

San Mateo County projects incorporate aesthetic features

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Placing aesthetic improvements high on your list can foster public approval of projects

San Mateo County, California, is located on the picturesque San Francisco Peninsula, between San Francisco and San Jose. The county is bisected by the Coastal Mountain Range and by the San Andreas Fault. The urban cluster of cities along U.S. 101, the residential areas in the rolling hills, and the quiet neighborhoods of the rural San Mateo County coast offer a wide variety of challenges to road improvement project implementation. Recently, the San Mateo County Department of Public Works successfully incorporated significant aesthetic features into several roadway improvement projects.

San Mateo County residents and public works officials have worked together in producing appealing results in many recent projects. Not only does this enhance the final product for the enjoyment of the community, but it makes the project planning and construction process more acceptable to the local area residents. The aesthetic features adopted by San Mateo County have occurred both on a policy level as well as on a project-specific basis, and range from inexpensive and easy-to-implement solutions to costly undergrounding of utilities.

The San Mateo County Department of Public Works, in addition to other duties, is responsible for the maintenance and improvement of over 300 mi (483 km) of county roads in the unincorporated areas of San Mateo County. The department actively pursues an annual road maintenance and improvement program. In a typical year, a portion of the improvement program includes major capital projects which are fully county-funded and neighborhood assessment district projects which are cooperatively funded by the county and local residents.

Alameda de las Pulgas

A recent example of a major capital



Alameda de las Pulgas after renovation. Left turn and bicycle lanes were added, as were sidewalks. Utilities were also placed underground. These and other aesthetic features built into the renovation plan helped gain public approval for the project.

roadway improvement project which was fully funded by San Mateo County is the Alameda de las Pulgas Improvement Project. Alameda de las Pulgas is a major north-south arterial that runs throughout the County of San Mateo from the City of San Mateo in the north to the county's border with Santa Clara County in the south. As of 1988, there was one remaining unimproved half-mile segment located in unincorporated San Mateo County near the Town of Woodside. Alameda de las Pulgas had been a county road for roughly 100 years and had never been improved to county standards.

This narrow two-lane road had severe pavement failure, inadequate drainage, nonstandard vertical sight distance, no provisions for left turns, and had been the site of numerous accidents. This segment of Alameda de las Pulgas carries over 14,000 vehicles per day and experiences severe congestion during peak travel periods. Woodside High

School's primary access is from Alameda de las Pulgas, and the lack of left turn lanes for traffic turning into the school created serious bottlenecks in the morning and afternoon peak periods.

The area also caused problems for pedestrians and bicyclists, since there were no sidewalks or bicycle lanes. During rainy periods, the shoulder areas became treacherous mud puddles, leading schoolchildren to walk on the narrow pavement. In addition, the San Mateo County Transit District (Samtrans) buses were forced to stop in travel lanes to allow passengers to embark and disembark. Needless to say, this created hazardous bottlenecks as well. Through traffic often drove on the dirt shoulders to maneuver around left-turning traffic and stopped buses.

Also prominent along Alameda de las Pulgas was the unsightly presence of heavily laden overhead utility poles along the edge of the roadway, which included a 60 kilovolt Pacific Gas & Electric

Department of Public Works stepped in to implement a major improvement project, not only to solve the traffic, drainage, and pavement problems, but to address the aesthetic deficiencies as well. The success of this project was heavily dependent on the cooperation of PG&E, Pacific Bell, TCI Cablevision, Samtrans, the California Department of Transportation, the Fair Oaks Sewer Maintenance District, the California Water Service Company, the Town of Woodside, the Town of Atherton, and most importantly, local residents.

Aesthetics incorporated early

The County of San Mateo took the aesthetic features of the project into consideration early in the planning process. An early commitment was made to place all utility lines underground. The county also decided to be the lead agency for creating the underground utility district, which involved preparing the construction plans, including the utility work in the road construction contract, administering the construction contract, and managing the utility cost-sharing process. This commitment ensured that the project would move forward in the most responsible manner possible.

The roadway improvement concept was to completely reconstruct the pavement and to improve the vertical sight distance, with one travel lane in each direction and a continuous center left turn lane for access to adjoining streets, numerous driveways, and the high school. The project included four bus turn-outs, deemed crucial to the efficient flow of traffic on this heavily traveled arterial. In addition, the project also included a new sanitary sewer system; a new storm drainage system; bicycle lanes; complete curb, gutter and sidewalks; and a new street lighting system.

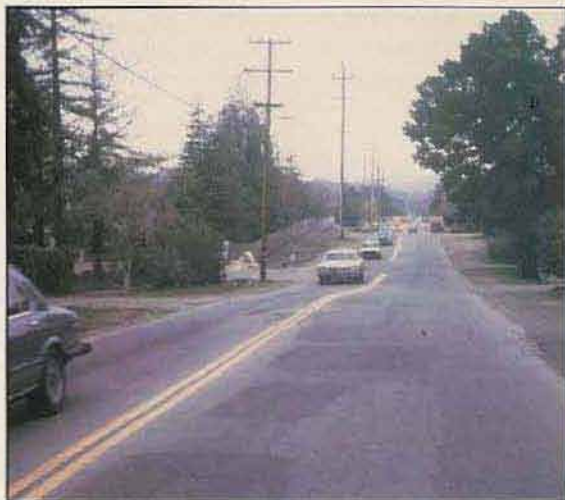
No project comes to completion without unique challenges and problems

project to the county and to the community, the bumps in the road were relatively small. Project design was completed in 1989 and construction was complete in 1990. The county's commitment to aesthetics is widely apparent when one compares the previous views through the corridor to the new roadway, which meets the needs of the traveling public and which is appealing to the eye. This is an excellent example of how a public works department can make a commitment to a specific project from the beginning of the planning process, to ensure that aesthetic considerations are implemented as a part of an individual project. The County of San Mateo has also made commitments to aesthetics on a policy level.

Montara/Moss Beach/El Granada community plan

The Montara/Moss Beach/El Granada area extends along the Pacific coast from Martini Creek to the northern city limits of Half Moon Bay, a distance of approximately 5 mi (8.05 km). This area was first subdivided shortly after the 1906 San Francisco Earthquake with the thinking that thousands of San Francisco residents would swarm to the area, anxious to start over. But the great exodus never came, and few of the subdivided lots were developed. The original 1909 curbs and sidewalks can still be

slowly until 1970 when a renewed interest in home construction began. In 1977, a community plan was prepared by the county planning department staff in close cooperation with the community residents. The plan emphasizes a policy of



Alameda de las Pulgas before the roadway improvement project. The lack of left turn lanes created havoc for schoolbuses at the entrance to Woodside High School, shown at left.

low growth based on urban infill of existing subdivided land, with maximum preservation of natural resources.

As far as public works are concerned the community plan emphasized modified residential road standards to allow narrower streets and flexible design standards to help preserve natural amenities and the community's rural character.

The Montara/Moss Beach/El Granada area was subdivided prior to the establishment of county subdivision/road standards; thus, many local streets have not been improved. Unpaved roads cause dust problems in the summer and storm drainage problems during rainy weather. The modern county road standard for residential streets consists of a 36 ft

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(10.98 m) wide pavement section (two travel lanes and two parking lanes), curbs, gutters, and a 5 ft (1.53 m) sidewalk on each side. The plan also includes modified standards for residential circulation systems and county roads for these coasts communities. The standards include an important caveat: reminding designers to be particularly careful to maintain adequate roadway geometric standards for emergency vehicle access to these areas.

For residential streets, the plan includes the following policies: the design of circulation systems which discourage through-traffic in residential areas; reduced road widths and special design considerations; walkways made of asphalt, exposed aggregate pavement, and/or colored concrete (earth colors or



Avenue Alhambra, after rehabilitation. The Alhambra project offered project planners the opportunity to improve virtually every element of the aging and scenic roadway. As this photograph shows, the system of intersections was vastly clarified during rehabilitation.

black), walkways separated from roadways with existing trees preserved; the locating of paths and walkways on one side of streets only where appropriate; and the providing of parking bays instead of parking lanes wherever possible and desirable.

The Montara/Moss Beach/El Granada plan also discusses the use of divided travel lanes where appropriate, to fit with the topography, to preserve natural features, and to maintain neighborhood character. In the last several years, the San Mateo County Department of Pub

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lic Works has completed several projects which beautifully implement the aesthetic policies of the community plan.

Avenue Alhambra

One project in particular, the Avenue Alhambra, presented an opportunity to plan, design and construct a challenging and attractive project consistent with the policies contained in the community plan. Avenue Alhambra is a light commercial/residential arterial which parallels State Route 1. A motel, several restaurants, and a market are mixed with attractive single family residences overlooking the Pacific Ocean. A concrete

circulation system.

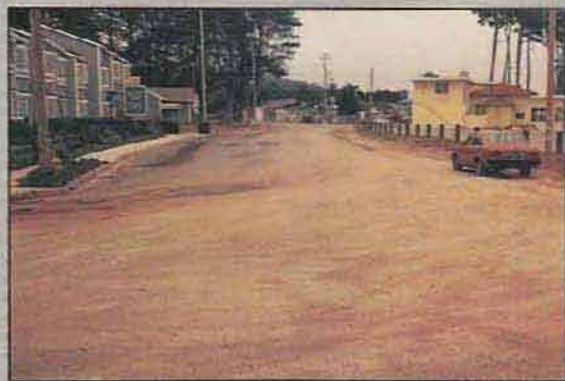
The Avenue Alhambra project offered the opportunity to rechannelize numerous intersections; reconstruct the pavement section; replace the curb, gutter, and sidewalks; upgrade the sanitary sewer system; and augment the storm drainage system. The final design of the project included several attractive aesthetic features, suitable for the site's spectacular views of the Pacific Ocean and fitting into the policies of the community plan. Some of these features included earth-colored concrete for curb, gutter, sidewalks, drainage inlet aprons, and driveways; adobe-colored interlocking paving stones as median material for

and other natural features. These projects are excellent examples of how the San Mateo County Department of Public Works is implementing the community's goals of preserving and improving the area lifestyle.

Significant public benefits

The San Mateo County Department of Public Works has actively pursued the use of aesthetic features in roadway improvement projects. This attention to the visual appeal of a project can provide significant visual benefits to the public. Attractive projects often gain community acceptance much more readily than

Avenue Alhambra: before and after



Avenue Alhambra before renovation. Pavement deterioration was obvious, the storm drainage system was inadequate, and the system of intersecting streets was confusing. The rehabilitation of Avenue Alhambra provided the opportunity to improve all



deficient infrastructure elements. As is obvious from the photographs of the finished project, the new Avenue Alhambra does justice to the roadway's prime oceanside location.

slab portion of the old Coast Highway underlies Avenue Alhambra. The old Coast Highway was built after the original subdivision's sidewalks and was situated approximately 2 ft (0.61 m) above these sidewalks. For some length of Avenue Alhambra, the severe cross slope between the edge of the concrete slab and the sidewalk prevented any driveway access, thus hampering development. In general, the pavement had deteriorated, the storm drainage system was inadequate, and the sidewalks were broken and incomplete. In addition, an obscure system of intersecting streets led to a confusing and often hazardous

traffic islands which contrasted with the earth-colored curbs, redwood and wrought iron pedestrian railing above the headwall for concrete box culverts; and curb returns at intersecting streets suitable for future improvement projects, fitting into the modified road standards which require use of parking bays along the residential streets and the use of chokers at intersections.

Currently, numerous neighborhood projects are in the planning and design stages which incorporate the use of colored concrete, parking bays, chokers at intersections, sidewalks on one side only, and the preservation of existing trees

projects without aesthetic enhancements. It is the local resident, after all, who must deal with the daily inconveniences during the construction of roadway projects. The incorporation of visual details such as underground utilities, street lighting, colored concrete, interlocking pavers, and unique modifications to road standards can be valuable features of a successful project, when combined with the standards of engineering excellence and devotion to public service required in today's public works environment.