sacred Heart Master Plan traffic volumes from the *Sacred Heart Master Plan Traffic Study* (assuming 791 students enrolled in Menlo School) were evaluated at the study intersections and are presented in **Figure 8**. The lane geometry included in this scenario can be seen in **Figure 7**. In **Table 6**, the signal control is listed as Signal for a signalized intersection, AWSC for an all-way stop-controlled intersection, and TWSC for a two-way stop-controlled intersection. The overall level of service is reported for signalized intersections as well as AWSC intersections and the worst approach is reported for TWSC intersections. Intersections operating unacceptably under Cumulative conditions are bolded.

As shown in **Table 6** the following study intersections do not function within acceptable standards in the cumulative condition under this analysis scenario:

- #4 – Valparaiso Avenue/Johnson Street
- #5 – Valparaiso Avenue/Emilie Avenue
- #6 – Valparaiso Avenue/Arbor Road
- #7 – Valparaiso Avenue/San Mateo Drive
- #8 – Valparaiso Avenue/Elena Avenue

Cumulative + Proposed Increased Enrollment Level of Service at Study Intersections

Cumulative traffic volumes (with 791 students enrolled) combined with vehicle trips expected to be generated by the 4 students added to the street network to reach the cumulative plus proposed increased enrollment of 795 students, were evaluated at the study intersections and are presented in **Figure 9**. The lane geometry included in this scenario can be seen in **Figure 7**. In **Table 6**, the signal control is listed as Signal for a signalized intersection, AWSC for an all-way stop-controlled intersection, and TWSC for a two-way stop-controlled intersection. The overall level of service is reported for signalized intersections as well as AWSC intersections and the worst approach is reported for TWSC intersections. Intersections operating unacceptably under Cumulative + Proposed Increased Enrollment conditions are bolded.

As shown in **Table 6** the following study intersections do not function within acceptable standards with the addition of the increased enrollment. The intersections will operate unacceptably and will experience an increase in delay above the allowable thresholds with the addition of the increased enrollment over the approved use level, thus creating significant impacts at the intersections below.

- #4 – Valparaiso Avenue/Johnson Street
- #5 – Valparaiso Avenue/Emilie Avenue
- #8 – Valparaiso Avenue/Elena Avenue

Table 6 – Cumulative Level of Service Summary

#	Intersection	Intersection Control	Cumulative Conditions				Cumulative + Increased Enrollment Conditions			
			AM Peak		School PM Peak		AM Peak		School PM Peak	
			LOS	Delay	LOS	Delay	LOS	Δ in Delay[1]	LOS	Δ in Delay[1]
1	Valparaiso Avenue/El Camino Real	Signal	D	49.8	D	51.7	D	0.0	D	0.0
2	Valparaiso Avenue/University Drive	Signal	C	27.2	C	25.3	C	0.2	C	0.1
3	Valparaiso Avenue/Michaels Way	TWSC	C	24.9	D	33.3	C	0.0	D	0.1
4	Valparaiso Avenue/Johnson Street	TWSC	**F**	**88.2**	**F**	**238.9**	**F**	**0.3**	**F**	**0.8**
5	Valparaiso Avenue/Emilie Avenue	TWSC	**F**	**835.8**	**F**	**363.4**	**F**	**1.9**	**F**	**1.0**
6	Valparaiso Avenue/Arbor Road	TWSC	**F**	**97.2**	E	**47.1**	**F**	**0.3**	E	**0.0**
7	Valparaiso Avenue/San Mateo Drive	TWSC	**F**	**66.3**	**F**	**74.8**	**F**	**0.3**	**F**	**0.2**
8	Valparaiso Avenue/Elena Avenue	TWSC	**F**	**OVRFL**	**F**	**244.2**	**F**	-	**F**	**0.8**
9	Valparaiso Avenue/Cotton Street	TWSC	D	32.0	C	19.1	D	0.1	C	0.0
10	Park Lane/Emilie Avenue	TWSC	C	21.7	C	19.2	C	0.0	C	0.0
11	Park Lane/Elena Avenue	AWSC	D	33.9	B	15.0	D	0.0	B	0.0

Intersections operating unacceptably are bolded and significant impacts are highlighted.

[1] Increase in delay from Cumulative Conditions

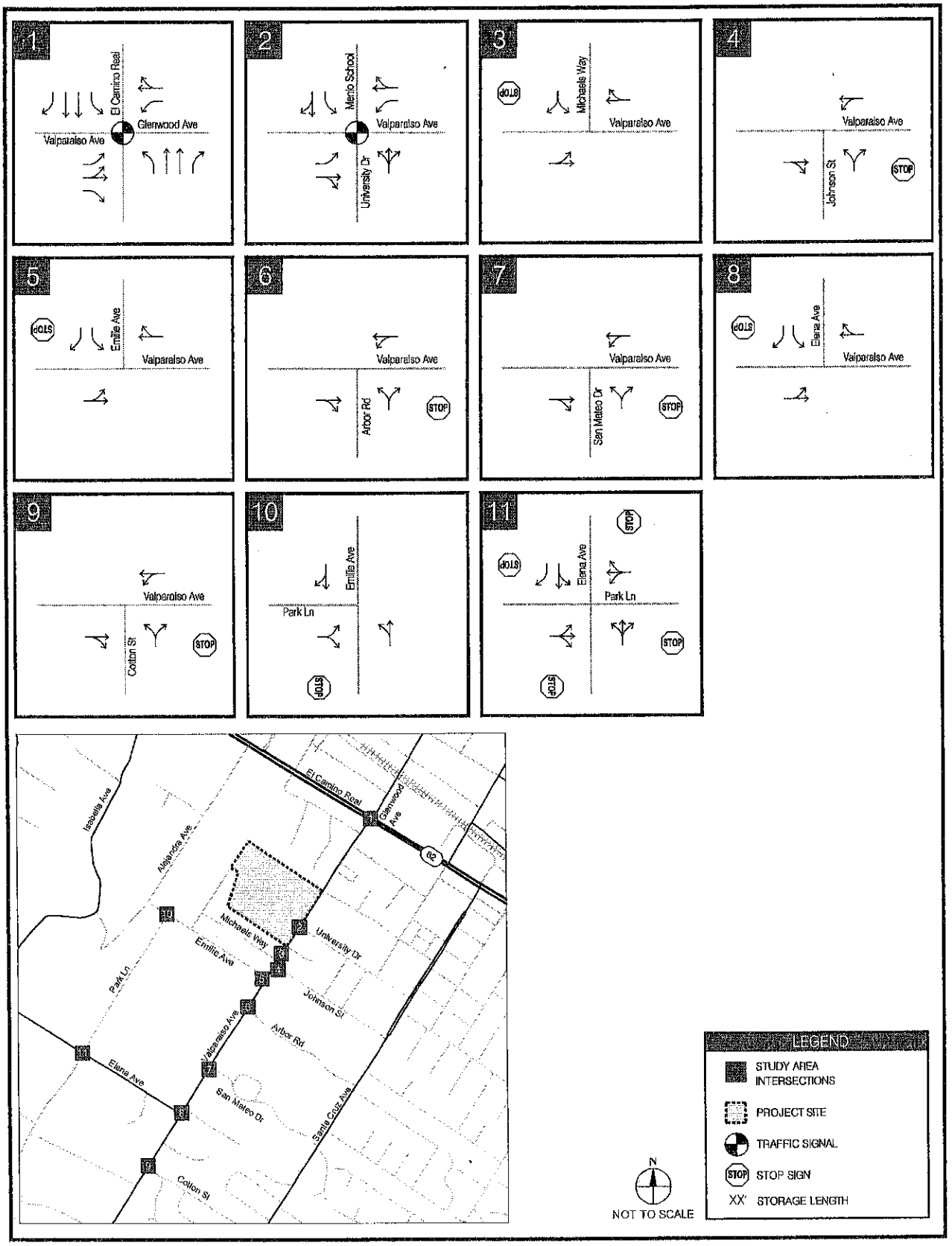


FIGURE 7

CUMULATIVE CONDITION

LANE GEOMETRY AND TRAFFIC CONTROL

Kimley-Horn and Associates, Inc.

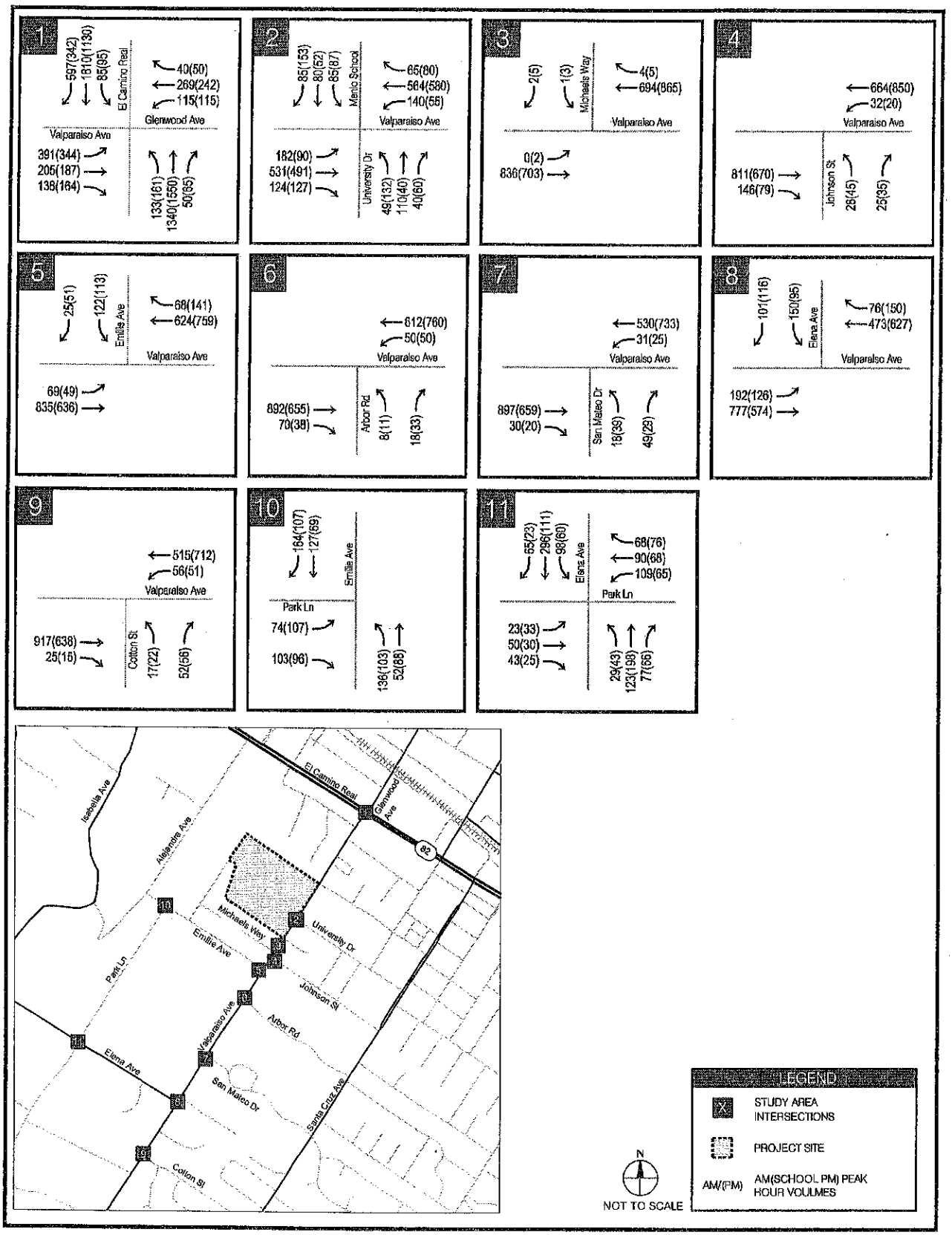


FIGURE 8

CUMULATIVE CONDITION

PEAK HOUR TURNING MOVEMENT VOLUMES

Kimley-Horn and Associates, Inc.

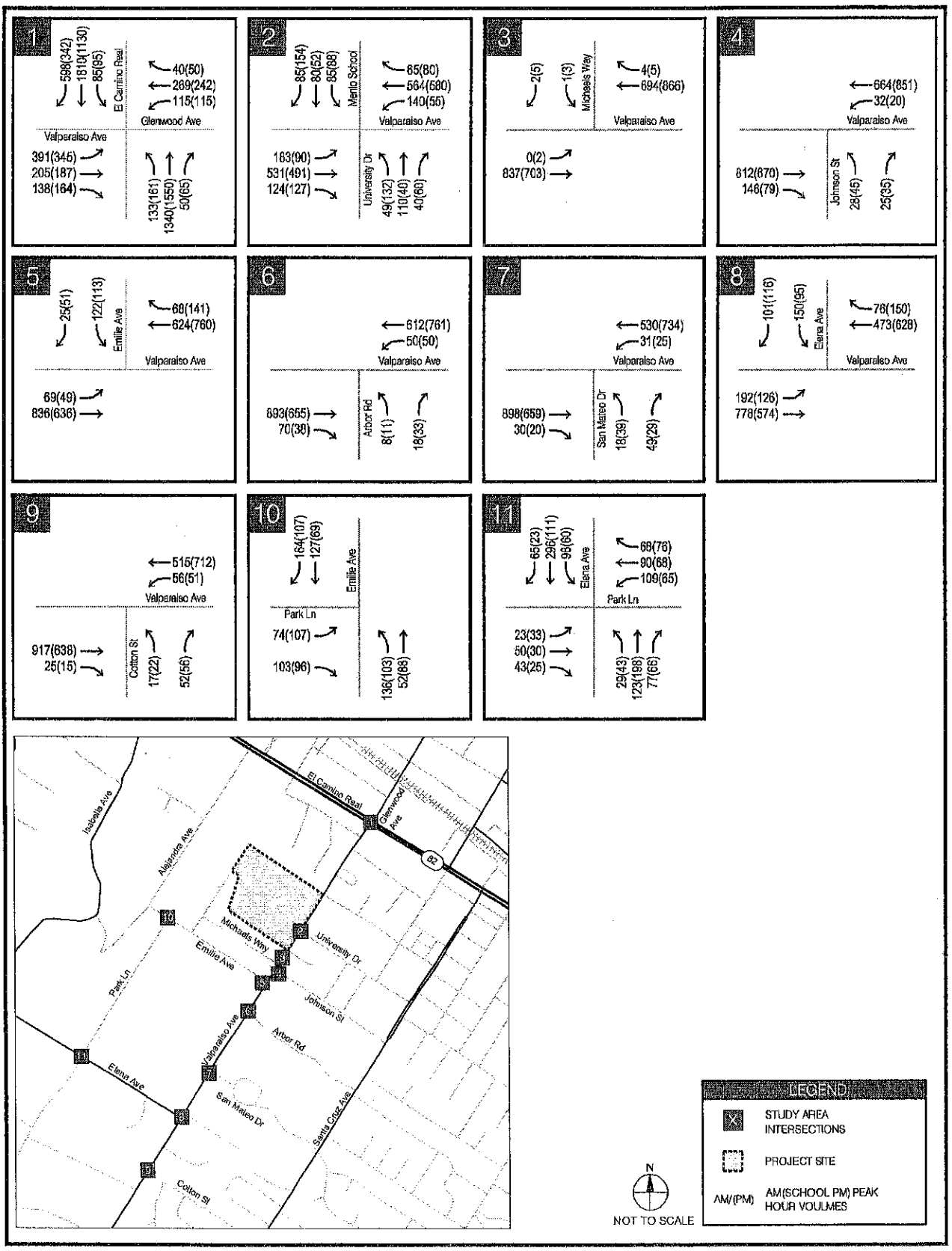


FIGURE 9

CUMULATIVE + INCREASED ENROLLMENT CONDITION

PEAK HOUR TURNING MOVEMENT VOLUMES

Kimley-Horn and Associates, Inc.

Traffic Signal Warrants

For this study, data was available for the AM and School PM peak hour periods; therefore, Kimley-Horn checked the traffic volumes at the unsignalized intersections against the peak hour warrant in the California Manual of Uniform Traffic Control Devices, September 26, 2006. The criteria for Warrant #3 are met when traffic volumes on the major and minor approaches exceed specified thresholds for at least one hour of the day. The warrant applies to traffic conditions during a one hour peak that are sufficiently high such that minor street traffic experiences excessive delay in entering and crossing the street. Warrants were evaluated in the Existing, Approved Use, and Approved Use + Increased Enrollment scenarios. When intersections satisfy the peak hour volume warrant, it does not necessarily mean that a signal will or should be installed. For example, in some instances, the intersection may operate at an acceptable level even though volumes satisfy one or more signal warrants such as at a right in/out driveway. A copy of the warrant analysis summary is included in the **Appendix**.

 # 3 – Valparaiso Avenue/Michaels Way (Town of Atherton/City of Menlo Park)

Results of the analysis indicate that Traffic Signal Warrant #3 – Peak Hour Volume Warrant will **not** be satisfied at Valparaiso Avenue/Michaels Way under any conditions.

 # 4 – Valparaiso Avenue/Johnson Street (Town of Atherton/City of Menlo Park)

Results of the analysis indicate that Traffic Signal Warrant #3 – Peak Hour Volume Warrant will **not** be satisfied at Valparaiso Avenue/Johnson Street under any conditions.

 # 5 – Valparaiso Avenue/Emilie Avenue (Town of Atherton/City of Menlo Park)

Results of the analysis indicate that Traffic Signal Warrant #3 – Peak Hour Volume Warrant is satisfied at Valparaiso Avenue/Emilie Avenue in the **Approved Use conditions**.

 # 6 – Valparaiso Avenue/Arbor Road (Town of Atherton/City of Menlo Park)

Results of the analysis indicate that Traffic Signal Warrant #3 – Peak Hour Volume Warrant will **not** be satisfied at Valparaiso Avenue/Arbor Road under any conditions.

 # 7 – Valparaiso Avenue/San Mateo Drive (Town of Atherton/City of Menlo Park)

Results of the analysis indicate that Traffic Signal Warrant #3 – Peak Hour Volume Warrant will **not** be satisfied at Valparaiso Avenue/San Mateo Drive under any conditions.

 # 8 – Valparaiso Avenue/Elena Avenue (Town of Atherton/City of Menlo Park)

Results of the analysis indicate that Traffic Signal Warrant #3 – Peak Hour Volume Warrant is satisfied at Valparaiso Avenue/Elena Avenue in the **Approved Use conditions**.

 # 9 – Valparaiso Avenue/Cotton Street (Town of Atherton/City of Menlo Park)

Results of the analysis indicate that Traffic Signal Warrant #3 – Peak Hour Volume Warrant will **not** be satisfied at Valparaiso Avenue/Cotton Street under any conditions.

 # 10 – Park Lane/Emilie Avenue (Town of Atherton)

Results of the analysis indicate that Traffic Signal Warrant #3 – Peak Hour Volume Warrant will **not** be satisfied at Park Lane/Emilie Avenue under any conditions.

 # 11 – Park Lane/Elena Avenue (Town of Atherton)

Results of the analysis indicate that Traffic Signal Warrant #3 – Peak Hour Volume Warrant will **not** be satisfied at Park Lane/Elena Avenue under any conditions.

Near-term Impacts and Mitigations

Sacred Heart completed an environmental impact report for their Master Plan[2]. As part of the Sacred Heart School Master Plan, they will be making improvements at the following intersections as mitigation sometime in the future. The exact timing is unknown.

- **#5 – Valparaiso Avenue/Emilie Avenue:** Add a second lane on the Emilie Avenue intersection approach. Stripe the approach as a left turn lane and a right turn lane.
- **#8 – Valparaiso Avenue/Elena Avenue:** Add a second lane on the Elena Avenue intersection approach. Stripe the approach as a left turn lane and a right turn lane.
- **#11 – Park Lane/Elena Avenue:** Add a southbound right turn lane on the Elena Avenue intersection approach. Restripe the southbound all-shared lane to a left-shared-through lane.

The following impacts were identified to be connected with the Menlo School expansion in the Near-term.

Impact #1: The **Valparaiso Avenue/Emilie Avenue** intersection will operate at an unacceptable level of service F during the AM and school PM peak hours in the Approved Use condition regardless of the proposed Menlo School increased enrollment. With the addition of the increased enrollment traffic, the intersection will be subject to an increase in delay of more than 0.8 seconds due to the project. Since the project traffic results in an increase in delay of 0.8 seconds or more at an intersection which operates at unacceptable service levels without the project, this is a significant impact.

Mitigation Measure #1: To mitigate the project impacts expected to occur in the Approved Use + Increased Enrollment condition, an exclusive left turn lane on

[2] *Sacred Heart School Master Plan Draft Environmental Impact Report*, Christopher A. Joseph and Associates, April 2010.

the Emilie Avenue approach should be added and the left-shared-right lane should be restriped as a right turn lane. Because the Menlo School increased enrollment adds more than 0.8 seconds of delay to an intersection currently operating unacceptably, the project should be responsible for a proportionate share of the mitigation costs, based on the City of Menlo Park impact threshold. Modifying the intersection will reduce the impact to less than significant and improve the level of service to better than Approved Use Conditions at LOS F and LOS E during the AM and PM peak hours as shown in **Table 6**. Because this improvement is included as mitigation in the Sacred Heart Master Plan, the cost of the improvement should be shared between the schools based on direction from the Town of Atherton.

Impact #2: The **Valparaiso Avenue/Elena Avenue** intersection will operate at an unacceptable level of service F during the AM and school PM peak hours in the Approved Use condition regardless of the proposed Menlo School increased enrollment. With the addition of the increased enrollment, the intersection will be subject to an increase in delay of more than 0.8 seconds due to the project. Since the project traffic results in an increase in delay of 0.8 seconds or more at an intersection which operates at unacceptable service levels without the project, this is a significant impact.

Mitigation Measure #2: To mitigate the project impacts expected to occur in the Approved Use + Increased Enrollment condition, an exclusive left turn lane on the Elena Avenue approach should be added and the left-shared-right lane should be restriped as a right turn lane. Because the Menlo School increased enrollment adds more than 0.8 seconds of delay to an intersection currently operating unacceptably, the project should be responsible for a proportionate share of the mitigation costs, based on the City of Menlo Park impact threshold. Modifying the intersection will reduce the impact to less than significant and improve the level of service to better than Approved Use Conditions at LOS F and LOS D during the AM and PM peak hours as shown in **Table 6**. Because this improvement is included as mitigation in the Sacred Heart Master Plan, the cost of the improvement should be shared between the schools based on direction from the Town of Atherton.

Sacred Heart is proposing an increased enrollment of 116 students which is documented in the Sacred Heart Master Plan to generate 166 new AM peak trips and 90 new School PM Peak trips. Menlo School is proposing an increased enrollment of 45 students which was calculated and noted herein to generate 41 new AM peak trips and 18 new School PM peak trips. Due to the close proximity of the two schools and their shared impact on local roadway facilities, the most equitable calculation of cost sharing for intersection improvements is based on the Caltrans methodology of percentage of new trips that a development adds to the network. Based on the percent of new trips on the street network, Menlo School should be responsible for 18% of the mitigation costs and Sacred Heart should be responsible for 82% of the mitigation costs at the intersections of Valparaiso Avenue/Emilie Avenue and Valparaiso Avenue/Elena

Avenue. It should be noted that mitigation at the intersection of Park Avenue/Elena Avenue is required in the Sacred Heart School Master Plan traffic study in the long-term 2030 condition but is not required for the Menlo School increased enrollment project.

Long-term Impacts and Mitigations

The following impacts were identified to be connected with the Menlo School expansion in the Long-term.

Impact #3: The **Valparaiso Avenue/Johnson Street**, **Valparaiso Avenue/Emilie Avenue**, and **Valparaiso Avenue/Elena Avenue** intersections would operate at an unacceptable level of service F during the AM and school PM peak hours in the Cumulative Use (i.e. with 750 students) condition. With the addition of the increased enrollment traffic, the intersections will be subject to an increase in delay of more than 0.8 seconds due to the project. Since the project traffic results in an increase in delay of 0.8 seconds or more at an intersection which operates at unacceptable service levels without the project, this is a significant impact.

> **Mitigation Measure #3:** To mitigate the project impacts expected to occur in the Cumulative Use + Increased Enrollment condition, Menlo School is proposing its CUP to include a requirement that Menlo School reduce the number of trips it generates in the school year 2011-2012 to 711 AM peak hour trips and 332 School PM peak trips. In addition, for the school year 2012-2013 and after, the school is proposing a requirement to reduce its trip generation to 627 trips in the AM peak hours and 302 trips in the PM peak hours. If this condition of approval is met, it will reduce the impact to less than significant and improve the delay to better than Cumulative Use Conditions during the PM peak hour as shown in **Table 8**.

The details of the proposed traffic and parking mitigation program were submitted in a letter from Menlo School to the Town of Atherton Planning Commission dated May 26, 2011. The proposed traffic and parking mitigation program would setup a program for Menlo School designed to reduce vehicle trips to and from the campus, to reduce parking demand and to effect an enforceable, verifiable and effective Transportation Demand Management program. The program consists of the elements listed below:

1. Busing students in School owned or leased buses
2. Incentivizing student carpooling
3. Incentivizing student bicycling and walking
4. Incentivizing parent carpooling
5. Incentivizing faculty and staff to not drive to work or to carpool
6. Use of other techniques to reduce trips and parking such as car sharing of school provided vehicles and guaranteed rides home

Table 7 – Mitigated Near-Term Level of Service Summary

#	Intersection	Intersection Control	Existing Conditions				Approved Use Conditions				Approved Use + Increased Enrollment Conditions				Approved Use + Increased Enrollment (Mitigated)			
			AM Peak		School PM Peak		AM Peak		School PM Peak		AM Peak		School PM Peak		AM Peak		School PM Peak	
			LOS	Delay	LOS	Delay	LOS	Δ in Delay[1]	LOS	Δ in Delay[1]	LOS	Δ in Delay[2]	LOS	Δ in Delay[2]	LOS	Δ in Delay[2]	LOS	Δ in Delay[2]
1	Valparaiso Avenue/El Camino Real	Signal	C	28.8	C	32.2	C	-0.9	C	-0.2	C	0.3	C	0.2				
2	Valparaiso Avenue/University Drive	Signal	D	41	C	24.4	D	-4.0	C	-0.4	D	4.2	C	0.4				
3	Valparaiso Avenue/Michaels Way	TWSC	C	16.1	C	19.2	C	-0.3	C	-0.2	C	0.2	C	0.2				
4	Valparaiso Avenue/Johnson Street	TWSC	D	26.3	D	28.3	D	-0.8	D	-0.3	D	0.6	D	0.3				
5	Valparaiso Avenue/Emilie Avenue	TWSC	**F**	**102.4**	**F**	**79.9**	**F**	**-9.7**	**F**	**-2.1**	**F**	**7.1**	**F**	**2.4**	F	**-16.8**	E	**-30.3**
6	Valparaiso Avenue/Arbor Road	TWSC	C	21	C	17.2	C	-0.4	C	-0.1	C	0.3	C	0.1				
7	Valparaiso Avenue/San Mateo Drive	TWSC	C	21.4	C	24.7	C	-0.5	C	-0.2	C	0.3	C	0.3				
8	Valparaiso Avenue/Elena Avenue	TWSC	F	**225.8**	**F**	**58.9**	**F**	**-18.3**	**F**	**-1.1**	**F**	**12.5**	**F**	**1.3**	F	**-106.9**	D	-24.3
9	Valparaiso Avenue/Cotton Street	TWSC	C	24.1	C	18.5	C	-0.5	C	0.0	C	0.2	C	0.0				
10	Park Lane/Emilie Avenue	TWSC	B	12.6	B	11.8	B	-0.1	B	0.0	B	0.0	B	0.0				
11	Park Lane/Elena Avenue	AWSC	D	26.0	B	11.9	D	-1.1	B	0.0	D	0.3	B	0.0				

Intersections operating unacceptably are bolded and significant impacts are highlighted.

[1] Increase in delay from Existing Conditions

[2] Increase in delay from Approved Use Conditions

Table 8 – Mitigated Long-Term Level of Service Summary

#	Intersection	Intersection Control	Cumulative Conditions				Cumulative + Increased Enrollment Conditions				Cumulative + Increased Enrollment (Mitigated)			
			AM Peak		School PM Peak		AM Peak		School PM Peak		AM Peak		School PM Peak	
			LOS	Delay	LOS	Delay	LOS	Δ in Delay[1]	LOS	Δ in Delay[1]	LOS	Δ in Delay[1]	LOS	Δ in Delay[1]
1	Valparaiso Avenue/El Camino Real	Signal	D	49.8	D	51.7	D	0.0	D	0.0				
2	Valparaiso Avenue/University Drive	Signal	C	27.2	C	25.3	C	0.2	C	0.1				
3	Valparaiso Avenue/Michaels Way	TWSC	C	24.9	D	33.3	C	0.0	D	0.1				
4	Valparaiso Avenue/Johnson Street	TWSC	**F**	**88.2**	**F**	**238.9**	**F**	**0.3**	**F**	**0.8**	**F**	**-12.0**	**F**	**-20.2**
5	Valparaiso Avenue/Emilie Avenue	TWSC	**F**	**835.8**	**F**	**363.4**	**F**	**1.9**	**F**	**1.0**	**F**	**-114.5**	F	**-27.8**
6	Valparaiso Avenue/Arbor Road	TWSC	**F**	**97.2**	**E**	**47.1**	**F**	**0.3**	**E**	**0.0**				
7	Valparaiso Avenue/San Mateo Drive	TWSC	**F**	**66.3**	**F**	**74.8**	**F**	**0.3**	**F**	**0.2**				
8	Valparaiso Avenue/Elena Avenue	TWSC	**F**	**OVRFL**	**F**	**244.2**	**F**	-	**F**	**0.8**	**F**	-	**F**	**-17.4**
9	Valparaiso Avenue/Cotton Street	TWSC	D	32.0	C	19.1	D	0.1	C	0.0				
10	Park Lane/Emilie Avenue	TWSC	C	21.7	C	19.2	C	0.0	C	0.0				
11	Park Lane/Elena Avenue	AWSC	D	33.9	B	15.0	D	0.0	B	0.0				

Intersections operating unacceptably are bolded and significant impacts are highlighted.

[1] Increase in delay from Cumulative Conditions

Note: Appendices are available on the Atherton Town website www.ci.atherton.ca.us

APPENDIX

APPENDIX

EXISTING CONDITIONS

TRIP GENERATION

APPROVED USE TRAFFIC CONDITIONS

APPROVED USE + INCREASED ENROLLMENT TRAFFIC CONDITIONS

CUMULATIVE TRAFFIC CONDITIONS

CUMULATIVE + INCREASED ENROLLMENT TRAFFIC CONDITIONS

SIGNAL WARRANT ANALYSIS

APPROVED USE + INCREASED ENROLLMENT MITIGATED TRAFFIC CONDITIONS

CUMULATIVE USE + INCREASED ENROLLMENT MITIGATED TRAFFIC CONDITIONS

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality

505 Petaluma Blvd. South
Petaluma, CA 94952
707-766-7700

April 21, 2011

Neal Martin
1259 El Camino Real #284
Menlo Park, CA 94025

VIA email: vmartin5@pacbell.net

SUBJECT: Menlo School Enrollment Increase Mitigated Negative Declaration – Air Quality and Noise Issues

Dear Neal:

This letter addresses comments regarding noise and air quality impacts associated with the proposed enrollment increase at Menlo School in Atherton, CA. We reviewed the Initial Study and Draft Negative Declaration (IS/MND) prepared for this project, dated March 2, 2011. Our understanding of the project is that the school would increase student enrollment from 750 students to 815 students. The school has stated that no new or additional buildings will need to be constructed to house the 65 additional students beyond those existing or previously approved.

Comments to the IS/MND were made regarding noise and air quality impacts caused by the proposed project:

1. "What noise impacts will result from the increased traffic and student population? In one sentence, MND states "An enrollment increase of approximately 9% would not result in any noise impacts." Where is the evidence and analysis to support that statement?"

2. "What air quality impacts are associated with the increased student population? Under new air district guidelines, a school of approximately 700 students is nearly at the threshold for GHG emissions, so an 815 student school is likely over that threshold. We don't know the answer since no analysis was done."

Responses to these comments are provided below.

Noise

The noise impacts associated with an increase of 65 enrolled students from a baseline of 750 students was evaluated. According to the school, new facilities would not be constructed to meet this increase. As a result, there would not be any temporary construction noise impacts associated with the proposed project. Operational noise from the project would result from the increased activity on site and increased traffic associated with the student increase.

The school would not construct any new facilities to support this enrollment increase, so there would not be any noise generated by mechanical equipment or uses of new buildings. The enrollment increase is anticipated to result in a 9-percent increase in the student population. A reasonable assumption is that this increase would result in a 9-percent increase in on-site noise generated by students (e.g., talking, yelling, recess activities, etc...). This increase is not anticipated to increase noise levels near the school noticeably. Such an increase in activity would be calculated to increase noise levels by less than 0.4 dBA during the period that the school is active. A 1 dBA increase is barely perceptible to the healthy human hearing in a laboratory setting and a 3 dBA increase is commonly used to describe noticeable noise increases in the ambient environment. This predicted increase to the ambient noise environment would not be detectable to residences nearby.

The proposed project would not change traffic circulation patterns. Kimley-Horn predicted that the increase in students would increase the number of combined am and pm peak-hour traffic trips from 1,171 for the approved use to 1,273 trips for the proposed project. Based on the number of increased traffic trips, the noise level increase would also be less than 0.4 dBA on a peak hourly basis. The daily noise level increase would be less. This would be an imperceptible increase in the noise level. The increase would be so slight that it would not be considered to contribute to any cumulative noise increase.

Air Quality

The change in emission over existing conditions or baseline is the basis of assessing air quality impacts. Currently, the baseline setting for assessing air pollutant or greenhouse gas emissions from the proposed project would be the school with an enrollment population of about 750 to 791 students. The proposed project would increase the school population by up to 65 students.

Table 3-1 of the Bay Area Air Quality management District (BAAQMD) CEQA Air Quality Guidelines provides the screening sizes for projects that might trigger significant construction or operational air quality impacts or significant increases in greenhouse gas emissions. BAAQMD considers these thresholds to evaluate whether or not a project would have emissions considered cumulatively considerable. Since the project would not involve any construction, it would not have construction period emissions. Operational period emissions of criteria air pollutants would be considered potentially significant for a new school with enrolment of 2,390 students or increased building footprint of 311 thousand square feet[1]. For greenhouse gas emissions, the BAAQMD screening size to identify potentially significant emission increases is 49 thousand square feet (or about 16% of the size for operational impacts)[2]. The proposed project would increase enrollment by about 3% of the potential significant project size for operational emissions. This would also be well below the size of a project that could have potentially significant GHG emissions. In other words, the proposed project increase in enrollment is well

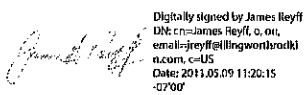
[1] BAAQMD has established significance thresholds for criteria air pollutants that include ozone precursors (i.e., reactive organic gases and nitrogen oxides) and particulate matter (i.e., PM_{10} and $PM_{2.5}$).
[2] BAAQMD does not identify the number of new students that may cause greenhouse gas emissions to be above 1,100 metric tons per day (the potential significance threshold).

below the project screening sizes identified by BAAQMD for operational criteria pollutant or operational greenhouse gas emissions. Therefore, impacts to air quality or climate change (measured in terms of greenhouse gas emission increases) would not be significant. Projects that are larger than the size identified by BAAQMD are only potentially significant and must prepare more rigorous analysis of emissions to determine if they are significant or not.

* * *

This concludes our evaluation of potential noise and air quality impacts associated with the Menlo School enrollment increase. Please feel free to contact us if you have any questions,

Sincerely,



James A. Reyff
Illingworth & Rodkin, Inc.

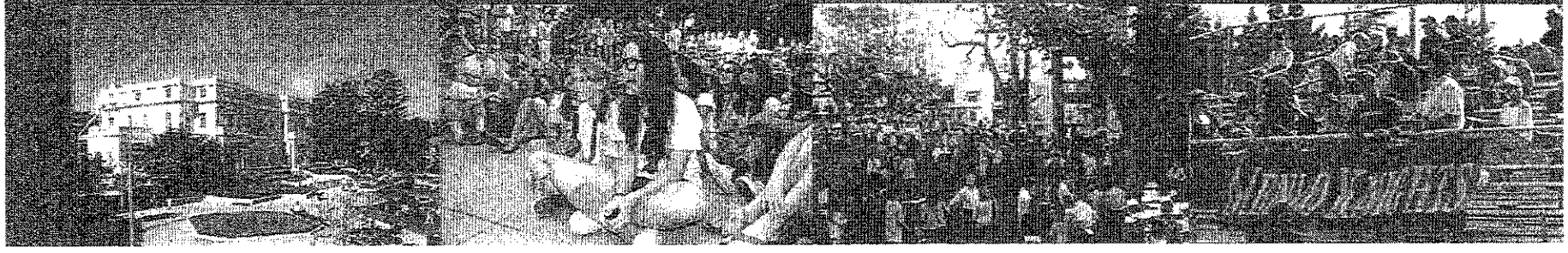
11-061

Nelson|Nygaard
consulting associates

Menlo School Traffic and Parking Mitigation Program

Community Meeting

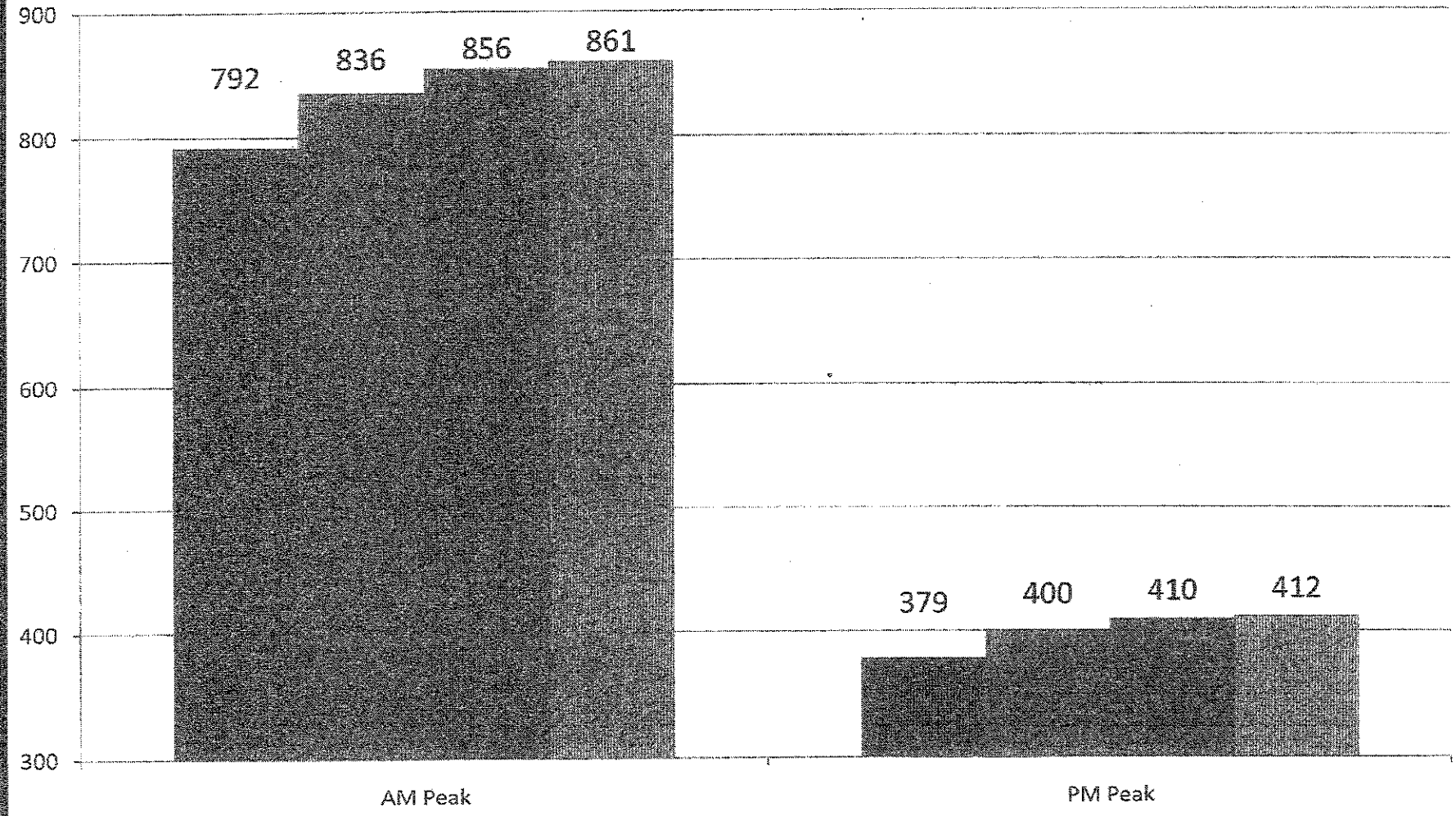
Brian Canepa
April 19, 2011



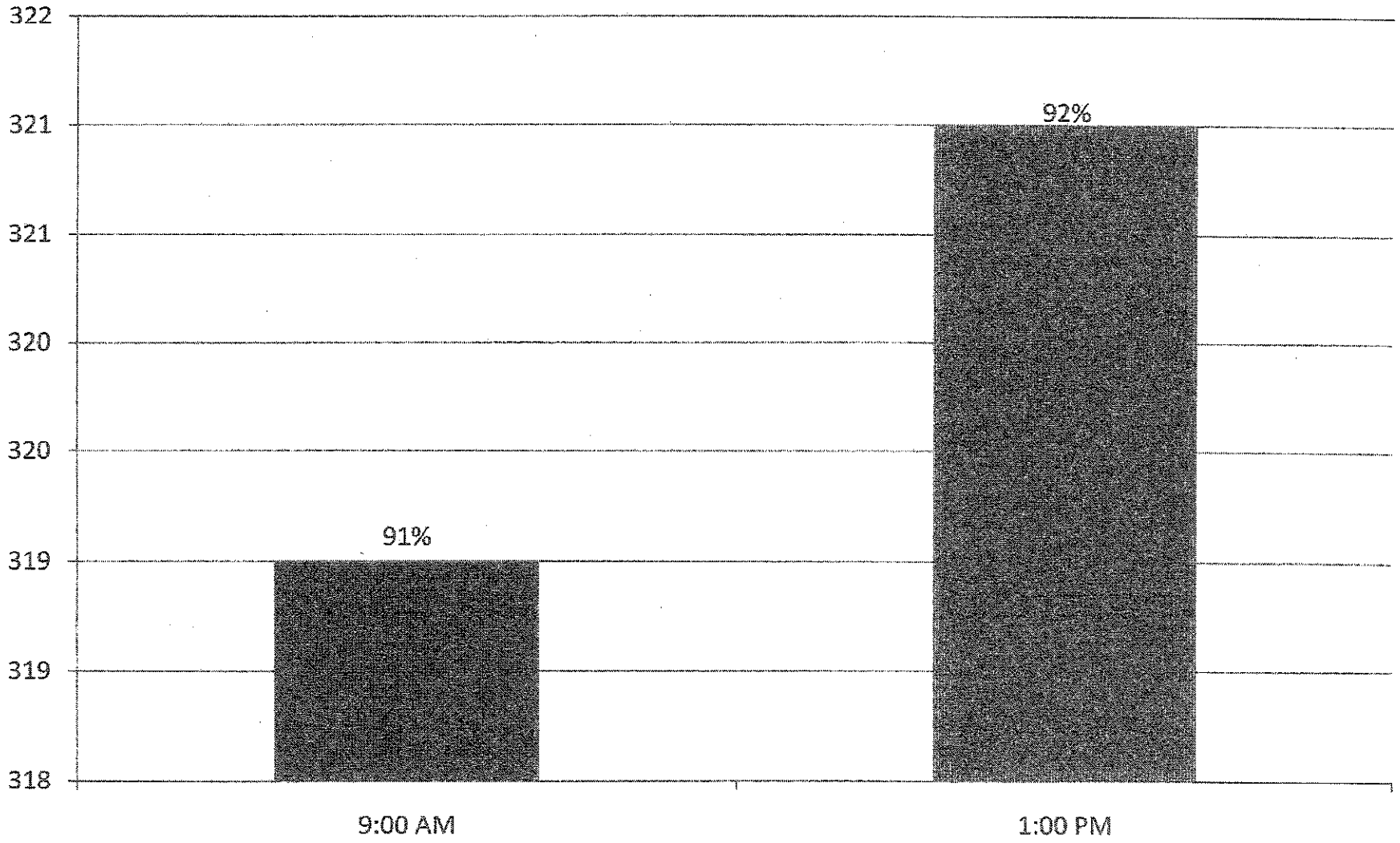
Priorities

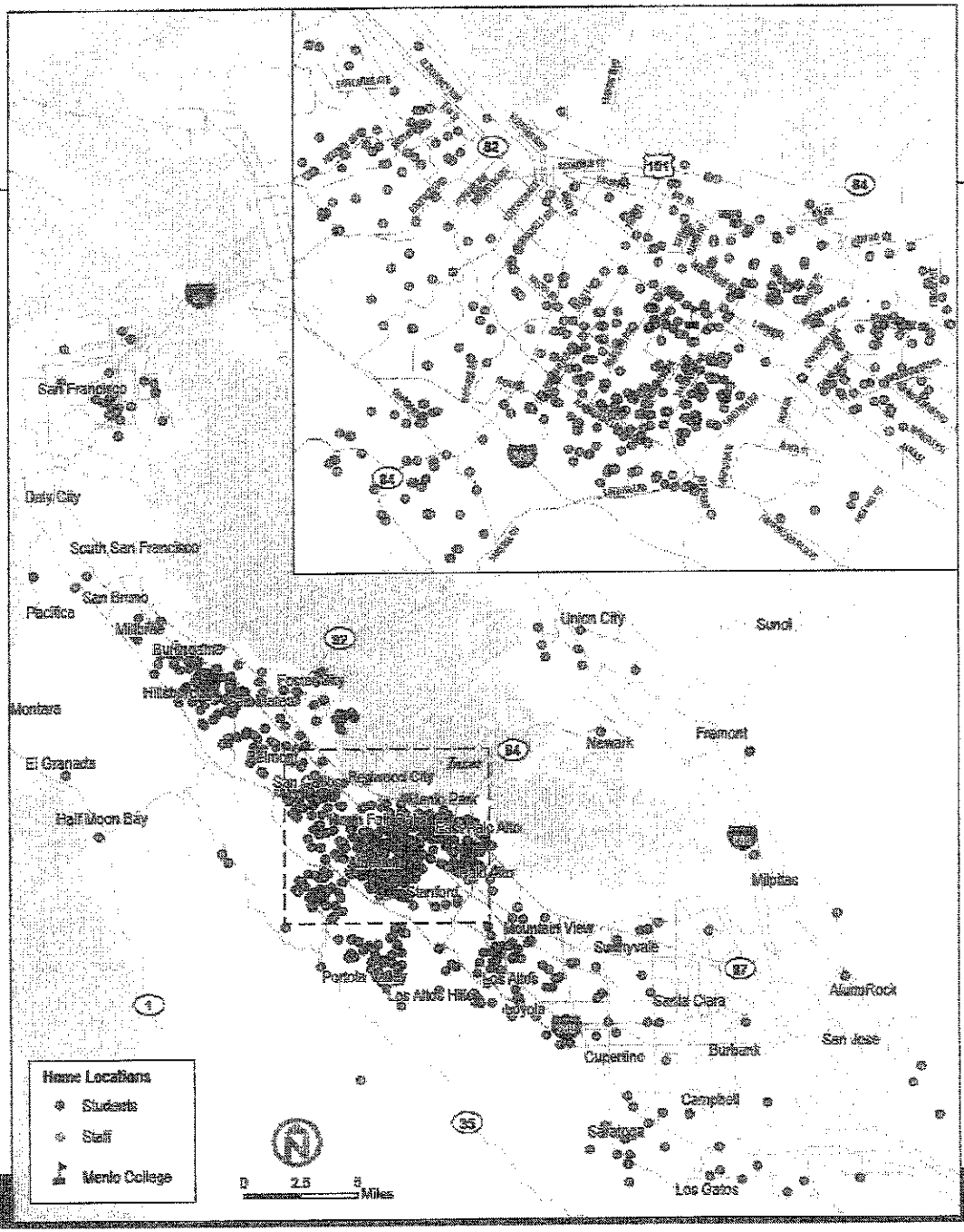
- Reduce Vehicle Trips
  - Address traffic on Valparaiso affecting Michaels Way, Victoria Drive, and Leon Way
  - Eliminate (not redirect) trips
- Reduce Parking Demand
- Enforceable, Verifiable, and Effective Plan

Current Conditions – Vehicle Trips



Current Conditions - Parking





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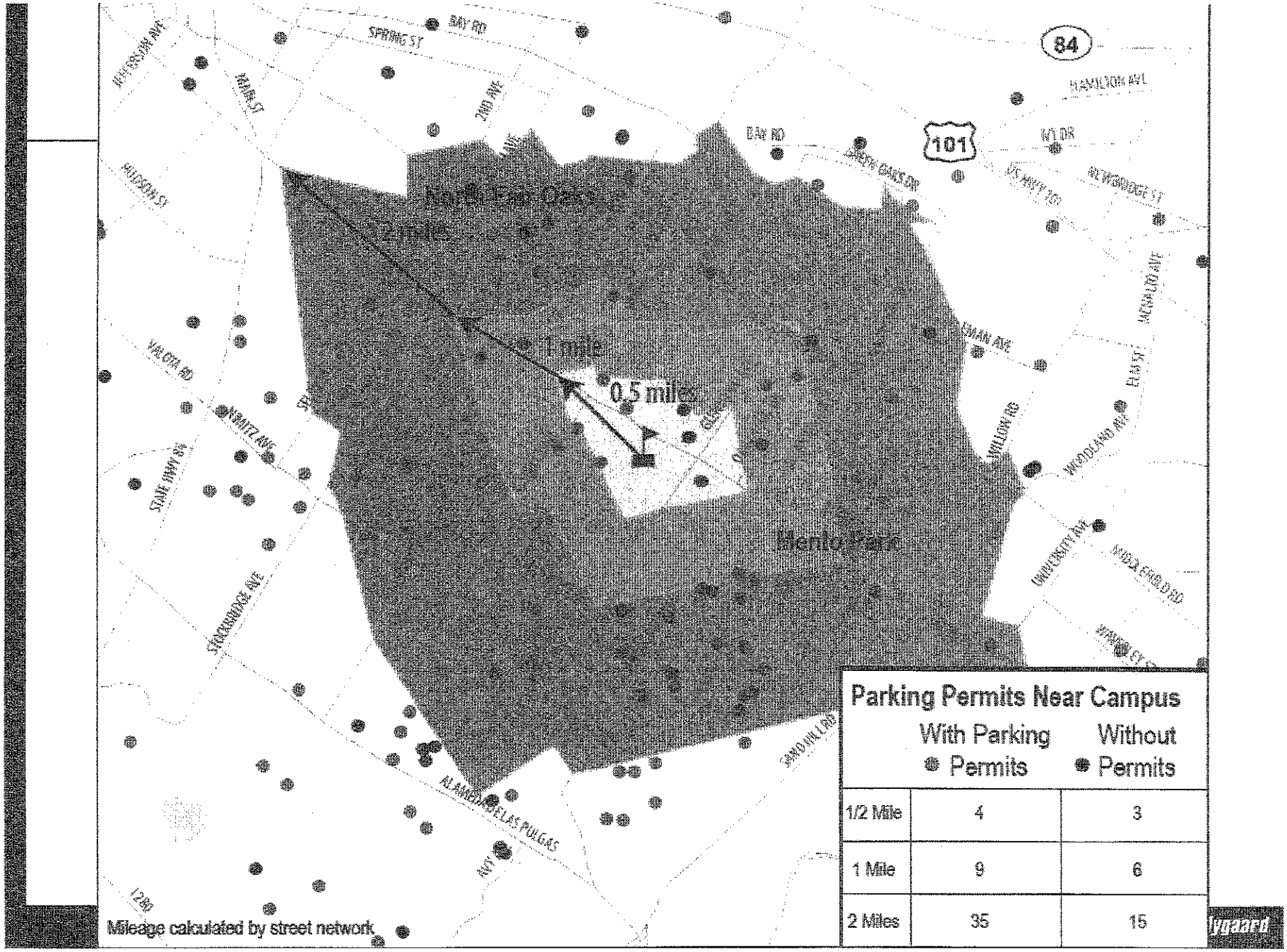


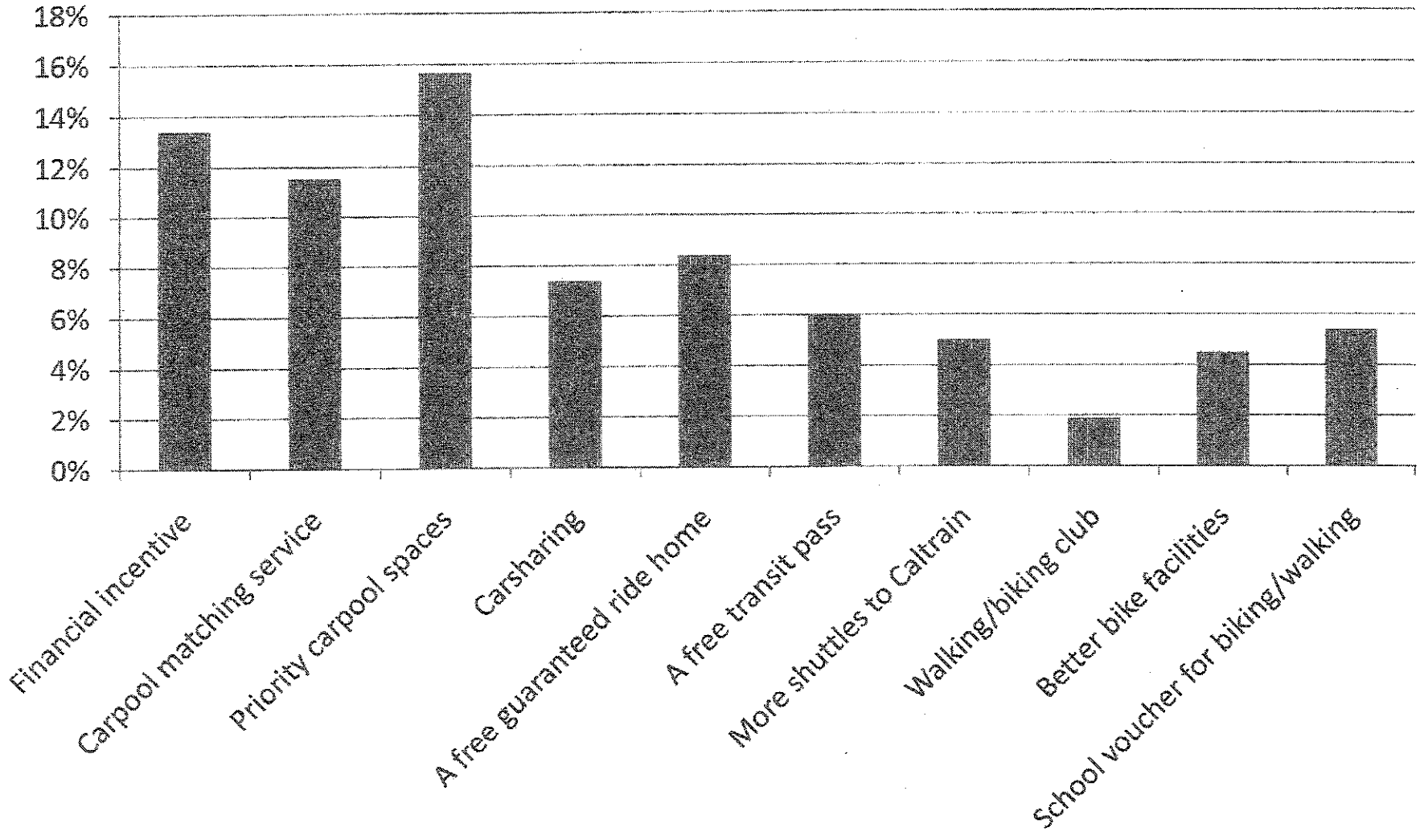
Parking Permits Near Campus

	With Parking Permits	Without Permits
1/2 Mile	4	3
1 Mile	9	6
2 Miles	35	15

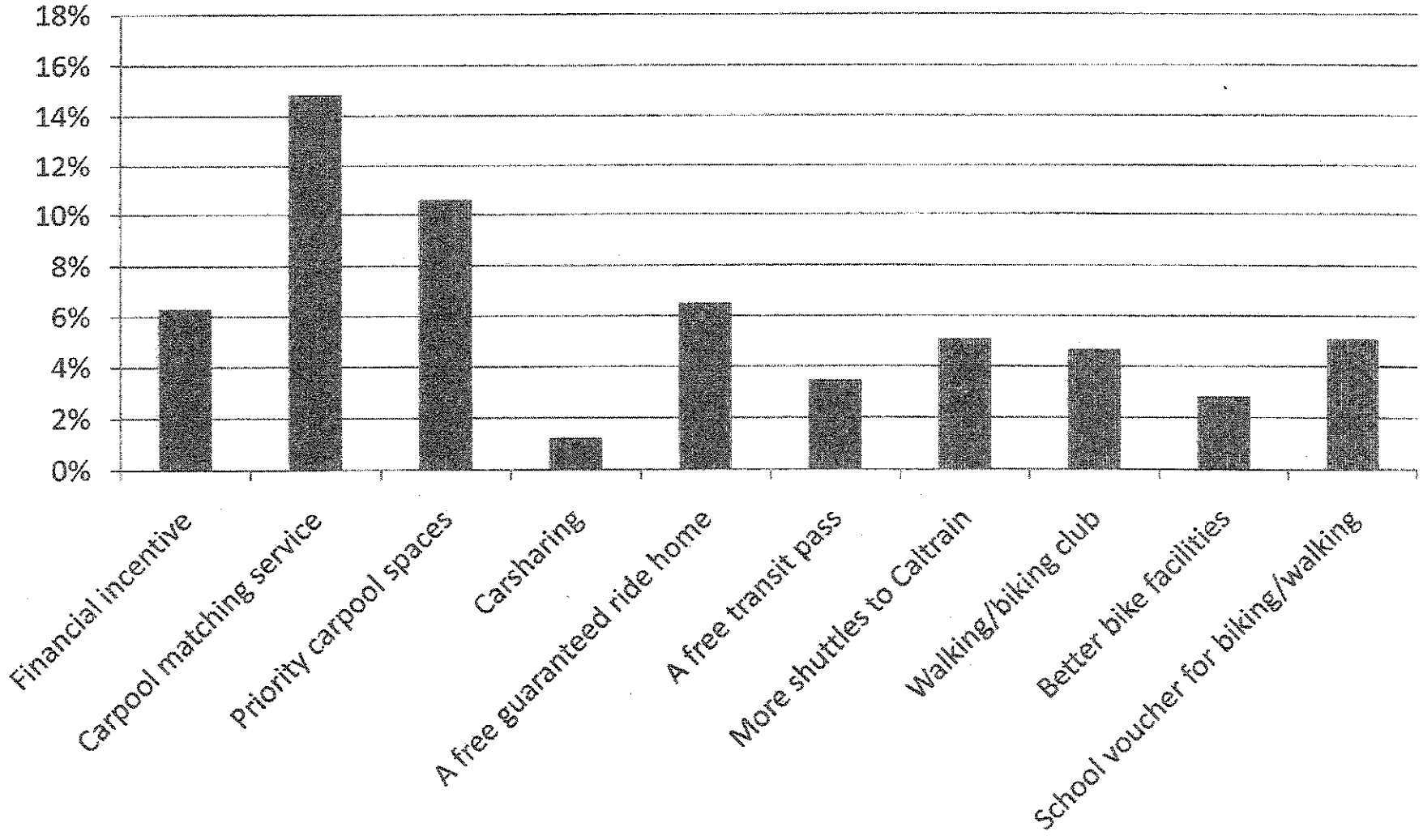
Mileage calculated by street network

Sygaard

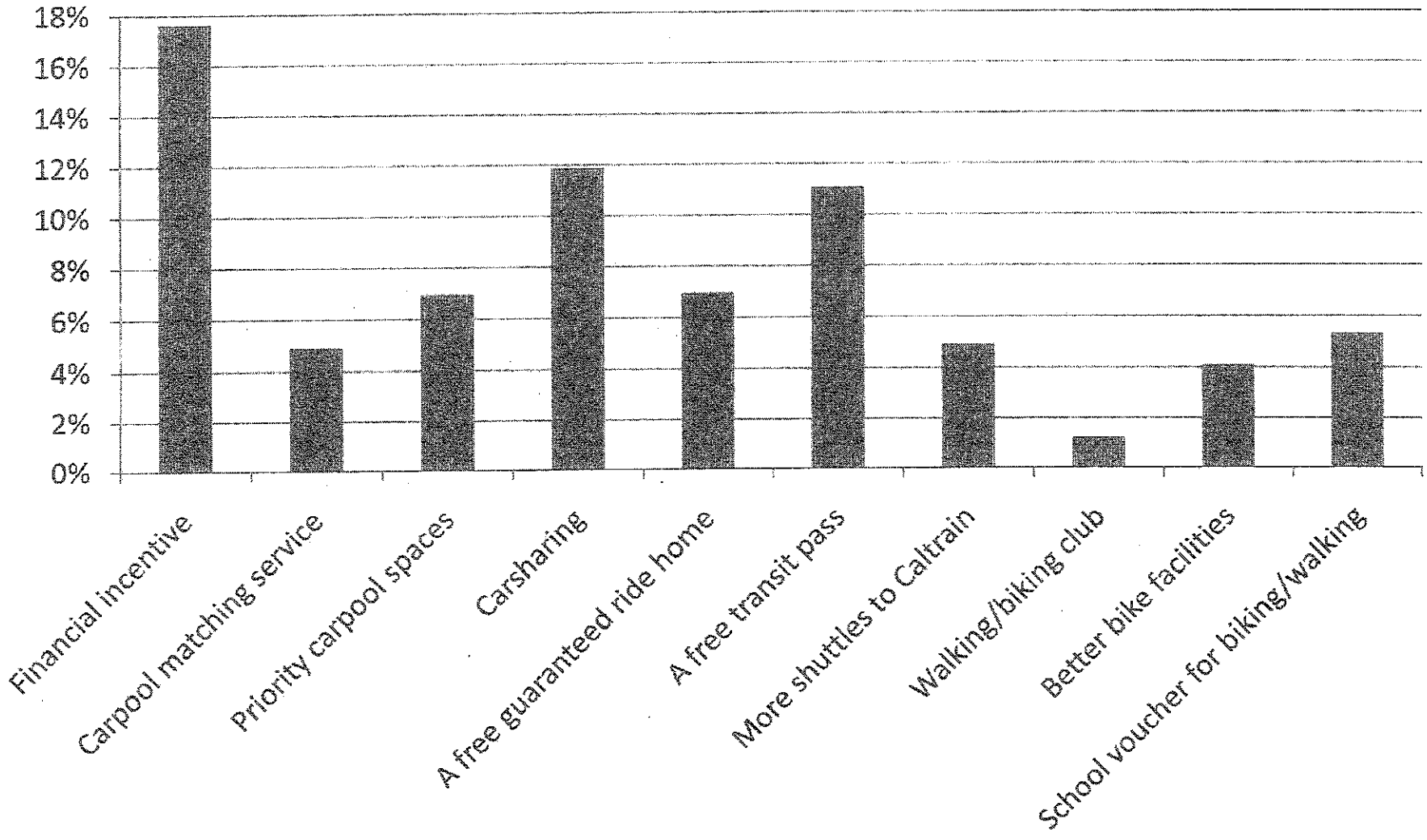
Survey Data - Students



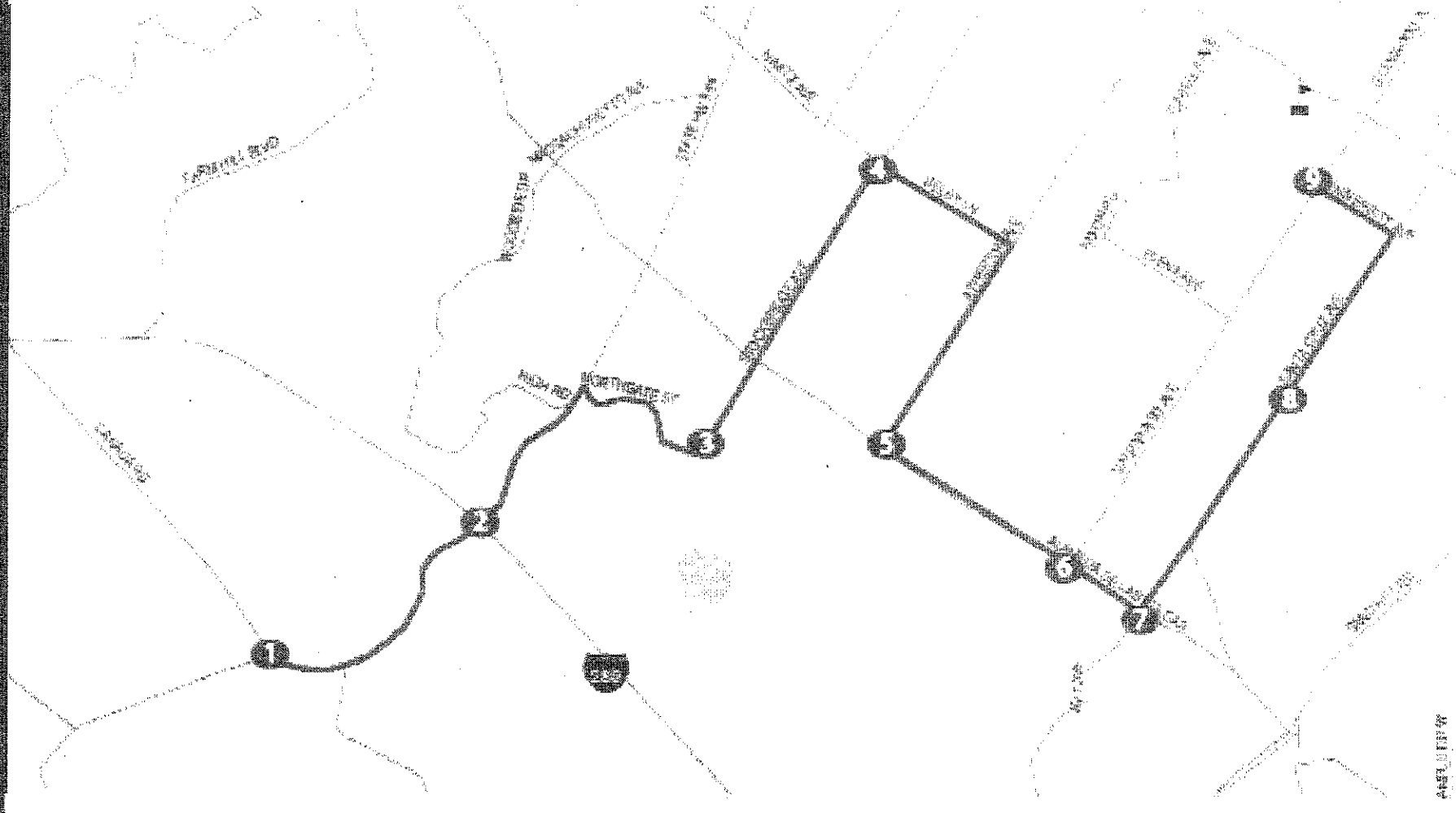
Survey Data – Parents



Survey Data – Faculty/Staff



Student Programs – Busing (Woodside/Atherton/ West Menlo Park)



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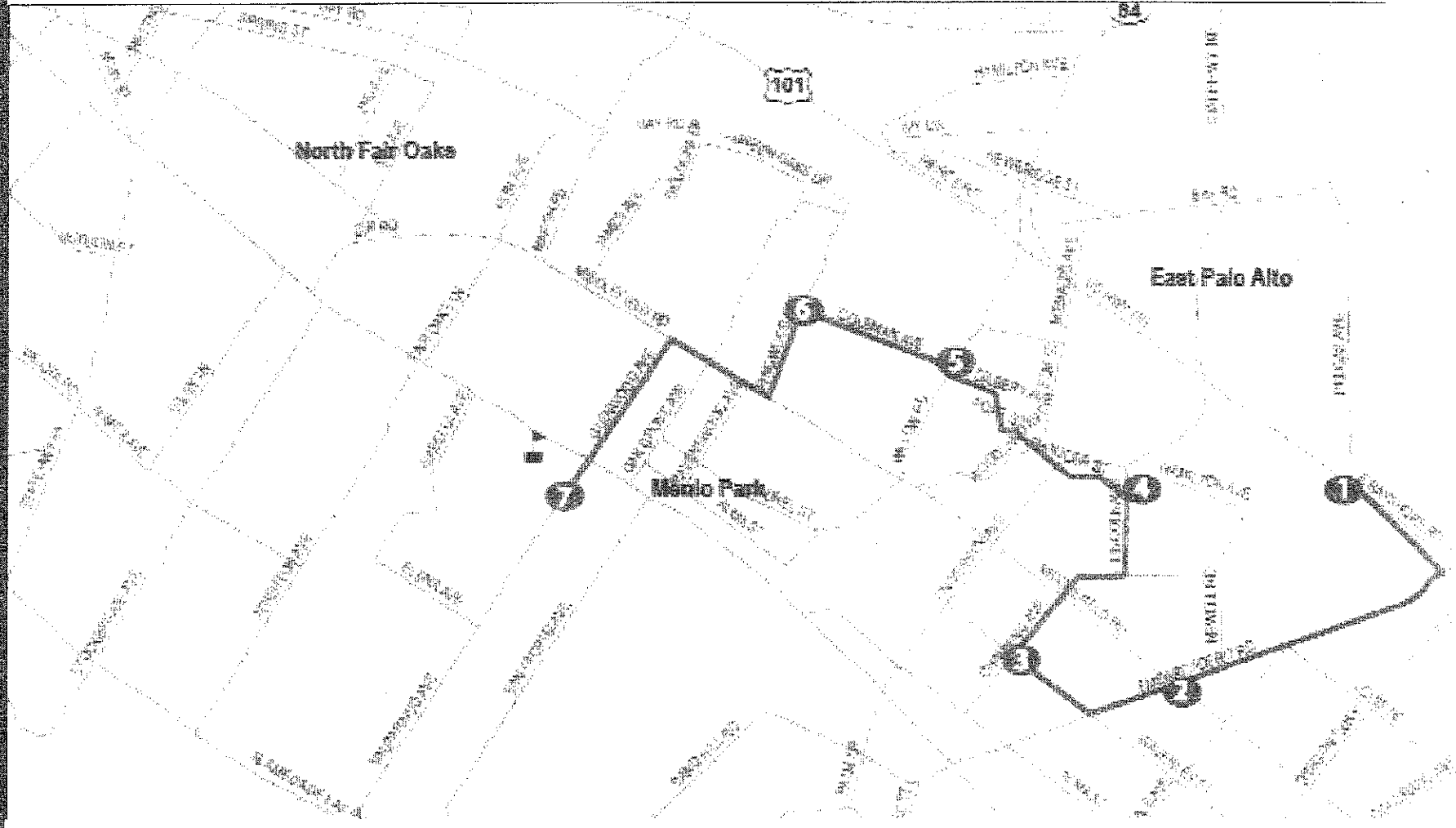
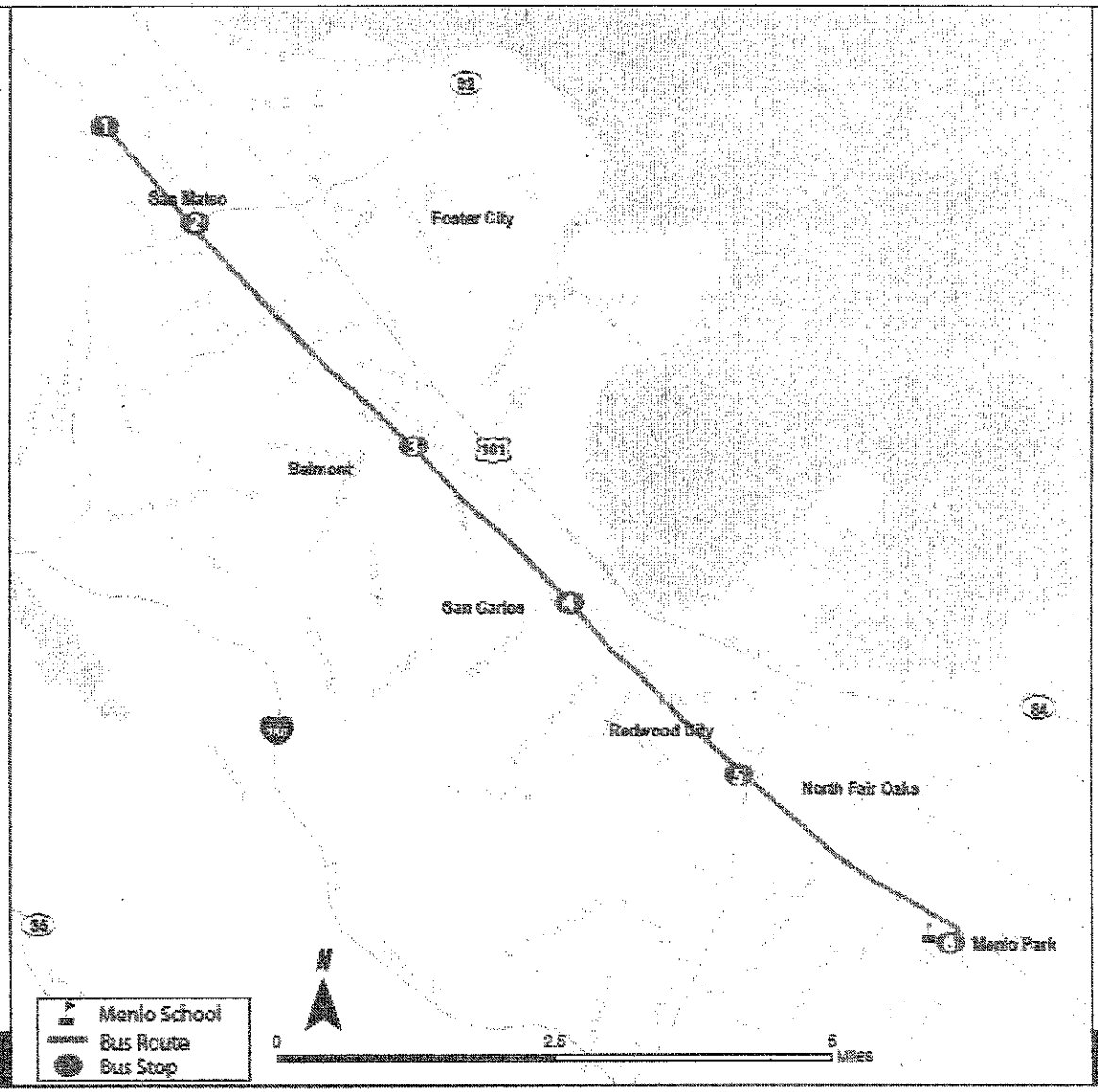
Student Programs – Busing (Palo Alto)



Student Programs – Busing (San Mateo/Redwood City)



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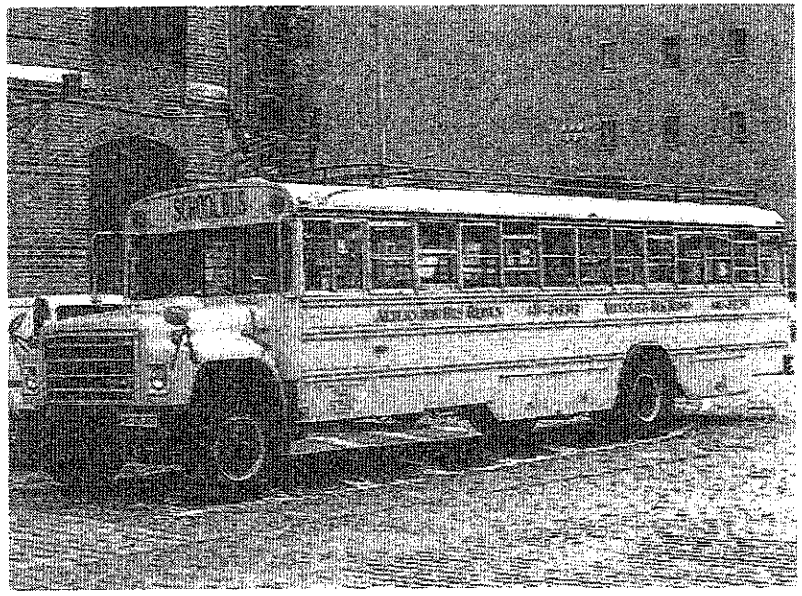
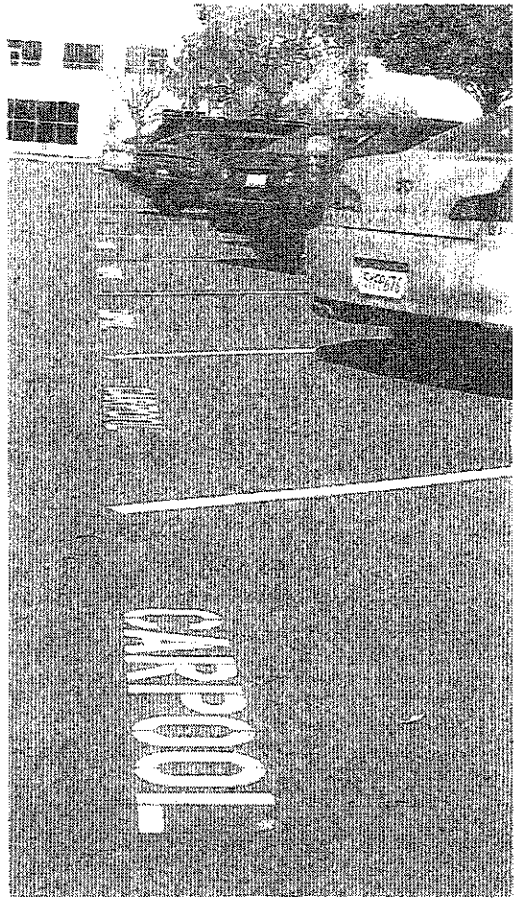
Student Programs – Busing

- Incentive
  - Merchant Gift Cards
  - One ride = $1 Credit
  - $10 Credits = $10 Gift Card
- Impact
  - Reduce "double-trip" parent drop-offs
  - 150 trip reduction in AM



Student Programs - Carpooling

- Additional Dedicated Carpool Spaces
- ZimRide
- Incentives for 3+ Carpools
  - Merchant Gift Cards
  - One ride = $1 Credit
  - $10 Credits = $10 Gift Card
- Impact
  - 30 trip reduction in AM; 21 in PM
  - 20 parking space reduction



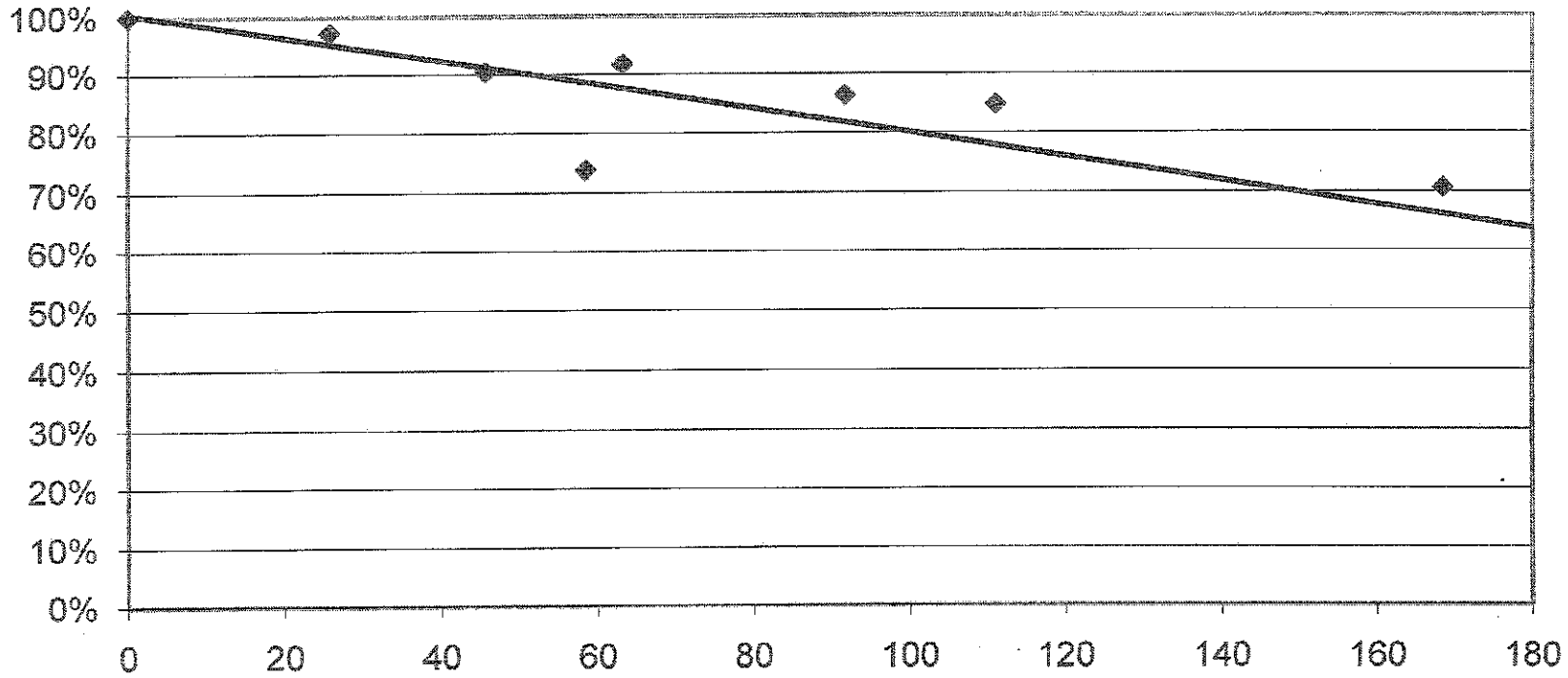
Student Programs – Bicycle/Walk

- Safe Routes to School
- Bike/Walk Trains
- Bike Facilities
- Incentives
  - Merchant Gift Cards
  - One ride = $1 Credit
  - $10 Credits = $10 Gift Card
- Impact
  - 12 trip reduction in AM & PM

Parent Program - Carpooling

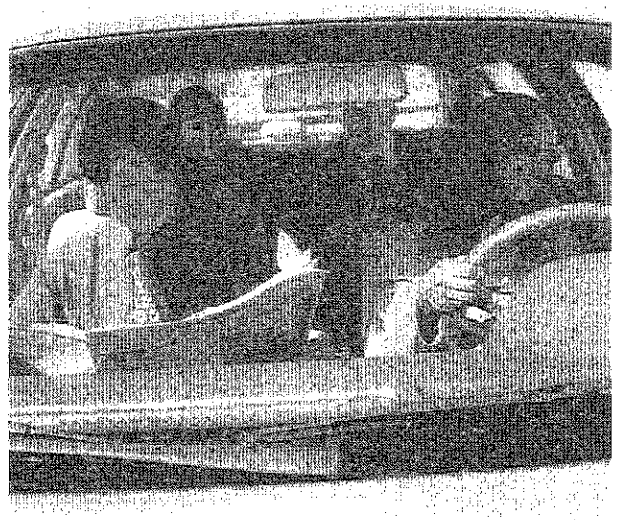
- ZimRide
- Incentives for 3+ Students
  - Merchant Gift Cards
  - One ride = $1 Credit
  - $10 Credits = $10 Gift Card
- Impact
  - 90 trip reduction in AM; 70 in PM

Faculty/Staff Programs – Parking Cash-Out



Faculty/Staff Programs – Parking Cash-Out

- Carpools of 3+ Faculty/Staff
  - ZimRide
  - Atherton Train Station Parking Lot
- Transit
  - SamTrans
  - Caltrain (Menlo Park Station) + Shuttle
- Bicycling/Walking
  - Bike facilities and education
- Impact
  - 20 trip reduction in AM & PM
  - 18 space parking reduction



Faculty/Staff Programs – Carsharing

- On-campus rental car
  - Errands
  - Appointments
- Impact
  - Supportive of other measures

Faculty/Staff Programs – Guaranteed Ride Home

- Free taxi ride home for emergencies
- Impact
  - Supportive of other measures

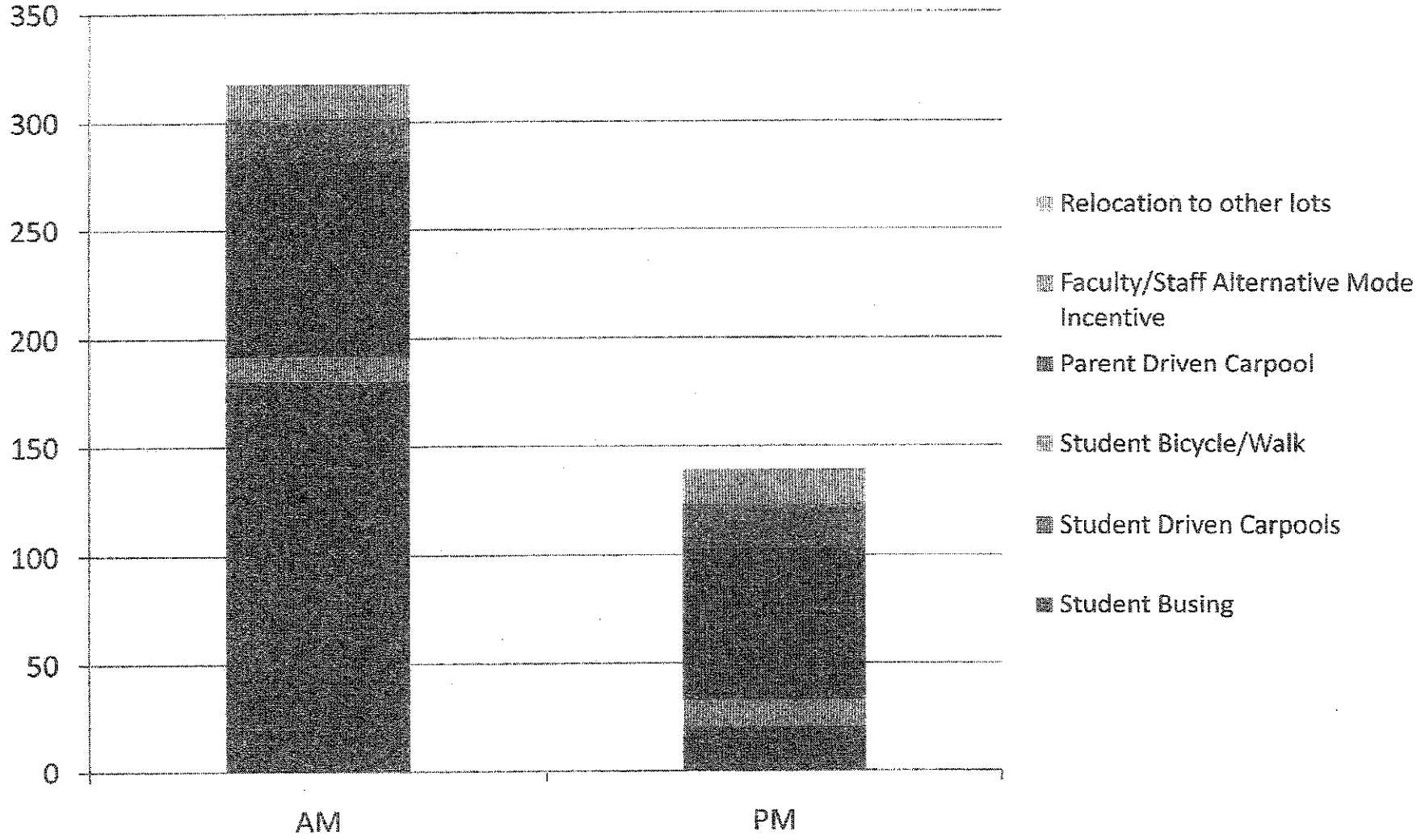
Faculty/Staff Programs – Existing

- Diversion of 16 cars from Valparaiso entrance
- Pre-tax commuter account

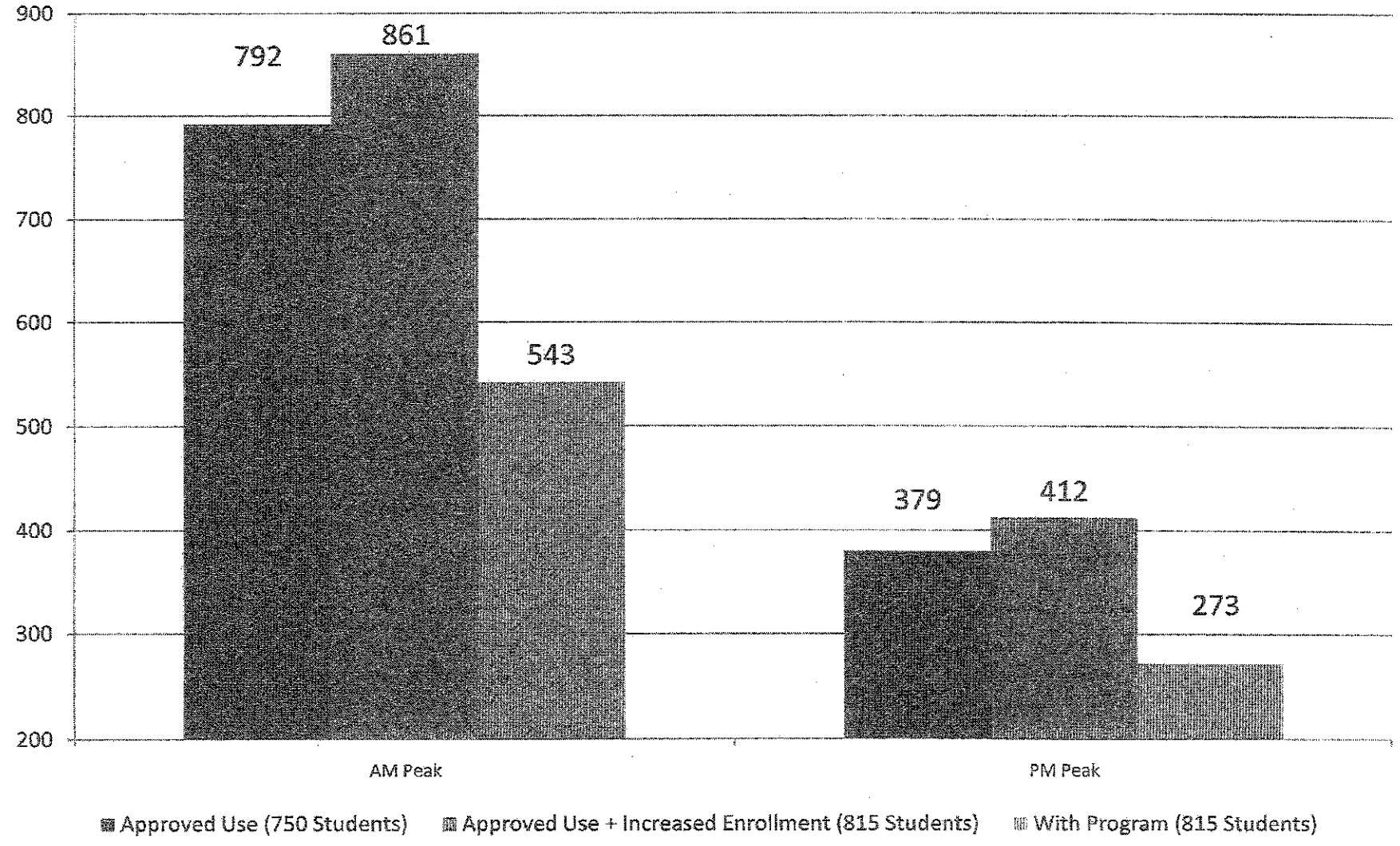
Other Programs

- Address parking against oak trees
- Restrict fire lane access

Summary of Impacts – Vehicle Trips



Summary of Impacts – Vehicle Trips



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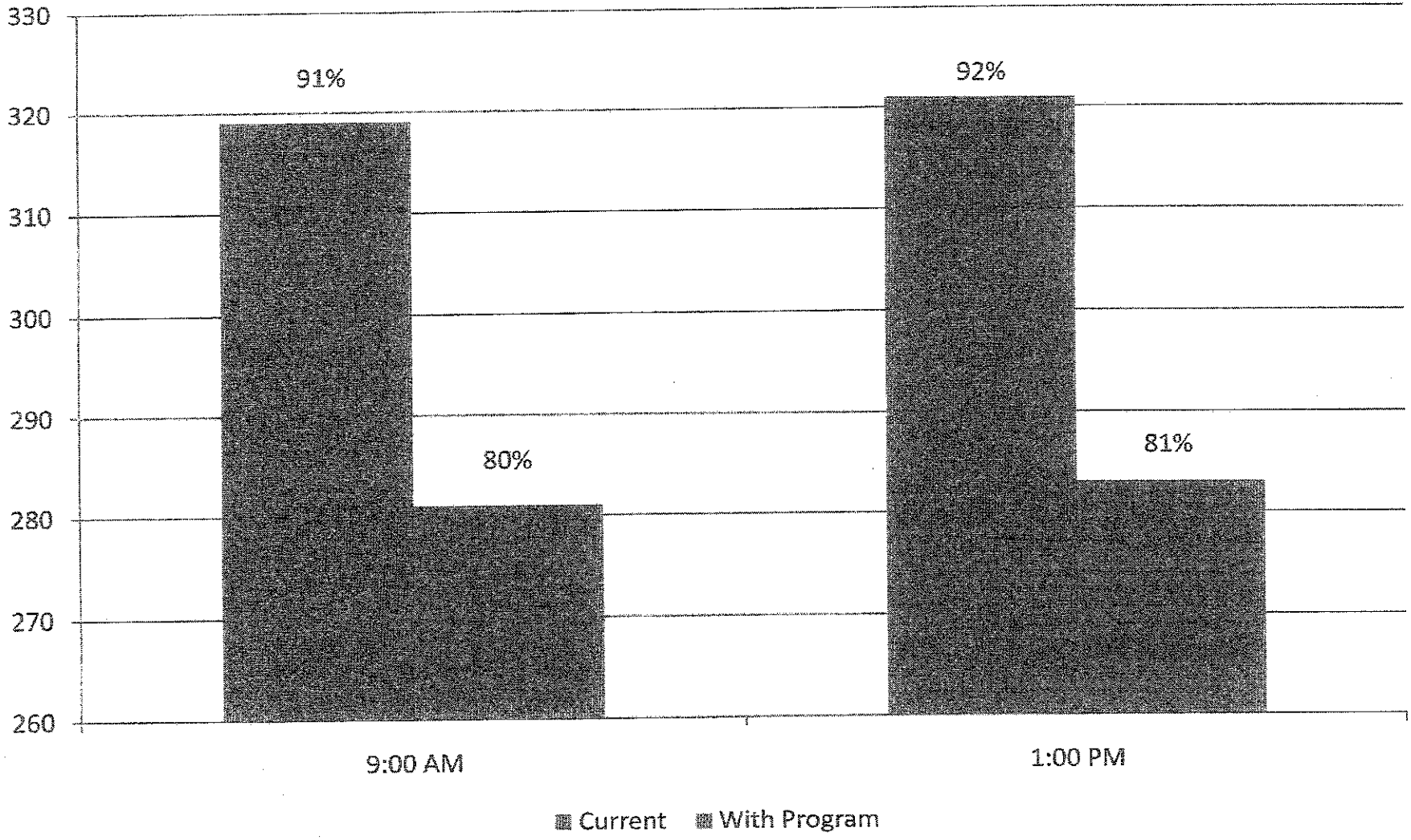
Summary of Impacts - Parking



For More Information

Brian Canepa

Nelson|Nygaard
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Mobility Accessibility Sustainability

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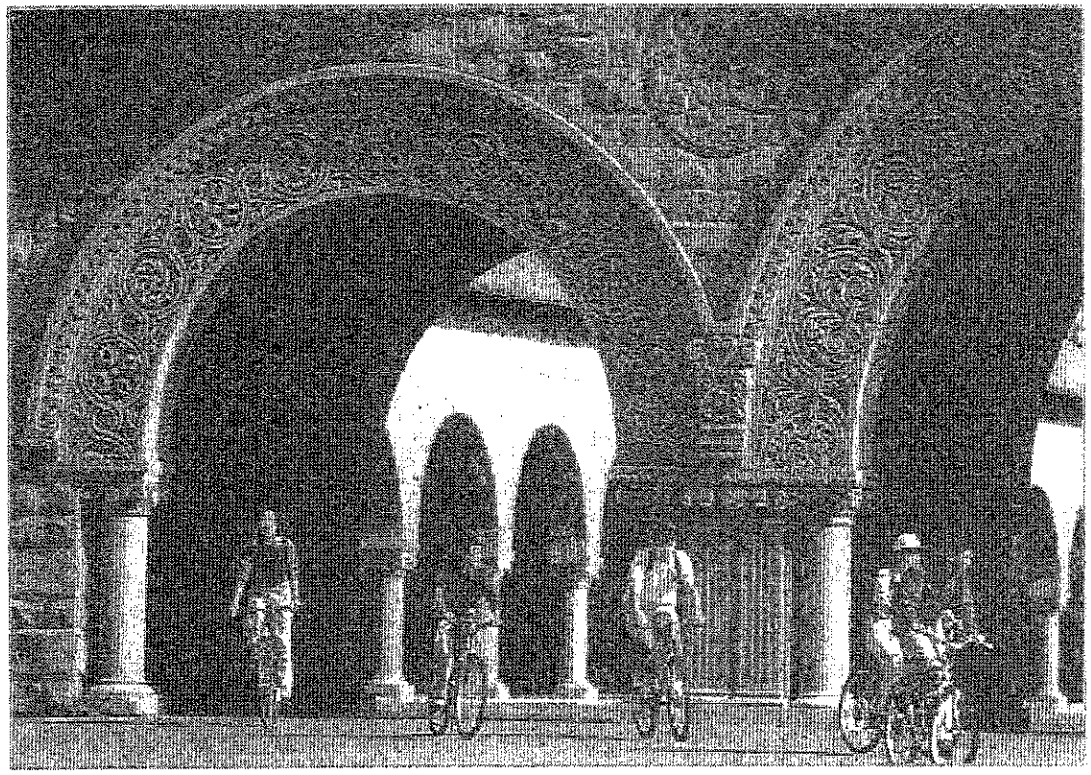

NELSON
NYGAARD

MEMORANDUM

To: David McAdoo

From: Brian Canepa and Francesca Napolitan

Date: April 14, 2011

Subject: Menlo School Trip Reduction Calculations

Figure 1 provides a range of the estimated impacts of each individual TDM measure on vehicle trips, illustrating the minimum and maximum number of trips that would be reduced by that specific measure without taking into account the effects of other TDM measures.

Figure 1 Trip Reduction Effects of Individual Measures

	% Trip Reduction		Number of Trips AM		Number of Trips PM	
	Low	High	Low	High	Low	High
Students						
Busing	8%	30%	59	222	0	0
Student Driven Carpools	2%	10%	15	74	15	74
Bicycle/Walk	1%	5%	7	37	7	37
Subtotal			82	333	22	111
Parents						
Parent Driven Carpool	8%	30%	59	222	59	222
Faculty/Staff						
Alternative Mode Incentive	10%	25%	12	30	12	30
Other						
Relocation to other lots			16	16	16	16

Figure 2 below provides a calculation of the reduction in vehicle trips due to the Menlo School's proposed TDM program. It should be noted that this is not a cumulative total of the trip reduction numbers shown in Figure 1.

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Figure 2 Number of Vehicle Trips Reduced

	Low		High		Probable	
	# of Trips		# of Trips		# of Trips	
	AM	PM	AM	PM	AM	PM
Students						
Busing	50	0	180	0	150	0
Student Driven Carpools	15	15	74	74	30	21
Bicycle/Walk	7	7	37	37	12	12
Parents						
Parent Driven Carpool	50	30	150	150	90	70
Faculty/Staff						
Alternative Mode Incentive	12	12	30	30	20	20
Other						
Relocation to other lots	16	16	16	16	16	16
TOTAL	**150**	**80**	**487**	**307**	**318**	**139**

Utilizing the trip reduction numbers from the probable scenario, the demand for parking from students would decrease by 20 spaces and the demand for parking from faculty and staff would decrease by 18 spaces.