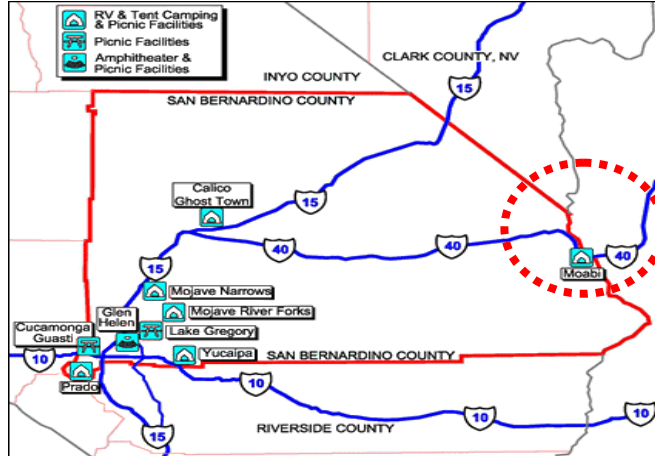


SEWER SYSTEM MANAGEMENT PLAN

Volume I

County of San Bernardino
Regional Parks Department

MOABI REGIONAL PARK



Prepared by:

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ACRONYMS

BWV	Backwater Valve
BAT	Best Available Technology
BMP	Best Management Practice
CASA	California Association of Sanitation Agencies
CCTV	Closed-Circuit Television
CFR	Code of Federal Regulations
CGRP	Cucamonga-Guasti Regional Park
CGTRP	Calico Ghost Town Regional Park
CIP	Capital Improvement Project
CIWQS	California Integrated Water Quality System
CM	Corrective Maintenance
CMMS	Computerized Maintenance Management System
CRWQCB	Colorado River Regional Water Quality Control Board
CWEA	California Water Environment Association
CSA	County Service Area
d/D:	The depth of flow (d) diameter (D) of the pipe
EPA	Environmental Protection Agency
ERP	Emergency Response Plan
ERSP	Emergency Sewer Response Provider (On-Call)
FOG	Fats, Oils, and Grease
FM	Force Main (Pressure Main)
FROG	Fats, Roots, Oils, and Grease
FSE	Food Service Establishments
GHRP	Glen Helen Regional Park
GIS	Geographical Information System
GPS	Global Positioning System
GRD	Grease Removal Device
GW	Groundwater Induced Infiltration
GWDR	General Waste Discharge Requirements (or Waste Discharge Requirements)
I/I	Inflow and Infiltration
IERP	Integrated Emergency Response Plan
LRWQCB	Lahontan Regional Water Quality Control Board
LRO	Legally Responsible Official
MNRP	Mojave Narrows Regional Park
MRFRP	Mojave River Forks Regional Park
MRP	Moabi Regional Park
MSDS	Material Safety Data Sheets
NOI	Notice of Intent
NPDES	National Pollution Discharge Elimination System
O&M	Operation and Maintenance
OERP	Overflow Emergency Response Plan
OES	Office of Emergency Services
PRP	Prado Regional Park

PM	Preventative Maintenance
PMP	Preventative Maintenance Program
POTWs	Publicly Owned Treatment Works
R&R	Rehabilitation and Replacement
SCADA	Supervisory Control and Data Acquisition
SCAP	Southern California Alliance of Publicly Owned Treatment Works
SOP	Standard Operating Procedure
SDD	Special Districts Department
SLS	Sewer Lift Station
SPS	Sewer Pump Station
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SSS	Sanitary Sewer System
SARWQCB	Santa Ana Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
USA	Underground Service Alert of Southern California
YRP	Yucaipa Regional Park
WDID	Waste Discharge Identification Number
WDP	Waste Discharge Permit
WDR	Waste Discharge Requirements
WWCS	Wastewater Collection System
	WWTPWastewater Treatment Plant



TERMS

Authorized Representative: The person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official, or a duly authorized representative of that person.

Best Management Practices: The Best Management Practices [BMP] is a developed industry standard related to the operation and maintenance of grease interceptors/grease-trap and housekeeping operations associated with food preparation and cleanup at restaurants and other food service facilities. BMPs are not just guidelines for FSEs; they are enforceable when a FSE fails to implement one or more of the listed BMPs.

Blockage: Partially or fully blocked wastewater, preventing flow through a sewer pipeline. The blockage can be caused by debris in the sewer, grease buildup, root intrusion, or a partial or full collapse of the pipeline. If not caught in time, the blockage may cause an overflow. This is also called a stoppage.

California Water Environment Association (CWEA): CWEA is an association of 8,000-plus professionals in the wastewater industry. CWEA is committed to keeping California's water clean. CWEA trains and certifies wastewater professionals, disseminates technical information, and promotes sound policies to benefit society through protection and enhancement of the water environment. CWEA offers services at the state level and locally through 17 geographical local sections. Through their on-line bookstore, CWEA offers technical references for sewer system operation and maintenance. Website: <http://www.cwea.org/>.

Computerized Maintenance Management System (CMMS): is also known as Enterprise Asset Management and Computerized Maintenance Management Information System (CMMIS). A CMMS software package maintains a computer database of information about an organization's maintenance operations, i.e. CMMIS - computerized maintenance management information system. This information is intended to help maintenance workers do their jobs more effectively and to help management make informed decisions. CMMS data may also be used to verify regulatory compliance.

Collection System: Generic term for any system of pipes or sewer lines used to convey wastewater to a treatment facility.

Colorado River Regional Water Quality Control Board: Also known as the Regional Water Board or RWQCB. The mission of this state regulatory agency is to: preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

<http://www.waterboards.ca.gov/coloradoriver/>

Drainage Channel: For the purposes of complying with the Statewide Sanitary Sewer Order, (1) a man-made canal used to transport storm water as part of a municipal separate storm sewer system, or (2) an intermittent or perennial stream bed.

Enrollee: The legal public entity that owns a sanitary sewer system, as defined by the GWDR, which has submitted a complete and approved application for coverage under the GWDR. This is also called a sewer system agency or wastewater collection system agency.

Evaporation Pond: Artificial ponds with very large surface areas that are designed to efficiently evaporate water by sunlight and exposure to ambient temperatures.

Event ID: A unique identifier assigned by the SSO database to each reported SSO or private lateral sewage discharge.

Facultative Lagoon: A type of stabilization pond used for biological treatment of industrial and domestic wastewater. Sewage or organic waste from food or fiber processing may be catabolized in a system of constructed ponds where adequate space is available to provide an average waste retention time exceeding a month. A series of ponds prevents mixing of untreated waste with treated wastewater and allows better control of waste residence time for uniform treatment efficiency.

Fats, Oils and Grease (FOG): Fats, oils, and grease that are discharged into the sanitary sewer collection system by Food Service Establishments (FSE), homes, apartments and other sources. FOG is a major cause of blockages leading to increased maintenance and sometimes SSOs. Grease can harden and cause floating "turtles" inside manholes and wet-wells that are hard to break down. These can easily clog pipe openings and cause serious problems if they make their way through the system.

Fats, Roots, Oils and Grease (FROG): Fats, oils, and grease that are discharged into the sanitary sewer collection system by FSEs attach to downstream roots that are protruding from lateral connections, pipe joints, manholes, etc., creating a more rock-solid blockage due to the combination of FOG and Roots that will lead to increased maintenance and sometimes SSOs.

FOG Control Program: To be implemented at the Enrollee's discretion. May include public education program; plan and schedule for the disposal of FOG; legal authority to prohibit FOG related discharges; requirement to install grease removal devices; authority to inspect grease producing facilities; identification of sanitary sewer system sections subject to FOG blockages and the establishment of a cleaning schedule for each section; development and implementation of source control measures for all sources of FOG.

Geographical Information System (GIS): A database linked with mapping, which includes various layers of information used by government officials. Examples of information found on a GIS can include a sewer map; sewer features such as pipe location, diameter, material, condition, last date cleaned or repaired. The GIS also typically contains base information such as streets and parcels.

Governing Board: This is the governing board of the sewer entity developing the SSMP. Examples would be the Board of Directors, the City Council, or the County Board of Supervisors.

GWDR – General Waste Discharge Requirements: A GWDR is an authorization to discharge waste with certain conditions, which can be issued on an individual basis or to a group of dischargers. The Statewide General WDR for Sanitary Sewer Systems was adopted by the SWCRB and will be implemented by the Regional Water Boards and SWRCB.

Infiltration: The entry of groundwater into a sewer system, including service connections. Infiltration occurs through defects in the piping network including defective or cracked pipes, pipe joints, and through defects in manhole walls and joints.

Inflow: Stormwater runoff entry into a sewer system from such sources as roof leaders, cellars, yard and area drains, foundation drains, cooling water discharges, drains from springs and swampy areas, around manhole covers that are not properly sealed to the top of manholes or through holes in the covers, and cross connections from storm sewer systems and catch basins. Inflow differs from infiltration in that it is a direct discharge into the sewer rather than seepage of groundwater into the sewer.

Lahontan Regional Water Quality Control Board: Also known as the Regional Water Board or RWQCB. The mission of this state regulatory agency is to: preserve, enhance and restore the

quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. Website: <http://www.waterboards.ca.gov/lahtontan/>.

Lateral: The portion of sewer that connects the waste plumbing from a home or business with the sewer main pipeline in the street. Some sewer system agencies own or maintain a portion of the lateral.

a) Upper Lateral: Portion of lateral from building to property line (or easement line), usually privately owned and maintained.

b) Lower Lateral: Portion of lateral from property line (or easement line) to sewer mainline in the street or easement. This portion of the lateral is sometimes privately owned and maintained and sometimes publicly owned and maintained.

Miles of Gravity Sewer: Amount of gravity sewer lines/pipes in an Enrollee's sanitary sewer system, expressed in miles.

Miles of Laterals: Amount of laterals in an Enrollee's sanitary sewer system, which the Enrollee is responsible for maintaining, expressed in miles.

Miles of Pressure Sewer: Amount of pressurized sewer lines/pipes in an Enrollee's sanitary sewer system, expressed in miles, also referred to as Force Mains.

Monitoring and Reporting Program: The Monitoring and Reporting Program established in the WDR that establishes monitoring, record keeping, reporting and public notification requirements for the GWDR.

Overflow Emergency Response Plan: Identifies measures to protect public health and the environment. A plan must include the following: notification procedure, appropriate response plan, regulatory notification procedures, employee training plan, procedures to address emergency operations, a program that ensures all reasonable steps are taken to contain and prevent discharges.

Percolation Pond: Refers to a pond (usually man-made) designed to allow treated wastewater effluent to percolate slowly into the ground. The pond acts as a holding facility while gravity allows the water to percolate or seep through the soil or other unconsolidated medium into the local water table (usually the surficial aquifer). "surficial" - pertaining to or occurring on or near the earth's surface; "a surficial geologic deposit".

Percent Reached Surface Water: Volume of sewage discharged from a sanitary sewer system or private lateral or collection system that reached surface water divided by the total volume of sewage discharged.

Percent Recovered: Volume of sewage discharged that was captured and returned to the sanitary sewer system or private lateral or collection system divided by the total volume of sewage discharged.

Private Lateral: That portion of the lateral that is owned and maintained by the private property owner that it serves. Based on an individual agency's ordinance, this may just be the upper lateral or can include the lower lateral.

Private Lateral Sewage Discharge (PLSD): Sewage discharges that are caused by blockages or other problems within privately owned laterals or collection systems which are tributary to the reporting Enrollee's sanitary sewer system. Reports of these events are submitted by Enrollees on a voluntary basis but are not their responsibility. This type of sewage discharge is the responsibility of the private lateral or collection system owner.

Preventative Maintenance (PM): Regularly scheduled servicing of machinery, infrastructure or other equipment using appropriate tools, tests, and lubricants. This type of maintenance can

prolong the useful life of equipment, infrastructure, and machinery and increase its efficiency by detecting and correcting problems before they cause a breakdown of the equipment, or failure of the infrastructure.

Rehabilitation and Replacement Plan (also referred to as a Capital Improvement Plan): Identifies and prioritizes system deficiencies and implements short-term and long-term rehabilitation actions to address each deficiency.

Sanitary Sewer Overflow (SSO): The Statewide GWDR defines an SSO as any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system, including overflows or releases that reach waters of the United States, overflows or releases that *do not* reach water of the United States, and backups into buildings and/or private property caused by conditions within the publicly owned portion of the sewer system.

Sanitary Sewer Overflow Categories:

Category 1: All discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system that equals or exceeds 1000 gallons; or result in a discharge to a drainage channel and/or surface water; or discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.

Category 2: All other discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system.

Santa Ana Regional Water Quality Control Board: Also known as the Regional Water Board or RWQCB. The mission of this state regulatory agency is to: preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. Website: <http://www.waterboards.ca.gov/santaana/>.

Sanitary Sewer System: Any system of gravity sewer pipelines, pump stations, force mains, or other facilities upstream of the headwork's of a wastewater treatment plant. The sanitary sewer system is used to collect and convey wastewater to the publicly owned treatment facility. Temporary storage and conveyance facilities are considered to be part of the sanitary sewer system and discharges into these temporary storage facilities are not to be considered SSOs.

Satellite Collection System: The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility to which the sanitary sewer system is tributary.

Sewage Lift Station: Lift stations are facilities designed to move raw sewage from a lower elevation to a higher elevation through pipes or pumps. Key elements of sewer lift stations include a receiving well (wet-well), often equipped with a bar screen or grinding pump to remove coarse materials; pumps and piping with associated valves; motors; a power supply system; an equipment control and alarm system; and an odor control system and ventilation system. The lift stations are equipped with redundant alarms and backup equipment to eliminate the potential for failures of mechanical and/or electrical equipment and appurtenances. Prime use of a lift station is inside a WWTP (screw pumps) or when two different elevations of a collection system join and sewage needs to be lifted and deposited back into a gravity pipe line simply feet away.

Sewage Pump Station: Pump stations are facilities designed to move raw sewage from a lower elevation to a higher elevation through the use of pipes a greater distance than that design of a sewer lift station. Key elements on a pump station are basically identical to a lift station. The main difference between the two types of stations is the distance the flow must be conveyed. The term Pump Station and/or Lift Station are widely used interchangeably, but technically are two separate types of conveyance moving systems.

Sewer System Management Plan (SSMP): A series of written site specific programs that address how a collection system owner/operator conducts their daily business as is outlined in the WDR. Each SSMP is unique for an individual discharger. The plan includes provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management and cost benefit analysis. The plan must also contain a spill response plan. Certification is offered by technically qualified and experienced persons and provides a useful cost effective means for ensuring that SSMPs are developed and implemented appropriately.

Spill: Generic term referring to any sewage discharge (i.e., SSO or private lateral sewage discharge) resulting from a failure in a sanitary sewer system or privately owned lateral or collection system.

SSO Database: Online reporting system developed, hosted, and maintained by the State Water Resources Control Board for compliance with the Monitoring and Reporting Program contained in Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WQO No. 2006-0003-DWQ).

Storm Drainpipe: For the purposes of complying with the Statewide Sanitary Sewer Order, any pipe that is part of a municipal separate storm sewer system used for collecting or conveying storm water.

System Evaluation and Capacity Assurance Plan: A required component of an agency's SSMP and is an important part of any agency's overall Capital Improvement Plan that provides hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event.

Total Volume Reached Surface Water: Amount of sewage discharged from a sanitary sewer system or private lateral or collection system that reaches a surface water.

Total Volume Recovered: Amount of sewage discharged that was captured and returned to the sanitary sewer system or private lateral or collection system.

WDID: Waste Discharge Identification number which is a unique identifier assigned by the State Water Board to each Enrollee for regulatory record and data management purposes.

INTRODUCTION

This introductory section provides background information on the purpose and organization of the Sewer System Management Plan (SSMP) and provides a brief overview of Moabi Regional Park's (MRP) sanitary sewer system. The County of San Bernardino, Special Districts Department has contracted with the County of San Bernardino, Regional Parks Department to provide operations, maintenance, and management services for Moabi Regional Park's sanitary sewer system, located at 100 Park Moabi Road, Needles CA (Thomas Guide map page 352, C-10). MRP is located along the banks of the Colorado River, at the California and Arizona state lines, and a short drive from Lake Havasu and Laughlin.

SSMP REQUIREMENT BACKGROUND

Moabi Regional Park has been mandated to comply with the State Water Resources Control Board's (SWRCB) Order No. 2006-0003-DWQ (see **Appendix I – SSMP Vol. II**). The SWRCB and the local Regional Water Quality Control Boards (RWQCB) oversee the water quality in the State of CA within their respective jurisdictions. MRP lies within a portion of the State that is under the jurisdiction of the Colorado Regional Board.

On May 2, 2006, the SWRCB adopted General Waste Discharge Requirements (GWDR), applicable to all publicly owned sanitary sewer systems in California with more than one mile of sewer pipeline. The goal of this requirement is to have a consistent statewide approach for reducing sanitary sewer overflows (SSOs) or sewage spills; therefore, these regulations apply directly to MRP. The County of San Bernardino, Special Districts Department (Department) has initiated, completed, and submitted all required documentation and application forms to the SWRCB for the registration of this facility's GWDR for the sanitary sewer system, including the Notice of Intent (NOI) to comply with the terms of the Statewide General Waste Discharge Requirements for sanitary sewer systems. A legally responsible official (LRO) is any individual authorized to enter and certify data into the online sanitary sewer overflow database on behalf of an agency enrolled under Statewide General Waste Discharge Requirements for sanitary sewer systems (WQO No. 2006-0003). A data submitter is any individual authorized by a legally responsible official to enter data into the online sanitary sewer overflow database on behalf of an agency enrolled under Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. The SWRCB issued a WDID, number 6SOO11127, for Moabi Regional Park's sanitary sewer system.

The purpose of the Board Order is to prevent SSOs from occurring by creating and establishing a Statewide Monitoring and Reporting Program (MRP) that requires each local or regional sewerage agency to create and implement its own SSMP based on the mandatory requirements of the Board Order (see **Appendix I – SSMP Vol. II**).

The Monitoring and Reporting Program established in the GWDR requires monitoring, record keeping, reporting, and public notification. The California Integrated Water Quality System (CIWQS) is a website that was created and implemented for this purpose. This program requires that a LRO be appointed to establish a monitoring and reporting program in-house to report all SSOs in accordance with the requirements of the Board Order. Furthermore, the LRO is required to report and certify, through the website, all SSOs that occurred within a specific timeframe as assigned by the SWRCB. The LRO is also required to certify a "No Spill

Certification,” documenting that no SSOs occurred during each particular month. For detailed information on the MRP please refer to **Appendix K – SSMP Vol. II**.

This SSMP for Moabi Regional Park is described herein.

DOCUMENT ORGANIZATION

This SSMP includes eleven mandatory elements, as listed below. Each of these elements forms a section of this document.

1. Goals
2. Organizational Structure
3. Legal Authority
4. Operation and Maintenance Program
5. Design and Performance Provisions
6. Overflow Emergency Response Plan
7. Fats, Oils and Grease Control Program
8. System Evaluation and Capacity Assurance Plan
9. Monitoring, Measurement and Program Modifications
10. SSMP Audits
11. Communication Plan

Each element section is organized into sub-sections, as follows:

1. Description of the SWRCB requirement for that element.
2. Discussion of the specific element. The discussion may be split into multiple sub-sections depending on length and complexity.

DISTRICT SERVICE AREA AND SEWER SYSTEM

The County of San Bernardino, Special Districts Department currently operates, maintains, and manages Moabi Regional Park’s sanitary sewer system on behalf of the County of San Bernardino, Regional Parks Department. The elevation of MRP is approximately 1,930 feet above sea level, with the coordinates of: 34°51’13”N 116°47’12”W (**Plate 1**). Moabi Regional Park encompasses approximately 3.5 square miles of land and, as of 2011, has a serving population estimated at less than 450 (total connections multiplied by a population of 3.3 per connection). The average design wastewater flow of the collection system is approximately 0.15 mgd.

Moabi Regional Park is located 14 miles south of Needles and 156 miles east Barstow (**Plate 2**). The sanitary sewer system consists of approximately 16,162 linear feet (3.06 miles) of pipeline ranging in size from 4” to 8” in diameter. The sewer pipelines transport raw sewage to Moabi Regional Park’s wastewater treatment plant facilities. The Department is also responsible for the operation, maintenance, and management of MRP’s wastewater treatment plant facilities, including the treatment and disposal of all domestic and commercial waste generated within the park. MRP’s wastewater treatment facilities consist of twenty-eight (28) holding tank systems that are pumped regularly, two (2) oxidation ponds (each lined with clay), and one (1) unlined percolation pond. The three ponds lie on approximately three acres of land.

PLATE 1 – Moabi Regional Park Site Map

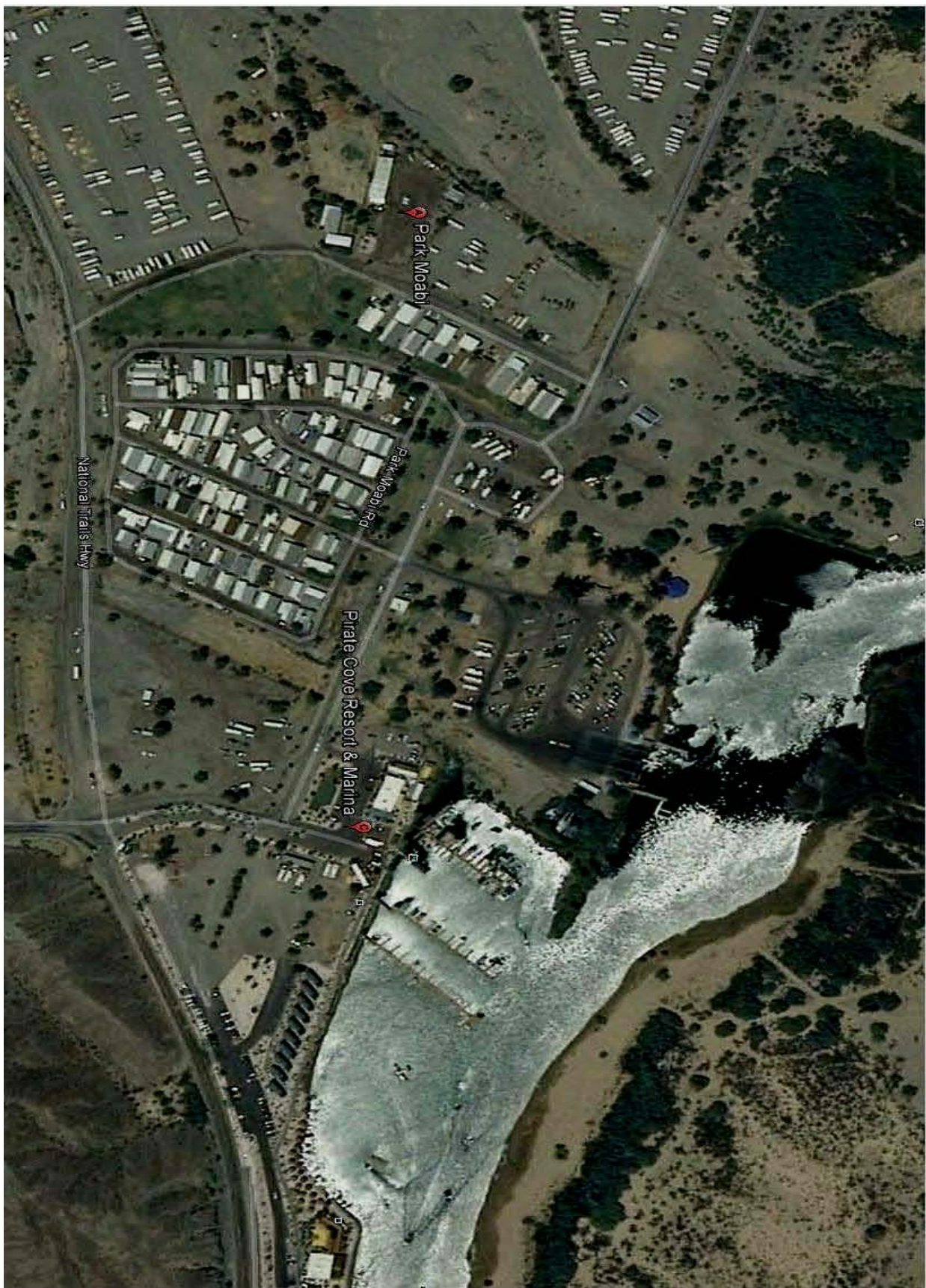


PLATE 2 – Moabi Regional Park – California Map

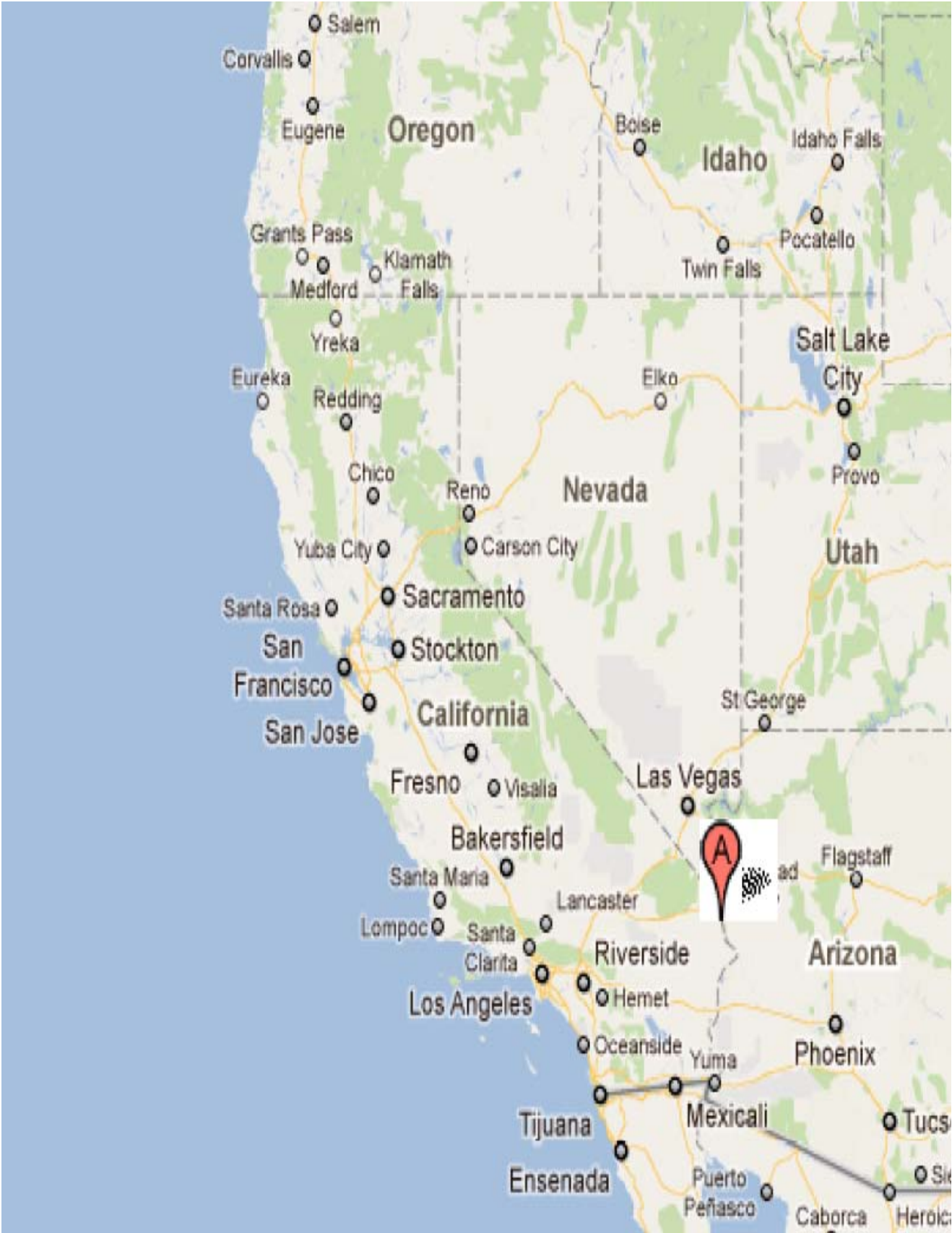


PLATE 3 – Moabi Regional Park - Local California Map

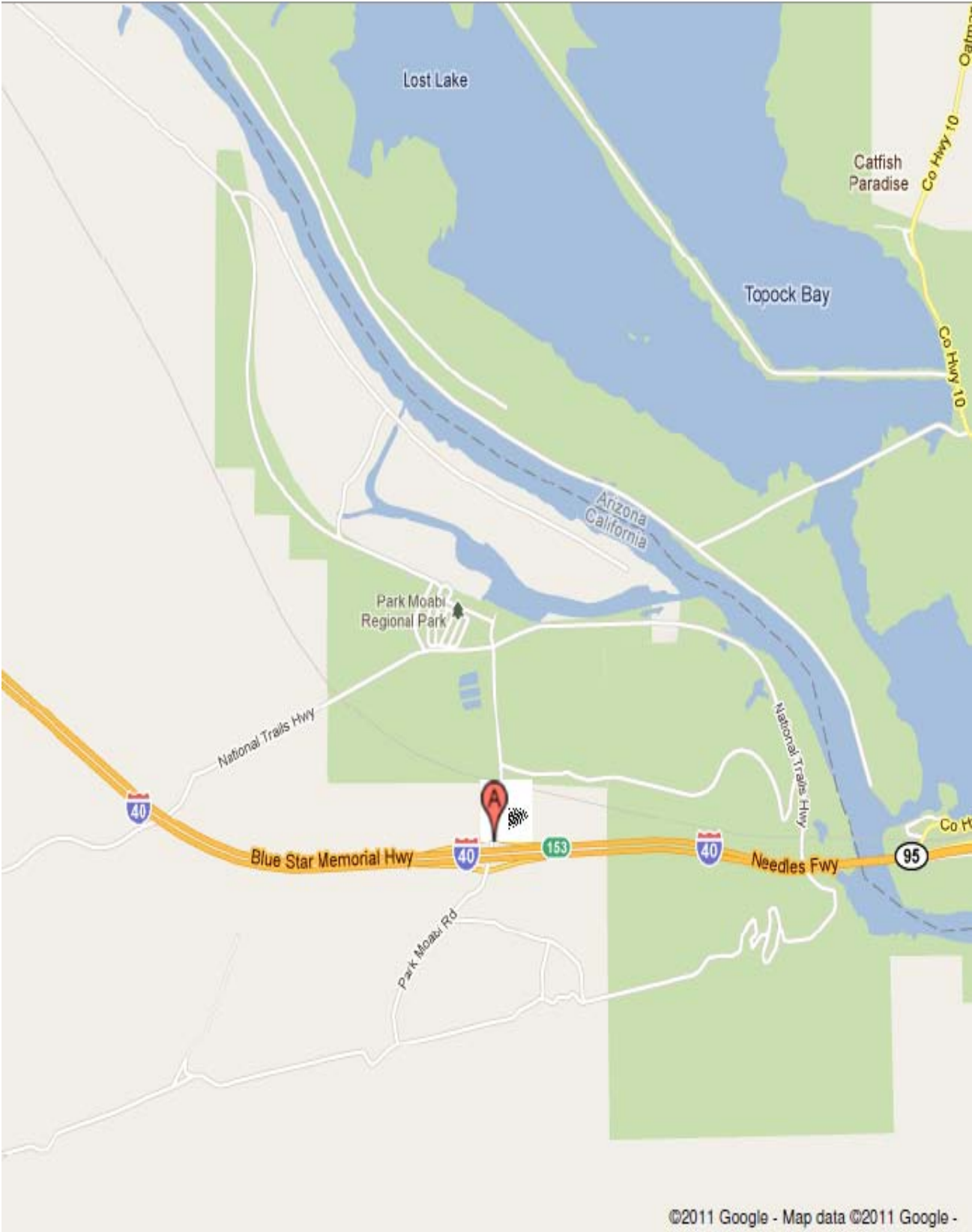


PLATE 4 – Moabi Regional Park – Park Utilities Plan

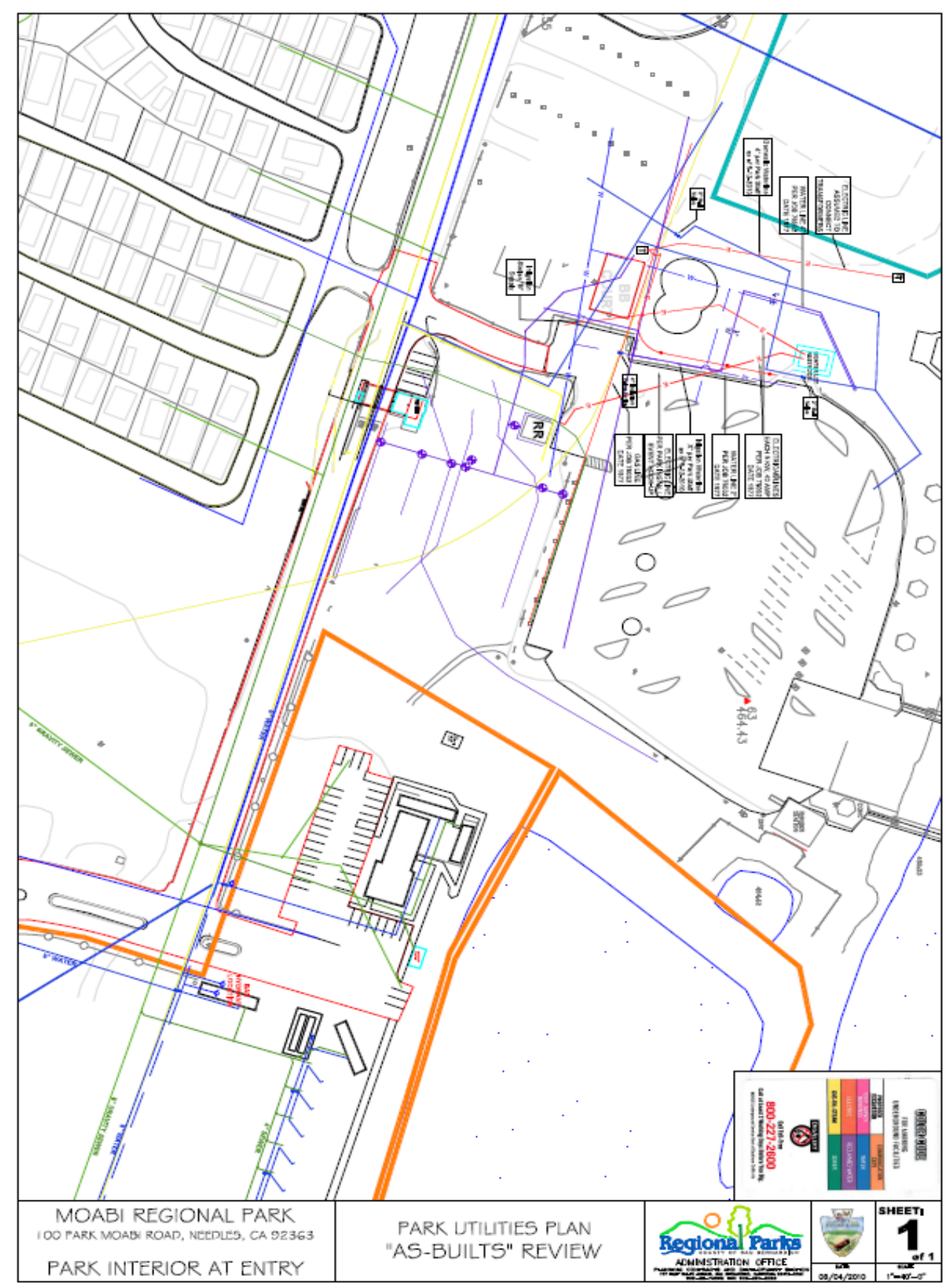
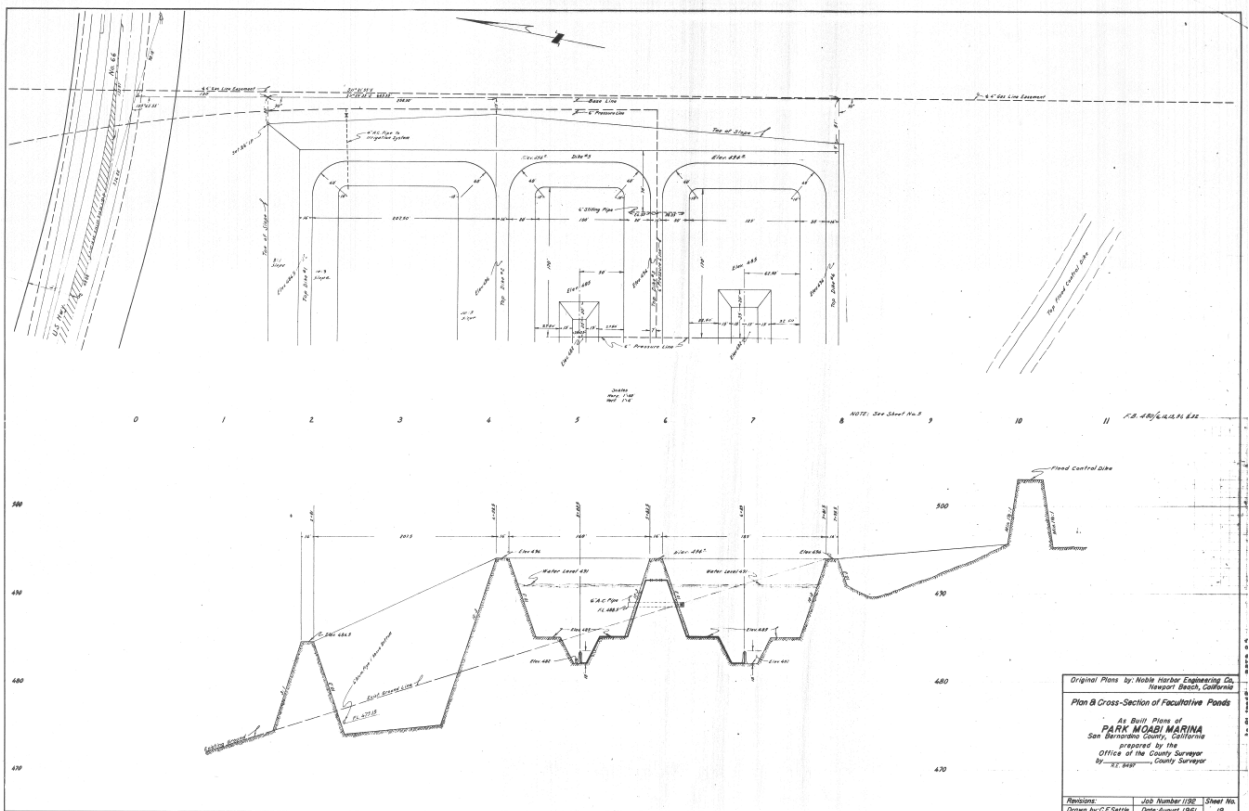
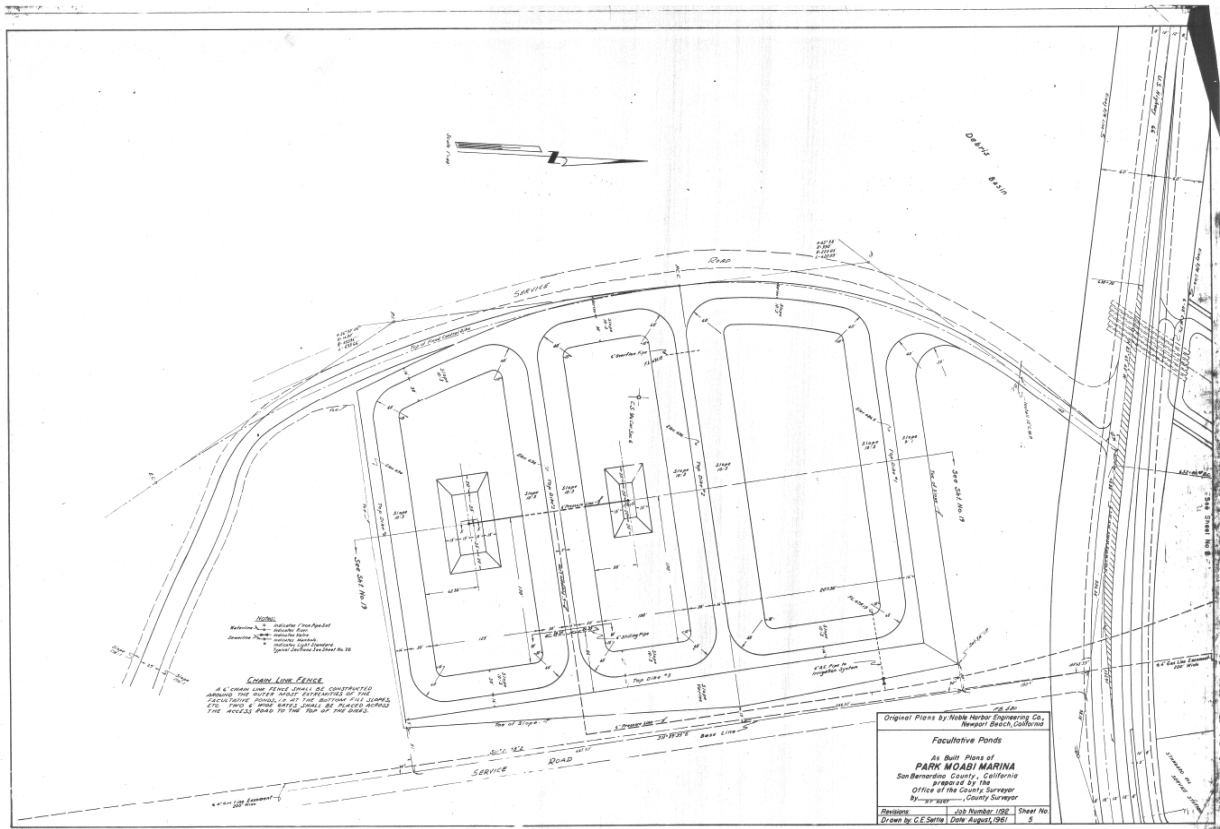


PLATE 5 – Moabi Regional Park – Sanitary Sewer System Measurements

REGIONAL PARKS SEWER LATERAL MEASUREMENTS MOABI		Plan Titles
Measurements (Feet)		
5928		Park Moabi Job #1192 Sht 23, August 1961 Note: Trailer Park
240	140	Park Moabi Job #1192 Sht 2, August 1961 Note: Center Parking Area
355	490	
130	320	
180		Park Moabi Job #1192 Sht 3, August 1961 Note: Boat Ramp
50		
173	62	Pirate Cove Resort & Marina Lots 1 thru 10 Sht 2 of 3
39	201	
200		
36		Pirate Cove Resort & Marina Lots 11 thru 14 Sht 2 of 3
200		
48		
260		ARQ Engineering LLC, Parking Site Plan Sht 1 of 8 Note: Plan doesn't show sewer, but sewer POC's are known according to previous plans and so this plan was used to estimate sewer length because it shows 2 POC's on a single plan and includes a scale
221 (No. 2)		Peninsular Sewer Systems Peninsular No.s 2,3, & 4, Sht 2 of 12
350 (No. 3)		
201 (No. 4)		
278 (No. 5)		Peninsular Sewer Systems Peninsular No.s 5 & 6, Sht 3 of 12
215 (No. 6)		
298 (No. 7)		Peninsular Sewer Systems Peninsular No.s 7,8, & 9, Sht 4 of 12
227 (No. 8)		
225 (No. 9)		
348 (No. 10)		Peninsular Sewer Systems Peninsular No.s 10 & 11, Sht 5 of 12
260 (No. 11)		
205 (No. 12)		Peninsular Sewer Systems Peninsular No.s 12 & 13, Sht 6 of 12
382 (No. 13)		
237 (No. 14)		Peninsular Sewer Systems Peninsular No.s 14 & 15, Sht 7 of 12
648 (No. 15)		
554 (No. 16)		Peninsular Sewer Systems Peninsular No.s 16 & 17, Sht 8 of 12
228 (No. 17)		
273 (No. 18)		Peninsular Sewer Systems Peninsular No.s 18 & 19, Sht 9 of 12
249 (No. 19)		
284 (No. 20)		Peninsular Sewer Systems Peninsular No.s 20 & 21, Sht 10 of 12
263 (No. 21)		
540 (No. 22)		Peninsular Sewer Systems Peninsular No.s 22 & 23, Sht 11 of 12
289 (No. 23)		
90 (No. 24)		Peninsular Sewer Systems Peninsular No.s 24 & 25, Sht 12 of 12
245 (No. 25)		
Subtotal Feet	16,162	MOABI

Miles of pipeline 3.06

PLATE 6 – Moabi Regional Park – Wastewater Treatment Plant



SECTION I

SECTION II

SECTION III

SECTION IV

SECTION V

SECTION VI

SECTION VII

STILLINGS PIPE & CATWALK DETAILS

CATWALK FENCE

NOTE: ALL DIMENSIONS FOR TYPICAL BLOCK INFORMATION.

Original Plans by Noble Harber Engineering Co., Newport Beach, California

Stillings Pipe & Catwalk Details Typical Sections

All Built Plans of PARK NOAHI MARINA San Bernardino County, California

Approved by the County Engineer

By: [Signature] County Surveyor

Revision	Date	Job Number	Sheet No.
1-1	1-1-1961	100	1



SECTION 1 – GOALS

REGULATORY REQUIREMENTS FOR GOALS ELEMENT

The SWRCB requirements for the Goals element of the SSMP are as follows:

Each collection system agency in the State of CA must develop goals to properly manage, operate, and maintain all aspects of its wastewater collection system in order to reduce and prevent SSOs, as well as to mitigate any SSOs that may occur.

GOALS DISCUSSION

The goal of this SSMP is to provide a living document, a written plan and schedule to properly operate, maintain, and manage all elements of MRP's sanitary sewer system in order to diminish and prevent SSOs, as well as to mitigate any potential SSOs that may occur.

A copy of the Board Order and certified SSMP shall be made available to the public. The County of San Bernardino, Special Districts Department and the Regional Parks Department recognizes the importance of protecting the water quality in the State of CA and takes the necessary precautions to mitigate, minimize, and prevent raw sewage overflows/spills from occurring, and is supplementing its existing Sewer System Management Program with the requirements set forth in the new state regulations. Please refer to **Appendix I – SSMP Vol. II**. The primary objectives of these regulations are:

- To properly operate, maintain, and manage all portions of Moabi Regional Park's wastewater collection systems
- To provide adequate capacity for conveying peak wastewater flows
- To minimize the frequency and magnitude of SSOs
- To prevent public health hazards
- To mitigate the impacts associated with any SSO that may occur
- To comply with all applicable regulatory notification and reporting requirements

SECTION 2 – ORGANIZATIONAL STRUCTURE

(SEE SSMP VOLUME II)

SECTION 3 – LEGAL AUTHORITY

REGULATORY REQUIREMENTS FOR LEGAL AUTHORITY ELEMENT

The SWRCB requirements for Legal Authority element of the SSMP are as follows:

The collection system agency must demonstrate through Collection System Use Ordinances, Service Agreements, or other legally binding procedures that it possesses the necessary legal authority to:

- A. Prevent illicit discharges into its wastewater collection systems. (Examples may include but are not limited to infiltration and inflow (I/I), storm water, chemical dumping, unauthorized debris, etc.)
- B. Require that sewers and connections be properly designed and constructed.
- C. Ensure access for maintenance, inspection or repairs for portions of the laterals owned or maintained by the public agency.
- D. Limit the discharge of fats, oils, grease, and other debris that may cause blockages.
- E. Enforce any violations of its sewer ordinances.

SUMMARY OF LEGAL AUTHORITY DOCUMENT

Through the County of San Bernardino Board of Supervisor's September 12, 1983 resolution establishing "Rules and Regulations for Sewer Services" (Rules and Regulations), and the December 31, 1980 "Wastewater Ordinance Regulating the Use and Construction of Public Wastewater Facilities" (Wastewater Ordinance), MRP possesses the legal authority to furnish residents and businesses with wastewater collection, treatment, and the disposal of sanitary waste as required by the SWRCB. Refer to **Appendix A** of this report for the Rules and Regulations and **Appendix C – SSMP Volume II** for the Wastewater Ordinance.

Illicit Discharges into the Wastewater Collection System

As established and approved by the County of San Bernardino Board of Supervisors, the County Service Area's Rules and Regulations for Sewer Service shall: govern the quality and quantity of permissible discharges into MRP's sewer system; provide limitations and prohibitions as to

specified wastes such as fats, oils, grease, and sand; require grease and sand interceptors and separators; regulate swimming pool discharges; and prescribe all required testing. Refer to Section 3.0 “General Use Regulations” of the CSA Rules and Regulations for Sewer Service (see **Appendix A** of this report for details regarding illicit discharges).

Sewer System Design and Construction Criteria

Criteria for the design and construction of sewer lines and connections have been established in the June 1, 1982 County of San Bernardino Special Districts Department’s “Standards for Sanitary Sewers” (**Appendix D – SSMP Vol. II**). Additionally, building sewer requirements and sewer connection requirements must adhere to Section 1.8 and 1.9 of the CSA Wastewater Ordinance (**Appendix C – SSMP Vol. II**).

Access of Facilities Owned by Agency

Per the CSA Wastewater Ordinance, Special Districts Department representatives maintain access to all sanitary sewer facilities within the public right-of-way for maintenance and construction purposes, with required permits. Where it becomes necessary to cross private property for maintenance and construction purposes, or to provide access for future sewers serving adjacent or upstream tributary land, the Special Districts Department obtains all necessary or required public easement documentation. Rules for conformance to these procedures are outlined in Section 1.9 of the Wastewater Ordinance (**Appendix C – SSMP Vol. II**).

Limit Discharges of Fats, Oils and Greases (FOG)

All FOG discharges are regulated in accordance with the Department’s FOG program, as outlined in **SECTION 7 – SSMP Volume II**.

Note: MRP maintains a source control program to eliminate the potential for FOG to enter the sanitary sewer system.

Enforcement of any Violations of Sewer Ordinances

Any person found to be in violation of any of the provisions of the Wastewater Ordinance, and failing to correct such violation within the specified timeframe, is to be penalized according to CSA Rules and Regulations, Section 7.0 “Discontinuation of Service” (**Appendix A**), and Sections 1.12 and 1.13 of the CSA Wastewater Ordinance (**Appendix C – SSMP Vol. II**).

SECTION 4 – OPERATION AND MAINTENANCE PROGRAM

REGULATORY REQUIREMENTS FOR OPERATIONS AND MAINTENANCE PROGRAM ELEMENT

The SWRCB requirements for the Operations and Maintenance Program element of the SSMP are as follows:

Each Sewer System Management Plan must include those elements that are appropriate and applicable to its collection system, as described below:

- A. Maintain an up-to-date map of the sanitary sewer system, showing all gravity pipeline segments, manholes, lift station, pressure pipes, and valves; including applicable storm water conveyance facilities.
- B. Maintain a description of routine preventive operation and maintenance activities by staff and contractors. This must include a system for scheduling regular maintenance and cleaning of the sanitary sewer system, with more frequent cleaning and maintenance targeted at known problem areas. The preventative maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders.
- C. Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address such deficiencies. The program should include, but is not limited to, regular visual and CCTV inspection of manholes and sewer pipelines. The rehabilitation and replacement program should include a capital improvement plan and schedule.
- D. Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require that contractors be appropriately trained.
- E. Provide equipment and replacement part inventories, including identification of critical replacement parts. Describe what replacement parts the agency keeps, where and how they are tracked and replaced, what outside contractors are on-call, etc., including the documentation of response times.

SUMMARY OF OPERATIONS AND MAINTENANCE PROGRAM DOCUMENT

Existing Sewer Collection System

The Special Districts Department has conducted detailed audits of the MRP sanitary sewer system and has documented the system, including the location of all gravity sewer mains, manholes, lift station, pressure pipes, valves and laterals, etc. Refer to **(Plate 5)** for an overview of the MRP Sanitary Sewer System Measurements.

Operations and Maintenance Program

The Special Districts Department, utilizing sewer cleaning equipment, has cleaned 100% of MRP's gravity sewer pipelines to-date (excluding the campground portion of the system). The Regional Parks Department currently owns and operates seven (7) regional park locations that are assigned waste discharge requirements (WDR) by the State of CA. The Special Districts Department has prioritized the systems according to need and has cleaned a percentage of each system as required by the WDR. Current operations and maintenance of the wastewater facilities are scheduled according to established priority levels.

The FY 2011-12 collection system inspection audits have been performed on all regional park locations, and the MRP was assigned a high-level priority. Factors for this priority level include: year-round park operations, a history of abnormal sewer problems or system failures, and long response times due to logistics and location. MRP is scheduled for ongoing O&M activities in 2012.

The Special Districts Department maintains a computerized maintenance management system (CMMS) data base that contains a history of prior cleaning, closed circuit televising (CCTV), and corrective maintenance activity, including: the date work was performed; the time that work was performed; the employee's name that provided maintenance; the distance/footage cleaned; the total time that each specific task was completed; the street location, line segment number, manhole number(s), size of pipeline, and location of pipeline cleaned; the justification for the specified maintenance; the condition of the specified pipeline; the amount of debris/roots/grease/other removed; the specific type of equipment used; and whether or not follow-up is required. The Department's maintenance program includes proactive, preventive, corrective, and emergency maintenance entries, as well as the quality control measures used.

The CMMS guides the frequency and type of required tasks for future sewer cleaning, CCTV, and maintenance of all pumps/lift stations and related equipment. The frequency and type of assigned tasks are determined based on staff's operational and maintenance expertise, past equipment performance, manufacturer's recommendations and requirements, and all site-specific conditions and environmental factors. Scheduled and completed tasks are cataloged and tracked through a work order system.

Problem sewer locations are identified, prioritized, and scheduled for maintenance based on a comprehensive review of the maintenance history and system characteristics, including: past SSOs, partial stoppages, disproportionate maintenance frequencies, logistics and location, age,

types of pipe, soil conditions, ground water tables, elevation (and inclement weather factors), etc. Preventive maintenance activities are also scheduled on pipeline segments with no prior cleaning history and/or no past required excessive maintenance and/or cleaning issues. Preventive maintenance activity is based on a less frequent basis for “non-problem” branch and trunk sewer pipelines, at a minimum interval of one cleaning or televising event every five years.

A sample of the Department’s cleaning record is attached as **Appendix E – SSMP Volume II**.

The Department has a proactive preventive maintenance program for its sanitary sewer systems, and is focused on critical and/or problematic areas. Preventive maintenance is performed by in-house staff and includes, but is not limited to: high velocity sewer cleaning, root control, FOG source control, inspection of sewer manholes and facilities, sewer smoke testing, sewer pump/lift station maintenance and inspection, valve exercising, and customer complaint investigation. The Department’s sewer main pipelines are divided into three (3) groups: trunk sewers (greater than 16 inches in diameter), branch sewers (16 inches or smaller in diameter), and outfall sewers (varying diameters from a WWTP to disposal site). In general, most sanitary sewer systems maintained by the Department are branch sewers. The MRP sanitary sewer system consists of all branch sewer pipelines and building laterals that convey all raw sewage to the MRP Wastewater Treatment Plant Facilities for treatment, processing, and final disposal (oxidation and percolation ponds).

For sewer pipeline cleaning, the Department utilizes an evacuator type cleaning truck for removal of debris, roots, grease, and objects from sewer manholes, wet-wells, vaults, and other sewer facilities. Mechanical rodding machines and straight high-velocity cleaners are also utilized in the cleaning process.

Overflows caused by blockages from FOG are monitored by location and by required cleaning frequency. The Department has increased the rotation of cleaning in sewers with repeated FOG related blockages or overflows.

New collection systems are televised through closed circuit television (CCTV) as a pre-acceptance requirement for the system.

The Department televises 5% of recently cleaned sewer pipelines as a quality assurance procedure to ensure that the cleaning process was effective. This general “Rule” is a set parameter and assumes that the sewer pipeline diameter is a minimum of 95% of the pipe’s designed capacity. Any pipeline that falls below the Rule parameter will be re-cleaned and re-televised. If it is determined that the initial cleaning procedures were not conducted properly, the crew responsible for the initial cleaning will be re-trained and tested on equipment operations. Proficiency is the key to every successful program.

When sewer pipelines are cleaned and/or televised, a determination/observation is made on each future cleaning frequency for each line segment. In addition to the Department’s routine maintenance activities, including mechanical root removal, the Department has on occasion used environmentally safe chemicals to control the growth of roots in sewer pipelines. The effectiveness of chemical root control treatment is carefully monitored and the frequency of treatment and application rates are adjusted as required, eliminating blockages caused by detached roots. Root intrusion issues are identified and addressed during routine cleaning and/or televising activities. The Department also identifies root intrusion issues during routine visual

manhole inspections and during customer complaint investigations. Aggressive root control problems are mitigated through various methods. When mechanically addressed, a hydraulic root cutting tool is operated by way of a high velocity cleaner or a mechanical rodding machine. Other methods may call for pipeline replacement and/or pipe re-lining to prevent re-growth. Chemical root control can be a viable alternative.

Pump and lift station maintenance: The sewage pump/lift station has a built-in back-up emergency and redundancy alarm system. A CIP is being developed to ensure that the station has, at a minimum, an auto dialer directly connected to a dedicated phone line that will transmit a call/signal to the Water and Sanitation Division office and to on-call field staff 24 hours a day. This CIP may also include a connection to a dedicated alarm company specializing in site/facility monitoring. The Division is in the process of up-grading the various districts with a Supervisory Control and Data Acquisition (SCADA) controlled system. SCADA is a computerized system that gathers and analyzes real time data. SCADA systems are used to monitor and control stations with emergency backup systems, generators, and other redundant systems. This will assist in eliminating potential SSOs caused by power outages and/or mechanical failures. Staff schedule inspections and conduct preventive maintenance on control panels, alarms, pumps, motors, and appurtenances; conducting other related facility grounds maintenance as part of the routine preventive maintenance program. On average, each station is visited, inspected, and operated/maintained approximately two (2) times per week for approximately 30 to 60 minutes per interval throughout the course of the year by trained and certified operators.

Customer complaints are generally handled through the Water and Sanitation Division office. When a complaint is received the following minimum information is asked of the caller:

- Caller's name, call back number(s), home address, nature of the problem, location of the problem, cross street, Thomas Guide page number (if available), whether the problem is still occurring, the best time to call back, and the call time and date when the complaint was received.

Note: If field staff is contacted directly while working in the field, the same information is asked and documented, and the information is forwarded to the office.

- A service order is automatically created, documenting all relevant data for each customer complaint. Customer complaints include: sewer fee questions, possible sewer stoppages, manhole covers missing or defective, odor issues, and occasionally a report of an SSO.
- Department staff is trained to appropriately and methodically respond to all service orders. The following service order procedures are conducted: time of contact is recorded; location of response; time of arrival; scene assessment; nature of the complaint recorded; actions/solutions recorded; and customer follow-up (if appropriate).
- Service orders issued for known problem sewer locations are typically inspected through CCTV within forty-eight (48) hours. Sewer pipeline capacity is restored and all necessary repairs and/or replacements must be scheduled.

The Department is typically not responsible for sewage stoppages and/or SSOs within customer sewer building laterals, unless the Department is under contract and the agency that the

Department is providing O&M services to, owns and maintains the laterals, as in this case for all of the San Bernardino County Regional Parks.

Rehabilitation and Replacement Program

Department staff assessed the MRP sanitary sewer system with regard to sewer system capacity. In order to properly maintain and ensure that MRP sewer facilities are in working order, the Department plans to have regular visual and CCTV inspection of manholes and sewer pipelines annually. A sample CCTV field data log is attached in this report for reference (**see Appendix E – SSMP Vol. II**).

Training Program

Wastewater spill response and reporting procedure training is required annually for all Department staff assigned to collection systems operations and maintenance.

Mock SSO drills and emergency by-pass pumping drills are scheduled periodically to keep SSO drill-procedures fresh. These drills are performed on an annual basis.

The California Water Environment Association's (CWEA) Technical Certification Program is a requirement for Department staff assigned to collection system operations and maintenance. Staff is required to obtain and maintain a CWEA grade certification equal to or above their position title, i.e. Maintenance Worker I requirement: Grade I Collection System Maintenance Certification; Maintenance Worker II requirement: Grade II Collection System Maintenance Certification; Maintenance Worker III requirement: Grade III Collection System Maintenance Certification; etc.

A California Commercial Drivers License (CDL) is required to be maintained in good standing by Department field staff at all times. The CDL must be a non-restricted Class "A" with tank endorsements (currently, hiring criteria dictates that all open field positions are required to possess a Class "A" non-restricted CDL with tank endorsements at the time of hire).

First-Aid/CPR training is required for all Department field staff. This is a requirement per CAL-OSHA; a competent person must be onsite and trained in First-Aid/CPR and able-bodied in order to respond to an emergency when crews are performing a permitted Confined Space Entry that has the potential to become a Confined Space Rescue.

Additional Staff Training Programs

The Department pays/reimburses for the following training:

- Bi-Weekly Tail Gate Training
- California Water Environment Association (CWEA) Training
- Desert and Mountain Section (DAMS) Training
- Internal Weekly Technical Training – CEUs Provided
- Monthly Safety Training
- Southern California Alliance of Publically Owned Treatment Works (SCAP) Training

Specialty Courses Offered by Vendors
SSO Emergency Response Drills – Semi-annual
SSO-WDR Compliance Workshop: Electronic Reporting Requirements

The Department pays/reimburses for the following Memberships:

American Water Works Association (AWWA)
California Rural Water Association (CRWA)
California Water Environment Association (CWEA)

CERTIFICATION BY POSITION

	<i>Job title</i>	SWRCB	CDPH - Distribution	CDPH - Treatment	BACKFLOW	CWEA CSM	CWEA PM	CWEA ELCT/INSTRU TECH	CWEA MECH TECH	CWEA ENVR COMP INSP	C-10 ELECTRICAL	CLASS A	CLASS B	CLASS C (Minimum Req.)
1	Deputy Director	5	3	2		4								X
2	Bus Ops Manager			1										X
3	Water Ops Manager		5	3								X		
4	WAS Supervisor	4												X
5	WAS Supervisor					4	1						X	
6	Maintenance Worker III		3	2	X	2						X		
7	Maintenance Worker III			1		3	1					X		
8	Maintenance Worker III					3						X		
9	Maintenance Worker III		2	1		3						X		
10	Maintenance Worker III					4							X	
11	Maintenance Worker II		1	2									X	
12	Maintenance Worker II					2						X		
13	Maintenance Worker II			2		1						X		
14	Maintenance Worker II		1	2	X	2			1			X		
15	Maintenance Worker II		3	2	X	1						X		
16	Maintenance Worker II		2	1		1						X		
17	Maintenance Worker II		2	2									X	
18	Maintenance Worker I		1	1									X	
19	Maintenance Worker I		1	1									X	
20	Maintenance Worker I		1	2									X	
21	Maintenance Worker I		1	1		1						X		

	Job title	SWRCB	CDPH - Distribution	CDPH - Treatment	BACKFLOW	CWEA CSM	CWEA PM	CWEA ELCT/INSTRU TECH	CWEA MECH TECH	CWEA ENVR COMP INSP	C-10 ELECTRICAL	CLASS A	CLASS B	CLASS C (Minimum Req.)
22	Maintenance Worker I		2	1									X	
23	Maintenance Worker I					1						X		
24	Maintenance Worker I					2							X	
25	Maintenance Worker I					1							X	
26	Maintenance Worker I					2						X		
27	Maintenance Worker I (Trainee)		1											X
28	Maintenance Worker I (Trainee)											X		
29	Sampling Tech		2	2										X
30	Public Service Employee		2	2								X		
31	Electromechanical-Tech		2	2							X		X	
32	TPO IV	4				3		1				X		
33	TPO I	2	2	2								X		
34	Inspector Vacant													
35	Regional Comp Spec									1				X
36	Budget Officer		1											X
37	Staff Analyst		2	1										X
Fiscal Year 11/12					Definitions									
WATER					CDPH- California Department of Public Health									
SANITATION					CSM- Collection System Maintenance									
Numbers indicate certificate or grade level					CWEA- California Water Environment Association									
An "X" indicates certification received					PM- Plant Maintenance Technologist									
					SWRCB- State Water Resources Control Board									
					TPO- Treatment Plant Operator									
					WAS- Water and Sanitation									

Equipment and Part Inventory

The Department maintains an up-to-date inventory list of Emergency Vehicles and Equipment (see **Appendix F – SSMP Vol. II**). The Department maintains a general parts warehouse stocked with parts and materials that are distributed throughout contract service entities and county service areas; refer to **Appendix J – SSMP Volume II** for a flow chart depicting inventory control, “Purchase Request Flowchart Process.”

SECTION 5 – DESIGN AND PERFORMANCE PROVISIONS

(SEE SSMP VOLUME II)

SECTION 6 – OVERFLOW EMERGENCY RESPONSE PLAN

(SEE SSMP VOLUME II)

SECTIONS 7 – FATS, OILS AND GREASE (FOG) CONTROL PROGRAM

(SEE SSMP VOLUME II)

SECTION 8 – SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

REGULATORY REQUIREMENTS FOR SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN ELEMENT

The SWRCB requirements for System Evaluation and Capacity Assurance Plan element of the SSMP are as follows:

The Collection System Agency shall prepare and implement a Capital Improvement Plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, storm or wet weather conditions, and design standards. At a minimum, the plan must include:

- A. Evaluation: Action needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to SSO discharges caused by hydraulic deficiency.
- B. Design Criteria: Where design criteria does not exist or is deficient, undertake the evaluation identified in Item A. above to establish appropriate design criteria.
- C. Capacity Enhancement Measures: The steps needed to establish a short and long term CIP to address the identified hydraulic deficiencies, including: prioritization, alternatives analysis, and completion schedule.
- D. Schedule: The agency shall develop a schedule of completion dates for all portions of the CIP as discussed in Items A thru C above.

SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN DISCUSSION

The Department has determined that MRP's sewage facilities are designed for build-out capacity. The Department has a proactive program to replace the facilities appurtenances (pipes, pumps, fittings, motors, electrical, etc.) as required. The Department shall routinely and systematically clean the sanitary sewer pipelines according to a schedule to maintain optimum system capacity. The County of San Bernardino budgets a portion of their annual operating budget for rehabilitation and/or replacement of sewer lines located in their Regional Parks.

SECTION 9 – MONITORING, MEASUREMENT, AND PLAN MODIFICATIONS

REGULATORY REQUIREMENTS FOR MONITORING, MEASUREMENT, AND PLAN MODIFICATIONS ELEMENT

The SWRCB requirements for Monitoring, Measurement, and Plan Modifications element of the SSMP are as follows:

The Agency is required to:

- A. Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities.
- B. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP.
- C. Assess the success of the preventative maintenance program.
- D. Update program elements as deemed appropriate, utilizing and monitoring performance evaluations.
- E. Modify and/or update the SSMP as appropriate in order to keep it current and available for auditing purposes at all times.

MONITORING, MEASUREMENT, AND PLAN MODIFICATIONS DISCUSSION

The implementation of SSMPs is a relatively new program and the Department proposes to use the following monitoring and performance goals to gage the effectiveness of the program:

- A. On an annual basis, compare the number of sanitary sewer overflows for each County Service Area and contracted service entity.
- B. Compare the frequency and magnitude of sewer pump/lift station failures and SSOs in each County Service Area and contracted service entity.

- C. On an annual basis, monitor, document and evaluate SSOs for any potential impacts to human health or impacts to the immediate environment in each County Service Area and contracted service entity.
- D. On an annual basis, track the miles of sewer pipeline cleaned in each County Service Area and contracted service entity.
- E. The Department shall maintain a permanent log of complaints regarding collection system overflows and associated odors.
- F. The Department shall maintain a comprehensive cost accounting for all funds related to outside forces or contractors employed for activities required by the SSMP.
- G. The Department shall maintain annual records of Inflow and Infiltration (I/I) to evaluate, per the Environmental Protection Agency (EPA), whether certain portions of the collection system exceed allowable I/I flows per mile.
- H. On an annual basis, the Department shall maintain a separate and comprehensive record of the number of miles of rehabilitated and/or replaced sewer pipeline.

The Department's final performance measure is the overall reduction of SSOs in each County Service Area and contracted service entity, including the reduction of SSO volume and magnitude and the impacts to water quality and the environment.

The Department is dedicated to mitigating and reducing SSOs at each County Service Area and contracted service entity, including the MRP's sanitary sewer system. The Department tracks and evaluates budgetary requirements that may be needed to accomplish this goal. The County of San Bernardino Board of Supervisors approves appropriate budgetary funding to assure that items required by the State of California comply with the regulations for implementation of the SSMP program.

SECTION 10 – SSMP PROGRAM AUDITS

REGULATORY REQUIREMENTS FOR SSMP PROGRAM AUDITS ELEMENT

The SWRCB requirements for SSMP Program Audits element of the SSMP are as follows:

The agency shall conduct periodic audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur once every two years and a report must be prepared and kept on file. Any deficiencies identified by these audits must be corrected and a schedule of corrective measures identified.

SSMP PROGRAM AUDITS DISCUSSION

The Department plans to take a proactive approach to auditing and updating the SSMP. The Department has established an internal policy to perform a comprehensive internal audit once every two years to evaluate the effectiveness of the SSMP elements and its compliance with the SWRCB's Waste Discharge Requirements. The audit will also include a report containing the results of the audits along with recommendations and suggested improvements to the State Water Resources Control Board. The SSMP document will be continuously updated and brought before the County of San Bernardino Board of Supervisors for approval as needed or required.

SECTION 11 – COMMUNICATIONS PROGRAM

(SEE SSMP VOLUME II)

APPENDIX A
RULES AND REGULATIONS FOR SEWER SERVICE

PENDING BOARD OF SUPERVISORS APPROVAL 2012

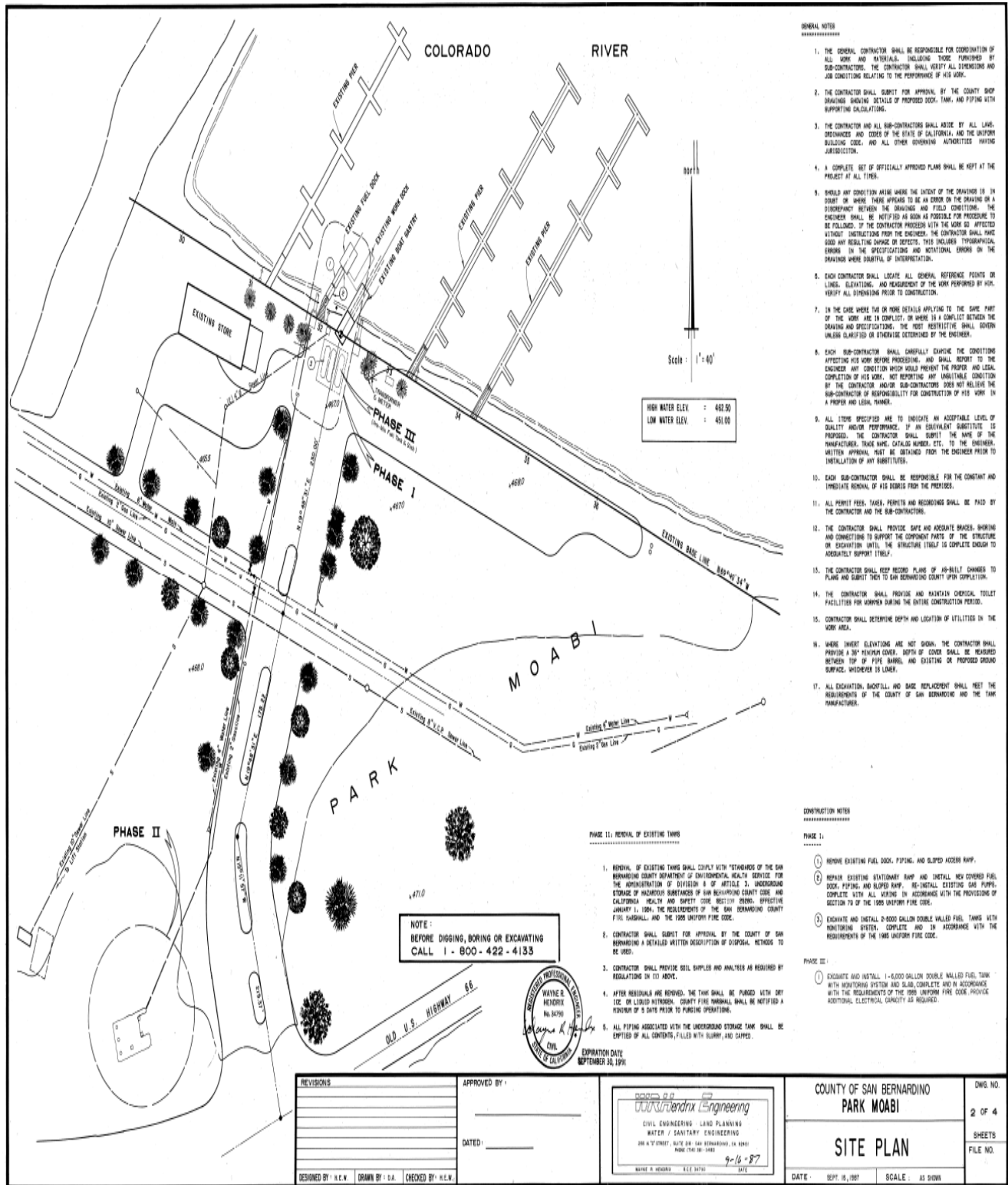
APPENDIX B

MOABI REGIONAL PARK – BOARD ORDER

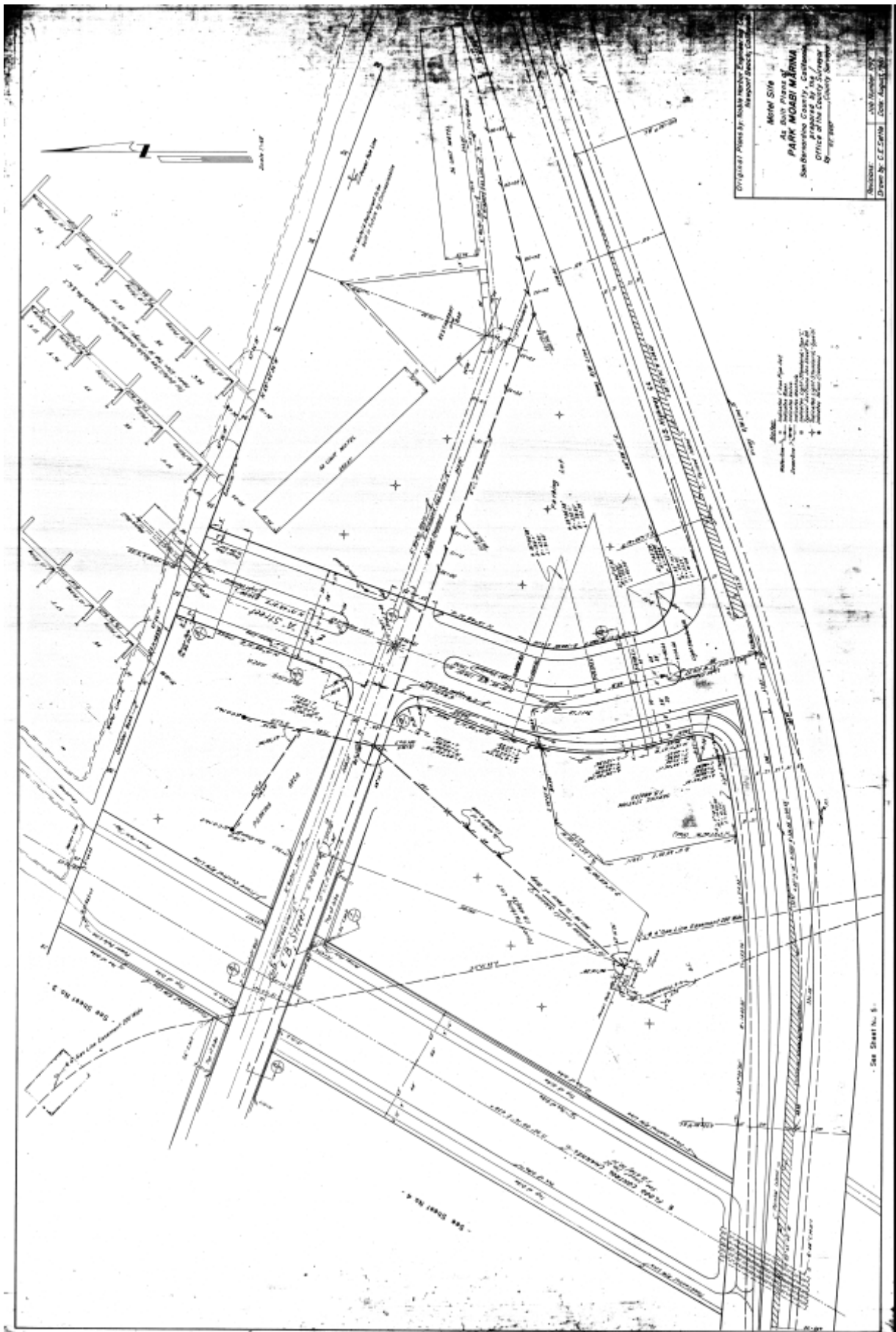
PENDING BOARD OF SUPERVISORS APPROVAL 2012

APPENDIX C

MOABI REGIONAL PARK – SEWER PLANS



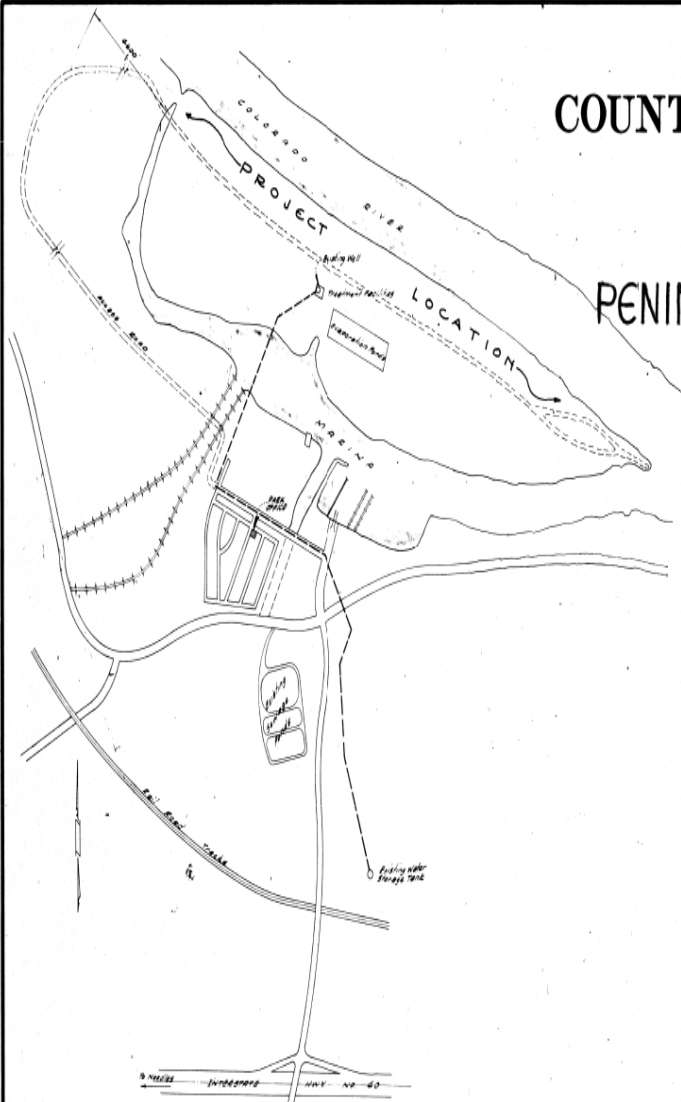




COUNTY OF SAN BERNARDINO CALIFORNIA

PLANS FOR

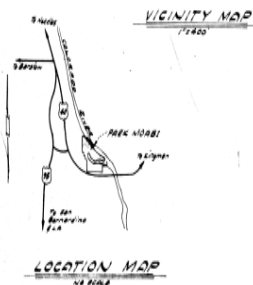
PARK MOABI PENINSULA CAMPGROUND PROJECT



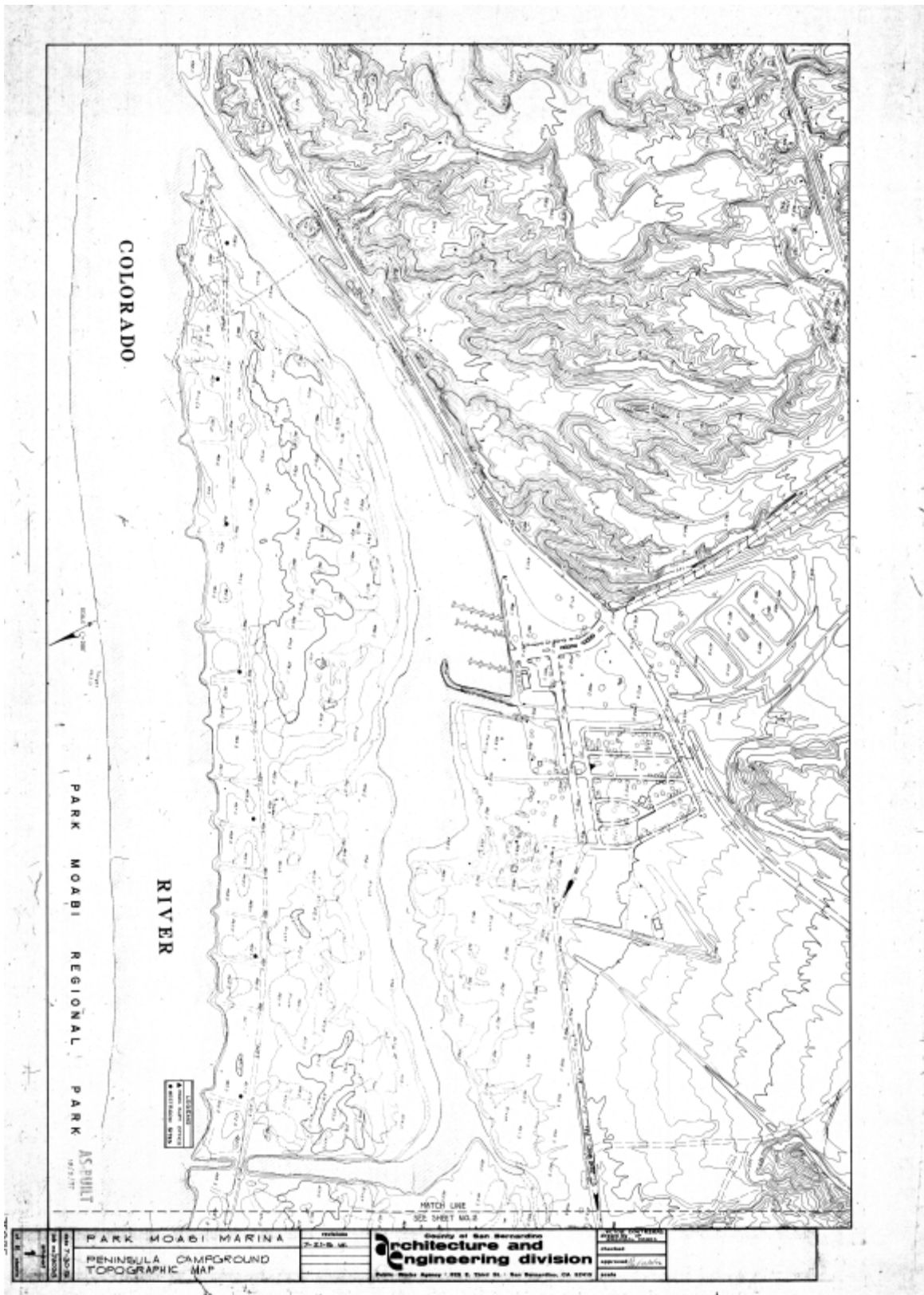
REGIONAL PARKS DEPARTMENT
Gary D. Patton, Director

INDEX OF SHEETS

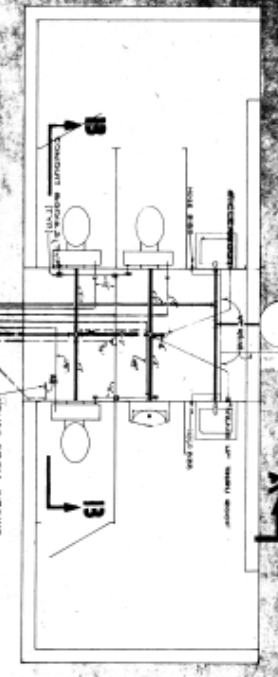
SHEET 0 OF 11	COVER SHEET
SHEET 1 OF 11	PENINSULA CAMPGROUND TOPOGRAPHIC MAP
SHEET 2 OF 11	TOPOGRAPHIC CAMPGROUND SITE LAYOUT
SHEET 3 OF 11	PLANT PLAN - RESTROOM, WATER/RESTROOM LOCATIONS
SHEET 4 OF 11	CAMP PAD ELEVATIONS
SHEET 5 OF 11	RESTROOM PLAN - RESTROOM SITES 11, 12, 13, 14, 15
SHEET 6 OF 11	RESTROOM PLAN - RESTROOM 17
SHEET 7 OF 11	ELECTRICAL PLAN
SHEET 8 OF 11	RESTROOM
SHEET 9 OF 11	VEHICLE TRAIL & LEACH FIELD PLAN
SHEET 10 OF 11	VEHICLE TRAIL - SAND EXTRACTOR PLAN
SHEET 11 OF 11	FIREHOUSE, CANYON AND DRINKING FOUNTAIN PLANS



REVISIONS	APPROVED BY County of San Bernardino	COUNTY OF SAN BERNARDINO PARK MOABI	DWG. NO. 0
	DATE 10/1/77	ENGINEER APPROVED BY	OF 11 SHEETS FILE NO.
DESIGNED BY RLS	DRAWN BY RLS	CHECKED BY	COVER SHEET



NOTES:
 ALL SEWERING TO BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE S.W.P.A. PLUMBING CODE AND THE S.W.P.A. PLUMBING CODE. THE PLUMBING CODE SHALL BE THE AUTHORITY IN ALL MATTERS RELATING TO THE PLUMBING CODE.

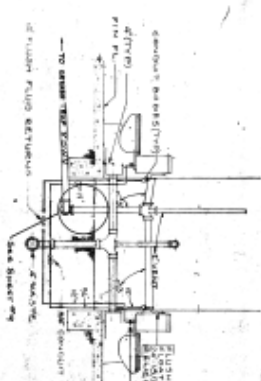


PLAN
 SCALE: 1/8" = 1'-0"

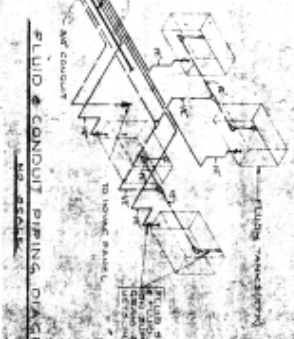
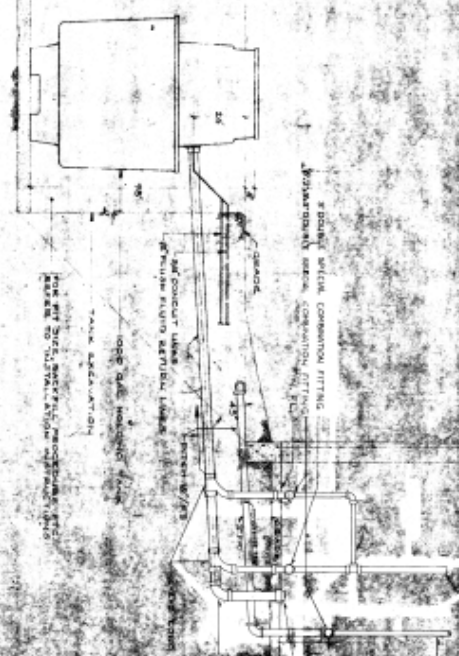
NOTES

1. ALL SEWERING TO BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE S.W.P.A. PLUMBING CODE AND THE S.W.P.A. PLUMBING CODE. THE PLUMBING CODE SHALL BE THE AUTHORITY IN ALL MATTERS RELATING TO THE PLUMBING CODE.

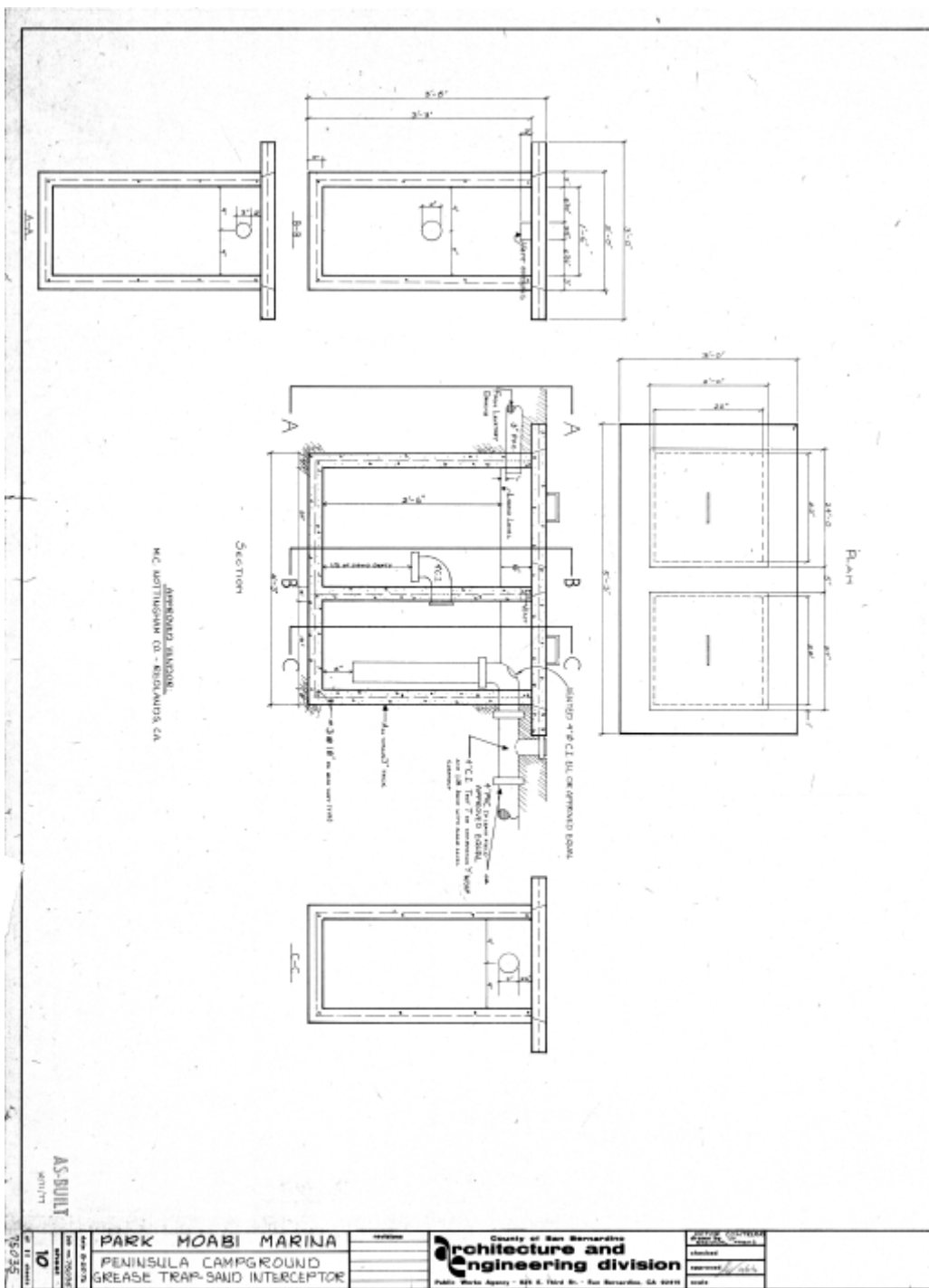
SECTION-B-B

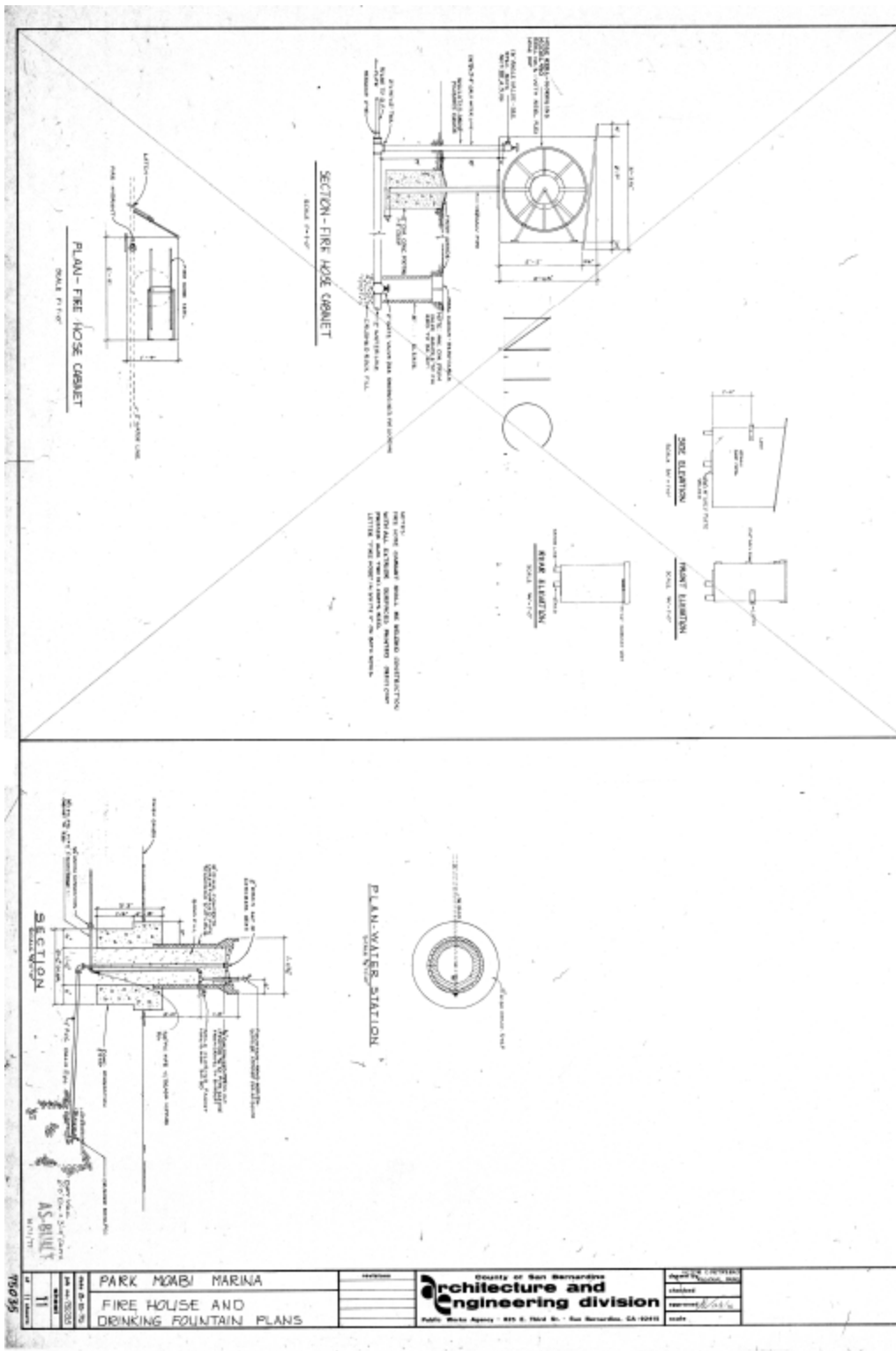


SECTION-A-A



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APPENDIX D

MOABI REGIONAL PARK – WASTEWATER TREATMENT FACILITY

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD COLORADO RIVER BASIN REGION

ORDER NO. 94-089

WASTE DISCHARGE REQUIREMENTS FOR SAN BERNARDINO COUNTY REGIONAL PARKS DEPARTMENT, OWNER PARK MOABI MARINA WASTEWATER TREATMENT FACILITY Southeast of Needles - San Bernardino County

The California Regional Water Quality Control Board, Colorado River Basin Region, finds that:

1. San Bernardino County Regional Parks Department, (hereinafter referred to as the discharger), 825 East Third St., San Bernardino, CA 92415, submitted a Report of Waste Discharge on February 24, 1994.
2. A maximum of 50,000 gallons-per-day of domestic sewage is discharged from a park having 110 mobile home spaces and 847 campground spaces (34 are connected to the sewerage system). The wastewater is pumped and discharged into a raw sewage lagoon treatment system consisting of three oxidation basins with a design average daily flow of 28,000 gallons-per-day. The discharger has constructed a subbasin in each of the center and south basins as the volume of sewage presently entering the system is too small for the basins to operate effectively. The third basin is designed as a percolation pond. The discharge site is located about 10 miles south of Needles, approximately 1/4 mile from the Colorado River, in the S 1/2 of Section 6, T7N, R24E, SBB&M.
3. The discharger is discharging a total of 1,000 gallons-per-day of handwashing wastewater from eight restrooms which are located a minimum of 300 feet from the Colorado River. The wastewater from each restroom is discharged into a 150-gallon grease trap. It then flows through a distribution box into a 60 square foot leach field. The seven leach fields have a total area of 420 square feet and are 800 feet apart, extending for over a mile along the river and one-half mile north of the trailer park. Toilet wastewater from each restroom is discharged through a self-contained fluid-flush recirculating unit into a sealed 1,000 gallon tank. The wastewater is regularly pumped from each tank and discharged into the disposal system described in Finding No. 2, above.
4. The discharger has reported that approximately 20 pounds per month of calcium nitrate is added to the oxidation basins to control odor.
5. In the event of a commercial power failure, an alarm on the pump station engine will sound. The discharger has available a gasoline engine which can then be used to pump the wastewater to the sewage lagoons.
6. This discharge has been subject to waste discharge requirements adopted in Board Order No. 88-114.
7. The Water Quality Control Plan for the Colorado River Basin Region of California (Basin Plan) was adopted on November 17, 1993, and designates the beneficial uses of ground and surface waters in this Region.