DRAFT

CITY OF MERCED

Mercy Medical Center Environmental Impact Report

March, 2006

Quad Knopf

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Mercy Medical Center
Environmental Impact Report

Submitted to:

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Introduction

The City of Merced is in receipt of an application for a rezone, General Plan Amendment, and site plan for a property located at the northeast and southeast corners of G Street and Cormorant Drive, in northern Merced. The City has sought the assistance of Quad Knopf, Inc. to evaluate the environmental effects of the proposed project and to present the results in an Environmental Impact Report (EIR). This Draft EIR has been prepared for the City of Merced Planning Department, pursuant to the State of California Environmental Quality Act (CEQA) of 1970 (as amended) (California Public Resources Code 21050 et seq.) and is an informational document intended to inform public decision makers, responsible or interested agencies and the general public of the potential environmental effects of the proposed project, and where applicable, mitigation measures that can be implemented to reduce or avoid the potential adverse environmental effects. While CEQA requires that major consideration be given to avoiding adverse environmental effects, the Lead Agency and other responsible public agencies must balance adverse environmental effects against other public objectives, including the economic and social benefits of a proposed project, in determining whether a proposed project shall be approved.

In conformance with Sections 15051 and 15367 of the State CEQA Guidelines, the City of Merced is the CEQA Lead Agency (the public agency responsible for reviewing and approving the project) for this Draft EIR. Responsible agencies (those agencies that may have discretionary approval over one or more actions involved with development of the project) may include, but are not limited to: the Central Valley Regional Water Quality Control Board, the San Joaquin Valley Unified Air Pollution Control District, Office of Statewide Health Planning and Development, Caltrans, California Air Resources Board, Caltrans Division of Aeronautics, California Department of Fish and Game, California Department of Health Services, California Integrated Waste Management Board, and California Department of Toxic Substances Control.

This Draft EIR is intended to provide an analysis of potential impacts that would result from implementation of the proposed project. Sections 15120 through 15132 of the State CEQA Guidelines describe the content requirement for Draft and Final EIRs. A Draft EIR must include the following components: a description of the environmental setting, an environmental impact analysis, feasible mitigation measures, alternatives to the proposed project (including a "no-project" alternative), significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The information contained in this Draft EIR will assist the decision-makers and interested members of the public in determining whether or not to approve the project as proposed or in some modified form and, if so, the nature and extent of the measures required to mitigate adverse environmental impacts that approval of the project might cause.

Project Description

The proposed project is the three-phase construction of a 607,428-square foot, eight-story, 460-bed replacement hospital (seven stories and one below grade level plus a mechanical penthouse); 200,000 square feet of medical office buildings, a 17,074-square foot power plant, a helipad, and

1,990 parking spaces within surface lots (1,405) and in a parking garage (585). The project site is approximately 30 acres in size which replaces the existing County owned facility located on 13.5 acres approximately 3.5 miles from the proposed project site. In total, the proposed project includes 1,011,171 square feet of building space (excludes existing Cancer Center), in structures ranging from one to seven stories in height, and 1,990 parking spaces. A helipad will be constructed to accommodate helicopter operations on the north end of the site. Figure 2-2 shows a site plan of the proposed improvements.

The proposed new structures and improvements will combine with the existing Mercy Cancer Center to form a coordinated medical facility complex for the City of Merced. The hospital structure (seven stories and one below grade level plus a mechanical penthouse) would be the main structure located on the site, with a variety of support and accessory structures surrounding the main building. As noted, the buildings are proposed to be developed in three phases, although the timing of the phases is not yet determined. It is believed that market conditions will dictate the eventual timing of the construction in the second and third phases. Construction of improvements and structures within the first phase is projected to occur in 2007.

Phase I of the proposed project includes development of a portion of the main hospital structure, a medical office building, and a power plant. The portion of the hospital structure to be developed in this phase consists of 258,714 square feet of usable space plus mechanical penthouse and will have 185 beds. The four-story medical office building will be 80,000 square feet, and the power plant will be 12,352 square feet in size. In addition to these structures, Phase I will also include the construction of 948 parking spaces, and miscellaneous municipal improvements (roadway construction, curb, gutter, sidewalk improvements, water and sewer infrastructure, etc.) to support the structures. The total size of buildings proposed in this phase is 351,066 square feet (excludes existing Cancer Center).

Phase II of the proposed project includes construction of a 258,714-square foot, 185-bed addition to the hospital building, the construction of a three-story, 60,000-square foot medical office building, and a 4,722-square foot addition to the power plant. Additionally, another 670 parking spaces will be constructed during this phase of development. In addition to these structures, Phase II will also include the construction of miscellaneous municipal improvements (water and sewer infrastructure, etc.) to support the structures. The total size of buildings proposed in this phase is 323,436 square feet.

Phase III of the proposed project includes construction of a final 90,000-square foot, 90-bed addition to the hospital building, the construction of a three-story, 60,000-square foot medical office building, and a six-story, 186,669-square foot parking garage (four story with roof parking and two levels below grade). The parking garage will contain 585 total parking spaces. The construction of the parking garage will remove some of the surface parking constructed in earlier phases of the project. In addition to these structures, Phase III will also include the construction of miscellaneous municipal improvements (water and sewer infrastructure, etc.) to support the structures. The total size of buildings proposed in this phase is 336,669 square feet.

In addition to the physical improvements just described, the project includes a proposed change to the General Plan land use designations and zoning designations for the subject property. The project proposes changing the General Plan land use designation to Professional/Commercial

Office (CO), and proposes a zone change to Planned Development (P-D). Consideration of the impacts associated with the regulatory change in land use and zoning designations will be considered in this analysis.

It is anticipated that the construction staging area for the project would be located on the project site, in various locations depending on phase and improvements under construction. The construction site would be accessed from G Street, along Cormorant Drive. Construction timelines are not known at this point, but it is expected that construction cycles will last 36 months for Phase 1 and II and 24 months for Phase III.

The construction and operation of this proposed project is expected to impact the economy of the Merced area. In addition to the generation of employment of construction workers, and hospital professional and non-professional employees, the project may also result in the closure or alteration of other medical operations within the area, including the Dominican and Community Campuses of the Catholic Healthcare West (CHW) system. The project may also impact local growth pressures and land values in the area surrounding the project site, increasing demand for support services and uses related to the operation of a medical center.

Potential Areas of Controversy and Issues to be Resolved

The following issues will likely produce controversy in reviewing and considering the proposed project:

- Light and glare production at the hospital site
- Impacts to the adjacent school site
- Traffic generation and its impacts on area roadways
- Safety issues regarding helicopter operations
- Noise issues related to helicopter operations
- Aesthetic impacts from hospital towers adjacent to school and homes
- Land use incompatibilities between hospital and surrounding land uses
- Potential growth-inducing impacts of the development
- Cumulative air quality impacts associated with construction and operation

Alternatives to the Project

Section 15126.6 of the State CEQA Guidelines requires the EIR to describe a reasonable range of alternatives to the project or to the location of the project which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the proposed project, and to evaluate the comparative merits of the alternatives. Alternatives that would reduce or avoid significant impacts represent an environmentally superior alternative to the proposed project. However, if the environmentally superior alternative is the "no project" alternative, the EIR must also identify an environmentally superior alternative among the other alternatives. Based upon the analysis contained and documented in this EIR, Alternative No. 1, the "No Project Alternative" is the environmentally superior alternative. The second best alternative is the Reduced Height Alternative, as described in Section 4 of this DEIR.

The alternatives identified for consideration are as follows:

ALTERNATIVE 1: NO PROJECT ALTERNATIVE

In accordance with Section 15126.6(e)(3)(B) presented above, this alternative considers the "no-project" alternative is the circumstance under which the project does not proceed. The analysis compares the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. This No Project alternative compares the existing state with the likely development of the site under current General Plan and Zoning Ordinance land use designations as the project site could still be developed in accordance with the existing *Merced Vision 2015 General Plan* and *Northeast Yosemite Specific Plan* land use designations, existing zoning and available infrastructure. The No Project Alternative also assumes continued use of the existing Mercy Cancer Center.

The majority of the project site is currently vacant and undeveloped. One building exists on the site which houses the Mercy Cancer Center; it is located on the northeast corner of the intersection of G Street and Cormorant Drive. Since most of the site is vacant and undeveloped, it is utilized for illegal dumping.

In the case of the proposed project, because of the existing *Northeast Yosemite Specific Plan* land use designations and zoning, failure to proceed with the project would not necessarily mean that the project site would remain in its existing condition. Currently, the portion of the project site on which the existing Cancer Center is located is designated by the Merced General Plan Professional/Commercial Office (CO) and is zoned Professional/Commercial Office (C-O). The rest of the 30-acre project site includes two vacant parcels, including 17.2 acres with a General Plan designation of High Medium Density Residential (HMD) and zoning of High Medium Density Residential (R-3-2) and 18 acres with a General Plan designation of Low Density Residential (LD) and zoning of Single-Family Residential (R-1-6).

Table ES-1 summarizes the development potential under the existing *Merced Vision 2015 General Plan* and *Northeast Yosemite Specific Plan* land use designations. The analysis assumes development at the upper range of units per acre (units/acre), but the number of units would be 80 percent of that number to make room for required infrastructure such as streets, drainage features, and parks. Under the No Project Alternative, the project site could support 202 high-medium density residential units (apartments) and 75 low-density residential units (single-family homes) for a total of 277 units. Table ES-1 also contains an estimate of the average daily automobile trips that would be generated by these residential developments.

Table ES-1
Residential Build-out Potential Under Current Land-Use Designations (No Project Alternative)

Area of Project Site	Acres	General Plan Land Use Designations	Development Range (units/acre)	Number of Units at Upper End of Range	Number of Units at 80% Build-out	Average Daily Trips (ADT)
Existing Cancer Center	4.0	CO	—	—	—	—
North and South Ends of Project Site	10.5	HMD	12-24	252	202	716[1]

Area of Project Site	Acres	General Plan Land Use Designations	Development Range (units/acre)	Number of Units at Upper End of Range	Number of Units at 80% Build-out	Average Daily Trips (ADT)
South and east of Cancer Center	15.7	LD	2-6	94	75	1,339[2]
Total	30.2	—	—	346	277	2,056

[1]Based on ADT of 6.63 per dwelling unit, Institute of Transportation Engineers (ITE), Trip Generation.
[2]Based on ADT of 9.55 per dwelling unit, Institute of Transportation Engineers (ITE), Trip Generation.

Source: Quad Knopf, Inc.

ALTERNATIVE 2: REDUCED HEIGHT ALTERNATIVE

This alternative would reduce the building height of the hospital towers to four stories, spreading the buildings across the site north of Cormorant Drive. The change will result in a loss of available parking areas north of Cormorant, resulting in the need to add garage parking south of Cormorant. The alternative will have the same overall square footage and parking, and phasing will remain identical to the proposed project.

ALTERNATIVE 3: BELLEVUE RANCH LOCATION ALTERNATIVE

This alternative would relocate the project to two adjacent sites in the mostly undeveloped Bellevue Ranch area northwest of the current project site. The sites are both designated in the Bellevue Ranch Master Development Plan as Professional/Commercial Office (CO). Site One is approximately 25 acres and is located northeast of the planned intersection of Bellevue Road and M Street. Site Two is approximately 5 acres and is located northwest of the intersection. Site One would contain the main hospital structure, two medical office buildings, power plant, and surface parking. Site Two would contain a third medical office building and the remainder of the surface parking. The alternative will have the same overall square footage and parking, and phasing will remain identical to the proposed project. The location of the alternative site is shown in Figure 4-1.

Summary of Impacts and Mitigation Measures

Section 15123(b)(1) of the *Guidelines for Implementation of the California Environmental Quality Act* (State CEQA Guidelines) provides that the summary shall identify each significant effect with proposed mitigation measures that would reduce or avoid that effect. A Summary of Potential Significant Impacts and Mitigation Measures is provided in Table ES-2.

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Table ES-2
Summary of Impacts and Mitigation Measures

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.1 Aesthetics/Light & Glare					
3.1-1	Create adverse impacts on surrounding viewsheds	Significant and Unavoidable		No mitigation measures are available.	
3.1-2	Produce substantial light pollution or glare.	Potentially Significant	3.1-2a	All lighting in the project area shall be shielded, directed downward and away from adjoining properties and rights-of-way. Light shields shall be installed and maintained consistent with manufacturer's specifications, and shall reduce the spillage of light on to adjacent properties to less than two foot-candles, as measured at the adjacent property line.	Less Than Significant
		Potentially Significant	3.1-2b	Lighting fixtures shall be designed to produce the minimum amount of light necessary for safety purposes.	Less Than Significant
		Potentially Significant	3.1-2c	The project design shall include the use of glass coatings to reduce the amount of light pollution and spillage from the interior lighting. Exterior glazing shall utilize performance coatings with an interior light reflectance in the range of 5-8%. Exterior glazing shall have a light reflectance out of less than 10%.	Less Than Significant
		Potentially Significant	3.1-2d	The project site landscaping shall include vegetation designed to shield adjacent	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				properties from project-generated light and glare. Exterior glazing shall have a light reflectance out of less than 10%.	
3.1-3	Visibility of aesthetically undesirable materials, equipment, and facilities during the construction periods of the three proposed phases of the project.	Less Than Significant		No mitigation measure is required.	
3.1-4	Visibility of aesthetically undesirable materials, equipment and facilities during normal facility operations.	Potentially Significant	3.1-4	The power plant and all outdoor storage areas shall be screened off by fencing and landscaping to reduce their visibility from surrounding areas. Landscaping and fencing shall be designed to reduce visibility from surrounding properties, including the selection of plant materials which provide screening year-round.	Less Than Significant
3.1-5	Create new shading patterns on adjacent land uses.	Less Than Significant		No mitigation measure is required.	
3.2 Agricultural Resources					
3.2-1	Conversion and loss of Prime Farmland to non-agricultural use.	Significant and Unavoidable		No mitigation measures are available.	
3.2-2	Indirect conversion and loss of surrounding Important Farmland to non-agricultural use.	Significant and Unavoidable		No mitigation measures are available.	
3.2-3	Conflict with a Williamson Act contract and zoning for agriculture.	No Impact		No mitigation measure is required.	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.3 Air Quality					
3.3-1	Increased Particulate Matter levels in the immediate vicinity during construction and operation	Potentially Significant	3.3-1	Construction contracts shall require the primary construction contractor to prepare and submit a dust control plan to the SJVAPCD that incorporates all provisions of Regulation VIII and the following additional measures: • Limit traffic speeds on unpaved roads to 15 mph. • Install wheel washers or other forms of wheel cleaners at truck exits, and wash loose dirt from trucks and equipment leaving the site. • Suspend excavation and grading activities when winds exceed 20 mph. • Limit size of area subject to excavation, grading or other construction activity at any one time to avoid excessive dust. • Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent. • Make maximum use of diesel equipment equipped with catalytic	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				converters and particulate traps. • Curtail construction during "Spare the Air Days" declared by the SJVAPCD. • Equipment not in use for more than ten minutes should be turned off. • Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use. • Whenever feasible and cost effective, use electrically driven equipment (provided they are not run via a portable generator set) or alternatively-fueled equipment/vehicles.	
3.3-2	Project traffic would result in an increase in carbon monoxide concentrations.	Less Than Significant		No mitigation measure is required.	
3.3-3	Operation of the project would result in increases in emission of both ozone precursors and PM_{10}.	Significant	3.3-3	The following design features/programs shall be implemented: • Use energy efficient design including automated control system for heating/air conditioning and energy efficiency; utilize lighting controls and energy-efficient lighting in buildings	Significant and Unavoidable

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				and use light colored roof materials to reflect heat. • Plant deciduous trees on the south and west elevations of the MOB. • Provide low nitrogen oxide (NOx) emitting and/or high efficiency water heaters. • Appropriate easements should be reserved to provide for future improvements such as bus turnouts, loading areas, and shelters. • Purchase low-emission, alternatively-fueled or electrical-driven maintenance vehicles and equipment. • Designate an on-site TSM coordinator. • Implement carpool/vanpool program, e.g., carpool ride-matching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc. • Provide lockers for employees bicycling or walking to work.	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.4 Biological Resources					
3.4-1	Substantial adverse impacts on candidate, special-status or sensitive species	Less Than Significant		No mitigation measure is required.	
3.4-2	Loss of habitat to special-status plants	No Impact		No mitigation measure is required.	
3.4-3	Loss of Swainson's hawk foraging habitat	Potentially Significant	3.4-3	The project proponent shall provide .5 acres of habitat mitigation land for each acre authorized for conversion (.5:1 ratio). All habitat mitigation lands protected under this requirement may be protected through fee title acquisition or a conservation easement (acceptable to the Department of Fish and Game) on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk. The project proponent shall provide for the long-term management of the habitat mitigation land by funding a management endowment (the interest on which shall be used for managing the habitat management lands) at a rate per acre that is acceptable to the Department of Fish and Game.	Less Than Significant
3.4-4	Interference with movement of native wildlife	Less Than Significant		No mitigation measure is required.	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.4-5	Loss of habitat for special-status species	Potentially Significant	3.4-5	• A qualified biologist shall conduct a pre-construction survey for nesting raptors (including both tree and ground nesting species) on site within 30 days of the onset of ground disturbance, if ground disturbance is to occur during the breeding season (February 1 to September 15). These surveys shall be based on the accepted protocols for the target species. If a nesting raptor were detected, an appropriate construction buffer would be needed (up to 250 feet or more). The actual size of the buffer would depend on the species, topography, and type of construction activity that would occur near the nest. If construction occurs during the non-breeding season, a qualified biologist shall conduct pre-construction surveys for burrowing owls. Pre-construction surveys during the non-breeding season are not necessary for raptors. • If burrowing owls are detected on site during the non-breeding season, placing one-way doors in the burrows and leaving them in place for a minimum of three days can passively relocate them. Once it has been determined that the owls have vacated the site, the burrows	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				can be collapsed and ground disturbance can proceed. Although this recommended mitigation measure avoids a direct take of the species, it is an indirect impact on the species. This indirect impact on the species, if they are detected on the project site, would be considered a significant and unavoidable impact.	
3.4-6a	Construction impacts to federally protected wetlands or jurisdictional waterways – Rerouting of Sells Lateral	Significant and Unavoidable		No mitigation measures are available.	
3.4-6b	Construction impacts to federally protected wetlands or jurisdictional waterways – Connecting Sells Lateral to Cottonwood Creek	Potentially Significant	3.4-6b	The project proponent shall prepare a restoration plan that provides measures to restore the area where the new Sells Lateral would connect to Cottonwood Creek and in the area where tree removal or any other disturbance would occur in Cottonwood Creek. The restoration plan shall provide for the re-contouring and replanting of convergence area and the tree removal area. The restoration plan shall provide a plan for grading, soil preparation, planting, and maintenance and monitoring for the restoration area. The restoration plan shall provide recommendations on the use of vegetation, rock material, or a combination	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				of both, in the convergence area to minimize erosion as appropriate based on the expected water flows. The restoration plan is subject to approval by the Army Corps of Engineers.	
3.4-6c	Construction impacts to federally protected wetlands or jurisdictional waterways – Removal of trees in Cottonwood Creek	Potentially Significant		See Mitigation Measure #3.4-6b.	Less Than Significant
3.4-6d	Construction impacts to federally protected wetlands or jurisdictional waterways – Inadvertent construction impacts on Cottonwood Creek	Potentially Significant	3.4-6d	The project proponent shall avoid disturbance to Cottonwood Creek during construction by establishing a minimum 20-foot buffer. The 20-foot buffer shall be clearly marked with orange construction fencing so that it is visible to equipment operators.	Less Than Significant
3.4-7	Degradation of water quality in seasonal creeks, reservoirs and downstream waters	Less Than Significant		No mitigation measure is required.	
3.4-8	Contribution to cumulative impacts affecting biotic resources that would likely result from the development of the proposed Mercy Medical Center	Significant and Unavoidable		No mitigation measures are available.	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.5 Cultural Resources					
3.5-1	Development of the Mercy Medical project site could disturb or destroy buried cultural resources (archaeological, paleontological, or human remains) within the project site.	Potentially Significant	3.5-1	• To ensure that buried cultural resources or human remains, if encountered, are recognized by construction crews, a worker education plan shall be initiated prior to project implementation. Information describing potentially significant resource characteristics and the procedures to be followed in the event of such a discovery shall be provided. • Should any artifacts, exotic rock types, or unusual amounts of bone, or shell be uncovered during construction activities, a qualified archaeologist shall be consulted for an on-the-spot-evaluation.	Less Than Significant
3.6 Geology and Soils					
3.6-1	Fault rupture and seismic-related ground failure.	Less Than Significant		No mitigation measure is required.	
3.6-2	Erosion and soil instability from excavation, grading, or fill.	Potentially Significant	3.6-2	All recommendations set forth on pages 27-46 in the Treadwell & Rollo Geologic Hazard Evaluation and Geotechnical Investigation (see Appendix F) shall be incorporated into construction and grading plans. The Office of Statewide Health Planning and Development (OSHPD) shall ensure that the recommendations are followed.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.6-3	Potential for expansive soils to cause structural failure of the proposed buildings and parking structure.	Potentially Significant		See Mitigation Measure #3.6-2.	Less Than Significant
3.7 Hazards and Hazardous Materials					
3.7-1	Use, transport, or disposal of hazardous materials	Less Than Significant		No mitigation measure is required.	
3.7-2	Release of hazardous materials into the environment	Less Than Significant		No mitigation measure is required.	
3.7-3	Handling of hazardous materials near a school site	Less Than Significant		No mitigation measure is required.	
3.7-4	Location of site on a known hazardous materials site	Less Than Significant		No mitigation measure is required.	
3.7-5	Safety hazards resulting from helicopter operations	Potentially Significant	3.7-5	The helipad shall be a restricted and secured area with warning signs, fence, and or gate, to prevent unanticipated injury to non-authorized persons in the vicinity resulting from moving equipment or flying debris.	Less Than Significant
3.8 Hydrology and Water Quality					
3.8-1	Violate any water quality standards or waste discharge requirements.	Less Than Significant		No mitigation measure is required.	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.8-2	The proposed project would change the existing drainage pattern of the project area.	Less Than Significant		No mitigation measure is required.	
3.8-3	The proposed project could place people or structures in a position that would pose a risk of loss, injury, or death involving flooding due to dam failure.	Less Than Significant		No mitigation measure is required.	
3.8-4	The proposed project could place people or structures within a 100-year floodplain.	Less Than Significant		No mitigation measure is required.	
3.9 Land Use/Population and Housing					
3.9-1	Potential conflicts with land-use policies or regulations intended to avoid or mitigate environmental effects.	Significant and Unavoidable		No mitigation measures are available.	
3.9-2	The project may contribute to blight in the area of the existing Mercy Medical Center as a result of that facility being relocated to the proposed new Mercy Medical Center site.	Less Than Significant		No mitigation measure is required.	
3.9-3	The potential of the project to reduce the City of Merced's housing stock by converting land	Less Than Significant		No mitigation measure is required.	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
	currently designated for residential development to non-residential uses.				
3.9-4	Division of an established community	Less Than Significant		No mitigation measure is required.	
3.9-5	Inducement of population growth	Less Than Significant		No mitigation measure is required.	
3.10 Noise					
3.10-1	The project could result in an increase in existing traffic noise levels at existing land uses in the project vicinity on the existing local roadway network.	Less Than Significant		No mitigation measure is required.	
3.10-2	The project could result in an increase in future traffic noise levels at existing land uses in the project vicinity on the existing local roadway network.	Less Than Significant		No mitigation measure is required.	
3.10-3	Proposed increases in helicopter noise levels may result in an exceedance of the City of Merced noise level criteria.	Less Than Significant		No mitigation measure is required.	
3.10-4	Helicopter noise.	Less Than Significant		No mitigation measure is required.	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.10-5	Sleep disturbance due to nighttime helicopter noise	Potentially Significant	3.10-5	The pilots shall avoid flights over noise sensitive areas at all times when weather permits. The predominant wind in that area is from the north, northwest. The helicopter operates by landing and taking off into the wind. A departure in the northwesterly direction is preferred. A modified approach procedure from the northwest may be possible during minimal and "no" wind conditions. However, if the wind velocity exceeds a specified criteria depending upon the model of aircraft, then the helicopter will need to approach from the northeast or southeast.	Significant and Unavoidable
3.10-6	New boilers within the Central Plant could result in a significant increase in noise levels.	Potentially Significant	3.10-6	Noise measured at the property line shall be based upon the Merced Vision 2015 General Plan. This document states that an outdoor noise level of 60 Ldn or less is acceptable for residential areas and for schools. The measurement of these units shall be in terms of dB(A) Leq at all residential property lines. Include appropriate acoustical louvers, silencers or other noise control measures at all ventilation openings facing north and west, and on the roof tops as required so as not to exceed 45 dB(A) Leq at all residential property lines.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.10-7	Noise generated by the Central Plant due to the use of emergency generators.	Potentially Significant	3.10-7a	Generators shall be specified with individual acoustical enclosures supplied by the manufacturer, which will limit the noise from the generator to 75 dB(A) at 10 feet.	Less Than Significant
		Potentially Significant	3.10-7b	Exterior generators shall be acoustically attenuated in weatherized enclosures by the manufacturer.	Less Than Significant
		Potentially Significant	3.10-7c	The emergency generators should be exercised only on weekdays between the hours of 8 a.m., and 5 p.m.	Less Than Significant
		Potentially Significant	3.10-7d	Only one emergency generator should be exercised at any given time.	Less Than Significant
		Potentially Significant	3.10-7e	Generators shall be specified with individual acoustical enclosures supplied by the manufacturer, which will limit the noise from the generator to 75 dB(A) at 10 feet.	Less Than Significant
3.10-8	Generation of construction noise exceeding City regulations.	Potentially Significant	3.10-8a	All heavy construction equipment and all stationary noise sources (such as diesel generators) shall be in good working order and have manufacturer installed mufflers.	Less Than Significant
		Potentially Significant	3.10-8b	Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences and Cruickshank Middle School as is	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				feasible. During Phases Two and Three, the Mercy Medical Center will be in use, therefore equipment warm up areas, etc. should be located as far away from the hospital, existing residences, and Middle School, as is feasible.	
		Potentially Significant	3.10-8c	All construction shall be between the hours of 7:00 a.m. and 9:00 p.m. daily except Sundays and holidays. Construction activities between the hours of 10:00 a.m. and 6:00 p.m. on Sundays and holidays shall meet at least one of the following noise limitations: 1. No individual piece of equipment shall produce a noise level exceeding 83 dBA at a distance of twenty-five feet from the source. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to twenty-five feet from the equipment as possible. 2. The noise level at any point outside of the property plane of the project shall not exceed 86 dBA.	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.10-9	Construction of the proposed Mercy Medical Hospital would involve activities that could generate groundborne vibration or ground-borne noise levels.	Potentially Significant	3.10-9	Limit groundborne vibration due to construction activities in the direction of sensitive receptors. For construction adjacent to highly sensitive uses, apply additional measures as feasible, including advance notice to occupants of sensitive facilities to ensure precautions are taken in those facilities to protect ongoing activities from the effects of vibration.	Less Than Significant
3.11 Public Services					
3.11-1	Expanded need for staff, vehicles, and equipment to adequately provide law enforcement services to the project.	Potentially Significant	3.11-1a	Pursuant to the recommendation of the City of Merced Police Chief, the project applicant shall provide a minimum of three onsite private security guards at all times during the operation of the proposed project. These security guards shall be trained to meet Department of Consumer Affairs standards.	Less Than Significant
		Potentially Significant	3.11-1b	Pursuant to the City of Merced General Plan Policy P-1.3.c, the project applicant shall pay Public Facilities Impact Fees to address impacts of growth on city infrastructure. In addition, Community Facilities District (CFD) formation is required for annual operating costs for city services. CFD procedures shall be initiated before final improvement plans are approved by the City. Developer/Owner	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				shall submit a request agreeing to such a procedure, waiving right to protest their inclusion in the District, and post deposit as determined by the City Engineer to be sufficient to cover procedure costs and maintenance costs expected prior to first assessments being received. In consultation with the Developer/Owner, the City's CFD consultant shall conduct a study to determine the proper rate and method of apportionment based on Phase 1 of the hospital project. The Owner/Developer reserves the right to appeal the consultant's findings to City Council for a final decision.	
		Potentially Significant	3.11-1c	Pursuant to the City of Merced General Plan Policy P-2.1.h, the design of the proposed project shall utilize modern public protection concepts such as "defensible space," security lighting, access, visibility, etc. to reduce policing problems and improve police effectiveness.	Less Than Significant
3.11-2	Expanded need for staff, vehicles, and equipment to adequately provide fire protection services to the project.	Potentially Significant	3.11-2	Pursuant to the City of Merced General Plan Policy P-1.3.c, the project applicant shall pay Public Facilities Impact Fees to address impacts of growth on city infrastructure. In addition, Community Facilities District (CFD) formation is	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				required for annual operating costs for city services. CFD procedures shall be initiated before final improvement plans are approved by the City. Developer/Owner shall submit a request agreeing to such a procedure, waiving right to protest their inclusion in the District, and post deposit as determined by the City Engineer to be sufficient to cover procedure costs and maintenance costs expected prior to first assessments being received. In consultation with the Developer/Owner, the City's CFD consultant shall conduct a study to determine the proper rate and method of apportionment based on Phase 1 of the hospital project. The Owner/Developer reserves the right to appeal the consultant's findings to City Council for a final decision.	
3.11-3	Conversion of land planned for recreational use.	Less Than Significant		No mitigation measure is required.	
3.12 Transportation & Circulation					
3.12-1	Exceedance of a level of service standard established by the City of Merced with regard to the intersection at Sandpiper Drive and Cormorant Drive.	Potentially Significant	3.12-1	Upon completion of Phase III (development of the south 10-acre parcel), outbound left-turn movements onto Sandpiper Avenue from the southern driveway access shall be prohibited. If this portion of Sandpiper Avenue is not constructed at the time	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				Mercy Medical Center land uses are constructed south of Cormorant Drive, the project applicant (subject to reimbursement) shall be required to construct this portion of Sandpiper Avenue.	
3.12-2	Exceedance of a level of service standard established by the City of Merced with regard to the intersection of Paulson Road and Yosemite Avenue.	Less Than Significant		No mitigation measure is required.	
3.12-3	Increase in demand for public transit	Potentially Significant	3.12-3	The proposed project includes MMCM-paid transportation from the existing facility to the new hospital. This should be considered when evaluating the impact on demand for public transit. Provide public transit facilities (e.g., bus shelters, public transit information kiosks, and park-and-ride lots) in those areas of the proposed project that would accessible to potential patrons and transit vehicles. The selection and location of the facilities should be determined in consultation with Merced County Transit.	Less Than Significant
3.12-4	Increase in demand for bicycle and pedestrian facilities	Potentially Significant	3.12-4	Provide sidewalks, bicycle lanes, and bicycle paths along roadways adjacent to the project site. Figure 4.10 in Chapter 4, Transportation and Circulation, of the	Less Than Significant

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
				Merced Vision 2015 General Plan (City of Merced 1997) shows: • a Class 2 (on-street) bicycle facility along G Street, and • a Class 1 (off-street) bicycle facilities along Cottonwood Creek north of the project site.	
3.12-5	Violation of Merced Vision 2015 General Plan Standards related to driveway spacing on major arterials	Potentially Significant	3.12-5	The applicant shall install on-site circulation barriers; thereby ensuring this driveway access point will be used as an emergency entrance only, and does not directly connect to employee and visitor parking areas. The project applicant shall also install a median to ensure that this driveway is a "right turn in and out" intersection only.	Less Than Significant
3.12-6	Cumulative impacts on intersection levels of service.	Potentially Significant		See Mitigation Measure #3.12-1.	Less Than Significant
3.12-7	Cumulative impacts on roadway segment levels of service	Less Than Significant		No mitigation measure is required.	
3.13 Utilities and Service Systems					
3.13-1	Increase in demand for water supply and distribution services and construction of additional water distribution infrastructure.	Less Than Significant		No mitigation measure is required.	

Impact #	Impact	Significance	Mitigation #	Mitigation Measure	Significance After Mitigation
3.13-2	Increase in demand for wastewater collection, treatment and disposal services and construction of additional wastewater infrastructure.	Less Than Significant		No mitigation measure is required.	
3.13-3	Increase in solid waste collection and disposal services.	Less Than Significant		No mitigation measure is required.	

CHAPTER ONE

INTRODUCTION

CHAPTER ONE
INTRODUCTION

CHAPTER ONE
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1.1 Proposed Action

The proposed project is the three-phase construction of a 607,428-square foot, eight-story, 460-bed replacement hospital (seven stories and one below grade level plus a mechanical penthouse), 200,000 square feet of medical office buildings, a 17,074-square foot power plant, a helipad, and 1,990 parking spaces (1,405 within surface lots and 585 in a parking garage). The project site is approximately 30 acres in size which replaces the existing County owned facility located on 13.5 acres approximately 3.5 miles from the proposed project site. In total, the proposed project includes 1,011,171 square feet of building space (excludes existing Cancer Center), in structures ranging from one to seven stories in height, and 1,990 parking spaces. A helipad will be constructed to accommodate helicopter operations on the north end of the site.

The proposed new structure and improvements will replace the existing County owned facility located on 13th Street. The existing hospital facility to be replaced is approximately 186,000 square feet with 174 beds and is located on 13.5 acres approximately 3.5 miles from the proposed project location. The proposed new structures and improvements will combine with the existing Mercy Cancer Center, currently located at the proposed project location, to form a coordinated medical facility complex for the City of Merced. The seven-story hospital structure would be the main structure located on the site, with a variety of support and accessory structures surrounding the main building. As noted, the buildings are proposed to be developed in three phases, although the timing of the phases is not yet determined. It is believed that market conditions will dictate the eventual timing of the construction in the second and third phases. Construction of improvements and structures within the first phase is projected to occur in 2007.

Phase I of the proposed project includes development of a portion of the main hospital structure, a medical office building, and a power plant. The portion of the hospital structure to be developed in this phase consists of 258,714 square feet of usable space plus mechanical penthouse and will have 185 beds. The four-story medical office building will be 80,000 square feet in size, and the power plant will be 12,352 square feet in size. In addition to these structures, Phase I will also include the construction of 948 parking spaces, and miscellaneous municipal improvements (roadway construction, curb, gutter, sidewalk improvements, water and sewer infrastructure, etc.) to support the structures. The total size of buildings proposed in this phase is 351,066 square feet (excludes Cancer Center).

Phase II of the proposed project includes construction of a 258,714-square foot, 185-bed addition to the hospital building, the construction of a three-story, 60,000-square foot medical office building, and a 4,722-square foot addition to the power plant. Additionally, another 670 parking spaces will be constructed during this phase of development. In addition to these structures, Phase II will also include the construction of miscellaneous municipal improvements (water and sewer infrastructure, etc.) to support the structures. The total size of buildings proposed in this phase is 324,436 square feet.

Phase III of the proposed project includes construction of a final 90,000-square foot, 90-bed addition to the hospital building, the construction of a three-story, 60,000-square foot medical office building, and a 186,669-square foot parking garage (four story with roof parking and two levels below grade). The parking garage will contain 585 total parking spaces. The construction of the parking garage will remove some of the surface parking constructed in earlier phases of the project. In addition to these structures, Phase III will also include the construction of miscellaneous municipal improvements (water and sewer infrastructure, etc.) to support the structures. The total size of buildings proposed in this phase is 336,669 square feet.

In addition to the physical improvements just described, the project includes a proposed change to the General Plan land use designations and zoning designations for the subject property. The project proposes changing the General Plan land use designation to Professional/Commercial Office (CO), and proposes a zone change to Planned Development (P-D). Consideration of the impacts associated with the regulatory change in land use and zoning designations will be considered in this analysis.

It is anticipated that the construction staging area for the project would be located on the project site, in various locations depending on phase and improvements under construction. The construction site would be accessed from G Street, along Cormorant Drive. Construction timelines are not known at this point, but it is expected that construction cycles will last 36 months for Phase I and II and 24 months for Phase III.

1.2 Procedures

As provided for in the State CEQA Guidelines, public agencies are charged with the duty to avoid or minimize significant environmental damage where feasible. In discharging this duty, the public agency has an obligation to balance a variety of public objectives, including economic, environmental and social issues (Section 15021 of the State CEQA Guidelines). The EIR is an informational document for use by decision-makers and the general public to identify the environmental affects of a proposed action. An EIR must identify feasible means to minimize any significant effects and describe reasonable alternatives to the proposed project. The Lead Agency, in this case the City of Merced, is required to consider the information in the EIR, along with any other available information, in making its decision (Section 15121 of the State CEQA Guidelines).

The City of Merced, in its role as Lead Agency, determined that an EIR must be prepared for the proposed project in accordance with CEQA. A Notice of Preparation (NOP) was circulated from December 13, 2004 through January 11, 2005 for review and comment by responsible, trustee and local agencies. A scoping meeting was held on Wednesday, January 5, 2005 at the Council Chambers within Merced City Hall. The NOP and responses to the NOP are included as Appendix A of this EIR.

As defined by Section 15378 of the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines), a "project" is any action that "...has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment..." Section 15093 of the Guidelines requires the

decision-makers to balance the benefits of a proposed project against any unavoidable environmental effects of the project. If the benefits of the project outweigh the unavoidable adverse environmental effects, the decision-makers may adopt a statement of overriding considerations, finding that the environmental effects are acceptable in light of the project's benefits to the public.

Under CEQA, the Lead Agency is usually the public agency with authority to approve or deny the project. In this case, the City of Merced will act as Lead Agency with authority to certify the EIR. Under Section 15381 of the Guidelines, a "responsible agency" is a public agency other than the Lead Agency that has discretionary approval authority over the project, and will utilize the EIR prepared.

The CEQA process requires that the Lead Agency seriously consider input from other interested agencies, citizen groups, and individuals. CEQA provides for a public process requiring full public disclosure of the expected environmental consequences of the proposed action. The public must be given a meaningful opportunity to comment. CEQA also requires monitoring to ensure that mitigation measures are carried out.

CEQA requires a public review period of 45 days for commenting on the Draft EIR. During the review period, any agency, group or individual may comment in writing on the Draft EIR, and the Lead Agency must respond to each comment on environmental issues in the Final EIR. Section 15202 of the CEQA Guidelines states that the City is not required to conduct formal hearings at any stage of the environmental review process. However, the City has scheduled public hearings prior to adoption of the Final EIR for the purposes of soliciting public input and to inform the community of the proposed project and its environmental impacts.

This Draft EIR will be publicly circulated for a 45-day period of review and comment by responsible agencies, interested parties, jurisdictions, and public/private organizations. During the review period, written comments on this document may be submitted to the City of Merced. A hearing on the Proposed Project and EIR will be held by the City of Merced. A notice of the time and location of the hearing will be published prior to that date. Comments should be addressed to:

City of Merced Planning Department
678 West 18th Street
Merced, California 95340

Comments received in writing during the comment period will be included and addressed in the Final EIR. The Final EIR will be considered for certification by the City of Merced in accordance with State CEQA Guidelines. Prior to certification of the EIR, the Lead Agency is required to prepare written findings of fact for each significant environmental impact identified in the EIR. For each significant impact, the Lead Agency must:

- Determine if the proposed project has been changed to avoid or substantially lessen the magnitude of the impact;

- Find that changes to the proposed project are within another agency's jurisdiction, and such changes have been or should be adopted; and

- Find that specific economic, social, or other considerations make mitigation measures or proposed project alternatives infeasible.

The State CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance." Definitions of significance vary with the physical conditions affected, and the setting in which the change occurs. The State CEQA Guidelines set forth physical impacts that trigger the requirements to make "mandatory findings of significance."

This EIR uses a variety of terms to describe the level of significance of adverse impacts identified during the course of the environmental analysis. The following are definitions of terms used in this EIR:

- **Significant and Unavoidable Impact** – Impacts that exceed the defined standards of significance and that cannot be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures.

- **Significant Impact** – Impacts that exceed the defined standards of significance and that can be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures.

- **Potentially Significant Impact** – Significant impacts which may ultimately be determined to be less-than-significant; the level of significance may be reduced in the future through implementation of local policies or guidelines (which are not required by statute or ordinance), or through further definition of the project detail in the future. Such impacts are equivalent to significant impacts and require the identification of feasible mitigation measures.

- **Less-Than-Significant Impact** – Impacts that do not exceed the defined standards of significance.

MITIGATION MONITORING PROGRAM

CEQA requires that when a public agency makes findings based on an EIR, the public agency must adopt a Mitigation Monitoring or Reporting Program (MMP) based on those measures which it has adopted or made a condition of the project approval in order to mitigate or avoid significant effects on the environment (PRC Section 21081.6, AB 3180 [1988]). The reporting or monitoring plan must be designed to ensure compliance during project implementation (PRC Section 21081.6). The Mitigation Monitoring Plan (MMP) for this project will be prepared under separate cover for consideration by the Lead Agency in conjunction with certification of the Final EIR.

1.3 Methodology

Through the preparation of an Initial Study, the City has determined that a project-level EIR should be prepared for the proposed project in accordance with CEQA and the CEQA Guidelines (Section 15063). This EIR analyzes and evaluates the potential effects of site acquisition, construction, and operation of the Mercy Medical Center, as described in Section 1.1 of this EIR. Included in this environmental analysis are the direct impacts of the proposed project, as well as cumulative and growth-inducing effects on the local and regional environment.

Based on the NOP process, the City concluded that the following environmental impacts have the potential to create a significant effect on the environment, and thus will be considered in this EIR:

- **Aesthetics/Light and Glare.** This section of the EIR analyzes the potential for the project to have a significant, adverse impact on aesthetic and visual resources on the site and in the area. This analysis includes the potential for the production of nighttime lighting and glare, the potential for reflected light from glass components of the buildings, shading impacts on adjacent land uses, and the change in visual character of the site and its surroundings.

- **Agricultural Resources.** This section addresses the potential for the project to result in conversion of adjacent and nearby agricultural lands to non-agricultural uses.

- **Air Quality.** This section addresses the potential significant air quality impacts associated with construction and operation of the hospital. This includes the potential for dust generation during construction, as well as operational emissions from vehicles and from hospital buildings on the site. Consistency with air quality requirements of the San Joaquin Valley Air Pollution Control District are considered within this section.

- **Biological Resources.** This section of the EIR assesses the potential impacts to sensitive, endangered, or threatened plant and animal species utilizing the site. This analysis includes a full records search of known species in the area, as well as site reconnaissance to check for nesting and foraging habitat which may be suitable for such species.

- **Cultural Resources.** This section analyzes the potential for the project to result in the loss or damaging of sensitive cultural, archeological, or paleontological resources on the site.

- **Geology and Soils.** This section analyzes the adequacy of site soils for development of the proposed project, as well as potential impacts associated with soil erosion and geologic conditions.

- **Hazards and Hazardous Materials.** This section addresses the potential for negative impacts associated with the transport or use of hazardous materials on the site. This includes materials used in the construction of the project, as well as hazardous materials used in the hospital and surrounding buildings. Reference to existing standards of various federal, state, and local agencies will be made, where applicable, and residual impacts are addressed.

Impacts to the adjacent Cruickshank Middle School are addressed in greater detail in this section.

- **Hydrology and Water Quality.** This section addresses potential impacts associated with water quality and surface drainage on the site, as well as any impacts associated impacts with groundwater recharge or other hydrological issues on site.

- **Land Use/Population and Housing.** This section addresses the potential for impacts to arise from the project with regards to housing and land use compatibility. The project will be analyzed for inconsistencies with adjacent educational and residential land uses, and the impact of the change in zoning and General Plan land use designation is considered.

- **Mineral Resources.** This section addresses the potential for mineral resources on the site to be affected by the proposed development.

- **Noise.** This section addresses the potential for noise generation on the site, both during construction and operation. Construction noise from vehicles and construction activities, operational noise from traffic, building appliances, and helicopters are all addressed herein.

- **Public Services.** This section addresses the impacts to public services within the area, including police and fire protection, parks, schools, and general government services.

- **Transportation/Circulation.** This section addresses the potential impacts to roadway systems, both within the site and in surrounding areas. Roadway and intersection analysis are consistent with the roads potentially affected by hospital traffic, and include application of standards from the City, County of Merced, and California Department of Transportation.

- **Utilities and Service Systems.** This section addresses the impacts to utility providers. This includes an analysis of the ability of water, sewer, stormwater, and electric systems to serve the site, and assesses impacts to the overall systems and their providers.

1.4 Organization of the EIR

CHAPTER ONE

Chapter One (current chapter) provides an introduction to the EIR, including a basic description of the CEQA process and general information about the project under consideration.

CHAPTER TWO

Chapter Two of the EIR describes the project in greater detail and summarizes the general characteristics of the project location.

CHAPTER THREE

Chapter Three describes specific characteristics of the project's environmental and regulatory setting, identifies and discusses potentially significant project-related impacts for the topics addressed in the EIR, and sets forth mitigation measures for those impacts, as appropriate. The evaluation of impacts has been organized in the following manner:

Setting

The setting provides a discussion of the regulatory environment that is applicable to the project. This topic also includes a description of the environment that may be affected by the project.

Impact Evaluation Criteria

The standards or thresholds by which impacts are measured are identified, with the objective of determining if an impact will be significant.

Impacts and Mitigation Measures

IMPACTS

Each impact is described and listed by number for future reference. This is followed by a discussion of the impact; a statement whether the impact is significant or less than significant; if found to be significant, a determination whether or not the impact can be avoided or reduced to an acceptable level through implementation of mitigation measures, or if the impact is unmitigable, unavoidable and/or irreversible.

MITIGATION MEASURES

Each mitigation measure is described and listed by number for future reference. The numbering of the mitigation measure is the same as the impact to which it applies. The discussion includes a statement whether or not the recommended measure will reduce the impact below the level of significance, based on the impact evaluation criteria.

CHAPTER FOUR

Chapter Four describes and evaluates alternatives to the proposed project. The proposed project is compared to each alternative, and the environmental ramifications of each are analyzed.

CHAPTER FIVE

Chapter Five addresses mandatory CEQA sections, including effects not found to be significant, unavoidable significant impacts and irreversible impacts.

APPENDICES

Following the text of this EIR, appendices have been included to facilitate full environmental review of the proposed project.

1.5 Areas of Controversy and Issues to be Resolved

CEQA Guidelines require that each EIR provide a list of issues which are likely to raise controversy and are of particular interest to the public. The following issues are most likely to produce controversy in reviewing and considering the proposed project:

- Light and glare production at the hospital site;
- Impacts to the adjacent school site;
- Traffic generation and its impacts on area roadways;
- Safety issues regarding helicopter operations;
- Noise issues related to helicopter operations;
- Aesthetic impacts from hospital towers adjacent to school and homes;
- Land use incompatibilities between hospital and surrounding land uses;
- Potential growth-inducing impacts of the development; and
- Cumulative air quality impacts associated with construction and operation.

CHAPTER TWO

PROJECT DESCRIPTION

CHAPTER TWO
PROJECT DESCRIPTION

Consistent with Section 15124 of the CEQA Guidelines, this section provides the description of the proposed project. This description forms the basis of the actions and activities to be considered in the analysis of the EIR.

2.1 Project Location and Existing Site Conditions

The project is located within the City of Merced, in the central San Joaquin Valley, approximately 150 miles southeast of San Francisco and 110 miles south of Sacramento. The City of Merced is located along State Route 99, and is closest in proximity to the cities of Modesto (40 miles north), Fresno (55 miles south), and Stockton (65 miles north).

The 30-acre project site is located in northern Merced, adjacent to the existing Merced College. The project site is specifically located at the northeast and southeast intersections of G Street and Cormorant Drive. The site is bounded on the east by Mercy Avenue and Sandpiper Drive. The project area is within the incorporated city limits of Merced. The site is within the project areas of the *Merced Vision 2015 General Plan*, as well as the *Northeast Yosemite Specific Plan*. Refer to Figure 2-1 for the specific location of the site.

The majority of the project site is currently vacant. One structure, the Mercy Cancer Center, is located on the site, on the northeast corner of the intersection of G Street and Cormorant Drive. The site is composed of various native and non-native vegetation, and has been used for illegal dumping in recent years. A drainage ditch runs along G Street across the project, directing stormwater off site. There is one creek (Cottonwood Creek) flowing along the northern boundary of the site, as well as a portion of a partially undergrounded drainage and irrigation channel (Sells Lateral) across the northern part of the site. Small trees line the creek bed, and landscape plantings surround the Cancer Center building. Soil conditions and maps of the area indicate the site has historically been used for agricultural production, likely in the production of row crops. Other than the Cancer Center, the site is undeveloped.

The surrounding land uses include Merced College to the west, a middle school and vacant park site to the east, developed and vacant residential lands to the south, and vacant residential and parkland to the north.

The proposed project site has three General Plan land use designations and three zoning designations. The portion of the site on which the existing Mercy Cancer Center sits is designated for Professional/Commercial Office (CO) in the General Plan, and zoned

Professional/Commercial Office (C-O). The vacant portions of the site are designated in the General Plan for Low Density Residential (LD) and High Medium Density Residential (HMD), and zoned Single-Family Residential (R-1-6) and High Medium Density Residential (R-3-2).

2.2 Statement of Project Objectives

The objectives of the project, as identified by the City, are as follows:

1. Build a new Medical Center in Merced to serve projected needs of the Merced community through the year 2015.

2. Construct a medical facility within the urban area of Merced, with public facilities and services generally available.

3. Construct a medical facility strategically located to serve future populations in the fast growing northern and eastern areas of the Merced Specific Urban Development Plan (SUDP).

4. Ensure adequate access is provided for patients and emergency vehicles, including emergency access by medical helicopter service.

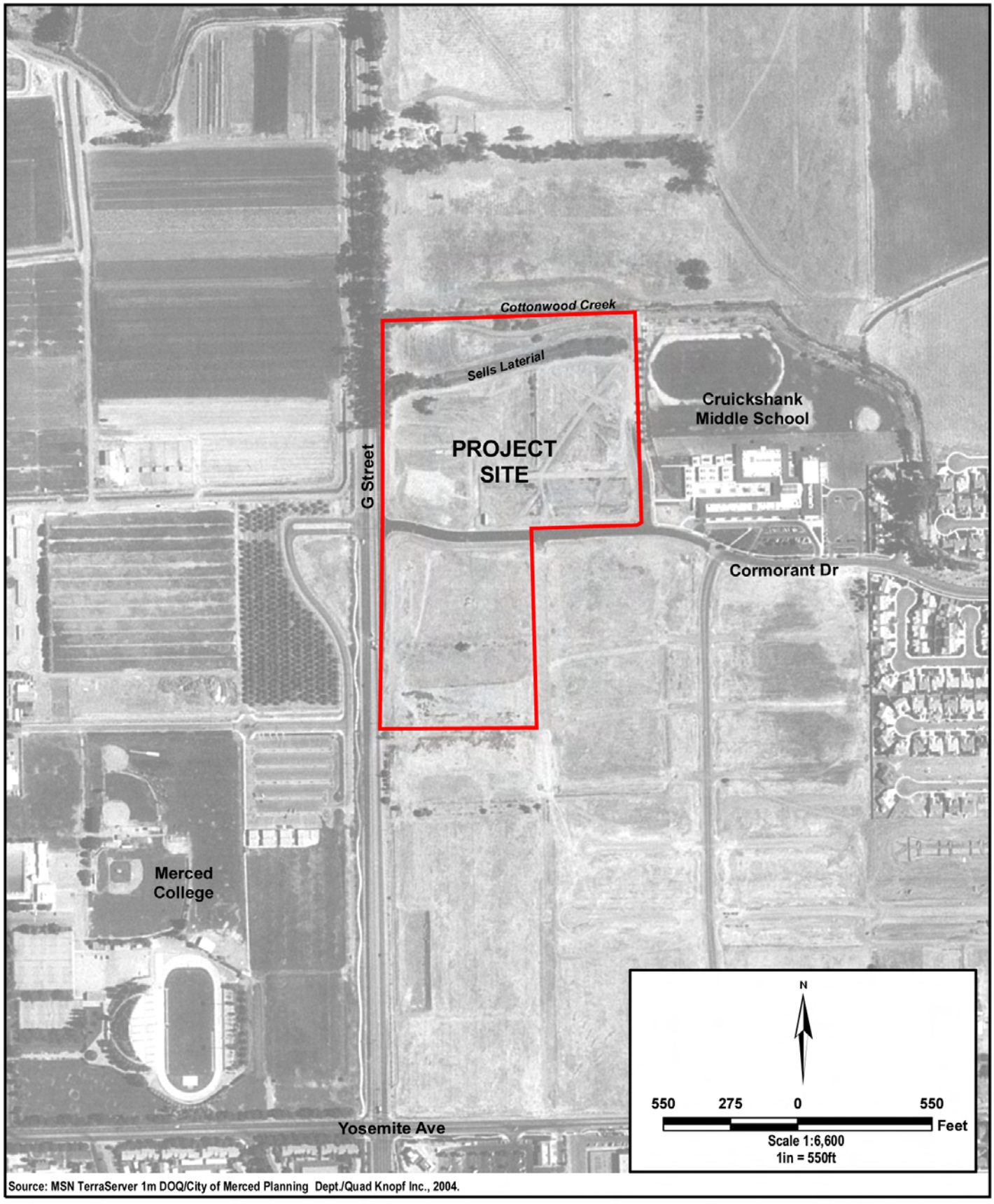
5. Comply with all appropriate development and construction requirements of the City of Merced and the California Office of Statewide Health Planning and Development (OSHPD).

6. Create buildings and a site layout which are aesthetically pleasing to surrounding residential areas.

The objectives are the primary tool used in the analysis of alternatives to the project. These project objectives are the basis of the alternatives developed and presented in Section 4.0, which also provides a full comparative environmental analysis of the project alternatives. The objectives also aid in the findings of fact and statements of overriding consideration, as included in the FEIR.

2.3 Technical, Economic, and Environmental Characteristics of Project

The proposed project is the three-phase construction of a 607,428-square foot, 460-bed replacement hospital (seven stories and one below grade level plus a mechanical penthouse); 200,000 square feet of medical office buildings, a 17,074-square foot power plant, a helipad, and 1,990 parking spaces (1,405 within surface lots and 585 in a parking garage). The project site is approximately 30 acres in size. In total, the proposed project includes 1,011,171 square feet of building space (excludes existing Cancer Center), in structures ranging from one to seven stories plus a penthouse in height, and 1,990 parking spaces. Figure 2-2 shows a site plan of the proposed improvements.



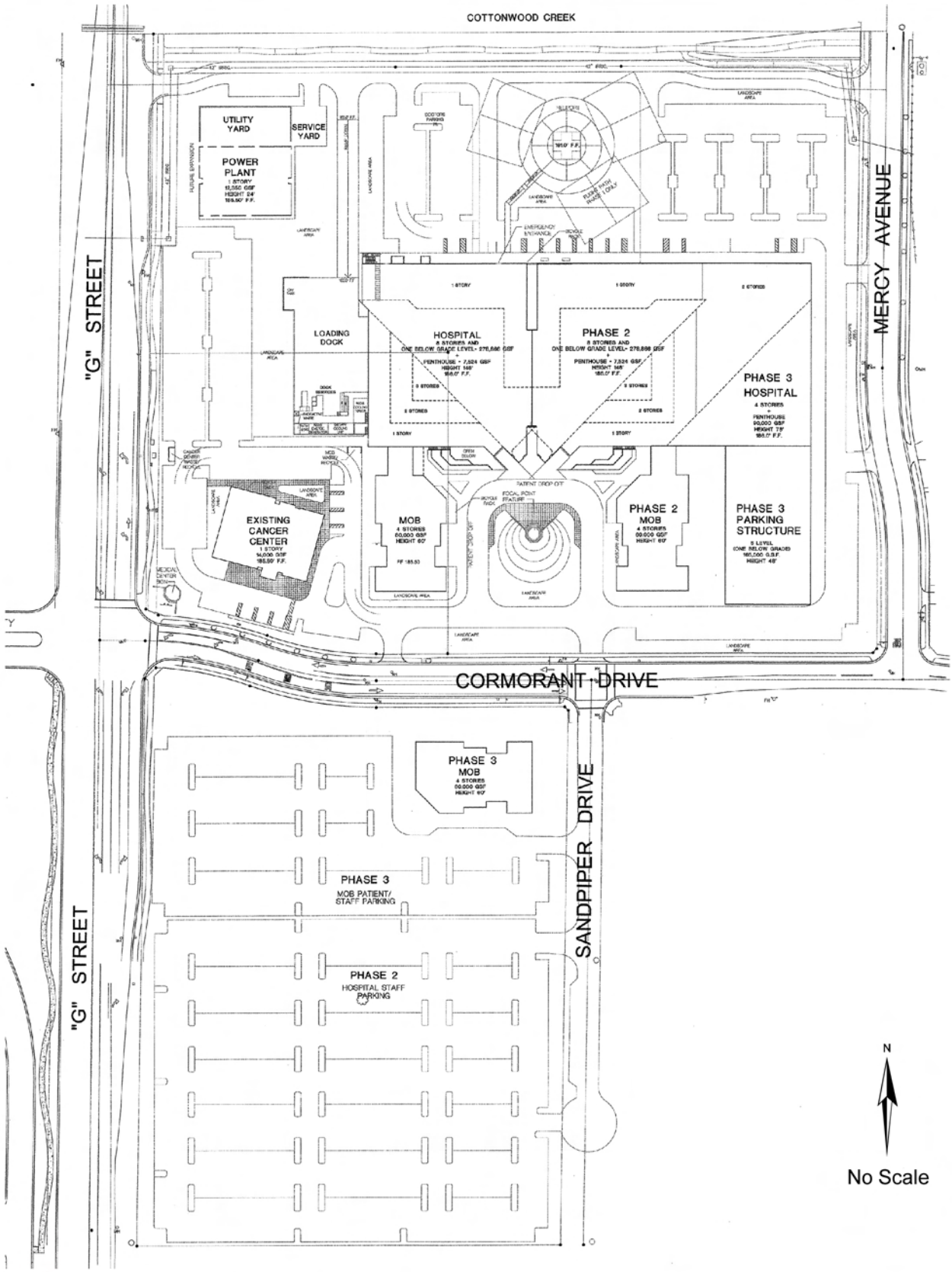
Source: MSN TerraServer 1m DOQ/City of Merced Planning Dept./Quad Knopf Inc., 2004.

Quad Knopf

LOCATION MAP

Figure 2-1

Job No. 04385



Source: RBB Architects Inc., 2005/Quad Knopf Inc., 2005.

Quad Knopf

SITE PLAN

Figure 2-2

Job No. 04385

The proposed new structures and improvements will replace the existing County-owned facility located on 13th Street. The existing hospital facility to be replaced is approximately 186,000 square feet with 174 beds and is located on 13.5 acres approximately 3.5 miles from the proposed project location. The proposed new structures and improvements will combine with the existing Mercy Cancer Center currently located at the proposed project location to form a coordinated medical facility complex for the City of Merced. The eight-story hospital structure would be the main structure located on the site, with a variety of support and accessory structures surrounding the main building. As noted, the buildings are proposed to be developed in three phases, although the timing of the phases is not yet determined. It is believed that market conditions will dictate the eventual timing of the construction in the second and third phases. Construction of improvements and structures within the first phase is projected to occur in 2007.

Phase I of the proposed project includes development of a portion of the main replacement hospital structure, a medical office building, and a power plant. The portion of the hospital structure to be developed in this phase consists of 258,714 square feet of usable space plus mechanical penthouse and will have 185 beds. The four-story medical office building will be 80,000 square feet in size, and the power plant will be 12,352 square feet in size. In addition to these structures, Phase I will also include the construction of 948 parking spaces, and miscellaneous municipal improvements (roadway construction, curb, gutter, sidewalk improvements, water and sewer infrastructure, etc.) to support the structures. The total size of buildings proposed in this phase is 351,066 square feet (excludes existing Cancer Center).

Phase II of the proposed project includes construction of a 258,714-square foot, 185-bed addition to the hospital building, the construction of a three-story, 60,000-square foot medical office building, and a 4,722-square foot addition to the power plant. Additionally, another 670 parking spaces will be constructed during this phase of development. In addition to these structures, Phase II will also include the construction of miscellaneous municipal improvements (water and sewer infrastructure, etc.) to support the structures. The total size of buildings proposed in this phase is 323,436 square feet.

Phase III of the proposed project includes construction of a final 90,000-square foot, 90-bed addition to the hospital building, the construction of a three-story, 60,000-square foot medical office building, and a 186,669-square foot parking garage (four stories with roof parking and two below grade levels). The parking garage will contain 585 total parking spaces. The construction of the parking garage will remove some of the surface parking constructed in earlier phases of the project. In addition to these structures, Phase III will also include the construction of miscellaneous municipal improvements (water and sewer infrastructure, etc.) to support the structures. The total size of buildings proposed in this phase is 336,669 square feet.

In addition to the physical improvements just described, the project includes a proposed change to the General Plan land use designations and zoning designations for the subject property. The project proposes changing the General Plan land use designation to Professional/Commercial Office (CO), and proposes a zone change to Planned Development (P-D). Consideration of the impacts associated with the regulatory change in land use and zoning designations will be considered in this analysis.

It is anticipated that the construction staging area for the project would be located on the project site, in various locations depending on phase and improvements under construction. The construction site would be accessed from G Street, along Cormorant Drive. Construction timelines are not known at this point, but it is expected that construction cycles will last from six to eight months during each phase.

The construction and operation of this proposed project is expected to impact the economy of the Merced area. In addition to the generation of employment of construction workers, and hospital professional and non-professional employees, the project may also result in the closure or alteration of other medical operations within the area, including the Dominican and Community Campuses of the Catholic Healthcare West (CHW) system. The project may also impact local growth pressures and land values in the area surrounding the project site, increasing demand for support services and uses related to the operation of a medical center.

2.4 Intended Uses of the EIR

This Environmental Impact Report will be used to satisfy the requirements of CEQA, with regards to the project described within this Section. The City of Merced, acting as Lead Agency, has overseen the preparation and adoption of this EIR, and is responsible for its availability and use by the public and other interested agencies and parties.

The site is within the City of Merced, and development of the project will require various City approvals. Among these are approval of the Conditional Use Permit, Rezoning application, General Plan Amendment, Encroachment Permits and other regulatory approvals at the city, county, regional, and state level. The necessity of these approvals for project construction and operation is considered part of the regulatory setting for the project, and mitigation measures contained within the EIR may require conditions to be met at these various stages of approval. A full listing of the permits and approvals required to implement the project is provided in Table 2-1.

In addition to approvals required by the City, portions of the site will also be subject to requirements and permits from the California Department of Transportation, the County of Merced, Central Valley Regional Water Quality Control Board, and potentially the California Department of Fish and Game or U.S. Fish and Wildlife Service. Additionally, approval by the Office of Statewide Health Planning and Development (OSHPD) will also be required for construction and operation of the project. As a California medical care facility, the State of California requires that design, engineering and building review of this hospital is to be conducted by the State Office of Statewide Health Planning and Development (OSHPD), part of the California Health and Human Services Agency. The State application and permitting processes will occur concurrently with the City of Merced's review. It is expected that these agencies will use the EIR in the consideration of the project for review and approval.

Table 2-1
Subsequent Permits, Approvals, Review and Consultation Requirements

Agency	Approval
City of Merced Department of Planning	General Plan Amendment Northeast Yosemite Specific Plan Amendment Rezoning of Property Conditional Use Permit
City of Merced Department of Public Works	Encroachment Permit
Office of Statewide Health Planning and Development	Site Plan Approval Geotechnical Approval
California Regional Water Quality Control Board (Central Valley Region)	Approval of Notice of Intent under General Waste Discharge Order and Approval of a Stormwater Pollution Prevention (construction) Permit
San Joaquin Valley Air Pollution Control District	Approval of air quality mitigation measures; consistency with Attainment Plans
U.S. Fish and Wildlife/California Department of Fish and Game	Verification of mitigation/permitting related to endangered and threatened species
United States Army Corps of Engineers	Wetlands Delineation verification
California Department of Transportation, Division of Aeronautics	Permit for operation of helipad and helicopters on site.

CHAPTER THREE

SETTING, IMPACTS & MITIGATION MEASURES

CHAPTER THREE
ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

3.1 Aesthetics/Light and Glare

This section addresses the aesthetic and visual impacts of the Mercy Medical Center on the surrounding area. Aesthetic impacts are considered to be those issues and impacts which can be objectively analyzed and quantified. These include light pollution, glare production, reflectivity, change in visual character, and impacts to a scenic vista. The analysis does not include subjective measures of aesthetics, such as the attractiveness of the design, the color of the buildings, or other matters of opinion or preference. The analysis focuses only on those impacts which are objectively significant to the environment.

During the Notice of Preparation (NOP) period comments were received from the Merced City School District regarding the impact of the proposed project on aesthetics/light and glare on adjacent properties, including the Cruickshank Middle School located directly to the east of the project site. Specific aesthetic issues mentioned relate to the potential shading of the school site and the change in viewsheds from the school.

3.1.1 REGULATORY SETTING

Federal Regulations

There are no specific federal regulations applicable to aesthetic resources.

State Regulations

There are no specific state regulations applicable to aesthetic resources.

Local Regulations

Aesthetics on the project site are subject to policies and standards set forth in the *Merced Vision 2015 General Plan* and the *City of Merced Northeast Yosemite Specific Plan*. These plans set forth policies dictating conditions under which development in the City may occur, including standards for production of light, visual intrusion, and other aesthetic factors. The applicable policies in the plans are set forth below.

MERCED 2015 GENERAL PLAN

Policies

UE-1.1 Designate area for new urban development that recognize the physical characteristics and environmental constraints of the planning area.

1.1.e Explore techniques to preserve areas of significant agricultural soils, aircraft noise and safety zones, buffers between cities, scenic areas, etc. from incompatible urban development.

UD-2.2 Maintain and enhance the unique community appearance of Merced

2.2.b Encourage the design of buildings that are in scale with adjacent development and harmonize with the character of the area or neighborhood.

2.2.c Discourage the visual monotony along major streets created by designs which use uninterrupted walls or fences with little or no landscaping.

2.2.d Encourage the development of methods to require acceptable levels of landscaping for new development and for effective maintenance in highly visible areas of the community.

2.2.f Expand the City's policies which require architecturally suitable means of screening utility equipment and garbage containers

OS-1.3 Promote the protection and enhancement of designated scenic routes.

1.3.a Identify, and where appropriate, designate scenic routes within the City's expanded SUDP.

1.3.b Preserve the nine currently-designated Scenic Corridors.

1.3 c Utilize established guidelines for the review of projects proposed within a designated Scenic Corridor.

In addition to the policies stated above, the *Merced Vision 2015 General Plan Urban Design Element* contains design guidelines which provide guidance for the appearance and layout of sites and structures within the City. These guidelines are advisory and are not considered mandatory; therefore they are not included in the analysis within this Environmental Impact Report.

NORTHWEST YOSEMITE SPECIFIC PLAN

List of Conditions

16. Street frontages shall border the creek open space areas wherever possible. This limits "backing lots" along the creek and provides physical and visual access in accordance with General Plan policy.

20. The Specific Plan attempts to preserve large stands of trees in the overall design. There may be site specific requirements as to how some trees should be saved in each of the subsequent development proposals.

22. Buildings, fences, walls, and landscaping shall be of high-quality materials and harmonious with one another in color and texture.

33. Any construction surrounding the stands of trees running along Cottonwood Creek shall be approved by the City Arborist (Community Services), subject to appeal to the Planning Commission.

3.1.2 ENVIRONMENTAL SETTING

The project site is located in northern Merced in the southern portion of the Central Valley. The project site consists of approximately 30 acres split between two parcels located at the northeast and southeast corners of the intersection of G Street and Cormorant Drive. The site is undeveloped with the exception of the existing Mercy Cancer Center located at the northeast corner of the intersection of G Street and Cormorant Drive. Current surrounding development includes residential subdivisions to the south and southeast, Cruickshank Middle School to the east, and Merced College and agricultural lands to the west. The undeveloped land to the north and south of the site are designated for future residential development and the undeveloped land to the northeast is designated for a future city park. Figure 3.9-1 of Section 3.9, Land Use and Population, illustrates the existing land use designations surrounding the project site.

The northeast corner of the intersection of G Street and Cormorant Drive is 176 feet above mean sea level. The elevation of the project site increases toward the northeastern corner to approximately 180 feet above mean sea level. Both parcels are relatively flat with no significant topographical changes. Cottonwood Creek runs east to west along the northern boundary of the project site. The creek currently runs above ground across the project site but has been placed underground on both the western and eastern ends of the site.

G Street runs north-south along the western end of the proposed project site. It is a major four lane arterial that narrows to three lanes just to the north and south of the project site. Cormorant Drive is a two lane street that runs east-west between the two parcels of the project site. Mercy Avenue is a two lane street that runs along the eastern boundary of the site separating Cruickshank Middle School from the project site. Mercy Avenue is currently unfinished and comes to a dead end at the northeast corner of the project site. The main entrance to the project site will be located on Cormorant Drive at approximately the project site's midway point.

Vegetation on the developed portion of the site consists of low non-native shrubbery, ornamental trees, and turf. Parking lot areas are landscaped with ornamental trees and shrubs, and have pole-mounted safety lighting located throughout parking areas. The existing development consists of one, one-story structure that is white and red stucco with tinted glass.

Vegetation on the undeveloped portions of the site consists of annual grasses and shrubs over much of the undisturbed area and riparian species along Cottonwood Creek including blackberries and cottonwood trees. The most prominent existing feature on the project site is the large stand of Eucalyptus trees located at the western end of the creek in the northwest corner of the project site.

Currently, the only traffic signals surrounding the proposed project site are at the intersection of G Street and Cormorant Drive at the western border of the site. Additional traffic control (likely a turn limitation) at the emergency entrance near the north end of the project site along G Street will be required of the project. Currently, the only source of light at the project site is the building and parking lighting at the existing Cancer Center.

There are two state designated scenic highways in Merced County. State Route 152 from the Santa Clara County line to the junction of Interstate 5, a 14-mile stretch referred to as Pacheco Pass Road, traverses agricultural lands and the San Luis Reservoir State Recreation Area. State Route 5 from State Route 152 to the Stanislaus County line, a 15-mile stretch of the West Side Freeway, traverses the central valley and parallels the Delta-Mendota Canal and the California Aqueduct. Both of the scenic highways are located in the western portion of Merced County and do not have views of the project site.

3.1.3 IMPACT EVALUATION CRITERIA

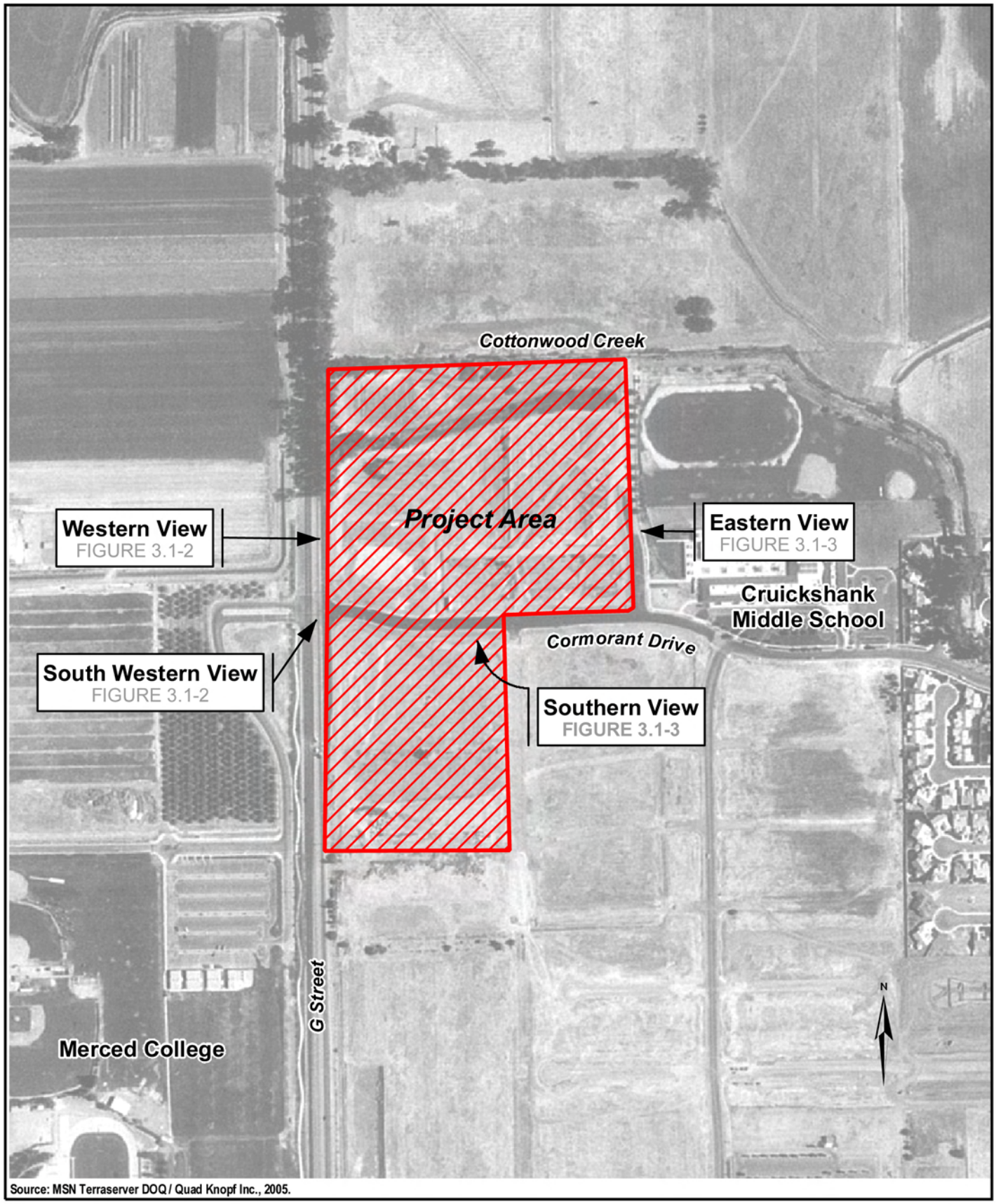
Impacts to aesthetic and visual resources will be assessed on the following thresholds of significance, based on criteria set forth in Appendix G of the State CEQA Guidelines. The project is considered to have a significant impact on the environment if it will:

- Have a substantial, adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings;
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area; or
- Cause physical adverse impacts to the environment resulting from shading of lands or structures.

3.1.4 IMPACTS & MITIGATION MEASURES

Impact #3.1-1: Create adverse impacts on surrounding viewsheds.

Discussion and Conclusion: The proposed project will have an effect on the nature and quality of scenic views in the vicinity of the project site. The area surrounding the project site is relatively flat agricultural land providing expansive views in all directions. Consequently, views from all directions will be altered as the height of the proposed structures will be substantially taller than any surrounding development. The views will be changed from natural landscape characterized by scattered vegetation to planted landscape characterized by non-native, manicured vegetation with buildings projecting from the site. Existing views of the site from surrounding areas are provided in Figure 3.1-1 and Photoplates 3.1-2 and 3.1-3.



Source: MSN Terraserver DOQ / Quad Knopf Inc., 2005.

Quad Knopf

EXISTING VIEWS

Figure 3.1-1

Job No. 04385

Western View

Southwestern View

Source: Quad Knopf Inc., 2005.

Quad Knopf

Photoplate

Figure 3.1-2

Job No. 04385

Southern View

Eastern View

Source: Quad Knopf Inc., 2005.

Quad Knopf

Photoplate

Figure 3.1-3

Job No. 04385

Additionally, the proposed project will be in high contrast to the existing development surrounding the site. The project consists of a main, eight-story hospital structure, numerous multi-story medical office buildings, a power plant, parking structure and other related structures. The main hospital building will be primarily composed of steel framing and glass while the medical office buildings and other smaller structures will resemble the existing Cancer Center.

While the goal of the design of the project structures will be to reduce the adverse impacts on surrounding viewsheds, this impact is ***potentially significant***.

There are no mitigation measures available to offset or reduce this impact. Disruption of existing viewsheds is a result of the height and scale of the proposed structures, and the viewsheds of and through the property will be permanently altered as a result of the project. This impact is ***significant and unavoidable***.

Mitigation Measure

No mitigation measures are available.

Impact #3.1-2: Produce substantial light pollution or glare.

Discussion and Conclusion: Security lighting in the parking areas, pathways, and on buildings has the potential to create light pollution in the vicinity of the project site. Light pollution is a potential impact from the operation of any light source at night. Proper light shields, lighting design, and landscaping are commonly used to reduce light pollution generated from lighting by blocking the conveyance of light upwards. The result is that the lights are not visible from above, and do not add ambient light to the nighttime sky.

Interior lighting at night has the potential to create a source of light spillage onto adjacent development and roadways. Proper light shields, lighting design, landscaping and certain building materials can be used to reduce light spillage from project structures. The result is a reduction in the amount of light spillage that occurs from the interior of buildings.

Light reflecting off surfaces during daylight hours has the potential to create a source of glare in the vicinity of the project site. Glare reducing materials are needed to reduce the impact of glare from reflective surfaces such as windows and other building materials. The result of these design measures is that glare is less visible from adjacent development and roadways.

The project includes installation and operation of outdoor security lighting throughout parking areas and the parking structure, circulation paths, and on the exterior of buildings. Light production will also occur from within the buildings, which will be visible from adjacent areas through windows and glass doors. The steel frame of the main hospital structure as well as other building materials will have the potential to create glare.

The proposed project also includes a helipad for receiving helicopter transports which will create the potential for an additional source of light pollution. However, the proposed facility will not

be a trauma center and will therefore only occasionally receive helicopter transports which will primarily occur during daylight hours. The light produced from helicopters is not expected to be significant.

This impact is considered ***potentially significant,*** and the following mitigation measures are required to address project impacts.

Mitigation Measure

Implementation of the following mitigation measures will reduce the impact to a ***less-than-significant*** level.

Mitigation Measure #3.1-2a:

All lighting in the project area shall be shielded, directed downward and away from adjoining properties and rights-of-way. Light shields shall be installed and maintained consistent with manufacturer's specifications, and shall reduce the spillage of light on to adjacent properties to less than two foot-candles, as measured at the adjacent property line.

Mitigation Measure #3.1-2b:

Lighting fixtures shall be designed to produce the minimum amount of light necessary for safety purposes.

Mitigation Measure #3.1-2c:

The project design shall include the use of glass coatings to reduce the amount of light pollution and spillage from the interior lighting. Exterior glazing shall utilize performance coatings with an interior light reflectance in the range of 5-8%. Exterior glazing shall have a light reflectance out of less than 10%.

Mitigation Measure #3.1-2d:

The project site landscaping shall include vegetation designed to shield adjacent properties from project-generated light and glare. Exterior glazing shall have a light reflectance out of less than 10%.

Impact #3.1-3: Visibility of aesthetically undesirable materials, equipment, and facilities during the construction periods of the three proposed phases of the project.

Discussion and Conclusion: During the construction periods of the three proposed phases of the project the use of mechanical equipment, outdoor storage and earth moving activities will have a temporary effect on the quality of scenic views in the vicinity of the project site. It is projected that each phase of the project will take approximately six to eight months to complete with at

least two years between the start of each construction phase. These impacts will only temporarily affect foreground views within the area and be visible from adjacent developments. Although temporary impacts can be considered significant, the site of construction equipment in the project area is common, and is considered a normal part of the urban environment in a growing area. The visibility of construction equipment, vehicles, and temporary structures are not substantially different than those found on construction sites throughout the area, and do not represent a major change in the visual character of the area. Therefore, implementation of the proposed project will have a ***less-than-significant*** impact.

Mitigation Measure

No mitigation measure is required.

Impact #3.1-4: Visibility of aesthetically undesirable materials, equipment and facilities during normal facility operations.

Discussion and Conclusion: The proposed project will include a number of support structures including a power plant with a utility yard and service yard, a waste incinerator with loading docks and waste disposal equipment, etc. These structures and associated equipment have the potential for being visible by the public and aesthetically undesirable. Implementation of the proposed project will have a ***potentially significant*** impact.

Mitigation Measure

Implementation of the following mitigation measure will reduce the impact to a ***less-than-significant*** level.

Mitigation Measure #3.1-4:

The power plant and all outdoor storage areas shall be screened off by fencing and landscaping to reduce their visibility from surrounding areas. Landscaping and fencing shall be designed to reduce visibility from surrounding properties, including the selection of plant materials which provide screening year-round.

Impact #3.1-5: Create new shading patterns on adjacent land uses.

Discussion and Conclusion: The potential shading patterns of the proposed project on adjacent land uses was observed during a site visit on January 27, 2005. The construction of the two hospital towers will result in the creation of large shaded areas in the early morning and evening hours of the day during most seasons. The shading will change with the position of the sun, and will generally transition from west to east over the course of the daylight hours. During the evening hours there is a possibility of shading on the western portion of the Cruickshank Middle School and a possibility of shading at midday on future residential development to the north of the site.

The shading that will occur as a result of the project will not result in a significant adverse effect on the environment. Shading of the adjacent school would occur in the evening hours, and would not result in the loss of landscaped areas or the freezing of soils. Shading of a particular area will be temporary and will not result in the substantial change to the climate or the environment. Implementation of the proposed project will have a ***less-than-significant*** impact with regards to this topic.

Mitigation Measure

No mitigation measure is required.

SOURCES

California Department of Transportation, California Scenic Highway System <http://www.dot.ca.gov/hq/LandArch/scenic/scpr.htm>

Merced Vision 2015 General Plan

Northeast Yosemite Specific Plan

3.2 Agricultural Resources

This section of the Draft Environmental Impact Report addresses potential impacts to agricultural resources on the project site and its surroundings. The analysis specifically focuses on the potential productivity of the soils on site to support agriculture, and the potential impacts that the project may have on the continued use of surrounding properties for agricultural production. This analysis relies heavily on mapping and soil analysis.

During the Notice of Preparation (NOP) period, no comments were received regarding the impact of the proposed project on agricultural resources.

3.2.1 REGULATORY SETTING

Federal Regulations

There are no specific federal regulations applicable to agricultural resources.

State Regulations

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971.

Local Regulations and Applicable General Plan Policies

MERCED COUNTY ORDINANCE 1213

Merced County Ordinance 1213 is the county's right-to-farm ordinance requiring that parcel maps of all parcels within 1,000 feet of an agricultural zone and dwelling units over 500 square feet have a notice advising of the potential inconveniences created by agricultural operations but that these inconveniences are acceptable customs and standards of agricultural operations in the vicinity of the property. Additionally, the ordinance requires that building permit applicants acknowledge the ordinance before a permit can be issued.

MERCED VISION 2015 GENERAL PLAN

Policies

UE-1.1 Designate areas for new urban development that recognize the physical characteristics and environmental constraints of the planning area.

1.1.a Direct development away from significant concentrations of "Prime" agricultural soils and give priority to the conversion of non-prime agricultural land if reasonable alternatives exist.

1.1.b Limit development and development related impacts on agricultural lands along the City's urban fringe.

1.1.e Explore techniques to preserve areas of significant agricultural soils, aircraft noise and safety zones, buffers between cities, scenic area, etc. from incompatible urban development.

OS-2.2 Protect agricultural areas outside the City's SUDP from urban impacts.

2.1.c Minimize conflict between agricultural and urban uses by requiring buffers, such as landscape areas, roadways, or creeks, to separate these uses.

3.2.2 ENVIRONMENTAL SETTING

Regional Agricultural Industry

Merced County is among the largest agricultural producing counties in California, with a gross income of over $1.9 billion in 2003. Livestock and poultry products represent the largest agricultural sector with 32 percent of total agricultural production. Livestock and poultry production represents the second largest sector with 24 percent of total agricultural production. Finally, fruit and nut crops represent the third largest agricultural sector with 16 percent of total agricultural production. As of 2002, Merced County encompassed 2,964 farms with a cumulative land area of 1,006,127 acres.

Agricultural Soils

According to the Natural Resource Conservation Service (NRCS) the project site consists of four different soil types: Landlow Clay, Landlow Silty Clay Loam, Marguerite Silty Clay Loam and Wyman Clay Loam. These soil types are described in Table 3.2-1 and are illustrated in Figure 3.2-1.

Table 3.2-1
Project Site Soil Types

Soil Name	# of Acres	% of Project Site	Storie Index	Capability Classification	Crop Suitability
Landlow Clay	0.10	0.003%	20	IIIw-5	Rice, irrigated pasture, non-irrigated range
Landlow Silty Clay Loam	1.83	0.06%	43	IIIw-2	Alfalfa, cotton, barley, figs, rice, irrigated pasture, non-irrigated range

Soil Name	# of Acres	% of Project Site	Storie Index	Capability Classification	Crop Suitability
Marguerite Silty Clay Loam, deep over hardpan	30.68	94%	76	I-1	Alfalfa, cotton, barley, sweet potatoes, truck crops, grapes, figs, almonds, peaches, rice, irrigated pasture, non-irrigated range.
Wyman Clay Loam, deep over hardpan	0.03	0.0009%	72	IIs-3	Alfalfa, cotton, barley, sweet potatoes, truck crops, grapes, figs, almonds, peaches, rice, irrigated pasture, non-irrigated range

Source: Natural Resource Conservation Services; Merced Vision 2015 General Plan Final Program Environmental Impact Report

The Storie Index rating expresses numerically the relative degree of suitability of a soil for general intensive agricultural uses at the time of the evaluation. The rating is based on soil characteristics and is obtained by evaluating soil surface and subsurface chemical and physical properties, as well as landscape surface features. A Storie Index rating of 100 is considered the best while a rating of 1 is considered the worst.

Land capability is a system of grouping soils primarily on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time. Capability classes, the broadest groups, are designated by numerals I through VIII with I indicating few limitations that restrict the soil's use and VIII indicating that the soil has limitations that nearly preclude their use for commercial crop production. Capability subclasses are soil groups within one class designated by the letters *e, w, s, or c*. In the case of the project site two capability subclasses are listed: *w* indicates that water in or on the soil interferes with plant growth or cultivation and *s* indicates that the soil is limited mainly because it is shallow, droughty, or stony. Capability units are designated by numerals 1 through 10 each indicating a different problem associated with the soil. In the case of the project site four capability units are listed:

- 1 - Indicates that a problem or limitation is caused by slope of by actual or potential erosion hazard;
- 2 - Indicates that a problem or limitation of wetness is caused by poor drainage or flooding;
- 3 - Indicates that a problem or limitation of slow or very slow permeability of the subsoil or substratum is caused by clayey subsoil or a substratum that is semiconsolidated; and
- 5 - Indicates that a problem or limitation is caused by a fine-textured or very fine textured surface layer.

Important Farmlands

The Farmland Mapping and Monitoring Program is a farmland classification system that is administered by the California Department of Conservation. The system classifies agricultural land according to its soil quality and irrigation status. The best quality agricultural land is called "Prime Farmland." Prime Farmland is land that has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed according to current farming methods. The land must have been used for production of irrigated crops at least sometime during the two cycles prior to the mapping date. The 2002 Merced County Soil Survey indicates that 586,980 acres of the county are Important Farmland, 286,054 acre of which are considered Prime Farmland. Between 2000 and 2002 the county experienced a net loss of 1,106 acres of Prime Farmland.

Figure 3.2-2 shows the important farmlands located on and within 1,000 feet of the project site. The project site encompasses 30.72 acres of land classified as "Prime Farmland if Irrigated" and 1.93 acres of land classified as "Farmland of Statewide Importance." Both are considered "Important Farmland."

Williamson Act

Merced County enacted the Williamson Act in July of 2000. As of 2005 there were approximately 400,000 acres in the County under Williamson Act contracts. Neither parcel at the project site (APN# 231010006 & APN# 231040003) is currently under a Williamson Act contract.

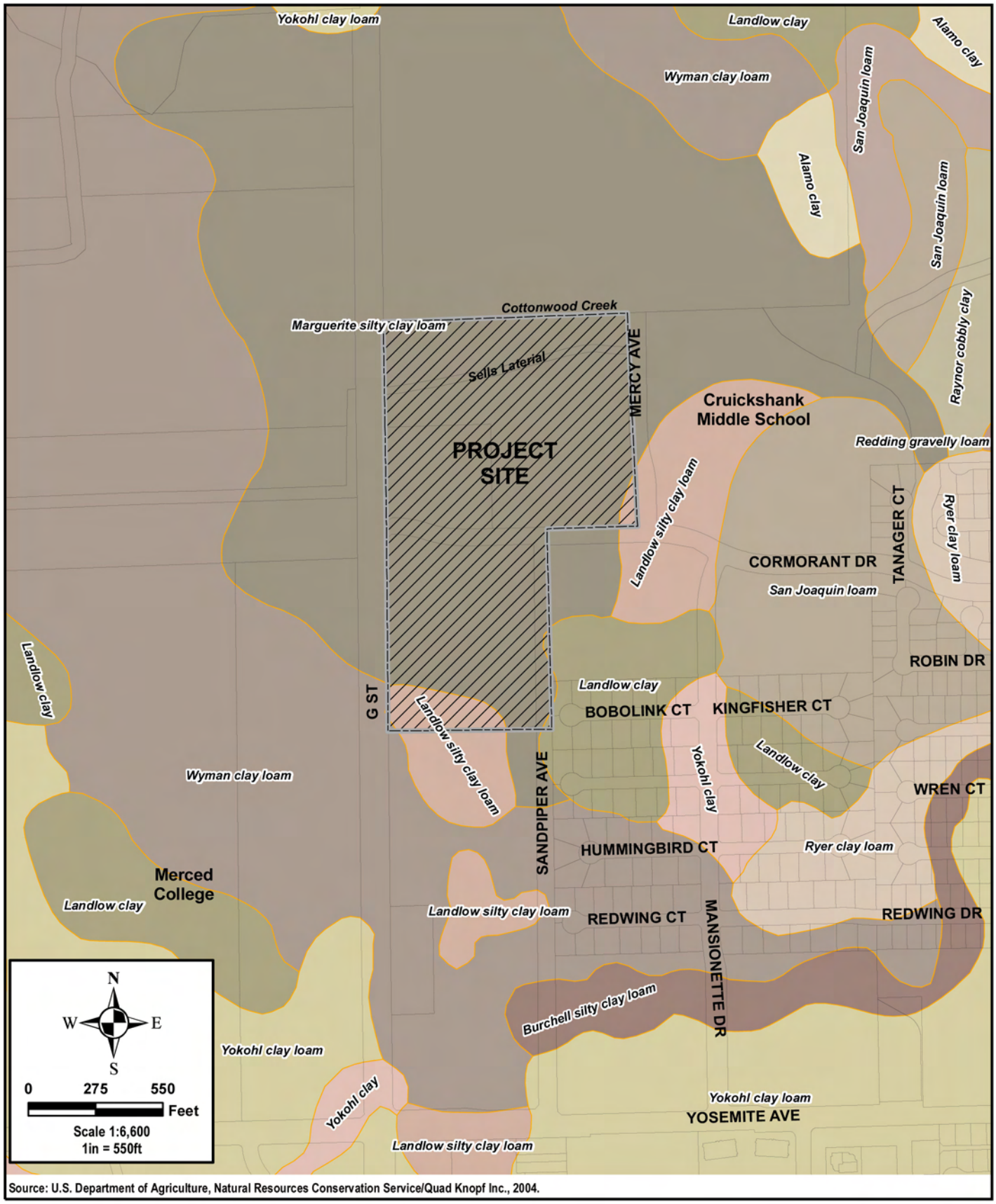
3.2.3 IMPACT EVALUATION CRITERIA

Impacts to public services and facilities will be assessed on the following thresholds of significance, based on Appendix G of the State CEQA Guidelines. The project will be considered to have a significant impact on the environment if it will:

- 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.

- Conflict with existing zoning for agricultural use, or a Williamson Act contract.

- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?



Source: U.S. Department of Agriculture, Natural Resources Conservation Service/Quad Knopf Inc., 2004.

Soils Map

Quad Knopf

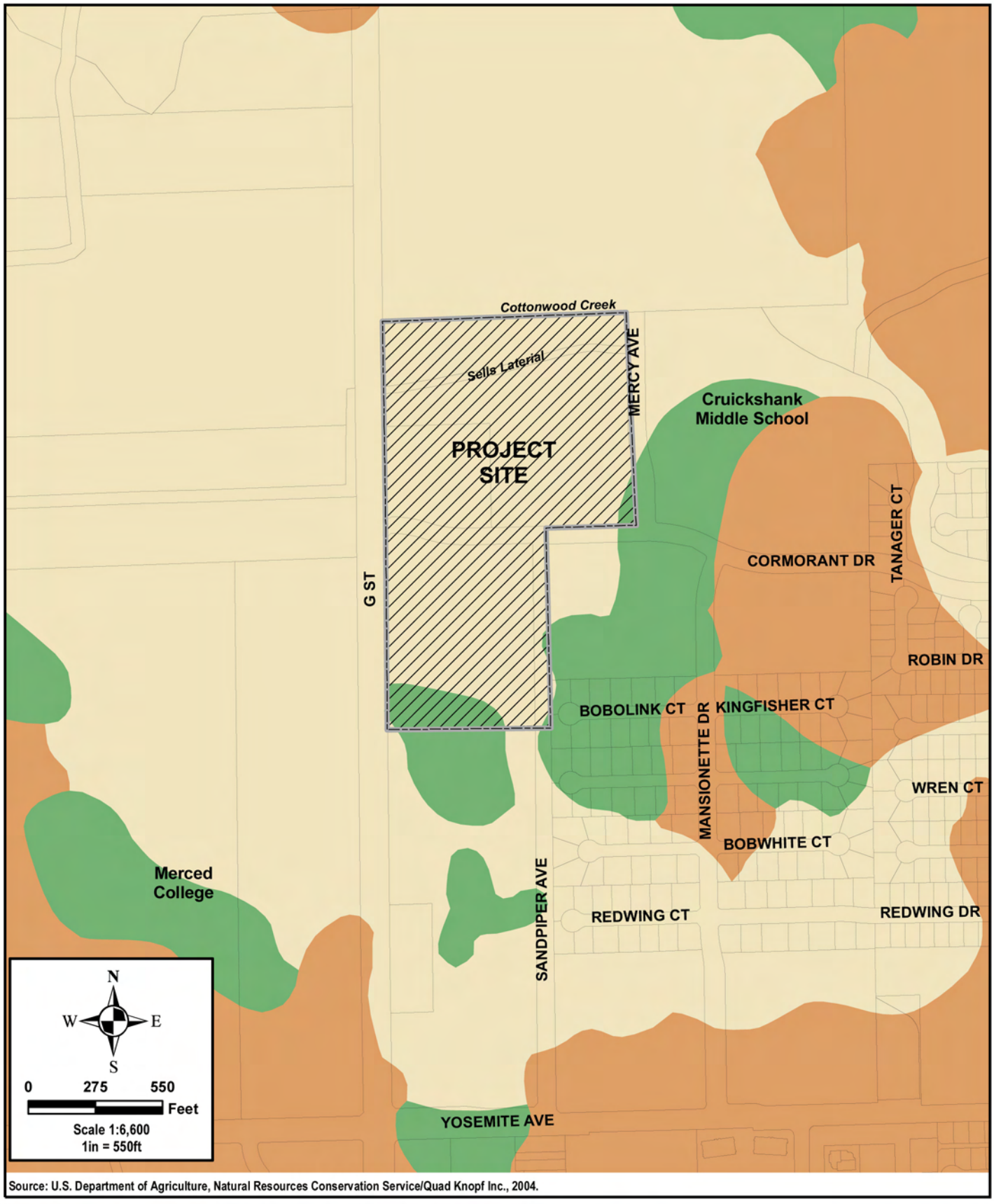
Parcels
Project Site

Soil Types

- Alamo clay, 0 to 1 percent slopes
- Burchell silty clay loam, 0 to 1 percent slopes
- Landlow clay, 0 to 1 percent slopes
- Landlow silty clay loam, 0 to 1 percent slopes
- Marguerite silty clay loam, deep over hardpan, 0 to 1 percent slopes
- Raynor cobbly clay, 0 to 3 percent slopes
- Redding gravelly loam, 0 to 8 percent slopes
- Ryer clay loam, 0 to 2 percent slopes
- San Joaquin loam, 0 to 3 percent slopes
- San Joaquin loam, 3 to 8 percent slopes
- Wyman clay loam, deep over hardpan, 0 to 1 percent slopes
- Yokohl clay loam, 0 to 3 percent slopes
- Yokohl clay, 0 to 3 percent slopes

Figure 3.2-1

Job No. 04385



Source: U.S. Department of Agriculture, Natural Resources Conservation Service/Quad Knopf Inc., 2004.

Quad Knopf

Important Farmlands Map

Parcels
Project Site

Farm Land Types
Farmland of statewide importance
Prime farmland if irrigated
Not prime farmland

Figure 3.2-2

Job No. 04385

3.2.4 IMPACTS & MITIGATION MEASURES

Impact #3.2-1: Conversion and loss of Prime Farmland to non-agricultural use.

Discussion and Conclusion: The majority of the project site (30.72 acres or 94 percent) is classified by the Natural Resource Conservation Service (NRCS) as "Prime Farmland if Irrigated." The remainder of the site (1.93 acres or 6 percent) is classified by the NRCS as "Farmland of Statewide Importance."

The conversion of Prime Farmland and Farmland of Statewide Importance within the City's "Specific Urban Development Plan (SUDP) Boundary," including the project site, was considered in the Merced Vision 2015 General Plan Environmental Impact Report. In the EIR the impact of converting economically viable concentrations of prime agricultural land to non-agricultural use was discussed in Mitigation Measure 4.6.3. The EIR explains that the majority of the soils within the SUDP are classified as non-prime soils. The effect of those soils that are classified as prime being converted to non-agricultural use cannot be mitigated. The EIR states that the effects of this conversion will be minimized to the maximum extent possible through plan implementation policies by developing in a manner "that produces the least amount of loss of productive agricultural land" and by developing in areas "which exhibit characteristics associated with less productive agricultural lands." Because this project will result in the conversion of prime agricultural lands and farmlands of statewide importance to non-agricultural uses, this is a ***significant impact***.

There are no mitigation measures available to offset the conversion of agricultural lands to non-agricultural uses. However, with the adoption of the General Plan, the City of Merced recognized that this Project is an appropriate use for the site, and that any loss of agricultural land is offset by the benefits that will be realized through the development of urban uses on-site. At the time of General Plan adoption, the City adopted a "Statement of Overriding Considerations" (City Council Resolution #97-22) concerning the loss of agricultural land. Regardless, implementation of the proposed project will have a ***significant and unavoidable impact*** with regards to this topic and will be further discussed in Section 5.2, *Significant Environmental Effects That Cannot Be Avoided.*

Mitigation Measure

No mitigation measures are available.

Impact #3.2-2: Indirect conversion and loss of surrounding Important Farmland to non-agricultural use.

Discussion and Conclusion: Land to the west and northwest of the project site is currently under agricultural production and is classified by the NRCS as "Prime Farmland if Irrigated." The County of Merced has a right-to-farm ordinance, which is meant to reduce conflicts between urban and agricultural land. Although the right-to-farm ordinance protects the ongoing agricultural operations on adjacent lands, new urban development on the project site could put pressure on the property owner(s) to convert the land to a non-agricultural use in the future. The

construction and operation of the project is likely to increase demand for businesses supporting hospital and medical facilities, including sales, rehabilitation clinics, and other uses. The addition of this demand to the area increases the potential for additional surrounding agricultural lands to convert to non-agricultural uses. Therefore, this impact is considered ***potentially significant.***

With the adoption of the General Plan, the City of Merced recognized that the designated uses are appropriate for the land surrounding the project site, and that any loss of agricultural land is offset by the benefits that will be realized through the development of urban uses on these sites. At the time of General Plan adoption, the City adopted a "Statement of Overriding Considerations" (City Council Resolution #97-22) concerning the loss of agricultural land. Regardless, with no mitigation measures available to offset this impact, the potential for the project to indirectly convert additional lands from agricultural to non-agricultural uses is ***significant and unavoidable*** and will be discussed further in Section 5.2, *Significant Environmental Effects That Cannot Be Avoided*.

Mitigation Measure

No mitigation measures are available.

Impact #3.2-3: Conflict with a Williamson Act contract and zoning for agriculture.

Discussion and Conclusion: The project site parcels (APN #231010006 and APN #231040003) are not currently under Williamson Act contracts and are not zoned for agricultural use, therefore, implementation of the proposed project would have ***no impact*** with regards to this topic.

Mitigation Measure

No mitigation measure is required.

SOURCES

California Department of Conservation. 2000-2002. *Merced County Land Use Conversion Report*.

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United States Department of Agriculture. 2003. *Agricultural Census Merced County Summary Highlights*.

Wacker, Sokolow, and Elkins. 2001. *County Right-to-Farm Ordinances in California: An Assessment of Impact and Effectiveness.* University of California Agricultural Issues Center AIC Issues Brief Number 15.

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3.3 Air Quality

This section addresses the air quality impacts of the Mercy Medical Center on the surrounding area. This section was prepared using methodologies and assumptions recommended within the air quality impact assessment recommendations of the San Joaquin Valley Air Pollution Control District. In keeping with these recommendations, the section describes existing air quality, construction-related impacts, direct and indirect emissions associated with the project, the impacts of these emissions on both the local and regional scale, and mitigation measures warranted to reduce or eliminate any identified significant impacts.

During the Notice of Preparation period comments were received from the Merced City School District and the San Joaquin Valley Air Pollution Control District (SJVAPCD) regarding the generation of fugitive dust and the impacts to CO and PM_{10} levels in the project vicinity.

3.3.1 REGULATORY SETTING

Air quality on the project site is subject to federal and state law, local air quality district regulations, and the policies and standards set forth in the *Merced Vision 2015 General Plan* and the *City of Merced Northeast Yosemite Specific Plan.*

Federal Regulations

The Federal Clean Air Act of 1970 (FCAA) was the first major piece of federal air quality regulation. Amended in 1977 and 1990, the Clear Air Act required the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) for several pollutants. These standards are set by law at levels that protect public heath and welfare, with an adequate margin of safety. Areas exceeding the federal standard more than two times per year are designated "non-attainment" areas under the Clean Air Act, and as such are subject to more stringent planning and pollution control requirements.

Under the 1990 amendment to the Clear Air Act, non-attainment areas are divided into five categories depending on future dates identified for meeting the standards. "Marginal" or "moderate" violators only slightly exceed the NAAQS, whereas "serious," "severe," or "extreme" violators exceed the standards by a much higher margin. Marginal areas are required to do little beyond what they are already doing to attain clean air, but areas designated "moderate" through "extreme" must adopt gradually tighter regulations. Areas designated "moderate" or worse for ozone non-attainment are required to show a three percent per year reduction in emissions of volatile organic compounds.

Areas close to meeting Carbon Monoxide (CO) standards are required to start a wintertime oxygenated fuels program and to correct problems with existing vehicle inspection programs. Area with higher levels of CO must also start an enhanced vehicle inspection program, and those areas with the highest CO levels must adopt transportation measures.

The FCAA requires an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures California will use to attain the NAAQS.

The Federal Clean Air Act Amendments of 1990 require states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution.

The SIP is to be periodically modified to reflect the latest emissions inventories, planning documents, rules and regulations of air basins as reported by the agencies with jurisdiction over them. The EPA reviews SIPs to determine if they conform to the mandates of the FCAA and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the non-attainment area and may impose additional control measures.

State Regulations

In 1988, the California Clean Air Act (CCAA) (AB 2595) was passed. The Act contains more stringent guidelines for the attainment of air quality goals than the FCAA. The California Air Resource Board (ARB) is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA. The CCAA classifies non-attainment areas as moderate, serious, severe, and extreme based on severity of violation of state ambient air quality standards. Both the State of California and the federal government have established a variety of ambient air quality standards. The State 1-hour ozone standard is 0.09 ppm (parts per million, by volume), not to be equaled or exceeded. The federal 1-hour ozone standard is 0.12 ppm, not to be exceeded more than three times in any three-year period.

California Toxic Air Contaminants law (AB1807) (AB 1807, H&SC Section 39666, et seq.) was enacted in 1983 and mandates the identification and control of toxic air contaminants not currently addressed by national ambient air-pollution programs.

California's Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) requires the California Air Resources Board (CARB) to compile and maintain a list of substances that pose chronic or acute threats to public health when present in the air. Additionally, the "Hot Spots" program includes an emissions inventory, requirements for assessing health risks, and provisions for notifying the public about emissions of toxic air contaminants.

Waters Bill (AB 3205) (H&S Code Section, 42301.6 through 42301.9) addresses sources of hazardous air pollutants near schools. It requires new or modified sources of hazardous air emissions located within 1,000 feet from the outer boundary of a school to give public notice to the parents or guardians of children enrolled in any school located within one-quarter mile of the source and to each address within a 1,000 foot radius.

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT REGULATIONS

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has adopted numerous regulations and rules regarding air quality in the San Joaquin Air Basin. It is noted that General Plan policies refer to the SJVAPCD by its former name and acronym, the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD). The following are SJVAPCD regulations and rules that applicable to the project.

Rule 2201 New and Modified Stationary Source Review Rule

This rule applies to all new stationary sources and all modification of existing stationary sources which are subject to the District permit requirements and after construction emit or may emit one or more affected pollutants.

Rule 4002 National Emission Standards for Hazardous Air Pollutants

Rule 4002 requires that prior to any demolition activity, an asbestos survey of existing structures on the project sites may be required to identify the presence of any asbestos containing building material (ACBM). Any identified ACBM having the potential for disturbance must be removed by a certified asbestos-contractor in accordance with CAL-OSHA requirements.

Regulation VIII Fugitive PM_{10} Prohibitions

Regulation VIII, Rules 8011-8081 are a series of rules designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction, road construction, bulk materials storage, landfill operations, etc.

Rule 4641 Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Rule 4102 Nuisance

This rule applies to any source operation that emits or may emit air contaminants or other materials. In the event that the project or construction of the project creates a public nuisance, it could be in violation and be subject to District enforcement action.

Local Regulations and Applicable General Plan Policies

MERCED VISION 2015 GENERAL PLAN

Policies

SD-1.1 Accurately determine and fairly mitigate the local and regional air quality impacts of projects proposed in the City of Merced.

1.1.a Develop uniform standards for mitigating air quality impacts resulting from development.

1.1.b Ensure that significant air quality impacts identified during CEQA review are consistently and fairly mitigated.

1.1.c All air quality mitigation measures should be feasible, implementable, and cost effective.

1.1.d Work with the SJVUAPCD to identify regional cumulative transportation and air quality impacts.

1.1.e Reduce the air quality impacts of development projects that may be insignificant by themselves, but cumulatively are significant.

1.1.f Encourage innovative measures to reduce air quality impacts.

SD-1.2 Coordinate local air quality programs with regional programs and those of neighboring jurisdictions.

1.2.a Work with neighboring jurisdictions and affected agencies to address cross-jurisdictional and regional transportation and air quality issues.

1.2.b Consult with the SJVUAPCD during the CEQA review for discretionary projects.

SD-1.3 Integrate land use planning, transportation planning, and air quality planning for the most efficient use of public resources and for a healthier environment.

1.1.a The City of Merced will consider air quality when planning the land uses and transportation systems to accommodate the expected growth in this community.

1.1.c The City of Merced will consult with transit providers to determine project impacts on long range transit plans and ensure that impacts are mitigated.

SD-1.6 Reduce emissions of PM_{10} and other particulates with local control potential.

1.6.a Work with the SJVUAPCD to reduce to the maximum extent feasible particulate emissions from construction, grading, excavation, and demolition.

SD-3.2 Encourage the use of energy conservation features and low-emission equipment for all new residential and commercial development.

3.2.c Encourage new residential, commercial and industrial development to reduce air quality impacts from area sources and from energy consumption.

S-7.1 Prevent injuries and environmental contamination due to the uncontrolled release of hazardous materials.

7.1.a Support Merced County in carrying out and enforcing the Merced County Hazardous Waste Management Plan.

7.1.b Continue to update and enforce local ordinances regulating the permitted use and storage of hazardous gases, liquids, and solids.

3.3.2 ENVIRONMENTAL SETTING

Climate

The climate of the project area is typical of inland valleys in California, with hot dry summers and cool, mild winters. Daytime temperatures in the summer often exceed 100 degrees, with lows in the 60's. In winter, daytime temperatures are usually in the 50's, with lows around 35 degrees. Radiation fog is common in the winter, and may persist for days. Winds are predominantly up-valley (from the north) in all seasons, but more so in the summer and spring months. Winds in the fall and winter are generally lighter and more variable in direction.

Air Pollution Climatology

The project site is located in the San Joaquin Valley air basin, which is defined by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south. The surrounding topographic features restrict air movement through and out of the basin and, as a result, impede the dispersion of pollutants from the basin. Inversion layers, which are created when a mass of warm dry air sits over cooler air near the ground, preventing vertical dispersion of pollutants from the air mass below, are formed in the San Joaquin Valley air basin throughout the year. During the summer, the San Joaquin Valley experiences daytime temperature inversions at elevations from 2,000 and 2,500 feet above the valley floor. During the winter months, inversions occur from 500 to 1,000 feet above the valley floor.

The pollution potential of the San Joaquin Valley is very high. Surrounding elevated terrain in conjunction with temperature inversions frequently restrict lateral and vertical dilution of pollutants. Abundant sunshine and warm temperatures in summer are ideal conditions for the formation of photochemical oxidant, and the Valley is a frequent scene of photochemical pollution.

Ambient Air Quality Standards

Both the U.S. Environmental Protection Agency and the California Air Resources Boards have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents.

The federal and California state ambient air quality standards are summarized in Table 3.3-1 for important pollutants. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and suspended particulate matter ($PM_{2.5}$ and PM_{10}).

Table 3.3-1
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour 8-Hour	0.12 ppm 0.08 ppm	0.09 ppm --
Carbon Monoxide	8-Hour 1-Hour	9.0 ppm 35.0 ppm	9.0 ppm 20.0 ppm
Nitrogen Dioxide	Annual 1-Hour	0.05 ppm --	-- 0.25 ppm
Sulfur Dioxide	Annual 24-Hour 1-Hour	0.03 ppm 0.14 ppm --	-- 0.05 ppm 0.25 ppm
PM_{10}	Annual 24-Hour	50 ug/m^3 150 ug/m^3	20 ug/m^3 50 ug/m^3
$PM_{2.5}$	Annual 24-Hour	15 ug/m^3 65 ug/m^3	12 ug/m^3 --
Lead	30-Day Avg. 3-Month Avg.	-- 1.5 ug/m^3	1.5 ug/m^3 --

ppm = parts per million
ug/m^3 = micrograms per cubic meter

Source: California Air Resources Board, Ambient Air Quality Standards (7/9/03)

The State of California regularly reviews scientific literature regarding the health effects of pollutants. On May 3, 2002, the California Air Resources Board (CARB) staff recommended lowering the level of the annual standards for PM_{10} and establishing a new annual standard for $PM_{2.5}$ (particulate matter 2.5 micrometers in diameter and smaller). The new standards became effective on July 5, 2003.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. Toxic Air Contaminants (TACs), are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Ambient Air Quality

The SJVAPCD operates two monitoring sites in the City of Merced measure gaseous pollutants and suspended particulate matter (PM_{10} and $PM_{2.5}$). A summary of air quality data from these monitoring sites is shown in Table 3.3-2. Table 3.3-2 shows that the federal/state standards for ozone and PM_{10} are frequently exceeded in the project area.

Table 3.3-2
Ambient Air Quality in Merced

Pollutant/Standard	Year	Days exceeding Standard
Ozone/State 1-Hour	2002	55
	2003	54
	2004	14
Ozone/Federal 1-Hour	2002	2
	2003	0
	2004	0
Ozone Federal 8-Hour	2002	56
	2003	54
	2004	15
Nitrogen Dioxide/State 1-Hour	2002	0
	2003	0
	2004	0
PM_{10}/State-Hour	2002	14
	2003	7
	2004	0
PM_{10}/Federal 24-Hour	2002	0
	2003	0
	2004	0
$PM_{2.5}$/Federal 24-Hour	2002	1
	2003	0
	2004	0

Source: California Air Resources Board, Aerometric data Analysis and Management (ADAM), 2005

Attainment Status and Regional Air Quality Plans

Federal and state air quality laws require identification of areas not meeting the ambient air quality standards. These areas must develop regional air quality plans to eventually attain the standards. Under both the federal and state Clean Air Acts, the San Joaquin Valley Air Basin is a non-attainment area (standards have not been attained) for ozone and particulate matter (PM_{10} and $PM_{2.5}$). The air basin is either attainment or unclassified for other ambient standards.

To meet federal Clean Air Act requirements, the SJVAPCD has adopted an Ozone Attainment Demonstration Plan and in June 2003 adopted the "2003 PM_{10} Plan." The most recent federal ozone plan (Amended 2002 and 2005 Rate of Progress Plan for San Joaquin Valley Ozone, December 2002) determined that it could not be demonstrated that the federal ozone standards could be met by the require date of November 15, 2005. In December 2003, the SJVAPCD requested that the U.S. Environmental Protection Agency (EPA) downgrade the Valley's ozone status from "severe" to "extreme" non-attainment, and in April 2004 the U.S. EPA approved the downgrade. The downgrade avoids automatic sanctions and would extend the deadline for meeting attainment until November 15, 2010, but requires implementation of stricter controls on existing and future air pollutant sources.

Work is currently proceeding on a revised PM_{10} attainment plan. The 2006 PM_{10} Plan is due to EPA by March 31, 2006.

To meet California Clean Air Act requirements, the District is currently drafting an update to the 2000 Triennial Plan updating the Air Quality Attainment Plan (AQAP) addressing the California ozone standard. The California Legislature, when it passed the California Clean Air Act in 1988, excluded PM_{10} from the basic planning requirements of the Act. The Act did require the CARB to prepare a report to the Legislature regarding the prospect of achieving the State ambient air quality standard for PM_{10}. This report did not recommend imposing a planning process similar to that for ozone or other pollutants for achievement of the standard within a certain period of time.

Health Effects of Pollutants

The following is a discussion of the health effects of important pollutants in the San Joaquin Valley Air Basin.

OZONE

Ozone is produced by chemical reactions, involving nitrogen oxides (NOx) and reactive organic gases (ROG), which are triggered by sunlight. Nitrogen oxides are created during combustion of fuels, while reactive organic gases are emitted during combustion and evaporation of organic solvents. Since ozone is not directly emitted to the atmosphere, but is formed as a result of photochemical reactions, it is considered a secondary pollutant. In the San Joaquin Valley Air Basin ozone is a seasonal problem, occurring roughly from April through October.

Ozone is a strong irritant that attacks the respiratory system, leading to the damage of lung tissue. Asthma, bronchitis and other respiratory ailments as well as cardiovascular diseases are aggravated by exposure to ozone. A healthy person exposed to high concentrations may become nauseated or dizzy, may develop headache or cough, or may experience a burning sensation in the chest.

Research has shown that exposure to ozone damages the alveoli (the individual air sacs in the lung where the exchange of oxygen and carbon dioxide between the air and blood takes place). Research has shown that ozone also damages vegetation.

SUSPENDED PARTICULATE

Suspended particulate matter (PM) is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. "Inhalable" PM consists of particles less than 10 microns in diameter, and is defined as "suspended particulate matter" or PM_{10}. Particles between 2.5 and 10 microns in diameter arise primarily from natural process, such as wind-blown dust or soil.

Fine particles are less than 2.5 microns in diameter ($PM_{2.5}$). $PM_{2.5}$, by definition is included in PM_{10}. Fine particles are produced mostly from combustion or burning activities. Fuel burned in cars and trucks, power plants, factories, fireplaces and wood stoves produces fine particles.

The level of fine particulate matter in the air is a public health concern because it can bypass the body's natural filtration system more easily than larger particles, and can lodge deep in the lungs. The health effects vary depending on a variety of factors, including the type and size of particles. Research has demonstrated a correlation between high PM concentrations and increased mortality rates. Elevated PM concentrations can also aggravate chronic respiratory illnesses such as bronchitis and asthma.

CARBON MONOXIDE

Carbon monoxide is a local pollutant in that high concentrations are found only very near the source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes.

Carbon monoxide's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Carbon monoxide concentrations are highly seasonal, with the highest concentrations occurring in the winter. This is partly due to the fact that automobiles create more carbon monoxide in colder weather and partly due to the very stable atmospheric conditions that exist on cold winter evenings when winds are calm. Concentrations typically are highest during stagnant air periods within the period November through January.

TOXIC AIR CONTAMINANTS

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Unlike criteria pollutants, no safe levels of exposure to TACs can be established. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage and death.

Diesel exhaust is a TAC of growing concern in California. The California Air Resources Board in 1998 identified diesel engine particulate matter as a TAC. The exhaust from diesel engines contains hundreds of different gaseous and particulate components, many of which are toxic. Many of these compounds adhere to the particles, and because diesel particles are so small, they penetrate deep into the lungs. Diesel engine particulate has been identified as a human carcinogen. Mobile sources, such as trucks, buses, automobiles, trains, ships and farm equipment are by far the largest source of diesel emissions.

Identification of Sensitive Receptors

"Sensitive Receptors" are defined as facilities where sensitive population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include residences, schools, playgrounds, child care centers, retirement homes, convalescent homes, hospitals and medical clinics. The project itself would be a new sensitive receptor. Other nearby sensitive receptors are existing and planned homes to the north, east, and south of the site, as well as the Cruickshank Middle School located immediately east of the site.

3.3.3 IMPACT EVALUATION CRITERIA

The SJVAPCD has established the following standards of significance for air quality impacts within the San Joaquin Air Basin:

- A project results in estimated carbon monoxide concentrations exceeding the California Ambient Air Quality Standard of 9 parts per million averaged over 8 hours and 20 ppm for 1-hour.

- A project results in new direct or indirect emissions of ozone precursors (ROG or NOx) in excess of 10 tons per year.

- A project has the potential to frequently expose members of the public to objectionable odors will be deemed to have a significant impact.

- A project has the potential to expose sensitive receptors (including residential areas) or the general public to substantial levels of toxic air contaminants would be deemed to have a potentially significant impact.

While SJVAPCD CEQA guidance recognizes that PM_{10} is a major air quality issue in the basin, it has not established numerical thresholds for significance for PM_{10}. However, for the purposes of this analysis, a PM_{10} emission of 15 tons per year (82 pounds per day) was used as a significance threshold. This emission is the SJVAPCD threshold level at which new stationary sources requiring permits from the District must provide emissions "offsets." This threshold of significance for PM_{10} is consistent with the SJVAPCD's ROG and NOx thresholds of ten tons per year, which are also the offset thresholds established in SJVAPCD Rule 2201 New and Modified Stationary Source Review Rule.

Despite the establishment of both federal and state standards for $PM_{2.5}$ (particulate matter, 2.5 microns), the SJVAPCD has not developed a threshold of significance for this pollutant. For this analysis, $PM_{2.5}$ impacts would be considered significant if project emissions of PM_{10} exceed 82 pounds per day.

SJVAPCD CEQA guidance does not recommend quantitative analysis of construction emissions. The SJVAPCD significance threshold for construction dust impacts is based on the appropriateness of construction dust controls. The SJVAPCD guidelines provide feasible control measures for construction emission of PM_{10} beyond that required by district regulations. If the

appropriate construction controls are to be implemented, then air pollutant emissions for construction activities would be considered less than significant.

3.3.4 IMPACTS & MITIGATION MEASURES

Impact #3.3-1: Increased Particulate Matter levels in the immediate vicinity during construction and operation

Discussion and Conclusion: The project would result in new sources of emissions both during construction and operation. During construction, gaseous and particulate emissions would be released by equipment and vehicles on the site, trucks bringing materials to the site and construction employee vehicles. During portions of the construction period, fugitive particulate emissions (PM_{10} and $PM_{2.5}$) would occur due to the action of vehicles/equipment and wind on unpaved areas.

The operation of the project land uses would include area sources (e.g., combustion of natural gas for heating), but the overwhelming source of emissions would be vehicle trips generated by project patrons and employees. Estimates of regional emissions generated by project traffic and on-site area sources were made using a program called URBEMIS-2002. URBEMIS-2002 is a program that estimates the emissions that result from various land use development projects. Land use projects can include residential uses such as single-family dwelling units, apartments and condominiums, and nonresidential uses such as shopping centers, office buildings, industrial parks and hospitals. URBEMIS-2002 contains default values for much of the information needed to calculate emissions. However, project-specific, user-supplied information can also be used when it is available.

Inputs to the URBEMIS-2002 program include trip generation rates, vehicle mix, average trip length by trip type and average speed. Average trip lengths, average speeds and vehicle mixes for the San Joaquin Valley Air Basin were used. Analysis year was 2006 for Phase 1 of the project and 2010 for Phase 2 and project buildout. The URBEMIS-2002 output is included in Appendix B.

Construction would result in numerous activities that would generate dust. The fine, silty soils in the project area and often strong afternoon winds exacerbate the potential for dust, particularly in the summer months. Grading, leveling, earthmoving and excavation are the activities that generate the most particulate emissions. Impacts would be localized and variable. Construction impacts would last for a period of several months. Construction dust impacts are considered to be potentially significant on a localized basis. The potential for dust nuisance would exist during early stages of construction when disturbance of soil is greatest.

Construction equipment and vehicles would also generate exhaust emissions during active construction. Although operated temporarily at construction sites, construction equipment is a substantial source category within the San Joaquin Valley Air Basin, generating ozone precursors as well as particulate matter. Since construction equipment is normally considered part of the existing inventory of sources quantification of this emission is not recommended by the SJVAPCD except for very large projects.

The San Joaquin Valley Air Pollution Control District regulates construction emissions through its Regulation VIII. The provisions of Regulation VIII pertaining to construction activities require:

- Effective dust suppression for land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill and demolition activities.

- Effective stabilization of all disturbed areas of a construction site, including storage piles, not used for sever or more days.

- Control of fugitive dust from on-site unpaved roads and off-site unpaved access roads.

- Removal of accumulations of mud or dirt at the end of the work day or once every 24 hours from public paved roads, shoulders and access ways adjacent to the site.

Regulation VIII requires that a dust control plan be prepared, and violations of the requirements of Regulation VIII are subject to enforcement action. Violations are indicated by the generation of visible dust clouds and/or generation of complaints. This is a ***potentially significant*** impact.

Mitigation Measure

Implementation of the following mitigation measure will reduce the impact to a level of ***less than significant***.

Mitigation Measure #3.3-1:

Construction contracts shall require the primary construction contractor to prepare and submit a dust control plan to the SJVAPCD that incorporates all provisions of Regulation VIII and the following additional measures:

- *Limit traffic speeds on unpaved roads to 15 mph.*

- *Install wheel washers or other forms of wheel cleaners at truck exits, and wash loose dirt from trucks and equipment leaving the site.*

- *Suspend excavation and grading activities when winds exceed 20 mph.*

- *Limit size of area subject to excavation, grading or other construction activity at any one time to avoid excessive dust.*

- *Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.*

- *Make maximum use of diesel equipment equipped with catalytic converters and particulate traps.*

- *Curtail construction during "Spare the Air Days" declared by the SJVAPCD.*

- *Equipment not in use for more than ten minutes should be turned off.*

- *Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use.*

- *Whenever feasible and cost effective, use electrically driven equipment (provided they are not run via a portable generator set) or alternatively-fueled equipment/vehicles.*

Impact #3.3-2: Project traffic would result in an increase in carbon monoxide concentrations.

Discussion and Conclusion: Project traffic would increase concentrations of carbon monoxide along streets providing access to the project. Carbon monoxide is a local pollutant (i.e., high concentrations are normally only found very near sources). The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes and congestion.

The SJVAPCD's *Guide for Assessing and Mitigation Air Quality Impacts* provides the following screening criteria to identify situations where modeling is warranted:

- The Level of Service (LOS) on one or more streets or at one or more signalized intersections in the project vicinity will be reduced to LOS E or F, and

- The project will substantially worsen an already existing LOS F on one or more streets or at one or more signalized intersections in the project vicinity.

The traffic impact analysis examined Level of Service (LOS) for intersections affected by the project. No existing or future signalized intersection is forecast to operate at LOS E or LOS F with the proposed project and cumulative traffic growth. Since the project is within an attainment area for carbon monoxide (ambient air quality standards are currently attained) and in an area with low background concentrations, changes in carbon monoxide levels resulting from the project would not result in violations of the ambient air quality standards, are considered a ***less-than-significant*** impact.

Mitigation Measure

No mitigation measure is required.

Impact #3.3-3: Operation of the project would result in increases in emission of both ozone precursors and PM_{10}.

Discussion and Conclusion: Table 3.3-3 shows the new auto and area source emissions of regional pollutants that would result from the proposed project, based upon output form the URBEMIS-2002 computer program. Also shown are the SJVAPCD's thresholds of significance.

The SJVAPCD has established a threshold of significance for ozone precursors of 10 tons per year, and 15 tons per year has been assumed to represent a significant impact for PM_{10}. Project-related emissions exceed the thresholds of significance for ozone precursors and particulate matter (PM_{10} and $PM_{2.5}$), resulting in regional air quality impacts which are potentially significant.

Table 3.3-3
Project Auto and Area-Source Emissions (Tons per Year)

	ROG	NOx	PM_{10}
Project Phase 1			
Auto Emissions	13.72	20.22	15.76
Area Source Emissions	0.04	0.39	0.00
Total	13.76	20.61	15.76
Project Phase 1-11			
Auto Emissions	16.50	24.70	26.52
Area Source Emissions	0.07	0.76	0.00
Total	16.57	25.46	26.52
Project Buildout			
Auto Emissions	22.23	33.23	35.68
Area Source Emissions	0.09	1.05	0.00
Total	22.32	34.28	35.68
SJVAPCD Significant Thresholds	10.00	10.00	15.00

ROG = Reactive Organic Gases
NO_x = Nitrogen Oxides
PM_{10} – Particulate Matter, 10 microns

With respect to regional pollutants, SJVAPCD guidance provides that a project that would individually have a significant air quality impact is also considered to have a significant cumulative air quality impact. Regional emissions from the proposed project would exceed the significance thresholds for ozone precursors and particulate matter (PM_{10} and $PM_{2.5}$) by a substantial amount, so the project is considered to have a significant cumulative impact on regional air quality.

The additional emissions that would result from the project would be occurring in an air basin that has severe air quality problems and that currently exceeds the state/federal ambient air quality standards. The state/federal ambient standards are health-based thresholds, so the project

would cumulatively contribute to the known adverse health effects associated with exceedances of the ambient air quality standards, and contribute to the health effects associated with mobile-source Toxic Air Contaminants. Implementation of the proposed project will have a ***significant*** impact.

Mitigation Measure

Subsequent to implementing the following mitigation measure the impact will remain ***significant and unavoidable***, and is also considered cumulatively significant.

Mitigation Measure #3.3-3:

The following design features/programs shall be implemented:

- *Use energy efficient design including automated control system for heating/air conditioning and energy efficiency; utilize lighting controls and energy-efficient lighting in buildings and use light colored roof materials to reflect heat.*
- *Plant deciduous trees on the south and west elevations of the MOB.*
- *Provide low nitrogen oxide (NOx) emitting and/or high efficiency water heaters.*
- *Appropriate easements should be reserved to provide for future improvements such as bus turnouts, loading areas, and shelters.*
- *Purchase low-emission, alternatively-fueled or electrical-driven maintenance vehicles and equipment.*
- *Designate an on-site TSM coordinator.*
- *Implement carpool/vanpool program, e.g., carpool ride-matching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc.*
- *Provide lockers for employees bicycling or walking to work.*

The suburban location and character of the proposed project limits the potential for further reducing regional air quality impacts. Available air quality mitigation strategies for a hospital are most effective on employee work trips, which comprise only a fraction of total project trips (see Table 3.3-3). Parking restrictions or fees as a means of reducing vehicle trips are unlikely to be successful at a hospital and could negatively impact the surrounding neighborhood.

The above measure would be expected to reduce project emissions by one to five percent. Available measures would not provide the more than 60 percent reduction in emissions that would be necessary to reduce project emissions to a less than significant level.

SOURCES

California Air Resources Board, Aerometric Data Analysis and Management (ADAM), 2005. <http://www.arb.ca.gov./adam/cgi-bin/adamtop/d2wstart>

California Air Resources Board, Ambient Air Quality Standards (7/9/03) <http://www.arb.ca.gov.aq./aaqs2.pdf>

California Air Resources Board (CARB). 1974. *Climate of the San Joaquin Valley Air Basin*.

Donald Ballanti, Certified Consulting Meteorologist

San Joaquin Valley Air Pollution Control District (SJVAPCD). 1998. *Guidance for Assessing and Mitigating Air Quality Impacts*.

3.4 Biological Resources

This section describes the biological resources in the vicinity of the proposed Mercy Medical Center and related potential effects of the proposed project. The affected environment, including an overview of local vegetation, sensitive plant communities, wetlands, wildlife, and special status species is presented and the methods and results of biological field surveys at the project site are discussed. This section addresses the effects that construction and subsequent operation of the Medical Center may have on special species status plants, animal species, and sensitive habitats. Mitigation measures to reduce potential impacts to a less than significant level are included in this section. Discussion of applicable laws, ordinances, regulations, and standards is provided.

A reconnaissance level biological survey and preliminary wetlands determination were conducted on March 22, 2005 by Quad Knopf biologists of areas within the project site. The wetlands determination is located in Appendix C. Other sources consulted included the California Natural Diversity Data Base, the California Native Plant Society Online Inventory to determine the potential for special status plant and wildlife species which may occur in the study area, and a review of previous studies conducted in sites located near or adjacent to the Mercy Medical project site.

During the Notice of Preparation Period, no comments were received regarding potential impacts from the proposed project on biological resources.

3.4.1 REGULATORY SETTING

Federal Regulations

FEDERAL ENDANGERED SPECIES ACT

The Federal Endangered Species Act (FESA) defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Once a species is listed it is fully protected from a "take" unless a take permit is issued by the U.S. Fish and Wildlife Service (USFWS). A take is defined as the killing, capturing, or harassing of a species. Proposed endangered or threatened species are those species for which a proposed regulation, but not final rule, has been published in the Federal Register.

MIGRATORY BIRD TREATY ACT

To kill, possess, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., § 703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

CLEAN WATER ACT – SECTION 404

Section 404 of the Clean Water Act (CWA) regulates all discharges of dredged or fill material into water of the United States. The United States Army Corps of Engineers is the agency responsible for administering the permit process for activities that affect waters of the United States. Executive Order 11990 is a federal implementation policy, which is intended to result in no net loss of wetlands.

CLEAN WATER ACT – SECTION 401

Section 401 of the Clean Water Act (CWA) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the Regional Water Quality Control Board. To obtain the water quality certification the Regional Water Quality Control Board must indicate that the proposed fill would be consistent with the standards set forth by the state.

JURISDICTIONAL WATERS

Areas meeting the regulatory definition of "Waters of the United States" (jurisdictional waters) are subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). The USACE under provisions of Section 404 of the Clean Water Act (1972), has jurisdiction over "Waters of the U.S." These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as "Waters of the U. S.", tributaries of waters otherwise defined as "Waters of the U.S.", the territorial seas, and wetlands adjacent to "Waters of the U.S." (33 CFR, Part 328, Section 328.3).

Areas not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions (33 CFR, Part 328).

State Regulations

CALIFORNIA ENDANGERED SPECIES ACT

The California Endangered Species Act (CESA) protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. The CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

The CESA expanded upon the original Native Plant Protection Act and enhanced legal protection for plants. To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

CALIFORNIA NATIVE PLANT PROTECTION ACT

In 1977 the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the state. The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The California Environmental Quality Act (CEQA) identifies that a species that is not listed on the federal or state endangered species list may be considered rare or endangered if the species meets certain criteria. Under CEQA public agencies must determine if a project would adversely affect a species that is not protected by FESA or CESA. Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e. candidate, or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency (i.e. USFWS or CDFG).

FISH AND GAME CODE § 3503, 3503.5, 3800 – PREDATORY BIRDS

Under the California Fish and Game Code, all predatory birds in California, generally called "raptors," are protected. The law indicates that it is unlawful to take, possess, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

FISH AND GAME CODE § 1601-1603 – STREAMBED ALTERATION

Under the California Fish and Game Code, the Department of Fish and Game (CDFG) has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project developers must obtain a "Streambed Alteration Agreement" from the CDFG prior to any alteration of a lake bed, stream channel, or their banks. Through this agreement, the CDFG may impose conditions to limit and fully mitigate impacts on fish and wildlife resources.

Local Regulations

CITY OF MERCED VISION 2015 GENERAL PLAN

Goal

OS-1: OPEN SPACE FOR THE PRESERVATION OF NATURAL RESOURCES

Policies

OS-1.1: Identify and preserve wildlife habitats which support rare, endangered, or threatened species.

1.1a: Identify, and recognize as significant, wetland habitats which meet the appropriate legal definition of Federal and State law.

1.1b: Urban development should occur away from identified sensitive species habitats unless specific provisions to ensure adequate protection and monitoring exist.

OS-1.2: Preserve and enhance creeks in their natural state throughout the planning area.

1.2d: Recognize Bear, Black Rascal, Cottonwood, and Fahrens Creek as important open space resources and promote their protection and enhancement through the use of natural plant materials.

3.4.2 ENVIRONMENTAL SETTING

Existing Conditions

VEGETATION/ BIOTIC HABITATS

The majority of the project site is currently vacant. It is composed of various native and non-native vegetation, and has been used for illegal dumping in recent years. A drainage ditch runs along G Street across the project site, directing stormwater off site. There is one creek (Cottonwood Creek) flowing along the northern boundary of the project site, as well as a portion of a partially underground drainage and irrigation channel (Sells Lateral) across the northern part of the project site. Small trees and blackberry vines line the creek and irrigation channel, and landscape plantings surround the Cancer Center building. Soil conditions and maps of the area indicate that the project site has historically been used for agricultural production, likely in the production of row and grain crops. Other than the Cancer Center, the project site is undeveloped.

The entire project site, excluding farm service roadways, irrigation canals, and Cottonwood Creek is cultivated in grains, alfalfa, or other field crops on a rotational basis. At the time of the biological survey, three areas were identified as the principal biotic habitats present on project site. These were identified as disked agricultural field, an irrigation canal (Sells Lateral), and Cottonwood Creek. Below are brief descriptions of the biotic habitats observed during the field survey.

Disked Agricultural Fields

A large portion of the project site (approximately 26.77 acres) was disked at the time of the field survey. Essentially no standing vegetation remained. Based upon the remnants of the disked plants and observations of adjacent land, it appears the disked portions were planted in oats (*Avena sativa*), however, several other species such as black mustard (*Brassica nigra*), ripgut (*Bromus diandrus*), wild barley (*Hordeum murinum* ssp. *leporinum*), white-stemmed filaree

(*Erodium moschatum*), London rocket (*Sisymbrium irio*), and milk thistle (*Silybum marianum*) were also observed.

Irrigation Canal (Sells Lateral)

Sells Lateral irrigation canal runs east-west on the project site. It is located in the northern portion of the project site and is surrounded by disked agricultural field. Vegetation in and along this canal consists of a dense thicket of Himalayan blackberry (*Rubus discolor*) along the banks, with scattered Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), and occasional fig (*Ficus carica*), willow (*Salix* sp.) and olive trees (*Olea europaea*). Several large eucalyptus trees (*Eucalyptus sideroxylon*) are located along the western end of the canal on the project site. Dominant vegetation in the bed of the canal consists of Baltic rush (*Juncus balticus*), umbrella sedge (*Cyperus eragrostis*), and water smartweed (*Polygonum lapathifolium*).

Cottonwood Creek

Cottonwood Creek occurs along the northern boundary of the project site as a channelized waterway that is dominated by Fremont cottonwood, with other trees such as fig and olive scattered occasionally along the banks. Like Sells Lateral, the western portion of Cottonwood Creek on the project site is also dominated by large eucalyptus trees. The lower portions of the banks and portions of the bed of Cottonwood Creek have patchy occurrences of bulrush (*Scirpus acutus*), and dense stands of Baltic rush, with water primrose (*Ludwigia peploides*) and water smartweed in portions of the creek. Many of the cottonwoods observed were vegetative shoots growing from large stumps, some greater than 24 inches in diameter. Therefore, these trees were much larger at one time.

All of the plant species were identified using Hickman (1993), but are presented in accordance with the *National list of plant species that occur in wetlands: California (Region 0)* (Reed 1988). Table 3.4-1 provides a list of those plants observed on the project site. The dominant wetland plant species identified on the project site included: Fremont cottonwood (FACW), Goodding's black willow (*Salix gooddingii*) (OBL), Baltic rush (OBL), water primrose (OBL), bog yellowcress (*Rorippa paustris* var. *occidentalis*) (OBL), bulrush (OBL), miner's lettuce (*Claytonia perfoliata*) (FAC), Himalayan blackberry (FACW*), and cattail (*Typha* sp.) (OBL).

Table 3.4-1
Plant Species Observed During the Site Visit

Scientific Name	Common Name	Wetland Indicator Status[1]
Avena sativa	cultivated oat	U
Brassica nigra	black mustard	U
Bromus diandrus	ripgut	U
Bromus hordeaceus	soft chess	U
Capsella bursa-pastoris	shepherd's purse	FAC-
Centaurea solstitialis	yellow starthistle	U
Claytonia perfoliata	miner's lettuce	FAC
Cynodon dactylon	Bermuda grass	FAC
Cyperus eragrostis	umbrella sedge	FACW

Scientific Name	Common Name	Wetland Indicator Status[1]
Erodium moschatum	white-stemmed filaree	U
Eucalyptus sideroxylon	red iron bark	U
Ficus carica	fig	U
Galium aparine	bedstraw	FACU
Geranium carolinianum	Carolina geranium	U
Helianthus annuus	annual sunflower	FAC-
Hordeum murinium ssp. *leporinum*	wild barley	NI
Juncus balticus	Baltic rush	OBL
Lactuca serriola	prickly lettuce	FAC
Leptochloa uninervia	Mexican sprangletop	FACW
Lolium multiflorum	Italian ryegrass	FAC*
Ludwigia peploides	water primrose	OBL
Malva parviflora	cheeseweed	U
Marrubium vulgare	horehound	FAC
Olea europaea	olive	U
Poa annua	annual bluegrass	FACW-
Polygonum lapathifolium	water smartweed	OBL
Populus fremontii ssp. *femontii*	Fremont cottonwood	FACW
Rorippa palustris var. *occidentalis*	bog yellowcress	OBL
Rosa californica	California wild rose	FAC+
Rubus discolor	Himalayan blackberry	FACW*
Salix gooddingii	Goodding's black willow	OBL
Salsola tragus	Russian thistle	FACU+
Scirpus acutus var. *occidentalis*	bulrush	OBL
Senecio vulgaris	common groundsel	NI*
Silybum marianum	milk thistle	U
Sisymbrium irio	London rocket	U
Sonchus asper	prickly sowthistle	FAC
Typha sp.	cattail	OBL
Urtica dioica ssp. holosericea	stinging nettle	FACW
Vicia sativa	common vetch	FACU

[1]Wetland Indicator Status (Categories as indicated in Reed 1998):

OBL (Obligate Wetland)	Plants that occur almost always (estimated probability >99 percent) under natural conditions in wetlands.
FACW (Facultative Wetland)	Plants that usually occur in wetlands (estimated probability 67 percent-99 percent), but occasionally found in nonwetlands.
FAC (Facultative)	Plants equally likely to occur in wetlands or nonwetlands (estimated probability 34 percent-66 percent).
FACU (Facultative Upland)	Plants that usually occur in nonwetlands (estimated probability 67 percent-99 percent), but occasionally found in wetlands (estimated probability 1 percent-33 percent).
U (Obligate Upland)	Plants that occur in wetlands in another region, but occur almost always (estimated probability >99 percent) under natural conditions in nonwetlands in California. If a species does not occur in wetlands in any region, it is not on the National List.
Special Characters	A question mark (?) following an Indicator denotes a tentative assignment base on the botanical literature and not confirmed by regional review. A positive (+) or negative (-) sign was used with the Facultative Indicator categories to more

Scientific Name	Common Name	Wetland Indicator Status[1]
	specifically define the regional frequency of occurrence in wetlands. The positive sign indicates a frequency toward the higher end of the category (more frequently found in wetlands), and a negative sign indicates a frequency toward the lower end of the category (less frequently found in wetlands). An asterisk (*) following an Indicator identifies tentative assignments based on limited information from which to determine the indicator status.	

Source: Quad Knopf, Inc., 2005.

CNDDB Records Search

The records search indicated that a total of 45 elements, including 20 special-status animals, 23 special-status plants, and two vegetation communities of concern have been reported in USGS map quadrangles which contain and surround the project site. The potential for these elements to be impacted by the proposed project, are listed in Table 3.4-2. Figures 3.4-1, 3.4-2, and 3.4-3 are maps that illustrate the CNDDB occurrences of plants, animals, and habitat communities reported near the project site.

The "potential for occurrence" ranking identified in Table 3.4-2 is based on the following criteria:

- Absent. Species was not observed during focused surveys conducted at an appropriate time for identification of the species or species is restricted to habitats that do not occur within the proposed project area.

- Low. No records exist of the species occurring within the proposed project area or its immediate vicinity and/or habitats needed to support the species are of poor quality.

- Moderate. Either a historical record exists of the species within the immediate vicinity of the proposed project (approximately 5 miles) or the habitat requirements associated with the species occur within the proposed project area.

- High. Both a historical record exists of the species within the proposed project and its immediate vicinity (approximately 5 miles) and the habitat requirements associated with the species occur within the proposed project area.

- Occurs. Species was observed within the proposed project area at the time of the survey.

Table 3.4-2
Special-Status Animal and Plant Species Reported by the CNDDB and CNPS for the Merced and Eight Surrounding USGS 7.5-minute Quadrangles

Species	Habitat	Status	Potential for Occurrence in Project Area
ANIMALS			
Agelaius tricolor (tricolored blackbird)	Occurs near fresh water with dense cattails, tules or willow thickets. May forage for waste grain in agricultural areas.	MBTA, CSC	Low. No nesting habitat present, species could potentially forage on site and in other agricultural fields in the area.

Species	Habitat	Status	Potential for Occurrence in Project Area
Ambystoma californiense (California tiger salamander)	Requires underground refuges, especially ground squirrel burrows and vernal pools or other seasonal water sources for breeding.	FT, CSC	Absent. No habitat present, site has been leveled and disked.
Athene cunicularia (burrowing owl)	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Dependent upon burrowing mammals, notably the California ground squirrel, for subterranean nest sites.	MBTA, CSC	Low. The site has been disked and only a few ground squirrel burrows (burrowing owls use ground squirrel burrows as nesting sites) were observed on site during the field surveys. No burrowing owls were observed during the field surveys.
Branchinecta conservatio (Conservancy fairy shrimp)	Large, turbid pools; inhabits astatic pools located in swales formed by old, braided allubium, filled by winter/spring rains. Endemic to the grasslands of the northern two-thirds of the Central Valley.	FE	Absent. No habitat present, site has been leveled and disked.
Branchinecta lynchi (vernal pool fairy shrimp)	Astatic rain-filled pools, usually small, clear-water sandstone-depression pools and grassland swale, earth slump, or basalt-flow depressions. Endemic to the grasslands of the Central Valley, Central Coast Mtns., and South Coast Mtns.	FT	Absent. No habitat present, site has been leveled and disked.
Branchinecta mesovallensis (midvalley fairy shrimp)	Vernal pools in the Central Valley.	---	Absent. No habitat present, site has been leveled and disked.
Buteo swainsoni (Swainson's hawk)	Breeds in stands with few trees in juniper-sage flats, riparian areas and in oak savannah. Requires adjacent suitable foraging areas such as grasslands, alfalfa, or grain fields supporting rodent population.	MBTA, CT	Moderate4. The project site has been disked and does not support a suitable small mammal prey base for Swainson's hawks; however, some of the surrounding agricultural fields support suitable foraging habitat for this species and the project site has historically been used for alfalfa and other row crops that can support a suitable small mammal prey base. In addition, the large eucalyptus trees on site could be used as nest trees.
Charadrius montanus (mountain plover)	Short grasslands and plowed fields of the Central Valley from Sutter and Yuba counties southward. It is also found in foothill valleys west of the San Joaquin Valley, and in Imperial Valley.	MBTA, CSC	Absent. No habitat present.

Species	Habitat	Status	Potential for Occurrence in Project Area
Dipodomys heermanni dixoni (Merced kangaroo rat)	Grassland and savanna communities in eastern Merced and Stanislaus Counties. Needs fine, deep, well-drained soil for burrowing. Although granivourous, also eats forbs and green grasses.	---	Absent. No habitat present, site has been leveled and disked.
Emys (=*Clemmys*) *marmorata* (western pond turtle)	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat for egg-laying (sandy banks or grassy open fields).	CSC	Low. Cottonwood Creek had water in it at the time of the field survey, however, this waterway is shallow, intermittent, has relatively steep banks, and lacks suitable basking sites for this species.
Gambelia sila (blunt-nosed leopard lizard)	Inhabits sparsely vegetated alkali and desert scrub habitats in areas of low topographic relief. Preferred habitat includes semiarid grasslands, alkali flats, and washes. Seeks cover in mammal burrows, under shrubs, or structures such as fence posts; they do not excavate their own burrows.	FE, CE	Absent. No habitat present, site has been leveled and disked.
Lepidurus packardi (vernal pool tadpole shrimp)	Vernal pools and swales with clear to highly turbid water, in the Sacramento Valley. Pools commonly found in grass bottomed swales of unplowed grasslands.	FE	Absent. No habitat present, site has been leveled and disked.
Linderiella occidentalis (California linderiella)	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan, or in sandstone depressions.	---	Absent. No habitat present, site has been leveled and disked.
Lytta molesta (molestan blister beetle)	Inhabits the Central Valley of California, from Contra Costa to Kern and Tulare Counties.	---	Absent. No habitat present, site has been leveled and disked.
Mylopharodon conocephalus (hardhead)	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Found in clear, deep pools with sand-gravel-boulder bottoms and slow water velocity.	CSC	Absent. No habitat present.
Myotis yumanensis (Yuma myotis)	Distribution is closely tied to bodies of water; optimal habitats are open forests and woodlands with sources of water over which to feed. Maternity colonies in caves, mines, buildings, or crevices.	---	Low. No nesting habitat on site, species could potentially forage on site during foraging flights.
Perognathus inornatus inornatus (San Joaquin pocket mouse)	Typically, found in grasslands and blue oak savannas. Needs friable soils for burrowing.	---	Absent. No habitat present, site has been leveled and disked.

Species	Habitat	Status	Potential for Occurrence in Project Area
Spea (=Scaphiopus) hammondii (western spadefoot)	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools and other wet areas are essential for egg-laying.	CSC	Absent. No habitat present, site has been leveled and disked.
Thamnophis gigas (giant garter snake)	Prefers freshwater marsh and low gradient streams, although has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes of California.	FT, CT	Low. Cottonwood Creek and the irrigation ditches would be the only waterways on the project site that could be used by this species, however, the only recorded observation from the CNDDB review is a historical observation in 1908 in the vicinity of Merced.
Vulpes macrotis mutica (San Joaquin kit fox)	Annual grasslands or grassy open stages with scattered shrubby vegetation, often chenopod scrub. Requires loose-textured sandy soils for burrowing, and a suitable prey base.	FE, CT	Low. The project site could provide limited foraging opportunities, but no kit fox use was observed onsite. Several recorded observations have been seen on grazed pasture 5 miles east of the project site.
PLANTS			
Agrostis hendersonii (Henderson's bent grass)	Valley and foothill grasslands, vernal pools; moist places.	3	Absent. No habitat present.
Atriplex cordulata (heartscale)	Chenopod scrub, valley and foothill grassland, meadows. Alkaline flats and scalds, on sandy soils.	1B	Absent. No habitat present.
Atriplex depressa (brittlescale)	Vernal pools, playas, alkaline clay soils.	1B	Absent. No habitat present.
Atriplex minuscula (lesser saltscale)	Sandy, alkaline soils in chenopod scrub, playas, valley and foothill grasslands.	1B	Absent. No habitat present.
Atriplex persistens (vernal pool smallscale)	Alkaline vernal pools.	1B	Absent. No habitat present.
Atriplex subtilis (subtle orache)	Valley and foothill grasslands.	1B	Absent. No habitat present.
Calycadenia hooveri (Hoover's calycadenia)	Cismontane woodland, valley and foothill grassland; on exposed, rocky, barren soil.	1B	Absent. No habitat present.
Castilleja campestris ssp. *succulenta* (succulent owl's-clover)	Vernal pools, valley and foothill grassland; in moist places and often in acidic soils.	FT, CE, 1B	Absent. No habitat present.
Clarkia rostrata (beaked clarkia)	Cismontane woodland, valley and foothill grassland. Occurs on north-facing slopes; sometimes on sandstone.	1B	Absent. No habitat present.
Cryptantha hooveri (Hoover's cryptantha)	Sandy soils within valley and foothill grasslands.	1B	Absent. No habitat present.
Delphinium recurvatum (recurved larkspur)	Alkaline soils in chenopod scrub, valley and foothill grasslands, and cismontane woodlands.	1B	Absent. No habitat present.

Species	Habitat	Status	Potential for Occurrence in Project Area
Downingia pusilla (dwarf downingia)	Valley and foothill grasslands and several types of vernal pools; occurs along vernal lake and pool margins with a variety of associates.	2	Absent. No habitat present.
Eryngium racemosum (Delta button-celery)	Riparian scrub; on clay in seasonally inundated floodplain.	CE, 1B	Absent. No habitat present.
Eryngium spinosepalum (spiny-sepaled button-celery)	Vernal pools, depressions within grasslands. Some sites on clay soil of granitic origin.	1B	Absent. No habitat present.
*Gratiola heterosepala (*Boggs Lake hedge-hyssop*)*	Occurs on clay soils in freshwater marshes and swamps, and vernal pools.	CE, 1B	Absent. No habitat present.
Navarretia myersii ssp. *myersii* (pincushion navarretia)	Vernal pools, valley and foothill grasslands. Often on clay soils within nonnative grasslands.	1B	Absent. No habitat present.
Navarretia nigelliformis ssp. *radians* (shining navarretia)	Cismontane woodland, valley and foothill grassland, vernal pools.	1B	Absent. No habitat present.
Neostapfia colusana (Colusa grass)	Vernal pools, usually in large or deep pool bottoms; on adobe soils.	FT, CE, 1B	Absent. No habitat present.
Orcuttia inaequalis (San Joaquin Valley orcutt grass)	Vernal pools; endemic to the San Joaquin Valley	FT, CE, 1B	Absent. No habitat present.
Orcuttia pilosa (hairy orcutt grass)	Vernal pools; endemic to the Sacramento Valley.	FE, CE, 1B	Absent. No habitat present.
Phacelia ciliata var. *opaca* (Merced phacelia)	Valley and foothill grassland; on adobe or clay soils of valley floors, open hills, or alkaline flats. Endemic to Merced County.	1B	Absent. No habitat present.
Sagittaria sanfordii (Sanford's arrowhead)	Occurs in marshes and swamps, in standing or slow-moving freshwater ponds, marshes and ditches.	1B	Low. Cottonwood Creek supports low quality habitat, however, no *Sagittaria* spp. were observed during the field surveys.
Tuctoria greenei (Greene's tuctoria)	Vernal pools, valley and foothill grassland; often occurs in dry bottoms of vernal pools in open grasslands.	FT, CR, 1B	Absent. No habitat present.
VEGETATION COMMUNITIES			
Northern Claypan Vernal Pool			Absent.
Northern Hardpan Vernal Pool			Absent.

STATUS CODES

FE	Federal Endangered Species
FT	Federal Threatened Species
MBTA	Species Protected under the Auspices of the Migratory Bird treaty Act
CE	California Endangered Species
CT	California Threatened Species
CR	California Rare Plant Species
CSC	California Department of Fish and Game Species of Special Concern
1B	California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and Elsewhere.

Species	Habitat	Status	Potential for Occurrence in Project Area
2	California Native Plant Society List 2 Species-Plants Categorized as Rare, Threatened, or Endangered in California, but more Common Elsewhere.		
3	California Native Plant Society List 3 Species-Plants about which More Information is Needed-A Review List.		
---	None		

SPECIAL STATUS SPECIES

Because the proposed Mercy Medical Center is to be constructed on disturbed agricultural land that has not been in production for years, the project site provides limited opportunities for special-status animal species.

The project site provides very limited denning or foraging opportunities. No sign (e.g., tracks, scat, dens, prey remains, etc.) of San Joaquin kit fox presence was observed during the field survey. The closest observation of kit fox is east of the project site on grazed pastures near Yosemite Lake. Because of the amount of agricultural disturbance, surrounding development, construction, and limited foraging opportunities, San Joaquin kit fox are not believed to be an issue regarding this project; therefore, no further discussion of this species is warranted in this document.

Of the species identified in Table 3.4-2, only two species have the potential to utilize the site. These are the burrowing owl, and Swainson's hawk. Further discussion on these species is provided below.

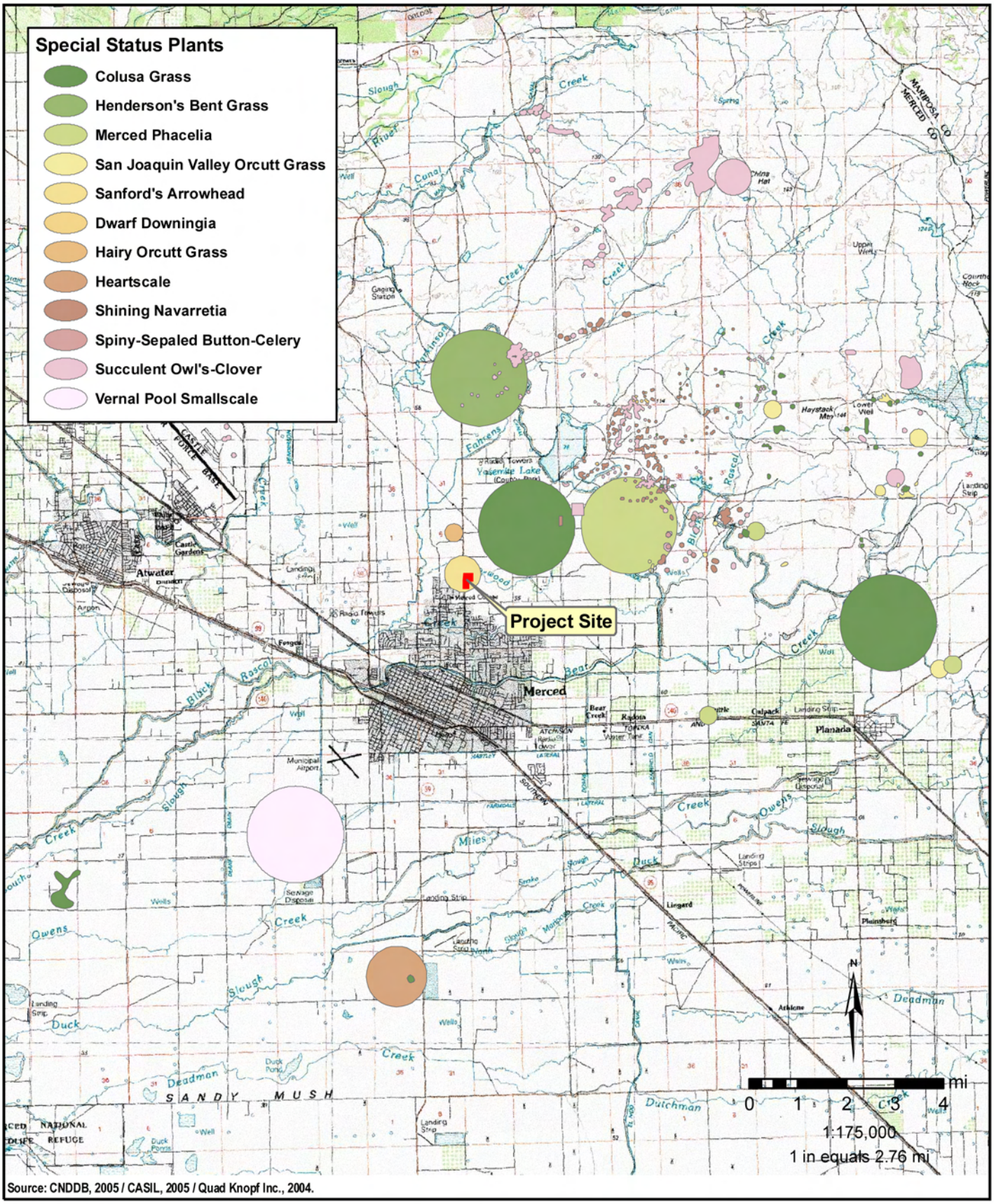
Burrowing owl

The burrowing owl (*Athene cunicularia*) is a small, terrestrial owl of open prairie and grassland habitats, and is the only owl that routinely lives and nests underground. In California, burrowing owls inhabit annual and perennial grasslands, deserts, and arid scrublands characterized by low-growing vegetation (Zarn 1974, CDFG 1985). In 1979, the CDFG designated the burrowing owl a Species of Special Concern as a result of diminishing habitat and concurrent population declines (CDFG 1995).

Presence on site. The biotic habitats found on the project site do not currently support a large small mammal prey base. In addition, on-going ground disturbance associated with agricultural activities would be expected to make the project site ill-suited for burrowing owl nesting. The project site did not contain the appropriate natural nesting habitat (burrows), and there were no burrowing owls observed during the project survey. It is considered unlikely that the proposed project would have any significant adverse effects on burrowing owls because they do not currently occur on the project site.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is state listed as threatened. This species is distinguished from most other hawks by its long, narrow-pointed wings. The plumage is extremely variable and this raptor can be mistaken for other species. There are three main color variations: light, rufous, and dark, all of which have been observed in California. The adult female is typically



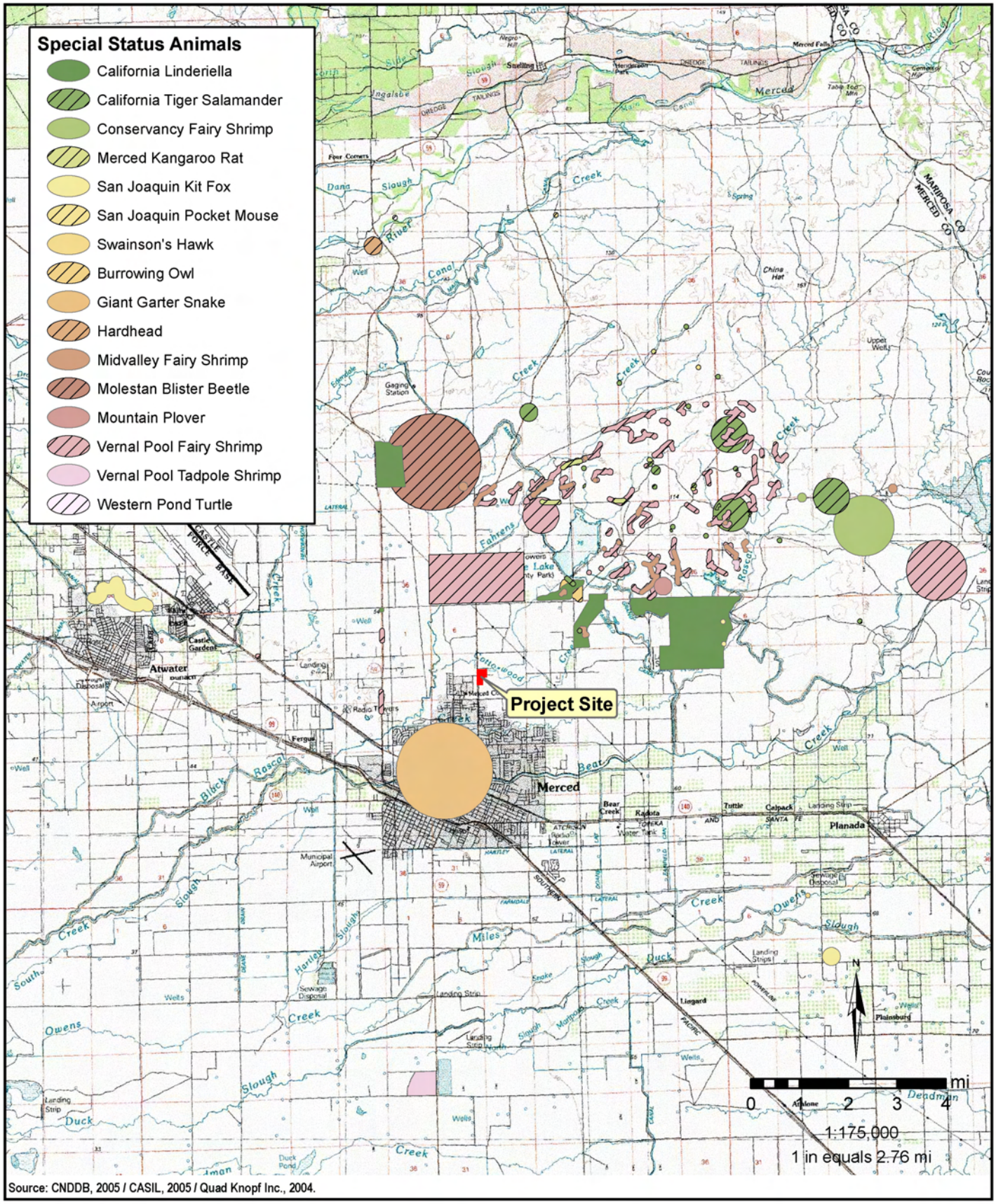
Source: CNDDB, 2005 / CASIL, 2005 / Quad Knopf Inc., 2004.

Quad Knopf

CNDDB PLANT OBSERVATION LOCATIONS

Figure 3.4-1

Job No. 04385



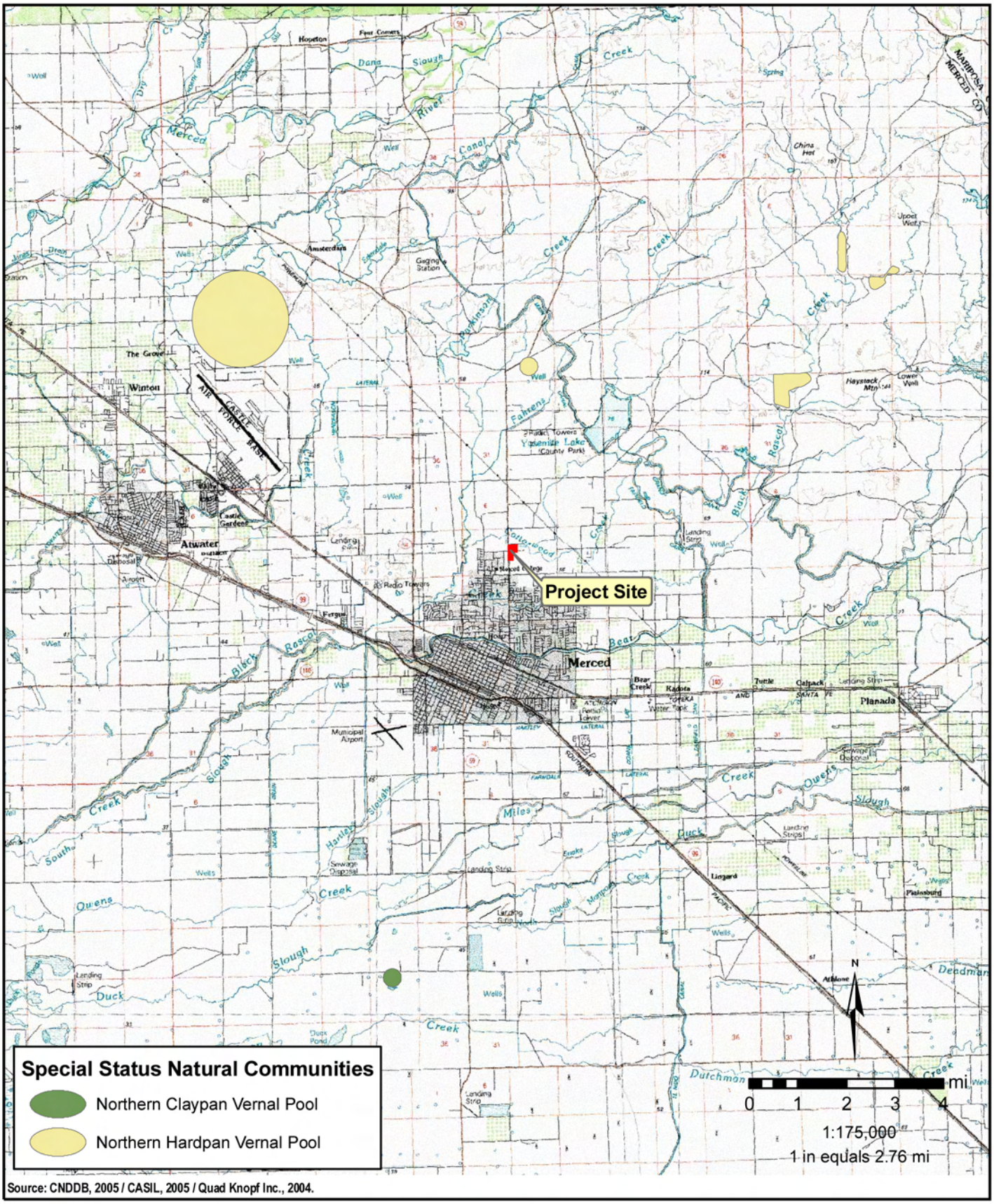
Source: CNDDB, 2005 / CASIL, 2005 / Quad Knopf Inc., 2004.

Quad Knopf

CNDDB ANIMAL OBSERVATION LOCATIONS

Figure 3.4-2

Job No. 04385



Source: CNDDB, 2005 / CASIL, 2005 / Quad Knopf Inc., 2004.

Quad Knopf

CNDDB TERRESTRIAL NATURAL COMMUNITY OBSERVATION LOCATIONS

Figure 3.4-3

Job No. 04385

slightly larger than the male weighing an average of 28 to 34 ounces, while males average about 25 to 31 ounces. Swainson's hawks forage for several small mammals and reptiles, but a large portion of its diet consists of insects, especially in the late summer and fall when they are migrating southward. This species requires large, open grasslands with abundant prey in association with suitable nest trees such as oaks, cottonwoods, walnuts, and willows in the Central Valley, and juniper in the Great Basin. Suitable hunting grounds include native grasslands or lightly grazed pastures, alfalfa and other hay crops and certain grain and row croplands. Croplands in which prey is scarce or difficult to acquire because of the density of vegetative cover, are unsuitable as hunting grounds. Examples include mature vineyards, orchards, rice, corn (prior to harvesting), and cotton crops. Swainson's hawk prey includes small mammals such as mice, gophers, ground squirrels, rabbits, and most commonly, voles. The Swainson's hawk will also feed on small birds, bats, and insects that it captures while in flight.

Presence on site. Swainson's hawk is known to forage within a 10-mile radius of their nest. A few Swainson's hawk nests occur within a 10 mile radius of the project site, and several occur just beyond the 10-mile radius of the project site. At the time of the field survey the project site was considered low quality foraging habitat for the Swainson's hawk, although suitable foraging habitat is provided to the north. Historically, the project site has been planted in crops that are optimal for Swainson's hawk. The eucalyptus trees located on the northern property edge could provide potential nesting locations for this species. The potential for this species to forage on the project site is considered moderate, and the potential for this species to forage in the area is relatively high.

Wetland Determination

A wetland determination was prepared by Quad Knopf for verification by the COE. The project site has two areas that qualify as "Waters of the United States" or "jurisdictional waters." Cottonwood Creek has been relocated and channelized; however, it does qualify as a jurisdictional waterway.

Sells Lateral, an irrigation canal, does support all COE wetlands criteria, but continues to provide water to onsite cultivated areas. If the COE determines upon verification of the wetland delineation that Sells Lateral is subject to Section 404, a permit would need to be obtained for any fill material that would enter into the irrigation canal. For purposes of this EIR it is assumed that Sells lateral is a wetland and jurisdictional water of the United States subject to Section 404 of the federal Clean Water Act.

The overflow ditch that runs between Sells lateral and Cottonwood Creek does not qualify and would not be subject to COE jurisdiction.

3.4.3 IMPACT EVALUATION CRITERIA

For the purposes of this report, specific project impacts to biological resources may be considered "significant" if they will:

- Have a substantial adverse effect, 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 CDFG or USFWS;

- 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 CDFG or USFWS;

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;

- Conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.4.4 IMPACTS & MITIGATION MEASURES

Impact #3.4-1: Substantial adverse impacts on candidate, special-status or sensitive species

Discussion and Conclusion: The CNDDB search identified several documented special status species within the region. There are no records of special status species present on the project site and there have been no observations of any during a reconnaissance survey. The biotic habitats of the project site, like most of the remaining lands in the region, have been drastically altered from their original form by human-caused disturbances, principally intensive agriculture and residential development. Because of the frequent disturbance regime from agricultural activities the baseline conditions at the project site is considered low quality habitat for plants and animals and no special status species are expected to occupy the project site. The project site may provide foraging habitat for two avian special status species and may provide nesting habitat for raptors. These issues are discussed in a separate impact discussion (Impact 3.4-3 and 3.4-5). There may be temporary occupancies of the project site by animals that are highly mobile such as migratory birds, although this would be considered a rarity and the stay would be short lived because of the lack of optimal habitat. Implementation of the proposed project would result in a ***less-than-significant*** impact.

Mitigation Measure

No mitigation measure is required.

Impact #3.4-2: Loss of habitat to special-status plants

Discussion and Conclusion: The CNDDB search identified several documented special status plant species within the region. There are no records of special status plant species present on the project site and there have been no observations of any during a reconnaissance survey. Because of the frequent disturbance regime from agricultural activities the baseline conditions at the project site are not conducive to special status plants. Implementation of the proposed project would result in ***no impact***.

Mitigation Measure

No mitigation measure is required.

Impact #3.4-3: Loss of Swainson's hawk foraging habitat

Discussion and Conclusion: Currently, the project site provides suitable habitat for only two special-status animal species; both are avian species (burrowing owl and Swainson's hawk) and may forage and potentially nest on the project site. Different terrains and crop types support different levels of prey abundance. Swainson's hawks are known to forage in certain low lying agricultural crops (e.g., alfalfa fields and other hay crops), grasslands, and fallow fields. Although no nesting habitat for Swainson's hawk was observed on the project site, foraging opportunities do exist and documented nests are located within a 10 mile radius of the project site. Although the foraging conditions on the project site are not considered optimal, the conversion of the project site to urbanized land would result in a permanent loss of available foraging habitat for Swainson's hawk. This is considered a ***potentially significant*** impact.

Mitigation Measure

Implementation the following mitigation measure would reduce the impact to a ***less-than-significant*** level.

Mitigation Measure #3.4-3:

The project proponent shall provide .5 acres of habitat mitigation land for each acre authorized for conversion (.5:1 ratio). All habitat mitigation lands protected under this requirement may be protected through fee title acquisition or a conservation easement (acceptable to the Department of Fish and Game) on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk.

The project proponent shall provide for the long-term management of the habitat mitigation land by funding a management endowment (the interest on which shall be used

for managing the habitat management lands) at a rate per acre that is acceptable to the Department of Fish and Game.

Impact #3.4-4: Interference with movement of native wildlife

Discussion and Conclusion: Although formal studies of wildlife movement in the study area were not conducted, it is not considered likely that any portions of the project site serve as an important linkage between wildlife habitats, although some wildlife species may pass through. Surrounding biotic habitats are similar, with intensively managed agricultural land further diminishing the possibility that the project site is important for terrestrial wildlife movement.

According to the *Recovery Plan for Upland Species of the San Joaquin Valley* (USFWS 1998), no wildlife linkage corridors are located in the project area. In addition, the project site is situated within an existing development area further reducing a possible linkage potential. Therefore, the proposed project will have a ***less-than-significant*** impact on the regional movements of terrestrial wildlife.

Mitigation Measure

No mitigation measure is required.

Impact #3.4-5: Loss of habitat for special-status species

Discussion and Conclusion: Suitable habitat for tree-nesting raptors exists on the project site. The proposed project would include the removal of the trees located along Cottonwood Creek and Sells Lateral. Construction activities that would adversely affect future raptor nesting activity (even off site), or result in mortality of individual birds, would be a violation of state and federal law. In addition, although no burrowing owls were detected during the field survey, suitable habitat for this species exists adjacent to the project site. Construction activities during the raptor breeding season (February through September) that would result in the abandonment of active nests (if any occurred) or direct mortality to these birds would constitute a significant impact. This is a potentially significant impact to nesting raptors (e.g., tree nesting raptors immediately on and off-site and burrowing owls). Additionally, construction activities that would harm or kill a burrowing owl (a ground nesting raptor) during the non-breeding season would also constitute a ***potentially-significant*** impact.

Mitigation Measure

Mitigation measures for potential impacts to special-status species habitat are set forth by the California Department of Fish and Game, and have been shown to effectively minimize the potential loss of such habitat. Implementation of the following mitigation measure would reduce this potential impact to a ***less-than-significant*** level and would keep the applicant in compliance with the state and federal laws governing raptor nests.

Mitigation Measure #3.4-5:

- *A qualified biologist shall conduct a pre-construction survey for nesting raptors (including both tree and ground nesting species) on site within 30 days of the onset of ground disturbance, if ground disturbance is to occur during the breeding season (February 1 to September 15). These surveys shall be based on the accepted protocols for the target species. If a nesting raptor were detected, an appropriate construction buffer would be needed (up to 250 feet or more). The actual size of the buffer would depend on the species, topography, and type of construction activity that would occur near the nest. If construction occurs during the non-breeding season, a qualified biologist shall conduct pre-construction surveys for burrowing owls. Pre-construction surveys during the non-breeding season are not necessary for raptors.*

- *If burrowing owls are detected on site during the non-breeding season, placing one-way doors in the burrows and leaving them in place for a minimum of three days can passively relocate them. Once it has been determined that the owls have vacated the site, the burrows can be collapsed and ground disturbance can proceed. Although this recommended mitigation measure avoids a direct take of the species, it is an indirect impact on the species. This indirect impact on the species, if they are detected on the project site, would be considered a significant and unavoidable impact.*

Impact #3.4-6a: Construction impacts to federally protected wetlands or jurisdictional waterways – Rerouting of Sells Lateral

Discussion and Conclusion: Quad Knopf, Inc. conducted a wetland delineation and has prepared a wetland determination for verification by the COE. This EIR assumes that the COE will verify the wetland determination that both Cottonwood Creek and Sells Lateral are jurisdictional waters and regulatory permits would be required prior to any disturbance to these jurisdictional waters. The proposed project includes rerouting Sells Lateral, which would cause fill material to enter into the existing Sells Lateral and construction of an alternate route for the lateral. This is a potentially significant impact. Implementation of this portion of the proposed project would be a violation of the federal Clean Water Act and the Fish and Game Code unless a Section 404 permit, a Section 401 water quality certification, and a Stream Bed Alteration Agreement are obtained from regulatory agencies. Obtaining these permits is required by law, yet they do not mitigate the impact. The existing Sells Lateral would be completely buried. The residual impact is ***significant and unavoidable***.

Mitigation Measure

No mitigation measures are available.

Impact #3.4-6b: Construction impacts to federally protected wetlands or jurisdictional waterways – Connecting Sells Lateral to Cottonwood Creek

Discussion and Conclusion: The rerouting of Sells Lateral to Cottonwood Creek would cause fill material to enter into Cottonwood Creek at the point where they converge. Implementation of this portion of the proposed project would be a violation of the federal Clean Water Act and the Fish and Game Code unless a Section 404 permit, a Section 401 water quality certification, and a Stream Bed Alteration Agreement are obtained. This is a ***potentially significant*** impact.

Mitigation Measure

Implementation of the following mitigation measure would reduce the impact to a ***less-than-significant*** level.

Mitigation Measure #3.4-6b:

The project proponent shall prepare a restoration plan that provides measures to restore the area where the new Sells Lateral would connect to Cottonwood Creek and in the area where tree removal or any other disturbance would occur in Cottonwood Creek. The restoration plan shall provide for the re-contouring and replanting of convergence area and the tree removal area. The restoration plan shall provide a plan for grading, soil preparation, planting, and maintenance and monitoring for the restoration area. The restoration plan shall provide recommendations on the use of vegetation, rock material, or a combination of both, in the convergence area to minimize erosion as appropriate based on the expected water flows. The restoration plan is subject to approval by the Army Corps of Engineers.

Impact #3.4-6c: Construction impacts to federally protected wetlands or jurisdictional waterways – Removal of trees in Cottonwood Creek

Discussion and Conclusion: The proposed project would require the removal of numerous trees located in Cottonwood Creek. Removal of the trees would require construction activities to occur within the bed of Cottonwood Creek. Implementation of this portion of the proposed project would be a violation of the federal Clean Water Act and the Fish and Game Code unless a Section 404 permit, a Section 401 water quality certification, and a Stream Bed Alteration Agreement are obtained. This is a ***potentially significant*** impact.

Mitigation Measure

Implementation of the previously cited Mitigation Measure #3.4-6b would reduce the impact to a ***less-than-significant*** level.

Impact #3.4-6d: Construction impacts to federally protected wetlands or jurisdictional waterways – Inadvertent construction impacts on Cottonwood Creek

Discussion and Conclusion: Construction activities may inadvertently cause fill material to enter into Cottonwood Creek. Project plans do not indicate a buffer that would prevent an inadvertent fill. This potentially significant impact can be avoided entirely by providing for a buffer area and

clearly marking the area as a tractor-keep-out zone. Avoidance of this area would eliminate any need for obtaining a Section 404 or 401 permit or Streambed Alteration Agreement for an inadvertent fill during construction. This is a ***potentially significant*** impact.

Mitigation Measure

Implementation of the following mitigation measure would reduce the impact to a ***less-than-significant*** level.

Mitigation Measure #3.4-6d:

The project proponent shall avoid disturbance to Cottonwood Creek during construction by establishing a minimum 20-foot buffer. The 20-foot buffer shall be clearly marked with orange construction fencing so that it is visible to equipment operators.

Impact #3.4-7: Degradation of water quality in seasonal creeks, reservoirs and downstream waters

Discussion and Conclusion: The construction phase of the proposed project could cause storm water runoff to enter the Cottonwood Creek or Sells Lateral, and ultimately larger waters of the U.S. The Clean Water Act requires each construction project that is over one acre in size to submit a Notice of Intent and a Storm Water Pollution Prevention Plan (SWPPP) to the Regional Water Quality Control Board to obtain a NPDES General Construction permit. SWPPPs include temporary drainage ditches, culverts, berms, and/or straw bales that trap storm water and prevent it from carrying sedimentation off of the project site. SWPPPs are designed to control storm water quality degradation to the extent practicable using best management practices during and after construction. The project proponent would be required to prepare the SWPPP and file a Notice of Intent with the RWQCB prior to the construction phase of the project. Implementation of the SWPPP in accordance with the standard conditions of a NPDES General Permit, the impacts to jurisdictional waters and water quality is ***less than significant***.

Mitigation Measure

No mitigation measure is required.

Impact #3.4-8: Contribution to cumulative impacts affecting biotic resources that would likely result from the development of the proposed Mercy Medical Center

Discussion and Conclusion: The development of the project site would have negligible, if any adverse effects on the diversity and abundance of native flora in the region. The project site has no potential to support a high diversity of native plants. In addition, most wildlife species associated with the project site are species that are adapted to disturbance of the type caused by agricultural practices. However, development of the project site would cumulatively remove foraging habitat for Swainson's hawk and burrowing owl. The total carrying capacity for these and other wildlife species that occur within the region would be cumulatively reduced.

Mitigation measures have been presented that would require conservation easements to be established on other lands that function as foraging habitat for these species. However, the establishment of the conservation easements does not fully mitigate the cumulative loss of this habitat. This is a ***significant and unavoidable*** impact.

Mitigation Measure

No mitigation measures are available.

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3.5 Cultural Resources

This section of the EIR describes cultural resources which exist in the vicinity of, and could be adversely affected by, the proposed Mercy Medical Center. Cultural resources are defined as prehistoric and historic archeological sites, architectural properties (e.g., buildings, bridges, and structures), and traditional properties with significance to Native Americans. This definition includes historic properties as defined by the National Historic Preservation Act (NHPA).

During the Notice of Preparation period, a recommendation was received from Caltrans which encouraged contacting the Native American Heritage Commission for advice on consulting with Native Americans regarding any cultural concerns within the project area.

3.5.1 REGULATORY SETTING

Federal, state, and local governments have developed laws and regulations which are designed to protect significant cultural resources that may be affected by proposed projects. The National Historic Preservation Act and the California Environmental Quality Act are the basic federal and state laws governing the preservation of historic and archaeological resources national, regional, state, and local significance.

Federal Regulations

NATIONAL HISTORIC PRESERVATION ACT

The National Historic Preservation Act was enacted in 1966 as a means to protect cultural resources that are eligible to be listed on the National Register of Historic Places (NRHP). The law sets forth criterion that are used to evaluate the eligibility of cultural resources. The National Register of Historic Places is composed of districts, sites, buildings, structures, objects, architecture, archaeology, engineering, and culture that is significant to American History.

Virtually any physical evidence of past human activity can be considered a cultural resource, although not all such resources are considered to be significant and eligible for listing. They often provide the only means of reconstructing the human history of a given site or region, particularly where there is no written history of that area or that period. Consequently, their significance is judged largely in terms of their historical or archaeological interpretive values. Along with research values, cultural resources can be significant, in part, for their aesthetic, educational, cultural and religious values

State Regulations

CALIFORNIA HISTORIC REGISTER ACT

The California Register Act was enacted in 1992 and codified in the Public Resource Code §5020, 5024 and 21085. This law created the California Register of Historical Resources and established criteria for assessing a “substantial adverse change” to a property that may be eligible for listing in the California Register of Historical Resources.

The law creates several categories of properties that may be eligible for the California Register. Certain properties are included in the program automatically, including: properties listed in the National Register of Historic Places; properties determined eligible for listing in the National Register of Historic Places; and certain classes of State Historical Landmarks. Other properties may be added through a nomination process and according to criteria yet to be developed by the State Historical Resources Commission (SHRC). The most practical criteria for assessing eligibility for the California Register are the criteria for listing in the National Register of Historic Places. The National Park Service has developed explicit eligibility criteria for listing in the National Register and guidelines for applying those criteria.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 15064.5 of the CEQA Guidelines provides guidance for determining the significance of impacts to archaeological and historical resources. Demolition or material alteration of a historical resource, including archaeological sites, is generally considered a significant impact. CEQA requires lead agencies to carefully consider the potential effects of a project on historical resources. A "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant (Public Resources Code §5020.1). Section 15064.5 of the CEQA Guidelines specifies criteria for evaluating the importance of cultural resources, including:

- The resource is associated with events that have made a contribution to the broad patterns of California history;
- The resource is associated with the lives of important persons from our past;
- The resource embodies the distinctive characteristics of a type, period, region or method construction, or represents the work of an important individual or possesses high artistic values; or
- The resource has yielded, or may be likely to yield, important information in prehistory or history.

CALIFORNIA HEALTH AND SAFETY CODE, § 7050.5 (B)

Requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are identified as Native American, the coroner must contact the California Native American Heritage Commission.

PUBLIC RESOURCES CODE, § 5024 AND 5024.5

Requires State agencies to inventory and protect historical structures and artifacts under their jurisdiction.

CONFIDENTIALITY

California Government Code Section 6254.10 exempts archaeological site information from the California Public Records Act, to prevent vandalism, trespassing, and unauthorized artifact acquisition. Locational information is not circulated as part of public documents.

Local Regulations

CITY OF MERCED VISION 2015 GENERAL PLAN

Chapter 8, the Sustainable Development chapter of the *Merced Vision 2015 General Plan* contains specific goals and actions intended to guide future City historic preservation efforts.

Goals

SD-2: CULTURAL RESOURCES:

- **A Diverse and Rich Historic and Cultural Resource Environment**
- **A Long Term Community Historic Preservation/ Improvement Program**

Policies

SD-2.1 Identify and preserve the City's archaeological resources.

2.1a: Utilize the inventory of known archeological sites maintained in the Central California Information Center for the review of development proposals

2.1b: Utilize standard practices for preserving archaeological materials that are unearthed during construction, as prescribed by the State Office of Historic Preservation.

2.1c: If appropriate, consider reconstruction of archaeological sites in city parks, on school grounds, in open space areas, or other suitable locations where they can serve an educational purpose.

SD-2.2 Identify and preserve the City's historic and cultural resources.

2.2 a. Expand City cultural and historic information resources.

2.2b. Support community groups and individuals working to preserve, protect and enhance the City's Historic and Cultural Resources.

2.2c. Review and revise as necessary, the City's development/construction regulations to facilitate the preservation of historic structures.

2.2d. Support, as feasible, efforts to promote the preservation of historically or architecturally significant structures in the City.

2.2 e. Support efforts to designate historic districts within the City.

3.5.2 ENVIRONMENTAL SETTING

The project area proposed for the development of the Mercy Medical Center by Catholic Healthcare West, is located in Merced, California, opposite Merced College. It is bordered by G Street (formerly Six Mile Road) on the west and bisected by Cormorant Drive. The proposed medical campus will include the cancer treatment center, the only building now standing on the property.

The project site consists of approximately 30 acres in the western portion of section 8, Township 7 South, Range 14 East, and is mapped on the Merced 7.5' USGS topographic sheets.

Archeology

The Central Valley region was among the first in the state to attract intensive fieldwork, and research has continued to the present day. This has resulted in a substantial accumulation of data. In the early decades of the 1900s, E.J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W.E. Schenck (Schenck and Dawson 1929). By 1933, the focus of work was directed to the Cosumnes locality, where survey and excavation were conducted by the Sacramento Junior College (Lillard and Purves 1936). Excavation data, in particular from the stratified Windmiller site (CA-Sac-107), suggested two temporally distinct cultural traditions. Later work at other mounds by Sacramento Junior College and the University of California, Berkeley, enabled the investigators to identify a third cultural tradition, intermediate between the previously postulated Early and Late Horizons. The three-horizon sequence, based on discrete changes in ornamental artifacts and mortuary practices, as well as on observed differences in soils within sites (Lillard, Heizer and Fenenga 1939), was later refined by Beardsley (1954). An expanded definition of artifacts diagnostic of each time period was developed, and its application extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California.

The Windmiller Culture (Early Horizon) is characterized by ventrally-extended burials (some dorsal extensions are known), with westerly orientation of heads; a high percentage of burials with grave goods; frequent presence of red ocher in graves; large projectile points, of which 60 percent are of materials other than obsidian; rectangular *Haliotis* beads; *Olivella* shell beads (types A1a and L); rare use of bone; some use of baked clay objects; and well-fashioned charmstones, usually perforated.

The Cosumnes Culture (Middle Horizon) displays considerable changes from the preceding cultural expression. The burial mode is predominately flexed, with variable cardinal orientation and some cremations present. There is a lower percentage of burials with grave goods, and ocher staining is common in graves. *Olivella* beads of types C1, F and G predominate, and there is abundant use of green *Haliotis sp.* rather than red *Haliotis sp.* Other characteristic artifacts

include perforated and canid teeth; asymmetrical and "fishtail" charmstones, usually unperforated; cobble mortars and evidence of wooden mortars; extensive use of bone for tools and ornaments; large projectile points, with considerable use of rock other than obsidian; and use of baked clay.

Hotchkiss Culture (Late Horizon) -- The burial pattern retains the use of the flexed mode, and there is wide spread evidence of cremation, lesser use of red ocher, heavy sue of baked clay, *Olivella* beads of Types E and M, extensive use of *Haliotis* ornaments of many elaborate shapes and forms, shaped mortars and cylindrical pestles, bird-bone tubes with elaborate geometric designs, clam shell disc beads, small projectile points indicative of the introduction of the bow and arrow, flanged tubular pipes of steatite and schist, and use of magnesite. (The above adapted from Moratto 1984:181-183). The characteristics noted are not all-inclusive, but cover the more important traits.

Schulz (1981), in an extensive examination of the central California evidence for the use of acorns, used the terms Early, Middle and Late Complexes, but the traits attributed to them remain generally the same. While it is not altogether clear, Schulz seemingly uses the term "Complex" to refer to the particular archeological entities (above called "Horizons") as defined in this region. Ragir's (1972) cultures are the same as Schulz's complexes.

Bennyhoff and Hughes (1984) have presented alternative dating schemes for the Central California Archeological Sequence. The primary emphasis is a more elaborate division of the horizons to reflect what is seen as cultural/temporal changes within the three horizons and a compression of the temporal span.

There have been other chronologies proposed, including Fredrickson (1973), and since it is correlated with Bennyhoff's (1977) work, it does merit discussion. The particular archeological cultural entities Fredrickson has defined, based upon the work of Bennyhoff, are patterns, phases and aspects. Bennyhoff's (1977) work in the Plains Miwok area is the best definition of the Cosumnes District, which likely conforms to Fredrickson's pattern. Fredrickson also proposed periods of time associated heavily with economic modes, which provides a temporal term for comparing contemporary cultural entities. It corresponds with Willey and Phillips' (1958) earlier "tradition," although it is tied more specifically to the archeological record in California.

Ethnography

The project area lies within the ethnographic territory of the Yokuts people. The Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names (Kroeber 1925). Each tribe spoke a particular dialect, common to its members, but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925).

The Yokuts held portions of the San Joaquin Valley from the Tehachapis in the south to Stockton in the north. On the north they were bordered by the Plains Miwok, on the west by the Saclan or Bay Miwok and Costonoan peoples. Although neighbors were often from distinct language

families, differences between the people appear to have been more influenced by environmental factors as opposed to linguistic affinities. Thus the Plains Miwok were more similar to the nearby Yokuts than to foothill members of their own language group. Similarities in cultural inventory co-varied with distance from other groups and proximity to culturally diverse people. The material culture of the southern San Joaquin Yokuts was therefore more closely related to that of their non-Yokuts neighbors than to that of Delta members of their own language group.

Trade was well developed, with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs which formed a maze within the valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. In general, the eastern portion of the San Joaquin Valley provided a lush environment of varied food resources, with the estimated large population centers reflecting this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented along the water ways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925), with most constructed from the readily available tules found in the extensive marshes of the low-lying valley areas. Housepit depressions ranged in diameter from three to eighteen meters.

History

Merced County was first explored by Gabriel Moraga in 1806, when he named the Merced River, "El Rio de Nuestra Señora de la Merced." Moraga's explorations were designed to locate appropriate sites for an inland chain of missions. Moraga explored the region again in 1808 and 1810.

Fur traders began working the streams of the San Joaquin Valley in 1828. Beaver skins may have been gathered by Hudson's Bay Company trappers in the Merced region.

John C. Frémont, on his way leaving California in 1844, proceeded southward from Sutter's Fort, passing through what is now Merced County. His party crossed the Merced River in a boat they constructed, camping on the south bank near the Merced River's junction with the San Joaquin River. The expedition stopped and camped on Bear Creek, five miles from its mouth. They then crossed the Creek, and traveled on into Madera County.

Merced County was carved out of Mariposa County in 1855. The construction of the Southern Pacific Railroad in 1872 brought major changes to the region. The City of Merced was laid out

in January of that year, when the railroad reached the spot. Merced became the County seat in December of 1872 (Hoover, Rensch and Rensch 1990; Gudde 1969: 198-199).

The completion of the Crocker-Huffman canal system led to the colonization of the territory around Merced, and resulted in a rapid expansion of the population. Merced is located in both the center of the State and the Valley, and serves as the gateway to Yosemite Park (Smith 1960: 379).

Method of Analysis

A field inspection of the project area was conducted by Peak & Associates, Inc., on March 6, 2005. The project area was examined by walking transects spaced at 10 meter intervals across the property. Visibility was quite limited in most of the project area due to a dense growth of grasses and weeds. However, there are dirt roads on both banks of Cottonwood Creek, providing visibility for the most archeologically sensitive portion of the project area. It is clear that the rest of the land has been leveled for agriculture, although the land is currently vacant. The only exception to this is the existing cancer treatment center and the landscaped property immediately adjacent to it and Cormorant Drive, which is paved and includes curbs, sidewalks, and a future intersection within the project area. The results of the field inspection did not yield any significant prehistoric of historic period resources within the project area.

The flat lands, seasonally wet, that characterize the terrain are not particularly sensitive for major archeological sites and historic period agricultural practices have further reduced archeological potential of discovery.

PREVIOUS STUDIES

The research for this report includes a record search by the Central California Information Center of the California Historical Resources Information System to identify previously recorded sites and previous cultural resources studies in and near the project area (Appendix D). There are no recorded resources, either archeological or historic, in the project vicinity. Previous surveys in the area have been limited to the right-of-way of G Street/Six Mile Road (Napton 1979) and the property of Merced College, across G Street (URS Corporation 2001; Cartier 2003).

The General Land Office (GLO) plat of the Township dating to 1854 shows no man-made features in the proposed project area, nor does it delineate Cottonwood Creek. However, the GLO surveyors were more interested in establishing section lines than in illustrating internal features. The Information Center noted that the 1948 USGS map of the proposed project area shows Six Mile Road on its modern alignment and a farm access road on the approximate alignment of Cormorant Drive, running from Six Mile Road to a farm house that stood east of the current project area. Surveys had been completed in the project vicinity.

Relevant surveys and historical maps do not indicate any potentially significant historic sites in the project vicinity.

NATIVE AMERICAN CONSULTATION

A Sacred Lands File Check was performed by the Native American Heritage Commission, which failed to indicate the presence of Native American cultural resources in the immediate project area. However, the absence of specific site information does not necessarily preclude the absence of cultural resources. The Commission also provided a list of appropriate Native American contacts for consultation regarding the project site. (See Appendix E)

3.5.3 IMPACT EVALUATION CRITERIA

The following standards of significance are based on Appendix G of the State CEQA Guidelines. For the purposes of this EIR, an impact is considered significant if the proposed Mercy Medical Center will:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

3.5.4 IMPACTS & MITIGATION MEASURES

Impact #3.5-1: Development of the Mercy Medical project site could disturb or destroy buried cultural resources (archaeological, paleontological, or human remains) within the project site.

Discussion and Conclusion: Impacts on cultural resources can result either directly or indirectly from pre-construction activities and construction of a proposed project. Direct impacts are those which result from the immediate disturbance of resources from vegetation removal, vehicle travel over the surface, earthmoving activities, excavation, or alteration of the setting of a resource. Indirect impacts are those which result from increased erosion due to site clearance and preparation, or from inadvertent damage or outright vandalism to exposed resource materials which could occur due to improved accessibility.

Concordant with the mandates of Section 7050.5 of the California Health and Safety Code, if human remains are discovered during the construction phase of a development, all work must stop in the immediate vicinity of the find, and the County Coroner must be notified. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission, which in turn will inform a most likely descendant. The descendant will then recommend to the landowner the appropriate method for the disposition of the remains and any associated grave goods.

The presence of a natural water course in the project area suggests that it is possible that Native Americans could have occupied or used the land. There is no indication that a subsurface prehistoric cultural deposit in the project area is likely to exist, or survived the past intensive agricultural use of the land. However, the possibility cannot be totally eliminated based on a records search and surface inspection. This impact is ***potentially significant.***

Mitigation Measure

The implementation of the following mitigation measure will ensure that any impacts to cultural resources are reduced to a level that is ***less than significant.***

Mitigation Measure #3.5-1:

- *To ensure that buried cultural resources or human remains, if encountered, are recognized by construction crews, a worker education plan shall be initiated prior to project implementation. Information describing potentially significant resource characteristics and the procedures to be followed in the event of such a discovery shall be provided.*

- *Should any artifacts, exotic rock types, or unusual amounts of bone, or shell be uncovered during construction activities, a qualified archaeologist shall be consulted for an on-the-spot-evaluation.*

SOURCES

The Cultural Resource Assessment for the Proposed Mercy Medical Center Project, City of Merced, Merced County, California. Peak and Associates. 24MAR05

Sacred Lands File Check. The Native American Heritage Commission.

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3.6 Geology and Soils

This section describes the existing geological resources and geologic hazards in the vicinity of the proposed Mercy Medical Center, and identifies any specific geological impact that is likely to result from project implementation along with feasible mitigation measures to address those impacts. The City of Merced did not receive any NOP comments regarding geology or soils during the public review period.

3.6.1 REGULATORY SETTING

Federal Regulations

Building standards for all medical facilities, including the Mercy Medical Center, are determined through adopted codes of the State of California Office of Statewide Health Planning and Development (OSHPD). No federal regulations apply to the project.

State Regulations

The California Building Code is based on the U.S. Uniform Building Code. Specific provisions of this code applicable to the project are determined by OSHPD, the agency responsible for both oversight and inspection of building standards for the project. Geologic resources and hazards are under the jurisdiction of the California Division of Mines and Geology (CDMG).

Local Regulations

MERCED VISION 2015 GENERAL PLAN

The Safety Element of the *Merced Vision 2015 General Plan* addresses seismic safety and development in areas of potential ground failures.

Policies

S-2.1. Reduce the potential danger from earthquake and seismic-related activity from existing buildings where necessary.

S-2.2. Encourage the improvement of all public facilities and infrastructure, such as natural gas, fuel, sewer, water, electricity, and railroad lines and equipment, with up-to-date seismic safety features.

S-2.3. Restrict urban development in all areas with potential ground failure characteristics.

3.6.2 ENVIRONMENTAL SETTING

The approximately 30-acre project site is relatively flat, with elevations ranging from 180 to 185 feet. The Mercy Cancer Center, an existing one-story wood-frame structure, occupies 3.8 acres

at the northeast corner of G St. and Cormorant Drive. With the exception of the Mercy Cancer Center, the proposed project site is vacant. The site is composed of various native and non-native vegetation, and has been used for illegal dumping in recent years. There is one creek (Cottonwood Creek) flowing along the northern boundary of the site, as well as a portion of a partially undergrounded drainage and irrigation channel (Sells Lateral) across the northern part of the site. An abandoned, narrow, north-south-trending irrigation canal ran through the site between Cormorant Drive and the Sells Lateral easement; the canal is now backfilled.

The proposed project includes construction of the following:

- **Three Hospital Buildings.** Each of the two hospital tower buildings will have a two-level podium and a total of seven stories, with one below-grade level plus a mechanical penthouse; the towers will have a triangular footprint. The buildings will have a basement extending approximately 17 feet below the existing ground surface. Each building will have a footprint of approximately 58,600 square feet. The third hospital building will be located east of the towers, and will be four stories in height. The hospital buildings will be physically separated from the medical office buildings and parking structure.

- **Three Medical Offices Buildings.** These buildings, one built in each of the three phases, will be four stories high with the first floor at grade and each will have a footprint of about 20,00 square feet.

- **Power Plant.** The power plant will be one-story building at grade. The Phase 1 building will be approximately 12,352 square feet. During Phase 2, the building will be expanded by approximately 4,722 square feet.

- **Parking Garage.** The parking garage will be constructed during Phase 3. The structure will have four stories with roof parking and two levels below grade with the first level near existing grade. The footprint will be approximately 26,700 square feet.

- **Loading Dock/Service Yard.** A depressed loading dock/service yard open area will be constructed west of the Phase 1 hospital building and will be structurally separated from it. The lowest finished concrete slab elevation of the loading dock will be about four feet below the hospital basement floor slab. Retaining walls up to 20.5 feet will be required to retain the soil around the service yard.

- **Associated Improvements.** New surface parking areas will be constructed north and west of the new hospital buildings, and south of Cormorant Drive. Access to the main hospital, ambulance entrances, and the loading dock will be provided via G Street and Mercy Avenue. Grading for most of the site will be less than two feet, except as noted for basements and foundations of hospital buildings. A below-grade utility conduit will connect the power plant to the Phase 1 hospital building. The 10-foot-wide trench will have a total length of about 350 feet, and will be four to five feet below the existing ground surface.

Regional Seismicity and Faulting

The project site is in an area of moderate seismicity. Table 3.6-1 shows the faults in the region and their approximate distance from the project site. The Great Valley faults (segments 8 and 9) are nearest to the project site at 53 miles. The City of Merced is not located within an Alquist-Priolo earthquake fault zone.

Table 3.6-1
Earthquake Faults in the Vicinity of the Project Site

Fault Segment	Approximate Distance from Site (km)	Direction from Site	Maximum Magnitude
Great Valley - 9	53	Southwest	6.6
Great Valley - 8	53	West	6.6
Great Valley - 7	63	West	6.7
Ortigalita	65	West	6.9
Great Valley - 10	65	Southwest	6.4
Great Valley - 11	79	South	6.4
Quien Sabe	91	Southwest	6.4
Great Valley - 12	96	South	6.3
Southern Greenville	96	West	6.6
Southern Calaveras	97	Southwest	5.8
Central Calaveras	97	West	6.2

Source: Treadwell & Rollo, Geologic Hazard Evaluation and Geotechnical Investigation

Site Soils

During March of 2004, Western Strata Exploration, Inc. (Clarksburg, CA) drilled test borings using hollow-stem auger drilling equipment under the direction of a Treadwell & Rollo field engineer. Treadwell & Rollo later tested the boring samples in a laboratory. The tests indicate that the project site is overlain with medium stiff-to-hard clay extending to a depth of seven feet below ground surface (Appendix F -Geologic Hazard Evaluation and Geotechnical Investigation, Merced Replacement Hospital). The surface clay has low-to-moderate potential for expansion. Consolidation tests showed the clay to be moderately compressible. The surface clay is underlain by sand and silt, interbedded with occasional clay and gravel layers to the maximum depth explored (51.5 feet). The sand is dense to very dense, with varying amounts of clay and silt. The silt is stiff to hard, with varying amounts of sand. The clay, where present, is stiff to hard. Treadwell & Rollo determined that because of its strength and low compressibility, this soil is suited to handle the proposed building loads.

Groundwater

A boring sample taken during a Treadwell & Rollo field investigation for the existing Mercy Cancer Center found groundwater at a depth of 48 feet below ground surface (bgs). A boring sample from the 2004 investigation found groundwater at 46 feet bgs. The firm has also reviewed available groundwater information, which indicated that groundwater at the site ranges from 40 to 50 feet bgs. The level may fluctuate slightly with seasonal rainfall.

3.6.3 IMPACT EVALUATION CRITERIA

Based on criteria set forth in Appendix G of the State CEQA Guidelines, the project will have a significant effect on the environment if it will expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death caused by any of the following:

- 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;
- Strong seismic ground shaking;
- Seismic-related ground failure, including liquefaction;
- Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- 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 offsite landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil as defined in Table 18-1B of the Uniform Building Code (1994) creating substantial risks to life or property;
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. (This issue is addressed in Section 3.11, Hydrology and Water Quality, in this EIR.)

3.6.4 IMPACTS & MITIGATION MEASURES

Impact #3.6-1: Fault rupture and seismic-related ground failure.

Discussion and Conclusion: The proposed project is an area of moderate seismicity and is not within an Alquist-Priolo earthquake fault zone. A site reconnaissance conducted by Treadwell & Rollo as well as a review of aerial photographs showed no evidence of active faulting. The site would be subject to strong ground shaking in the event of a major earthquake. However, the geohazard analysis by Treadwell & Rollo determined that the soils on the project site are highly cohesive. In addition, groundwater at the project site, at 40-50 feet bgs, is below the level of the foundations for the hospital buildings (17-20 feet). Treadwell & Rollo concluded in their geotechnical investigation that the potential for liquefaction—the term used to describe when a solid (in this case a soil) begins to act as a fluid—to occur beneath the proposed structures is very low. Also, since the site is flat, and the potential for liquefaction is very low across the project site, the potential for lateral spreading (horizontal movement) is low. Finally, the design and construction of the proposed hospital buildings, medical office buildings, central plant, and

parking garage will comply with the current seismic provisions of CCR, Title 24, California Building Standards Code.

It is noted that the Treadwell & Rollo report analyzed the project as earlier designed, in which the hospital towers were seven stories in height (rather than the eight stories analyzed in this EIR). This change is not sufficient to change conclusions regarding the ability of the soil to accommodate the development or increase risks to the project from fault rupture or seismic-related ground failure. Therefore, this impact is ***less than significant.***

Mitigation Measure

No mitigation measure is required.

Impact #3.6-2: Erosion and soil instability from excavation, grading, or fill.

Discussion and Conclusion: The project involves construction of two eight-story hospital towers, medical office buildings. Grading plans are not available at this time, but the hospital towers will require excavation of basements extending approximately 17 to 20 feet below the existing ground surface. Erosion and/or unstable soil conditions could occur during the excavation for these foundations, especially during the rainy season.

It is noted that the Treadwell & Rollo report analyzed the project as earlier designed, in which the hospital towers were seven stories in height (rather than the eight stories analyzed in this EIR). This change is not sufficient to change conclusions regarding the ability of the soil to accommodate the development or increase risks to the project from soil instability. This impact is ***potentially significant.***

Mitigation Measure

Implementation of following mitigation measure will reduce these impacts to a level that is ***less than significant.***

Mitigation Measure #3.6-2:

All recommendations set forth on pages 27-46 in the Treadwell & Rollo Geologic Hazard Evaluation and Geotechnical Investigation (see Appendix F) shall be incorporated into construction and grading plans. The Office of Statewide Health Planning and Development (OSHPD) shall ensure that the recommendations are followed.

Impact #3.6-3: Potential for expansive soils to cause structural failure of the proposed buildings and parking structure.

Discussion and Conclusion: The on-site surface soils contain variable concentrations of clay. These soils can undergo moderate volume changes with increasing or decreasing soil moisture content, and are considered cable of exerting slight to moderate expansion pressures upon foundations and concrete slabs-ongrade. This impact is considered ***potentially significant.***

Mitigation Measure

Mitigation required under Mitigation Measure #3.6-2 is sufficient to ensure that impacts are reduced to a level that is ***less than significant.***

SOURCES

Merced General Plan (City of Merced 1997)

Merced General Plan EIR (Merced 1997)

*Geologic Hazard Evaluation and Geotechnical Investigation, Merced Replacement Hospital (*Treadwell & Rollo, Inc., July 20, 2004*)*

Geologic Hazard Evaluation, Merced Replacement Hospital (Gilpin Geosciences, Inc., July 15, 2004)

3.7 Hazards and Hazardous Materials

This section of the Environmental Impact Report addresses the potential for the construction and operation of the Mercy Medical Center to create hazards to the public or users of the site, handle acutely hazardous materials which may have a significant adverse impact on the public, or otherwise threaten the health and safety of persons on the site and its surroundings through exposure to hazards. In response to the Notice of Preparation issued by the City of Merced for this project, specific comments were made requesting analysis of potential safety impacts of helicopter operations (by the Merced County Airport Land Use Commission), safety and hazardous conditions that may result from a lack of containment of hazardous materials and toxic substances that are used in the project (Merced City School District). This EIR addresses each of these issues.

3.7.1 REGULATORY SETTING

Federal Regulations

BIOHAZARDOUS MATERIALS AND ANIMALS

The United States Department of Health and Human Services Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health prescribe containment and handling principles for use in microbiological, biomedical, and animal laboratories. Based on the potential for transmitting biological agents and the rate of transmission of these agents, and based on the quality and concentrations of biological agents produced at a laboratory, Biosafety Levels may be instituted as prescribed by these principles.

HAZARDOUS MATERIALS TRANSPORTATION

The U.S. Department of Transportation regulates hazardous materials transportation between states. Combined with the California Highway Patrol, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads.

State Regulations

The development of hospitals within the State of California fall under the regulatory authority of the Medical Waste Management Act, codified as California Health and Safety Code § 117600 – 118360. The statute includes requirements for hospital registration with the State Department of Health Services, adoption of a Medical Waste Management Plan, and regular inspection and monitoring of hazardous waste storage and disposal systems.

Additional requirements of the Health and Safety Code monitor and regulate the transportation and off-site disposal of hazardous wastes, including the medical wastes expected to be generated within the hospital and power plant.

Various State agencies provide oversight relative to the handling, storage, or transport of hazardous materials and substances. The following provides a listing of the State agencies with

oversight responsibilities for hazards or hazardous materials which may be associated with the project.

HAZARDOUS WASTE HANDLING

The California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under the Resource Conservation and Recovery Act (RCRA) and the California Hazardous Waste Control Law. Both laws impose "cradle to grave" regulatory systems for handling hazardous waste in a manner that protects human health and the environment.

RADIOACTIVE MATERIALS

The Radiologic Health Branch of the California Department of Health Services administers the federal Atomic Energy Act, the California Radiation Control Law, and related regulations, which govern the receipt, storage, use, transportation, and disposal of sources of ionizing radiation (radioactive material) and provide for protecting the users of these materials and the general public from radiation hazards.

MEDICAL WASTE HANDLING

Medical (biohazardous) waste is generally regulated in the same manner as hazardous waste, except that special provisions apply to storage, desinfection, containment, and transportation. The California Department of Health Services Medical Waste Management Program enforces the Medical Waste Management Act and related regulations.

HAZARDOUS MATERIALS TRANSPORTATION

The state agency with primary responsibility in California for enforcing federal and state regulations and responding to hazardous materials transportation emergencies is the California Highway Patrol. Together with the U.S. DOT, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads.

Local Regulations

The Safety Element of the *Merced Vision 2015 General Plan* contains various goals and policies to ensure that the residents and visitors to Merced are not exposed to unsafe conditions resulting from urban development and activity. The following specific local policies apply to development of the uses proposed in this project.

MERCED VISION 2015 GENERAL PLAN

Policies

S-2.3 Restrict urban development in all areas with potential ground failure characteristics.

S-4.2 Maintain a reasonable level of accessibility and infrastructure support for fire suppression, disaster, and other emergency services.

S-5.2 Prevent the encroachment of potential hazards to flight within the Airport's airspace.

S-7.1 Prevent injuries and environmental contamination due to the uncontrolled release of hazardous materials.

S-7.2 Ensure that hazardous materials are cleaned up before a property is developed or redeveloped.

3.7.2 ENVIRONMENTAL SETTING

The project site is mostly vacant urban land formerly used for agricultural production. A portion of the site is developed with a Cancer Center, as well as urban improvements associated with this structure. Land uses surrounding the site include vacant lands planned for single and multiple family residential developments, an existing Middle School, and Merced College. The proximity of residential and educational land uses creates potential land use conflicts which may be affected by hazards and hazardous materials used in the construction and operation of the Mercy Medical Center.

3.7.3 IMPACT EVALUATION CRITERIA

Based on consideration of Appendix G of the State CEQA Guidelines, the project is considered to have an adverse impact on the environment if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

- Create a safety hazard to residents and persons in the area through the routine operations of helicopters at the project site.

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

- 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 create a significant hazard to the public or environment.

3.7.4 IMPACTS & MITIGATION MEASURES

Impact #3.7-1: Use, transport, or disposal of hazardous materials

Discussion and Conclusion: The project includes construction and operation of a hospital facility and medical office buildings. The operation of these uses will include the regular and routine use, transport, and disposal of a variety of potentially hazardous materials, including medications, cleaning agents, and materials used in medical procedures, operations, and activities. Additional hazardous materials are also likely to be present on the site for use in the upkeep and maintenance of landscaping, including fuels for landscaping equipment and chemicals for plant health and maintenance.

The Office of Statewide Health Planning and Development (OSHPD) is responsible for setting and enforcing regulations related to the use, transport, and disposal of hazardous materials at California hospitals and medical facilities. The regaultions in place are sufficient to ensure that the existence of these chemicals and hazardous materials will not have a significant adverse imapct on the public or the surrounding environment.

Workers within the hospital buildings and medical offices are afforded protection from exposure or impact from hazardous materials by both OSHPD regulations and employment regulations set by the California Occupational Safety and Health Administration (Cal/OSHA), implemented by the California Department of Occupational Safety and Health. This State Department has enforcement and investigatory capabilities to ensure that standards are adhered to and that workers are protected from safety hazards in the workplace, including special regulations for medical office and hospital facilities.

Landscaping chemicals and fuels are expected to be on the site as well, for routine use by maintenance personnel. The use and storage of these chemicals is common in the area, and is not expected to produce a significant environmental hazard to users of the site.

Impacts from the use, transport, and disposal of hazardous materials are considered ***less than significant.***

Mitigation Measure

No mitigation measure is required.

Impact #3.7-2: Release of hazardous materials into the environment

Discussion and Conclusion: As discussed above, the project will include the routine use and storage of potentially hazardous materials on-site. The potential release of hazardous materials into the environment is considered low due to the existing regulations for the handling of such materials. OSHPD regulations include specific requirements for the handling, storage, and disposal of all hazardous materials associated with the hospital and medical operations of the facility, and are considered sufficient to ensure that the public health and safety will be preserved.

The storage of landscaping fuels and cleaners on site also creates the potential for release of hazardous materials. These chemicals and fuels are common in use throughout urban areas, and the exposure of persons to the small quantity of materials likely to be present is insufficient to pose a health risk to the general public or sensitive receptors on the site or in the surrounding area.

The impacts related to the potential release of hazardous materials into the environment are considered ***less than significant.***

Mitigation Measure

No mitigation measure is required.

Impact #3.7-3: Handling of hazardous materials near a school site

Discussion and Conclusion: The project includes the operation of hospital and medical office facilities which are anticipated to utilize a variety of potentially hazardous materials as part of daily operations. The site is adjacent to the Cruickshank Middle School, part of the Merced City School District. The project will handle hazardous materials within one-quarter mile of an existing school, resulting in potential conflicts with sensitive receptors at the school site.

The use of potentially hazardous materials and substances at the hospital and medical offices has the potential to impact sensitive receptors at the adjacent school site, if such materials or substances are released into the environment. The existing regulations for the facility, implemented and overseen by OSHPD, are sufficient to ensure that all hazardous materials and substances are not released into the environment. The OSHPD requirements will provide reasonable assurances that the school site will not be adversely affected by the use of hazardous materials at the project site. The impact is considered ***less than significant***.

Mitigation Measure

No mitigation measure is required.

Impact #3.7-4: Location of site on a known hazardous materials site

Discussion and Conclusion: The project site is not located on a known hazardous materials site, as identified on any local, state, or federal database of hazardous materials sites. The site is not listed within the databases of the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), National Priority List (NPL), No Further Remedial Action Planned Sites (NFRAP), or Municipal Solid Waste Landfills (MSWLF), as maintained by the U.S. Environmental Protection Agency. The site is also not listed on any state databases, most notably the Leaking Underground Storage Tank (LUST) database of the California Department of Toxic Substances Control (DTSC). The impact is considered ***less than significant***.

Mitigation Measure

No mitigation measure is required.

Impact #3.7-5: Safety hazards resulting from helicopter operations

Discussion and Conclusion: The project is intended to accommodate the use of a planned helipad for takeoff and landing of helicopters. While full flight schedules will vary and be dependent on patient and staff needs, it is anticipated that the facility will have three to four takeoffs and landings per week. The flight paths for the facility are shown in Figures 3.10-1, 3.10-2, and 3.10-3 within the Noise Section of this EIR. The helipad is raised approximately eight feet above the surrounding grade to limit potential contact with users of the facility. The flight paths and angles of the helicopters will eliminate potential conflict points with persons on the site or on surrounding properties.

Existing regulations prohibit the flight of helicopters over the school site, thus eliminating potential conflicts with helicopter flights at the school. The flight paths developed for the project do not include flight over the school site, and flight angles have been developed to remove potential conflict points with overhead power lines, vegetation, and other obstructions.

While flights and flight paths are not considered to have significant impacts, there is a potential for conflicts at the landing site. Conflicts between hospital users of the helipad and pedestrians or stray animals are possible, and the impacts which could result from these conflicts cannot be fully discounted given the information available in the project description. The potential for significant safety impacts resulting from helicopter operations is considered ***potentially significant.***

Mitigation Measure

Implementation of the following mitigation measures will reduce the impact to a ***less-than-significant*** level.

Mitigation Measure #3.7-5:

The helipad shall be a restricted and secured area with warning signs, fence, and or gate, to prevent unanticipated injury to non-authorized persons in the vicinity resulting from moving equipment or flying debris.

SOURCES

California Office of Statewide Health Planning and Development (www.oshpd.ca.gov)

UC Merced Long Range Development Plan Draft Environmental Impact Report, City of Merced, August 2001.

Laura Armstrong, Catholic Healthcare West

Debbie Kohlede, Catholic Healthcare West

U.S. Department of Transportation (www.usdot.gov)

California Department of Toxic Substances Control (www.dtsc.ca.gov)

United States Environmental Protection Agency (www.epa.gov)

California Department of Occupational Health and Safety (www.dir.ca.gov/DOSH)

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3.8 Hydrology and Water Quality

This section of the Environmental Impact Report addresses impacts of the project on hydrology and water quality within the site and its surroundings. The analysis contained within this section fully considers all hydrologic impacts associated with construction and operation of the Mercy Medical Center, and addresses all factors contained within Appendix G of the State CEQA Guidelines. The Initial Study for the project, included in this EIR as Appendix A, identified only the potential for flood inundation as a potentially significant impact. This section fully addresses the potential significance of flood inundation of the site.

During the comment period, no specific comments were received related to hydrology and water quality on the site.

3.8.1 REGULATORY SETTING

The City of Merced, Central Valley Regional Water Quality Control Board (CVRWQCB), Federal Emergency Management Agency (FEMA), U.S. Army Corps of Engineers (Corps) and U.S. Environmental Protection Agency (EPA) all provide regulations related to the quality of water and hydrology for land within the City of Merced. The following regulations are in effect for the project site.

Federal Regulations

CLEAN WATER ACT (CWA)

The CWA administered through the Regulatory Program of the Corps regulates the water quality of all discharges into waters of the U.S. including wetlands and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water-quality certification requirements for "any applicant applying for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable water."

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

The National Flood Insurance Program (NFIP) is a Federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted, as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years although such a flood may occur in any give year. The State Department of Water Resources occasionally audits local agencies to insure the proper implementation of FEMA floodplain management regulations.

State Regulations

REGIONAL WATER QUALITY CONTROL BOARD PERMITTING

The National Pollution Discharge Elimination System (NPDES) program, under Section 402(p) of the Federal Clean Water Act, is administered locally by the Central Valley Regional Water Quality Control Board on behalf of the U.S. Environmental Protection Agency. The program is designed to reduce pollution from storm water discharge and may require a permit from parties discharging to lakes, streams and other water bodies. In the case of the proposed project, a construction activity permit would be required since construction activities associated with the project would result in the disturbance of more than one acre. The permit would require that the following measures be implemented during construction activities: eliminate or reduce non-storm water discharges to storm water systems and other waters of the nation, develop and implement a Storm Water Pollution Prevention Plan (SWPPP), and perform inspections of storm water control structures and pollution prevention measures.

Local Regulations

The City of Merced has a variety of policies related to the protection and preservation of hydrology and water quality within the community. The following policies are stated within the City's General Plan:

MERCED VISION 2015 GENERAL PLAN

Policies

S-3.1 Endeavor to remove most of the existing City, and the vast majority of the SUDP, from the 100-year floodplain.

S-3.2 Maintain essential City services in the event of flooding or dam failure.

3.1.a Work on the development and implementation of a funding plan to provide for the City's share of the Merced Streams Project. Consider basing assessments on those areas which would benefit from removal from the 100-year flood and/or Lake Yosemite's inundation area.

3.2.a Continue to build all pump stations (both sewer and water) entryways at one (1) foot above the 100-year flood elevation and consider additional standards to address flooding due to dam failure.

3.2.b Continue the "flood-proofing" of high-value or important City infrastructure, such as lift stations and signal control functions, as required by the City's Flood Damage Prevention Ordinance.

3.8.2 ENVIRONMENTAL SETTING

The project site is within the northern portion of the City of Merced. The site is generally flat, with the Sells Lateral (owned and operated by the Merced Irrigation District) traversing the site from east to west, as well as Cottonwood Creek, which also traverses the site from east to west. The Sells lateral is partially undergrounded across and to the west of the site, and is fully undergrounded to the east of the site.

3.8.3 IMPACT EVALUATION CRITERIA

Based on the significance criteria contained in Appendix G of the CEQA Guidelines, the construction and operation of the project is considered to have a significant adverse impact on the environment if it will:

- Violate any water quality standards or waste discharge requirements.

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

- 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.

- 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 or amount of surface runoff in a manner which would result in flooding on- or off-site.

- Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

- Otherwise substantially degrade water quality.

- 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.

- Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

- 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.

3.8.4 IMPACTS & MITIGATION MEASURES

Impact #3.8-1: Violate any water quality standards or waste discharge requirements.

Discussion and Conclusion: The construction phase of the proposed project could cause storm water runoff to enter drainages and ultimately waters of the United States. The project proponent is required to prepare a Storm Water Pollution Prevention Plan (SWPPP) for the proposed project and submit it with a Notice of Intent to the Regional Water Quality Control Board. SWPPPs include best management practices that trap storm water and prevent it from carrying sedimentation off of the project site. SWPPPs are designed to control storm water quality degradation to the extent practicable using best management practices during and after construction. Implementation of the approved SWPPP in accordance with a General Permit issued by the RWQCB for the proposed project and compliance with the requirements for obtaining a General Permit will reduce impacts to water quality to a level of ***less than significant***.

Mitigation Measure

No mitigation measure is required.

Impact #3.8-2: The proposed project would change the existing drainage pattern of the project area.

Discussion and Conclusion: The project site is flat, with runoff from precipitation currently draining into Cottonwood Creek to the north, the Sells Lateral on the site, and a drainage ditch to the west. As part of the development of the site, impervious surfaces will be added to the property, in the form of buildings, parking areas, and other paved surfaces. Based on submitted site plans, the project will result in the creation of approximately 25 new acres of impervious surfaces to the site. This will result in an increase in stormwater runoff from the site, and will increase the potential for contaminated runoff to enter Cottonwood Creek and the Sells Lateral.

The project is required, under existing City regulations, to divert its stormwater runoff to the existing stormwater drainage system for the City. This system has adequate capacity to accommodate the runoff associated with the development of the site, and such stormwater management was considered in the adoption of the Northeast Yosemite Specific Plan and during creation of the City's Stormwater Management Plan. The redirection of runoff to the City system will reduce potential impacts associated with alteration of the existing drainage pattern to a level of ***less than significant.***

Mitigation Measure

No mitigation measure is required.

Impact #3.8-3: The proposed project could place people or structures in a position that would pose a risk of loss, injury, or death involving flooding due to dam failure.

Discussion and Conclusion: The project site is within the dam failure inundation area for Lake Yosemite, as shown in Figure 3.8-1. This area represents the lands which would potentially be flooded were the dam at Lake Yosemite to suffer a complete failure, resulting in the distribution of water from the reservoir into surrounding lands. The dam failure inundation area for Lake Yosemite covers large portions of the City of Merced and surrounding county areas.

The dam at Lake Yosemite is an earthfill structure, which would fail gradually were the dam to rupture or break. The initial flood wave resulting from the dam breach would reach the City of Merced approximately 20 minutes after dam failure, and would result in flood depths of one to thirty feet within the inundation area.

Large urban areas of California are within dam inundation zones of lakes and reservoirs. Development of these areas has historically proceeded under the assumption that existing safety regulations are sufficient to ensure the protection of persons and property within the flood inundation areas of these waterways. The likelihood of dam failure at Lake Yosemite is considered very low. The U.S. Army Corps of Engineers provides safety oversight for the dam at the Lake, and regular safety inspections and maintenance are sufficient to reduce potential risks from dam failure to a less-than-significant level. This impact is considered ***less than significant.***

Mitigation Measure

No mitigation measure is required.

Impact #3.8-4: The proposed project could place people or structures within a 100-year floodplain.

Discussion and Conclusion: The project site is not within the 100-year floodplain, as shown in Figure 3.8-2. The potential for flooding on the site resulting from a 100-year storm is considered ***less than significant.***

Mitigation Measure

No mitigation measure is required.

SOURCES

Merced Vision 2015 General Plan (City of Merced 1997)

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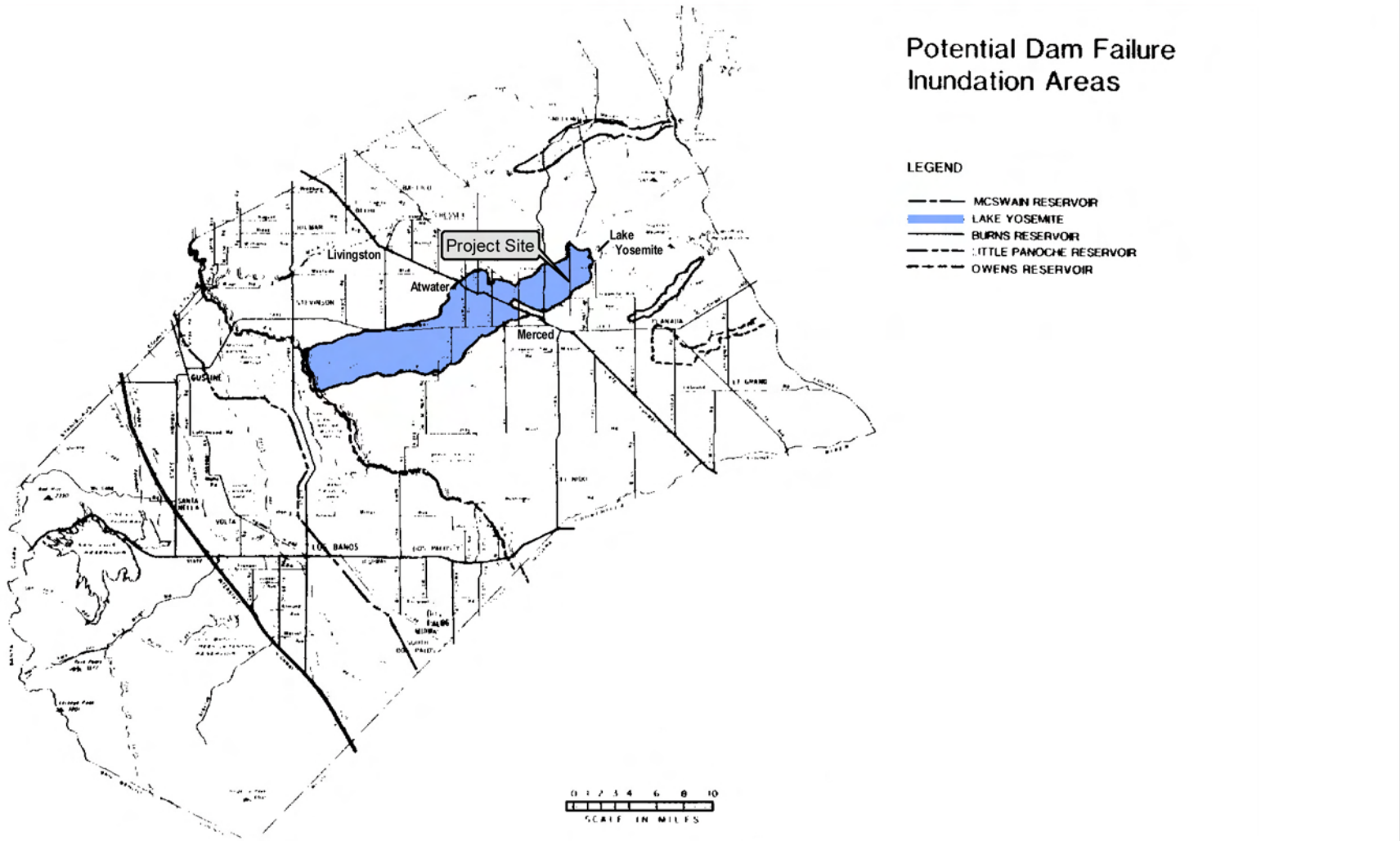


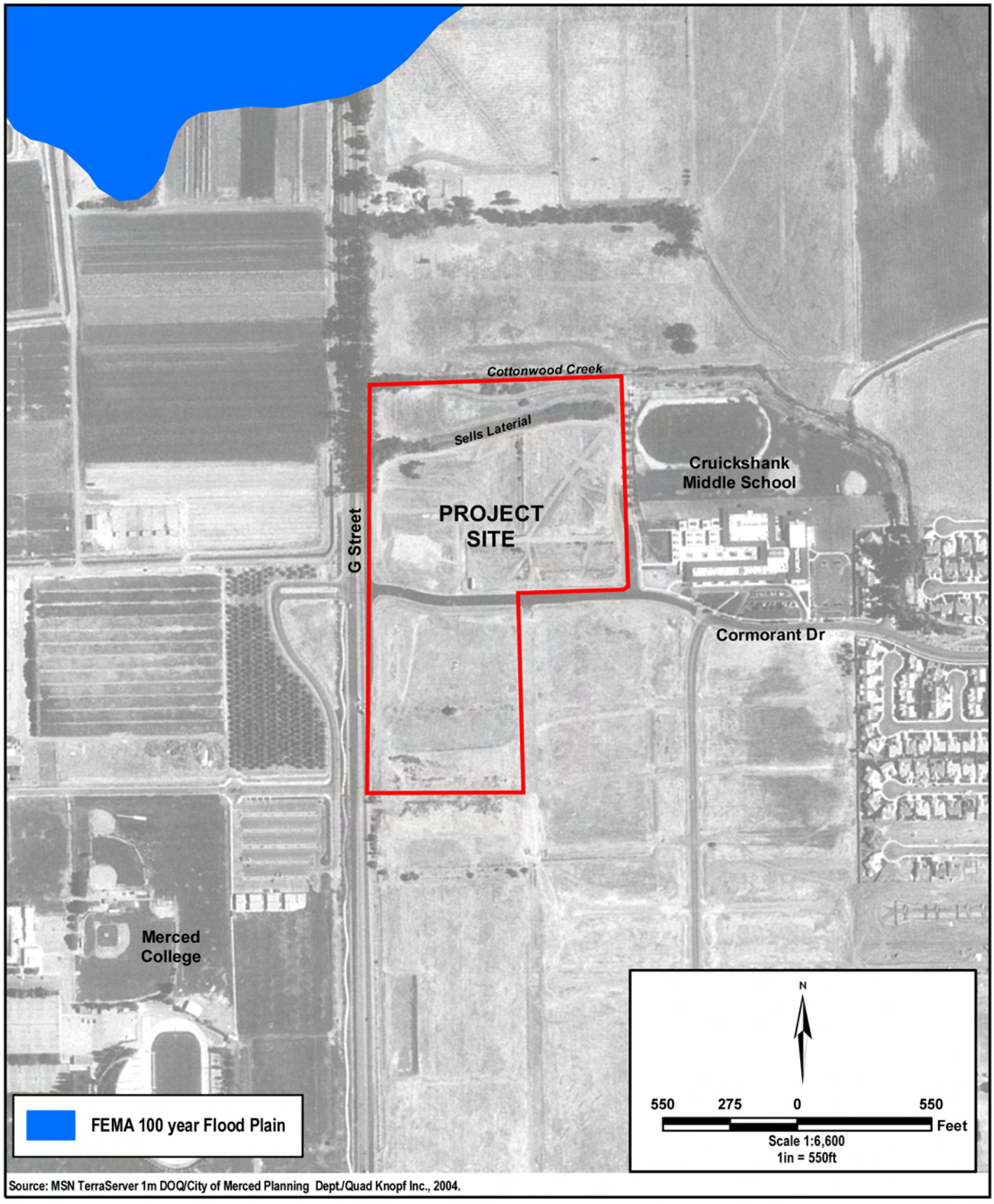
Source: U.S Army Coprs of Engineers / Merced County Planning Department, 2000 / Quad Knopf, 2005

Quad Knopf

DAM INUNDATION

Figure 3.8-1

Job No.: 04385



Source: MSN TerraServer 1m DOQ/City of Merced Planning Dept./Quad Knopf Inc., 2004.

Quad Knopf

FEMA Flood Zone

Figure 3.8-2

Job No. 04385

3.9 Land Use/Population and Housing

This section of the EIR provides a discussion of land uses at and within the vicinity of the project site and assesses the potential effects of construction and operation of the proposed project on land use. The county, state, and federal jurisdictions potentially affected by the proposed project are identified, as are their respective plans, policies, laws, and regulations (including zoning where applicable), and potentially sensitive land uses.

The City of Merced received NOP comments from the Merced City School District requesting analysis of potential land use conflicts between the proposed Medical Center and the adjacent middle school.

3.9.1 REGULATORY SETTING

Federal Regulations

There are no specific federal regulations applicable to land use planning.

State Regulations

The Office of Statewide Planning Health and Development (OSHPD) publishes a specified list of criteria for the siting of medical facilities within individual communities.

Local Regulations

Land uses for the project site are governed by the *Merced Vision 2015 General Plan* and the *Northeast Yosemite Specific Plan*. The specific plan area covers approximately 640 acres bounded by G Street to the west, Cardella Road to the north, Gardner Avenue to the east, and Yosemite Avenue to the south. The plan currently calls for mostly single-family residential development with some duplex and multi-family development. Other uses include three church sites, a middle school, and a small neighborhood commercial site. The plan was revised in 1999, when the site of the current Mercy Cancer Center was converted from a single-family residential designation to Professional/Commercial Office (C-O).

MERCED VISION 2015 GENERAL PLAN

The following policies are contained in the *Merced Vision 2015 General Plan*:

Land-Use Element Policies

L-1.1 Promote balanced development which provides jobs, services, and housing.

L-1.2 Encourage a diversity of building types, ownership, prices, designs, and site plans for residential areas throughout the City.

L-1.3 Encourage a diversity of lot sizes in residential subdivisions.

L-1.4 Conserve residential areas that are threatened by blighting influences.

L-1.5 Protect existing neighborhoods from incompatible developments.

L-1.6 Continue to pursue quality single-family and higher density residential development.

L-1.7 Encourage the location of multi-family developments on sites with good access to transportation, shopping, and services.

L-1.8 Create livable and identifiable residential neighborhoods.

Housing Element Policies

H-1.1 Support increased densities in residential areas.

H-1.2 Review design standards to support affordable housing.

H-1.3 Develop and implement an Affordable Housing Ordinance.

H-1.4 Pursue joint development agreements.

H-1.5 Provide priority review and permitting for affordable housing projects.

H-1.6 Support the construction of second units.

H-1.7 Pursue State and Federal funds for new housing construction.

H-1.8 Support housing to meet special needs.

H-1.9 Continue the "Build-A-House" Project with Merced College.

HABITAT CONSERVATION PLAN

No habitat conservation plan or natural community conservation plan exists either for the project site or for the *Northeast Yosemite Specific Plan* area.

3.9.2 ENVIRONMENTAL SETTING

The applicant proposes to develop the project on two vacant parcels adjacent to the existing Mercy Cancer Center, a one-story wood-frame structure that occupies a 3.8-acre site at the northeast corner of G St. and Cormorant Drive. The project site, including the existing Cancer Center site and the two vacant parcels, is approximately 30 acres in size.

The project would consolidate the emergency room functions of the existing “Old Catholic” hospital in central Merced (Mercy Hospital and Health Services - Dominican Campus) at the former “County Hospital” in south Merced. When the project is completed, CHW may phase

out services at Dominican Campus and eventually vacate it. The applicant plans to relocate most of the other services at the Dominican Campus to the proposed project site at G Street and Cormorant Drive.

At the proposed project site, these hospital services would be housed in a 607,428-square foot, replacement hospital (seven stories and one below grade level plus a mechanical penthouse) and 200,000 square feet of medical office buildings. Also to be built on the site is a 17,074-square foot power plant, a helipad, and 1,990 parking spaces (1,405 within surface lots and 585 in a parking garage). The facilities would be built in three phases, beginning with the main hospital structures, a medical office building, and the power plant. Phase II includes an addition to the hospital buildings, construction of a three-story, 60,000-square-foot medical office building, and a 4,722-square-foot addition to the power plant, and another 670 parking spaces. Phase III would include construction of a final addition to the hospital buildings, a three-story, 60,000-square-foot medical building office building, and a parking garage (four-story with roof parking and two levels below grade) with 585 parking spaces. Phase III will remove some of the surface parking construction in earlier phases of the project.

Current and Proposed Land Uses

Figures 3.9-1 and 3-9-2 show the current land use designations and zoning for the project site and surrounding area, respectively. The 4-acre parcel (APN #6-004-20-07) on which the existing Cancer Center is located is designated by the Merced General Plan Professional/Commercial Office (CO) and is zoned Professional/Commercial Office (C-O). The rest of the 30-acre project site includes two vacant parcels, including 10.5 acres (APN #6-004-30-01) with a General Plan designation of High Medium Density Residential (HMD) and zoning of High Medium Density Residential (R-3-2) and 15.7 acres (APN #6-004-20-06) with a General Plan designation of Low Density Residential (LD) and zoning of Single-Family Residential (R-1-6).

Figures 3.9-3 and 3.9-4 show the proposed land-use designation and zone changes for the project site, respectively. The applicant proposes changing the General Plan land-use designations to Professional/Commercial Office, which is consistent with the current designation as the Mercy Cancer Center. The applicant also proposes a zone change to Planned Development (P-D).

The Dominican Campus, located in central Merced, is designated "Public/General Use" and is zoned "Office Commercial."

The site is composed of various native and non-native vegetation, and has been used for illegal dumping in recent years. There is one creek (Cottonwood Creek) flowing along the northern boundary of the site, as well as a portion of a partially undergrounded drainage and irrigation channel (Sells Lateral) across the northern part of the site. There is also a drainage ditch on the western side of the property.

Surrounding Land Uses

The project site is bounded on the west by G Street, on the north by Cottonwood Creek, Mercy Avenue to the east, and vacant parcels to the south. The surrounding land uses include Merced

College and agricultural lands to the west, Cruickshank Middle School and a vacant park site to the east, developed and vacant residential lands to the south, and vacant residential and parkland to the north.

Population

Since incorporation, the City has grown to a population of 73,610, as reported in the January 1, 2005 Department of Finance Population Estimates. Table 3.9-1 shows population and percentage population change for Merced, Merced County, and California between 1980 and 2000. In 1980, the population of Merced was 36,499, and by 1990 the population had increased to 56,216. This was an increase of approximately 54 percent, which was much higher than both Merced County's and California's increase in population for the same time period. From 1990 to 2000, the City's population increased 13.7 percent to total 63,893. Merced County and California's population increase from 1990 to 2000 was higher at 18.0 percent and 13.8 percent respectively.

Table 3.9-1
Population Growth – Merced, Merced County and California, 1980-2000

	1980 Population	1990 Population	% Change 1980 to 1990	2000 Population	% Change 1990 to 2000
Merced	36,499	56,216	54.0%	63,893	13.7%
Merced County	134,560	178,403	32.6%	210,554	18.0%
California	23,668,862	29,760,021	25.7%	33,871,648	13.8%

Source: 1980, 1990, & 2000 U.S. Census

Table 3.9-2 shows population estimates and projections for Merced and Merced County for the years 2000, 2005, and 2010. By 2010, Merced is projected to have a population of 92,014 persons and Merced County is projected to have a population of 273,923 persons. The 2005 and 2010 projections are based on MCAG's population forecast and include UC Merced.

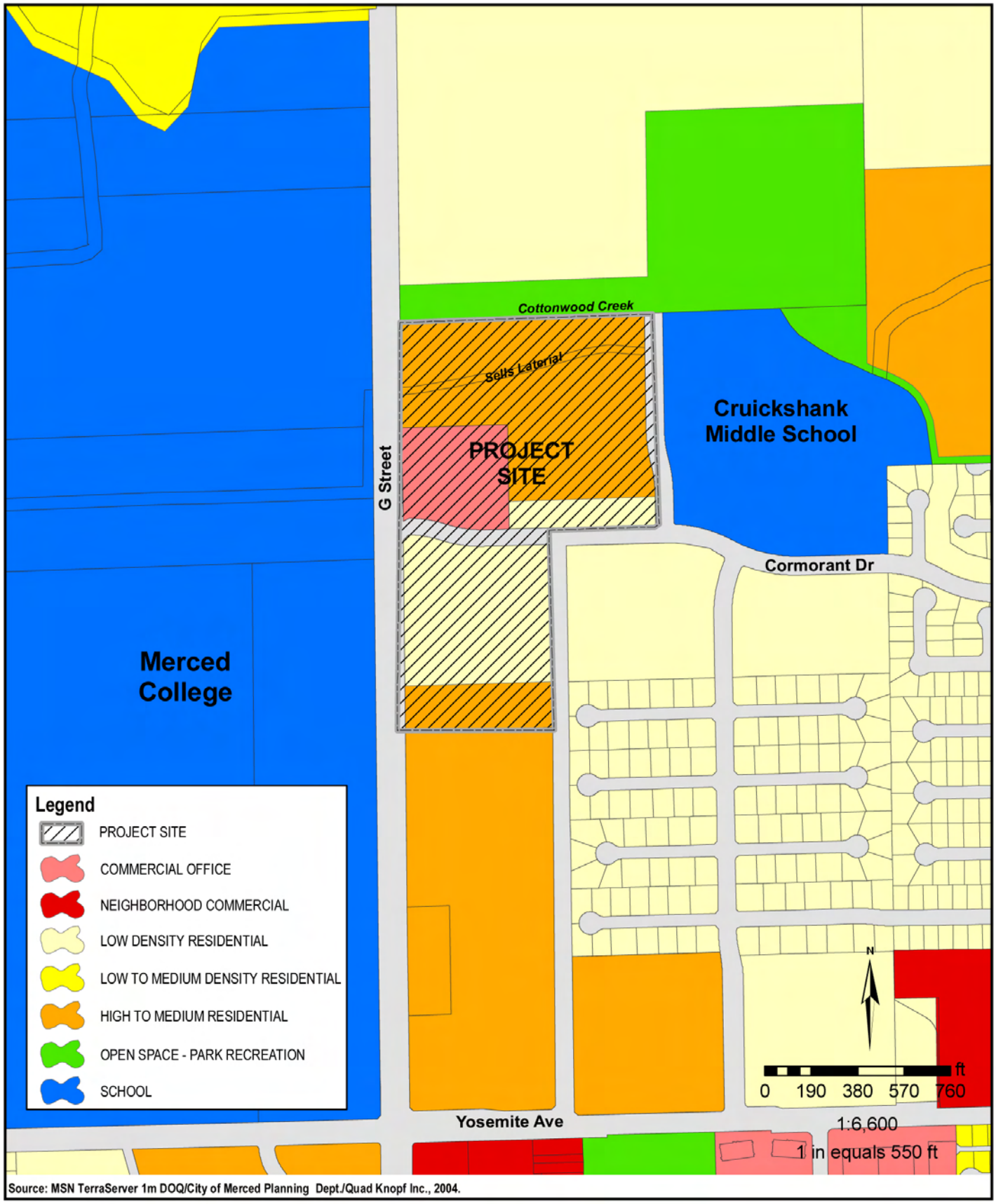
Table 3.9.2
Population Estimates and Projections – MCAG Projections, 2000-2010

	2000[1]	2005	2010
Merced[2]	63,893	81,263	92,014
Merced County	210,554	242,846	273,923

[1] 2000 U.S. Census
[2] Population projections apply to Merced's SUDP, not the City limits.

Source: MCAG, Regional Housing Needs Plan, January 1, 2001 through June 30, 2008

Table 3.9-3 shows Merced and Merced County's Total Households, Population in Households, and Average Household Size for 1990 and 2000. In 1990, Merced's Average Household Size was 3.03 while the County's Average Household Size was 3.17. Average Household Size in 2000 was 3.06 persons per household for Merced and 3.25 persons per household for the County, showing a slight growth in household size for the general area.



Source: MSN TerraServer 1m DOQ/City of Merced Planning Dept./Quad Knopf Inc., 2004.

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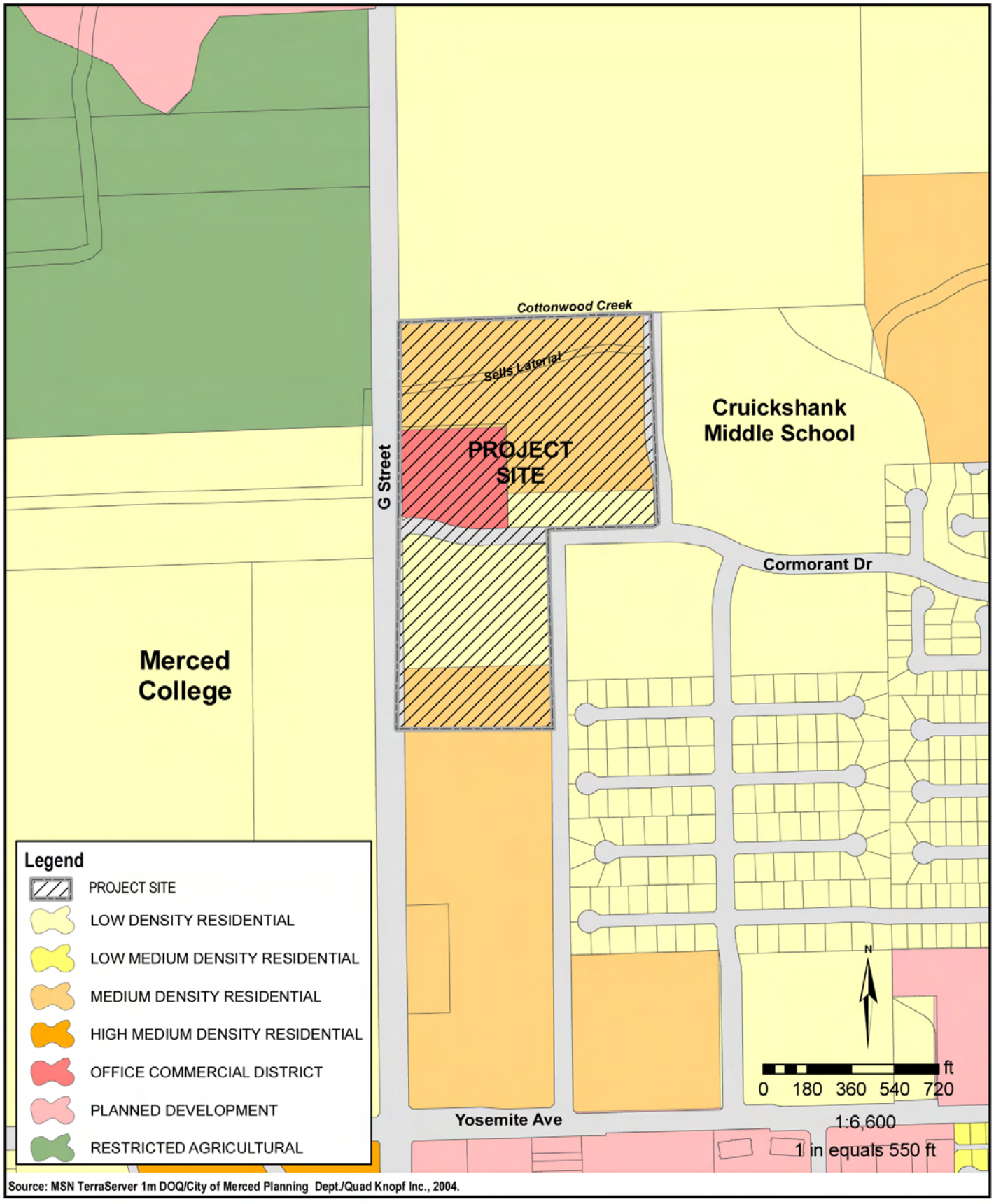
CURRENT GENERAL PLAN DESIGNATIONS

Figure 3.9-1

Job No. 04385



Source: MSN TerraServer 1m DOQ/City of Merced Planning Dept./Quad Knopf Inc., 2004.

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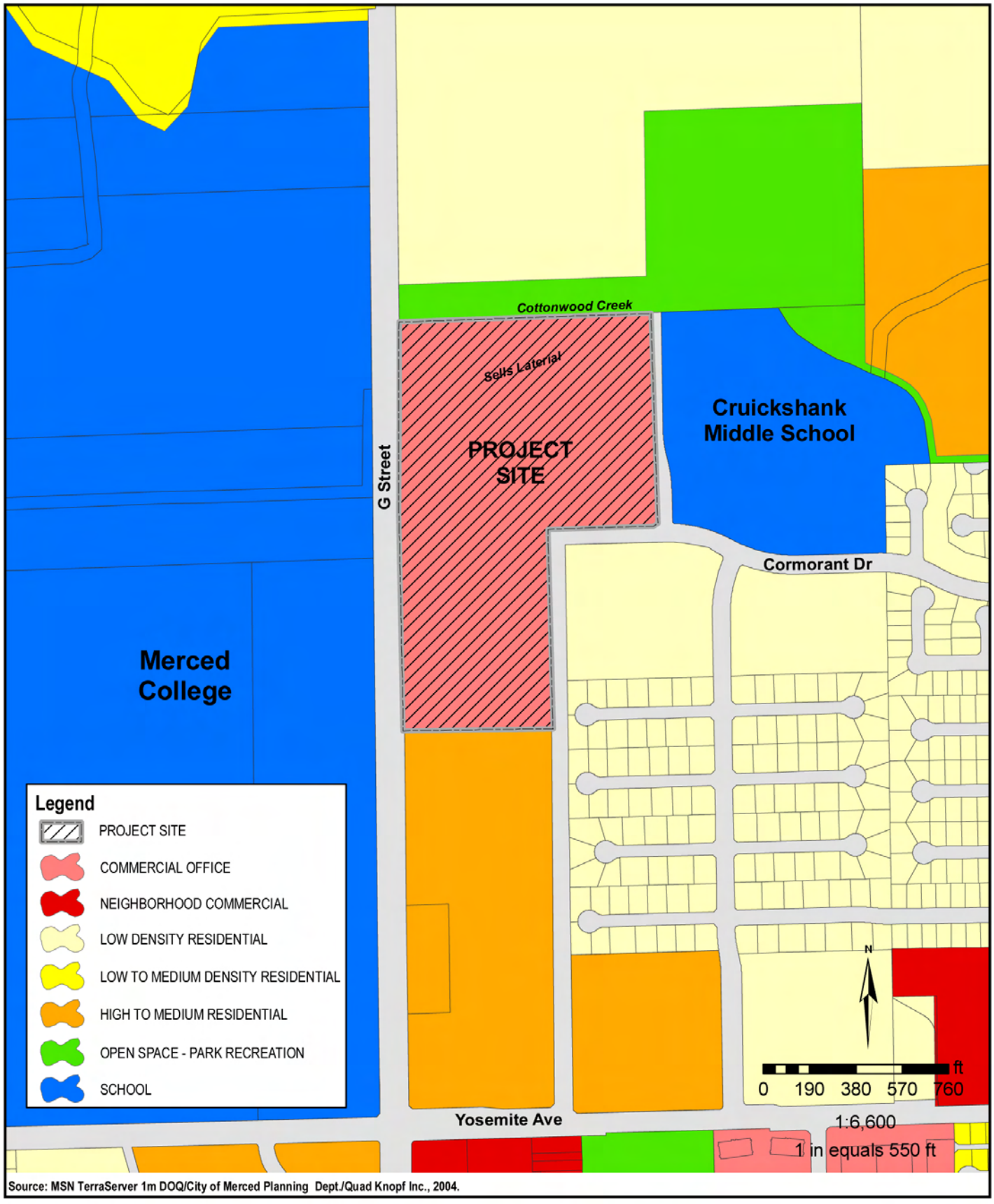
CURRENT ZONING

Figure 3.9-2

Job No. 04385



Source: MSN TerraServer 1m DOQ/City of Merced Planning Dept./Quad Knopf Inc., 2004.

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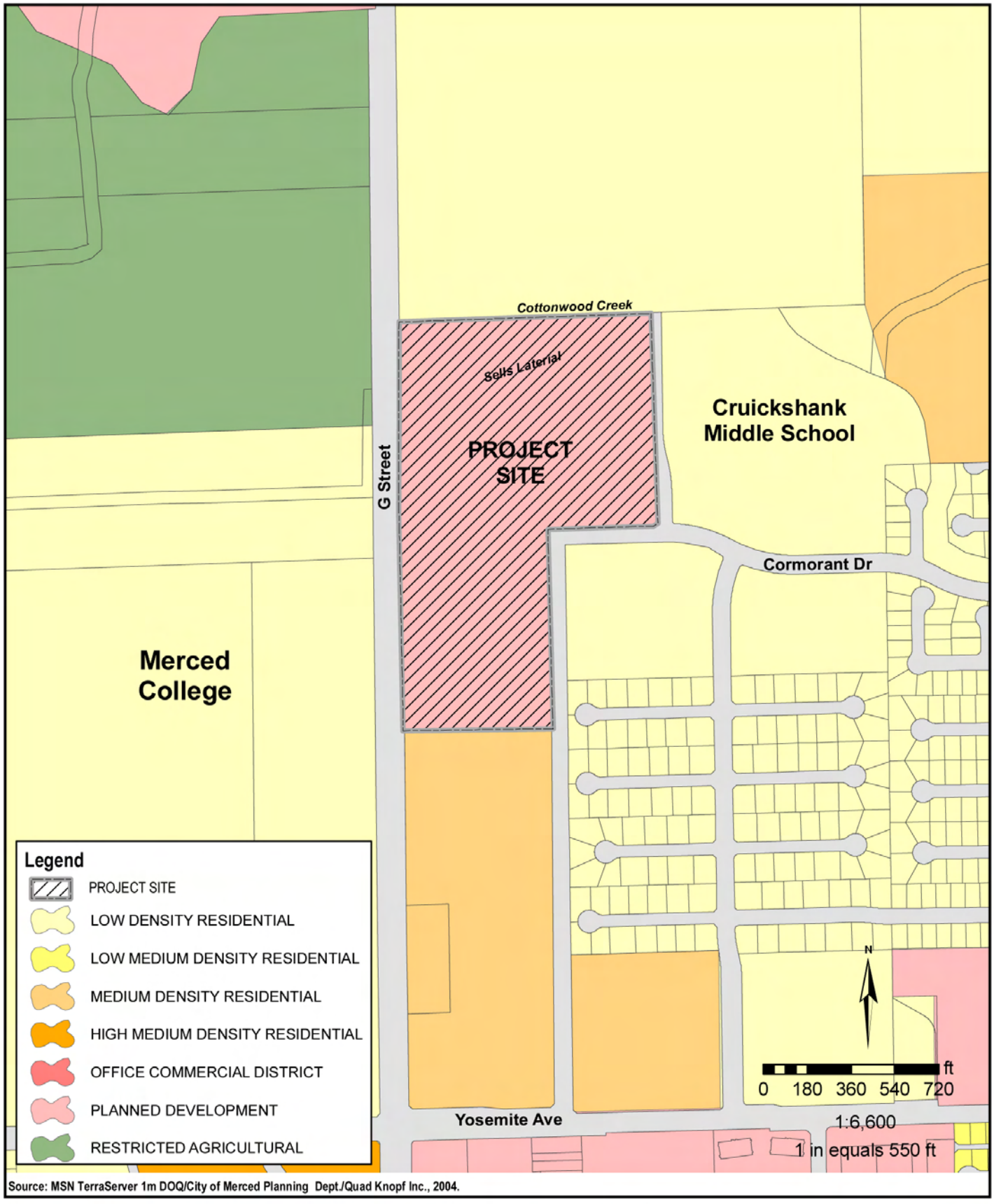
PROPOSED PROJECT SITE GENERAL PLAN DESIGNATION

Figure 3.9-3

Job No. 04385



Source: MSN TerraServer 1m DOQ/City of Merced Planning Dept./Quad Knopf Inc., 2004.

Quad Knopf

PROPOSED PROJECT SITE ZONING

Figure 3.9-4

Job No. 04385

Table 3.9-3
Average Household Size – Merced and Merced County, 1990-2000

Area	Year	Number of Households	Population in Households	Average Household Size
Merced	1990	18,154	55,350	3.03
Merced	2000	20,435	62,523	3.06
Merced County	1990	55,331	175,172	3.17
Merced County	2000	63,815	207,699	3.25

Source: 1990 and 2000 U.S. Census

Housing

Table 3.9-4 identifies total housing units for Merced and Merced County in 1980, 1990 and 2000. Between the years 1990 and 2000, a total of 2,684 housing units (U.S. Census data) were added within the City (an increase of 14.2 percent) while Merced County's percentage of housing units increased 17.1 percent to total 68,373 in 2000. Merced's percentage increase in housing units from 1980 to 1990 was 28.4 percent and from 1990 to 2000 was half that at 14.2 percent. The number of new housing units required in the City of Merced as determined in the Regional Housing Needs Plan (MCAG, 2002) is 4,666. From 1980 to 1990 the City added 4,167 housing units, and 2,684 units from 1990 to 2000. At an average of 7.4 units per acre, the construction of 4,666 will require 631 acres. The City has 3,640 acres of planned residential vacant land within its limits and those areas to be annexed or in the annexation process, which is in excess of this requirement.

Table 3.9-4
Total Housing Units – Merced and Merced County, 1980-2000

	1980	1990	1980-1990 Increase (%)	2000	1990-2000 Increase (%)
Merced	14,681	18,848	28.4	21,532	14.2
Merced County	50,016	58,410	16.8	68,373	17.1

Source: 1990 and 2000 U.S. Census

Table 3.9-5 shows Merced's projected housing needs by income group through 2008. The City's projected need for all income groups is 4,666 units. The City has estimated that it the current inventory of vacant land designated and zoned for residential uses could be built out to accommodate 16,130 dwelling units.

Table 3.9-5
Merced's Projected Housing Unit Needs by July 1, 2008 by Income Group

Income Group	Number	Percent
Very Low	1,073	23.0
Low	793	17.0
Moderate	887	19.0
Above Moderate	1,913	41.0
Total	4,666	100.0

Source: *Merced Vision 2015 General Plan*

3.9.3 IMPACT EVALUATION CRITERIA

Based upon common standards of land use compatibility, and on consideration of Appendix G of the State CEQA Guidelines, the proposed project is considered to have a significant land use impact if it will:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the City of Merced General Plan) adopted for the purpose of avoiding or mitigating an environmental effect;
- Conflict with any applicable habitat conservation plan or natural community conservation plan;
- 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);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere;
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

3.9.4 IMPACTS & MITIGATION MEASURES

Impact #3.9-1: Potential conflicts with land-use policies or regulations intended to avoid or mitigate environmental effects.

Discussion and Conclusion: Specific environmental impacts from potential land-use conflicts between the hospital and current and possible future residential developments in the vicinity of the project site are addressed under Aesthetics/Light & Glare (Section 3.1), Air Quality (section 3.2), Hazards and Hazardous Materials (Section 3.7), Noise (Section 3.10), and Transportation and Circulation (Section 3.15). In terms of land-use policies, the project may be inconsistent with General Plan Policy L-1.5, "Protect existing neighborhoods from incompatible developments." Existing neighborhoods are located to the south and east of the site, although not adjacent to the site. The undeveloped land east of the project site (south of Cormorant) is currently designated for development of single-family homes (see Figures 3.9-1 and 3-9-2), which would be considered compatible with the existing homes.

The proposed location of the hospital complex is not adjacent to the existing neighborhood. However, the possibility exists that the presence of a hospital complex will generate interest by developers to propose complementary developments, such as medical offices and drug stores for the properties adjacent to this neighborhood. The development of commercial uses there might cause environmental impacts to existing neighborhoods as well as to Cruickshank Middle School

to the north. The City of Merced has to date received no applications or inquiries regarding changing the designations and zoning for these parcels. Moreover, the mere existence of the proposed hospital does not guarantee that it will create pressures to convert this land for commercial uses. Nevertheless, the project is likely to generate demand for commercial sites in the Northeast Yosemite Specific Plan area, causing future land-use incompatibilities. Therefore, this impact is considered ***potentially significant***.

There are no mitigation measures available to offset or reduce this impact. The development of a hospital complex in an area that is has been partly developed or planned for residential uses will create permanent land-use conflicts. Therefore, this impact will remain ***significant and unavoidable.***

Mitigation Measure

No mitigation measures are available.

Impact #3.9-2: The project may contribute to blight in the area of the existing Mercy Medical Center as a result of that facility being relocated to the proposed new Mercy Medical Center site.

Discussion and Conclusion: Catholic Healthcare West (CHW) currently leases from the County of Merced most of the facilities at the old County Hospital site on 13th street for the Mercy Medical Center. The Medical Center will be moved to the proposed project site, which would leave the space vacant. Under a 31-year operating agreement with the County, CHW is obligated to provide outpatient services for south Merced. However, the agreement does not specify that the facilities must be located at the old County Hospital site (John Volanti, Director of Public Health, County of Merced, pers. comm. April 6, 2005). In addition, even if these services were provided at the current facility, they would require only a small portion of the space that will be vacated. The County has not determined how the space will be used. However, individual departments have various uses in mind—including healthcare-related uses—and the County intends to develop a plan to occupy the space once it becomes available (Paul Fillebrown, Director of Public Works, County of Merced pers. comm. April 6, 2005).

The City of Merced General Plan contains a policy (L-1.4) to "conserve residential areas that are threatened by blighting influences." Residential neighborhoods are located south and west of the Merced Community Campus. However, given the interest in using the site and the lack of equivalent facilities in south Merced, it is unlikely that the departure of the Mercy Medical Center will cause the facility to be abandoned and left in a deteriorating state. Therefore, the potential of the project to contribute to blight in south Merced is considered ***less than significant.***

Mitigation Measure

No mitigation measure is required.

Impact #3.9-3: The potential of the project to reduce the City of Merced's housing stock by converting land currently designated for residential development to non-residential uses.

Discussion and Conclusion: The applicant has proposed General Plan amendments to convert 17.2 acres with a General Plan designation of High Medium Density Residential (HMD) and 18 acres with a General Plan designation of Low Density Residential (LD) to Professional/Commercial Office, which is the current designation for the Mercy Cancer Center. Table 3.9-6 shows the build-out potential of these parcels assuming the upper end of the density range with 20 percent of land set aside for required infrastructure such as streets, drainage features, and parks (80 percent of build-out potential).

Table 3.9-6
Residential Build-out Potential Under Current Land-Use Designations

Parcel	Development Range (units/acre)	Number of Units at Upper End of Range	Number of Units at 80% Build-out
10.5 acres of HMD	12-24	252	202
15.7 acres of LD	2-6	94	75
Total	—	346	277

Source: Quad Knopf, Inc.

The City of Merced has calculated that its housing needs for all income groups through 2008 is 4,666 dwelling units. The City has estimated that if the current inventory of vacant land designated and zoned for residential uses could be built out to accommodate 16,130 dwelling units, which is far more than is needed to meet the projected need. Therefore the impact from the lost potential of 413 dwelling units as a result of the proposed General Plan amendments is ***less than significant***.

Mitigation Measure

No mitigation measure is required.

Impact #3.9-4: Division of an established community

Discussion and Conclusion: The proposed project will convert more than 25 acres of land planned for residential development to medical office use. The creation of a medical center on the site could result in pressure to alter land use designations on surrounding properties to accommodate supporting commercial uses as well.

The creation of the Medical Center on the project site will add large scale buildings and non-residential uses to the site. Lands immediately east and west of the site are currently in use with educational facilities, including the Merced College to the west. The existence of large buildings in the area, including non-residential structures, has not historically served as a division to the community. While land use conflicts between medical center uses and residential land uses may be present, it is not expected that such conflicts will result in the division of the community. The impact is considered ***less than significant.***

Mitigation Measure

No mitigation measure is required.

Impact #3.9-5: Inducement of population growth

Discussion and Conclusion: The proposed project will create additional demand for commercial businesses to support medical center operations, as discussed under Impact 3.9-1. The project is designed to accommodate the project population growth of the City, already planned for in the Merced Vision 2015 General Plan and expected to result from various factors beyond the project. The development of the project will not result in the inducement of substantial population growth. The impact is considered ***less than significant***.

Mitigation Measure

No mitigation measure is required.

SOURCES

Merced Vision 2015 General Plan (City of Merced 1997)

Merced General Plan EIR (Merced 1997)

Merced Adopted Housing Element (2003)

John Volanti, Director of Public Health, County of Merced

Paul Fillebrown, Director of Public Works, County of Merced

California Department of Finance, *2005 E-5 Population and Housing Projections*

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3.10 Noise

This section is based on the *Environmental Noise Analysis* for the Merced Mercy Medical Center prepared by Bollard & Brennan, Inc. The full text of this report is contained in Appendix G.

During the Notice of Preparation period, comments were received from the Merced County Airport Land Use Commission requesting that noise and safety impacts created by the hospital helipad on the surrounding neighborhood due to helicopter operations and flight paths be analyzed and, that the landing site and approach/flight paths should depict the proximity to any existing or proposed noise sensitive or people intensive uses.

The Merced School District suggested that the Project specifically address the following in terms of cumulative impacts on the students, teachers, employees, parents and facilities associated with the Cruickshank Middle School and the District overall:

1. Noise impacts and mitigation during and associated with the construction of the facility as a result of passenger vehicle traffic, construction vehicle traffic, and delivery vehicle traffic, etc. Impacts should be addressed for both within school buildings and in the outdoor areas.

2. Noise impacts and mitigation during normal operation of the facility resulting from the general operation of the facility as a result of passenger vehicle traffic, ambulance and law enforcement vehicle sirens, etc. Impacts should be addressed for both within school buildings and in the outdoor areas.

3. Noise impacts and mitigation during normal operations of the facility resulting from the general operation of the facility including paging and announcement systems, the power plant, and ambulance sirens, etc. Impacts should be addressed for both within school buildings and in the outdoor areas.

4. Flight pattern impacts on the middle school, including takeoff and landing patterns of the helicopters using the helipad, associated noise and vibration, and associated safety concerns in the case of an emergency.

The Department of Transportation Division of Aeronautics noted that the hospital helipad will require a State Helicopter Permit. The issues of primary concern to the Department are helicopter-related noise and safety impacts on the surrounding community, including land use compatibility issues.

This section discusses the existing noise environment in the project vicinity, and identifies potential impacts and mitigation measures related to the proposed Mercy Medical Center.

3.10.1 REGULATORY SETTING

Federal Regulations

The Federal Aviation Administration has adopted a noise compatibility criterion for aircraft of 65 dB Ldn for residential uses, which includes penalties for nighttime noises.

State Regulations

The State of California "Model Community Noise Control Ordinance" suggests that an exterior hourly L50/Leq noise level of 55 dB should be used for evaluating stationary noise source impacts during the daytime period (7am-10pm) and 45 dBA during the nighttime period (10om-7 am), within "suburban" areas. For the purposes of this report, the daytime hourly average (Leq) noise level of 55dB and a nighttime hourly Leq of 45 dB is used for on-site noise sources.

STATE OF CALIFORNIA PUBLIC UTILITIES CODE

The state legislative authority to adopt noise standards governing the operation of aircraft and aircraft engines for airports is provided in Section 21669, Article 3, Chapter 4, Part 1, Division 9 of the Public Utilities Code. Caltrans Division of Aeronautics is the agency responsible for compliance with this PUC section.

The PUC differentiates emergency service helicopters from other aircraft by providing exemptions from local ordinances. Section 21662.4 (a), Article 3, Chapter 4, Part 1, Division 9 of the PUC state the following concerning exemption from the noise ordinances:

> Emergency aircraft flights for medical purposes by law enforcement, fire fighting, military, or other persons who provide emergency flights for medical purposes are exempt from local ordinances adopted by a city, county, or a city and county, whether general law or chartered, that restricts flight departures and arrivals to particular hours of the day or night, that restrict the departure or arrival of aircraft based upon the aircraft's noise level, or that restrict the operation of certain types of aircraft.

CALTRANS DIVISION OF AERONAUTICS

The Caltrans Division of Aeronautics has adopted CNEL as the noise descriptor to be used in describing a CNEL value of 65 dB as the noise impact criterion for noise-sensitive land uses, such as single family or multi-family dwellings. The CNEL is typically about 1 dB more than the Ldn because it applies an additional penalty for noise sources between the hours of 7 am and 10 pm. The Ldn descriptor only applies a penalty to noise levels between the hours of 10 pm and 7 am.

Local Regulations

MERCED VISION 2015 GENERAL PLAN

Policies

N-1.1 Minimize the impacts of aircraft noise

N-1.3 Reduce equipment noise levels

1.3a Limit operating hours for noisy construction equipment used in the City of Merced

1.3c Review maximum noise level permitted for City equipment purchases and construction contracts

N-1.4 Reduce noise levels at the receiver where noise reduction at the source is not possible

1.4 c Use the "normally acceptable" noise levels as established in the "Noise and Land Use Compatibility Guidelines" for the review of non-residential land uses:

Residential: Normally Acceptable[1]: 50-60 Ldn or CNEL, db
Conditionally Acceptable[2]: 60-70 Ldn or CNEL, db
Normally Unacceptable[3]: 70-75 Ldn or CNEL, db
Clearly Unacceptable[4]: 75-85 Ldn or CNEL, db

Schools, Libraries, Churches, Hospitals, Nursing Homes:
Normally Acceptable: 50-60
Conditionally Acceptable: 60-70 Ldn or CNEL, db
Normally Unacceptable: 70-80 Ldn or CNEL, db
Clearly Unacceptable: 80-85 Ldn or CNEL, db

Industrial, Manufact., Utilities, Agriculture:
Normally Acceptable: 50-70 Ldn or CNEL, db
Conditionally Acceptable: 70-80 Ldn or CNEL, db
Normally Unacceptable: 75-85 Ldn or CNEL, db

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1 Normally Acceptable: Specified land use us satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

2 Conditionally Acceptable: New construction development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction but with closed windows and fresh air supply systems or air conditioning will normally suffice.

3 Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features should be included in the design.

4 Clearly Unacceptable: New construction or development should generally not be undertaken.

N-2.6 Manage noise from construction activities by:

- Limiting the hours of construction activities that generate noise, when adjacent to housing and other "sensitive" uses. Typically, construction is limited to the hours of 7:00 AM to 10:00 PM, weekdays and Saturday, and prohibited on Sundays and holidays

- Requiring that all construction vehicles or equipment, fixed or stationary, be equipped with properly operating and maintained mufflers.

- Requiring that construction vehicle staging areas be located as far as practical from existing residential uses.

- Schedule the noisiest construction operations to occur together to avoid continuing periods of the greatest annoyance, wherever possible,

- Requiring that construction vehicle trips be routed as far as practical from existing residential uses.

3.10.2 ENVIRONMENTAL SETTING

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The decibel scale adjusted for A-weighting (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Over the audible range of pitch, the human ear is less sensitive to low frequencies and is more sensitive to midlevel and high-pitched sound.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

The Day-night Average Level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10 p.m. to 7 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variation in the noise environment.

Existing Conditions

According to the *Environmental Noise Analysis* the current noise conditions around the site range from 45- 60 Ldn. Ambient Noise measurements ranges from average daytime (7:00 am- 10:00 pm) levels of 43.2 Leq to 59.9 Leq and average nighttime (10:00 pm- 7:00am) levels of 36.8 Leq to 39.7 Leq. Table 3.10-1 summarizes current ambient noise levels. Table 3.10-2 summarizes existing traffic noise levels.

Table 3.10-1
Measured Ambient Noise Monitoring Results, March 2005

Site	Location	Average Measured Hourly Noise Levels, dBA						
		24-hour	Daytime (7:00 am - 10:00 pm)			Nighttime (10:00 pm - 7 am)		
		L_{dn}	L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
Continuous 24-hour Noise Measurement Sites								
1	625 Kingfisher Ct.	44.9 dB	43.2	40	59.5	36.8	35	50.4
2	628 LeHigh Drive	50.2 dB	50.4	45	54.8	39.9	34	54.8
3	1217 Pleasant Lane	56.5 dB	58.1	40	68.4	39.7	35	56.5
Short-term Noise Measurement Sites								
A	N. of Project Site @ Cardella	N/A	54.8	54	61.0	**@ 3:20 p.m.**		
B	S. of Project Site @ Yosemite	N/A	59.9	59	70.3	**@ 3:45 p.m.**		
Notes: Source - Bollard & Brennan, Inc., 2005								

Table 3.10-2
Existing Traffic Noise Levels and Distances to Contours

Roadway	Segment	*Ldn @ 100 Feet, dB	*Distance to Contours (feet)	
			65 dB Ldn	60 dB Ldn
G Street	N. of Cardella Rd.	58	35	75
	S. of Cardella Rd.	58	35	75
	N. of Service Driveway	NA	NA	NA
	S. of Driveway	NA	NA	NA
	N. of Cormorant Dr.	58	32	68
	S. of Cormorant Dr.	60	49	106
	N. of Yosemite Ave.	60	49	106
	S. of Yosemite Ave.	62	63	136
Sandpiper Avenue	N. of Middle Proj. Driveway	NA	NA	NA
	S. of Middle Proj. Driveway	NA	NA	NA
Mercy Avenue	N. of North Proj. Driveway	NA	NA	NA
	S. of North Proj. Driveway	NA	NA	NA
	N. of Cormorant Dr.	NA	NA	NA
Mansionette Drive	N. of Yosemite Ave.	58	36	78
Paulson Road	S. of Cardella Rd.	NA	NA	NA
	N. of Yosemite Ave.	56	24	52
Cardella Road	W. of G Street	NA	NA	NA
	E. of G Street	34	1	2
	W. of Paulson Rd.	NA	NA	NA
	E. of Paulson Rd.	NA	NA	NA
Cormorant Drive	W. of G Street	45	5	10

Roadway	Segment	*Ldn @ 100 Feet, dB	*Distance to Contours (feet)	
			65 dB Ldn	60 dB Ldn
	E. of G Street	58	35	74
	W. of Mercy Ave.	NA	NA	NA
	E. of Mercy Ave.	NA	NA	NA
Yosemite Avenue	W. of G Street	63	76	164
	E. of G Street	62	61	132
	W. of Mansionette Dr.	62	63	135
	E. of Mansionette Dr.	62	65	141
	W. of Paulson Rd.	62	68	146
	E. of Paulson Rd.	62	59	128
*Relative to Roadway Centerline Source: Bollard & Brennan, Inc. , 2005				

Sensitive Noise Receptors

Existing land uses located within the City of Merced that are sensitive to intrusive noise include hospitals, convalescent facilities, parks, and residential areas, schools, and libraries. Some variability in standards for noise sensitivity map applies to different densities of residential development, and single-family uses are frequently considered the most sensitive. There is a range of land uses that are relatively insensitive to noise, such as commercial, retail, industrial, salvage yards, transit terminal, and others.

Sensitive noise receptors in the proposed project site include existing single-family residential uses to the south and east, Cruickshank Middle School to the east, and Merced College to the west; the hospital itself is also classified as a sensitive noise receptor.

Construction Noise Impacts

During the construction phases of the project, noise from construction activities would increase the noise environment in the immediate area. Activities involved in construction would generate noise levels ranging from 85 to 90 dB at a distance of 50 feet. Construction activities would be temporary in nature, typically occurring during normal working hours. Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction site. Average maximum noise levels for construction equipment would range from 85-87 dB at 50 feet.

Traffic Noise Impacts

As a means of determining the potential future noise impacts associated with the project, Bollard & Brennan, Inc. used the FHWA Traffic Noise Prediction Model to analyze Existing plus Phase 1 traffic noise levels; the chance in noise levels due to the project; cumulative traffic noise levels without the project; Cumulative plus Project traffic noise levels; and the change in noise levels due to the project. Results are shown in Tables 3.10-3 through 3.10-5.

Table 3.10-3
Existing + Phase 1 Traffic Noise Levels and Distances to Contours
(Relative to Roadway Centerline)

Roadway	Segment	Ldn @ 100 Feet, dB	Change In Levels, dB	Distance to Contours (feet)	
				65 dB Ldn	60 dB Ldn
G Street	N. of Cardella Rd.	59	+1	38	81
	S. of Cardella Rd.	59	+1	38	82
	N. of Service Driveway	59	0	38	82
	S. of Driveway	59	0	39	84
	N. of Cormorant Dr.	58	0	36	78
	S. of Cormorant Dr.	62	+2	65	140
	N. of Yosemite Ave.	62	+2	65	139
	S. of Yosemite Ave.	63	+1	74	160
Sandpiper Avenue	N. of Middle Proj. Driveway	NA	NA	NA	NA
	S. of Middle Proj. Driveway	NA	NA	NA	NA
Mercy Avenue	N. of North Proj. Driveway	NA	NA	NA	NA
	S. of North Proj. Driveway	52	NA	14	31
	N. of Cormorant Dr.	57	NA	29	63
Mansionette Drive	N. of Yosemite Ave.	59	+1	37	80
Paulson Road	S. of Cardella Rd.	NA	NA	NA	NA
	N. of Yosemite Ave.	58	+2	32	69
Cardella Road	W. of G Street	NA	NA	NA	NA
	E. of G Street	34	0	1	2
	W. of Paulson Rd.	NA	NA	NA	NA
	E. of Paulson Rd.	NA	NA	NA	NA
Cormorant Drive	W. of G Street	45	0	5	10
	E. of G Street	61	+3	53	115
	W. of Mercy Ave.	60	NA	49	106
	E. of Mercy Ave.	59	NA	39	83
Yosemite Avenue	W. of G Street	63	0	79	169
	E. of G Street	62	0	61	132
	W. of Mansionette Dr.	62	0	63	135
	E. of Mansionette Dr.	62	0	66	143
	W. of Paulson Rd.	62	0	64	138
	E. of Paulson Rd.	62	0	65	139

Source: Bollard & Brennan, Inc. , 2005
NA = Indicates that the roadway segment does not exist, or did not previously exist.

Table 3.10-4
Cumulative/No Project Traffic Noise Levels and Distances to Contours
(Relative to Roadway Centerline)

Roadway	Segment	Ldn @ 100 Feet, dB	Distance to Contours (feet)	
			65 dB Ldn	60 dB Ldn
G Street	N. of Cardella Rd.	63	72	155
	S. of Cardella Rd.	62	63	136
	N. of Service Driveway	62	63	136
	S. of Driveway	62	63	136
	N. of Cormorant Dr.	61	53	113

Roadway	Segment	Ldn @ 100 Feet, dB	Distance to Contours (feet)	
			65 dB Ldn	60 dB Ldn
	S. of Cormorant Dr.	63	73	157
	N. of Yosemite Ave.	62	67	144
	S. of Yosemite Ave.	64	92	197
Sandpiper Avenue	N. of Middle Proj. Driveway	NA	NA	NA
	S. of Middle Proj. Driveway	NA	NA	NA
Mercy Avenue	N. of North Proj. Driveway	NA	NA	NA
	S. of North Proj. Driveway	NA	NA	NA
	N. of Cormorant Dr.	56	24	52
Mansionette Drive	N. of Yosemite Ave.	58	35	75
Paulson Road	S. of Cardella Rd.	56	24	52
	N. of Yosemite Ave.	58	35	75
Cardella Road	W. of G Street	58	37	79
	E. of G Street	58	37	79
	W. of Paulson Rd.	59	37	80
	E. of Paulson Rd.	59	37	80
Cormorant Drive	W. of G Street	48	8	17
	E. of G Street	60	46	100
	W. of Mercy Ave.	58	36	78
	E. of Mercy Ave.	57	27	59
Yosemite Avenue	W. of G Street	63	78	168
	E. of G Street	64	90	195
	W. of Mansionette Dr.	64	90	195
	E. of Mansionette Dr.	63	78	168
	W. of Paulson Rd.	63	78	168
	E. of Paulson Rd.	63	78	168

Source: Bollard & Brennan, Inc., 2005
NA=Indicates that the roadway segment does not exist, or did not previously exist.

Table 3.10-5
Cumulative + Project Traffic Noise Levels and Distances to Contours
(Relative to Roadway Centerline)

Roadway	Segment	Ldn @ 100 Feet, dB	Change in Levels, dB	Distance to Contours (feet)	
				65 dB Ldn	60 dB Ldn
G Street	N. of Cardella Rd.	63	0	77	165
	S. of Cardella Rd.	62	0	68	147
	N. of Service Driveway	62	0	68	147
	S. of Driveway	63	0	68	147
	N. of Cormorant Dr.	61	0	58	126
	S. of Cormorant Dr.	64	+1	93	199
	N. of Yosemite Ave.	64	+2	87	188
	S. of Yosemite Ave.	65	+1	106	229
Sandpiper Avenue	N. of Middle Proj. Driveway	59	NA	40	87
	S. of Middle Proj. Driveway	58	NA	34	74
Mercy Avenue	N. of North Proj. Driveway	58	NA	34	72
	S. of North Proj. Driveway	58	NA	35	76

Roadway	Segment	Ldn @ 100 Feet, dB	Change in Levels, dB	Distance to Contours (feet)	
				65 dB Ldn	60 dB Ldn
	N. of Cormorant Dr.	59	+3	38	82
Mansionette Drive	N. of Yosemite Ave.	58	0	35	76
Paulson Road	S. of Cardella Rd.	57	+1	30	65
	N. of Yosemite Ave.	58	0	36	78
Cardella Road	W. of G Street	59	+1	41	89
	E. of G Street	59	+1	42	90
	W. of Paulson Rd.	59	0	40	87
	E. of Paulson Rd.	60	+1	45	97
Cormorant Drive	W. of G Street	48	0	8	17
	E. of G Street	63	+3	74	159
	W. of Mercy Ave.	61	+3	52	113
	E. of Mercy Ave.	58	+1	35	75
Yosemite Avenue	W. of G Street	64	+1	84	180
	E. of G Street	64	0	92	199
	W. of Mansionette Dr.	64	0	92	197
	E. of Mansionette Dr.	64	+1	79	171
	W. of Paulson Rd.	63	0	79	171
	E. of Paulson Rd.	64	+1	80	173

Source: Bollard & Brennan, Inc. , 2005
NA = Indicates that the roadway segment does not exist, or did not previously exist.

Helicopter Noise Impacts

As a means of developing noise contours associated with the proposed helicopter operations, Bollard & Brennan, Inc., utilized the Federal Aviation Administration (FAA) Integrated Noise Model (INM) version 6.1. The INM has the ability to develop noise contours for both fixed wing aircraft and helicopter operations. The contours which were developed included CNEL contours and SEL contours. These contour maps are included in the full Noise Analysis document in Appendix G. Based upon information gathered by the helicopter planning consultant, there will be approximately 220 arrivals and 220 departures per year. This results in an annual daily average of 0.6 arrivals and 0.6 departures per day. The day/evening/nighttime split assumes 57% daytime (7 a.m. to 7 p.m.), 10 % evening (7 p.m. to 10 p.m.), and 33% night (10 p.m. to 7 a.m.).

Central Plant Noise Impacts

The Central Power Plant is located in the northwest corner of the project site. The Central Plant is approximately 700 feet from the nearest residences to the west; related equipment includes chillers, boilers, cooling towers, and three 1500 kw emergency diesel generators. Although, there is a proposed mechanical equipment room, currently, specific equipment types are not available. In addition, the equipment room design is not completed. This analysis will focus on providing a preliminary analysis of the potential noise impacts, and the required performance standards for each type and piece of equipment.

EMERGENCY GENERATORS

The emergency generators are expected to include three Caterpillar Model 3512B standby power generator sets. Typically, the emergency generators will be located within the mechanical room with the supply and exhaust air ducted through the roof. During emergencies, the use of emergency generators is considered to be exempt from the noise level criteria; however, approximately twice per month, the emergency generators are exercised for approximately 30 minutes. During the exercising of the equipment, the noise level criteria are applicable.

The primary noise sources associated with the generator operations are the exhaust systems, which create an overall noise level of 100 dBA, and the generator/engine, which accounts for an overall noise level of 98 dBA.

BOILER AND CHILLERS

Boiler and chiller equipment will generally run any time of the day and night. The boiler room is expected to consist of up to four boilers which are vented through the roof of the building. A typical boiler produces a sound power level of approximately 95 dBA. Ventilation is typically provided through louvers on the sides of the building.

3.10.3 IMPACT EVALUATION CRITERIA

A project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed, as discussed previously in the Regulatory Setting heading of this Section. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria or ordinances, or substantially increase noise levels to noise-sensitive land uses.

For this analysis, noise impacts associated with the proposed project would be considered significant if the following were to occur:

- For transportation noise sources, an exceedance of the upper limit noise level criterion contained within the General Plan Noise Element, FAA regulations of the Caltrans Division of Aeronautics criteria.

- Expose the existing noise-sensitive land uses in the project vicinity to noise levels generated by on-site activities (sources other than off-site traffic) in excess of the City of Merced General Plan Noise Elements standards.

- The project results in a significant increase (+3 dB) in noise levels at noise-sensitive land uses.

- In terms of sleep disturbance, there are no criteria which have been established which assess the rate of sleep disturbance which is considered acceptable or unacceptable. For the

purposes of this report, the potential for sleep disturbance will be quantified to the best extent possible, with significance determined by any disturbance of sleep to residences in the area.

Additionally, consistent with Appendix G of the State CEQA Guidelines, a project will have a significant impact if it:

- Exposes persons to or generates noise levels in excess of standards established in the *Merced Vision 2015 General Plan* or noise ordinance, or applicable standards of other agencies;

- Expose persons to or generate excessive ground-borne vibration or ground-borne noise levels;

- Causes a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

- Causes a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

- 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, expose people residing or working in the project area to excessive noise levels; or

- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

3.10.4 IMPACTS & MITIGATION MEASURES

Impact #3.10-1: The project could result in an increase in existing traffic noise levels at existing land uses in the project vicinity on the existing local roadway network.

Discussion and Conclusion: Based upon the analysis of existing traffic noise levels and traffic noise levels associated with the proposed project Phase 1, the change in traffic noise levels resulting from the propose project range between 0 dB and +2 dB at all but one roadway segment. A change in noise levels of 1 to 3 dBA is considered to be "just barely perceivable." An increase in traffic noise levels of 3 dB Ldn has been identified along Cormorant Drive between G Street and Sandpiper Drive; however, this section of Cormorant Drive is adjacent to the project site, and no residential units will be affected. Therefore, this impact is ***less than significant.***

Mitigation Measure

No mitigation measure is required.

Impact #3.10-2: The project could result in an increase in future traffic noise levels at existing land uses in the project vicinity on the existing local roadway network.

Discussion and Conclusion: Based upon the analysis of future traffic noise levels and traffic noise levels associated with the proposed project, the change in traffic noise levels resulting from the proposed project range between 0 dB and +3 dB. A 3dB chance in noise levels is considered to be "just barely perceptible" and is considered to be the test of significance. The only roadway segments which are predicted to experience a + 3 dB increase in noise levels are adjacent to the project site or vacant land. Therefore, this impact is considered ***less than significant.***

Mitigation Measure

No mitigation measure is required.

Impact #3.10-3: Proposed increases in helicopter noise levels may result in an exceedance of the City of Merced noise level criteria.

Discussion and Conclusion: The City of Merced established a normally acceptable noise level criterion for transportation noise sources of 60 dB Ldn/CNEL. A conditionally acceptable noise level criterion of 65 dB Ldn/CNEL is allowed, while using the best available practical application of noise control measures. An interior noise level criterion of 45 dB CNEL is also applied.

Based upon the INM model runs, the 50 dB CNEL contour is confined to the project site. The 60 dB CNEL contours do not encroach upon any residential uses. This is ***less than significant.***

Assuming a typical exterior to interior noise level reduction of 25 dB under standard construction practices, the interior noise level criterion of 45 dB CNEL will not be exceeded. This impact is ***less than significant.***

Mitigation Measure

No mitigation measure is required.

Impact #3.10-4: Helicopter Noise

Discussion and Conclusion: Operation of helicopters is regulated by the California Department of Transportation Division of Aeronautics. Caltrans uses noise thresholds in their determination of acceptable locations for helipads. Caltrans has established a noise level criterion of 65 dB CNEL. Based upon the INM runs, the 50 dB CNEL contours are confined to the project site. This impact is ***less than significant.***

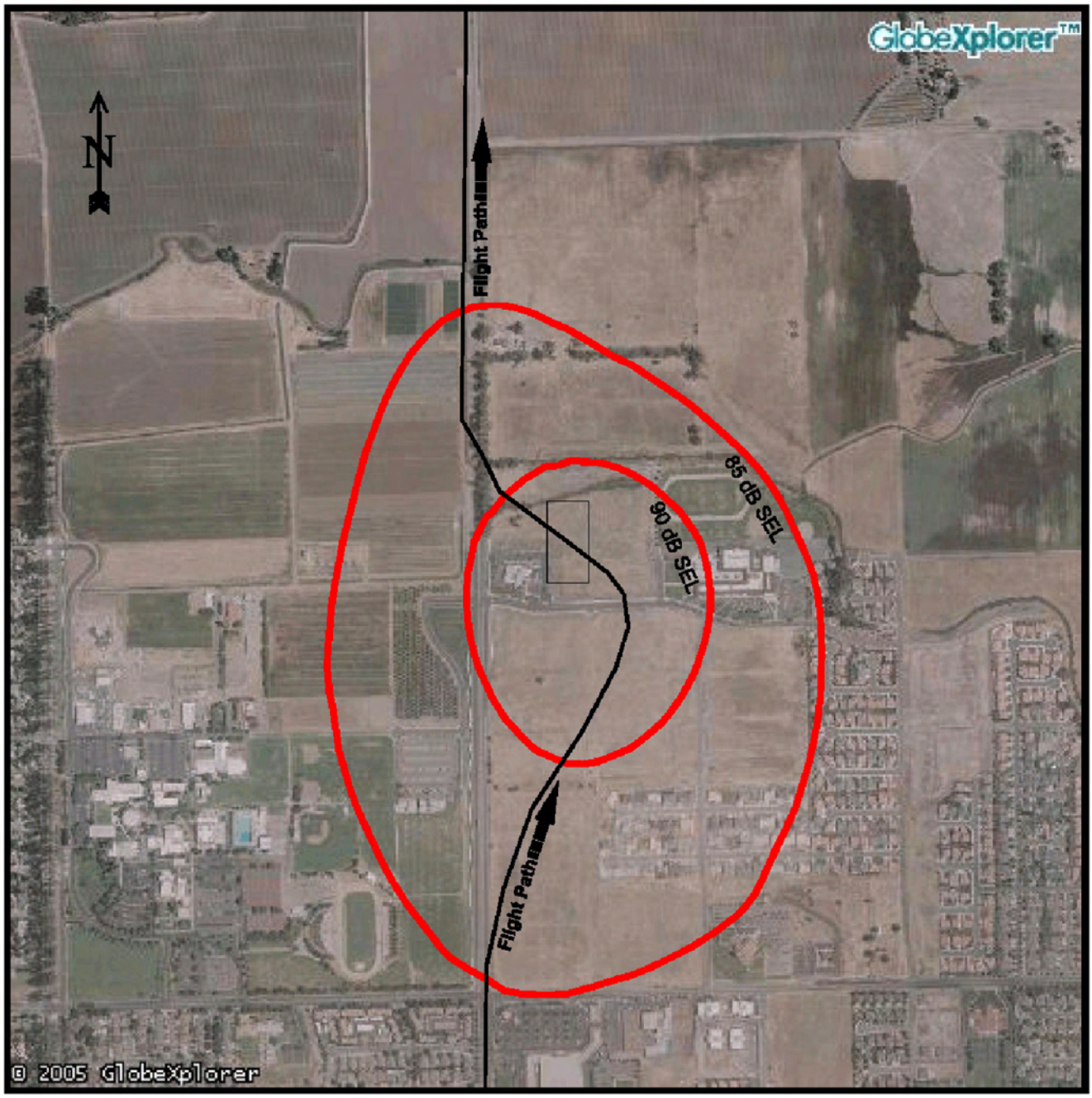
Mitigation Measure

No mitigation measure is required.

Impact #3.10-5: Sleep disturbance due to nighttime helicopter noise

Discussion and Conclusion: The proposed helicopter operations may result in sleep disturbance at existing or proposed residential uses. Figures 3.10-1 and 3.10-2 show the predicted SEL contours associated with arrivals and departures of helicopters. The SEL contours which are

NORTHBOUND ARRIVAL / NORTHWEST DEPARTURE SEL



Source: Bollard & Brennan, 2005 / Quad Knopf, 2005

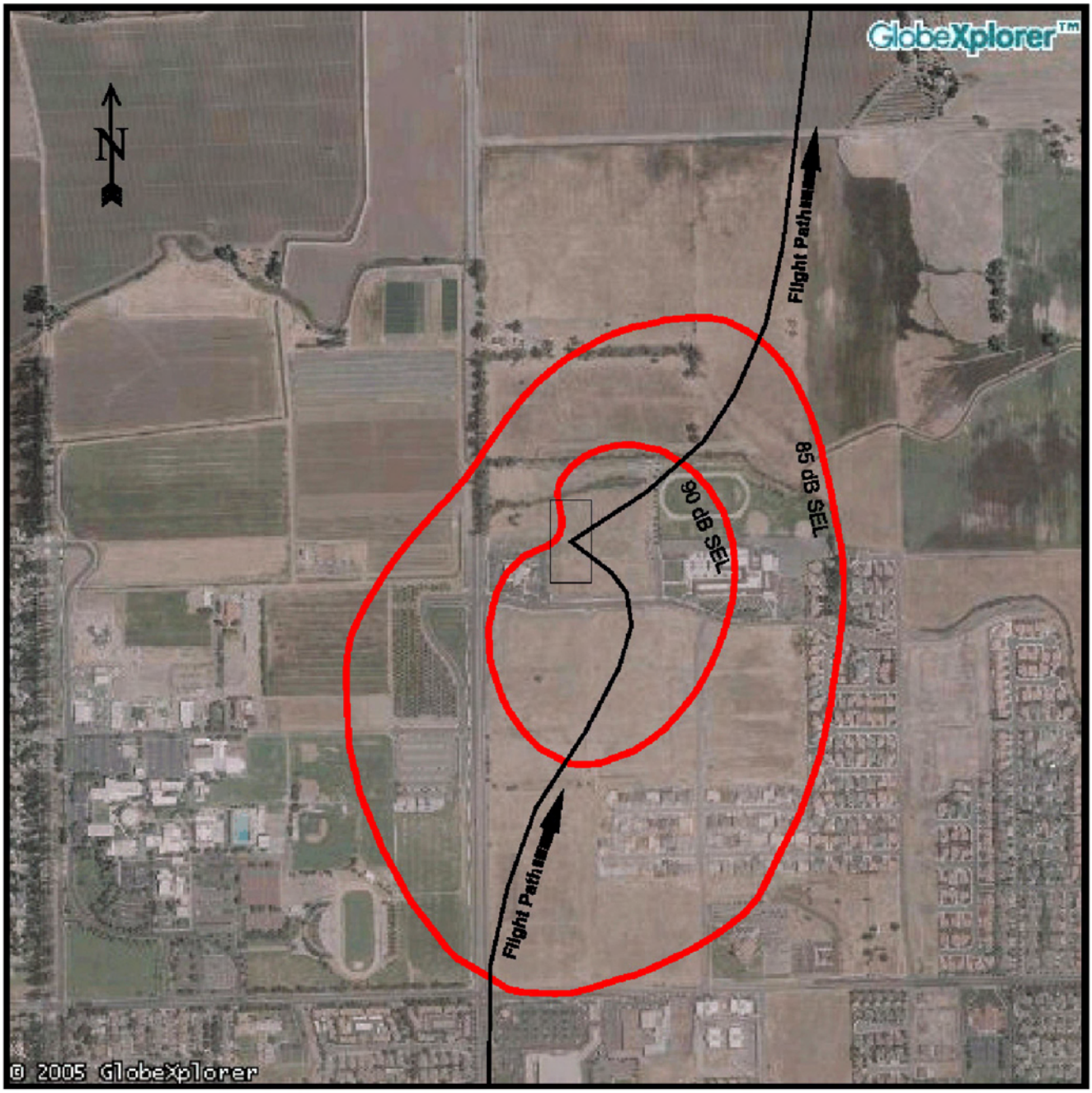
Quad Knopf

HELICOPTER NOISE GENERATION FLIGHT PATH #1

Figure 3.10-1

Job No.: 04385

NORTHBOUND ARRIVAL / NORTHEAST DEPARTURE SEL



Source: Bollard & Brennan, 2005 / Quad Knopf, 2005

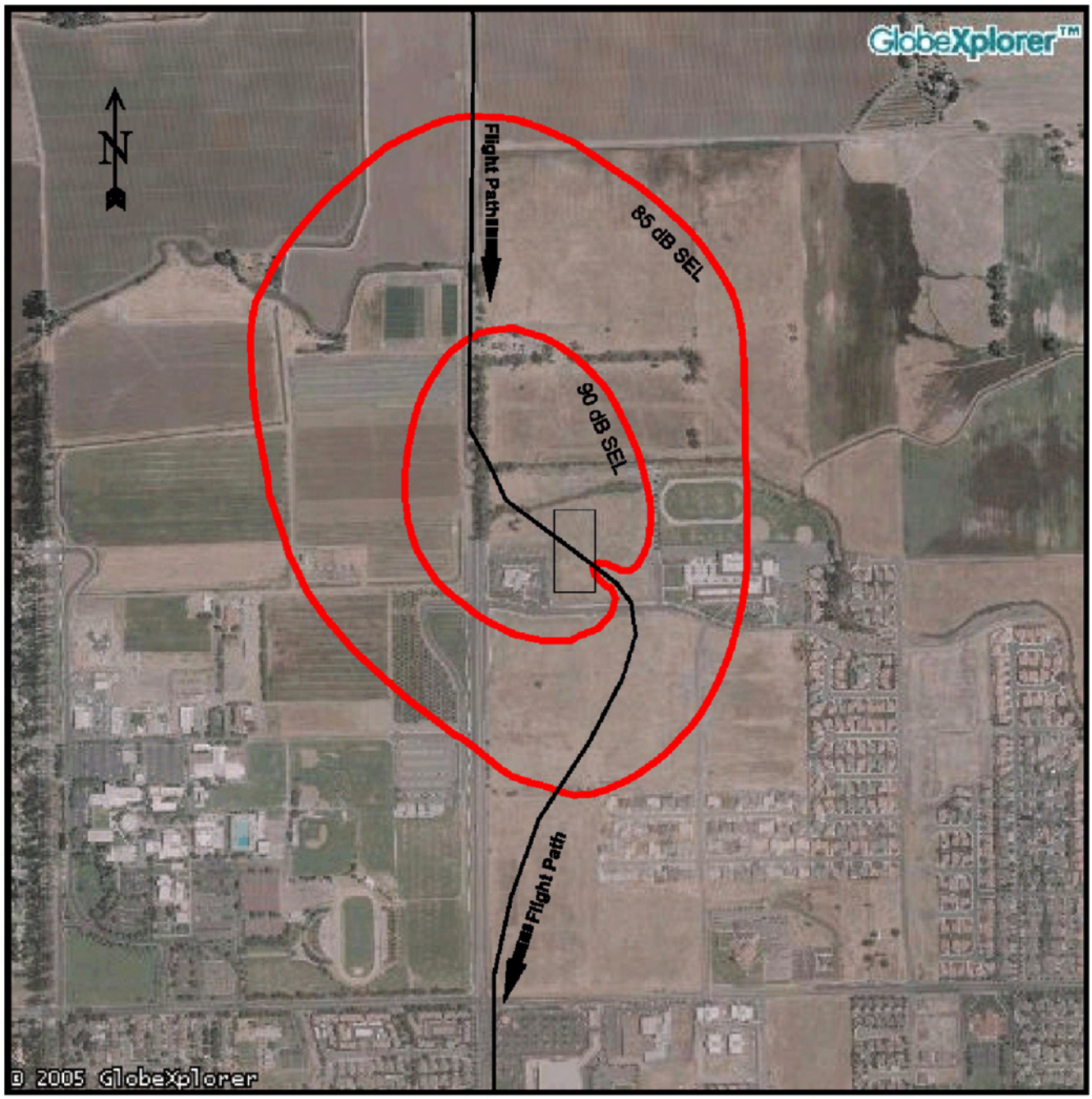
Quad Knopf

HELICOPTER NOISE GENERATION FLIGHT PATH #2

Figure 3.10-2

Job No.: 04385

SOUTHBOUND ARRIVAL / DEPARTURE SEL



Source: Bollard & Brennan, 2005 / Quad Knopf, 2005

Quad Knopf

HELICOPTER NOISE GENERATION FLIGHT PATH #3

Figure 3.10-3

Job No.: 04385

shown to include the 85 dB and 90 dB contours. Comparing the exterior SEL contours to Figure 3.10-3 (FICAN Study), and assuming an exterior to interior noise level reduction of 25 dB, it can be expected that approximately 3% of the residences located under the 85 dB SEL contours could experience sleep disturbance. Approximately 5% of the residences located under the 90 dB SEL contours could experience sleep disturbance. This is a ***potentially significant*** impact.

Mitigation Measure

Implementation of the following mitigation measure will not reduce impacts to a less than significant level. Following implementation of the mitigation measure, this impact remains ***significant and unavoidable.***

Mitigation Measure #3.10-5:

The pilots shall avoid flights over noise sensitive areas at all times when weather permits. The predominant wind in that area is from the north, northwest. The helicopter operates by landing and taking off into the wind. A departure in the northwesterly direction is preferred. A modified approach procedure from the northwest may be possible during minimal and "no" wind conditions. However, if the wind velocity exceeds a specified criteria depending upon the model of aircraft, then the helicopter will need to approach from the northeast or southeast.

Impact #3.10-6: New boilers within the Central Plant could result in a significant increase in noise levels.

Discussion and Conclusion: Four boilers are located within the Central Plant building. The boilers are expected to be contained within a concrete or masonry building. However, ventilation openings are generally provided through a plenum to the roof of a building or through the side of the building. The typical sound power level of a boiler is approximately 95 dB. The ventilation ducting is expected to reduce some of the noise, based on attenuation over distance. However, it is assumed that the total sound power level within the boiler room is approximately 100 dB with all four boilers operating, the predicted noise levels at the roof or side of the building are predicted to be 90 dBA. Mechanical equipment designs include acoustical lovers such as the Ruskin ACL845 stationary louvers which can be mounted on the openings in the roof. The expected noise level reduction from the louvers is conservatively 20 dB. Therefore, the boiler room noise levels are expected to be 70 dB at the air ventilation openings. The nearest residences are approximately 700 feet from the building. The predicted noise levels are the nearest residences without any additional shielding would be less than 30 dB. The boiler operations are expected to comply with the City of Merced daytime and nighttime stationary noise source criteria of 55 dB Leq and 45 dB leq, respectively; however, without detailed designs for the boilers, noise generation cannot be known for certain. The impact is ***potentially significant.***

Mitigation Measure

Implementation of the following mitigation measure will reduce impacts to a ***less-than-significant*** level.

Mitigation Measure #3.10-6:

Noise measured at the property line shall be based upon the Merced Vision 2015 General Plan. This document states that an outdoor noise level of 60 Ldn or less is acceptable for residential areas and for schools. The measurement of these units shall be in terms of dB(A) Leq at all residential property lines.

Include appropriate acoustical louvers, silencers or other noise control measures at all ventilation openings facing north and west, and on the roof tops as required so as not to exceed 45 dB(A) Leq at all residential property lines.

Impact #3.10-7: Noise generated by the Central Plant due to the use of emergency generators.

Discussion and Conclusion: The central plant will contain three emergency generators which may create a significant increase in noise levels from engine noise and exhaust. Emergency generators are considered to be non-operational except under emergency conditions. However, emergency generators will be subject to the noise level criteria when they are exercised for maintenance purposes.

Generator equipment has been specified to include 3 caterpillar 3512B emergency generators, which are contained within the central plant. The supply air and exhaust air is vented through the roof through plenums.

The closest residences to the generator room building are approximately 700 feet from the roof. Assuming that up to two generators are operating within the generator room, the sound power level within the room is expected to be approximately 128 dBA. Since the engine noise will be reduced by approximately 10 dB within the plenum, the predicted sound power level at the roof is approximately 118 dBA. The predicted noise level at the nearest residences is 62 dB. If just one generator is operating, the predicted noise level at the nearest resident is 59 dB.

The sound power level from a single unmuffled exhaust is expected to be approximately 100 dBA at 23 feet. The predicted noise level, from exhaust noise, at the nearest residence is approximately 71 dB Leq. Therefore the predicted engine noise levels from the two emergency generators will exceed the daytime and nighttime 55 dB Leq and 45 dB Leq stationary noise source criteria, respectively. This impact is ***potentially significant.***

Mitigation Measure

Implementation of the following mitigation measures will reduce the impact to a level that is ***less than significant.***

Mitigation Measure #3.10-7a:

Generators shall be specified with individual acoustical enclosures supplied by the manufacturer, which will limit the noise from the generator to 75 dB(A) at 10 feet.

Mitigation Measure #3.10-7b:

Exterior generators shall be acoustically attenuated in weatherized enclosures by the manufacturer.

Mitigation Measure #3.10-7c:

The emergency generators should be exercised only on weekdays between the hours of 8 a.m., and 5 p.m.

Mitigation Measure #3.10-7d:

Only one emergency generator should be exercised at any given time.

Mitigation Measure #3.10-7e:

Generators shall be specified with individual acoustical enclosures supplied by the manufacturer, which will limit the noise from the generator to 75 dB(A) at 10 feet.

Impact #3.10-8: Generation of construction noise exceeding City regulations

Discussion and Conclusion: Noise impacts would be generated by construction activities. These sounds generally range between 85 dB and 90 dB at a distance of 50 feet, and could exceed normally acceptable sound levels at neighboring receptor locations. This impact is ***potentially significant.***

Mitigation Measure

Implementation of the following mitigation measures will reduce the impact to a ***less-than-significant*** level.

Mitigation Measure #3.10-8a:

All heavy construction equipment and all stationary noise sources (such as diesel generators) shall be in good working order and have manufacturer installed mufflers.

Mitigation Measure #3.10-8b:

Equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from existing residences and Cruickshank Middle School as is feasible. During Phases Two and Three, the Mercy Medical Center will be in use, therefore equipment warm up areas, etc. should be located as far away from the hospital, existing residences, and Middle School, as is feasible.

Mitigation Measure #3.10-8c:

All construction shall be between the hours of 7:00 a.m. and 9:00 p.m. daily except Sundays and holidays.

Construction activities between the hours of 10:00 a.m. and 6:00 p.m. on Sundays and holidays shall meet at least one of the following noise limitations:

1. *No individual piece of equipment shall produce a noise level exceeding 83 dBA at a distance of twenty-five feet from the source. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to twenty-five feet from the equipment as possible.*

2. *The noise level at any point outside of the property plane of the project shall not exceed 86 dBA.*

Impact #3.10-9: Construction of the proposed Mercy Medical Hospital would involve activities that could generate groundborne vibration or ground-borne noise levels.

Discussion and Conclusion: Normal project construction activities would not generate substantial levels of vibration. Pile driving, if required during the construction phase of a project, could produce significant groundborne vibration levels. This impact is ***potentially significant.***

Mitigation Measure

Implementation of the following mitigation measure will reduce the impact to a ***less-than-significant*** level.

Mitigation Measure #3.10-9:

Limit groundborne vibration due to construction activities in the direction of sensitive receptors. For construction adjacent to highly sensitive uses, apply additional measures as feasible, including advance notice to occupants of sensitive facilities to ensure precautions are taken in those facilities to protect ongoing activities from the effects of vibration.

SOURCES

Bollard & Brennan, Inc. *Environmental Noise Analysis: Merced Mercy Medical Center Project # 2004-287*. April 21, 2005

Merced Vision 2015 General Plan

3.11 Public Services and Facilities

This section of the DEIR analyzes the potential demands on public facilities and services generated by the project, and makes a determination on the significance of this impact on the providers of these facilities and services. Public services included in this analysis are police enforcement and fire protection. Public facilities included in this analysis are schools, parks and recreational facilities, and libraries.

During the Notice of Preparation (NOP) period comments were received from the City of Merced Fire Department regarding the impact of the proposed project on public services and facilities.

3.11.1 REGULATORY SETTING

The City of Merced is the public service provider for the majority of services required by the project. Various local statutes and standards apply to the services and facilities provided, and regulate the ways in which new developments are required to offset impacts associated with these services. Following are the regulations applicable to the project:

Federal Regulations

There are no specific federal regulations applicable to public services.

State Regulations

In 1986, the State Legislature approved AB 2926. This bill enables school districts to directly impose developer fees to pay for new school construction (Government Code section 53080). It also establishes the maximum fees (adjustable for inflation) which may be collected under this and any other school fee authorization. Prior to imposing the fee, the district must conduct a study to determine the impact of the anticipated increase in commercial or industrial employees on the cost of providing school facilities.

Local Regulations and Applicable General Plan Policies

MERCED VISION 2015 GENERAL PLAN

Policies

P-1.3 Require new development to provide or pay for its fair share of public facility and infrastructure improvements.

1.3.c All new development shall contribute its fair share of the cost of on-site and off-site public infrastructure and services as appropriate.

1.3.d The City may require developments to install off-site facilities which also benefit other properties.

P-2.1 Maintain sufficient public protection facilities, equipment, and personnel to serve the City's needs.

2.1.b Determine that new development is adequately served by fire and police protection services.

2.1.e Maintain an adequate and reliable water system to serve fire protection needs.

2.1.g Utilize existing community resources, to the maximum extent feasible, in the provision of public protection services.

2.1.h Assure that new development utilizes modern public protection concepts in their design and development

OS-3.1 Provide high-quality park and open space facilities to serve the needs of a growing population.

3.1.a Continue efforts to acquire new park sites within future growth areas in advance of development to meet the recreation open space needs of an expanding population.

OS-3.2 Maintain and expand the City's bikeway and trail system.

3.2.a Utilize the urban stream system in the planning and design of bikeways and trails.

3.2.b Make use of creekside areas, utility line easements, abandoned railroad rights-of-way, and canal easements for bikeway purposes.

S-4.1 Promote the concept of fire protection master planning with fire safety goals, missions, and supporting objective for the community.

4.1.a Provide additional fire station locations as expansion of the City occurs in order to maintain a response objective of 4 to 6 minutes citywide.

4.1.b Work with the Fire Department and the Environmental Health Division to identify fire districts that will require specialized manpower and equipment, such as businesses that use hazardous materials, and request that land uses or structures with similar needs be confined to these districts.

S-4.2 Maintain a reasonable level of accessibility and infrastructure support for fire suppression, disaster, and other emergency services.

4.2.d Expand the inspection program to include the following recommendations by the Insurance Services Office of California:

a. Perform fire prevention inspections of all buildings other than dwellings once a year, except hazardous occupancies which should be inspected twice a year.

b. Establish a program of adequate reinspection of electrical wiring and equipment.

S-6.1 Provide superior community-based police services.

6.1.c Locate future police facilities to enhance the "community policing" concept through the expansion of existing or the addition of new police service districts as the City grows.

S-6.2 Provide services and personnel necessary to maintain community order and public safety.

6.2.a Maintain a police force sufficiently staffed and deployed to ensure quick response times to emergency calls.

6.2.b Encourage approaches to crime prevention to be designed into new buildings and subdivisions.

NORTHEAST YOSEMITE SPECIFIC PLAN:

List of Conditions

5. The applicant shall install the required bikeways and undercrossings along Cottonwood Creek, and will be reimbursed for this in accordance with City ordinance.

26. A maintenance district will be formed to maintain any retention basins, the storm drain system, the park and landscaped areas along walls, streets, and any medians. In addition, the maintenance district will be 100 percent responsible for maintenance of the creek itself, the surrounding riparian area, and the side of the creek without the bike path. Maintenance cost for the side of the creek with the bike path shall be split between the City and the maintenance district. The maintenance district share of the cost shall be determined by benefit to properties in the area (local benefit).

31. The applicants shall be required to enter into a written agreement consenting to pay all City and school district fees, taxes and/or assessments in effect on the date of any subsequent permit approval. Any increase in those fees, taxes and/or assessments, and any new fees, taxes and/or assessments which are in effect at the time the building permits are issued, which may include traffic impact fees, a Parsons Avenue impact fee, Mello-Roos impact fee, etc.; said agreement to be approved by the City Council prior to the adoption of the ordinance, resolution, or minute actions.

3.11.2 ENVIRONMENTAL SETTING

Police Enforcement

The City of Merced Police Department provides law enforcement services including dispatching to the City of Merced and the project site. The Merced County Sheriff's Department provides coroner services to the city.

The City Police Department has three police stations: (1) 1109 Loughborough Drive in the northern portion of the city; (2) 470 West 11th Street located in the southern portion of the city; and (3) 611 West 22nd Street in the central portion of the city. Although all three police stations are located within four miles of the project site the northern station on Loughborough Drive is the closest. As of February 2005, the department had a total of 81 sworn officers including four administrative staff. The department has a total 95 vehicles including patrol, SWAT, bomb, investigatory, traffic, canine, parking enforcement, and administrative vehicles. The Loughborough Drive station has a total of 12 sworn officers and seven vehicles.

The average response time for in-progress calls is between two and four minutes while the average response time for not-in-progress calls can range from two minutes to over an hour depending upon the type of call. According to the City of Merced Police Department Commander, the estimated response times, for in-progress and not-in-progress calls, to the project site are the same as the average response times.

The project site is within a patrol route referred to as "Beat 10" which stretches from M Street east to the city limits and from Bear Creek north to the city limits. There are a minimum of two officers assigned to this beat at all times.

Fire Protection

Fire protection services are provided by the City of Merced Fire Department. The department currently has four fire stations located at (1) 99 East 16th Street, (2) East 21st Street and Yosemite Park Way, (3) Loughborough Drive north of the Merced Mall and (4) at the Merced Municipal Airport. The department currently has four engine companies, a rescue squad, a ladder company, reserve engines, and a reserve ladder. The department also has a mutual aid agreement with both the City of Atwater and the Merced County Fire Departments. The City of Merced Health and Safety Code requires the local fire authority to conduct annual fire inspections at all hospital facilities.

Station 53 located on Loughborough Drive north of the Merced Mall is the closest fire station to the project site. The station currently has one engine and one truck company.

The department's average response time to emergency calls is between four and six minutes. The Merced Fire Department Chief estimated a five minute response time to the project site. The department's ISO rating is currently a class 2, which is considered well above average.

Schools

Schools in the City of Merced are administered by the Merced City Elementary School District, the Merced Union High School District and the Merced County Office of Education.

The Merced City Elementary School District has 1,200 employees and consists of two preschools, 12 elementary schools and four middle schools including Cruickshank Middle School located adjacent to the project site. The District has a total of 17 schools with a total of 11,414 students and 518 teachers resulting in a pupil-to-teacher ratio of 22 to one. The District has 1,163 classes with an average class size of 27.6 students. This is slightly greater than the county and state average class size of 26.7 and 27.4, respectively.

The Merced Union High School District consists of seven high schools including one alternative high school and one continuation high school. The District has a total of 9,695 students and 410 teachers resulting in a pupil-to-teacher ratio of 23.6 to one. The District has 1,653 classes with an average class size of 28.1 students. This is slightly greater than the county and state average class size of 26.7 and 27.4, respectively.

The Merced County Office of Education consists of one special education facility, three community day schools, one juvenile court school, and one county community school. The Office of Education has a total of six schools with a total of 1,341 students and 106 teachers resulting in a pupil-to-teacher ratio of 12.7 to one. The Office has 59 classes with an average class size of 26.8 students. This is slightly greater than the county and state average class size of 26.7 and 27.4, respectively.

Parks and Recreational Facilities

The City of Merced owns and maintains 33 park areas with a total area of 337.05 acres. These park areas include mini-parks, urban plazas, neighborhood parks, school parks, community parks, large urban parks, athletic parks, special use areas, linear parks, and undeveloped parkland. The city's policy requires five acres of parkland for every 1,000 residents. As of 2003, the city's population was 67,610 for a ratio of 5.04 acres per 1,000 residents. The city also owns and maintains seven ball fields, four soccer fields, two tennis courts, one gymnasium, 5,450 square feet of pool space, and 13.11 miles of recreational pathways/trails. The park located nearest the project site is the Davenport Ranch Park which is a 7.5-acre undeveloped parkland bordered by Cormorant Drive, Providence Avenue and Davenport Drive.

Other Public Services

Library services in the City of Merced are provided by the Merced County Library which has 16 branches located throughout the county. The main branch of the library and one additional branch are located in the city of Merced on O Street and Lesher Drive, respectively. The main branch has over 100,000 books and 150 magazine and newspaper subscriptions.

3.11.3 IMPACT EVALUATION CRITERIA

Impacts to public services and facilities will be assessed based on the following thresholds of significance. The project will be considered to have a significant impact on the environment if it:

- Results 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 service ratio, response times or other performance objectives for any of the public services (fire protection, police protection, schools, parks, other public facilities);

- Increases 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;

- Includes recreational facilities or requires the construction of expansion of recreational facilities which might have an adverse physical effect on the environment;

- Results in the loss of land previously proposed for recreational use.

3.11.4 IMPACTS & MITIGATION MEASURES

Impact #3.11-1: Expanded need for staff, vehicles, and equipment to adequately provide law enforcement services to the project.

Discussion and Conclusion: The need for security at the proposed project arises from the need to protect victims of violent crimes who might be taken to the emergency room for treatment as well as someone to patrol parking lot areas and the extensive grounds of the facility. Due to the range of the existing patrol area and officer staffing levels, the City of Merced Police Department presently does not have a sufficient number of sworn officers and equipped vehicles to assure adequate response times and law enforcement services to the project. However, the City of Merced Police Chief has indicated that if the project applicant elects to have at least three private security guards on duty at all times that additional City police officers would not be needed. Furthermore, the City of Merced General Plan Policy P-1.3.c requires that development project applicants contribute their fair share of the cost of on-site and off-site public infrastructure and services through the payment of Public Facilities Impact Fees. This impact is considered ***potentially significant*** and the following mitigation measures are required to address project impacts.

Mitigation Measure

Implementation of the following mitigation measures will reduce this impact to a ***less-than-significant*** level.

Mitigation Measure #3.11-1a:

Pursuant to the recommendation of the City of Merced Police Chief, the project applicant shall provide a minimum of three onsite private security guards at all times during the operation of the proposed project. These security guards shall be trained to meet Department of Consumer Affairs standards.

Mitigation Measure #3.11-1b:

Pursuant to the City of Merced General Plan Policy P-1.3.c, the project applicant shall pay Public Facilities Impact Fees to address impacts of growth on city infrastructure. In addition, Community Facilities District (CFD) formation is required for annual operating costs for city services. CFD procedures shall be initiated before final improvement plans are approved by the City. Developer/Owner shall submit a request agreeing to such a procedure, waiving right to protest their inclusion in the District, and post deposit as determined by the City Engineer to be sufficient to cover procedure costs and maintenance costs expected prior to first assessments being received. In consultation with the Developer/Owner, the City's CFD consultant shall conduct a study to determine the proper rate and method of apportionment based on Phase 1 of the hospital project. The Owner/Developer reserves the right to appeal the consultant's findings to City Council for a final decision.

Mitigation Measure #3.11-1c:

Pursuant to the City of Merced General Plan Policy P-2.1.h, the design of the proposed project shall utilize modern public protection concepts such as "defensible space," security lighting, access, visibility, etc. to reduce policing problems and improve police effectiveness.

Impact #3.11-2: Expanded need for staff, vehicles, and equipment to adequately provide fire protection services to the project.

Discussion and Conclusion: According to the City of Merced Fire Department Chief, the main hospital building of the proposed project will be eight stories tall requiring the use of their ladder company which consists of a ladder truck with 105-foot ladder and two firefighters. This is the maximum height ladder available; therefore the project will not require any new vehicles. The facility will have a number of lower floors forming a barrier around the tower area which may make it difficult for firefighters to park their vehicles close enough to the facility to reach individuals in upper floors. This is in contrast to the two existing Mercy facilities which are no more than three stories in height. Therefore, rescue operations at the proposed facility would require three firefighters assigned to the company per shift instead of two. This will create the need for the addition of one fire fighter for each of the department's three shifts for a total addition of three new firefighters and associated equipment.

Additionally, the project would increase demand for fire inspections by the department requiring an additional two days of inspection time as well as any follow up inspection time. The existing

inspection personnel will be sufficient to handle the additional inspection time required by the project. This impact is considered ***potentially significant*** and requires implementation of the following mitigation measure.

Mitigation Measure

Implementation of the following mitigation measure will reduce this impact to a ***less-than-significant*** level.

Mitigation Measure #3.11-2:

Pursuant to the City of Merced General Plan Policy P-1.3.c, the project applicant shall pay Public Facilities Impact Fees to address impacts of growth on city infrastructure. In addition, Community Facilities District (CFD) formation is required for annual operating costs for city services. CFD procedures shall be initiated before final improvement plans are approved by the City. Developer/Owner shall submit a request agreeing to such a procedure, waiving right to protest their inclusion in the District, and post deposit as determined by the City Engineer to be sufficient to cover procedure costs and maintenance costs expected prior to first assessments being received. In consultation with the Developer/Owner, the City's CFD consultant shall conduct a study to determine the proper rate and method of apportionment based on Phase 1 of the hospital project. The Owner/Developer reserves the right to appeal the consultant's findings to City Council for a final decision.

Impact #3.11-3: Conversion of land planned for recreational use.

Discussion and Conclusion: According to the *Northeast Yosemite Specific Plan* developments adjacent to Cottonwood Creek are required to include the installation of bikeways and undercrossings along the creek. The proposed project will not allow for the creation of a bikeway along the creek. However, the creek has been run underground on both adjacent parcels making the creation of a creek-side bike path on the project site impractical. Implementation of the proposed project will therefore have a ***less than significant*** impact with regards to this topic.

Mitigation Measure

No mitigation measure is required.

SOURCES

Alexander Hall, Director, City of Merced Parks and Community Services

California Department of Education, Education Data Partnership
<http://www.ed-data.k12.ca.us/welcome.asp>

City of Merced. 2003. *Park and Open Space Master Plan Final Draft*.

Jeff Schindler, Commander, Merced Police Department

John Raggio, Director, City of Merced Public Works Department

Kenneth Mitten, Chief, Merced City Fire Department

Merced Vision 2015 General Plan

Northeast Yosemite Specific Plan

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3.12 Transportation/Circulation

This section is based on the *Traffic Impact Study for the Mercy Medical Center Project* (kdAnderson Transportation Engineers.) The full text of the report is contained in Appendix H. The report describes current traffic conditions on the portions of the circulation system that will serve the proposed project. The analysis addresses existing, future, and cumulative traffic conditions with and without the proposed project.

During the Notice of Preparation period, comments were received from the Merced School District and the Department of Transportation.

The Merced School District suggested that the project could have project specific and cumulative traffic related impacts on the students, teachers, parents and facilities associated with Cruickshank Middle School and the District overall in the following areas:

- Traffic impacts and mitigation during normal operation of the facility as a result of increased vehicle counts, including by not limited to G Street, Cormorant Drive, Mercy Avenue, Sandpiper Drive, Mansionette Drive, and Yosemite Avenue, etc. and all related intersections;

- Specific traffic impacts and mitigation resulting from project vehicles and school private vehicle conflicts. Project vehicles and school bus vehicles conflicts, project vehicles and pedestrian/bicycle conflicts, primary access/egress from Mercy Avenue passing directly by the school, and the use of Mansionette Drive by emergency vehicles and project vehicles coming from Yosemite Avenue; and

- Traffic and pedestrian impacts and mitigation as a result of Phase 2 and Phase 3 additional parking provided on the south side of Cormorant Drive.

The Department of Transportation noted that the proposed project would substantially increase traffic trips that would impact local streets and State Routes 59, 140 and 99; and that a Traffic Impact Study in accordance with the Caltrans "Guide for the Preparation of Traffic Impact Studies," to address the cumulative impact on State Routes 59, 140, and 99 is required. A detailed Traffic Study should include the following:

- An estimation of the project's total trip generation rates.

- An estimation of the directional distribution and network of project trips.

- The study should include, at a minimum, the existing traffic, the project related traffic, and the cumulative traffic, along with AM/PM peak hour turning movements.

- Cumulative conditions should include existing conditions plus other approved and pending projects.

- A discussion of identified mitigation measures/improvements and funding responsibilities should be included in the Traffic Impact Study.

The Department of Transportation also noted that the proposed project may impact projects EA 0E590, 16th Street/Olive Avenue widening and EA 0G440, Atwater-Mercy Expressway.

STUDY METHODOLOGY

The City of Merced recently provided a *Sample Traffic Study Scope of Work* (City of Merced 2004), which is intended to be a guide for the preparation of traffic studies of projects in the City of Merced. In general, this transportation/circulation analysis used the methods presented in the City's *Sample Traffic Study Scope of Work.*

3.12.1 REGULATORY SETTING

Local Regulations

MERCED VISION 2015 GENERAL PLAN

The *Merced Vision 2015 General Plan* contains several specific goals and policies which address identified potential adverse impacts associated with traffic growth in the Merced urban area; specifically:

- Establish circulation system standards which correspond to land use and expected growth in the City's SUDP. (Chapter 4- Transportation and Circulation, Policies T-1.1, 1.3, 1.6, and 1.8; Chapter 2- Land Use; Policies L-2.6 and 2.7).

- Provide a framework for the evaluation of future development proposals and establish standards for system improvements based on need (Chapter 4- Transportation and Circulation, Policies T1.1, 1.2, 1.3, and 1.6; Chapter 2- Land Use, Policies L-1.7 and 2.7).

- Reduce activities which result in unnecessary traffic generation. (Chapter 4- Transportation and Circulation, Policies T-1.5 and 2.9; Chapter 2- Land Use, Policies L-1.7, 2.4, 2.6, and 2.7).

3.12.2 ENVIRONMENTAL SETTING

The City of Merced is located the central San Joaquin Valley, along State Route (SR) 99. The 30-acre proposed project site is located in northern Merced, adjacent to the existing Merced College, specifically at the northeast and southeast intersections of G Street and Cormorant Drive.

The following critical study intersections were analyzed for this section:

- G Street and Cardella Road
- G Street and Cormorant Drive
- G Street and Yosemite Avenue
- Mansionette Drive and Yosemite Avenue, and

- Paulson Road and Yosemite Avenue.

Implementation of the proposed Mercy Medical Center project would result in the construction or operation of new intersections. Under scenarios with the proposed project, the following 10 project-related intersections, in addition to the five existing intersections were analyzed:

- G Street and Emergency/Service Driveway
- Mercy Avenue and North Project Driveway
- Mercy Avenue and Middle Project Driveway
- Mercy Avenue and South Project Driveway
- Cancer Center Driveway and Cormorant Drive
- Sandpiper Drive and Cormorant Drive
- Mercy Avenue and Cormorant Drive
- Sandpiper Drive and North Project Driveway
- Sandpiper Drive and Middle Project Driveway
- Sandpiper Drive and South Project Driveway.

The intersection of Cancer Center Driveway and Cormorant Drive, and the intersection of Mercy Avenue and Cormorant Drive exist. However, they currently function in a limited manner, serving individual facilities.

One study intersection, the intersection of Paulson Road and Cardella Road is planned to be present in the future, regardless of whether the proposed Mercy Medical Center project is constructed.

The following existing and future roadway segments were analyzed:

- Cardella Road, west of G Street;
- Cardella Road, east of G Street;
- G Street, south of Cardella Road;
- Cormorant Drive, west of Paulson Road;
- G Street, south of Cormorant Drive;
- Sandpiper Drive, south of Cormorant Drive;
- Mansionette Drive, south of Cormorant Drive;
- Paulson Road, south of Cormorant Drive;
- Yosemite Avenue, west of G Street; and
- Yosemite Avenue, east of G Street.
- Campus Parkway, south of Yosemite Avenue; (future roadway segment)
- Campus Parkway, north of Yosemite Avenue; (future roadway segment) and
- Mercy Avenue, north of Cormorant Drive (future roadway segment).

Level of Service Methodologies/Policies

Level of service (LOS) analysis provides a basis for describing existing traffic conditions and for evaluating the significance of project traffic impacts. Level of service measures the quality of traffic flow and is represented by letter designations from A to F, with a grade of A referring to the

best conditions, and F representing the worst conditions. The characteristics associated with the various LOS for intersections are presented in Table 3.12-1.

Table 3.12-1
Level of Service Definitions

Level of Service	Signalized Intersection	Unsignalized Intersection
A	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec	Little or no delay. Delay ≤ 10 sec/vehicle
B	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec	Short traffic delays. Delay > 10 sec/vehicle and ≤ 15 sec/vehicle
C	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec	Average traffic delays. Delay > 15 sec/vehicle and ≤ 25 sec/vehicle
D	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 55.0 sec	Long traffic delays. Delay > 25 sec/vehicle and ≤ 35 sec/vehicle
E	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and ≤ 80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/vehicle and ≤ 50 sec/vehicle
F	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/vehicle

Source: Transportation Research Board 2000.

Project Study Area

This traffic impact study presents analyses of traffic operating conditions at 16 intersections and along 13 roadway segments in the study area. The study area includes roadway facilities within the area bounded by Cardella Road on the north, SR 59 on the west, the future Campus Parkway on the east, and Yosemite Avenue on the south.

The following is a description of roadways that provide access to the proposed Mercy Medical Center project site. These roadways are shown in Figure 1 and 2 of the *Traffic Report* located in Appendix H.

STATE ROUTE 99

State Route (SR) 99 is the primary regional highway in the Merced area. Within the City of Merced, SR 99 is a controlled-access freeway. However, outside of the City, at-grade intersections of SR 99 are present. SR 99 provides access to Modesto, Stockton, San Francisco and Sacramento to the north, and Fresno and Bakersfield to the south. Through the City of Merced, SR 99 is a four-lane freeway, with an average traffic volume in the range of 35,000 to 40,000 vehicles per day.

STATE ROUTE 59

State Route 59 is a north-south highway extending from Route 152 (near Los Banos) to Snelling, an unincorporated community located north of the City of Merced on the Merced River. SR 59 is a two-lane rural highway through Merced, serving between 14,000 and 16,000 vehicles per day.

G STREET

G Street is a north-south roadway extending from SR 99 to La Paloma Road, where it turns into Snelling Road. G Street is a four-lane roadway south of Yosemite Avenue. A portion of G Street immediately north of Yosemite Avenue has 3 southbound lanes and one northbound lane. Further north, G Street is a two-lane roadway. Traffic volumes on G Street are almost 20,000 vehicles per day within the City, and 6,100 vehicles per day north of the city limits.

CORMORANT DRIVE

Cormorant Drive is a two-lane collector roadway aligned in an east-west direction. Cormorant Drive is aligned through the project site, and would be the major route providing direct access to the site. Currently, Cormorant Drive provides access to Merced College through its intersection with G Street, and provides access to Cruickshank Middle School, which is east of the proposed project site.

OLIVE AVENUE

Olive Avenue is an east-west roadway providing cross-town travel in Merced. West Olive Avenue connects SR 59 and R, M and G Streets. It is a six-lane roadway between G Street and SR 59, primarily serving a commercial corridor. West of SR 59, Olive Avenue becomes Santa Fe Drive, connecting the northern portions of Merced to the City of Atwater and the Castle Airport area. The segment of West Olive Avenue between SR 59 and R Street is designated as an expressway. East of G Street, East Olive Avenue transitions from four lanes to two lanes and provides access to one of Merced's largest residential areas. Daily traffic volumes on Olive Avenue range from 37,000 vehicles in the western part of the City to 8,800 vehicles east of G Street.

BELLEVUE ROAD

Bellevue Road is a two-lane east-west roadway extending from Fox Road to its eastern terminus at Lake Road. Bellevue Road provides access to the University of California Merced site.

CARDELLA ROAD

Cardella Road is a two-lane east-west roadway with four discontinuous segments. The roadway extends from Santa Fe Drive in the west to Lake Road in the east. Cardella Road is planned to be a four-lane arterial north of the project site. One of the segments of Cardella Road is east of G Street. This portion of Cardella Road is narrow, and is not a through road.

YOSEMITE AVENUE

Yosemite Avenue is an east-west road extending from an area west of R Street to its eastern terminus at Arboleda Drive. The portion between R Street and G Street is four-lanes wide, the remainder is two-lanes wide. A portion of Yosemite Avenue east of SR 59 has been constructed, but is not yet open for use, as of May 2005.

PAULSON ROAD

Paulson Road is a two-lane collector roadway aligned in a north-south direction. Paulson Road currently extends from south of Yosemite Avenue, to north of Cormorant Drive. At the time the Notice of Preparation for the proposed project was published, signal light equipment had been installed at the intersection of Paulson Road and Yosemite Avenue. However, the equipment had not been activated, and the intersection was controlled by stop signs. The signal has been in operation since April 2005. Paulson Road is planned to be extended to the north to connect with Cardella Road.

MANSIONETTE DRIVE

Mansionette Drive is a two-lane collector roadway aligned in a north-south direction. Mansionette Drive currently extends from Yosemite Avenue to Cormorant Drive.

MERCY AVENUE

Mercy Avenue is a two-lane collector roadway aligned in a north-south direction. A short portion of Mercy Avenue is present immediately north of Cormorant Drive. Mercy Avenue is planned to be extended to the north to connect with Cardella Road, and would provide access to project site parking lot driveways.

SANDPIPER DRIVE

Sandpiper Drive is planned to be a 64-foot wide local roadway aligned in a north-south direction between Yosemite Avenue and Cormorant Drive. The intersection curbs for Sandpiper Drive are present at Cormorant Drive. Sandpiper Drive would provide access to project site parking lot driveways.

Existing Traffic Operations

INTERSECTIONS

Traffic count data for the a.m. peak hour and p.m. peak hour periods were collected for this traffic impact study on November 3, 4, and 9, 2004. 15-minute increment count data were collected for a two-hour period from 7:00 a.m. to 9:00 a.m., and a two-hour period from 4:00 p.m. to 6:00 p.m. The contiguous one-hour period within each two-hour period with the highest volumes was used in this traffic impact study as the peak hour.

Table 3.12-2 presents existing a.m. peak hour and p.m. peak hour LOS at the aforementioned existing study intersections. As indicated in Table 3.12-2, the intersection at Paulson Road and Yosemite Avenue operates at an unacceptable LOS F during both the a.m. and p.m. peak hours. At the time of this traffic analysis, signal equipment installed at this intersection was not activated. The signal has been in operation since April 2005.

ROADWAYS

Table 3.12-3 presents a summary of existing daily traffic volumes along the ten existing study roadway segments.

The highest existing traffic volume on a two-lane roadway is 13,571 vehicles per day on Yosemite Avenue east of G Street. The highest existing traffic volume on a four-lane roadway is 15,279 vehicles per day on Yosemite Avenue west of G Street. These volumes are well below the LOS D daily volume thresholds for these types of facilities, indicating these roadway segments operate at acceptable LOS; therefore no improvements are needed to mitigate increases in traffic in relation to the capacity of the street system.

Table 3.12-2
Intersection Level of Service - Existing Conditions Plus Project

Intersection	Intersection Control	Existing Conditions				Existing Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1. G Street & Cardella Road	Minor Stop	B	11.9	B	11.8	B	13.6	B	13.6
3. G Street & Emergency/ Service Driveway	Minor Stop	- -	- -	- -	- -	B	14.1	B	14.3
4. Mercy Avenue & North Project Driveway	Minor Stop	- -	- -	- -	- -	A	9.6	A	9.6
5. Mercy Avenue & Middle Project Driveway	Minor Stop	- -	- -	- -	- -	A	8.7	A	9.4
6. Mercy Avenue & South Project Driveway	Minor Stop	- -	- -	- -	- -	A	8.9	B	10.2
7. G Street & Cormorant Drive	Signal	B	14.5	B	10.5	B	14.1	B	16.2
8. Cancer Center Driveway & Comorant Drive	Minor Stop	- -	- -	- -	- -	B	12.7	C	19.0
9. Sandpiper Drive & Cormorant Drive	Minor Stop	- -	- -	- -	- -	F	462.8	F	260.5
9. Sandpiper Ave. & Cormorant Drive - Mitigated	*Minor Stop*	- -	- -	- -	- -	*B*	*14.2*	*B*	*10.1*
10. Mercy Avenue & Cormorant Drive	Minor Stop	- -	- -	- -	- -	C	16.5	B	11.1
10. Mercy Avenue & Cormorant Drive - Mitigated	*Signal*	- -	- -	- -	- -	*C**	*18.2*	*B**	*11.2*
11. Sandpiper Drive & North Project Driveway	Minor Stop	- -	- -	- -	- -	B	12.2	B	13.3
12. Sandpiper Drive & Middle Project Driveway	Minor Stop	- -	- -	- -	- -	B	10.4	B	10.9
13. Sandpiper Drive & South Project Driveway	Minor Stop	- -	- -	- -	- -	A	9.3	A	9.8
14. G Street & Yosemite Avenue	Signal	C	28.5	C	24.4	C	31.7	C	31.9
14. G Street & Yosemite Avenue - Mitigated						*C**	*32.2*	*D**	*36.9*
15. Mansionette Drive & Yosemite Avenue	Signal	B	14.9	A	5.7	B	14.9	A	7.1
16. Paulson Road & Yosemite Avenue	Minor Stop	F	88.2	F	62.3	F	112.0	F	71.6
16. Paulson Road & Yosemite Avenue	*Signal*	*B*	*16.0*	*B*	*13.9*	*B*	*15.8*	*B*	*13.6*

LOS = Level of Service
Delay is expressed in delay per vehicle.
Dashes ("- -") indicate intersection would not exist.
Mitigated conditions indicated in italicized text.
*LOS presented to show the effects of prohibiting outbound left-turns at the intersection of the Sandpiper Drive and Cormorant Drive.

Table 3.12-3
Roadway Segment Level of Service - Existing Background Conditions

Roadway Segment	Number of Lanes	Type Of Facility	Maximum Daily Volume at LOS D*	Existing Conditions	Existing Plus Phase 1	Existing Plus Project
Cardella Road, east of G Street	2	Collector	12,000	Minimal	Minimal	Minimal
G Street, south of Cardella Road	2	Arterial	18,000	4,807	5,693	6,655
Mercy Avenue, north of Cormorant Drive	2	Collector	12,000	0,	5,282	6,106
Cormorant Drive, west of Paulson Road	2	Collector	12,000	1,476	2,442	3,492
G Street, south of Cormorant Drive	4	Arterial	36,000	6,378	12,270	18,658
Sandpiper Drive, south of Cormorant Drive	2	Collector	12,000	0	0	7,726
Mansionette Drive, south of Cormorant Drive	2	Collector	12,000	2,648	2,960	3,310
Paulson Road, south of Cormorant Drive	2	Collector	12,000	1,760	1,760	1,760
Yosemite Avenue, west of G Street	4	Arterial	36,000	15,279	16,327	17,465
Yosemite Avenue, east of G Street	2	Arterial	18,000	13,571	13,571	13,571

Notes:
*Maximum daily volume thresholds are from County of Merced 2001, and are based on peak hour per lane volumes in the MCAG travel demand model, representing LOS D capacities. Daily capacities were calculated by multiplying the hourly capacities by 12. Daily lane volumes greater than thresholds would be classified as LOS E or F.

Public Transit

Local public transit service in the vicinity of the proposed Mercy Medical Center project is provided by Merced County Transit. Also referred to as "The Bus," Merced County Transit was created in July 1996 after consolidation of three existing public transit systems. The Merced County Transit system is the single countywide provider of public transit service in Merced County, and is managed by the transportation division of the Merced County Department of Public Works. Merced County Transit operates Monday through Saturday, with 17 fixed routes operating Monday through Friday. The fixed routes are supplemented by a dial-a-ride service. Urban transit routes connect downtown Merced, adjacent neighborhoods, and major trip generators, such as the Merced Civic Center, hospitals, shopping areas, and Merced College. Rural routes connect outlying cities and communities in Merced County.

The major transit stop closest to the proposed Mercy Medical Center project is at the shopping center on the southeast corner of G Street and Yosemite Avenue. Merced County Transit Routes 1, 2, and 11 provide service to this location, and also provide service to Merced College via the entrance along Yosemite Avenue.

Transit service linking the City of Merced with other parts of the state is provided by private entities, including Greyhound Lines, which provides daily and weekend service from Merced to numerous California locations.

Project Trip Generation

Buildout of the proposed Mercy Medical Center project would generate traffic to and from the project site. The overall methodology used to asses the impacts of buildout of the proposed project on traffic operations is described in the *Traffic Impact Study for the Mercy Medical Center Project* located in Appendix H.

Trip generation estimates for buildout of the proposed Mercy Medical Center are presented in Table 3.12-4.

Table 3.12-4
Proposed Project Near-Term Buildout Trip Generation

Land Use & ITE Land Use Code	Quantity	Trips Generated						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Hospital (ITE Code 610)	662,780 Sq. Ft.	8,844	533	262	795	258	524	782
Medical-Dental Office Building (ITE Code 720)	200,000 Sq. Ft.	7,963	392	104	496	162	438	600
Total		16,807	925	367	1,291	420	962	1,382

Source: Institute of Transportation Engineers 2003.
Note:
[A] Trip generation equation used per Institute of Transportation Engineers 1998.
[B] Average rate used per Institute of Transportation Engineers 1998.
Sum of values may not equal total due to rounding.

The proposed project would generate an estimated 16,807 vehicle trips per day to and from the project site. Of that daily total, an estimated 1,291 trips would be generated during a.m. peak hour, and 1,382 trips would be generated during the p.m. peak hour.

Project Trip Distribution and Assignment

TRIP DISTRIBUTION

The geographic distribution of vehicle trips associated with the proposed Mercy Medical Center project was determined based on the MCAG travel demand model. In some cases, results directly from the MCAG model were considered unreasonable and were adjusted to reflect a more reasonable distribution.

Future land use development and construction of future roadways are expected to affect the geographic distribution. Therefore, two patterns of geographic distribution were developed; one distribution was used for existing background conditions, while a second distribution was used for future cumulative background conditions. The full traffic report, located in Appendix H presents the geographic trip distribution percentages for the proposed project used with both existing background and cumulative background conditions.

TRIP ASSIGNMENT

Traffic that would be generated by the proposed Mercy Medical Center project was added to existing peak hour volumes. Figure 3 within the Traffic Report displays the resulting Existing Plus Project traffic volumes anticipated for each study intersection in both a.m. and p.m. peak hours.

3.12.3 IMPACT EVALUATION CRITERIA

Consistent with Appendix G of the CEQA Guidelines, the proposed project is considered to have a significant impact on the environment if it will:

- 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);

- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;

- Result in a change in the air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;

- Substantially increase hazards due to design features (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

- Result in inadequate emergency access;

- Result in inadequate parking capacity.

Consistent with Action T-1.8.b of the *Merced Vision 2015 General Plan* (City of Merced 1997), which establishes an acceptable LOS of D for intersections and roadways, this traffic impact study considers LOS A through D acceptable for roadways and signalized intersections.

In most cases, poor LOS (LOS E or F) at unsignalized intersections is not judged to be significant unless the volume of traffic also satisfies warrants for traffic signals. In circumstances where alternative travel routes do not exist or are restricted, the City may opt to identify an impact even when signal warrants are not met (City of Merced 2004b).

In this traffic impact study, the significance of the proposed Mercy Medical Center project's impact on traffic operating conditions is based on a determination of whether resulting LOS is considered acceptable by the agency responsible for the roadway facility. A project's impact on traffic conditions is considered significant if implementation of the project would result in LOS changing from levels considered acceptable to levels considered unacceptable, or if the project would worsen already unacceptable LOS at an intersection.

3.12.4 IMPACTS & MITIGATION MEASURES

Impact #3.12-1: Exceedance of a level of service standard established by the City of Merced with regard to the intersection at Sandpiper Drive and Cormorant Drive.

Discussion and Conclusion: Implementation of the proposed Mercy Medical Center project would result in this intersection operating at LOS F. LOS F is considered unacceptable by the City of Merced. This is a ***potentially-significant*** impact.

Absent mitigation, vehicles departing the south parking lot traveling toward the west would have a direct route to G Street via Cormorant Drive. These vehicles should be directed from the south parking lot toward the south on Sandpiper Drive, and west on Yosemite Avenue, to G Street. Sandpiper Drive between Cormorant Drive and Yosemite Avenue is not present; however, it may be present by the time Mercy Medical Center land uses are constructed south of Cormorant Drive. Because this portion of Sandpiper Drive would be used by land uses not related to the Mercy Medical Center, the project applicant should be reimbursed for a portion of the cost of this portion of Sandpiper Drive.

Vehicles departing the Cancer Center and the Hospital Drop-Off area traveling toward the east would be able to make a left-turn onto Cormorant Drive at the intersection of Sandpiper Drive and Cormorant Drive. These vehicles should be directed from the Cancer Center and the Hospital Drop-Off area along the on-site driveway to the east, towards the South Project Driveway on Mercy Avenue, and south on Mercy Avenue, to Cormorant Drive.

Implementation of the following mitigation measure would increase the number of vehicles making through movements, and left-turns at the intersection of Mercy Avenue and Cormorant

Drive, and at the intersection of G Street and Yosemite Avenue, however these two intersections would operate at an acceptable LOS B.

Mitigation Measure

Implementation of the following mitigation measure will improve operating conditions to a ***less than significant level.***

Mitigation Measure #3.12-1:

Upon completion of Phase III (development of the south 10-acre parcel), outbound left-turn movements onto Sandpiper Avenue from the southern driveway access shall be prohibited. If this portion of Sandpiper Avenue is not constructed at the time Mercy Medical Center land uses are constructed south of Cormorant Drive, the project applicant (subject to reimbursement) shall be required to construct this portion of Sandpiper Avenue.

Impact #3.12-2: Exceedance of a level of service standard established by the City of Merced with regard to the intersection of Paulson Road and Yosemite Avenue.

Discussion and Conclusion: The previously unacceptable Level of Service at the intersection of Paulson Road and Yosemite Avenue has been mitigated by the activation and operation of a traffic signal at this intersection. This is a ***less-than-significant*** impact.

Mitigation Measure

No mitigation measure is required.

Impact #3.12-3: Increase in demand for public transit

Discussion and Conclusion: Implementation of the proposed Mercy Medical Center project would result in an increase in demand for public transit service. Currently, there is no direct public transit service to the project site. The closest service is provided at the shopping center on the southeast corner of G Street and Yosemite Avenue. This is a ***potentially-significant*** impact.

Mitigation Measure

Implementation of the following mitigation measure would facilitate the provision of public transit service to residents, employees, and patrons of land uses within the project site, and reduce related impacts from the proposed project to a ***less-than-significant level.***

Mitigation Measure #3.12-3:

The proposed project includes MMCM-paid transportation from the existing facility to the new hospital. This should be considered when evaluating the impact on demand for

public transit. Provide public transit facilities (e.g., bus shelters, public transit information kiosks, and park-and-ride lots) in those areas of the proposed project that would accessible to potential patrons and transit vehicles. The selection and location of the facilities should be determined in consultation with Merced County Transit.

Impact #3.12-4: Increase in demand for bicycle and pedestrian facilities

Discussion and Conclusion: Implementation of the proposed Mercy Medical Center project would result in an increase in demand for bicycle and pedestrian facilities. Currently, there are limited bicycle and pedestrian facilities in the vicinity of the project site. This is a ***potentially-significant*** impact.

Mitigation Measure

Implementation of the following mitigation measure would facilitate the provision of bicycle and pedestrian services to residents, employees, and patrons of land uses within the project site- and reduce related impacts from the proposed project to a ***less-than-significant level.***

Mitigation Measure #3.12-4:

Provide sidewalks, bicycle lanes, and bicycle paths along roadways adjacent to the project site. Figure 4.10 in Chapter 4, Transportation and Circulation, of the Merced Vision 2015 General Plan (City of Merced 1997) shows:

- *a Class 2 (on-street) bicycle facility along G Street, and*
- *a Class 1 (off-street) bicycle facilities along Cottonwood Creek north of the project site.*

Impact #3.12-5: Violation of Merced Vision 2015 General Plan Standards related to driveway spacing on major arterials

Discussion and Conclusion: Implementation of the proposed Mercy Medical Center project would result in a driveway access point intersection on G Street for use by emergency and service vehicles. The driveway would be aligned along the northernmost edge of the project site, 730 feet north of the signalized intersection of G Street and Cormorant Drive. The intersection spacing standard, as specified in Section 4.3.2 and Implementing Action 1.3 K of the *Merced Vision 2015 General Plan*, is one-quarter mile (1,320) feet. The proposed location of the emergency driveway would violate this standard. This is a ***potentially-significant*** impact.

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to a ***less-than-significant*** level. This mitigation measure would be required by the City of Merced as a condition of exemption from this General Plan Standard.

Mitigation Measure #3.12-5:

The applicant shall install on-site circulation barriers; thereby ensuring this driveway access point will be used as an emergency entrance only, and does not directly connect to employee and visitor parking areas. The project applicant shall also install a median to ensure that this driveway is a "right turn in and out" intersection only.

Impact #3.12-6: Cumulative impacts on intersection levels of service

Discussion and Conclusion: Under Cumulative Plus Project conditions, the intersection of Sandpiper Drive and Cormorant Drive would operate at LOS F with a vehicle delay of 336.4 seconds during the a.m. peak hour. LOS F is considered unacceptable by the City of Merced. This is considered a ***potentially-significant*** impact.

Mitigation Measure

Implementation of Mitigation Measure #3.12-1 will reduce this impact to a ***less-than-significant*** level.

Impact #3.12-7: Cumulative impacts on roadway segment levels of service

Discussion and Conclusion: Under Cumulative plus Project conditions, the highest traffic volume of a two-lane roadway would be 6,130 vehicles per day on Sandpiper Drive south of Cormorant Drive. The highest traffic volume of a four-lane roadway would be 21,847 vehicles per day on Campus Parkway south of Yosemite Avenue. The highest traffic volume on a six-lane roadway would be 22,592 vehicles per day on G Street south of Cormorant Drive. These volumes are well below the LOS D daily volume thresholds for these types of facilities, indicating these roadway segments would operate at acceptable LOS. Therefore, this impact is considered ***less than significant***.

Mitigation Measure

No mitigation measure is required.

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3.13 Utilities and Service Systems

This section addresses the impacts of the Mercy Medical Center on the public utility and service systems in Merced. The utility systems considered in this analysis are water, wastewater, solid waste, and private services such as electric, natural gas, and telecommunications. Services considered in the analysis include general government services, including anticipated impacts to the City's General Fund and individual departments. In each case, only systems which will serve the proposed project are considered; additional service providers in the City or surrounding areas are not analyzed if they do not or would not provide services to the Medical Center.

During the Notice of Preparation period comments were received from the California Regional Water Quality Control Board requesting that a description of all solid and liquid wastes and their management be discussed in this section.

3.13.1 REGULATORY SETTING

Federal Regulations

There are no specific federal regulations applicable to public utilities and services.

State Regulations

SB 610 – WATER SUPPLY ASSESSMENT

Senate Bill 610 (SB 610), passed in 2001, amended the California Water Code, to require a written water supply assessment for projects of 500 or more residential units, 500,000 square feet of retail commercial space, or 250,000 square feet of office commercial space. Five hundred residential units are estimated to require approximately 150,000 gallons of water per day. Hospital space is not generally considered commercial space; additionally, the total estimated water usage is less than 150,000 gallons per day. A water supply assessment is therefore not required for the proposed project.

AB 939

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed Assembly Bill 939, the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties in California are required to divert 25 percent of all solid waste from landfill or transformation facilities by January 1, 1995, and 50 percent by January 1, 2000.

Solid waste plans are prepared by each jurisdiction to explain how each city's AB 939 plan is integrated with their respective county plan. The plans must promote in order of priority: source reduction, recycling and composting, and finally, environmentally safe transformation, and land disposal.

MEDICAL WASTE MANAGEMENT ACT

The Medical Waste Management Act (MWMA) became effective on January 1, 1991. This act regulates the transport, treatment and disposal of all medical waste produced in California. Specifically, it requires all waste to be treated prior to disposal and requires the preparation of a Medical Waste Management Plan (MWMP) for all facilities that treat their own medical waste onsite.

TITLE 24 BUILDING ENERGY EFFICIENCY STANDARDS

Building energy consumption is regulated under Title 24 of the California Code of Regulations. The efficiency standards contained in this title apply to new construction of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting.

Local Regulations

MERCED CITY CODE

Title 15. Public Services. Encompasses all City ordinances regarding publicly provided sewer and water systems.

CITY OF MERCED VISION 2015 GENERAL PLAN

P-1.1 Provide adequate public infrastructure and services to meet the needs of future development.

1.1.a Through development review, ensure that utilities are adequately sized to accommodate the proposed development and, if applicable, allow for extensions for future developments, consistent with master plans.

1.1.b Master infrastructure plans for newly developing areas may be prepared and adopted as necessary.

1.1.c Include in Specific Plans and master plans, a phasing plan for providing access, sewer, water, drainage, flood control, schools, parks and other appropriate governmental facilities and services.

1.1.d Construct a stormwater drainage system, water system and sewer system in accordance with master plans.

1.1.e Apply for federal, State and regional funding sources set aside to finance infrastructure costs to the maximum extent feasible.

P-3.1 Ensure that adequate water supply can be provided within the City's service area, concurrent with service expansion and population growth.

3.1.e Continue to work with Merced Irrigation District and the County of Merced to ensure that adequate water supply and distribution facilities can be developed to meet the growth of the Merced metropolitan area.

P-4.1 Provide adequate wastewater collection, treatment and disposal capacity for projected future needs.

4.1.a Maintain the existing wastewater system to increase the lifetime of the system.

4.1.b Develop wastewater master plans to serve future Merced urban expansion.

P-5.1 Provide effective storm drainage facilities for future development.

5.1.d Continue to require all development to comply with the Merced County Critical Area Flooding and Drainage Plan and any subsequent updates.

5.1.e Installation of facilities necessary to provide services to development projects will be based on the full buildout scenario.

P-6.1 Establish programs to recover recyclable materials and energy from solid wastes generated within the City.

6.1.a Implement source reduction and recycling programs to minimize waste at the point of manufacture or use.

P-6.2 Minimize the potential impacts of waste collection, transportation and disposal facilities upon the residents of Merced.

6.2.b Cooperate with Merced County to implement recommendations for source reduction programs which have the least environmental and economic impacts on the City and its residents.

6.2.c Continue implementation of programs in cooperation with the County of Merced to meet solid waste diversion goals.

OS-5.1 Promote water conservation throughout the planning area.

5.1.a Continue implementation and enforcement of the City's Water Shortage Regulations (MMC 15.42.010-100).

5.1.b Continue implementation of the Water Efficient Landscaping and Irrigation Ordinance (MMC 17.60.010-070).

List of Conditions

17. All storm drainage must comply with the Merced County Critical Area Flooding and Drainage Plan (Master Plan) and any applicable requirements of the Merced Irrigation District. Open fenced drainage basins will not be allowed. Drainage basins are to be combined into landscaped open space retention areas or placed in underground systems, to be included in a maintenance district and no park fee credit will be given. Any storm drain pump stations must meet City standards and be approved by the City Engineer.

23. A water well site is to be dedicated (fee title) to the City. The exact location is to be determined by the Engineering Department based on need during subsequent subdivision or other discretionary approvals. It may be located in the creek easement or park area.

3.13.2 ENVIRONMENTAL SETTING

Water

WATER SUPPLY

Most water found in the San Joaquin Valley originates in the western slope of the Sierra. Valley rainfall in the Merced area averages nearly 11 inches per year while in the higher elevations of the Sierra; rainfall averages 55 inches at the 5,000 foot elevation and has been known to exceed 80 inches per year during extremely wet years at higher elevations.

The most significant source of water in the Merced region is the Merced River which originates in Yosemite National Park. Ultimately the Merced joins the San Joaquin River northwest of the City of Merced. The Merced Irrigation District (MID) relies on the Merced River for much of its water supply. The District stores Merced River water in Lake McClure, located in the northwestern portion of Mariposa County. The capacity of the lake, approximately one million acre feet, is roughly equivalent to the average discharge of the river which is 955,000 acre feet per year.

While the Merced River is the most significant source of surface water in the region, several natural creeks also dissect the area in and around the City of Merced. The most prominent are Black Rascal, Burns, Owens, Mariposa and Bear Creeks. These creeks originate in the foothills east of Merced and flow seasonally from east to west. During an average year, peak runoff from these creeks occurs during February and totals about 16,000 acre feet. Total inflow from these creeks is estimated to be about 63,000 acre feet during an average year.

The groundwater system of the Merced region is complex due to the manner by which water is added and withdrawn. Groundwater recharge occurs primarily from agricultural irrigation and rainfall; at the same time, agricultural and municipal pumping account for most of the groundwater withdrawals. The groundwater basin beneath Merced consists of a wedge of unconsolidated sedimentary deposits of sand, gravel, silt and clay. These sedimentary deposits

represent a huge underground reservoir of fresh water, about 30 million acre-feet. Not all of this water can be withdrawn because it would cause excessive declines in groundwater levels resulting in poor quality water intruding into currently clean aquifers. Overdrawing the aquifer would also result in subsidence of the land surface of the area. Groundwater levels in the Merced region range from one to fifteen feet below the surface.

STORAGE AND DISTRIBUTION

The City's water supply system consists of four elevated storage tanks with a combined storage capacity of approximately 1.4 million gallons, 18 wells and 14 pumping stations equipped with variable speed pumps that attempt to maintain 45 to 50 psi (pounds per square inch) nominal water pressure.

WATER QUALITY

See Section 3.8, *Hydrology and Water Quality*, for information on the water quality of the Merced area and the proposed project site.

REGIONAL DEMAND

The *Merced Water Supply Plan* evaluated future domestic water needs and identified increasing urban water demand in response to projected population growth. It was projected that the City of Merced's annual needs could increase from 15,000 acre feet in 1995 to as much as 60,000 acre feet in 2030.

ONSITE DEMAND

The project site currently requires a water supply due to the existing Mercy Cancer Center. According to a utilities account consumption history report provided by the City of Merced Finance Department, this facility currently uses an average of 77.35 gallons of water per day for all of its operations. This volume fluctuates substantially with seasonal variation.

Wastewater

REGIONAL SETTING

The City of Merced's sewer system is gravity fed to lift stations located throughout the city and transported to the City of Merced Wastewater Treatment Plant for treatment. Treated wastewater is ultimately discharged to Hartley Slough and a Wildlife Management Area.

EXISTING WASTEWATER SYSTEM

The project is located in a developing area of the city and is currently zoned and designated for residential development with the exception of the commercial zoning covering the Cancer Center parcel. The Mercy Cancer Center is the only structure currently at the project site and is located at the northeast corner of G Street and Cormorant Drive.

Using a standard rate of 90 percent of the total water volume used to estimate wastewater production, the existing facility produces approximately 70 gallons of wastewater per day. The sewer system is gravity fed to two lift stations located one and two miles from the project site, respectively, and then to the wastewater treatment plant.

WASTEWATER TREATMENT

The City of Merced Waste Water Treatment Plant is located at 10260 Gove Road in Merced. The plant services the entire City of Merced providing full primary and secondary treatment. Subsequent to treatment, wastewater is discharged into Hartley Slough, a tributary of the San Joaquin River, and to the Wildlife Management Area (WMA) directly south of the plant. Approximately 75 to 80 percent of the plants treated wastewater is discharged to Hartley Slough while the remaining is discharged to the WMA. The City of Merced maintains a National Pollutant Discharge Elimination System (NPDES) permit (#CA0079219) for this discharge.

The wastewater treatment plant is currently operating at an average dry weather flow (ADWF) of 7.8 mgd, or 78 percent of the plant's permitted ADWF capacity of 10 mgd. The plant's current wet weather flow (AWWF) is 8.15 mgd. The city is currently designing an expansion plan for the plant that will increase capacity to 15 mgd and is expected to be completed within three years. Interim expansion projects are expected to increase capacity to 11.5 mgd.

Solid Waste

REGIONAL SETTING

Solid waste disposal for the City of Merced and the project site is managed by the Merced County Solid Waste Regional Agency. The City provides all waste collection and transport services within the City limits processing approximately 60,000 tons per year. Commercial and industrial solid waste collection services are provided up to six times per week.

WASTE REDUCTION PROGRAMS

Currently, the City does not have any commercial and industrial waste reduction programs in place; however, beginning in late 2005, the City will start a pilot recycling and greenwaste program for a portion of the commercial and industrial facilities. This program is expected to be expanded to include all commercial and industrial facilities in the City and be made permanent by late 2006.

DISPOSAL SITES

There are currently two active landfills that service the City of Merced. The Billy Wright Disposal Site is located one mile west of Interstate 5 in the city of Los Banos. This active solid waste facility is owned and operated by the County of Merced. It is located on 172 acres with a total permitted disposal area of 39 acres. This landfill accepts agricultural, construction/demolition and mixed municipal wastes with a maximum of 800 tons processed per day. In 2001, this landfill accepted 51,439 tons. The landfill encompasses 3,650,000 total cubic yards of disposal space, of which 2,554,250 cubic yards (70 percent) has been used. The

remaining area is 1,095,750 cubic yards (30 percent) and the estimated closure date of the facility is January 1, 2010.

The Highway 59 Disposal Site is located on Highway 59, six miles north of the City of Merced. This active solid waste facility is also owned and operated by the County of Merced. It is located on 610 acres with a total permitted disposal area of 255 acres. This landfill accepts mixed municipal, other hazardous, other designated and wood wastes as well as green materials and tires with a maximum of 1,500 tons per day. In 2001 this landfill accepted 169,700 tons. The landfill encompasses 30,012,352 total cubic yards of disposal space, of which 27,087,836 cubic yards (90.3 percent) has been used. The remaining area is 2,924,516 cubic yards (9.7 percent) and the estimated closure date of the facility is January 1, 2030.

HAZARDOUS MEDICAL WASTE

This topic is discussed in Section 3.7, *Hazards and Hazardous Materials*.

Gas and Electric Service

Natural gas and electrical power in the City are supplied by Pacific Gas and Electric (PG&E), however, power requirements will be met by the proposed onsite power plant.

Telecommunications

Telephone service in the City of Merced is provided by SBC Communications and cable television is provided by TCI Cablevision.

3.13.3 IMPACT EVALUATION CRITERIA

Impacts to utilities and service systems will be assessed based on the following thresholds of significance. The project is considered to have a significant impact on the environment if it will:

- Exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board;

- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

- 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;

- Lack sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;

- Result in a determination by the wastewater treatment provider which services or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or

- Fail to comply with federal, state, and local statues and regulations related to solid waste.

3.13.4 IMPACTS & MITIGATION MEASURES

Impact #3.13-1: Increase in demand for water supply and distribution services and construction of additional water distribution infrastructure.

Discussion and Conclusion: According to project engineers, the hospital buildings are estimated to require approximately 250 gallons of water per day per bed. The Phase I hospital facility will have 185 beds for a total water requirement of 46,250 gallons per day. The Phase II hospital addition will also have 185 beds for a total water requirement of 46,250 gallons per day. The Phase III hospital addition will have 90 beds for a total water requirement of 22,500 gallons per day. At build out the hospital will contain 460 beds resulting in a cumulative water usage of approximately 115,000 gallons of water per day.

According to the City of Merced standard water usage estimate ratio, the proposed medical office buildings are estimated to require approximately 120 gallons of water per day per 1,000 square feet. The Phase I medical office building will be 80,000 square feet for a total water requirement of 9,600 gallons per day. The Phase II medical office building will be 60,000 square feet for a total water requirement of 7,200 gallons per day. The Phase III medical office building will also be 60,000 square feet for a total water requirement of 7,200 gallons per day. At build out the medical office buildings will cumulatively encompass 200,000 square feet resulting in a total water requirement of approximately 24,000 gallons of water per day.

Irrigated water will be used for onsite landscaping; however, the proposed project design calls for minimal landscaping resulting in a volume of water sufficiently low to be considered insignificant.

These estimates indicate that the total water requirement for the proposed project will be approximately 55,850 gallons per day at completion of Phase I, 109,300 gallons per day at completion of Phase II, and 139,000 gallons per day at build out of the proposed project. These estimates are summarized in Table 3.13-1 below.

Table 3.13-1
Project Water Usage Estimates (Gallons)

	Hospital	Medical Office Buildings	Total Facility
Phase One	46,250	9,600	55,850
Phase Two	46,250	7,200	109,300
Phase Three	22,500	7,200	**139,000**

Source: City of Merced, Quad Knopf, Inc.

According to John Frank, Senior Engineer with the City of Merced Planning Department, the project will not have an adverse impact on the City's water supply infrastructure. The City's water supply and water supply infrastructure are planned for future development such as the proposed project. Additionally, the onsite water distribution infrastructure required for the proposed project will be funded and constructed by the project applicant during all three phases of project construction. This impact is considered ***less than significant***.

Mitigation Measure

No mitigation measure is required.

Impact #3.13-2: Increase in demand for wastewater collection, treatment and disposal services and construction of additional wastewater infrastructure.

Discussion and Conclusion: According to standard wastewater production estimates, the volume of wastewater produced by the hospital facilities of the proposed project will be equal to approximately 90 percent of the volume of water used. According to the water requirement estimates described in the previous impact discussion, the Phase I and II hospital facilities will each produce approximately 41,625 gallons of wastewater per day. The Phase III hospital facility will produce approximately 20,250 gallons of wastewater per day. At build out the hospital facility will produce approximately 103,500 gallons of wastewater per day.

According to the City of Merced's standard wastewater production estimate ratio, the medical office buildings of the proposed project will produce approximately 108 gallons of wastewater per day per 1,000 square feet equal to 90 percent of the total water used. The Phase I medical office building will be 80,000 square feet for a total of 8,640 gallons of wastewater produced. Both the Phase II and III medical office buildings will be 60,000 square feet for a total of 6,480 gallons of wastewater produced by each building. At build out the medical office buildings will cumulatively produce approximately 21,600 gallons of wastewater per day.

These estimates amount to a total volume of wastewater produced by the proposed project of approximately 50,265 gallons per day at completion of Phase I, 98,370 gallons per day at completion of Phase II, and 125,100 gallons per day at build out of the proposed project. These estimates are summarized in Table 3.13-2 below.

Table 3.13-2
Project Wastewater Production Estimates (Gallons)

	Hospital	Medical Office Buildings	Total Facility
Phase One	41,625	8,640	50,265
Phase Two	41,625	6,480	98,370
Phase Three	20,250	6,480	**125,100**

Source: City of Merced, Quad Knopf, Inc.

According to John Frank, Senior Engineer with the City of Merced Planning Department, the City's wastewater system has been master planned for future development such as the proposed

project. Any impacts that result from the project have been planned for and will therefore not have a significant adverse impact on the City's infrastructure.

According to Adoga Kiharangwa, Manager of the City of Merced Wastewater Treatment Plant, the additional wastewater volume produced by the proposed project will not have a significant adverse impact on the wastewater treatment services provided by the City. The plant is currently undergoing improvements and expansion and will be able to process the additional wastewater volume. Implementation of the proposed project will therefore have a ***less than significant*** impact with regards to this topic.

Mitigation Measure

No mitigation measure is required.

Impact #3.13-3: Increase in solid waste collection and disposal services.

Discussion and Conclusion: A typical estimate for the production of solid waste by a hospital is approximately 15 pounds per bed per day. At build out, the hospital will consist of 460 beds for a total estimated solid waste volume of 6,900 pounds per day or 1,260 tons annually. According to a commercial solid waste generation study conducted by the Palm Beach County Solid Waste Authority, medical office buildings typically generate approximately 2.97 pounds of solid waste per square foot annually. At build out, the proposed medical office buildings will encompass 200,000 square feet resulting in a total estimated solid waste volume of 594,000 pounds annually. Cumulatively, these estimates amount to approximately 1,557 tons of solid waste generated by the proposed project annually.

The project site is currently serviced by the Highway 59 disposal site. This landfill has an estimated closure date of 2030, factoring in future development such as the proposed project. In 2001 this landfill accepted 169,700 tons of solid waste. The proposed project is estimated to produce approximately 1,557 tons each year. This volume is only 0.9 percent of the existing volume accepted by the landfill each year.

The proposed project will not add a substantial volume of solid waste to the City's landfill. Additionally, the City has planned on additional solid waste volume from future development such as the proposed project. Finally, according to Stan Murdock, Solid Waste Manager for the City of Merced, the proposed project will not have a significant impact on the collection and disposal services provided by the City and no additional personnel or equipment will be required to adequately service the project site. Therefore, this impact is considered ***less than significant***.

Mitigation Measure

No mitigation measure is required.

SOURCES

Adoga Kiharangwa, City of Merced Wastewater Treatment Plant

California Integrated Waste Management Board. 2004. *Merced County Waste Stream Profile*.

Central Valley Regional Water Quality Control Board. *City of Merced Wastewater Treatment Facility, Merced County – Consideration of NPDES Permit Renewal and Cease and Desist Order*.

City of Merced Department of Finance. 2004. *Account Consumption History for Mercy Cancer Center*.

Merced Vision 2015 General Plan

Palm Beach County Solid Waste Authority. 1993. *Commercial General Study.*

Stan Murdock, Manager, City of Merced Solid Waste Department.

CHAPTER FOUR

PROJECT ALTERNATIVES

CHAPTER FOUR
EVALUATION OF ALTERNATIVES

4.1 Description of Project Alternatives

This section of the Draft Environmental Impact Report contains the analysis of alternatives to the project. The California Environmental Quality Act and the implementing CEQA Guidelines require that alternatives to the proposed project be discussed in the EIR. The value of such discussion is to inform public decision-makers of the differential environmental impacts which may be associated with each potential alternative, and to enable a reasoned judgment to be made as to which alternative to the proposed project may be environmentally superior. Section 15126.6 of the CEQA Guidelines provides a description of what should be included in the alternatives discussion in an EIR.

The DEIR must contain an analysis of a reasonable range of alternative project proposals, including alternative project locations (if feasible). Alternatives are selected based on their ability to accomplish the majority of the project objectives while reducing at least one significant environmental impact associated with the project. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. Alternatives are selected based on the rule of reason, which states that the alternative must be considered realistic and could potentially occur on the site. Alternatives must also be realistic given the social, financial, and institutional conditions known to exist at the present time.

As part of the range of alternatives considered in this section, the DEIR also includes analysis of the "no project" alternative. The "no project" analysis discusses the existing conditions at the time the notice of preparation is published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. The inclusion of the "no project" alternative allows for comparison of the proposed project to the likely environmental impacts of other development which could occur on the site under existing regulations and land use designations.

The level of evaluation for the alternatives is less stringent than that of the proposed project. The EIR provides sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the relative impact of each alternative, as compared to the proposed project, is located at the end of this Section. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative are discussed, but in less detail than the significant effects of the project as proposed.

4.2 Project Objectives

As stated in Section Two of this DEIR, the objectives of the City of Merced for this project are as follows:

1. Build a new Medical Center in Merced to serve projected needs of the Merced community through the year 2015.

2. Construct a medical facility within the urban area of Merced, with public facilities and services generally available.

3. Construct a medical facility strategically located to serve future populations in the fast growing northern and eastern areas of the Merced Specific Urban Development Plan (SUDP).

4. Ensure adequate access is provided for patients and emergency vehicles, including emergency access by medical helicopter service.

5. Comply with all appropriate development and construction requirements of the City of Merced and the California Office of Statewide Health Planning and Development (OSHPD).

6. Create buildings and a site layout which are aesthetically pleasing to surrounding residential areas.

4.3 Project Alternatives

The following project alternatives have been developed for the Mercy Medical Center EIR, consistent with CEQA requirements and the project objectives stated above. The following represent a reasonable range of alternatives to the project, and provide adequate consideration of the likely options available to construct and operate a hospital facility in Merced.

ALTERNATIVE 1: NO PROJECT ALTERNATIVE

In accordance with Section 15126.6(e)(3)(B) presented above, this alternative considers the "no-project" alternative is the circumstance under which the project does not proceed. The analysis compares the environmental effects of the property remaining in its existing state and continued use of the existing hospital against environmental effects which would occur if the project is approved. Failure to proceed with this project is not likely to result in the preservation of existing environmental conditions, since the land would likely be developed in accordance with existing regulations. This No Project alternative compares the existing state with the likely development of the site under current General Plan and Zoning Ordinance land use designations as the project site could still be developed in accordance with the existing *Merced Vision 2015 General Plan* and *Northeast Yosemite Specific Plan* land use designations, existing zoning and available infrastructure.

The majority of the project site is currently vacant and undeveloped. One building exists on the site which houses the Mercy Cancer Center; it is located on the northeast corner of the intersection of G Street and Cormorant Drive. Since most of the site is vacant and undeveloped it is currently utilized for illegal dumping.

In the case of the proposed project, because of the existing *Northeast Yosemite Specific Plan* land use designations and zoning, failure to proceed with the project would not necessarily mean that the project site would remain in its existing condition. Currently, the portion of the project site on which the existing Cancer Center is located is designated by the Merced General Plan Professional/Commercial Office (CO) and is zoned Professional/Commercial Office (C-O). The rest of the 30-acre project site includes two vacant parcels, including 17.2 acres with a General Plan designation of High Medium Density Residential (HMD) and zoning of High Medium Density Residential (R-3-2) and 18 acres with a General Plan designation of Low Density Residential (LD) and zoning of Single-Family Residential (R-1-6).

Table 4-1 summarizes the development potential under the existing *Merced Vision 2015 General Plan* and *Northeast Yosemite Specific Plan* land use designations. The analysis assumes development at the upper range of units per acre (units/acre), but the number of units would be 80 percent of that number to make room for required infrastructure such as streets, drainage features, and parks. Under the No Project Alternative, the project site could support 202 high-medium density residential units (apartments) and 75 low-density residential units (single-family homes) for a total of 277 units. Table 4-1 also contains an estimate of the average daily automobile trips that would be generated by these residential developments.

Table 4-1
Residential Build-out Potential Under Current Land-Use Designations (No Project Alternative)

Area of Project Site	Acres	General Plan Land Use Designations	Development Range (units/acre)	Number of Units at Upper End of Range	Number of Units at 80% Build-out	Average Daily Trips (ADT)
Existing Cancer Center	4.0	CO	—	—	—	—
North and South Ends of Project Site	10.5	HMD	12-24	252	202	716[1]
South and East of Cancer Center	15.7	LD	2-6	94	75	1,339[2]
Total	30.2	—	—	346	277	2,056

[1]Based on ADT of 6.63 per dwelling unit, Institute of Transportation Engineers (ITE), Trip Generation.
[2]Based on ADT of 9.55 per dwelling unit, Institute of Transportation Engineers (ITE), Trip Generation.

Source: Quad Knopf, Inc.

ALTERNATIVE 2: REDUCED HEIGHT ALTERNATIVE

This alternative would reduce the building height of the hospital towers to four stories, spreading the buildings across the site north of Cormorant Drive. The change will result in a loss of available parking areas north of Cormorant, resulting in the need to add garage parking south of Cormorant. The alternative will have the same overall square footage and parking, and phasing will remain identical to the proposed project.

ALTERNATIVE 3: BELLEVUE RANCH LOCATION ALTERNATIVE

This alternative would relocate the project to two adjacent sites in the mostly undeveloped Bellevue Ranch area northwest of the current project site. The sites are both designated in the Bellevue Ranch Master Development Plan as Professional/Commercial Office (CO). Site One is approximately 25 acres and is located northeast of the planned intersection of Bellevue Road and M Street. Site Two is approximately 5 acres in size and is located northwest of the intersection. Site One would contain the main hospital structure, two medical office buildings, power plant, and surface parking. Site Two would contain a third medical office building and the remainder of the surface parking. The alternative will have the same overall square footage and parking, and phasing will remain identical to the proposed project. The location of the alternative site is shown in Figure 4-1.

4.4 Analysis of Alternatives

Each of the alternatives is analyzed below for potential impacts on the environment. The impact discussions are qualitative, and focus on the relative comparative level of impact, as compared to the proposed project. Under each heading, a statement is made indicating whether the impacts created by the alternative are less than, equal to, or greater than those in the proposed project. A summary of these statements is found at the conclusion of this section.

NO PROJECT ALTERNATIVE

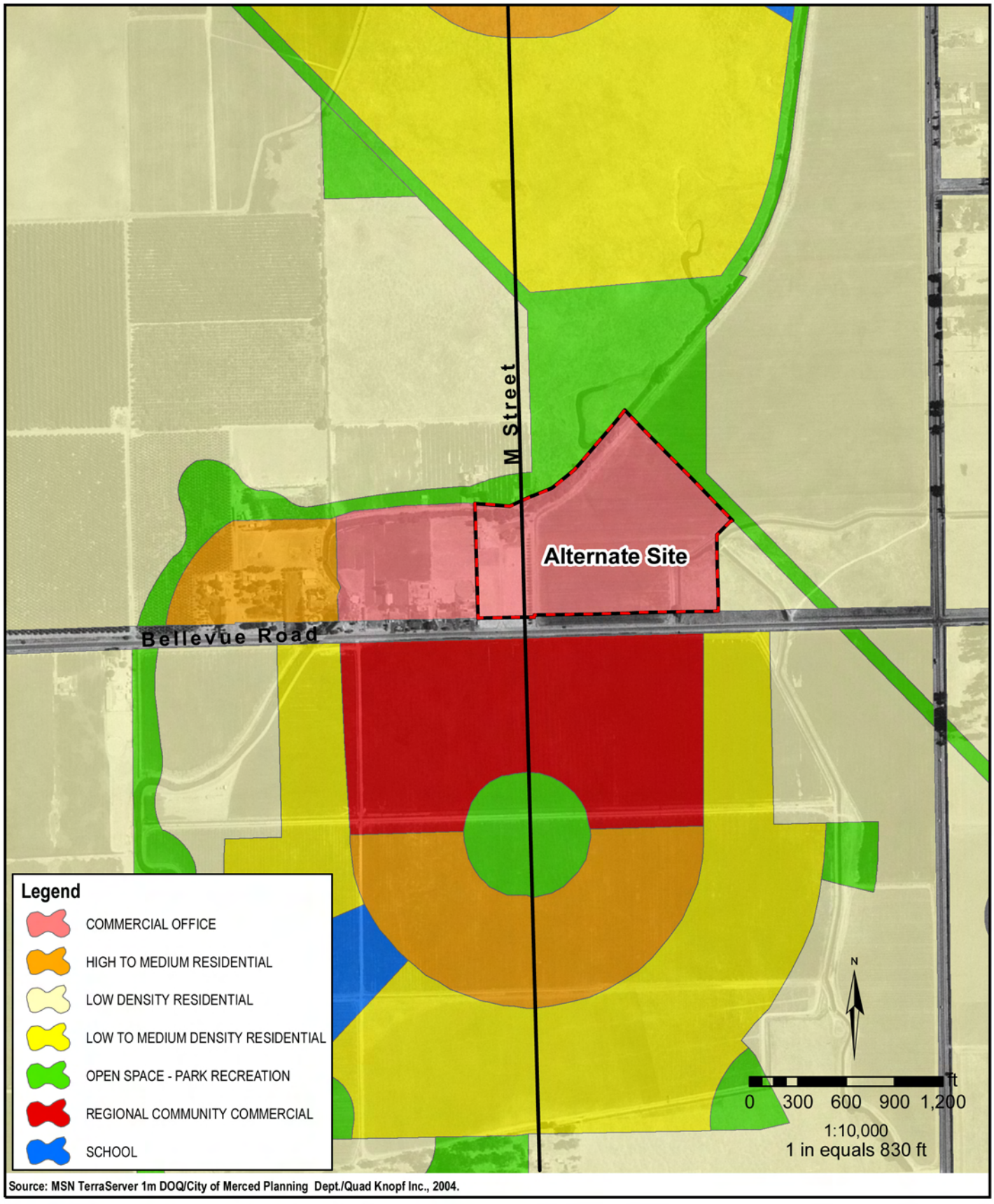
The No Project Alternative assumes that the project site could still be developed in accordance with the existing *Merced Vision 2015 General Plan* and *Northeast Yosemite Specific Plan* land use designations, existing zoning and available infrastructure. Under the No Project Alternative, the project site could support 202 high-medium density residential units (apartments) and 75 low-density residential units (single-family homes) for a total of 277 units (see Table 4-1).

Aesthetics/Light & Glare

Under the No Project Alternative, adverse visual impacts would be reduced because development would be residential, and buildings would be at similar heights to structures in the surrounding area. Light and glare impacts from the towers would be eliminated, and other light impacts would be reduced because of elimination of security lighting in parking lots. The elimination of the towers would also spare the nearby middle school and future residential development from shading effects. Adverse visual impacts from support structures (e.g., power plant with a utility yard and service yard) would also be reduced under residential development currently allowed.

Agricultural Resources

Since residential development would occur under this alternative, prime farmland would still be converted to non-agricultural uses. This development would also increase pressure to indirectly convert additional lands from agricultural to non-agricultural uses. However, this pressure would be reduced in comparison to the proposed hospital complex, which will induce demand for related commercial businesses. Overall, impacts to agricultural resources would be reduced under this alternative.



Source: MSN TerraServer 1m DOQ/City of Merced Planning Dept./Quad Knopf Inc., 2004.

Quad Knopf

ALTERNATE LOCATION

Figure 4-1

Job No. 04385

Air Quality

Because residential development under the No Project Alternative would generate an average of 2,056 vehicle trips per day, compared to 16,087 under the proposed project, emissions of both ozone precursors and PM_{10} would be significantly reduced. Air quality impacts from construction would be similar, depending upon phasing of residential development.

Biological Resources

Biological impacts under this alternative would be similar to those of the proposed project. Loss of Swainson's Hawk foraging areas could occur under this alternative. Residential construction could also disturb burrowing owls and tree-nesting raptors that may exist on site.

Cultural Resources

As with the proposed project, residential construction under this No Project Alternative has the potential to disturb cultural resources or human remains that have not been identified through record searches or surface inspection.

Geology and Soils

Unlike the proposed project, residential construction that would be allowed under current zoning would not involve excavation of basements for buildings or parking structures. Therefore, this alternative would reduce erosion and soil instability from excavation, grading, or fill. It would also reduce the potential for expansive soils to cause structural failure.

Hazards and Hazardous Materials

Unlike hospitals, residential developments do not involve the routine use, transport, or disposal of hazardous materials, other than those associated with landscaping. Residential developments also do not have helicopter operations. Therefore, impacts from hazards and hazardous materials would be reduced under this alternative.

Hydrology and Water Quality

Because the location is the same, the risk from dam inundation would not change. This alternative would reduce run-off because residential development generally has more landscaping and less area of impervious surfaces. Construction impacts to water quality would be similar, as would mitigation measures.

Land Use/Population and Housing

Under this alternative, the undeveloped portion of the project site would be built-out as residential, as is called for in the *Northeast Yosemite Specific Plan*. Therefore, potential conflicts with current land-use policies would be eliminated, and impacts would be less than in the proposed project.

Noise

Development of residential uses instead of the hospital complex would reduce or eliminate noise caused by mechanical equipment such as heating, ventilation, and air conditioning systems, and by the planned power plant. Impacts from construction noise would be similar, depending upon phasing. However, groundborne vibrations would likely be reduced because pile-driving for building basements would not take place. Noise caused by operation of ambulances and helicopters would be eliminated under this alternative. Overall, noise impacts would be reduced under this alternative.

Public Services

Under this No Project Alternative, demand for police services would be similar. Although residential neighborhoods are likely to have fewer public safety incidents than a hospital complex, they also do not typically provide private on-site security services. With residential structures instead of high-rise buildings, potential use of the City of Merced Fire Department's ladder truck would be reduced. The impact on city recreational services and facilities would increase under this alternative.

Transportation/Circulation

The proposed project would generate an estimated 16,807 vehicle trips per day to and from the project site. Under this No Project Alternative, residential development would generate an average of 2,056 vehicle trips per day (see Table 4-1), which would reduce the potential for congestion at key intersections. As with the proposed project, this alternative would also generate increased demand for public transit, bicycle, and pedestrian facilities. Impacts to transportation and circulation are reduced under this alternative.

Utilities and Service Systems

Residential development under this No Project Alternative would place lower demands on the City of Merced's wastewater treatment and solid waste disposal infrastructure than the proposed project. Wastewater generated under this alternative is estimated to be 42,350 gallons per day (gpd)—50 gpd for each of 847 residents of 277 dwelling units—compared to 123,300 for the hospital complex. Solid waste generated under this alternative would be approximately 305 tons per year—.36 tons per year for each of 847 residents of 277 dwelling units—compared to 1,547 tons per year from the proposed project. However, development under this alternative will consume more water—144,000 gallons per day (170 gallons per day per capita for 847 residents of 277 dwelling units) than the proposed project, which is estimated to consume 137,000 gallons per day at build-out. Overall, impacts to utilities and service systems would be reduced under this alternative.

REDUCED HEIGHT ALTERNATIVE

This alternative would reduce the building height of the hospital towers to four stories, spreading the buildings across the site north of Cormorant Drive. The change will result in a loss of

available parking areas north of Cormorant, resulting in the need to add garage parking south of Cormorant. The alternative will have the same overall square footage and parking, and phasing will remain identical to the proposed project.

Aesthetics/Light & Glare

Under this alternative, adverse visual impacts, including potential light spillage, daytime window glare, and shadowing effects, would be reduced because the towers would be closer in height to the middle school and current and future residential structures in the surrounding area. Light and glare impacts from the towers would be eliminated, and other light impacts would be reduced because of elimination of security lighting in parking lots. However, the addition of garage parking south of Cormorant would contribute to the potential for adverse visual impacts to future residential development on the south side of the project site. Adverse visual impacts from support structures (e.g., power plant with a utility yard and service yard) would remain.

Agricultural Resources

Since development of the entire project site would occur under this alternative, prime farmland would still be converted to non-agricultural uses. This alternative would also increase pressure to indirectly convert additional lands from agricultural to non-agricultural uses. Agricultural resources impacts under this alternative would remain significant and unavoidable.

Air Quality

Impacts to air quality would remain the same under this alternative, since the size of the project and the amount of traffic generated would not change. Air quality impacts from construction would be similar, as would the required mitigation.

Biological Resources

Biological impacts under this alternative would be similar to those of the proposed project. Loss of Swainson's Hawk foraging areas could occur under this alternative. Construction could also disturb burrowing owls and tree-nesting raptors that may exist on site.

Cultural Resources

As with the proposed project, construction under this alternative has the potential to disturb cultural resources or human remains that have not been identified through record searches or surface inspection.

Geology and Soils

Construction under this alternative would still involve excavation of basements for buildings or parking structures. Therefore, this alternative would not reduce erosion and soil instability from excavation, grading, or fill. It would also not reduce the potential for expansive soils to cause structural failure.

Hazards and Hazardous Materials

This alternative would not change the types of hazardous materials used, nor would it change the way they are used, stored or transported. The Reduced Height Alternative would also include helicopter operations. Overall, impacts from hazards and hazardous materials would remain unchanged.

Hydrology and Water Quality

Flood potential from dam inundation would not change under this alternative. The amount of impervious surface would also be the same, since this alternative would only involve rearranging the proposed hospital and medical office spaces, and covering some of the surface parking area with multi-story garages. Potential impacts to water quality from construction would also be the same.

Land Use/Population and Housing

Under this alternative, the undeveloped portion of the project site would still be built-out as a hospital complex, in conflict with the planning objectives of the *Northeast Yosemite Specific Plan*. Therefore, reduction in the height of the towers would not completely eliminate potential conflicts with current land-use policies. As compared to the project, there would be less conflict since the scale of the buildings would be more compatible with the surrounding area.

Noise

The Reduced Height Alternative would not eliminate noise caused by mechanical equipment such as heating, ventilation, air conditioning, and by the planned power plant. Impacts from construction noise and noise caused by operation of ambulances and helicopters would be similar to the proposed project.

Public Services

Under this alternative, demand for police services would be similar to that of the proposed project. Potential demand for the City of Merced Fire Department's ladder truck would remain as the four-story towers would still require service via ladder truck. The impact on city recreational services and facilities would remain the same.

Transportation/Circulation

Overall traffic volume would remain the same under this alternative. Although concentration of parking south of Cormorant might change the distribution of traffic and therefore the potential impact on key intersections, impacts are equivalent to those of the proposed project.

Utilities and Service Systems

Since the Reduced Height Alternative does not change the overall size of the hospital complex, the demand for water, wastewater treatment, and solid waste disposal services would remain the same as under the proposed project.

BELLEVUE RANCH LOCATION ALTERNATIVE

This alternative would relocate the project to two adjacent sites in the mostly undeveloped Bellevue Ranch area northwest of the current project site. The sites are both designated in the Bellevue Ranch Master Development Plan as Professional/Commercial Office (CO). Site One is 25.3 acres and is located northeast of the planned intersection of Bellevue Road and M Street. Site Two is approximately 5.5 acres in size and is located northwest of the intersection. Site One would contain the main hospital structure, two medical office buildings, power plant, and surface parking. Site 2 would contain a third medical office building and the remainder of the surface parking. The alternative will have the same overall square footage and parking, and phasing will remain identical to the proposed project.

Aesthetics/Light & Glare

Depending upon the placement of the hospital towers on Bellevue Ranch Site One, this alternative could increase visual impacts and light and glare on surrounding residential and open space areas. Land west of the site has been designated for high-to-medium residential development, and land north of the site is designated for open space, parks and recreation. Existing residential development immediately west of the project site would also be visually impacted.

Agricultural Resources

The Bellevue Ranch alternative sites contain Prime soils and soils of Statewide Importance. This alternative would involve conversion of these resources to non-agricultural use, and the impact would be similar to what will occur on the proposed project site.

Air Quality

This alternative would not change the overall size of the project. Emissions generated at individual intersections may be higher or lower depending upon traffic circulation. Particulate emissions from construction would be similar. Greater use of public transportation by hospital employees, patients, and visitors due to the proximity of a planned transit station might reduce automobile emissions.

Biological Resources

Neither the proposed project site or the Bellevue alternative site have significant biological resources. This impacts under the alternative would likely be similar.

Cultural Resources

Neither the proposed project site or the Bellevue alternative site have known cultural resources. The potential impacts under this alternative would likely be similar, and the same mitigation measures would be required to prevent destruction of unknown cultural resources.

Geology and Soils

The soils on the Belleve Ranch alternatives sites have a higher shrink-swell potential (Draft EIR, Bellevue Ranch Master Development Plan, 1993) than on the proposed project site; however, erosion hazard is slight. Overall, this impact would greater under this alternative than on the proposed project site. Mitigation measures would be similar for both the project site and the alternative site.

Hazards and Hazardous Materials

This alternative would not change the types of hazardous materials used, nor would it change the way they are used, stored or transported. The Bellevue Ranch Location Alternative would also include helicopter operations. Overall, impacts from hazards and hazardous materials would remain unchanged.

Hydrology and Water Quality

Under this alternative, potential water quality impacts from construction activities and changes in drainage from coverage of undeveloped land with impervious surfaces would be similar to those on the proposed project site. Both sites are in the flood inundation area for Lake Yosemite, so flood risks would also be similar.

Land Use/Population and Housing

The Bellevue Ranch sites are designated for office space and would require an amendment to the Bellevue Ranch Master Plan to allow the hospital use. Placing the hospital at Bellevue Ranch site would be inconsistent with the village concept long contemplated at the Bellevue Ranch as well as with the City's General Plan. There may also be conflicts with the entitlements received by the developers of the Bellevue project under the Bellevue Ranch Master Development Agreement. Additionally, the site is developed with a house and accessory structures and development of the site would result in removal of the house.

Noise

Noise impacts from construction of the project and ongoing operations would be similar at the Bellevue Ranch sites as those at the proposed project site. Mitigation measures would also be similar under this alternative.

Public Services

Demands on police and fire services would be similar under this alternative compared to the proposed project. Mitigation measures requiring funding for additional City services would be the same under this alternative.

Transportation/Circulation

Development of the hospital at the Bellevue Ranch sites would have similar impacts on transportation as the project since the project description will remain the same. The circulation system in the *Bellevue Ranch Specific Plan* area was designed for the planned land uses, including the office sites considered here as alternatives to the proposed project site in the *Northeast Yosemite Specific Plan* area.

Utilities and Service Systems

The size of the proposed project is the same under this alternative. Therefore, demands on utility systems would be the same at the Bellevue Ranch sites as they will be at the proposed project site.

4.5 Conclusion

Significant impacts that cannot be fully mitigated include:

- conversion and loss of Prime Farmland to non-agricultural use;
- indirect conversion and loss of surrounding Important Farmland to non-agricultural use;
- direct increases in emissions of both ozone precursors and PM_{10};
- cumulative increases in emissions of both ozone precursors and PM_{10}; and
- conflicts with land-use policies or regulations intended to avoid or mitigate environmental effects.

Accordingly, alternatives that reduce or avoid these impacts represent environmentally superior alternatives to the proposed project. As described at the beginning of this Chapter, if the environmentally superior alternative is the "no project" alternative, the EIR must also identify an environmentally superior alternative among the remaining alternatives (see Table 4-2).

Table 4-2
Significance of Environmental Effects Under Alternatives Compared to Proposed Project

Impact Topic	No Project Alternative	Reduced Height Alternative	Bellevue Ranch Location Alternative
Aesthetics/Light & Glare	Lesser	Lesser	Greater
Agricultural Resources	Lesser	Unchanged	Unchanged
Air Quality	Lesser	Unchanged	Lesser
Biological Resources	Unchanged	Unchanged	Unchanged
Cultural Resources	Unchanged	Unchanged	Unchanged
Geology and Soils	Lesser	Unchanged	Greater
Hazards and Hazardous Materials	Lesser	Unchanged	Unchanged

Impact Topic	No Project Alternative	Reduced Height Alternative	Bellevue Ranch Location Alternative
Hydrology and Water Quality	Lesser	Unchanged	Unchanged
Land Use/Population and Housing	Lesser	Lesser	Greater
Noise	Lesser	Unchanged	Unchanged
Public Services	Unchanged	Unchanged	Unchanged
Transportation and Circulation	Lesser	Unchanged	Unchanged
Utilities and Service Systems	Lesser	Unchanged	Unchanged
Number of Impacts Reduced	10	2	1
Number of Impacts Increased	0	0	3
Number of Impacts Unchanged	3	11	9

Source: Quad Knopf, Inc.

Based upon the analysis contained and documented in Chapter Three of this EIR and the analysis presented above, the No Project Alternative has been determined to be the environmentally superior alternative because it would have the fewest impacts on the existing environment. However, under the CEQA guidelines [15126.6(e)(2)], if the No Project Alternative is identified as the environmentally superior alternative, the EIR shall also identify an environmentally superior alternative among the alternatives involving site development. This analysis has identified the Reduced Height Alternative has the environmentally superior alternative among the other alternatives.

The Reduced Height Alternative does not increase any potential impacts and would reduce land use conflicts since it would be more compatible with the scale of the surrounding neighborhood and would have less impact on aesthetics.

CHAPTER FIVE

CONSEQUENCES OF PROJECT IMPLEMENTATION

CHAPTER FIVE
CONSEQUENCES OF PROJECT IMPLEMENTATION (MANDATORY CEQA SECTIONS)

This section of the Draft Environmental Impact Report provides for the required statements regarding the consequences of project implementation on the environment. The subsections below provide a listing of the environmental effects found not to be significant, significant effects which can be successfully mitigated, significant effects which cannot be mitigated, irreversible impacts, and finally cumulative impacts. Each of the statements below is supported in the analysis contained in Chapter Three of this DEIR.

5.1 Effects Found Not To Be Significant

Section 15128 of the CEQA Guidelines requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Based on the analysis in Chapter 3, the following impacts were found not to be significant:

AESTHETICS/LIGHT AND GLARE

Impact #3.1-3: Visibility of aesthetically undesirable materials, equipment, and facilities during the construction periods of the three proposed phases of the project.

Impact #3.1-5: Create new shading patterns on adjacent land uses.

AGRICULTURAL RESOURCES

Impact #3.2-3: Conflict with a Williamson Act contract and zoning for agriculture.

AIR QUALITY

Impact #3.3-2: Project traffic would result in an increase in carbon monoxide concentrations.

BIOLOGICAL RESOURCES

Impact #3.4-1: Substantial Adverse Impacts on Candidate, Special-Status or Sensitive Species

Impact #3.4-2: Loss of Habitat to Special-Status Plants

Impact #3.4-4: Interference with Movement of Native Wildlife

Impact #3.4-7: Degradation of Water Quality in Seasonal Creeks, Reservoirs and Downstream Waters

CULTURAL RESOURCES

None

GEOLOGY AND SOILS

Impact #3.6-1: Fault rupture and seismic-related ground failure.

HAZARDS AND HAZARDOUS MATERIALS

Impact #3.7-1: Use, Transport, or Disposal of Hazardous Materials

Impact #3.7-2: Release of Hazardous Materials into the Environment

Impact #3.7-3: Handling of Hazardous Materials near a School Site

Impact #3.7-4: Location of Site on a Known Hazardous Materials Site

HYDROLOGY AND WATER QUALITY

Impact #3.8-1: Violate any water quality standards or waste discharge requirements.

Impact #3.8-2: The proposed project would change the existing drainage pattern of the project area.

Impact #3.8-3: The proposed project could place people or structures in a position that would pose a risk of loss, injury, or death involving flooding due to dam failure.

Impact #3.8-4: The proposed project could place people or structures within a 100-year floodplain.

LAND USE/POPULATION AND HOUSING

Impact #3.9-2: The project may contribute to blight in the area of the existing Mercy Medical Center as a result of that facility being relocated to the proposed new Mercy Medical Center site.

Impact #3.9-3: The potential of the project to reduce the City of Merced's housing stock by converting land currently designated for residential development to non-residential uses.

Impact #3.9-4: Division of an established community

Impact #3.9-5: Inducement of population growth

NOISE

Impact #3.10-1: The project could result in an increase in existing traffic noise levels at existing land uses in the project vicinity on the existing local roadway network.

Impact #3.10-2: The project could result in an increase in future traffic noise levels at existing land uses in the project vicinity on the existing local roadway network.

Impact #3.10-3: Proposed increases in helicopter noise levels may result in an exceedance of the City of Merced noise level criteria.

Impact #3.10-4: Helicopter Noise

PUBLIC SERVICES AND FACILITIES

Impact #3.11-3: Conversion of land planned for recreational use.

TRANSPORTATION/CIRCULATION

Impact #3.12-2: Exceedance of a level of service standard established by the City of Merced with regard to the intersection of Paulson road and Yosemite Avenue.

Impact #3.12-7: Cumulative Impacts on roadway segment levels of service

UTILITIES AND SERVICE SYSTEMS

Impact #3.13-1: Increase in demand for water supply and distribution services and construction of additional water distribution infrastructure.

Impact #3.13-2: Increase in demand for wastewater collection, treatment and disposal services and construction of additional wastewater infrastructure.

Impact #3.13-3: Increase in solid waste collection and disposal services.

5.2 Significant Environmental Effects Requiring Mitigation

Multiple environmental impacts have been identified which can be reduced to a level of less than significant upon incorporation of mitigation measures. These impacts are listed below. Refer to Section 3 of the EIR for a full analysis of impacts and mitigation measures.

AESTHETICS/LIGHT AND GLARE

Impact #3.1-2: Produce substantial light pollution or glare.

Impact #3.1-4: Visibility of aesthetically undesirable materials, equipment and facilities during normal facility operations.

AGRICULTURAL RESOURCES

None

AIR QUALITY

Impact #3.3-1: Increased Particulate Matter levels in the immediate vicinity during construction and operation

BIOLOGICAL RESOURCES

Impact #3.4-3: Loss of Swainson's hawk foraging habitat

Impact #3.4-5: Loss of Habitat for Special-Status Species

Impact #3.4-6b: Construction impacts to federally protected wetlands or jurisdictional waterways – Connecting Sells Lateral to Cottonwood Creek

Impact #3.4-6c: Construction impacts to federally protected wetlands or jurisdictional waterways – Removal of trees in Cottonwood Creek

Impact #3.4-6d: Construction impacts to federally protected wetlands or jurisdictional waterways – Inadvertent construction impacts on Cottonwood Creek

CULTURAL RESOURCES

Impact #3.5-1: Development of the Mercy Medical project site could disturb or destroy buried cultural resources (archaeological, paleontological, or human remains) within the project site.

GEOLOGY AND SOILS

Impact #3.6-2: Erosion and soil instability from excavation, grading, or fill.

Impact #3.6-3: Potential for expansive soils to cause structural failure of the proposed buildings and parking structure.

HAZARDS AND HAZARDOUS MATERIALS

Impact #3.7-5: Safety Hazards Resulting from Helicopter Operations

HYDROLOGY AND WATER QUALITY

None

LAND USE/POPULATION AND HOUSING

None

NOISE

Impact #3.10-6: New boilers within the Central Plant could result in a significant increase in noise levels.

Impact #3.10-7: Noise generated by the Central Plant due to the use of emergency generators.

Impact #3.10-8: Generation of construction noise exceeding City regulations

Impact #3.10-9: Construction of the proposed Mercy Medical Hospital would involve activities that could generate groundborne vibration or ground-borne noise levels.

PUBLIC SERVICES AND FACILITIES

Impact #3.11-1: Expanded need for staff, vehicles, and equipment to adequately provide law enforcement services to the project.

Impact #3.11-2: Expanded need for staff, vehicles, and equipment to adequately provide fire protection services to the project.

TRANSPORTATION/CIRCULATION

Impact #3.12-1: Exceedance of a level of service standard established by the City of Merced with regard to the intersection at Sandpiper Avenue and Cormorant Drive.

Impact #3.12-3: Increase in demand for public transit

Impact #3.12-4: Increase in demand for bicycle and pedestrian facilities

Impact #3.12-5: Violation of Merced Vision 2015 General Plan Standards related to driveway spacing on major arterials

Impact #3.12-6: Cumulative Impacts on intersection levels of service

UTILITIES AND SERVICE SYSTEMS

None

5.3 Significant Environmental Effects That Cannot Be Avoided

CEQA Guidelines, Section 15126.2(b), require a description of any significant impacts resulting from implementation of a project, including impacts that can not be mitigated to below a level of significance.

The significant irreversible environmental changes associated with this project that cannot be mitigated to below the relevant threshold of significance area:

AESTHETICS/LIGHT AND GLARE

Impact #3.1-1: Create adverse impacts on surrounding viewsheds.

AGRICULTURAL RESOURCES

Impact #3.2-1: Conversion and loss of Prime Farmland to non-agricultural use.

Impact #3.2-2: Indirect conversion and loss of surrounding Important Farmland to non-agricultural use.

AIR QUALITY

Impact #3.3-3: Operation of the project would result in increases in emission of both ozone precursors and PM_{10}.

BIOLOGICAL RESOURCES

Impact #3.4-6a: Construction impacts to federally protected wetlands or jurisdictional waterways – Rerouting of Sells Lateral

Impact #3.4-8: Contribution to cumulative impacts affecting biotic resources that would likely result from the development of the proposed Mercy Medical Center

CULTURAL RESOURCES

None

GEOLOGY AND SOILS

None

HAZARDS AND HAZARDOUS MATERIALS

None

HYDROLOGY AND WATER QUALITY

None

LAND USE/POPULATION AND HOUSING

Impact #3.9-1: Potential conflicts with land-use policies or regulations intended to avoid or mitigate environmental effects.

NOISE

Impact #3.10-5: Sleep disturbance due to nighttime helicopter noise

PUBLIC SERVICES AND FACILITIES

None

TRANSPORTATION AND CIRCULATION

Impact #3.12-5: Violation of Merced Vision 2015 General Plan Standards related to driveway spacing on major arterials

UTILITIES AND SERVICE SYSTEMS

None

5.4 Irreversible Impacts

Development of the proposed project area will commit non-renewable resources during construction, and ongoing utility services provided to the project area. Energy resources and building materials consumed during construction will essentially be irreversible and irretrievable

5.5 Cumulative Impacts

This EIR has identified significant and unavoidable cumulative impacts to air quality as a result of implementation of the proposed project.

5.6 Growth Inducing Impacts

CEQA Guidelines, Section 15126.2(d) require than an EIR discuss ways in which the proposed project could foster economic or population growth, or the construction of additional housing, or the way in which the proposed project might encourage and facilitate other activities that could significantly affect the environment, either directly or indirectly, in the surrounding environment.

The build out of the proposed project could result in development of related projects, such as such as medical offices and drug stores for the properties adjacent to this neighborhood, which would foster economic and physical growth in the area.