



# Cannon



Construction Management



# Reliable Responsive Solutions

**We have provided Reliable Responsive Solutions to clients for projects large and small since 1976.**

Our team of professionals includes:

- Construction Managers
- Resident Engineers
- Inspectors
- Civil Engineers
- Structural Engineers and Representatives
- Licensed Land Surveyors
- Funding Administrators
- GIS Specialists
- Automation and Controls
- Electrical Engineers
- Mechanical Engineers
- Technicians and Designers

## Safety

Cannon's Construction Management team applies comprehensive project controls to help manage the critical issues of time, cost, scope, quality, and safety. At Cannon, we take the "safety" component of project controls seriously—it is not just about keeping records and maintaining programs.

Our team is committed to providing a safe and healthful workplace, incorporating "best practices" in our policies and procedures, identifying and correcting risk to help improve both public and worker safety by integrating safety and health into all aspects of the construction process, from inception to completion.

Our safety programs and commitment to safety are intended to foster an injury-free, productive workplace, and we are proud to have earned one of the highest safety ratings in the industry. Our Experience Modification Rating (EMR) places us at the top of our class and demonstrates our continued commitment to jobsite safety.

**Safety and wellness are more than just policies at Cannon—they are cornerstones to how we work in the field and in our offices.**



# Construction Management

## Services

- Construction Management
- Contract Administration
- Construction Inspection
- Project and Contract Management
- Constructability Reviews
- Structures Representative
- Construction Surveys and Staking
- Materials Sampling and Testing
- Office Engineering
- Special Inspections
- Value Engineering
- Bidding Assistance
- Scheduling Support
- Claims Assistance
- Stormwater - SWPPP/QSP/QSD Support
- Permitting
- Local, State, Federal Agency Coordination



# Transportation - Federally Funded

## Overview

- Streets and Highways
- Bridges
- Parking Lots
- Bikeways
- Trails
- Intersections
- Transit Facilities

## Projects



### Train Station Restoration and Expansion

*Grover Beach, California*

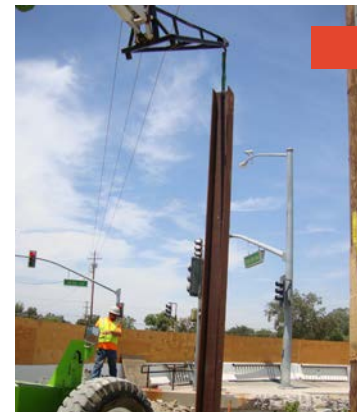
The City of Grover Beach's aging train station desperately needed an upgrade and expansion. Funding was granted from a Congestion Management Air Quality Grant, Prop. 1B, and the Regional Surface Transportation Program. The project included expanding the bus and vehicle parking, access, and loading areas as well as relocating the ingress and egress. Cannon provided construction management services, which included grading, paving, landscaping, site lighting, signage/stripping, and the installation of curb, gutter, sidewalk and storm drains, water and sewer lines, driveways, retaining walls and miscellaneous furnishings and amenities.



### North Depot & Highway 166 Improvements

*Santa Maria, California*

The intersection of North Depot and Highway 166 was creating safety hazards to pedestrians and vehicles. To address the safety concerns, the City of Santa Maria realigned the intersection of North Depot Street, West Fesler Street, and North Railroad Street. Traffic signals were also modified at North Depot Street and Main Street (Highway 166) to provide protected left turn lanes onto Main Street. Cannon provided construction management services for this federally-funded project.

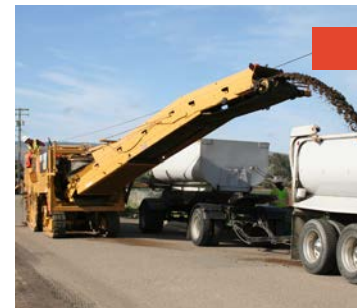


### Highway 46 East Dual Lefts

*Paso Robles, California*

To mitigate increased traffic demands along Highway 101 and Highway 46 East interchange, the City of Paso Robles partnered with Caltrans to improve the interchange. Cannon provided all aspects of construction management for the project, including construction engineering, construction inspection, contract management, and office engineering services.

Funded through a grant from the State Transportation Improvement Program, the project entailed construction of dual left turn-lanes; widening to incorporate an additional acceleration lane; three signalized intersections; installation of truss type overhead sign structures and concrete pile foundations; permanent concrete barriers; metal beam guard rails, terminal ends, and anchor blocks; storm drains and culverts; ornamental fencing; landscape improvements; lighting; video monitoring; and installation of the County's first ramp meter.



### Highway 1 Improvements

*Guadalupe, California*

Cannon provided construction management and inspection services for the Highway 1 Federal Demonstration High Priority Project in the City of Guadalupe. This project consisted of removal and replacement of raised and broken concrete sidewalk on Guadalupe Street (Highway 1) and installation of more than 1050 feet of large diameter RCP storm drains, catch basins, and utility relocations. The work also consisted of drainage improvements to eliminate stormwater surcharges and ponding within existing roadway infrastructure, including reconstruction of cross gutters, curbs, driveways and storm drain inlets, as well as manholes.

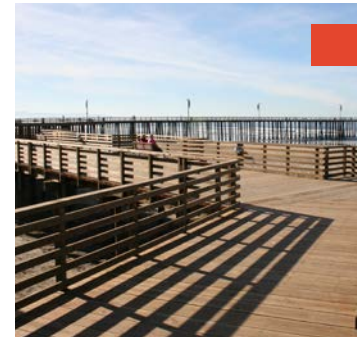


# Transportation -Community Corridors

## Overview

- Transportation Planning
- Traffic Safety
- Safe Routes to School
- Rural Highways and Freeways
- Right-of-Way
- Urban Streets
- Trails and Bikeways
- Water and Wastewater
- Green and Complete Streets
- Bridges
- Parks and Recreational Facilities

## Projects



### Pismo Pier Promenade

*Pismo Beach, California*

A popular tourist destination, the Pismo Pier received a major facelift with the addition of the "Promenade." As an elevated boardwalk, the promenade travels along the easterly edge of the world-renowned Pismo Beach in California. The fourth and final phase of a multi-year project, this phase included lighting, seating, striping and parking changes, pavers, a precast concrete railing system, storm drain improvements, underground detention storage, and relocating a staircase to access the sandy beach. Cannon provided all aspects of construction management for the project, including construction engineering, construction inspection, office engineering services, and funding administration.



### Shell Beach Road Downtown Revitalization

*Pismo Beach, California*

The Shell Beach Road Project is a major component of the City of Pismo Beach's overall Complete Street and Revitalization Plan. The well-traveled corridor lacked multi-modal transportation features and limited potential access for connections to key destinations. Project improvements included construction of a multi-use path, ADA-compliant sidewalks and curb ramps, intersection bulb-outs for pedestrian safety and traffic calming, landscaping, streetscape furnishings and amenities, lighting, walls and fences, fresh pavement surfaces, new striping and markings, and public art displays. Cannon provided construction management, construction inspection, materials testing coordination, and administrative services.



### 21st Green and Complete Street

*Paso Robles California*

21st Street was built on land that was once a tributary of the Salinas River; this along with development of the surrounding urban areas over time caused frequent flooding. Due to the roadway's poor surface condition and a desire to promote both bike and pedestrian use, the City set out to develop the first Green/Complete street enhancement project within the Central Coast.

Stormwater and street improvements included stormwater bio-retention areas; median creek channels; storm drain pipes/culverts; energy dissipation feature; replacement of sewer mains and laterals; water main and service reconstruction; repaving with conventional and pervious pavement/paver systems; and installation of engineered soil mixes and drought tolerant plantings.



### 12th Street Green and Complete Street Improvements

*Paso Robles, California*

The grant-funded 12th Street Green and Complete Street Project was designed to reduce the impacts of storm flows and sedimentation on the Salinas River, promote increased groundwater recharge, decrease potential for local flooding, and improve pedestrian mobility and safety.

Cannon provided engineering, landscape architecture, and construction management services to reduce future pavement maintenance costs, improve pedestrian access, reduce stormwater flows, and prioritize incorporation of existing street elements, such as mature street trees. This complete street also included the establishment of Class III bike lanes.



# Water Resources

## Overview

- Water Supply Facilities
- Wastewater Treatment Plants
- Collection Facilities
- Water Distribution Systems
- Water Treatment Plants
- Storm Drainage Collection

## Projects



### Well No. 2 and Biological Nitrate Removal Treatment Plant

*Glendale, California*

Crescenta Valley Water District (CVWD) began to explore options to reactivate Well No. 2, which had been shut down for more than 40 years due to high nitrate levels. They learned of a new technology developed by ATPwater that could remove nitrates using a hydrogen-based membrane biofilm reactor. CVWD selected Cannon to provide construction management for the construction of the necessary facilities for Well No. 2 to come back online. Cannon's scope included weekly progress meetings; keeping complete and organized construction files using ProCore; daily site observation/inspection with daily reports; review and response to RFIs; exhibits for design changes as needed based on field conditions and CVWD's requested changes or additions; coordination of material testing; and management of contract change orders.



### Plant 209 Pump Station

*Covina, California*

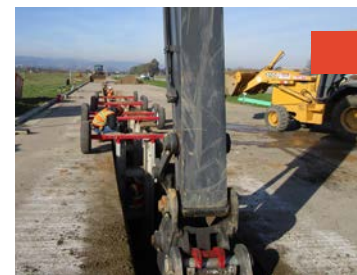
Suburban Water Systems (SWS) provides and maintains critical and essential water infrastructure for the San Jose Hills, Whittier, and La Mirada Service Areas. To keep services functioning, SWS set out to replace Plant 209 Pump Station and hired Cannon to provide electrical engineering, automation, and provided construction management services. Cannon's construction management scope included coordination with the City of Whittier for obtaining the permits and connection of the on-site sewer to the City's sewer system, full-time on-site observation and inspection, daily reports, weekly progress meetings, agency coordination, and coordination of RFIs and submittals. Cannon used Procore for organizing the project files, communication, and scheduling.



### Wastewater Treatment Plant Upgrade

*Guadalupe, California*

The City's aging wastewater treatment plant (WWTP) was unable to meet revised discharge standards of the California Regional Water Quality Control Board (RWQCB). Due to funding source requirements, the project was on a compressed schedule and very tight budget. Cannon's role included construction management and inspection services of the WWTP upgrades, and preparation of a meticulous planning and management process to maintain continual operation of the plant throughout the course of construction.



### Airport Area Infrastructure Improvements

*Paso Robles, California*

The City of Paso Robles has experienced significant development in recent years near the Municipal Airport area. To support this growth, the City decided to upgrade existing sewer mains, lift station, and various linear infrastructure. The City hired Cannon to provide construction management, inspection, as well as coordinate the materials engineering, sampling, and testing. As part of the project, the City replaced existing septic systems and leach fields with a new gravity sewer system.



# Structures

## Overview

- Street and Highways
- Bridges
- Piers
- Seawalls
- Retaining Walls and Crib Walls
- Sheet Piling and Shoring

## Services

- Structures Representative
- Material Certification
- Submittal Review
- Testing Results Review
- Concrete Mix Design Review
- Welding Report Review
- Working Drawing Review
  - » Trenching and Shoring
  - » Demolition Plan
  - » Pile Driving Plan
  - » Column Support Systems
  - » Falsework
  - » Prestressing
  - » Precast Components
  - » Structural Steel Shop Drawings
  - » Bearing Assemblies

## Projects



### 13th Street Bridge Widening

*Paso Robles, California*

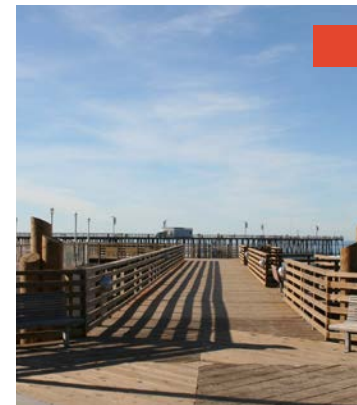
Cannon provided construction management and was the acting structures inspector for the widening of the 13th Street Bridge in Paso Robles, which spans over Highway 101. The project included construction of new and reconstruction of existing return walls, a new Type 26 concrete bridge barrier with stamped brick façade, and ornamental railing and lighting. This project was designed to complement the Caltrans 46 East Corridor Improvements.



### Shell Beach Bluff Stabilization

*Shell Beach, California*

As part of a \$2.3 million effort, the City of Pismo Beach undertook emergency actions to stabilize eroding bluffs in Shell Beach and prevent future bluff failures. The stabilization efforts effectively protected a sewage pumping station, failure of which would have caused approximately 500 to 600 homes to be without sanitary sewer services. Cannon provided on-site construction management and inspection services for the project, which included installation of structural tiebacks used to secure and stabilize the bluff. To enhance aesthetic appeal, and maintain visual continuity, the new seawall was sculpted and stained to blend with the natural bluffs.



### Elevated Boardwalk

*Pismo Beach, California*

As part of the Pismo Beach Promenade Improvement project, the City installed an elevated boardwalk of pressure treated timber pile and bent cap construction north of the existing pier. The 14 inch piles were driven to a tip elevation of 20 feet below the mean lower water level to provide stability and to protect the boardwalk from changes in tide. Boardwalk construction also included new framing, decking, and two staircases to allow for pedestrian access to the beach below. Helical anchors were installed in the foundation of a new section of seawall that closed off the old beach access stairwell through the existing seawall at the entrance of the pier.

Cannon provided all aspects of construction management for the boardwalk construction including construction engineering, construction and special inspections, office engineering services, and funding administration.



### Municipal Auditorium Renovation

*Riverside, California*

The City of Riverside selected Cannon as part of the Design-Build Team for the renovation, seismic retrofit, and re-roofing of the Riverside Municipal Auditorium (RMA). The RMA, built in the 1920s, is a six-story plus basement, approximately 53,000 square foot reinforced concrete structure. The building was added to the National Register of Historic Places in March 1978. Cannon was responsible for the design of a complete structural seismic exterior and interior retrofit and provided structural observation and inspection.

“My experience with Cannon has been excellent. They have been responsive in their communications, diligent in their work product, and agile when the scope of work changed over the course of time.”

-Dwayne Chisam, Director of Public Works/City Engineer



# Construction Surveys

## Services

### Overview

- Streets and Highways
- Bridges
- Parking Lots
- Bikeways
- Trails
- Seawalls
- Retaining Walls and Crib Walls
- Right-of-Way
- Water and Wastewater Treatment Plants
- Water Distribution Systems

- Construction Staking
- Property Boundary
- Right-of-Way and Easement Surveys
- Topographic and Utility Mapping
- Underground Utility Location and Markout
- Transportation Corridor Design Surveys
- ALTA/ACSM Surveys
- Tentative, Parcel, and Tract Maps
- Rough Grade Staking
- Layout Staking for Utilities and Site Improvements
- Transportation Corridor Design Surveys
- Laser Scanning and 3D Asbuilt Modeling
- GIS Mapping and Database Development

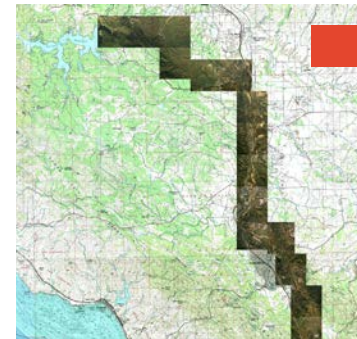
## Projects



### South Vine Street Improvements

*Paso Robles, California*

South Vine Street serves as a commuter route connecting Paso Robles residents to a major shopping center and is an alternate, non-freeway route to neighboring cities. Project improvements included widening the existing two traffic lanes; adding two, 5-foot wide striped and colored Class II bike lanes; and installing curbs, gutters, drainage improvements and traffic calming measures along the route. Scope of work included preparation of plans, specifications, and engineering estimates, coordination of meetings, construction inspection, and surveying. Surveying services included utility and topographic mapping and construction staking, which included over 9,000 linear feet of roadway and utility improvements.



### Nacimientto Water Delivery Surveys

*San Luis Obispo County, California*

The County of San Luis Obispo selected Cannon to provide professional surveying services for the Nacimientto Water Project. This water-delivery project centered on a 45-mile pipeline, two 15,000-acre-foot-per-year pump stations, one 9,000-acre-foot-per-year pump station, two 2-MG storage tanks, and four 1-MG storage tanks. The project ultimately delivered 15,750 acre-feet per year of raw water from Nacimientto Reservoir to turnouts serving six growing communities from Paso Robles to San Luis Obispo. The scope of work included topographic surveys and legal descriptions for the 45-mile pipeline, which crosses creeks and rivers and passes through both urban and rural areas, and construction staking of a 10-mile segment.



### Water Pipeline Replacement Construction Staking

*Vandenberg Air Force Base (VAFB), California*

VAFB was replacing pipelines within the base and selected Cannon to compile digital plans, including topographic mapping and GIS data for portions of the North Base cantonment area. Cannon provided engineering and surveying services.

Surveying services included research and coordination with base mapping, complied GIS data files; construction stakes were set at the true location of each waterline; completion of an as-built survey of the location of the newly installed water distribution facility at the North Base, and preparation of a survey report.



### Well No. 16 Construction Staking

*La Crescenta, California*

Shortly after Well No. 16 was drilled by Glendale Water and Power (GW&P), a well report stated that there were excessive nitrate levels in the water, and the well was never placed into service. Soon after, GW&P arranged for CVWD, who has a nitrate treatment plant, to take over and equip the well and pay GW&P an agreed-upon rate for the water. CVWD selected Cannon to provide engineering and design services, construction management, and construction staking services for Well No. 16. Staking services included verifying, extending, and setting local horizontal and vertical controls for ten improvement points.





**Reliable Responsive Solutions<sup>SM</sup>**

Cannon—[CannonCorp.us](http://CannonCorp.us)

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