



MONITORING WATER QUALITY IN CREEKS



CATCHMENT TANK CONSTRUCTION



PROGRAMMING SIGNAL TIMING



REVIEWING CONSTRUCTION PLANS

ENGINEERING SERVICES

Providing Santa Rosa a comprehensive
array of engineering services



INSIDE A WATER PIPE



SURVEYING A PROJECT SITE



EXCAVATION FOR PSB TANK INSTALLATION

CITY ENGINEERING SERVICES

In response to the changing needs of our customers, both public and internal, Engineering Services has been restructured citywide to provide a more collaborative and efficient practice. Where once there were departmentalized engineering functions, the reorganized Citywide Engineering Services provides improved customer service by consolidating similar functions and skills within the organization. Engineering Services has become more adaptable and resilient—prepared to respond to the changing priorities and needs of the industry and community. There is increased opportunity for project collaboration and shared resources, centralized databases and tracking methods—all leading to an elimination of redundant processes.

Engineering staff has greater flexibility along with new opportunities for growth and professional development, creating a well-trained and highly skilled resource to provide the most effective product and customer service.

City of Santa Rosa Engineering Services provides a comprehensive array of skills and services within four divisions: Asset Management, Capital Projects Engineering, Engineering Development Services and Traffic Engineering. Additionally, Engineering Services is supported by Storm Water and Creeks. These divisions and the services they provide are detailed in this brochure.

ASSET MANAGEMENT

CAPITAL PROJECTS ENGINEERING

ENGINEERING DEVELOPMENT SERVICES

TRAFFIC ENGINEERING

STORM WATER AND CREEKS



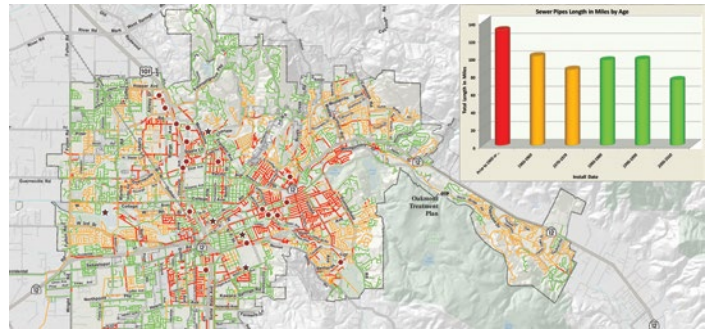
MONITORING CREEK HEALTH



DOWNLOADING FIELD STATS



ANALYZING ASPHALT SAMPLES



TRACKING THE AGE OF SEWER LINES

ASSET MANAGEMENT

The Asset Management Division is responsible for long-range planning for the City's infrastructure and natural resources. Staff evaluate information about the status of water, sewer and storm drain pipe, pavement, street lights and natural assets, including trees, creeks and wetlands, and native species.

The Asset Management team monitors the condition and performance of City assets to ensure required levels of service in the most cost-effective manner. The team uses tools such as Hydraulic Models, Geographical Information System (GIS), Computerized Maintenance Management Systems, and Supervisory Control and Data Acquisition systems to analyze and prioritize assets for refurbishment, rehabilitation or replacement. The results of this analysis are used to develop a 5-year prioritized Capital Improvement Program.

SERVICES

- Capital Improvement Projects Planning/Budgeting
- Mapping/GIS Services
- Utilities Sewer, Water and Reclamation Modeling
- Asset Management Implementation and Support
- Grant Administration and Support
- Master Plan Studies
- Data Collection and Analysis

STORM WATER AND CREEKS

In compliance with its Storm Water Permit, the City protects the water quality of our local creeks through reducing storm water pollution. Staff coordinates public education and outreach programs, responds to spills and illegal dumping in creeks and monitors water quality. Staff also implements the Citywide Creek Master Plan, securing grant funding for creek restoration projects and working with citizens, community groups, and partnering agencies through the Creek Stewardship Program. An interdisciplinary team of Environmental Specialists, City Planners, and Civil Engineering Technicians provide regulatory compliance support for City projects, including biological studies and preparation of environmental documents and permits, and related mitigation planning and implementation.

SERVICES

- Environmental Permitting for Capital Projects
- Storm Water Program Management for Permit Compliance
- Creek Stewardship
- Coordination of Flood Hazard Mapping Studies
- Citywide Creek Master Plan
- Grant Administration and Support



WELDING WATER CATCHMENT TANK



FRAMING FOR A CONCRETE POUR



FIELD SURVEY



ROADWAY OVERLAY

CAPITAL PROJECTS ENGINEERING

The Capital Projects Engineering Division is responsible for design and construction of projects to rehabilitate, upgrade and expand the City's infrastructure. Capital Projects Engineering is comprised of engineering and technical staff that are committed to enhancing the following facilities to protect public health and safety, and the environment:

- Sanitary Sewer Collection System
- Water Distribution System
- Laguna Wastewater Treatment Plant
- Street Network
- Traffic Signals and Systems
- Pedestrian and Bicycle Facilities
- Bridges and Other Structures
- Creeks and Drainage Systems
- Parks
- Other City Facilities

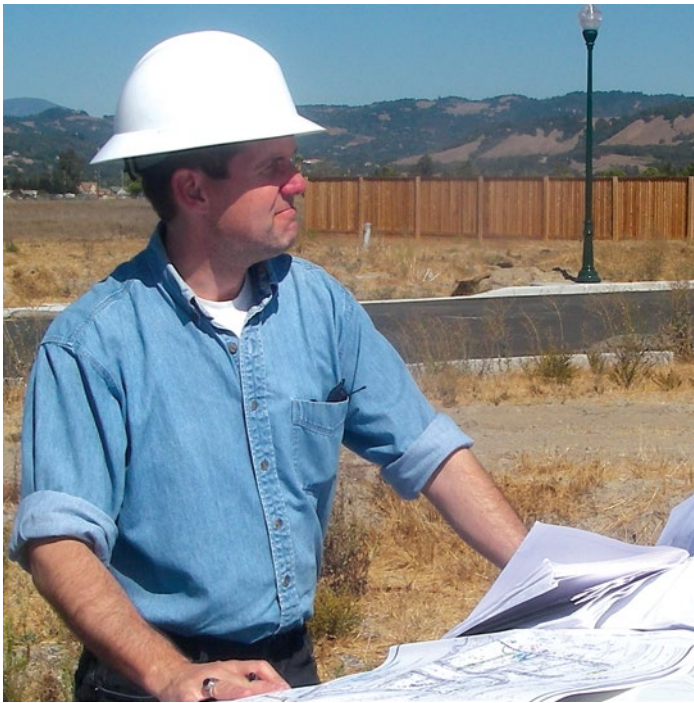
Capital Projects (including design and construction costs) are primarily funded through sewer and water rates, gas taxes, other transportation-related Federal, State and local funding sources, development fees, storm water utility revenue, and grants. Capital Projects Engineering services are provided directly by City staff and indirectly by consultant professionals with oversight by City staff.

SERVICES

- Capital Project Design
- Capital Project Construction Management
- Consultant Engineering Services
- Surveying
- Right-of-Way Engineering

A well-designed and maintained infrastructure anchors our economy and lifestyles and secures the public health and well-being.

- CALIFORNIA INFRASTRUCTURE REPORT CARD 2006, A CITIZEN'S GUIDE, AMERICAN SOCIETY OF CIVIL ENGINEERS



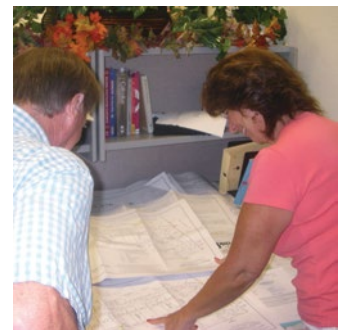
REVIEWING PLANS FOR A NEW DEVELOPMENT



NEW HOUSING DEVELOPMENT



ENCROACHMENT PERMIT ISSUE



REVIEWING CONSTRUCTION PLANS

ENGINEERING DEVELOPMENT SERVICES

Engineering Development Services provides a point of contact for the public to find out about their City and neighborhoods—staff provides information on streets, the location of water and sewer lines, and street lights.

Engineering Development Services reviews all projects and construction drawings that build neighborhoods and business centers of the future. All private development applications are reviewed to ensure that subdivision maps, which create both residential and commercial lots, are correct, meet all State requirements, and the approval conditions of the City. All construction drawings for public improvements are reviewed and approved to ensure that construction is done in accordance with City, State and Federal standards, thus increasing the lifespan of these improvements. If constructed properly, some of these public improvements can last from fifty to one hundred years, avoiding frequent expenditures to maintain infrastructure.

Engineering Development Services is charged with ensuring compliance with the Federal Clean Water Act, the City's Storm Water Management Program and the City's Grading and Erosion Control Ordinance. Staff implements Best Management Practices to minimize pollutants and sediment from entering our storm water system, creeks and streams.

SERVICES

- Development Plan Review
- Storm Water Permit Compliance
- Grading Permit Issuance
- Encroachment Permit Issuance
- Meter Set Approval
- Development Construction Inspection
- Subdivision Bond Processing and Final Acceptance
- Subdivision Tentative Map Processing through Entitlement
- Water Efficient Landscape Ordinance Implementation



PEDESTRIAN CROSSING SIGNAL



DESIGNING SAFE ROADS FOR ALL MODES OF TRANSPORTATION



TRAFFIC SIGNAL TIMING



TRANSPORTATION PERMITS

TRAFFIC ENGINEERING

The Traffic Engineering Division is responsible for planning the street signs, striping and signal timing throughout the City's 540 miles of streets. Its goal is to provide a safe and efficient facility for transportation, regardless of the mode: pedestrian, bicycle or vehicle.

Safety concerns brought forth by citizens are continually reviewed, and collision trends are analyzed to determine appropriate measures to address these issues. The division determines speed limits for streets through a system of monitoring and reporting, along with collision analyses.

Traffic Engineering staff works closely with the City's Bicycle and Pedestrian Advisory Board to plan bicycle lanes where possible, and with local schools to promote safe routes for children and identify related infrastructure needs.

Transportation Planning reviews how new development will affect traffic in the City. Staff also researches and obtains grant funding to leverage infrastructure improvements.

The City of Santa Rosa recently installed an Adaptive Traffic Control System on some of its busiest traffic corridors that gathers data on a second-by-second basis. The system automatically determines the traffic signal timing at one signal in conjunction with the signals on the corridor to increase the efficiency of traffic flow. Additional traffic corridors will be added to this system with the use of grant funding.

Materials Engineering is responsible for quality assurance of materials used to construct City roadway projects. Some of the services the group provides include asphalt plant inspection and sampling, laboratory and field testing, and pavement engineering. This team is responsible for overseeing the Pavement Management Program—an asset management database for the City's paved streets, which includes a Pavement Condition Index. This program is required for Federal and State grant eligibility. Using PMP, staff's technical expertise promotes cost-effective preventative maintenance and pavement rehabilitation.

SERVICES

- Traffic Signal Timing
- Neighborhood Traffic Calming
- Citizen Service Requests
- Engineering and Traffic Survey
- Transportation Planning
- Development Review
- CIP Grant Support
- Roadway Striping
- Materials Testing Lab/Pavement Management
- Citywide Traffic Model
- Safe Routes to School Program
- Street Smarts Program
- Transportation Permits



PUMP STATION S-9 INTAKE PIPING



SURVEY MONUMENT



AERIAL VIEW OF THE LAGUNA TREATMENT PLANT



CONSTRUCTION OF A RETAINING WALL



SEWER PIPE CONNECTION



WASTEWATER TREATED WITH UV LIGHT



PEDESTRIAN CROSSWALK ACTIVATION

CONTACT INFORMATION

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LAGUNA TREATMENT PLANT CONSTRUCTION



WATER VALVE INSTALLATION



FRAMEWORK OF WATER TANK CEILING



PSB TANK INSTALLATION