



City Council Staff Report

DATE: March 19, 2014

AGENDA ITEM NO: **New Business**
Agenda Item 6-A.

TO: The Honorable Mayor and City Council
FROM: Chu Thai, Management Services Director
SUBJECT: Consideration regarding adopting a Resolution Establishing Procedures for Increasing Water, Wastewater and Solid Waste Fees in Accordance with the Requirements of Proposition 218

RECOMMENDATION:

Recommendations: It is recommended that the City Council:

- (1) Adopt Resolution ____ establishing procedures for increasing water, wastewater and solid waste fees in accordance with the requirements of Proposition 218; and
- (2) Receive and file this report.

EXECUTIVE SUMMARY: For water, wastewater and solid waste rate increases, the California Constitution (Proposition 218) requires that local governments give a special form of mailed notice at least 45 days before holding a public hearing. Property owners may then submit a written protest to the rate increases. Out of the 16,359 parcels in Monterey Park, 8,180 valid protest are needed to stop the rate increase by the voters. The draft resolution, if adopted, would help facilitate the Proposition 218 proceedings.

BACKGROUND: In November 1995, California voters approved Proposition 218 requiring certain procedures be followed with regard to "property-related" fee increases imposed by governmental agencies. In July 2006, the California Supreme Court decision (*Bighorn-Desert View Water Agency v. Verjil*) clarified that water and wastewater charges are property-related fees subject to the requirements of Article XIII D, Section 6 of the California Constitution ("Art. XIII D"). Based upon that decision, solid waste fees are also subject to Proposition 218 proceedings.

For agencies that impose water, wastewater and solid waste collection fees, the Bighorn decision has three basic implications. First, the adoption and increase of "property related fees" are subject to Proposition 218's procedural requirements (Art. XIII D, § 6(a)). These procedural provisions require detailed noticing to each property owner 45 days before the hearing on the fee and prohibit the adoption of the fee or increase if a majority of the property owners protest the imposition or increase in writing. Second, property related fees are subject to Proposition 218's substantive requirements (Art. XIII D, § 6(b)). Among other things, the substantive requirements provide that the amount of the fee "shall not exceed the proportional cost of the service attributable to

the parcel,” and that revenues from the fee “shall not exceed the funds required to provide the service” and “shall not be used for any purpose other than that for which the fee was imposed.” Third, “property related fees” are subject to the power of the electorate to reduce them by initiative (Art. XIII C, § 3). To comply with Proposition 218, the City must:

1. Develop a Notice of Public Hearing on Proposed Increases to Water, Sewer and Solid Waste Rates, citing the proposed maximum rates, how the property owner can calculate their bill, how the revenues will be utilized, general information about the scheduled public hearing and instructions on how to protest the proposed rates;
2. Mail the notices to property owners and/or tenants at least 45 days before the scheduled public hearing; and
3. Collect and maintain a count of all written protest votes received. The City cannot impose the new rates if 50% plus one unique parcel protests are submitted to, and validated by, the City Clerk. Immediately after the close of the public hearing, the City Clerk will make a determination if a majority protest exists and report the results to the City Council. If a majority protest does not exist, the City Council is authorized to adopt proposed rates by ordinance. If a majority protest does exist, the City Council could – at its discretion – place the matter on the ballot for voter approval.

Wastewater, a term more commonly used by the State of California, is often referred to as sewer at local municipalities. Similarly, the term solid waste is synonymous with refuse and trash. Within the context of all rate increases, “property owners” include tenants who are directly liable to pay the proposed water, wastewater or solid waste fees or charges.

Guidelines for the Submission and Tabulation of Protests

Regrettably, the legal requirements for procedures related to notice and protests are relatively brief. They are not clear regarding, for example, how local agencies should count protests they receive. Therefore, it is recommended that the City Council adopt guidelines that establish Proposition 218 protest proceedings. The proposed guidelines (Attachment A) are consistent with those adopted by other California cities, and could be used for all future Proposition 218 notices for Monterey Park water, sewer and solid waste rates. There are currently 16,359 parcels in Monterey Park; 8,180 properly submitted protests will stop the rate increases by the voters.

Staff and the City Attorney has determined that the protest ballots should be mailed out to both the property owners and utility customers. These two lists reside on separate databases. Staff will make efforts to merge the lists and eliminate duplications before mailing, however many households will receive multiple notices.

Resolution Establishing Methods for Administering Proposition 218 Protest Votes
Page 3

Rate Implementation Timeline

Staff will follow the schedule below to implement the water, sewer and solid waste rate increases.

Schedule for Proposed Rate Increases

Date 2014	Action	Responsibility
In Progress	Begin preparation of Prop 218 Notice. Obtain parcel owner and utility customer databases. Identify mailing company. Draft notice for legal review	Chu/Tim
Wed, Mar 19	Council Information - Rate Adjustment Timeline Council Information - Water/Sewer	Chu Ron/Chris
Wed, Apr 2	Council Information - Solid Waste Council Direction - Water, Sewer & Solid Waste Rates	Ron/Chris Ron/Chu
Wed, Apr 16	Council to approve Prop 218 Notice and determine proposed rates	Chu/Ron
Fri, Apr 25	Notice mailed out	Tim
May	Water and Sewer System Tour - One Saturday	Chris
Wed, Jun 18	Public Hearing for Water, Sewer and Solid Waste Rate Increase	Chu/Ron
Jul-Aug	Mgt Svs update utility billing system and prepare staff for questions. Information on infrastructure rehabilitation and water conservation in utility bills	Tim
Mon, Sep 1	Rate adjustments go in effect - Increases will show on October bills.	Tim/Chu

Analysis of Water System

The existing water rates, which have been in effect since October 1, 2009, generate approximately \$10.6 million annually. The water rates must be adjusted to generate \$14 million-\$20 million per year to repair, replace or rehabilitate the water system.

For informational purposes, the chart below compares the current average monthly water bills for single family residential (5/8" and 3/4" meter) accounts.

Municipal Water Rate Comparison - Residential

Agency	Current
Monterey Park	\$28.82
California Water Service Co.	\$53.52
Golden State Water Co.	\$54.05
San Gabriel Valley Water Co.	\$55.31
City of Covina	\$30.71
City of Alhambra	\$46.36

The City of Monterey Park provides domestic water service to a population of approximately 61,500 residents, as well as commercial, industrial, and public facilities. There are approximately 12,300 active water meter accounts. Highlights of the City's water system consists of:

- 136.6 miles (721,250 feet) of transmission and distribution system pipe ranging from 2-inch to 36-inches in diameter
- 8 active wells, 3 standby wells, and 1 inactive well
- 11 storage reservoirs and 2 settling tanks
- 11 booster pump stations
- Groundwater treatment facilities at the Delta Plant, and at Well 5 and Well 12
- 1 imported water supply connection

The existing system dates back to the 1929s. Approximately 72 percent of the transmission and distribution system was constructed before 1960, and 35 percent of the system was installed during the 1950's. The City's existing potable water supply consists almost entirely of groundwater from the City's wells produced from the Main San Gabriel Basin (Main Basin).

The City's Water Master Plan was updated in 2012. The Master Plan recommended a comprehensive capital improvement program (CIP) that will improve the system to meet the established criteria, properly maintain the system's assets, and replace the facilities that have reached the end of their useful lives. The current estimated cost of the CIP is \$99.9 million. The recommended CIP will replace 18.2 miles (95,895 feet) of pipe for fire flow improvements, which includes some of the older pipe that has reached the end of its useful life. However, it will not address all the replacements needed, which currently total over 264,000 feet. Therefore, an aggressive pipe replacement program is recommended to mitigate the risk of having to tend to problems under emergency conditions and consequent very high costs.

Analysis of Sewer System

The City current sewer service charge is \$0.0810 per 100 cubic feet of water used, and generates approximately \$300,000 annually. Based on a January 2014 study, sewer rates must be adjusted to support a \$12.8 million Sewer Capital Improvement Program to repair, replace or rehabilitate the sewer system.

For informational purposes, the chart below compares the current average monthly sewer bills for single family residential (5/8" and 3/4" meter) accounts.

Municipal Sewer Rate Comparison - Residential

Agency	Current
Monterey Park	\$1.86
Alhambra	\$11.93
South Pasadena	\$10.38
Azusa	\$11.18
Downey	\$7.08
Whittier	\$7.06

A September 2012 engineering study titled Sewer System Financial Evaluation and Sewer Rate Recommendations (Attachment C) proposed a rate increase that will support \$1 in annual sewer system repairs, replacements and rehabilitations.

The existing sewer collection system consists of about 665,000 feet (126 miles) of gravity sewers ranging in size from 6-inches to 15-inches in diameter, and 2,498 manholes.

The City prepared a Sewer System Management Plan (SSMP) in 2009. The SSMP recommended pipe replacements due to capacity problems; preparing a complete map of the system; updating of the sewer master plan (SECAP); preparing a Fats, Oils, and Grease Program; CCTV inspection of the system; updating the Emergency Overflow Response Plan; staff training; and implementing an asset management plan and a computerized maintenance management system, with a total cost of \$4.8 million (2009 value).

A January 2014 engineering study titled Wastewater Collection System Master Plan Update (Attachment D), provided the City with a more current and comprehensive assessment of Monterey Park's sewer system. The report stated that the City was able to conduct video inspection for 35% of the sewer system, and that 65% of the community sewer infrastructure has never been inspected. Some pipelines were installed over 100 years ago, and 50 years beyond its life expectancy. The estimated cost to update the sewer system is \$12.8 million within a 10 year timeframe. As more sewer lines are inspected, additional CIP projects will be identified, and rates will be further adjusted.

Analysis of Solid Waste

The chart below compares the current monthly solid waste bills for residential accounts with one 96 gallon trash and one 96 gallon recycle containers.

Municipal Solid Waste Rate Comparison - Residential

Agency	Current
Monterey Park	\$19.54
Alhambra	\$21.45
South Pasadena	\$40.84
Azusa	\$22.16
Downey	\$17.27
Whittier	\$21.92

The Fiscal Year 2013-14 Mid Year Review Report (Attachment E) presented by staff projects FY 2014-15 refuse fund revenues at \$5.8 million and operating expenses at \$6.8 million. This \$1 million net loss in the refuse fund supports the need to increase solid waste rates by 15%.

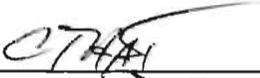
ALTERNATIVE COUNCIL CONSIDERATIONS:

Seek additional information from staff.

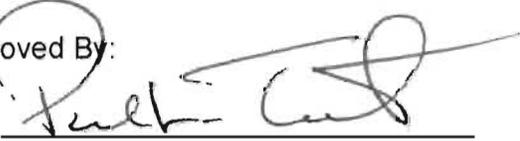
FISCAL IMPACT:

There is no impact in the submission of this report.

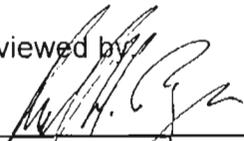
Respectfully submitted,



Chu Thai
Director of Management Services

Approved By: 

Paul L. Talbot
City Manager

Reviewed by: 

Karl H. Berger
Assistant City Attorney

Attachments:

- Attachment A-Resolution Submission Guidelines
- Attachment B - Water Rate Study, September 2012
- Attachment C - Sewer Rate Study, September 2012
- Attachment D - Wastewater Collection System Master Plan Update 2014
- Attachment E - Mid Year Review, Refuse Fund

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MONTEREY PARK ESTABLISHING PROCEDURES FOR INCREASING WATER, WASTEWATER, AND SOLID WASTE FEES IN ACCORDANCE WITH THE REQUIREMENTS OF PROPOSITION 218.

The City Council for the City of Monterey Park does resolve as follows:

SECTION 1: The City Council finds and declares as follows:

- A. On July 24, 2006, the California Supreme Court confirmed that charges for water and wastewater services are subject to Proposition 218 procedures (*Bighorn-Desert View Water Agency v. Verjil* (2006) 39 Cal.4th 205);
- B. The City Council anticipates that there will be future increases in water, wastewater, and solid waste rates. Adopting the policies and procedures set forth in this Resolution will help implement the requirements set forth in Article XIID of the California Constitution and help ensure that the rights of those persons that are authorized to protest service charges are preserved;
- C. Elections Code § 4000(c)(9) provides that any protest ballot proceeding required or authorized by California Constitution Articles XIIC or XIID may be conducted wholly by mail. In the event a protest ballot process is required, the City Council seeks to achieve higher awareness of those affected by the proposed increase, provide an orderly protest process for both those receiving the ballots and the City, ensure to the extent practicable that there is some verification process regarding the protests received, and to reduce the costs of the protest ballot process; and
- D. Adopting this Resolution is in the public interest for the reasons set forth above and as further stated within Article XIID and the Proposition 218 and state legislation relating to the implementation of Proposition 218.

SECTION 2: The City Council adopts the procedures set forth in this Resolution for conducting all proceedings required by California Constitution Article XIID for utility fee (as defined below) increases. Where no specific procedures are imposed by Article XIID or the Proposition 218 Omnibus Implementation Act (Government Code §§ 53750, *et seq.*), the procedures set forth in this Resolution apply. This Resolution may be referred to as the “Proposition 218 Protest Proceedings Resolution.”

SECTION 3: *Definitions.* Unless the contrary is stated or clearly appears from the context, the following definitions govern the construction of the words and phrases used in this Resolution. Words and phrases not defined by this chapter will have the meaning

set forth in California Constitution Article XIID or the Proposition 218 Omnibus Implementation Act.

- A. “Act” means the Proposition 218 Omnibus Implementation Act found at Government Code §§ 53750, *et seq.*;
- B. “Article 13D” means California Constitution Article XIID, § 6;
- C. “Manager” means the City Manager or designee;
- D. “Property owner” has the same meaning set forth in Article 13D and also pursuant to the Act includes tenancies of real property where tenants are directly liable to pay the proposed water, wastewater, or solid waste fee or charge;
- E. “Protest” means a written protest filed with the City Clerk in accordance with Article 13D, the Act, and this Resolution as described in Article 13D, § 6(a)(2);
- F. “Utility fee” means a fee or charge imposed for potable water, wastewater, or solid waste services provided to customers in accordance with the Monterey Park Municipal Code (“MPMC”), and other applicable law, by the City of Monterey Park.

SECTION 4: *Calculation of the fee and proposed increase.* Utility fees must be calculated in accordance with the recommendations in the latest independent Rate Study report or City’s internal financial analysis.

SECTION 5: *Administration of Proceedings.* The City Manager, or designee, is authorized to implement this Resolution in a manner consistent with the California Constitution and other applicable law.

SECTION 6: *Notice.* Notice of a proposed utility fee increase is provided as follows:

- A. In general, the City will identify the record property owner(s) of each parcel to which the utility fee would be applied from its billing system database and/or the latest equalized tax roll produced by Los Angeles County. The City’s Utility Billing database and the equalized tax roll is presumptive evidence of ownership of the land for voting purposes.
- B. If either the City’s Utility Billing Database or Los Angeles County Recorder’s website shows that more than one property owner has an interest in a parcel, all property owners (each property owner) must receive notice at the address shown for the property owner. Both property owners and parties financially responsible for paying the fee will be provided notice. In the event that notice is sent for a utility service for

which the City is not currently charging a fee, the notices will be sent to the property owner based upon the Los Angeles County Recorder's website and to the street address to which the service would be provided if the address is different than the address designated for the property owner on the Los Angeles County Recorder's website.

- C. The notice must be sent by mail at least forty-five (45) days before the date set for the public hearing on the utility fee.
- D. The form of the notice of hearing will be approved by the City Council and be on file with the City Clerk.
- E. The notice provided by these procedures, in accordance with Article 13D, supersedes and is in lieu of notice required by any other statutes to levy or increase a utility fee.
- F. The City Clerk, or designee, may certify the proper mailing of notices by an affidavit which constitutes conclusive proof of mailing in the absence of fraud.
- G. Failure of any person to receive notice does not invalidate the proceedings.

SECTION 7: *Protests against Utility Fee Increases.*

- A. The property owner(s) of parcels subject to the proposed fee increase are entitled to a single protest for each parcel. When a parcel is held as community property or in joint tenancy or as a tenancy in common, any spouse or joint tenant or tenant in common is presumed to have authority to cast a protest on behalf of such parcel.
- B. Executors, administrators, and guardians may cast a protest on behalf of the estate represented by them. If such representatives are shown on the latest assessment roll as paying taxes and assessments on behalf of the property owner(s), that fact establishes the right of such representative(s) to cast a protest. If such representatives are not shown on the latest assessment roll, the representatives may file with the City Clerk, at any time before the commencement of the public hearing, or the date of the election, as the case may be, certified copies of the written documentation establishing the legal representation.
- C. The protest of any public or quasi-public corporation, private corporation, or unincorporated association may be signed by any person so authorized in writing by the board of directors or trustees or other managing body thereof.

- D. The Manager is designated as the voting representative with respect to City-owned property.
- E. In any case where the documentation provided to the City Clerk in is ambiguous or unclear, the City Attorney will determine whether the documentation is adequate for the purpose provided.
- F. In the event a property owner loses or misplaces a protest ballot, upon request by the property owner the City will provide a replacement protest ballot unless a properly filled out protest ballot has already been received for the parcel of property.

SECTION 8: *Public Hearing.*

- A. Only protest ballots that (i) were provided by the City to the property owner in the form approved by the Council and (ii) are properly filled out and legibly signed by an eligible property owner is made will be counted as a valid protest. Only one protest may be counted for each parcel of property regardless of the number of protests filed by property owners for the parcel.
- B. The City Clerk must stamp each written protest the date and time it is filed with the City Clerk for purposes of establishing whether the protest was filed before the close of the public testimony portion of the public hearing. No protest received after the close of the public testimony portion of the public hearing can be counted in determining the amount of protest, but the Council may, in its discretion, consider such protests in making its decision. Written protests may be withdrawn in writing at any time before the conclusion of the public testimony portion of the public hearing.
- C. At the time and place fixed for the hearing, or at any time to which the hearing is adjourned, the Council must:
 - 1. Hear all persons interested in the matter of the proposed fee increase;
 - 2. Hear all objections, protests or other written communications from any owner of property subject to the proposed utility fee; and
 - 3. Take and receive oral and documentary evidence pertaining to the proposed fee increase.
 - 4. The hearing may be continued from time to time, as the Council determines necessary to complete its consideration of the proposed fee increase.

5. If the Council determines, at the close of the public testimony portion of the public hearing, that votes were received from property owners representing a majority of the parcels subject to the proposed fee increase, the Council will adopt a resolution setting forth the results of the protest ballot process; the proceedings will then be closed; and the utility fee cannot be approved by the City Council.
6. If the Council determines at the close of the public testimony portion of the public hearing that written protests were not received from property owners representing a majority of the parcels subject to the proposed utility fee, the Council will adopt a resolution setting forth the results of the protest ballot process and then may, by Ordinance, change the utility fee so long as in an amount that does exceed the amount and methodology set forth in the public notices sent to the property owners.

SECTION 9: Environmental Review. This Resolution is exempt from review under the California Environmental Quality Act (California Public Resources Code §§ 21000, *et seq.*, “CEQA”) and CEQA regulations (14 California Code of Regulations §§ 15000, *et seq.*) because it establishes rules and procedures to implement government funding mechanisms; does not involve any commitment to a specific project which could result in a potentially significant physical impact on the environment; and constitutes an organizational or administrative activity that will not result in direct or indirect physical changes in the environment. Accordingly, this Resolution does not constitute a “project” that requires environmental review (*see specifically* 14 CCR § 15378(b)(4-5)).

SECTION 10: If any part of this Resolution or its application is deemed invalid by a court of competent jurisdiction, the city council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this Resolution are severable.

SECTION 11: The City Clerk is directed to certify the passage and adoption of this Resolution; and cause it to be entered into the City of Monterey Park’s book of original Resolutions.

SECTION 12: This Resolution will take effect immediately day following its final passage and adoption.

PASSED AND ADOPTED this _____ day of _____, 2014.

Anthony Wong, Mayor

ATTEST:

Vincent D. Chang, City Clerk

APPROVED AS TO FORM
MARK D. HENSLEY, City Attorney

By: _____
Karl H. Berger, Assistant City Attorney

CITY OF MONTEREY PARK

WATER SYSTEM FINANCIAL EVALUATION AND WATER RATE RECOMMENDATIONS



Submitted to:

City of Monterey Park
320 West Newmark Avenue
Monterey Park, California 91754

Submitted by:

AKM Consulting Engineers
553 Wald
Irvine, California 92618
(949) 753-7333

September 17, 2012

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1. EXISTING SYSTEM

The City of Monterey Park provides domestic water service to a population of approximately 60,435 residents, as well as commercial, industrial, and public facilities. The water demand has declined from 10,947 acre feet per year (AFY) in 2006 to 8,447 AFY in 2010. This may be due to the recent economic climate and a very conscientious water conservation effort by the City and the customers.

The City of Monterey Park’s water system consists of:

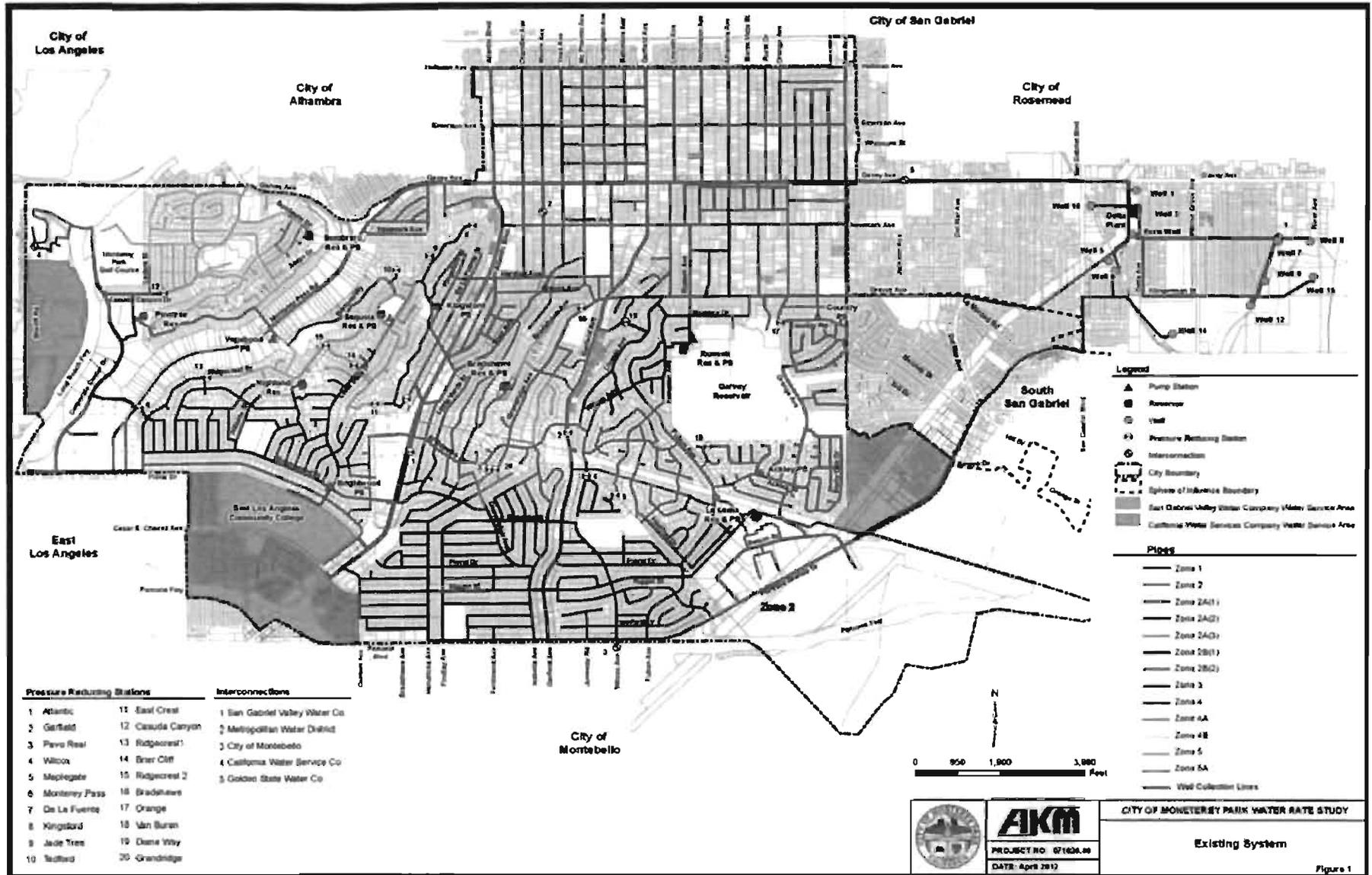
- 136.6 miles (721,250 feet) of transmission and distribution system pipe ranging from 2-inch to 36-inches in diameter
- 13 pressure zones - 5 open zones regulated by reservoir levels, and 8 closed zones without a regulating reservoir
- 8 active wells, 3 standby wells, and 1 inactive well
- 11 storage reservoirs and 2 settling tanks
- 11 booster pump stations
- 20 pressure reducing stations providing supply to closed zones
- Groundwater treatment facilities at the Delta Plant, and at Well 5 and Well 12
- 1 imported water supply connection
- 4 emergency interconnections
- 13,400 water meter connections (12,300 active)

Portions of the City territories are served by California Water Service Company, and San Gabriel Valley Water Company. The existing water system is shown on Figure 1.

The existing system dates back to the 1929s. Approximately 72 percent of the transmission and distribution system was constructed before 1960, and 35 percent of the system was installed during the 1950’s. About 51 percent of the system pipes are made of cast iron and 33 percent are made of asbestos cement. Table 1 shows the system pipes by decade of construction.

**Table 1
Pipe Length by Decade of Construction**

Year of Construction	Length (ft)	%
1920-1929	140,950	19.5
1930-1939	8,584	1.2
1940-1949	114,823	15.9
1950-1959	254,247	35.2
1960-1969	99,358	13.8
1970-1979	52,217	7.2
1980-1989	14,091	2.0
1990-1999	7,344	1.0
2000-2009	7,577	1.1
Unknown	22,226	3.1
Total	721,417	100.0



- Legend**
- ▲ Pump Station
 - Reservoir
 - Well
 - ⊕ Pressure Reducing Station
 - Interconnection
 - City Boundary
 - - - Sphere of Influence Boundary
 - East Gabriel Valley Water Company (Water Service Area)
 - California Water Services Company (Water Service Area)

- Pipes**
- Zone 1
 - Zone 2
 - Zone 2A(1)
 - Zone 2A(2)
 - Zone 2A(3)
 - Zone 2B(1)
 - Zone 2B(2)
 - Zone 3
 - Zone 4
 - Zone 4A
 - Zone 4B
 - Zone 5
 - Zone 5A
 - Well Collection Lines

Pressure Reducing Stations		Interconnections	
1 Atlantic	11 East Crest	1 San Gabriel Valley Water Co	
2 Garfield	12 Casuda Canyon	2 Metropolitan Water District	
3 Pavo Real	13 Ridgecrest 1	3 City of Montebello	
4 Wilcox	14 Briar Cliff	4 California Water Service Co	
5 Macgregate	15 Ridgecrest 2	5 Golden State Water Co	
6 Monterey Pass	16 Bradshaw		
7 De La Fuente	17 Orange		
8 Kingsford	18 Van Buren		
9 Jade Tree	19 Diane Willy		
10 Telford	20 Grandridge		



PROJECT NO: 07103A.00
DATE: April 2012

CITY OF MONTEREY PARK WATER RATE STUDY

Existing System

Figure 1

The majority of the distribution system was constructed before 1960 (518,604 ft or 72 percent). These pipes have reached or outlived their useful lives. The system experienced an average of over 25 pipe breaks per year since 2002, with 34 breaks in 2011, which is indicative of an aging system. Some of the pipe break repair work is illustrated in the photographs below.

PIPE BREAKS / REPAIRS



Unplanned pipe replacement/repair is significantly more costly than planned pipe replacement, and does not address the problem with the aging system. Pipe breaks cost the City between \$10,000 and \$70,000 for each repair, excluding the cost of significant lost water. The pipe breaks that occurred over the past ten years are listed in Table 2, and their locations are shown in Figure 2.

**Table 2
Past 10 Year Pipe Breaks**

Year	No. of Breaks	Years of Installation						Type of Main Break				Materials						
		1920s	1930s	1940s	1950s	1960 or later	Unk	C	L	PH	S	ACP	CIP	ML&CSP	SCCP	STL	Unk	
2002	11	4		2	4	1		3	5		3	1	9		1			
2003	13	3	1	1	5	3		8	4	1		2	8					
2004	24	4		4	12	4		9	10	5		6	12		1	5		
2005	26	6	1	1	14	3	1	11	8	7		5	21					
2006	33	6		6	13	4	4	11	13	4	5	5	26				2	
2007	32	8	1	8	13	1	1	16	9	6	1	2	27	1			2	
2008	31	7	2	4	13	5		8	15	8		7	23				1	
2009	30	12	3	3	6	5	1	7	18	5		5	22				3	
2010	19	7	3	2	4	3		7	7	5		4	13				2	
2011	34	16	1	4	8	5		7	23	4		4	26	3				1
Total	253	73	12	35	92	34	7	87	112	45	9	41	187	4	2	15		

The City's existing potable water supply consists almost entirely of groundwater from the City's wells produced from the Main San Gabriel Basin (Main Basin). Currently, only eight wells are active. Water can also be imported from the San Gabriel Valley Municipal Water District (SGVMWD). The City of Monterey Park has prescriptive right to 3.39216 percent of the operating safe yield (OSY) of the Main Basin. The Main Basin is known to be the most contaminated basin in the nation. The groundwater contamination is from ground disposal of volatile organic compounds (VOCs), dating back to World War II, as well as perchlorates and 1,4-Dioxane. Because of the contamination of the Main Basin, all water pumped must be treated to meet the primary and secondary water quality standards prior to service to customers. The City has treatment facilities at Well 5, Well 12, and the Delta Plant.

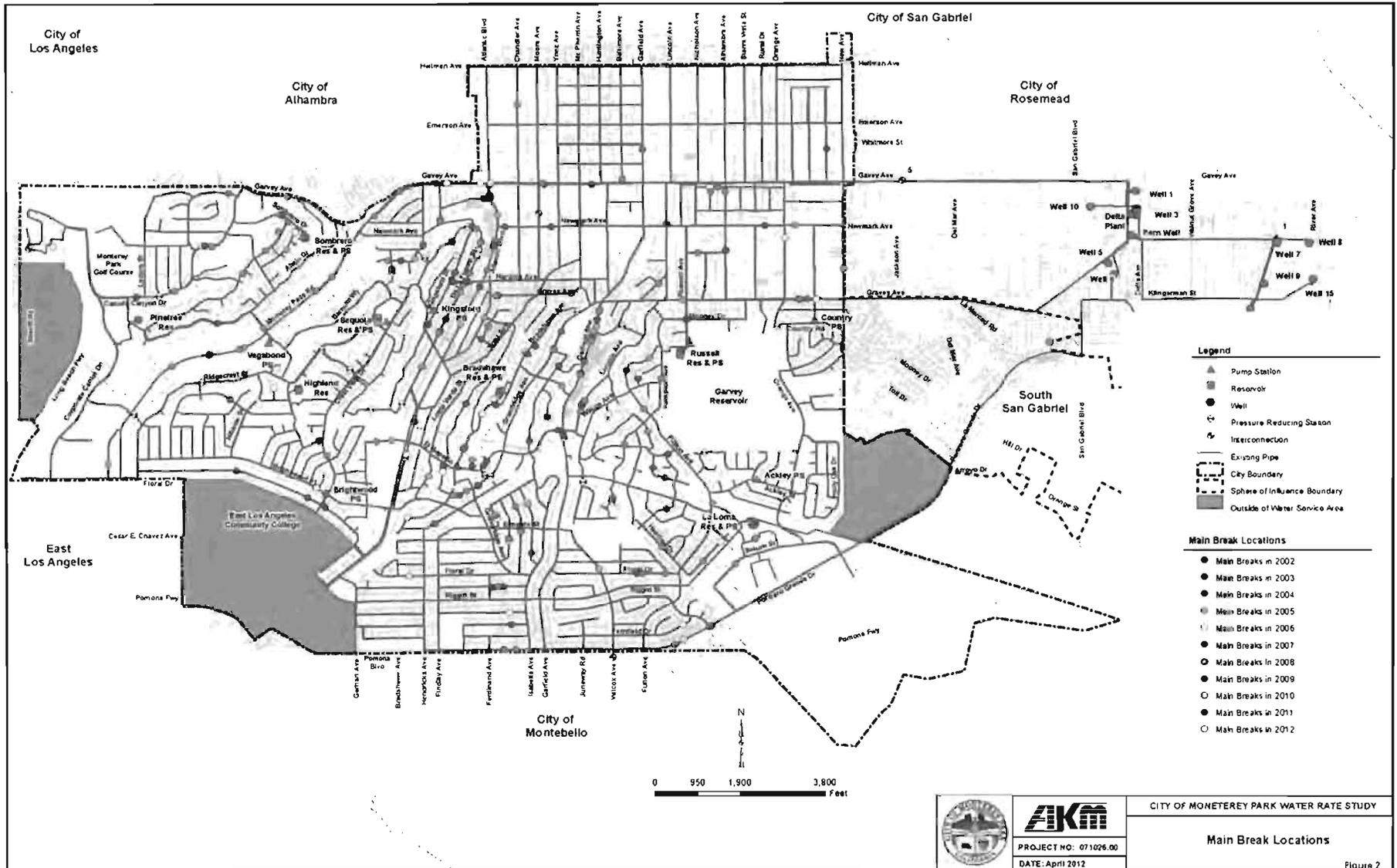


Figure 2

2. CAPITAL IMPROVEMENT PROGRAM

The City completed a Water Master Plan in 1996, which contained system improvement recommendations totaling \$26 million. The City implemented some of the recommended projects. The Water Master Plan was updated in 2012 (2012 Master Plan), which evaluated the system based on its ability to meet the established criteria, including proper water quality and providing fire flows at adequate pressures; and condition assessment of the system. The 2012 Master Plan recommended a comprehensive capital improvement program (CIP) that will improve the system to meet the established criteria, properly maintain the system’s assets, and replace the facilities that have reached the end of their useful lives. The current estimated cost of the CIP is \$99.9 million, as detailed in Table 3. The recommended CIP will replace 18.2 miles (95,895 feet) of pipe for fire flow improvements, which includes some of the older pipe that has reached the end of its useful life. However, it will not address all the replacements needed, which currently total over 264,000 feet. Therefore, an aggressive pipe replacement program is recommended to mitigate the risk of having to tend to problems under emergency conditions and consequent very high costs.

3. WATER FUND

Existing Rate Structure

The water system’s operation and maintenance, and capital improvement program are supported by a rate structure consisting of monthly meter charges and ascending scale consumption charges per 100 cubic feet (748 gallons) of water. The existing water rates, which have been in effect since October 1, 2009, are shown in Table 4.

**Table 4
Existing Water Rates**

Size of Meter and Service	Minimum 100 Cu. Ft. Per Month	Minimum Charge Per Month	Monthly Charge per 100 Cu. Ft. \$1.38	Monthly Charge per 100 Cu. Ft. \$1.81
5/8 or 3/4 inch	6	\$12.63	over 6-20	above 20
1 inch	0	\$13.67	0-20	above 20
1-1/4 inch	0	\$18.19	0-20	above 20
1-1/2 inch	0	\$21.53	0-20	above 20
2 inch	0	\$27.71	0-20	above 20
3 inch	0	\$55.48	0-20	above 20
4 inch	0	\$91.72	0-20	above 20
6 inch	0	\$280.07	0-20	above 20
8 inch	0	\$700.44	0-20	above 20
10 inch	0	\$1,480.32	0-20	above 20

Lifeline Water Rates:

Size of Meter and Service	Minimum 100 Cu. Ft. Per Month	Minimum Charge Per Month	Monthly Charge per 100 Cu. Ft. \$1.38	Monthly Charge per 100 Cu. Ft. \$1.81
5/8 or 3/4 inch	6	\$6.32	0-20	above 20

**Table 3
Capital Improvement Program**

CIP No.	Project	Justification	Recommended Facilities				Total Project Cost (\$)
			Minimum Firm Capacity (gpm)	Res Size (MG)	Pipe Size (in)	Pipe Length (ft)	
1	Expansion of Air Strippers at Well 5 Site or Advanced Oxidation Upgrade for Delta Plant	Water Quality					\$4,050,000
	Replace Delta Settling Tanks	Condition		2.0			\$6,075,000
	Replace Delta Booster Pump Station	Age / Condition	8,400				\$5,500,000
	Install Stand-by Generator(s) for New Delta Booster Pump Station	Criteria					\$1,080,000
2	Russell Reservoir Construction	Increase Storage		3.0			
	Replace Russell Booster Pump Station.	Improve Fire Protection	Combined Firm Capacity of Zone 2A(2) and 2A(3) Pump Stations should be a minimum of 3400 gpm				\$7,000,000
3	Replace Bradshawe Booster Pump Station	Improve Fire Protection	Combined Firm Capacity of Zone 2A(2) and 2A(3) Pump Stations should be a minimum of 3400 gpm				\$2,800,000
	Replace Bradshawe Reservoir 3	Age / Condition		1.0			\$2,700,000
4	New Booster Pump Station from Zone 2 to 5	Improve Fire Protection / Redundancy	4,000				\$4,150,000
5	Repair PRS valves from Zone 2 to 2B(2) and add pressure relief	Improve Fire Protection / Redundancy					\$270,000
6	PRS from Zone 5 to 3	Improve Fire Protection / Redundancy			8	500	\$526,500
7	Country Booster Pump Station Improvements	Improve Fire Protection					\$2,800,000
8	Replace Ackley Booster Pump Station	Improve Fire Protection					\$2,800,000
9	New Booster Pump Station from Zone 2 to 3	Improve Fire Protection / Redundancy	3,900		12	1,000	\$3,267,000
10	New Booster Pump Station from Zone 3 to 4	Improve Fire Protection / Redundancy	2,400				\$2,800,000
11	Replace Pinetree Reservoir 8	Condition		2.0			\$5,400,000
12	SCADA upgrades/improvements						\$675,000
13	Water Utility Office Building at Garvey Reservoir Upgrades	Condition					\$675,000
14	Replace Well No. 1	Age					\$3,375,000
15	Replace Well No. 3	Age					\$3,375,000
Fire Protection Pipeline Improvements							
16	Zone 1 Fire Protection Pipeline Improvements	Improve Fire Protection			8	7,492	\$2,831,976
17	Zone 1 Fire Protection Pipeline Improvements	Improve Fire Protection			12	6,988	\$3,962,196
18	Zone 2 Fire Protection Pipeline Improvements	Improve Fire Protection			8	33,030	\$12,485,340
19	Zone 2 Fire Protection Pipeline Improvements	Improve Fire Protection			12	13,701	\$7,768,467
20	Zone 2A(1) Fire Protection Pipeline Improvements	Improve Fire Protection			8	3,198	\$1,208,844
21	Zone 2A(1) Fire Protection Pipeline Improvements	Improve Fire Protection			12	764	\$433,188
22	Zone 2A(2) Fire Protection Pipeline Improvements	Improve Fire Protection			8	1,327	\$501,606
23	Zone 2A(3) Fire Protection Pipeline Improvements	Improve Fire Protection			8	6,318	\$2,388,204
25	Zone 4 Fire Protection Pipeline Improvements	Improve Fire Protection			8	2,158	\$815,724
26	Zone 4 Fire Protection Pipeline Improvements	Improve Fire Protection			12	2,416	\$1,369,872
27	Zone 4A Fire Protection Pipeline Improvements	Improve Fire Protection			8	7,326	\$2,769,228
28	Zone 4B Fire Protection Pipeline Improvements	Improve Fire Protection			8	4,469	\$1,689,282
29	Zone 5 Fire Protection Pipeline Improvements	Improve Fire Protection			8	3,204	\$1,211,112
30	Zone 5 Fire Protection Pipeline Improvements	Improve Fire Protection			12	2,005	\$1,136,835
Total							\$99,890,374
Annual Improvement Projects							
31	Reservoir and Booster Pump Station Improvements	Condition					\$675,000
32	Meter Exchange Program	Age					\$270,000
33	Pipe Replacement Program	Age					\$4,050,000
Total							\$4,995,000

The City adds 37.5 percent to the sum of the meter charges and consumption charges to support the operation and maintenance of the treatment facilities. The customers are billed once every two months. Table 5 shows the various customers by meter size, average water use, and average existing water bills. The existing rate structure generates approximately \$10.6 million.

**Table 5
Existing Average Monthly Water Bills**

Customer Type Meter Size	and	Average Daily Water Use (Gallons/Day)	Average Monthly Water Use (100 Cu. Ft.)	Average Monthly Water Bill
Single Family Residential				
3/4"		296	12.0	\$20.96
1"		337	13.7	\$24.33
1-1/2"		446	18.2	\$38.30
2"		446	18.2	\$44.48
Multiple Family Residential				
3/4-inch		761	30.9	\$51.74
1"		867	35.3	\$68.88
1-1/4"		1,349	54.9	\$108.91
1-1/2"		1,943	79.0	\$155.93
2"		3,894	158.3	\$305.72
3"		9,929	403.8	\$777.68
4"		15,167	616.7	\$1,199.41
Commercial				
3/4-inch		646	26.3	\$43.32
1"		1,153	46.9	\$89.93
1-1/4"		544	22.1	\$49.61
1-1/2"		2,058	83.7	\$164.43
2"		4,901	199.3	\$379.86
3"		7,562	307.5	\$603.44
4"		11,831	481.1	\$953.87
6"		35,118	1428.1	\$2,856.25
8"		2,094	85.2	
Institutional				
3/4"		1,939	78.8	\$138.45
1-1/2"		23	0.9	\$14.59
2"		2,147	87.3	\$177.16
3"		3,189	129.7	\$281.59
4"		5,428	220.7	\$482.65
Irrigation				
3/4"		328	13.3	\$23.77
1"		1,210	49.2	\$94.13
1-1/2"		1,857	75.5	\$149.58
2"		6,457	262.6	\$494.39
3"		4,465	181.6	\$375.49
4"		10,404	423.1	\$848.88

Table 6 shows the average monthly water bills of several nearby water agencies, as well as the City of Monterey Park customers. The average Monterey Park water customer bills are significantly lower than the water bills of the corresponding customers served by these purveyors.

**Table 6
Average Monthly Single Family Residential Water Bill Comparison**

Agency	Average Monthly Water Bill
Monterey Park	\$28.82
California Water Service Co.	\$53.52
Golden State Water Co.	\$54.05
San Gabriel Valley Water Co.	\$55.31
City of Covina	\$60.71
City of Alhambra	\$46.36

Expenditures

The water system’s expenditures are documented in two funds: Water Operations (0092) and Water Treatment (0093). Each fund’s expenditures consist of:

- Salaries and Benefits
- Supplies, including assessments
- Services
- Leases and Overhead
- Maintenance
- Capital Improvement Program
- Repairs

The 2010-2011 budgets for the two funds were \$9.3 million and 4.9 million, respectively, for a total of \$14.2 million. This budget included approximately 4.7 million in capital improvements. In order to implement the CIP recommended by the 2012 Master Plan in a reasonable schedule, the capital improvement expenditure needs to be increased. Since the existing rate structure generates only \$10.6 million, the difference has been made up from the fund reserves. As the reserves have nearly been used up, and the remainder has been committed to currently budgeted projects, the rates have to be increased.

4. ALTERNATIVE FUNDING SCENARIOS

Several funding scenarios were developed and evaluated, and three were selected for detailed review. Common to the all alternatives is updated monthly meter charges designed to recover the fixed costs of the utility. The funding scenarios consisted of the following, with analyses conducted assuming 3% annual inflation rate:

1. Construct \$8.3 million per year in capital improvements using a pay-as-you-go system
2. Construct \$5.3 million per year in CIP using a pay-as-you-go system
3. Issue \$20 million in bonds, construct \$5.3 million per year in capital improvements

Meter Charges

The existing rate structure has a monthly meter charge, and an ascending block consumption charge. The monthly meter charge includes the first 6 hundred cubic feet of consumption for 5/8-inch and 3/4-inch meters. Revenue generated by the existing meter charges (\$2.1 million) is approximately half of the fixed costs of the system. The existing meter charges for Monterey Park and five nearby agencies are shown in Table 7. Monterey Park's meter charges are significantly lower than the meter charges of the five agencies through 4-inch meters. Only the City of Alhambra's 6-inch and 8-inch and California Water Service Company's 8-inch meter charges are lower than Monterey Park's.

**Table 7
Monthly Meter Charges for Monterey Park and Nearby Agencies**

Meter Size	Monterey Park	California Water Service Company	Golden State Water Company	San Gabriel Valley Water Company	Covina	Alhambra
3/4"	\$12.63	\$20.45	\$22.35	\$30.06	\$32.19	\$19.29
1"	\$13.67	\$34.08	\$37.25	\$50.10	\$50.14	\$38.53
1.5"	\$21.53	\$68.16	\$74.50	\$100.20	\$80.04	\$57.82
2"	\$27.71	\$94.33	\$119.00	\$160.30	\$137.93	\$77.09
3"	\$55.48	\$178.97	\$224.00	\$300.60	\$258.62	\$96.36
4"	\$91.72	\$260.12	\$373.00	\$501.00	\$431.01	\$154.18
6"	\$280.07	\$431.22	\$745.00	\$1,000.00	\$861.87	\$192.72
8"	\$700.44	\$651.29	\$1,192.00	\$1,600.00		\$289.09

The City's meter charges should be re-structured to cover the water utility's fixed expenditures based on maximum capacity of the various size meters, with the 3/4-inch meter maximum capacity being the base unit without any allowance for consumption. The fixed costs of the water utility are estimated at \$4,230,000. Table 8 illustrates how this cost is distributed to the active meters in the system based on maximum meter capacity, and the resulting recommended monthly meter charges.

**Table 8
Recommended Monthly Meter Charges**

Meter Size	Maximum Capacity (gpm)	Ratio to 3/4-inch	Number of Meters	Number of Equivalent Meters	Recommended Monthly Meter Charge	Existing Monthly Meter Charge
3/4"	30	1.00	9,162	9,162	20.30	\$12.63
1"	50	1.67	2,150	3,583	33.83	\$13.67
1.5"	100	3.33	547	1,823	67.67	\$21.53
2"	160	5.33	336	1,792	108.27	\$27.71
3"	300	10.00	24	240	203.01	\$55.48
4"	500	16.67	25	417	338.34	\$91.72
6"	1000	33.33	4	133	676.69	\$280.07
8"	1600	53.33	4	213	1,082.70	\$700.44
Total			12,252	17,364		

Alternative 1. Construct \$8.3 million per year in CIP using a pay-as-you-go system

This alternative was developed to construct the recommended improvements in approximately 12 years, then start an aggressive pipeline replacement program. A 3-tier ascending block consumption charge is established for the single-family residential customers, and a constant rate is set up for all other customers as shown in Table 9. The consumption charges are the highest for this alternative.

**Table 9
Consumption Charges for Alternative 1**

Consumption (100 Cu. Ft)	Single Family Residential	All Others
0-6	\$2.75	\$3.05
6-12	\$2.95	\$3.05
Over 12	\$3.05	\$3.05

The proposed rate structure will generate approximately \$20.1 million in the first year, and will need to be increased at the rate of inflation. Table 10 shows the details of this alternative, as well as the average monthly bills for 5/8-inch and 3/4- inch single family residential customers. The average monthly bills include the meter charges, consumption charges, and water treatment charges.

**Table 10
Funding Alternative 1 - \$8.3 Million Annual CIP, Pay-as-You-Go Funding**

EXPENDITURES	2013	2014	2015	2016	2017	2018	2019	2020
0092								
1000 Salaries and Benefits	3,200,000	3,296,000	3,394,880	3,496,726	3,601,628	3,709,677	3,820,967	3,935,596
2000 Supplies	481,000	495,430	510,293	525,602	541,370	557,611	574,339	591,569
Water Assessment	500,000	515,000	530,450	546,364	562,754	579,637	597,026	614,937
3000 Services, Repairs	1,100,000	1,133,000	1,166,990	1,202,000	1,238,060	1,275,201	1,313,458	1,352,861
Electricity, Gas	615,000	633,450	652,454	672,027	692,188	712,954	734,342	756,372
4000 Leases & Overhead	1,030,000	1,060,900	1,092,727	1,125,509	1,159,274	1,194,052	1,229,874	1,266,770
8000 Maintenance	750,000	772,500	795,675	819,545	844,132	869,456	895,539	922,405
CIP	8,000,000	8,240,000	8,487,200	8,741,816	9,004,070	9,274,193	9,552,418	9,838,991
9000 Other Repairs	300,000	309,000	318,270	327,818	337,653	347,782	358,216	368,962
Subtotal Fund 0092	15,976,000	16,455,280	16,948,938	17,457,407	17,981,129	18,520,563	19,076,179	19,648,465
0093								
1000 Salaries and Benefits	1,020,000	1,050,600	1,082,118	1,114,582	1,148,019	1,182,460	1,217,933	1,254,471
2000 Supplies	860,000	885,800	912,374	939,745	967,938	996,976	1,026,885	1,057,692
3000 Services, Repairs	675,000	695,250	716,108	737,591	759,718	782,510	805,985	830,165
Electricity	560,000	576,800	594,104	611,927	630,285	649,193	668,669	688,729
4000 Leases & Overhead	450,000	463,500	477,405	491,727	506,479	521,673	537,324	553,443
8000 Maintenance	250,000	257,500	265,225	273,182	281,377	289,819	298,513	307,468
Subtotal Fund 0093	3,815,000	3,929,450	4,047,334	4,168,754	4,293,816	4,422,631	4,555,310	4,691,969
Total Expenditures	19,791,000	20,384,730	20,996,272	21,626,160	22,274,945	22,943,193	23,631,489	24,340,434
REVENUES								
Bi-Monthly Service Charges	4,220,000	4,346,600	4,476,998	4,611,308	4,749,647	4,892,137	5,038,901	5,190,068
Consumption + Treatment Charges	15,886,000	16,362,580	16,853,458	17,359,062	17,879,833	18,416,228	18,968,715	19,537,777
Total Revenue	20,106,000	20,709,180	21,330,456	21,970,369	22,629,481	23,308,365	24,007,616	24,727,844
Fund Balance	315,000	639,451	973,635	1,317,844	1,672,380	2,037,552	2,413,679	2,801,089
Annual Rate Increases	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Average Monthly Single Family Water Bill	75.01	77.26	79.58	81.97	84.43	86.96	89.57	92.26

Alternative 2 . Construct \$5.3 million per year in CIP using a pay-as-you-go system

This alternative was developed to construct the recommended improvements in approximately 19 years. A 3-tier ascending block consumption charge is established for the single-family residential customers, and a constant rate is set up for all other customers as shown in Table 11.

**Table 11
Consumption Charges for Alternative 2**

Consumption (100 Cu. Ft)	Single Family Residential	All Others
0-6	\$2.16	\$2.35
6-12	\$2.36	\$2.35
Over 12	\$2.40	\$2.35

The proposed rate structure will generate approximately \$16.9 million in the first year, and will need to be increased at the rate of inflation. Table 12 shows the details of this alternative, as well as the average monthly bills for 5/8-inch and 3/4-inch single family residential customers. The average monthly bills include the meter charges, consumption charges, and water treatment charges.

**Table 12
Funding Alternative 2 - \$5.3 Million Annual CIP, Pay-as-You-Go Funding**

EXPENDITURES	2013	2014	2015	2016	2017	2018	2019	2020
0092								
1000 Salaries and Benefits	3,200,000	3,296,000	3,394,880	3,496,726	3,601,628	3,709,677	3,820,967	3,935,596
2000 Supplies	481,000	495,430	510,293	525,602	541,370	557,611	574,339	591,569
Water Assessment	500,000	515,000	530,450	546,364	562,754	579,637	597,026	614,937
3000 Services, Repairs	1,100,000	1,133,000	1,166,990	1,202,000	1,238,060	1,275,201	1,313,458	1,352,861
Electricity, Gas	615,000	633,450	652,454	672,027	692,188	712,954	734,342	756,372
4000 Leases & Overhead	1,030,000	1,060,900	1,092,727	1,125,509	1,159,274	1,194,052	1,229,874	1,266,770
8000 Maintenance	750,000	772,500	795,675	819,545	844,132	869,456	895,539	922,405
CIP	5,000,000	5,150,000	5,304,500	5,463,635	5,627,544	5,796,370	5,970,261	6,149,369
9000 Other Repairs	300,000	309,000	318,270	327,818	337,653	347,782	358,216	368,962
Subtotal Fund 0092	12,976,000	13,365,280	13,766,238	14,179,226	14,604,602	15,042,740	15,494,023	15,958,843
0093								
1000 Salaries and Benefits	1,020,000	1,050,600	1,082,118	1,114,582	1,148,019	1,182,460	1,217,933	1,254,471
2000 Supplies	860,000	885,800	912,374	939,745	967,938	996,976	1,026,885	1,057,692
3000 Service, Repairs	675,000	695,250	716,108	737,591	759,718	782,510	805,985	830,165
Electricity	560,000	576,800	594,104	611,927	630,285	649,193	668,669	688,729
4000 Leases & Overhead	450,000	463,500	477,405	491,727	506,479	521,673	537,324	553,443
8000 Maintenance	250,000	257,500	265,225	273,182	281,377	289,819	298,513	307,468
Subtotal Fund 0093	3,815,000	3,929,450	4,047,334	4,168,754	4,293,816	4,422,631	4,555,310	4,691,969
Total Expenditures	16,791,000	17,294,730	17,813,572	18,347,979	18,898,418	19,465,371	20,049,332	20,650,812
REVENUES								
Bi-Monthly Service Charges	4,220,000	4,346,600	4,476,998	4,611,308	4,749,647	4,892,137	5,038,901	5,190,068
Consumption + Treatment Charges	12,695,721	13,076,592	13,468,890	13,872,957	14,289,145	14,717,820	15,159,354	15,614,135
Total Revenue	16,915,721	17,423,192	17,945,888	18,484,265	19,038,792	19,609,956	20,198,255	20,804,203
Fund Balance	124,721	253,183	385,499	521,784	662,158	806,744	955,666	1,109,057
Average Monthly Single Family Water Bill	65	67.20	69.22	71.30	73.44	75.64	77.91	80.25

Alternative 3. Issue \$20 million in bonds, construct \$5.3 million per year in capital improvements

This alternative is formulated to keep the average monthly bill for customers with 5/8-inch and 3/4-inch meters similar to those of the nearby agencies. A 3-tier ascending block consumption charge is established for the single-family residential customers, and a constant rate is set up for all other customers as shown in Table 13.

**Table 13
Consumption Charges for Alternative 5**

Consumption (100 Cu.Ft)	Single Family Residential	All Others
0-6	\$1.55	\$1.75
6-12	\$1.65	\$1.75
Over 12	\$1.75	\$1.75

The proposed rate structure will generate approximately \$14 million in the first year. Based on an annual inflation rate of 3%, all charges will need to be increased at 3% for two years, 10% for four years, and 6% thereafter. Table 14 shows the details of this alternative, as well as the average monthly bills for 5/8-inch and 3/4-inch single family residential customers. The average monthly bills include the meter charges, consumption charges, and water treatment charges.

**Table 14
Funding Alternative 3 - \$20 Million Bond Issue, \$5.3 Million Annual CIP**

EXPENDITURES	2013	2014	2015	2016	2017	2018	2019	2020
0092								
1000 Salaries and Benefits	3,200,000	3,296,000	3,394,880	3,496,726	3,601,628	3,709,677	3,820,967	3,935,596
2000 Supplies	481,000	495,430	510,293	525,602	541,370	557,611	574,339	591,569
Water Assessment	500,000	515,000	530,450	546,364	562,754	579,637	597,026	614,937
3000 Services, Repairs	1,100,000	1,133,000	1,166,990	1,202,000	1,238,060	1,275,201	1,313,458	1,352,861
Electricity, Gas	615,000	633,450	652,454	672,027	692,188	712,954	734,342	756,372
4000 Leases & Overhead	1,030,000	1,060,900	1,092,727	1,125,509	1,159,274	1,194,052	1,229,874	1,266,770
8000 Maintenance	750,000	772,500	795,675	819,545	844,132	869,456	895,539	922,405
CIP	5,000,000	5,150,000	5,304,500	5,463,635	5,627,544	5,796,370	5,970,261	6,149,369
9000 Other Repairs	300,000	309,000	318,270	327,818	337,653	347,782	358,216	368,962
Subtotal Fund 0092	12,976,000	13,365,280	13,766,238	14,179,226	14,604,602	15,042,740	15,494,023	15,958,843
0093								
1000 Salaries and Benefits	1,020,000	1,050,600	1,082,118	1,114,582	1,148,019	1,182,460	1,217,933	1,254,471
2000 Supplies	860,000	885,800	912,374	939,745	967,938	996,976	1,026,885	1,057,692
3000 Service, Repairs	675,000	695,250	716,108	737,591	759,718	782,510	805,985	830,165
Electricity	560,000	576,800	594,104	611,927	630,285	649,193	668,669	688,729
4000 Leases & Overhead	450,000	463,500	477,405	491,727	506,479	521,673	537,324	553,443
8000 Maintenance	250,000	257,500	265,225	273,182	281,377	289,819	298,513	307,468
CIP								
Subtotal Fund 0093	3,815,000	3,929,450	4,047,334	4,168,754	4,293,816	4,422,631	4,555,310	4,691,969
Debt Service	1,261,440	1,261,440	1,261,440	1,261,440	1,261,440	1,261,440	1,261,440	1,261,440
Total Expenditures	18,052,440	18,556,170	19,075,012	19,609,419	20,159,858	20,726,811	21,310,772	21,912,252
REVENUES								
Bi-Monthly Service Charges	4,230,000	4,356,900	4,487,607	4,622,235	4,760,902	4,903,729	5,050,841	5,202,366
Consumption + Treatment Charges	9,667,227	9,957,244	10,255,961	11,281,558	12,409,713	13,650,685	15,015,753	15,916,698
Total Revenue	13,897,227	14,314,144	14,743,568	15,903,793	17,170,616	18,554,414	20,066,594	21,119,065
Bond Revenue	20,000,000							
Fund Balance	17,106,227	14,125,641	11,055,638	8,611,452	6,883,649	5,972,692	5,989,954	6,458,207
Annual Rate Increases	1.03	1.03	1.03	1.10	1.10	1.10	1.10	1.06
Average Monthly Single Family Water Bill	\$54.39	\$56.03	\$57.71	\$63.48	\$69.82	\$76.81	\$84.49	\$89.56

Table 15 illustrates the comparison of the three alternatives over a 10 year period. Alternative 1 will allow construction of \$95.15 million in capital improvements, while Alternatives 2 and 3 will only construct \$60.76 million over the same period. Although the average monthly bills are lower for Alternative 2 than the bills for Alternative 3, for the first six years, the debt service payments require larger increases for Alternative 3 to implement the same capital improvement program.

**Table 15
Comparison of the 3 Alternatives for Single Family Residential 5/8" and 3/4" Meters**

Alternative	Exist. MP	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	Total CIP
\$8.3 MYR CIP, 3% Per Yr Increase	\$28.29	\$75.01	\$77.26	\$79.58	\$81.97	\$84.43	\$86.96	\$89.57	\$92.26	\$95.02	\$97.87	95,150,198
\$5.3 MYr CIP, 3% Per Yr Increase	\$28.29	\$65.25	\$67.20	\$69.22	\$71.30	\$73.44	\$75.64	\$77.91	\$80.25	\$82.65	\$85.13	60,758,560
\$5.3 MYr CIP; \$20M Bond - 3-3%, 4-10%, 3-6% Incr.	\$28.29	\$54.33	\$55.96	\$57.64	\$63.40	\$69.74	\$76.71	\$84.38	\$89.45	\$94.81	\$100.50	60,758,560

Comparison to Other Agencies

Table 16 shows the comparison of the average monthly water bills for single family residential customers to the bills of other nearby agencies, including California Water Service Company and San Gabriel Valley Water Company, who provide service to portions of Monterey Park.

**Table 16
Comparison of Average Monthly Water Bills for
Single Family Residential 5/8" and 3 /4" Meters to Other Agencies**

Agency	Average Monthly Water Bill
Monterey Park Alternative 1	\$75.01
Monterey Park Alternative 2	\$65.25
Monterey Park Alternative 3	\$54.33
California Water Service Co.	\$53.52
Golden State Water Co.	\$54.05
San Gabriel Valley Water Co.	\$55.31
City of Covina	\$60.71
City of Alhambra	\$46.36

1. INTRODUCTION

Background

The City of Monterey Park's (City) sewer system serves the most of the areas within its corporate boundaries. The City provides sewer service to a population of approximately 61,000. The existing sewer collection system consists of about 665,000 feet (126 miles) of gravity sewers ranging in size from 6-inches to 15-inches in diameter, and 2,498 manholes. Some of the City areas drain directly into Los Angeles County Sanitation District trunk sewers that cross the City. A City area along the south side of the I-10 Freeway drains north across the Freeway to the City of Alhambra's Pump Station No.3.

The State Water Resources Control Board adopted the Statewide General Waste Discharge Requirements (WDR) on May 2, 2006. Provision 9 of the WDR states:

*The Enrollee shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, **by establishing a proper rate structure**, accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures must be in compliance with applicable laws and regulations and comply with generally acceptable accounting practices.*

Provision 11 of WDR sets the requirement for the preparation of a Sewer System Management Plan:

11. The enrollee shall develop and implement a written Sewer System Management Plan (SSMP) and make it available to the State and/or Regional Water Board upon request. A copy of this document must be publicly available at the Enrollee's office and/or available on the internet. This SSMP must be approved by the Enrollee's governing board at a public meeting.

The essential elements of the SSMP are detailed in Provision 13 of the Order, and listed below:

- Goal (WDR Section D.13i)
- Organization (WDR Section D.13ii)
- Legal Authority (WDR Section D.13iii)
- Operation and Maintenance Program (WDR Section D.13iv)
- Design and Performance Provisions (WDR Section D.13v)
- Overflow Emergency Response Plan (WDR Section D.13vi)
- Fats, Oil and Grease Control Program (WDR Section D.13vii)
- System Evaluation and Capacity Assurance Plan (WDR Section D.13viii)
- Monitoring and Program Modifications (WDR Section D.13ix)
- Program Audits (WDR Section D.13x)
- Communications Program (WDR Section D.13xi)

Requirements for the Operation and Maintenance Program include:

- (a) *Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities.*
- (b) *Describe **routine preventive operation and maintenance activities by staff and contractors, including 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 each deficiency.** The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. **Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects.** Finally, **the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan.***
- (d) *Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained.*
- (e) *Provide equipment and replacement part inventories, including identification of critical replacement parts.*

Requirements for SECAP include:

*Capacity Enhancement Measures: The steps needed to establish a short- and long-term capital improvement plan (CIP) to address identified hydraulic deficiencies including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. **The CIP shall include an implementation schedule and shall identify sources of funding.***

The City of Monterey Park prepared a SSMP in 2009. The capital improvement program for the City's system was formulated based on the 1996 Sewer Master Plan. The SSMP document included recommendations for pipe replacements due to capacity problems; preparing a complete map of the system; updating of the sewer master plan (SECAP); preparing a Fats, Oils, and Grease Program; CCTV inspection of the system; updating the Emergency Overflow Response Plan; staff training; and implementing an asset management plan and a computerized maintenance management system, with a total cost of \$4.8 million (2009 value). It does not comprehensively cover a rehabilitation and replacement plan for addressing the problems with an aging system, as well as existing structural deficiencies. Given the system's age and number of spills, it is estimated that the rehabilitation and replacement plan for the City's system would be approximately \$1 million per year. The actual program will need to be refined based on CCTV inspection and condition evaluation of the system.

The sewer system experienced 10 spills in 2011, which corresponds to 7.93 spills per 100 miles of pipe. This is 2.65 times as high as the maximum number of spills (3) per 100 miles of pipe for a proper system. Not addressing this problem promptly may subject the City to significant fines by the California Regional Water Quality Control Board.

2. FINANCIAL EVALUATION AND RECOMMENDED SEWER CHARGES

The City currently has a sewer service charge, which is \$0.0810 per 100 cubic feet of water used. The average water bill for a single family residential customer is \$0.97 per month. It generates approximately \$300,000 annually. The budgeted expenditures totaled \$239,000 for Fiscal Year 2011-2012, with an estimated fund balance of \$661,000 at the end of June 2012.

The existing rate structure does not generate adequate revenues to comply with the WDRs. This study develops proper level of expenditures based on existing information, provides recommendations for proper operation and maintenance of the wastewater collection system meeting the requirements of the regulations, and implementing the needed capital improvement program.

Expenditures

The operating and maintenance expenditures of the sewer system should include personnel costs (salaries and benefits), administrative support, use of City facilities, regular cleaning of the system, supplies and materials, insurance, CCTV inspection and condition assessment of the system, root treatment, staff training, regulatory compliance, SSMP audit, SSMP update, and establishing an operating reserve. The SSMP update should cover all elements, including the SECAP and Operation and Maintenance Program. The needed capital improvement expenditures and rates can be updated when these two elements are updated.

The total expenditure for fiscal year 2012-2013 is estimated to be \$2,405,000, including \$1,205,000 for operation and maintenance, and 1,200,000 for capital improvements. These expenditures, detailed in Table 1, will increase due to increases in material and labor costs in the future.

Revenues

The revenues of the Sewer Fund are proposed to fully support the operation and maintenance of the system, comply with regulatory requirements, construct the anticipated capital improvements, and build reserves to respond to emergencies. It is recommended that the revenues be generated through a Sewer Charge based upon sewage generation utilizing the minimum billing period water use by water meter size. The sewage generation by the customers with 5/8-inch and 3/4-inch meters (excluding irrigation meters) is calculated to be 6.57 hundred cubic feet (227 gallons per day), and is considered be the equivalent residential unit (ERU). ERU's for other water meter sizes are then based upon the ratio of their wastewater flows to that of the equivalent residential unit. The sewer system customers within the City's service area and the development of the ERUs are shown in Table 2.

Table 1	
FY 2012-2013 Expected Expenditures	
OPERATION AND MAINTENANCE	
Salaries and Benefits	\$250,000
CCTV Inspection	\$183,000
Condition Assessment	\$90,000
Root Treatment	\$150,000
Staff Training	\$24,000
Regulatory Compliance	\$50,000
SSMP Audit	
SSMP Update	\$300,000
Supples & Materials	\$24,000
Insurance	\$24,000
Facilities	\$50,000
Operating Reserve	\$80,000
Subtotal- Operation and Maintenance	\$1,225,000
CAPITAL IMPROVEMENTS	
Rehabilitation & Replacement	\$1,000,000
CIP Reserve	\$200,000
Subtotal-Capital Improvements	\$1,200,000
TOTAL EXPENDITURES	\$2,425,000

The sewer charges needed to support a total 2012-2013 fiscal year expenditure of \$2,425,000 are shown in Table 3. The sewer charges should be increased annually by the increase in the Engineering News Record Construction Cost Index for the Los Angeles Area (ENRLA) for the next 5 years. The charges should remain the same when there is no increase or there is a decrease in ENRLA. The charges should be updated at the end of 5 years or earlier based on better information that may be available, such as completion of updated SECAP and Operation and Maintenance Program. Table 4 shows the detailed expenditures, fund balances, and sewer charges for 5/8-inch and 3/4-inch meters for the next five years based on 3 percent per year increase in ENRLA. This program builds a total fund balance of \$2.27 million in five years, which can be used to respond to emergencies.

Table 2 Equivalent Dwelling Units				
Customer Type and Meter Size	Flow (GPD)	EDU	No. of Meters	Total EDU's
Commercial				
3/4	605	2.66	231	615
1	920	4.00	193	772
1 1/4	422	4.00	5	20
1 1/2	1,750	7.71	162	1,249
2	4,440	19.56	143	2,797
3	6,039	26.61	13	346
4	8,628	38.01	11	418
6	23,477	103.44	4	414
Institutional				
3/4	1,033	4.55	1	5
2	1,528	6.73	4	27
3	1,635	7.21	1	7
4	3,755	16.54	3	50
Lifeline				
	207	0.91	388	354
Multi Family				
3/4	648	2.85	389	1,110
1	776	3.42	524	1,791
1 1/4	1,277	5.63	9	51
1 1/2	1,877	8.27	378	3,127
2	3,597	15.85	151	2,393
3	9,215	40.60	8	325
4	11,922	52.53	10	525
Single Family				
5/8 & 3/4	227	1.00	8119	8,119
1	277	1.22	1415	1,727
1 1/2 & 2	350	1.26	26	33
Total				26,273

Table 3 Monthly Sewer Rates			
Customer Type and Meter Size	No. of Meters	EDU	Monthly Sewer Rate
Commercial			
3/4	231	2.66	\$20.49
1	193	4.00	\$30.76
1 1/4	5	4.00	\$30.76
1 1/2	162	7.71	\$59.29
2	143	19.56	\$150.45
3	13	26.61	\$204.67
4	11	38.01	\$292.39
6	4	103.44	\$795.62
Institutional			
3/4	1	4.55	\$35.00
2	4	6.73	\$51.78
3	1	7.21	\$55.42
4	3	16.54	\$127.24
Lifeline			
	388	0.91	\$7.01
Multi Family			
3/4	389	2.85	\$21.94
1	524	3.42	\$26.29
1 1/4	9	5.63	\$43.29
1 1/2	378	8.27	\$63.63
2	151	15.85	\$121.90
3	8	40.60	\$312.30
4	10	52.53	\$404.01
Single Family			
5/8 & 3/4	8,119	1.00	\$7.69
1	1,415	1.22	\$9.39
1 1/2 & 2	26	1.26	\$9.72

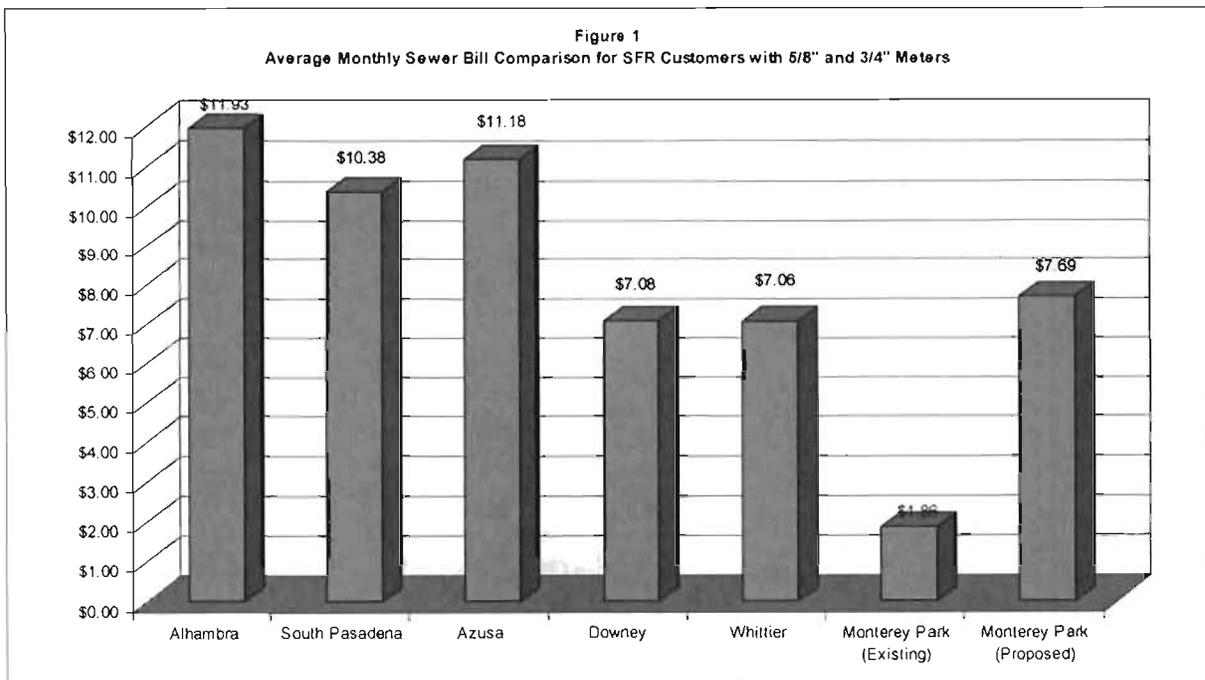
Table 4
Estimated Expenditures, Fund Balances and 5/8" & 3/4" SFR Monthly Sewer Charges
Based on 3% Annual Increase in ENRLA

EXPENDITURES	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
OPERATION AND MAINTENANCE					
Salaries and Benefits	\$250,000	\$257,500	\$265,225	\$273,182	\$281,377
CCTV Inspection	\$183,000	\$188,490	\$194,145	\$199,969	\$205,968
Condition Assessment	\$90,000	\$92,700	\$95,481	\$98,345	\$101,296
Root Treatment	\$150,000	\$154,500	\$159,135	\$163,909	\$168,826
Staff Training	\$24,000	\$24,720	\$25,462	\$26,225	\$27,012
Regulatory Compliance	\$50,000	\$51,500	\$53,045	\$54,636	\$56,275
SSMP Audit				\$218	\$0
SSMP Update	\$300,000	\$300,000	\$0	\$0	\$0
Supples & Materials	\$24,000	\$24,720	\$25,462	\$26,225	\$27,012
Insurance	\$24,000	\$24,720	\$25,462	\$26,225	\$27,012
Facilities	\$50,000	\$51,500	\$53,045	\$54,636	\$56,275
Operating Reserve	\$80,000	\$82,400	\$84,872	\$87,418	\$90,041
Subtotal- Operation and Maintenance	\$1,225,000	\$1,252,750	\$981,333	\$1,010,990	\$1,041,096
CAPITAL IMPROVEMENTS					
Repair, Replacement, Rehab	\$1,000,000	\$1,030,000	\$1,260,000	\$1,297,800	\$1,336,734
CIP Reserve	\$200,000	\$206,000	\$252,000	\$259,560	\$267,347
Subtotal-Capital Improvements	\$1,200,000	\$1,236,000	\$1,512,000	\$1,557,360	\$1,604,081
TOTAL EXPENDITURES	\$2,425,000	\$2,488,750	\$2,493,333	\$2,568,350	\$2,645,176
FUND BALANCE	\$941,000	\$1,229,400	\$1,566,272	\$1,913,250	\$2,270,638
5/8 \$ 3/4-INCH SFR MONTHLY SEWER CHARGE	\$7.69	\$7.89	\$7.91	\$8.15	\$8.39

Comparison with Other Agency Average Monthly Bills and Recommendations

Table 5 and Figure 1 show the proposed monthly sewer bills for single family residential customers with 5/8" and 3/4" meters in comparison to the current monthly bills of five other agencies. While no two systems are exactly alike due to facility age, material, construction practices, soil conditions, and maintenance practices, this table indicates the funding needed for nine agencies to properly operate and maintain their systems. The recommended sewer charges will allow the implementation of the estimated CIP and maintain the system in good condition. It is near the low end of the five agencies surveyed, and should be adopted.

Table 5 Average Monthly Sewer Bill Comparison for SFR Customers with 5/8" and 3/4" Meters	
Agency	Average Monthly Sewer Bill
Alhambra	\$11.93
South Pasadena	\$10.38
Azusa	\$11.18
Downey	\$7.08
Whittier	\$7.06
Monterey Park (Existing)	\$1.86
Monterey Park (Proposed)	\$7.69



City of Monterey Park Wastewater Collection System Master Plan Update



City of Monterey Park



Phoenix Civil Engineering, Inc.

1/13/2014

Chapter 1 - Executive Summary

The City of Monterey Park was incorporated in 1916. It is a full service city that provides water and wastewater service to its residents. City staff are responsible for the day to day operations of the utility systems. Recently, the City has embarked on a program to review the utility rates and implement a program to increase the utility rates to reflect the current cost of doing business. Historically, the rates for utility service (focusing on wastewater service in particular) have been inconsistently lower than surrounding communities and not covering the actual costs of operating, maintaining and providing the wastewater collection to the community.

Operation and maintenance of a wastewater collection system is governed by State and federal laws. These regulations are in place to ensure that a community is not exposed to unsafe or unsanitary conditions relating to wastewater. The City of Monterey Park operates and maintains a collection system spanning 126 miles and serves the community of 61,445 residents. The community wastewater collection system operates entirely by gravity. There are commercial and industrial areas that contribute wastewater to the collection system in addition to the residential uses. The city collects the wastewater from the community and transports it to Los Angeles County Sanitation District (LACSD) for treatment outside of the city limits. LACSD operates several trunk lines through the city and there are also areas of the city that connect directly into the LACSD trunk line.

In performing the analysis associated with this report, it was discovered that several critical aspects of the regulated operation and maintenance of the wastewater collection system have not occurred. For example, the city does not have a formal closed circuit television (CCTV) inspection program for the wastewater pipelines. From 2005 through 2008 and then again in 2011, certain portions of the wastewater collection system were investigated. There does not seem to be a program in place identifying areas that are to be inspected. The CCTV work performed to date appears to be random. The CCTV completed accounts for only 35% of the collection system. The remaining 65% of the community infrastructure has NEVER been internally investigated. It was installed many decades ago and unless there was a blockage, it was never internally inspected again. The community was incorporated almost 100 years ago which means there are conceivably pipelines in the system that are almost 100 years old. The city does not have an up to date wastewater collection system atlas documenting all of the manholes. Photocopies of a wall mounted atlas map have been used and any changes are written on the copy page. There is no manhole numbering system in place making a formal maintenance program or any maintenance program incredibly difficult. The CCTV work performed to date is only referenced by street and sometimes a station number. Two flaws exist with this program. First it assumes that the inspection started at the beginning of the street which cannot be corroborated, and second it requires the reviewer of the video logs to physically measure out pipeline reaches and perform an extensive field investigation to locate the pipeline segment with the defect or maintenance issue. It is essentially floating in space with no connection to the actual system.

After reviewing the critically identified pipeline segments in the CCTV inspections, it was evident that the collection system is not being maintained or operated in accordance with the State regulations. The collection system has a chronic grease and root intrusion problem that is plaguing the network. Of the video reviewed pipeline segments, there are sections of pipeline that are blocked with grease such that the video camera could not pass or complete the inspection. There were segments of pipeline that had root masses that either completely blocked the pipeline or ran along the pipeline invert for several feet. Once again, there were sections where the camera operator had to cease the inspection because passage was not possible. Certain sections showed customer lateral connections almost completely sealed off with grease. The city contracts out for performing the fats, oils and grease (FOG) inspection and enforcement program. After review of the CCTV work which is already several years out of date, it is evident that the FOG program is not being performed adequately and has no impact on the community. FOG is a community problem and must be addressed at the community level. Over time, excessive FOG will clog a collection system causing sanitary sewer overflows (SSOs). Excessive SSOs or failure of maintenance will lead to mandatory minimum penalties (financial) levied on the community. The penalties can be in the several hundreds of thousands of dollars.

The CCTV videos revealed sections of the collection system pipelines that were severely cracked or in some cases partially missing. Joint offsets between pipeline sections were so severe in some locations that passage by the camera was not possible. The most recent CCTV inspection was performed three years ago in 2011 and the first CCTV is now 8 years old. Several segments of the broken pipelines are located on the hillside neighborhoods in the city. CCTV inspection is a State mandated function of operating a wastewater collection system and it is part of the

SSMP requirements. At a minimum, CCTV inspection of the entire collection system should be occurring on a regular rotation (every 5- or 10 years).

In 1996, a wastewater master plan was prepared for the city. As part of that report, certain sections of the community were modeled using limited flow information obtained as part of the report preparation. The modeling totaled approximately 20% of the collection system and the remainder of the system was estimated from the results. In 2009, as part of State mandated requirements, the city retained a consultant to prepare the Sanitary System Management Plan (SSMP). This document is not a master plan, but more of a summary of how the city manages the wastewater infrastructure. The consultant also updated the 1996 wastewater master plan recommendations as not one of the recommended improvement projects were ever implemented by the city. In addition to the updated 1996 master plan projects, there were recommended projects that were identified as part of the SSMP. To date, none of the projects in the 2009 SSMP have been implemented.

Pipeline life expectancy is typically listed as 50 years by manufacturers. From a replacement standpoint, 50 year life expectancy is used. Depending on pipe material, installation procedures and maintenance programs a pipeline could last longer. Regardless, pipelines do fail over time and replacement or rehabilitation is required to keep the system operating. A damaged pipeline leaking wastewater into the surrounding soil is still considered a sanitary sewer overflow and must be reported to the State of California. In addition, a long term leaking pipeline can affect potable water stored in underground aquifers, damage nearby public or private property or at a minimum spread untreated wastewater which is a sanitary issue. The effects of a leaking pipeline can be slow or catastrophic. An example of a catastrophic effect of a leaking pipeline is typically a sinkhole which can be seen on the television news. Part of an effective wastewater collection system program is to replace pipelines or rehabilitate pipelines to extend their lifetime so that all of the pipelines do not fail at once and the benefit of the asset is maximized. This is a managed effort to control the financial impacts to the community so replacements are controlled and focused. Unfortunately, the city has not maintained, or replaced much needed wastewater collection system pipelines in several years or potentially decades. Of concern in performing the review of the partial collection system documents, is that a substantial financial and staff effort is going to be required to get the system back into compliance and operating as it should be. The current staffing levels are far below surrounding communities or other agencies of similar size. Repeated historical cuts to staff and funding in the enterprise wastewater collection system have created a failed program. The current condition of the system is not a reflection of the staff who have been running to attempt to cover all of the necessary functions. The reduced staff are left to operate and maintain a collection system and its components with outdated resources. It is not possible to maintain a collection system the size of the city's with the number of staff assigned to perform the maintenance. Similar to fighting a structure fire with one gallon buckets, all of the staff time is spent just attempting to manage the identified issue areas. The remainder of the system has never been checked. Lack of the necessary tools has resulted in a program where lines are "cleaned in the dark" using the high pressure water system tools, but without CCTV verification of the cleaning effort it is impossible to know what was done. The lack of funding for the wastewater collection system is not sustainable given the ever increasing regulations that must be met for wastewater collection systems. A sanitary sewer overflow (SSO) is not acceptable and frequently reflects maintenance issues. In the 2009 study, the report states that the number of annual SSOs that the city had reported were unacceptable and far beyond the number reported in other similar communities. All of the indicators are present in the collection system for a major sewer overflow or catastrophic failure. It is not a matter of "if", it is a matter of "when".

The following chapters provide a system overview, summarize recommendations from the two previous studies, provide review documents for the CCTV work product that was previously performed and details the list of recommended Capital Improvement Program projects. These projects will allow the City to incorporate the financial impact of the recommended projects into a rate study program. The CIP projects span a 10 year timeframe. This timeframe was selected to attempt to realistically address the numerous tasks that are needed. In the recommendations, the 1996, 2009 and recommendations from the CCTV review are all included. Forty four projects were identified and budgets prepared. The total program cost is \$12,776,000. This represents the 35% of the collection system that was reviewed. As the annual CCTV program is implemented, additional CIP projects will be identified and regular updates to the wastewater master plan will be required. Typically, master plans are updated every 5 years as projects are completed and new ones identified. In the near years as projects are identified, it might be necessary for staff to update the CIP list and shuffle projects around in the 10 year timeframe. As the wastewater system is funded through rates levied on the community, evaluating the funding structure of the wastewater collection system is an essential next step. As costs to maintain the system increase, the rates need to reflect the changes. Failure to increase rates to perform the mandated and regulated functions of wastewater collection is the cause of the current system condition.

Chapter 2 - Introduction

The City of Monterey Park is located in the western portion of the San Gabriel Valley in Los Angeles County. It is located approximately 11 miles east of downtown Los Angeles and is approximately 9 square miles in area according to the City's General Plan. The community borders are Interstate 10 (San Bernardino Freeway) on the northern side, Interstate 710 (Long Beach Freeway) on the west side, State Route 60 (Pomona Freeway) on the south side and the City of Rosemead and the unincorporated County area of South San Gabriel on the east side of the community. The cities of Los Angeles, Alhambra, Montebello and Rosemead are the neighboring communities. The community is surrounded by other developed communities and therefore, is essentially at build out conditions from a total land use area standpoint. According to the California Department of Finance population estimate for 2013, the City of Monterey Park has a population of 61,445. According to the estimate, the population has increased slightly from the figure in 2012 of 61,184. The community is primarily residential in composition. The City's General Plan guidelines have a year 2020 timeframe and focus primarily on infill projects and redevelopment of parcels to allow for population increases. The land use map from the City's General Plan is shown in Figure 1.

Monterey Park did not incorporate as a city until 1916. The utilities in the city are very similar to the surrounding communities. Water service is provided using groundwater from the city wells. The community wastewater collection system operates entirely by gravity. There are no lift stations in the system. There are commercial and industrial areas that contribute wastewater to the collection system in addition to the residential uses. The city collects the wastewater from the community and transports it to Los Angeles County Sanitation District (LACSD) for treatment outside of the city limits. LACSD operates several trunk lines through the city and there are also areas of the city that connect directly into the LACSD trunk line. Figure 2 shows location of the LACSD trunk line in the community. In 1981, the community retained Willdan to prepare a wastewater master plan. In 1996, the master plan was updated by ASL Consulting Engineers. In addition, the city retained URS in 2009 to prepare the Sewer System Management Plan (SSMP) for the community. In the 1996 sewer master plan, certain sections of the existing collection system were modeled using field obtained flow information from five selected locations around the city. The modeling focused on 11 collection basins. Areas that drained directly to the LACSD trunk sewer were not modeled. From the discussion in that report, approximately 55% of the city collection system area was modeled. It is also understood that within the 11 identified basins, not all the pipelines were modeled. The master plan focused only on pipelines that were the main backbone of the collection basin. That document also listed certain recommended improvements that were based on the modeling information and the field documented cleaning reports provided by city staff. The recommendations were divided into hydraulic and maintenance (grease) recommendations. In the SSMP, a specific proposed development was modeled and the assumption was that because the community had not expanded in population or area, the 1996 sewer master plan flow analysis was correct and still valid.

The scope of this document is to provide an update to the previous work compiled in the other wastewater master plans. Specifically,

- Review existing information and system components.
- Meet with City Staff to discuss the system operation and collect institutional knowledge regarding the system.
- Review existing CCTV work that has been performed to date to develop areas of identified improvements.
- Prepare a Capital Improvement Program listing of projects that were identified in previous studies as well as the work performed in this report.
- Prepare a recommended schedule of implementation of the Capital Improvement Projects to support the recommendations outlined in the previously prepared master plan and SSMP.

Part of the original scope of services for the report was to provide a snapshot model using a program such as MS Excel. During the course of the work, it was decided that it was more beneficial to prepare the Capital Improvement Program list of projects based on the CCTV work performed to date. The snap shot modeling effort was eliminated from the project.

Chapter 3 - System Overview

The City of Monterey Park topography is primarily sloping to the south. The topography is relatively flat with the exception of the rolling hill in the southeast corner of the city where the Garvey Reservoir is located and northwest of Atlantic Blvd is another hillside area. Atlantic Blvd is located in a valley area between the two hillside sections of the city. The majority of the elevations in the community range from approximately 250 feet in elevation in the southern section of the city to the mid 300s in the northeast corner. According to the description provided in the city's Sewer System Management Plan (URS, 2009), the northeast section of the city is the oldest. The Garvey Reservoir area is at an approximate elevation of 558 feet and the hillside community adjacent to the Monterey Park Golf Course (west of Atlantic Blvd.) elevations range in the mid to upper 500s. The center of the city is in the rolling hillside area.

As stated previously, the wastewater collection system operates entirely by gravity pipelines. There are no lift stations in the collection system. The pipelines are primarily vitrified clay pipe (VCP) and the predominant diameter is 8-inches. The largest diameter of collection system pipeline in the city is 15-inches. An approximation of the system by pipeline diameter can be seen in Table 1.

Table 1: Collection System Pipeline Percentage by Diameter

Diameter	Percentage of Total
8	95
10	3
12	1
15	1

Note: Footages based on City provided information

The collection system comprises approximately 126 miles of pipeline with 2,289 manholes (Sanitary Sewer Management Plan, URS 2009). The city does not currently have a system for numbering the manholes. It is not known by the current staff if there ever was a system for numbering the manholes. There are sections of pipelines in the collection system that are not VCP, but polyvinyl chloride (PVC) and concrete pipe. Concrete pipe is very susceptible to the effects of the corrosive nature of a wastewater environment and the use of this pipe material is fairly rare. This pipe material is discussed in greater detail in Chapter 6.

The wastewater collection system atlas that is used by city work forces are 8.5 x 11 inch sheets with portions of the collection system photocopied from a previous source. The city does have a grid system for the sheets that range from B3 to F6. It is unclear if there is an A series in the grid. A copy of the grid system is shown on Figure 3. With no numbering system for the manholes, it is very difficult for crews to accurately describe the location of the facility other than by street and cross streets.

According to the California Department of Finance population estimate for 2013, the City of Monterey Park has a population of 61,445. According to the estimate, the population has increased slightly from the figure in 2012 of 61,184. The community is primarily residential in composition. There are areas of commercial located in the city along the major corridors (Atlantic Blvd, Garvey Avenue, Garfield Avenue and Monterey Pass Road).

The city does not process its own wastewater nor does it have a wastewater treatment plant. Similar to other surrounding communities, the city wastewater system was originally designed to rely on the Los Angeles County Sanitation Department (LACSD). LACSD collects the wastewater from several communities and transports it to an LACSD nearby wastewater treatment plant. The city is part of LACSD District No. 2. In the city, there are several points where the city collection system connects to the LACSD trunk lines that pass through the city. Figure 2 shows the LACSD trunk lines and the city collection system connection points. The wastewater generated by the city is not metered as it flows into the LACSD system. The city does not know exactly how much wastewater is generated by the community because of the lack of metering. In addition, the LACSD does not accurately know how much wastewater is generated by the community of Monterey Park. In speaking with a representative from

LACSD, they confirmed that the wastewater is not metered from the individual communities, but rather typical generation rates based on land use are used to determine an approximation of the wastewater generated. These approximations are based on reports that are prepared by LACSD in order to establish their rates. Rates for the LACSD system are charged on the annual tax bill for each parcel in the community. The Appendix contains the LACSD typical sewage generation rates by land use along with the wastewater charges for District No. 2 communities.

Chapter 4 - Future Development Considerations

The City of Monterey Park is essentially built out with respect to development of open space or vacant parcels. There are specific areas that will benefit from infill or redevelopment of existing land uses; however, there are no imminent large scale developments on the planning horizon. The 2009 SSMP identified three developments that were proposed to be constructed in the city: Atlantic Time Square, Town Center and Market Square. The Atlantic Time Square development was constructed after the 2009 SSMP. It is assumed that the recommendations for the wastewater pipeline improvements identified in the SSMP were implemented. For the remaining two developments, the 2009 SSMP modeling efforts identified pipeline diameters that will need to be installed as part of the development conditions associated with the projects. Those future developments were not reanalyzed as part of this report. Based on discussions with city staff, there are no major projects identified that will modify the existing wastewater generation rates for specific areas of the city. Densification of existing land uses will increase the wastewater generation for the specific areas of the city where the growth will occur, but that is not envisioned to be widespread. Pipelines that were identified in the 1996 Sewer Master Plan defined as near the hydraulic deficient criteria should be reviewed in detail in those areas where substantial densification is intended to occur - conversion of single family residences into multifamily complexes or conversion of commercial property into live/work units (residential and commercial combined would be two examples).

Chapter 5 - Collection System CCTV Review

Background

The City has previously hired contractors to perform closed circuit television (CCTV) recording of the collection system pipeline interiors. As part of this update, city staff provided a map showing the areas of the city that had CCTV work performed in the past. The areas where CCTV work was previously performed can be seen in Figure 5. The footages from the CCTV logs provided by the city are shown in Table 2.

Table 2: Collection System CCTV Work Performed

Year	Footage (feet/miles)
2005	48,526 / 9.2
2006	56,219 / 10.65
2007	49,283 / 9.33
2008	43,000 / 8.14
2011	37,072 / 7.02

Note: The footages were calculated based on the total length of each reach of pipeline videotaped and recorded in the CCTV log.

From the footages provided and the estimated total city footage of 126 miles stated in the SSMP (URS, 2009) it was calculated that approximately 44.3 miles or 35% of the city had been televised. The years of the work performed were: 2000, 2005, 2006, 2007, 2008, and 2011. The 2000 CCTV work consisted entirely of paper inspection logs. There were no videos present. It is surmised that there were VHS tapes provided with the log book because that is how the 2005, 2006 and 2008 work was delivered to the city at the time of the work performance. Regardless, the 2000 work is considered obsolete at this point and as part of a routine, managed CCTV system, those pipelines are overdue for CCTV work.

As part of the scope of work for the update, the city provided the previous CCTV recordings that were on VHS tapes (2005, 2006, 2008). The tapes were sent to be converted to DVDs. In addition to the VHS tapes, the City provided DVDs of 2007, a portion of 2008 and 2011 for viewing also. There were a couple of general observations that were initially made regarding the CCTV work. Because the city does not have a formal manhole numbering system in place, the CCTV work listed the locations by pipeline station or a system that was not familiar to current city wastewater staff. Using this system, there are several obvious issues. For example, the location shown on the CCTV recording log does not indicate a cross street or starting point for the work. It merely begins with a station and continues all of the work for that period off of that station by street. Therefore, it is difficult and/or impossible to determine where any of the deficiencies exist. Many of the streets that were investigated are long. The footages provided by the recording do not exactly match the lengths shown on the atlas. In addition, there were errors reported in footages recorded and stations shown on the work. It is understood that the CCTV work has not been reviewed in detail by city staff.

Analysis

As part of this report, a formal process for reviewing the tapes was established. The process was:

- Convert the provided tape to DVD for viewing.
- Assemble a binder with the DVDs in place along with the associated video log.
- Code the condition of the pipeline based on the CCTV video log as follows:
 1. Grease
 2. Roots
 3. Sag
 4. Minor cracks
 5. Major cracks
 6. Offset joints
 7. Missing pipe
- Review electronic video work for conditions 4 through 7.
- Note areas identified as 1 through 3 and spot check videos to verify consistency.
- Prepare budget level repair estimates for the pipeline defects 4 through 7. Grease is a maintenance issue that is tied directly to the success of the city's fats, oils and grease (FOG) program. Pipeline sags can only be corrected by pipeline replacement and are considered a maintenance item unless the sag creates a pressurized condition. Eventual correction is recommended once other more critical areas are addressed.

Figure 5 was prepared to show the areas that had previous CCTV work performed based on the information provided by city staff.

There are entire sections of the city collection system that have never been internally inspected. This is not advisable, has been previously identified in the SSMP document to be performed and needs to be corrected as part of an aggressive campaign. As part of routine collection system maintenance, it is important to perform regular CCTV inspections of the pipeline system. The CCTV program should perform internal inspections of the entire collection system every 5 to 10 years and supplemental CCTV should be performed in areas where there are known issues (sags, grease, roots) every two years depending on the condition. To accomplish the necessary CCTV inspections many agencies purchase their own CCTV camera van and equipment and retain the staff necessary to operate the equipment. The staff can also perform other tasks that are required when they are not performing the CCTV work. As part of the city's Sewer System Management Plan (SSMP), internal inspection of the pipelines is a recommendation. The State of California considers CCTV of the collection system a requirement for proper management of the collection system and reduction of sewer system overflows (SSOs). Sewer system overflows

that can be avoided through regular CCTV inspections could lead to fines imposed by the State Water Resources Control Board.

Findings

Based on the review of the videos provided, the collection system reviewed is in a serious state of disrepair. As there is no current CCTV program to document the correction of findings of previous CCTV work, it has to be assumed that the condition is still present unless additional information can be provided. In general, the CCTV work performed was of good quality. The camera operators performed well in documenting the condition of the collection system videoed. It is not common practice to perform a CCTV system inspection without a thorough cleaning of the pipeline prior to the CCTV work. It was evident in many if not all of the inspections that a cleaning of the pipeline prior to the CCTV work had not been performed. Failure to clean prior to video creates a situation where pests, roots, grease, and general wastewater debris are present on the video which do not add to the quality of the recording. Dirty pipelines also can mask any cracks or defects in the pipeline because areas are covered.

Grease

The areas reviewed had unacceptable levels of grease in the pipeline. There were customer lateral connections that appeared to be completely sealed off with grease plugs. Grease was so prevalent in certain pipeline reaches that the camera could not advance after several attempts because of the buildup of grease. It is evident based on the review of 35% of the collection system that the fats, oils and grease (FOG) program that is being performed by the city is not reaching the target audience on a large enough scale. The 1996 Wastewater Master Plan and 2009 SSMP both identified grease as a condition that was in need of correction.

Roots

Additionally, the system has numerous pipelines exhibiting extensive root intrusion. Many of the areas had to cease CCTV work due to blockages and the work had to set up downstream of the blockage and work upstream to complete the review of the pipeline reach. Root and grease conditions are very dangerous conditions in a collection system as the buildup collects passing material eventually forming a seal of the pipeline and leads to a sanitary sewer overflow condition in the street, exposure of the residents and environment to untreated wastewater, and the potential for financial penalties or civil penalties by the regulatory agencies.

Structural Issues

The videos reviewed show pipelines that failed structurally ranging from minor cracking at joints or laterals to spiral fracturing and visible separation of the pipeline material to areas where holes exist in the pipe or sections of the pipe are missing or fallen into the channel.

Not many of the areas reviewed show pipeline sags.

From the CCTV work reviewed (35% of the entire collection system) there were areas identified with one of each of the conditions shown above (1 through 7). The breakdown of the conditions observed is shown in Table 4.

The identified issues were then categorized into recommended improvement projects that are listed in the following section. A table listing all of the CCTV identified issues is included in the Appendix for reference. Grease and root condition pipeline reaches were identified, but not included as particular projects in the recommendation section as they relate to overall maintenance duties in a collection system. Sagged pipe reaches were also not specifically identified at any other location than in the Appendix. The recommendation section includes pipelines exhibiting a condition 4, 5, 6, or 7.

Future CCTV work should incorporate manhole numbering identifiers so that it can be accurately recorded and any issues identified for repair. A programmatic system for performing CCTV work needs to be prepared so that within a reasonable timeframe (10 years from a budget standpoint, 5 years recommended) the entire collection system is internally inspected. This work will then be started again for the next predetermined period as part of the recommendations and system requirements outlined in the city's Sewer System Management Plan (SSMP) that was reported to the regulatory agencies.

Table 4: Collection System Condition Based on CCTV Review

Condition	Percentage of Total CCTV Reaches Reviewed
Grease	19%
Roots	27%
Pipeline Sag	2.2%
Structural Deficiency	32%
Offset Joint	3%
No Observed Issue	34%

Note: Several pipeline reaches contain more than one issue and are coded appropriately. The total number of pipeline reaches reviewed is 957 from 2005 through 2008 and 2011.

Chapter 6 - Recommended Capital Improvement Program

This chapter provides a list of recommended Capital Improvement Program projects based on the information collected in the preceding chapters. The recommended projects are a combination of physical improvement projects, staff/equipment improvements as well as overall program improvements. In speaking with city staff, the recommendations from the previous 1996 sewer master plan were not performed or implemented to their knowledge. Historical city staff are no longer with the agency and it cannot be confirmed that any of the recommendations were implemented. Therefore, it must be assumed that the repairs have not been made. It has also been confirmed that the recommendations outlined in the 2009 Sewer System Management Plan (SSMP) have not been performed or budgeted. Many of the recommendations listed an implementation date of 2009. It is understood that one of the reasons for the wastewater rate increase was to perform the recommendations.

Historical Recommendations

The recommended Capital Improvement Program (CIP) contains the recommendations from the previous study as well as the 2009 Sewer System Management Plan. As stated previously, cleaning of grease in the system is considered part of regular operation and maintenance activities so the cost estimate was not updated for this study. The cleaning of grease impacted pipelines is not a capital improvement project and those improvements are shown in Table 5 for reference.

Table 5 - Recommendations from 1996 Sewer Master Plan Relating to Grease

No.	Reason for Recommendation	Location	Length (ft)	Diameter (in)	2009 Updated Cost Estimate
1	Grease	Harding Ave: from Ynez Ave. to Chandler Ave.	175	10	\$4,111
2	Grease	Nicholson Ave: from Garvey Ave. to 300 ft. north	300	8	\$7,049
3	Grease	Lincoln Ave: from Garvey Ave. to 300 ft. north	300	8	\$7,049
4	Grease	Garvey Ave: from Baltimore Ave. to Ramona Ave.	300	12	\$7,049
5	Grease	Garvey Ave: from Lincoln Ave. to Garfield Blvd.	600	12	\$14,096
6	Grease/ Hydraulic	Garvey Ave: from 278 ft. west of Atlantic to Chandler Ave. and Atlantic Blvd. then from Garvey Ave. 200 ft. north	1,078	10 and 12	\$25,327
7	Grease	McPherrin Ave: from Avondale Ave. to Garcelon Ave.	300	8	\$7,049
8	Grease	Alley west of El Mercado Ave: from El Mercado Ave. to El Mercado Ave.	1,200	8	\$28,194
9	Grease	Alley west of Atlantic Ave: from Harding Ave. to easement	675	8	\$15,859
10	Grease	Easement north of El Portal Pl: from Alley west of Atlantic Blvd. to Alley west of El Mercado Ave.	500	8	\$11,748
11	Grease	Alley west of Atlantic Blvd: from El Portal Pl. to Cadiz St.	600	8	\$14,096
12	Grease	Emerson Ave: from New Ave. east to city limits	200	8	\$4,699
13	Grease	Garfield Pl: from Garfield Ave. to end of street	200	8	\$4,699
14	Grease	Easement from Elmgate St. to Floral Dr.	600	8	\$14,096
15	Grease	Ramona Blvd: from apartment complex to Golf Course Rd.	600	8	\$14,096

No.	Reason for Recommendation	Location	Length (ft)	Diameter (in)	2009 Updated Cost Estimate
16	Grease	Isabella Ave: from Markland Dr. to Riggin St.	200	8	\$4,699
17	Grease	Alley between Riggan St. and Hillview Dr.	600	8	\$14,096
Total Length 8 inch Diameter			6,275	Total Cost	\$147,429
Total Length 10 inch Diameter			715	Total Cost	\$14,438
Total Length 12 inch Diameter			1,438	Total Cost	\$36,145
Total All Recommendations			8,428	Total Cost	\$198,012

Note: The 1996 Wastewater Master Plan also identified numerous pipeline reaches that required hydraulic improvements to accommodate increased flow due to build out or known conditions at that time. These improvements are included in the list of Capital Improvement Projects as they are pipeline improvements and not part of operation and maintenance of the collection system.

As mentioned previously, the 2009 SSMP identified several recommendations (12 total) that were to be implemented in 2009 or shortly thereafter. Those recommendations were also included in the list of Capital Improvement Program projects as they have not been completed yet. One of the recommendations is to prepare wastewater collection system atlas maps for the city. As part of this project, those maps were created showing manhole labels, pipe diameters, and flow direction and the atlas grid that was shown on the previous photocopy maps provided by the City was used.

The 1996 Wastewater Master Plan also listed 19 pipeline segments that based on the modeling performed as part of the Master Plan effort did not meet the requirements for adequate wastewater flow capacity and it was recommended to increase the diameter of the pipelines or install parallel pipelines. As part of this update, these recommendations were not validated or confirmed, but merely included in the Capital Improvement Program project list with 2013 cost estimates. Table 6 shows the recommendations and the updated costs.

Table 6 - Recommendations from 1996 Sewer Master Plan Relating to Hydraulic Conditions

No.	Recommendation	Location	Length (ft)	Diameter (in)	2009 Cost Estimate	2013 Cost Estimate
1	Parallel Pipeline	Grandridge Ave: from Alley east of Isabella Ave. to Arlight St.	1,050	8	\$262,752	\$333,600
2	Increase Diameter to 12-inch	Alley east of Isabella Ave: from Markland Dr. to Floral Dr.	802	12	\$218,144	\$283,300
3	Parallel Pipeline	Fulton Ave: from Markland Dr. to Riggin St.	481	8	\$120,365	\$157,000

No.	Recommendation	Location	Length (ft)	Diameter (in)	2009 Cost Estimate	2013 Cost Estimate
4	Parallel Pipeline	Emerson Ave: from New Ave. to Elizabeth Ave. and from Orange Ave. to Alhambra Ave.	1,536	8	\$384,369	\$474,000
5	Parallel Pipeline	Chandler Ave: from Harding Ave. to 300 ft north	300	10	\$77,112	\$115,600
6	Replace 8-inch Diameter Pipeline	Easement from Cipriano Pl. to Alley west of El Mercado Ave. and Alley from easement to El Portal Ave.	630 140	10 12	\$161,935 \$38,080	\$247,900
7	Replace with 12-inch Diameter Pipe	Easement/Alley: from Harding Ave. to Ynez Ave.	2,250	12	\$612,000	\$783,000
8	Reline Existing Pipeline	Gladys Ave: from Emerson Ave. to end of street	700	8	\$128,500	\$228,400
9	Reline Existing Pipeline	Emerson Ave: from Nicholson Ave. to Lincoln Ave.	500	8	\$91,800	\$176,800
10	Reline Existing Pipeline	Bradshawe Ave: from 1018 Bradshawe Ave. to Bradshawe Pl.	200	8	\$36,720	\$84,400
11	Reline Existing Pipeline	Divina Vista St: from Ynez Ave. to top of hill	300	8	\$55,080	\$110,200
12	Replace 8-inch Diameter Pipeline	Fulton Ave: from Fernfield Dr. to Gleason St.	284	10	\$72,999	\$111,100
13	Parallel Pipeline	Sefton Ave: from Newmark Ave. to 310 south	310	8	\$77,574	\$112,700
14	Parallel Pipeline	Garvey Ave: from Alhambra Ave. to Nicholson Ave.	612	8	\$153,147	\$205,600
15	Parallel Pipeline	Floral Dr: from Atlantic Blvd. to Collegian Ave.	179	8	\$44,793	\$78,800
16	Parallel Pipeline	Garvey Ave: from Electric Ave. to Marguerita Ave.	372	8	\$93,089	\$128,800
17	Replace 10-inch Diameter Pipeline	Harding Ave: from Ynez Ave. to Chandler Ave.	566	12	\$38,080	\$199,100
18	Replace 10-inch Diameter Pipeline	Easement north of El Portal Pl: from Atlantic Blvd. to Alley west of Atlantic Blvd.	140	12	\$48,500	\$73,800
19	Replace 8-inch Diameter Pipeline	Emerson Ave: from Elizabeth Ave. to 200 ft. west	194	10	\$262,752	\$88,000

	Total Length 8 inch Diameter	6,240	Total Cost	\$2,090,300
	Total Length 10 inch Diameter	1,408	Total Cost	\$464,700
	Total Length 12 inch Diameter	3,898	Total Cost	\$1,437,100
	Total All Recommendations	11,546	Total Cost	\$3,992,100

Note: The 1996 Master Plan cost estimate was adjusted in the 2009 SSMP by a factor of 136% based on the Consumer Price Index. The 2013 cost estimate was calculated based on construction cost data from recent construction projects, rental rates using the State of California Department of Transportation Equipment Rental Cost Database and the State of California Department of Industrial Relations published labor prevailing wage rates for the 2013 timeframe.

(Note continued) The bold 2009 estimates shown for Project 17 and 19 do not calculate correctly based on the cost estimate per linear foot provided in the 2009 SSMP document (\$272/lf for Project 17 and \$250/lf for Project 19). The 2013 cost estimates shown are closer to the anticipated cost of the replacement of the pipeline.

As part of the 2009 Sewer System Management Plan (SSMP), the consultant made several system wide improvement recommendations to provide better efficiency to the overall operation of the system. In the SSMP, there were specific implementation timelines that were provided. The implementation did not occur, but the recommendations are included in the proposed wastewater system rate increase to allow for the city to make the recommended improvements. Table 7 lists the recommendations.

Table 7 - Recommendations from 2009 Sewer System Management Plan

No.	Priority	Identified Issue	Recommendation	Budget (2009)
1	High	Up to date Sewer Atlas Map Book	Using GIS format, develop and maintain a complete sanitary sewer atlas with an inventory of the data components.	\$100,000
2	High	Geographic Positioning Survey	Use GPS technology to inventory all of the City's wastewater collection system components.	\$100,000
3	High	Computerized Maintenance Management System (CMMS)	Purchase a CMMS for the wastewater collection system. Pursue integration with the City's maintenance management system.	\$250,000
4	High	FOG Program	Expand the City's FOG program to include public outreach and a formal FOG program managed by the City's collection system staff.	\$100,000
5	High	CCTV System Expansion	Expand CCTV operations equipment and staffing to include one additional CCTV van and two additional staff members to properly perform CCTV inspections of new and existing lines	\$300,000
6	High	Asset Management Plan	Implement an asset management plan to actively develop rehabilitation and replacement programs for the collection system.	\$500,000

No.	Priority	Identified Issue	Recommendation	Budget (2009)
7	High	System Evaluation and Capacity Assurance Plan	Perform a complete Sewer Master Plan to refine the capital improvement project list every five years.	\$150,000
8	Medium	Upgrade field equipment for crews	Upgrade field equipment to make CCTV software compatible with other office software. Move towards electronic maps on hard mounted lap tops in the field crew trucks.	\$50,000
9	Medium	Ongoing Training	Provide ongoing training for the City's collection system staff to be proficient in the use of the CMMS and GIS for collection system maintenance activities	\$10,000
10	High	Emergency Overflow Response Plan	Update recently prepared Emergency Overflow Response Plan. Complete the plan and include systematic review annually of the plan in meeting the requirements of the SSMP.	\$15,000
11	High	Flow Monitoring	Implement flow monitoring at key locations (10 and 2 rain gauges) for a period of three months between December and March to collection information on the extent of the I/I during the wet and dry weather conditions.	\$75,000
12	High	Implement Annual Grease and FOG Inspection Program	Allowance for regular maintenance at identified hot spot locations	\$200,000

Note: The 2009 budget numbers were not adjusted to 2013 dollars because it was estimated that the costs were in the same magnitude as previously estimated in 2009 for the identified recommendations.

Analysis

All of the closed circuit television (CCTV) videos provided by the city were reviewed that had conditions identified in the operator log sheets as a 4, 5, 6, or 7. Spot checks were performed for video logs that indicated roots or grease issues to verify that the logs were accurately reporting conditions in the pipeline. Each segment of pipeline reviewed with the 4 through 7 numbering was then provided a recommended improvement either spot repair to correct the issue for isolated small pipeline deficiencies such as one offset joint or a pipeline reach with relatively far spread deficiencies (cracked joints, cracked laterals, etc.). The next recommendation was to line the existing pipeline with a cured in place pipe (CIPP) product. This recommendation was made for pipelines that had many repeatable deficiencies (multiple joint fractures, several segments of pipe segments requiring repair, multiple segments spanning several reaches, or some major pipe deficiencies suitable to CIPP). CIPP is far less costly than traditional open cut construction where the project combines several pipeline reaches together into one project to realize the cost savings. It is also less impact to the residents and community because lateral connections can be reinstated robotically from within the pipeline and the entry into the pipeline can be achieved from within an existing manhole. The majority of the recommendations were either spot repair or CIPP for the areas requiring improvement. Hydraulic issues were not analyzed as part of this project so increasing diameter of existing pipelines was not in the list of projects. In pipeline reaches where there were several spot repairs (typically greater than 5 or 6) the recommendation was modified to CIPP of the entire reach between the manholes because it was less costly than several small excavations. Lastly, there were some pipeline reaches that required complete replacement due to the severity of the pipeline deficiency where a spot repair would be too long and the CIPP is not the best application.

For each project, a CIP project specific worksheet was prepared that identifies a recommended implementation schedule as well as a summary budget. The budget values were established utilizing three sources of information:

recent construction project typical cost estimates, prevailing wage labor rates using the State of California Department of Industrial Relations database for Los Angeles County (www.dir.ca.gov) and the State of California Department of Transportation (Caltrans) database for equipment rental rates (www.dot.ca.gov/hq/constru/eqrr). From that information, a master sheet was created in MS Excel and typical replacement costs were calculated. Using costs per hour for labor and equipment, an estimate of the amount of time required to perform certain tasks (excavation, pipeline installation, manhole setting, etc.) were calculated. Costs for material items were also estimated using recent quotes for materials and construction bids. The equipment, labor and material costs were then converted into a cost per foot for each type of repair (CIPP, replacement) for typical pipeline diameters found in the city system (8-, 10-, and 12-inch). Spot repairs were tabulated on a per occurrence basis. The MS Excel spreadsheet used for the cost estimating is located in the Appendix.

Recommendations

Once the costs were tabulated for the typical recommended repairs of the pipelines in the system, a Capital Improvement Program (CIP) sheet was created for each project identified. The first 19 projects are the pipeline hydraulic repair projects identified in the 1996 Wastewater Master Plan. These were selected as the first 19 for no reason other than they were the oldest recommendations.

CCTV Program

CIP project 20 is the annual CCTV program. This is a requirement in the SSMP and part of the recommendations outlined by the State of California in preventing sewer system overflows. The city does not have a program currently and it does not appear that there was a methodology to the areas of the community that were videotaped previously. Recognizing that the city has certain budget limitations, the CCTV program was divided into 10 sections of approximately 66,000 feet each. It is understood that the city cannot afford to video the entire system sooner than that timeframe, but it needs to be an annual project that is performed until the entire system has been documented and then repeated. The CCTV program will also be of benefit in that prior to the CCTV work, cleaning of the pipe will occur and that will provide the City with a program that will ultimately cover the entire pipeline network. The recommended CIP breakdown provides a comparison between having a private contractor perform the work and having the city crews perform the work. For the private contractor estimate, recent estimates were used for projects completed in similar lengths and diameters of pipelines. For the city staff performing the work estimate, the cost per foot assumes that the CCTV equipment was purchased as a separate project (CIP 37) as recommended in the 2009 SSMP and that two city staff members are needed to perform the CCTV work which is typically how it is performed. The cost per staff person can be seen in the Appendix on the master calculation spreadsheet. The benefit of having city staff perform the CCTV work is that they are not concerned with profit or other clients and they have a sense of pride working on their own system. The differential between hiring out or hiring additional staff members translated to the city option costing \$0.40 more per foot. Annual CCTV inspection is necessary to ensure that the collection system continues to operate without incident. The community has a significant grease and root intrusion issue that hopefully will be addressed over time, but the CCTV work will also be required as a necessary tool of operating the system in cases of blockages, grease/root management, and pipeline condition.

Spot Repair Projects

CIP projects 21 through 24 are the areas where spot repairs are recommended. The spot repairs are based on the review of the CCTV work performed to date and there were 362 areas that are candidates for spot repairs. The areas were grouped relatively close together and the breakdown each year was in the mid to upper \$300,000 range. It is recognized that it is not realistic to attempt to repair all of the spot repair areas all at once because the cost would be approximately \$1.5M so it was divided into four relatively equal segments based on cost.

Cured in Place Pipe (CIPP) Projects

CIP projects 25 through 30 are the areas that require cured in place pipe (CIPP) lining based on the review of the CCTV work. Of the CCTV videos reviewed, there was approximately 59,400 linear feet that are recommended to be rehabilitated using CIPP. According to the CCTV video logs and the pipelines reviewed, there is approximately 22,500 linear feet of the collection system that is reinforced concrete pipe. This pipe is not acceptable for

wastewater applications where the pipeline has atmospheric conditions. The hydrogen sulfide gas in the wastewater is released into the pipeline atmosphere and it combines with the water moisture to form sulfuric acid which is corrosive to concrete materials. As a result, the pipeline disintegrates and eventually fails. All of the concrete pipe identified in the system from the CCTV was included as a CIPP candidate. In addition to the areas with reinforced concrete pipe, there were pipeline reaches where the amount of spot repairs would cost more than just lining the entire reach so it was decided to include it in the CIPP recommendation list. Additionally, if there were pipeline deficiencies that were noted to be in the majority of the reach, the reach was added to the CIPP list. Areas with substantial root intrusion were not added to the list because root intrusion can be maintained with an aggressive cleaning program. It is recommended that the cost of maintaining the pipelines relatively root free versus lining the pipeline and eliminating the continual root maintenance should be explored by city staff at a future date. The projected total cost estimate for the installation of CIPP at the locations identified is \$3.9M. To manage the cost and implementation of the projects, the projects were spread over 6 years.

Pipeline Replacement Projects

CIP projects 31 and 32 are two specific streets that require pipeline replacement due to the extreme pipeline deficiency that was seen on the CCTV. Both of those street projects were estimated using the pipeline replacement costs in the master calculation sheet.

2009 SSMP Recommended Projects

CIP projects 33 through 43 are summarized directly from the 2009 SSMP recommendations. The costs from the 2009 report were modified to include a 15% contingency.

Annual Pipeline CCTV Projects Allowance

CIP project 44 is an allowance for costs associated with pipeline deficiency repairs discovered as the annual CCTV program (CIP 20) is performed. For purposes of this study, it was assumed that the city collection system is maintained consistent to the areas that had video work performed. The age is relatively similar and the pipeline materials, wastewater constituents, land uses are very similar so for estimating purposes, the remaining 65% of the collection system to have CCTV work performed will have similar results in Capital Improvement Program projects (spot repairs and CIPP). As stated previously, the annual cost for those projects is about \$800,000. That is the cost of project 44.

Once the 44 CIP projects were identified with their own cost estimates, a CIP sheet was created for each showing a map obtained courtesy of Google Earth of the area, a breakdown of the cost as well as the description of the project and the issue warranting the project. Those sheets and the cost breakdown are attached for reference.

The 44 projects were compiled into a summary table showing implementation years on a 10 year basis. This is the typical timeline for Capital Improvement Program projects in a master plan. It is assumed that after 10 years, several projects have been implemented and at that point, new projects are necessary (development related or improvement related) that need to be scheduled. The total cost of the identified projects is \$12,776,300.

The CIP implementation schedule lists the projects by the corresponding number assigned. Projects that repeat over the timeframe such as CCTV work or the pipeline repair allowance are shown. To keep the recommended CIP projects manageable from an implementation and financial aspect, the improvements were arranged so that the annual cost for the improvements would be \$2M. To spread the proposed improvements over a larger schedule is not realistic and the estimates would need to be revisited after approximately 5 to 7 years. The 1996 Wastewater Master Plan projects (CIP 1 through 19) were delayed until Year 5 to allow for implementation of more critical projects relating to pipeline deficiencies (spot repairs and CIPP).

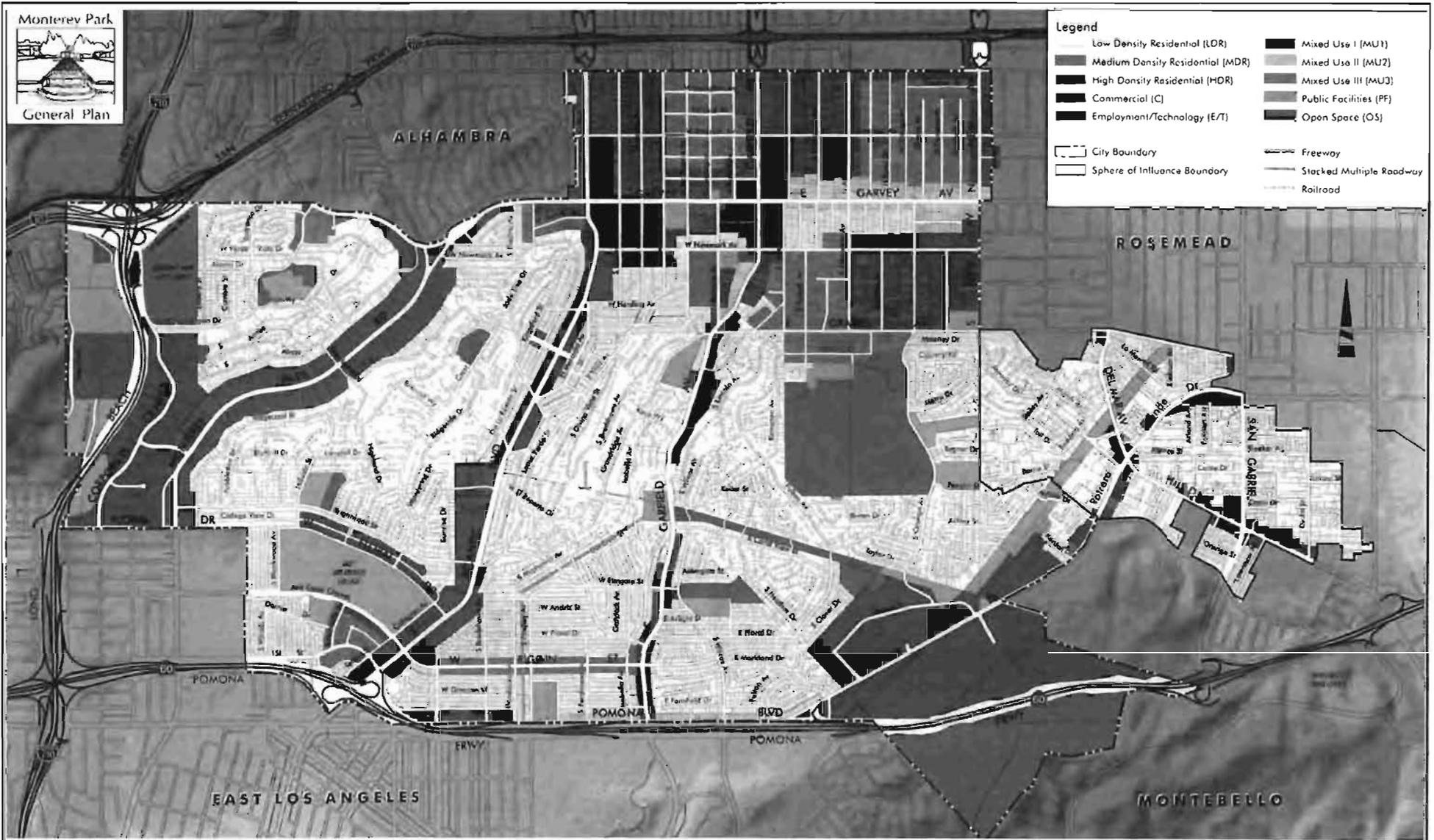
Monterey Park



General Plan

Legend

- | | |
|----------------------------------|--------------------------|
| Low Density Residential (LDR) | Mixed Use I (MU1) |
| Medium Density Residential (MDR) | Mixed Use II (MU2) |
| High Density Residential (HDR) | Mixed Use III (MU3) |
| Commercial (C) | Public Facilities (PF) |
| Employment/Technology (E/T) | Open Space (OS) |
| City Boundary | Freeway |
| Sphere of Influence Boundary | Stacked Multiple Roadway |
| | Railroad |



VERIFY SCALES
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 IF NOT THE ONLY ONE WHICH IS CORRECT
 VERIFY SCALES ACCORDINGLY



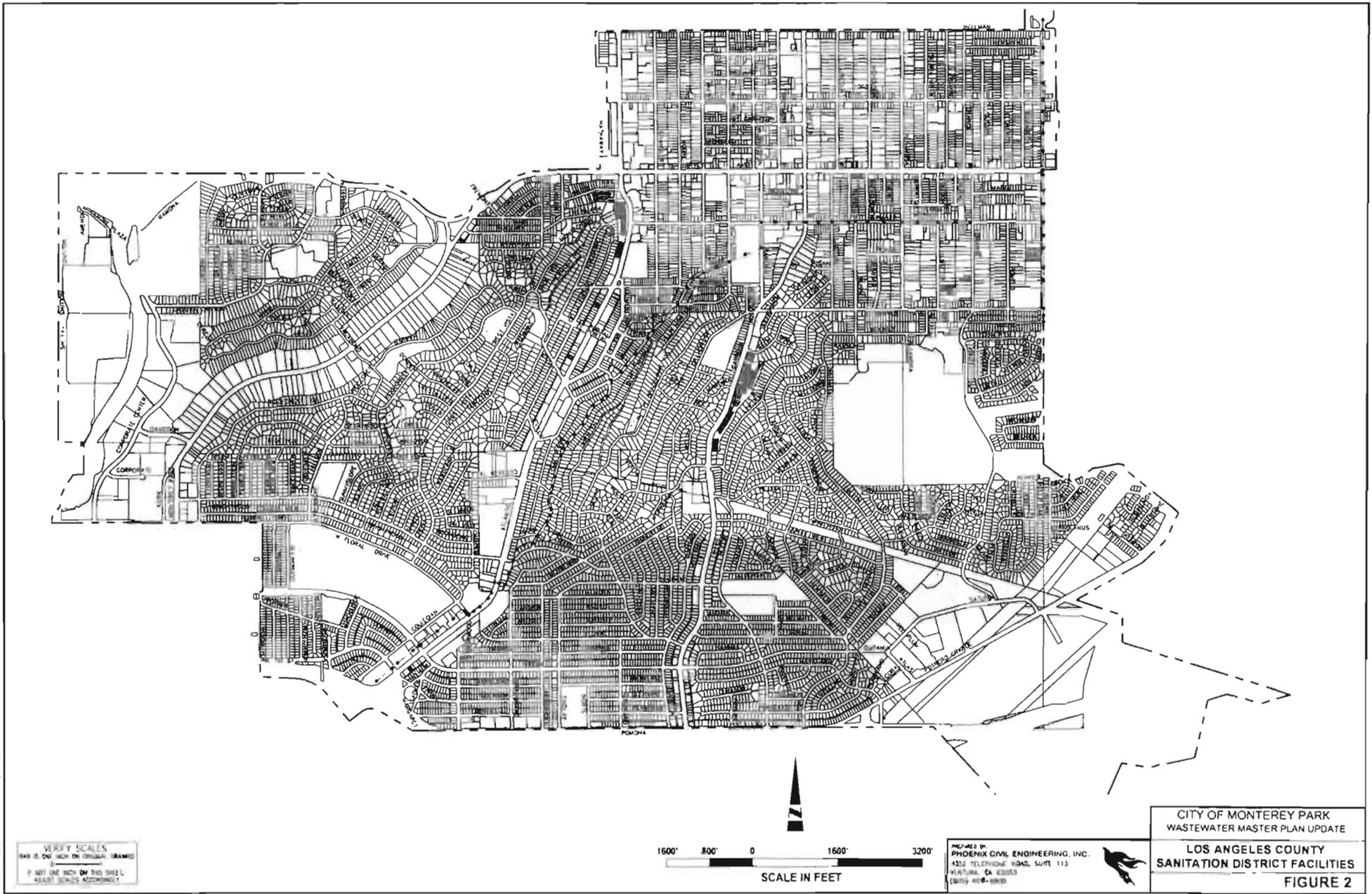
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 4000 W. 11TH AVENUE, SUITE 1113
 DENVER, CO 80202
 (303) 733-5800



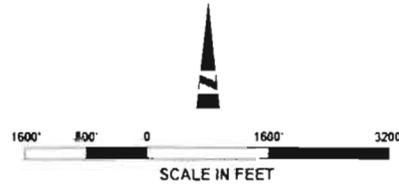
CITY OF MONTEREY PARK
 WASTEWATER MASTER PLAN UPDATE

LAND USE MAP

FIGURE 1



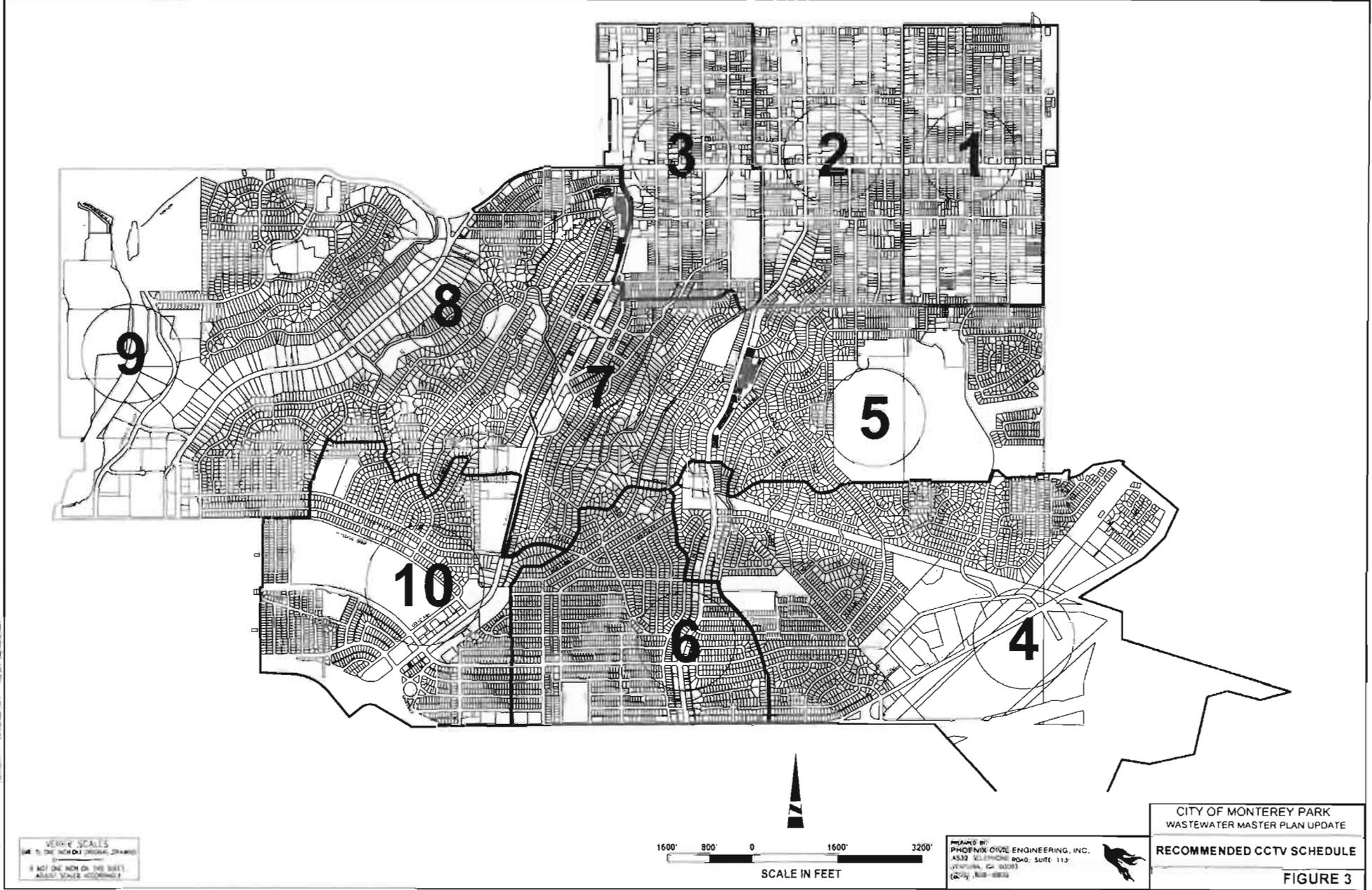
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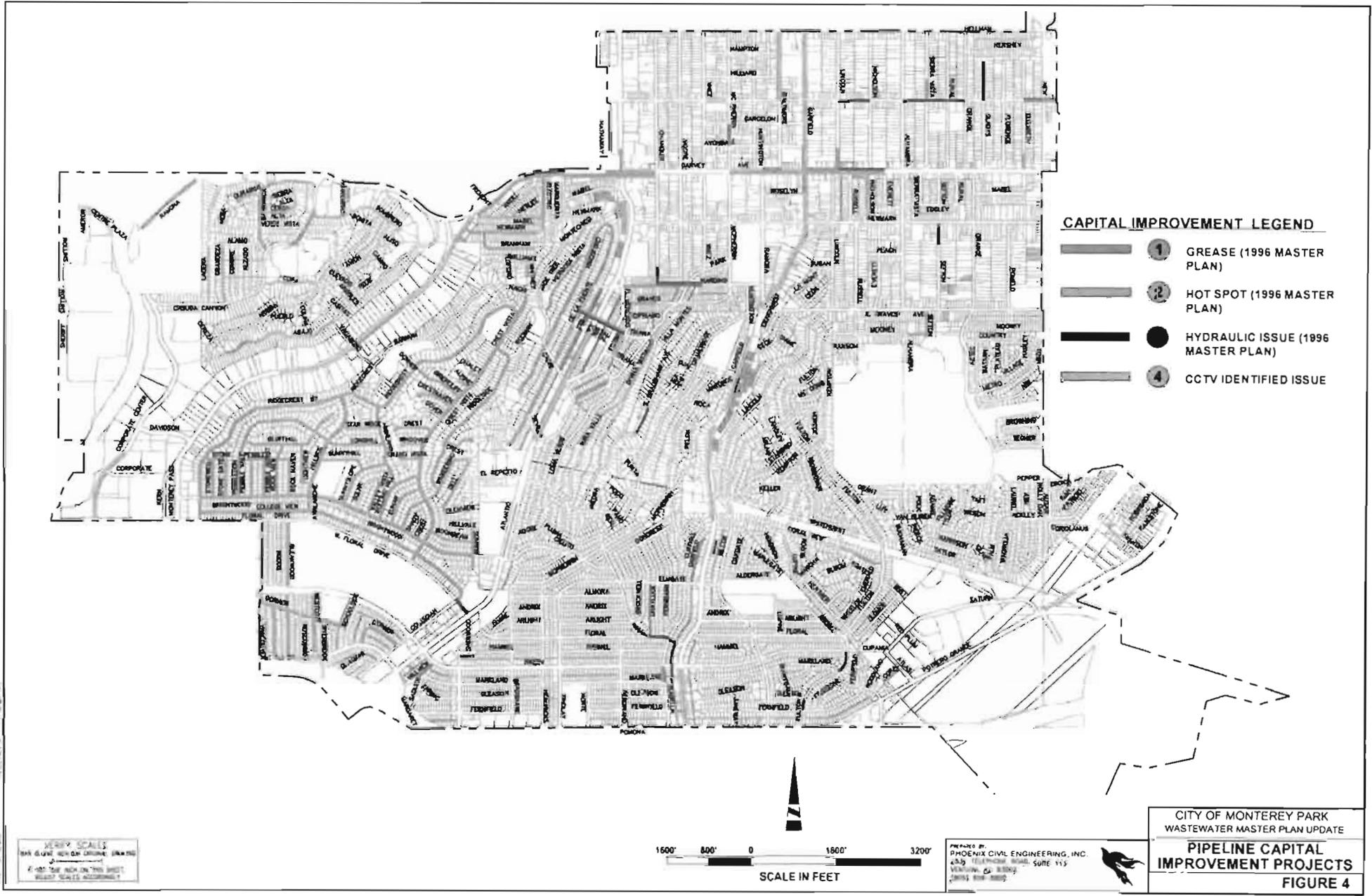


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 4522 TELEPHONE ROAD, SUITE 113
 PLEASANTON, CA 94566
 (925) 888-8888



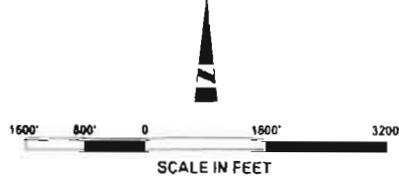
CITY OF MONTEREY PARK
 WASTEWATER MASTER PLAN UPDATE
 LOS ANGELES COUNTY
 SANITATION DISTRICT FACILITIES
 FIGURE 2





- CAPITAL IMPROVEMENT LEGEND**
-  1 GREASE (1996 MASTER PLAN)
 -  2 HOT SPOT (1996 MASTER PLAN)
 -  ● HYDRAULIC ISSUE (1996 MASTER PLAN)
 -  4 CCTV IDENTIFIED ISSUE

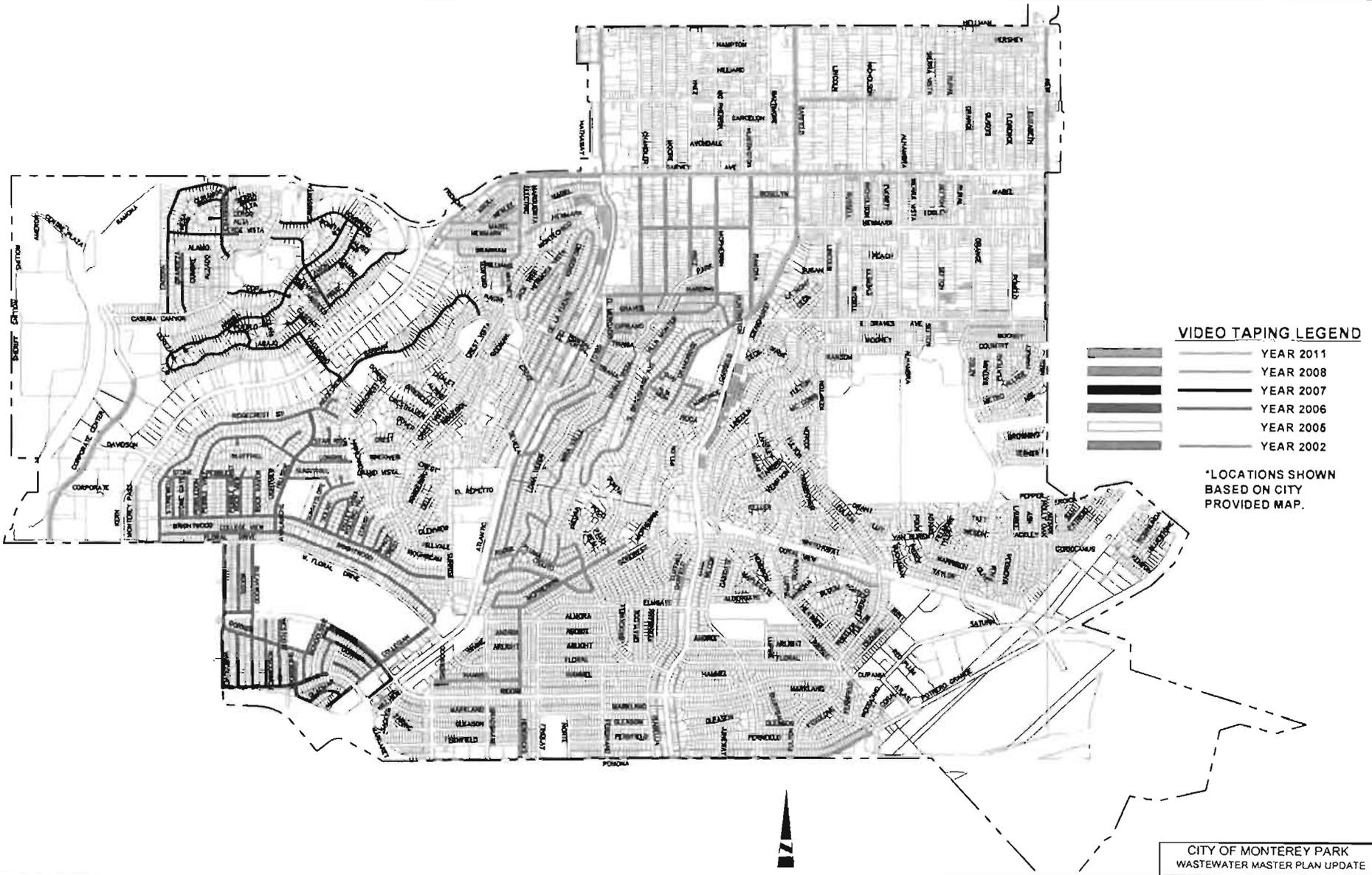
VERIFY SCALES
 MAY BE USED WITH OTHER DRAWINGS
 4"=100' MAP SCALE ON THIS SHEET
 8"=1" PLAN SCALE AS SHOWN



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 WILLOW GLEN, ARIZONA
 85901-2800



CITY OF MONTEREY PARK
 WASTEWATER MASTER PLAN UPDATE
PIPELINE CAPITAL IMPROVEMENT PROJECTS
 FIGURE 4

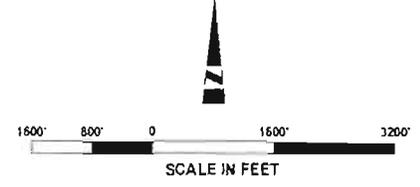


VIDEO TAPING LEGEND

	YEAR 2011
	YEAR 2008
	YEAR 2007
	YEAR 2006
	YEAR 2005
	YEAR 2002

*LOCATIONS SHOWN
BASED ON CITY
PROVIDED MAP.

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VENTURA, CA 93003
(805) 698-1800



CITY OF MONTEREY PARK
WASTEWATER MASTER PLAN UPDATE
CCTV WORK PERFORMED
FIGURE 5

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project Summary

Project No	Location	Description	Estimated Cost
1	Grandridge Ave: from Alley east of Isabella to Arlight Street	Pipeline Replacement	\$133,600
2	Alley East of Isabella Ave: from Markland Dr. to Floral Dr.	Pipeline Replacement	\$283,300
3	Fulton Ave: from Markland Dr. to Riffin St.	Pipeline Replacement	\$157,000
4	Emerson Ave: from New Ave. to Elizabeth Ave. and from Orange Ave. to Alhambra Ave	Pipeline Replacement	\$474,000
5	Chandler Ave: from Harding Ave. to 300 ft north Easement: from Cipriano Pl. to Alley west of El Mercado Ave. and Alley from easement to El Portal Ave	Pipeline Replacement	\$115,600
6		Pipeline Replacement	\$247,900
7	Easement/Alley: from Harding Ave. to Ynez Ave.	Pipeline Replacement	\$783,000
8	Gladys Ave: from Emerson Ave. to end of street	Pipeline Replacement	\$228,400
9	Emerson Ave: from Nicholson Ave. to Lincoln Ave. Bradshaw Ave: from 1018 Bradshaw Ave. to Bradshaw Pl.	Pipeline Replacement	\$176,800
10		Pipeline Replacement	\$84,400
11	Divina Vista Street: from Ynez Ave. to top of hill	Pipeline Replacement	\$110,200
12	Fulton Ave: from Fernfield Dr to Gleason St.	Pipeline Replacement	\$111,100
13	Sefton Avenue: from Newmark Ave. to 310 feet south	Pipeline Replacement	\$112,700
14	Garvey Ave.: from Alhambra Ave. to Nicholson Ave.	Pipeline Replacement	\$205,600
15	Floral Drive: from Atlantic Blvd. to Collegian Ave.	Pipeline Replacement	\$78,800
16	Garvey Ave.: from Electric Ave. to Margarita Ave.	Pipeline Replacement	\$128,800
17	Harding Ave.: from Ynez Ave. to Chandler Ave. Easement north of El Portal Pl.: from Atlantic Blvd. to Alley west of Atlantic Blvd.	Pipeline Replacement	\$199,100
18		Pipeline Replacement	\$73,800
19	Emerson Ave.: from Elizabeth Ave. to 200 feet west	Pipeline Replacement	\$88,000
20	Annual CCTV Program	Annual CCTV Program (10 year rotation)	\$191,200
21		Annual CCTV Prog. (City Staff)	\$221,800
22	Spot Repairs - Multiple Locations - Year 1	Spot Repairs (Various Locations)	\$377,400
23	Spot Repairs - Multiple Locations - Year 2	Spot Repairs (Various Locations)	\$365,000
24	Spot Repairs - Multiple Locations - Year 3	Spot Repairs (Various Locations)	\$385,700
25	Spot Repairs - Multiple Locations - Year 4	Spot Repairs (Various Locations)	\$373,300
26	Cured in Place Pipe Installations - Multiple Locations - Year 1	Cured in Place Pipe Installation	\$569,300
27	Cured in Place Pipe Installations - Multiple Locations - Year 2	Cured in Place Pipe Installation	\$570,400
28	Cured in Place Pipe Installations - Multiple Locations - Year 3	Cured in Place Pipe Installation	\$567,700
29	Cured in Place Pipe Installations - Multiple Locations - Year 4	Cured in Place Pipe Installation	\$794,600
30	Cured in Place Pipe Installations - Multiple Locations - Year 5	Cured in Place Pipe Installation	\$732,400
31	Cured in Place Pipe Installations - Multiple Locations - Year 6	Cured in Place Pipe Installation	\$706,400
32	Briardell Way	Pipeline Replacement	\$67,200
33	Alpine Terrace	Pipeline Replacement	\$96,700
34	Up to Date Sewer Atlas Map Book	SSMP Requirement	\$115,000
35	Geographic Positioning Survey	SSMP Requirement	\$115,000
36	Computerized Maintenance Management System	SSMP Requirement	\$287,500
37	FOG Program Expansion	SSMP Requirement	\$115,000
38	CCTV System Expansion	SSMP Requirement	\$345,000
39	Asset Management Plan	SSMP Requirement	\$575,000
40	Upgrade Field Equipment	SSMP Requirement	\$57,500
41	Ongoing Training	SSMP Requirement	\$11,500
42	Emergency Overflow Response Plan	SSMP Requirement	\$17,300
43	Flow Monitoring	SSMP Requirement	\$86,300
44	Implement Annual Grease and FOG Inspection Program	SSMP Requirement	\$230,000
45	Annual Allowance for Pipeline Repairs from CCTV	Pipeline Replacement	\$810,000
		Total	\$12,776,300

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program 10-Year Implementation

Project No.	Location	Description of Improvement	Year												
			1	2	3	4	5	6	7	8	9	10			
1	Grandridge Ave: from Alley east of Isabella to Arlight Street	Pipeline Replacement							\$333,600						
2	Alley East of Isabella Ave: from Markland Dr. to Floral Dr.	Pipeline Replacement													\$283,300
3	Fulton Ave: from Markland Dr. to Rigglin St.	Pipeline Replacement													\$157,000
4	Emerson Ave: from New Ave. to Elizabeth Ave. and from Orange Ave. to Alhambra Ave.	Pipeline Replacement										\$474,000			
5	Chandler Ave: from Harding Ave. to 300 ft north Easement: from Cipriano Pl. to Alley west of El Mercado Ave. and Alley from easement to El Portal Ave.	Pipeline Replacement									\$115,600				
6	Easement/Alley: from Harding Ave. to Ynez Ave.	Pipeline Replacement										\$247,900			
7	Gladys Ave: from Emerson Ave. to end of street	Pipeline Replacement												\$783,000	
8	Emerson Ave: from Nicholson Ave. to Lincoln Ave.	Pipeline Replacement						\$228,400							
9	Bradshaw Ave: from 1018 Bradshaw Ave. to Bradshaw Pl.	Pipeline Replacement										\$84,400			
10	Ovina Vista Street: from Ynez Ave. to top of hill	Pipeline Replacement										\$110,200			
11	Fulton Ave: from Fernfield Dr. to Gleason St.	Pipeline Replacement												\$111,100	
12	Sefton Avenue: from Newmark Ave. to 310 feet south	Pipeline Replacement												\$112,700	
13	Garvey Ave.: from Alhambra Ave. to Nicholson Ave.	Pipeline Replacement												\$205,600	
14	Floral Drive: from Atlantic Blvd. to Collegian Ave.	Pipeline Replacement													\$78,800
15	Garvey Ave.: from Electric Ave. to Marguerita Ave.	Pipeline Replacement													\$128,800
16	Harding Ave.: from Ynez Ave. to Chandler Ave.	Pipeline Replacement													\$199,100
17	Easement north of El Portal Pl.: from Atlantic Blvd. to Alley west of Atlantic Blvd.	Pipeline Replacement													\$73,800
18	Emerson Ave.: from Elizabeth Ave. to 200 feet west	Pipeline Replacement													\$88,000
19	Annual CCTV Program	Annual CCTV Prog. (City Staff)	\$221,800	\$221,800	\$221,800	\$221,800	\$221,800	\$221,800	\$221,800	\$221,800	\$221,800	\$221,800	\$221,800	\$221,800	\$221,800
20	Spot Repairs - Multiple Locations - Year 1	Spot Repairs (Various Locations)	\$377,400												
21	Spot Repairs - Multiple Locations - Year 2	Spot Repairs (Various Locations)		\$365,000											
22	Spot Repairs - Multiple Locations - Year 3	Spot Repairs (Various Locations)			\$385,700										
23	Spot Repairs - Multiple Locations - Year 4	Spot Repairs (Various Locations)				\$373,300									
24	Cured in Place Pipe Installations - Multiple Locations - Year 1	Cured in Place Pipe Installation	\$569,300												
25	Cured in Place Pipe Installations - Multiple Locations - Year 2	Cured in Place Pipe Installation		\$570,400											
26	Cured in Place Pipe Installations - Multiple Locations - Year 3	Cured in Place Pipe Installation			\$567,700										
27	Cured in Place Pipe Installations - Multiple Locations - Year 4	Cured in Place Pipe Installation				\$794,600									
28	Cured in Place Pipe Installations - Multiple Locations - Year 5	Cured in Place Pipe Installation						\$732,400							

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program 10-Year Implementation

Project No.	Location	Description of Improvement	Year													
			1	2	3	4	5	6	7	8	9	10				
30	Cured in Place Pipe Installations - Multiple Locations - Year 6	Cured in Place Pipe Installation							\$706,400							
31	Briarcliff Way	Pipeline Replacement	\$67,200													
32	Alpine Terrace	Pipeline Replacement	\$96,700													
33	Up to Date Sewer Atlas Map Book	SSMP Requirement			\$115,000											
34	Geographic Positioning Survey	SSMP Requirement						\$115,000								
35	Computerized Maintenance Management System	SSMP Requirement								\$287,500						
36	FOG Program Expansion	SSMP Requirement	\$115,000													
37	CCTV System Expansion	SSMP Requirement	\$345,000													
38	Asset Management Plan	SSMP Requirement								\$575,000						
39	Upgrade Field Equipment	SSMP Requirement		\$57,500												
40	Ongoing Training	SSMP Requirement		\$11,500												
41	Emergency Overflow Response Plan	SSMP Requirement	\$17,300													
42	Flow Monitoring	SSMP Requirement								\$86,300						
43	Implement Annual Grease and FOG Inspection Program	SSMP Requirement	\$230,000													
44	Annual Allowance for Pipeline Repairs from CCTV	Pipeline Replacement		\$810,000	\$810,000	\$810,000	\$810,000	\$810,000	\$810,000	\$810,000	\$810,000	\$810,000	\$810,000	\$810,000	\$810,000	
Total By Year			\$2,039,700	\$2,036,200	\$2,100,200	\$2,199,700	\$2,107,600	\$2,071,800	\$2,096,200	\$2,125,100	\$2,244,200	\$2,040,600				

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	1 – 1996 Master Plan
Schedule	Year 6
Description/Location	Grandridge Ave: from Alley east of Isabella to Arlight Street
Issue	Hydraulic Deficiency
Budget	\$333,600
➤ Design	\$55,600
➤ Construction	\$278,000

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #1
Grandridge Ave: from Alley east of Isabella to Arlight Street

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$18,720.00	\$18,720.00
2	Excavation	1050	LF	\$25.00	\$26,250.00
3	Manhole Installation	4	EA	\$8,300.00	\$33,200.00
4	Pipeline Installation	1050	LF	\$69.00	\$72,450.00
5	Backfill and Compaction	1050	LF	\$51.00	\$53,550.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$205,915.00
	Contingency	15%			\$30,900.00
	Overhead/Profit/Bonds/Insurance	20%			\$41,200.00
	Design and Construction Phase Services	20%			\$55,600.00
	Total				\$333,615.00
	Budget				\$333,600.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	2 – 1996 Master Plan
Schedule	Year 10
Description/Location	Alley East of Isabella Ave: from Markland Dr. to Floral Dr.
Issue	Hydraulic Deficiency
Budget	\$283,300
➤ Design	\$47,200
➤ Construction	\$236,100

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #2
Alley East of Isabella Ave: from Markland Dr. to Floral Dr.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$15,900.00	\$15,900.00
2	Excavation	802	LF	\$25.00	\$20,050.00
3	Manhole Installation	3	EA	\$8,300.00	\$24,900.00
4	Pipeline Installation	802	LF	\$89.00	\$71,378.00
5	Backfill and Compaction	802	LF	\$51.00	\$40,902.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$174,875.00
	Contingency	15%			\$26,200.00
	Overhead/Profit/Bonds/Insurance	20%			\$35,000.00
	Design and Construction Phase Services	20%			\$47,200.00
	Total				\$283,275.00
	Budget				\$283,300.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	3 – 1996 Master Plan
Schedule	Year 10
Description/Location	Fulton Ave: from Markland Dr. to Riggin St.
Issue	Hydraulic Deficiency
Budget	\$157,000
➤ Design	\$26,200
➤ Construction	\$130,800

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #3
Fulton Ave: from Markland Dr. to Riggin St.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$8,810.00	\$8,810.00
2	Excavation	481	LF	\$25.00	\$12,025.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	481	LF	\$69.00	\$33,189.00
5	Backfill and Compaction	481	LF	\$51.00	\$24,531.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$96,900.00
	Contingency	15%			\$14,500.00
	Overhead/Profit/Bonds/Insurance	20%			\$19,400.00
	Design and Construction Phase Services	20%			\$26,200.00
	Total				\$157,000.00
	Budget				\$157,000.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	4 – 1996 Master Plan
Schedule	Year 8
Description/Location	Emerson Ave: from New Ave. to Elizabeth Ave. and from Orange Ave. to Alhambra Ave.
Issue	Hydraulic Deficiency
Budget	\$474,000
➤ Design	\$79,000
➤ Construction	\$395,000

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #4
Emerson Ave: from New Ave. to Elizabeth Ave. and from Orange Ave. to Alhambra Ave.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$26,600.00	\$26,600.00
2	Excavation	1536	LF	\$25.00	\$38,400.00
3	Manhole Installation	5	EA	\$8,300.00	\$41,500.00
4	Pipeline Installation	1536	LF	\$69.00	\$105,984.00
5	Backfill and Compaction	1536	LF	\$51.00	\$78,336.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$292,565.00
	Contingency	15%			\$43,900.00
	Overhead/Profit/Bonds/Insurance	20%			\$58,500.00
	Design and Construction Phase Services	20%			\$79,000.00
	Total				\$473,965.00
	Budget				\$474,000.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	5 – 1996 Master Plan
Schedule	Year 7
Description/Location	Chandler Ave: from Harding Ave. to 300 ft north
Issue	Hydraulic Deficiency
Budget	\$115,600
➤ Design	\$19,300
➤ Construction	\$96,300

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #5
Chandler Ave: from Harding Ave. to 300 ft north

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$6,480.00	\$6,480.00
2	Excavation	300	LF	\$25.00	\$7,500.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	300	LF	\$79.00	\$23,700.00
5	Backfill and Compaction	300	LF	\$51.00	\$15,300.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$71,325.00
	Contingency	15%			\$10,700.00
	Overhead/Profit/Bonds/Insurance	20%			\$14,300.00
	Design and Construction Phase Services	20%			\$19,300.00
	Total				\$115,625.00
	Budget				\$115,600.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	6 – 1996 Master Plan
Schedule	Year 8
Description/Location	Easement: from Cipriano Pl. to Alley west of El Mercado Ave. and Alley from easement to El Portal Ave.
Issue	Hydraulic Deficiency
Budget	\$247,900
➤ Design	\$41,300
➤ Construction	\$206,600

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #6
Easement: from Cipriano Pl. to Alley west of El Mercado Ave. and Alley from easement to El Portal Ave.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$13,910.00	\$13,910.00
2	Excavation	770	LF	\$25.00	\$19,250.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation (10-inch diameter)	630	LF	\$79.00	\$49,770.00
5	Pipeline Installation (12-inch diameter)	140	LF	\$89.00	\$12,460.00
6	Backfill and Compaction	770	LF	\$51.00	\$39,270.00
7	Pressure Testing	1	LS	\$745.00	\$745.00
8	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$153,005.00
	Contingency	15%			\$23,000.00
	Overhead/Profit/Bonds/Insurance	20%			\$30,600.00
	Design and Construction Phase Services	20%			\$41,300.00
	Total				\$247,905.00
	Budget				\$247,900.00

Notes

Mobilization is calculated at 10% of bid items 2 through 8.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	7 - 1996 Master Plan
Schedule	Year 9
Description/Location	Easement/Alley: from Harding Ave. to Ynez Ave.
Issue	Hydraulic Deficiency
Budget	\$783,000
➤ Design	\$130,500
➤ Construction	\$652,500

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #7
Easement/Alley: from Harding Ave. to Ynez Ave.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$43,940.00	\$43,940.00
2	Excavation	2250	LF	\$25.00	\$56,250.00
3	Manhole Installation	8	EA	\$8,300.00	\$66,400.00
4	Pipeline Installation	2250	LF	\$89.00	\$200,250.00
5	Backfill and Compaction	2250	LF	\$51.00	\$114,750.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$483,335.00
	Contingency	15%			\$72,500.00
	Overhead/Profit/Bonds/Insurance	20%			\$96,700.00
	Design and Construction Phase Services	20%			\$130,500.00
	Total				\$783,035.00
	Budget				\$783,000.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
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Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	8 – 1996 Master Plan
Schedule	Year 5
Description/Location	Gladys Ave: from Emerson Ave. to end of street
Issue	Hydraulic Deficiency
Budget	\$228,400
➤ Design	\$38,100
➤ Construction	\$190,300

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Opinion of Probable Construction Cost
Capital Improvement Program Project #8
Gladys Ave: from Emerson Ave. to end of street

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$12,810.00	\$12,810.00
2	Excavation	700	LF	\$25.00	\$17,500.00
3	Manhole Installation	3	EA	\$8,300.00	\$24,900.00
4	Pipeline Installation	700	LF	\$69.00	\$48,300.00
5	Backfill and Compaction	700	LF	\$51.00	\$35,700.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$140,955.00
	Contingency	15%			\$21,100.00
	Overhead/Profit/Bonds/Insurance	20%			\$28,200.00
	Design and Construction Phase Services	20%			\$38,100.00
	Total				\$228,355.00
	Budget				\$228,400.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

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Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	9 – 1996 Master Plan
Schedule	Year 8
Description/Location	Emerson Ave: from Nicholson Ave. to Lincoln Ave.
Issue	Hydraulic Deficiency
Budget	\$176,800
➤ Design	\$29,500
➤ Construction	\$147,300

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Opinion of Probable Construction Cost
Capital Improvement Program Project #9
Emerson Ave: from Nicholson Ave. to Lincoln Ave.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$9,910.00	\$9,910.00
2	Excavation	500	LF	\$25.00	\$12,500.00
3	Manhole Installation	3	EA	\$8,300.00	\$24,900.00
4	Pipeline Installation	500	LF	\$69.00	\$34,500.00
5	Backfill and Compaction	500	LF	\$51.00	\$25,500.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$109,055.00
	Contingency	15%			\$16,400.00
	Overhead/Profit/Bonds/Insurance	20%			\$21,800.00
	Design and Construction Phase Services	20%			\$29,500.00
	Total				\$176,755.00
	Budget				\$176,800.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
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Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	10 – 1996 Master Plan
Schedule	Year 8
Description/Location	Bradshaw Ave: from 1018 Bradshaw Ave. to Bradshaw Pl.
Issue	Hydraulic Deficiency
Budget	\$84,400
➤ Design	\$14,100
➤ Construction	\$70,300

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Opinion of Probable Construction Cost
Capital Improvement Program Project #10
Bradshaw Ave: from 1018 Bradshaw Ave. to Bradshaw Pl.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$4,730.00	\$4,730.00
2	Excavation	200	LF	\$25.00	\$5,000.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	200	LF	\$69.00	\$13,800.00
5	Backfill and Compaction	200	LF	\$51.00	\$10,200.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$52,075.00
	Contingency	15%			\$7,800.00
	Overhead/Profit/Bonds/Insurance	20%			\$10,400.00
	Design and Construction Phase Services	20%			\$14,100.00
	Total				\$84,375.00
	Budget				\$84,400.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	11 – 1996 Master Plan
Schedule	Year 8
Description/Location	Divina Vista Street: from Ynez Ave. to top of hill
Issue	Hydraulic Deficiency
Budget	\$110,200
➤ Design	\$18,400
➤ Construction	\$91,800

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #11
Divina Vista Street: from Ynez Ave. to top of hill

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$6,180.00	\$6,180.00
2	Excavation	300	LF	\$25.00	\$7,500.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	300	LF	\$69.00	\$20,700.00
5	Backfill and Compaction	300	LF	\$51.00	\$15,300.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$68,025.00
	Contingency	15%			\$10,200.00
	Overhead/Profit/Bonds/Insurance	20%			\$13,600.00
	Design and Construction Phase Services	20%			\$18,400.00
	Total				\$110,225.00
	Budget				\$110,200.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

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Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	12 – 1996 Master Plan
Schedule	Year 9
Description/Location	Fulton Ave: from Fernfield Dr. to Gleason St.
Issue	Hydraulic Deficiency
Budget	\$111,100
➤ Design	\$18,500
➤ Construction	\$96,600

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #12
Fulton Ave: from Fernfield Dr. to Gleason St.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$6,240.00	\$6,240.00
2	Excavation	284	LF	\$25.00	\$7,100.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	284	LF	\$79.00	\$22,436.00
5	Backfill and Compaction	284	LF	\$51.00	\$14,484.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$68,605.00
	Contingency	15%			\$10,300.00
	Overhead/Profit/Bonds/Insurance	20%			\$13,700.00
	Design and Construction Phase Services	20%			\$18,500.00
	Total				\$111,105.00
	Budget				\$111,100.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

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Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	13 – 1996 Master Plan
Schedule	Year 9
Description/Location	Sefton Avenue: from Newmark Ave. to 310 feet south
Issue	Hydraulic Deficiency
Budget	\$112,700
➤ Design	\$18,800
➤ Construction	\$93,900

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #13
Sefton Avenue: from Newmark Ave. to 310 feet south

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$6,330.00	\$6,330.00
2	Excavation	310	LF	\$25.00	\$7,750.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	310	LF	\$69.00	\$21,390.00
5	Backfill and Compaction	310	LF	\$51.00	\$15,810.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$69,625.00
	Contingency	15%			\$10,400.00
	Overhead/Profit/Bonds/Insurance	20%			\$13,900.00
	Design and Construction Phase Services	20%			\$18,800.00
	Total				\$112,725.00
	Budget				\$112,700.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

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Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	14 – 1996 Master Plan
Schedule	Year 9
Description/Location	Garvey Ave.: from Alhambra Ave. to Nicholson Ave.
Issue	Hydraulic Deficiency
Budget	\$205,600
➤ Design	\$34,300
➤ Construction	\$171,300

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #14
Garvey Ave.: from Alhambra Ave. to Nicholson Ave.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$11,540.00	\$11,540.00
2	Excavation	612	LF	\$25.00	\$15,300.00
3	Manhole Installation	3	EA	\$8,300.00	\$24,900.00
4	Pipeline Installation	612	LF	\$69.00	\$42,228.00
5	Backfill and Compaction	612	LF	\$51.00	\$31,212.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$126,925.00
	Contingency	15%			\$19,000.00
	Overhead/Profit/Bonds/Insurance	20%			\$25,400.00
	Design and Construction Phase Services	20%			\$34,300.00
	Total				\$205,625.00
	Budget				\$205,600.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

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Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	15 – 1996 Master Plan
Schedule	Year 10
Description/Location	Floral Drive: from Atlantic Blvd. to Collegian Ave.
Issue	Hydraulic Deficiency
Budget	\$78,800
➤ Design	\$13,100
➤ Construction	\$65,700

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #15
Floral Drive: from Atlantic Blvd. to Collegian Ave.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$4,430.00	\$4,430.00
2	Excavation	179	LF	\$25.00	\$4,475.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	179	LF	\$69.00	\$12,351.00
5	Backfill and Compaction	179	LF	\$51.00	\$9,129.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$48,730.00
	Contingency	15%			\$7,300.00
	Overhead/Profit/Bonds/Insurance	20%			\$9,700.00
	Design and Construction Phase Services	20%			\$13,100.00
	Total				\$78,830.00
	Budget				\$78,800.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	16 – 1996 Master Plan
Schedule	Year 10
Description/Location	Garvey Ave.: from Electric Ave. to Marguerita Ave.
Issue	Hydraulic Deficiency
Budget	\$128,800
➤ Design	\$21,500
➤ Construction	\$107,300

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #16
Garvey Ave.: from Electric Ave. to Marguerita Ave.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$7,230.00	\$7,230.00
2	Excavation	372	LF	\$25.00	\$9,300.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	372	LF	\$69.00	\$25,668.00
5	Backfill and Compaction	372	LF	\$51.00	\$18,972.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$79,515.00
	Contingency	15%			\$11,900.00
	Overhead/Profit/Bonds/Insurance	20%			\$15,900.00
	Design and Construction Phase Services	20%			\$21,500.00
	Total				\$128,815.00
	Budget				\$128,800.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

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Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	17 – 1996 Master Plan
Schedule	Year 10
Description/Location	Harding Ave.: from Ynez Ave. to Chandler Ave.
Issue	Hydraulic Deficiency
Budget	\$199,100
➤ Design	\$33,200
➤ Construction	\$165,900

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Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #17
Harding Ave.: from Ynez Ave. to Chandler Ave.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$11,170.00	\$11,170.00
2	Excavation	566	LF	\$25.00	\$14,150.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	566	LF	\$89.00	\$50,374.00
5	Backfill and Compaction	566	LF	\$51.00	\$28,866.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$122,905.00
	Contingency	15%			\$18,400.00
	Overhead/Profit/Bonds/Insurance	20%			\$24,600.00
	Design and Construction Phase Services	20%			\$33,200.00
	Total				\$199,105.00
	Budget				\$199,100.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

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Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	18 – 1996 Master Plan
Schedule	Year 10
Description/Location	Easement north of El Portal Pl.: from Atlantic Blvd. to Alley west of Atlantic Blvd.
Issue	Hydraulic Deficiency
Budget	\$73,800
➤ Design	\$12,300
➤ Construction	\$61,500

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Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #18
Easement north of El Portal Pl.: from Atlantic Blvd. to Alley west of Atlantic Blvd.

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$4,140.00	\$4,140.00
2	Excavation	140	LF	\$25.00	\$3,500.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	140	LF	\$89.00	\$12,460.00
5	Backfill and Compaction	140	LF	\$51.00	\$7,140.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$45,585.00
	Contingency	15%			\$6,800.00
	Overhead/Profit/Bonds/Insurance	20%			\$9,100.00
	Design and Construction Phase Services	20%			\$12,300.00
	Total				\$73,785.00
	Budget				\$73,800.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

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Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	19 – 1996 Master Plan
Schedule	Year 10
Description/Location	Emerson Ave.: from Elizabeth Ave. to 200 feet west
Issue	Hydraulic Deficiency
Budget	\$88,000
➤ Design	\$14,700
➤ Construction	\$73,300

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Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #19
Emerson Ave.: from Elizabeth Ave. to 200 feet west

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$4,930.00	\$4,930.00
2	Excavation	200	LF	\$25.00	\$5,000.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	200	LF	\$79.00	\$15,800.00
5	Backfill and Compaction	200	LF	\$51.00	\$10,200.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$54,275.00
	Contingency	15%			\$8,100.00
	Overhead/Profit/Bonds/Insurance	20%			\$10,900.00
	Design and Construction Phase Services	20%			\$14,700.00
	Total				\$87,975.00
	Budget				\$88,000.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

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Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	20 – 2009 SSMP
Schedule	10% of System per Year
Description/Location	Annual CCTV Program
Issue	SSMP Requirement
Budget	\$221,800
➤ Design	\$0
➤ Construction	\$221,800

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #20
Annual CCTV Program

Item	Description	Quantity	Unit	Unit Price	Total Price
1	CCTV Work Contract	66530	LF	\$2.50	\$166,325.00
	Subtotal				\$166,325.00
	Contingency	15%			\$24,900.00
	Total				\$191,225.00
	Budget				\$191,200.00
1	CCTV Work City Staff	66530	LF	\$2.90	\$192,937.00
	Subtotal				\$192,937.00
	Contingency	15%			\$28,900.00
	Total				\$221,837.00
	Budget				\$221,800.00

Contractor's overhead and profit estimated to be included in project cost for contract work.

City of Monterey Park
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Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	21 – 2013 CCTV Review
Schedule	Year 1
Description/Location	Spot Repairs - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$377,400
➤ Design	\$62,900
➤ Construction	\$314,500

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #21
Spot Repairs - Multiple Locations - Year 1

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Barranca Drive	6	EA	\$2,560.00	\$15,360.00
2	Crest Vista Drive	12	EA	\$2,560.00	\$30,720.00
3	Ridge Crest St.	27	EA	\$2,560.00	\$69,120.00
4	Highland Drive	10	EA	\$2,560.00	\$25,600.00
5	Rolling Hills Drive	4	EA	\$2,560.00	\$10,240.00
6	Lunar Drive	5	EA	\$2,560.00	\$12,800.00
7	Windover Way	5	EA	\$2,560.00	\$12,800.00
8	Grand Vista Way	3	EA	\$2,560.00	\$7,680.00
9	Ridgeside Drive	8	EA	\$2,560.00	\$20,480.00
10	East Crest Way	2	EA	\$2,560.00	\$5,120.00
11	Wandering Drive	3	EA	\$2,560.00	\$7,680.00
12	Dell Drive	3	EA	\$2,560.00	\$7,680.00
13	Moonbeam Drive	3	EA	\$2,560.00	\$7,680.00
	Subtotal				\$232,960.00
	Contingency	15%			\$34,900.00
	Overhead/Profit/Bonds/Insurance	20%			\$46,600.00
	Design and Construction Phase Services	20%			\$62,900.00
	Total				\$377,360.00
	Budget				\$377,400.00

Contractor's overhead and profit estimated to be included in project cost.

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Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	22 – 2013 CCTV Review
Schedule	Year 2
Description/Location	Spot Repairs - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$365,000
➤ Design	\$60,800
➤ Construction	\$304,200

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #22
Spot Repairs - Multiple Locations - Year 2

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Sunrise Drive	10	EA	\$2,560.00	\$25,600.00
2	Branham St.	2	EA	\$2,560.00	\$5,120.00
3	Electric Ave.	1	EA	\$2,560.00	\$2,560.00
4	Newmark Ave.	7	EA	\$2,560.00	\$17,920.00
5	Mabel Ave.	2	EA	\$2,560.00	\$5,120.00
6	Kingsford St.	3	EA	\$2,560.00	\$7,680.00
7	De La Fuente	3	EA	\$2,560.00	\$7,680.00
8	Hermosa Vista	6	EA	\$2,560.00	\$15,360.00
9	Ridgecrest Way	1	EA	\$2,560.00	\$2,560.00
10	Hillside St.	6	EA	\$2,560.00	\$15,360.00
11	Longhill Dr.	8	EA	\$2,560.00	\$20,480.00
12	North Ridge Pl.	3	EA	\$2,560.00	\$7,680.00
13	Star Ridge Dr.	1	EA	\$2,560.00	\$2,560.00
14	Stone Gate St.	1	EA	\$2,560.00	\$2,560.00
15	Stonewell St.	5	EA	\$2,560.00	\$12,800.00
16	Pebbledon St.	7	EA	\$2,560.00	\$17,920.00
17	Pebble Hurst St.	1	EA	\$2,560.00	\$2,560.00
18	Solar Drive	2	EA	\$2,560.00	\$5,120.00
19	Valley Vista Dr.	1	EA	\$2,560.00	\$2,560.00
20	Brightwood St.	18	EA	\$2,560.00	\$46,080.00
	Subtotal				\$225,280.00
	Contingency	15%			\$33,800.00
	Overhead/Profit/Bonds/Insurance	20%			\$45,100.00
	Design and Construction Phase Services	20%			\$60,800.00
	Total				\$364,980.00
	Budget				\$365,000.00

Contractor's overhead and profit estimated to be included in project cost.

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	23 – 2013 CCTV Review
Schedule	Year 3
Description/Location	Spot Repairs - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$385,700
➤ Design	\$64,300
➤ Construction	\$321,400

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #23
Spot Repairs - Multiple Locations - Year 3

Item	Description	Quantity	Unit	Unit Price	Total Price
1	College View Dr.	18	EA	\$2,560.00	\$46,080.00
2	Lightview St.	4	EA	\$2,560.00	\$10,240.00
3	Rockview St.	3	EA	\$2,560.00	\$7,680.00
4	Bleakwood Ave	2	EA	\$2,560.00	\$5,120.00
5	S. Woods Ave.	3	EA	\$2,560.00	\$7,680.00
6	S. Vancouver Ave.	4	EA	\$2,560.00	\$10,240.00
7	Westcott Ave.	3	EA	\$2,560.00	\$7,680.00
8	Dorner Ave.	2	EA	\$2,560.00	\$5,120.00
9	Bluffhill Dr.	4	EA	\$2,560.00	\$10,240.00
10	First St.	1	EA	\$2,560.00	\$2,560.00
11	Floral Dr.	5	EA	\$2,560.00	\$12,800.00
12	Alley near College View Dr.	3	EA	\$2,560.00	\$7,680.00
13	Ease East of Greylock Ave.	1	EA	\$2,560.00	\$2,560.00
14	Sherbrook St.	1	EA	\$2,560.00	\$2,560.00
15	Casitas St.	5	EA	\$2,560.00	\$12,800.00
16	Arbolis St.	4	EA	\$2,560.00	\$10,240.00
17	Vagabond Rd.	5	EA	\$2,560.00	\$12,800.00
18	Barnum Way	8	EA	\$2,560.00	\$20,480.00
19	Abajo Dr.	1	EA	\$2,560.00	\$2,560.00
20	Arriba Dr.	1	EA	\$2,560.00	\$2,560.00
21	Verde Vista	1	EA	\$2,560.00	\$2,560.00
22	Bonita Terrace	1	EA	\$2,560.00	\$2,560.00
23	Sombrero Dr.	2	EA	\$2,560.00	\$5,120.00
24	Copa Way	4	EA	\$2,560.00	\$10,240.00
25	Ladera St.	2	EA	\$2,560.00	\$5,120.00
26	Grandeza St.	1	EA	\$2,560.00	\$2,560.00
27	Cerco Alta Dr.	2	EA	\$2,560.00	\$5,120.00
28	Sierra Alta Way	2	EA	\$2,560.00	\$5,120.00
	Subtotal				\$238,080.00
	Contingency	15%			\$35,700.00
	Overhead/Profit/Bonds/Insurance	20%			\$47,600.00
	Design and Construction Phase Services	20%			\$64,300.00
	Total				\$385,680.00
	Budget				\$385,700.00

Contractor's overhead and profit estimated to be included in project cost.

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	24 – 2013 CCTV Review
Schedule	Year 4
Description/Location	Spot Repairs - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$373,300
➤ Design	\$62,200
➤ Construction	\$311,100

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #24
Spot Repairs - Multiple Locations - Year 4

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Garfield Ave. ES	7	EA	\$2,560.00	\$17,920.00
2	Garfield Ave. WS	5	EA	\$2,560.00	\$12,800.00
3	Monterey Pass Rd.	13	EA	\$2,560.00	\$33,280.00
4	Corporate Center Dr.	5	EA	\$2,560.00	\$12,800.00
5	Garvey Ave.	7	EA	\$2,560.00	\$17,920.00
6	Potrero Grande Dr.	1	EA	\$2,560.00	\$2,560.00
7	Pomona Blvd.	2	EA	\$2,560.00	\$5,120.00
8	South St.	1	EA	\$2,560.00	\$2,560.00
9	Atlantic Blvd.	2	EA	\$2,560.00	\$5,120.00
10	Garfield Alley	2	EA	\$2,560.00	\$5,120.00
11	Mabel St.	1	EA	\$2,560.00	\$2,560.00
12	Whitney St.	4	EA	\$2,560.00	\$10,240.00
13	Branham St.	5	EA	\$2,560.00	\$12,800.00
14	Hellman St.	5	EA	\$2,560.00	\$12,800.00
15	Emerson St.	2	EA	\$2,560.00	\$5,120.00
16	Divina Vista St.	13	EA	\$2,560.00	\$33,280.00
17	New Ave.	7	EA	\$2,560.00	\$17,920.00
18	Pomelo	2	EA	\$2,560.00	\$5,120.00
19	Baltimore Ave.	6	EA	\$2,560.00	\$15,360.00
Subtotal					\$230,400.00
Contingency		15%			\$34,600.00
Overhead/Profit/Bonds/Insurance		20%			\$46,100.00
Design and Construction Phase Services		20%			\$62,200.00
Total					\$373,300.00
Budget					\$373,300.00

Contractor's overhead and profit estimated to be included in project cost.

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	25 – 2013 CCTV Review
Schedule	Year 1
Description/Location	Cured in Place Pipe Installations - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$569,300
➤ Design	\$94,900
➤ Construction	\$474,400

City of Monterey Park
 Wastewater System Master Plan Update
 Opinion of Probable Construction Cost
 Capital Improvement Program Project #25 - Year 1
 Cured in Place Pipe Installations - Multiple Locations

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Barranca Drive	220	LF	\$37.50	\$8,250.00
2	Crest Vista Drive	930	LF	\$37.50	\$34,875.00
3	Highland Dr.	365	LF	\$37.50	\$13,687.50
4	Windover Way	85	LF	\$37.50	\$3,187.50
5	West Crest Way	745	LF	\$37.50	\$27,937.50
6	Crest Haven Way	920	LF	\$37.50	\$34,500.00
7	Briarcliff Way	725	LF	\$37.50	\$27,187.50
8	Chalet Terrace	180	LF	\$37.50	\$6,750.00
9	Whitney Pl.	260	LF	\$37.50	\$9,750.00
10	Sunrise Dr.	155	LF	\$37.50	\$5,812.50
11	Electric Ave.	145	LF	\$37.50	\$5,437.50
12	De La Fuente	1410	LF	\$37.50	\$52,875.00
13	Alley near De La Fuente	1325	LF	\$37.50	\$49,687.50
14	Hillside St.	1905	LF	\$37.50	\$71,437.50
	Total Footage	9370	LF		
	Subtotal				\$351,375.00
	Contingency	15%			\$52,700.00
	Overhead/Profit/Bonds/Insurance	20%			\$70,300.00
	Design and Construction Phase Services	20%			\$94,900.00
	Total				\$569,275.00
	Budget				\$569,300.00

Contractor's overhead and profit estimated to be included in project cost.

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	26 – 2013 CCTV Review
Schedule	Year 2
Description/Location	Cured in Place Pipe Installations - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$570,400
➤ Design	\$95,100
➤ Construction	\$475,300

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #26 - Year 2
Cured in Place Pipe Installations - Multiple Locations

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Sunnyhill Drive	185	LF	\$37.50	\$6,937.50
2	Longhill Dr.	855	LF	\$37.50	\$32,062.50
3	Star Ridge Dr.	240	LF	\$37.50	\$9,000.00
4	Stone Gate St.	675	LF	\$37.50	\$25,312.50
5	Pebbledon St.	1010	LF	\$37.50	\$37,875.00
6	Bluffhill Dr.	665	LF	\$37.50	\$24,937.50
7	Pebble Ct.	510	LF	\$37.50	\$19,125.00
8	Pebble Hurst St.	310	LF	\$37.50	\$11,625.00
9	Brightwood St.	2835	LF	\$37.50	\$106,312.50
10	Rock View St.	750	LF	\$37.50	\$28,125.00
11	Rock Haven St.	745	LF	\$37.50	\$27,937.50
12	S. Woods Ave.	610	LF	\$37.50	\$22,875.00
	Total Footage	9390	LF		
	Subtotal				\$352,125.00
	Contingency	15%			\$52,800.00
	Overhead/Profit/Bonds/Insurance	20%			\$70,400.00
	Design and Construction Phase Services	20%			\$95,100.00
	Total				\$570,425.00
	Budget				\$570,400.00

Contractor's overhead and profit estimated to be included in project cost.

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	27 – 2013 CCTV Review
Schedule	Year 3
Description/Location	Cured in Place Pipe Installations - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$567,700
➤ Design	\$94,600
➤ Construction	\$473,100

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #27 - Year 3
Cured in Place Pipe Installations - Multiple Locations

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Garfield Ave.	4355	LF	\$37.50	\$163,312.50
2	Pebble Vale St.	330	LF	\$37.50	\$12,375.00
3	College View Dr.	1855	LF	\$37.50	\$69,562.50
4	Lightview St.	390	LF	\$37.50	\$14,625.00
5	Bleakwood Ave.	335	LF	\$37.50	\$12,562.50
6	S. Vancouver Ave.	250	LF	\$37.50	\$9,375.00
7	Dorner Dr.	280	LF	\$37.50	\$10,500.00
8	Vagabond Rd. and Barnum Way	310	LF	\$37.50	\$11,625.00
9	Alley bet. Cadiz and Loma Verde	795	LF	\$37.50	\$29,812.50
10	Baltimore Ave.	445	LF	\$37.50	\$16,687.50
	Total Footage	9345	LF		
	Subtotal				\$350,437.50
	Contingency	15%			\$52,600.00
	Overhead/Profit/Bonds/Insurance	20%			\$70,100.00
	Design and Construction Phase Services	20%			\$94,600.00
	Total				\$567,737.50
	Budget				\$567,700.00

Contractor's overhead and profit estimated to be included in project cost.

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	28 – 2013 CCTV Review
Schedule	Year 4
Description/Location	Cured in Place Pipe Installations - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$794,600
➤ Design	\$132,400
➤ Construction	\$662,200

City of Monterey Park
 Wastewater System Master Plan Update
 Opinion of Probable Construction Cost
 Capital Improvement Program Project #28 - Year 4
 Cured in Place Pipe Installations - Multiple Locations

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Garvey Ave. (12- and 15-inch diameter)	8530	LF	\$57.50	\$490,475.00
	Subtotal				\$490,475.00
	Contingency	15%			\$73,600.00
	Overhead/Profit/Bonds/Insurance	20%			\$98,100.00
	Design and Construction Phase Services	20%			\$132,400.00
	Total				\$794,575.00
	Budget				\$794,600.00

Contractor's overhead and profit estimated to be included in project cost.

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	29 – 2013 CCTV Review
Schedule	Year 5
Description/Location	Cured in Place Pipe Installations - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$732,400
➤ Design	\$122,100
➤ Construction	\$610,300

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #29 - Year 5
Cured in Place Pipe Installations - Multiple Locations

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Abajo Dr.	220	LF	\$37.50	\$8,250.00
2	Sombrero Dr.	670	LF	\$37.50	\$25,125.00
3	Copa Way	120	LF	\$37.50	\$4,500.00
4	Ladera St.	1730	LF	\$37.50	\$64,875.00
5	Grandeza St.	1100	LF	\$37.50	\$41,250.00
6	Cerco Alta Dr.	725	LF	\$37.50	\$27,187.50
7	Barranca Dr.	1355	LF	\$37.50	\$50,812.50
8	Durango St.	185	LF	\$37.50	\$6,937.50
9	First St.	330	LF	\$37.50	\$12,375.00
10	Nicholson Ave.	300	LF	\$37.50	\$11,250.00
11	Atlantic Blvd.	1525	LF	\$37.50	\$57,187.50
12	Garfield Ave. ES	280	LF	\$37.50	\$10,500.00
13	Monterey Pass Rd. (8-inch diameter)	635	LF	\$37.50	\$23,812.50
14	Monterey Pass Rd. (10-inch diameter)	695	LF	\$47.50	\$33,012.50
15	Monterey Pass Rd. (12-inch diameter)	1305	LF	\$57.50	\$75,037.50
	Total Footage	11175	LF		
	Subtotal				\$452,112.50
	Contingency	15%			\$67,800.00
	Overhead/Profit/Bonds/Insurance	20%			\$90,400.00
	Design and Construction Phase Services	20%			\$122,100.00
	Total				\$732,412.50
	Budget				\$732,400.00

Contractor's overhead and profit estimated to be included in project cost.

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	30 – 2013 CCTV Review
Schedule	Year 6
Description/Location	Cured in Place Pipe Installations - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$706,400
➤ Design	\$117,700
➤ Construction	\$588,700

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #30 - Year 6
Cured in Place Pipe Installations - Multiple Locations

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Corporate Center Dr.	305	LF	\$37.50	\$11,437.50
2	Garvey Ave. (8-inch diameter)	1475	LF	\$37.50	\$55,312.50
3	De La Fuente	2635	LF	\$37.50	\$98,812.50
4	Atlantic Blvd.	3520	LF	\$37.50	\$132,000.00
5	Garfield Alley	180	LF	\$37.50	\$6,750.00
6	Whitney Pl.	255	LF	\$37.50	\$9,562.50
7	El Mercado Alley	270	LF	\$37.50	\$10,125.00
8	De La Fuente Easement	1090	LF	\$37.50	\$40,875.00
9	Baltimore Ave.	1310	LF	\$37.50	\$49,125.00
10	Coral View St.	590	LF	\$37.50	\$22,125.00
	Total Footage	11630	LF		
	Subtotal				\$436,125.00
	Contingency	15%			\$65,400.00
	Overhead/Profit/Bonds/Insurance	20%			\$87,200.00
	Design and Construction Phase Services	20%			\$117,700.00
	Total				\$706,425.00
	Budget				\$706,400.00

Contractor's overhead and profit estimated to be included in project cost.

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	31 – 2013 CCTV Review
Schedule	Year 1
Description/Location	Briar Cliff Way
Issue	Pipeline Structural Deficiency
Budget	\$67,200.00
➤ Design	\$11,200
➤ Construction	\$56,000

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #31
Briarcliff Way

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$3,770.00	\$3,770.00
2	Excavation	125	LF	\$25.00	\$3,125.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	125	LF	\$79.00	\$9,875.00
5	Backfill and Compaction	125	LF	\$51.00	\$6,375.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$41,490.00
	Contingency	15%			\$6,200.00
	Overhead/Profit/Bonds/Insurance	20%			\$8,300.00
	Design and Construction Phase Services	20%			\$11,200.00
	Total				\$67,190.00
	Budget				\$67,200.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	32 – 2013 CCTV Review
Schedule	Year 1
Description/Location	Alpine Terrace
Issue	Pipeline Structural Deficiency
Budget	\$96,700
➤ Design	\$16,100
➤ Construction	\$80,600

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #32
Alpine Terrace

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization	1	LS	\$5,430.00	\$5,430.00
2	Excavation	232	LF	\$25.00	\$5,800.00
3	Manhole Installation	2	EA	\$8,300.00	\$16,600.00
4	Pipeline Installation	232	LF	\$79.00	\$18,328.00
5	Backfill and Compaction	232	LF	\$51.00	\$11,832.00
6	Pressure Testing	1	LS	\$745.00	\$745.00
7	Record Drawings	1	LS	\$1,000.00	\$1,000.00
	Subtotal				\$59,735.00
	Contingency	15%			\$9,000.00
	Overhead/Profit/Bonds/Insurance	20%			\$11,900.00
	Design and Construction Phase Services	20%			\$16,100.00
	Total				\$96,735.00
	Budget				\$96,700.00

Notes

Mobilization is calculated at 10% of bid items 2 through 7.

Contractor's overhead and profit estimated to be 20% of project construction cost. Costs associated with insurance, bonds, etc., are included in that value.

Design and Construction Phase services include preparation of plans, specifications and estimate. Construction phase services are estimated at 8% of construction cost (subtotal, contingency and overhead/profit/bonds/insurance).

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	33 – 2009 SSMP
Schedule	Year 3
Description/Location	GIS Based Sanitary Sewer Atlas
Issue	Atlas Does Not Exist
Budget	\$115,000
➤ Design	\$115,000
➤ Construction	\$0

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #33
Up to Date Sewer Atlas Map Book

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Using GIS format, develop and maintain a complete sanitary sewer atlas with an inventory of the data components.	1	LS	\$100,000.00	\$100,000.00
	Subtotal				\$100,000.00
	Contingency	15%			\$15,000.00
	Total				\$115,000.00
	Budget				\$115,000.00

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	34 – 2009 SSMP
Schedule	Year 5
Description/Location	City-wide
Issue	Inventory All Wastewater Components
Budget	\$115,000
➤ Design	\$115,000
➤ Construction	\$0

City of Monterey Park
 Wastewater System Master Plan Update
 Opinion of Probable Construction Cost
 Capital Improvement Program Project #34
 Geographic Positioning System of Collection System Components

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Use GPS technology to inventory all of the City's wastewater collection system components.	1	LS	\$100,000.00	\$100,000.00
	Subtotal				\$100,000.00
	Contingency	15%			\$15,000.00
	Total				\$115,000.00
	Budget				\$115,000.00

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	35 - 2009 SSMP
Schedule	Year 6
Description/Location	City-wide
Issue	Computerized Maintenance Management System
Budget	\$287,500
➤ Design	\$287,500
➤ Construction	\$0

City of Monterey Park
 Wastewater System Master Plan Update
 Opinion of Probable Construction Cost
 Capital Improvement Program Project #35
 Computerized Maintenance Management System (CMMS)

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Purchase a CMMS for the wastewater collection system. Pursue integration with the City's maintenance management system.	1	LS	\$250,000.00	\$250,000.00
	Subtotal				\$250,000.00
	Contingency	15%			\$37,500.00
	Total				\$287,500.00
	Budget				\$287,500.00

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	36 – 2009 SSMP
Schedule	Year 1
Description/Location	City-wide
Issue	Expand FOG Program
Budget	\$115,000
➤ Design	\$115,000
➤ Construction	\$0

City of Monterey Park
 Wastewater System Master Plan Update
 Opinion of Probable Construction Cost
 Capital Improvement Program Project #36
 FOG Program Expansion

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Expand the City's FOG program to include public outreach and a formal FOG program managed by the City's collection system staff.	1	LS	\$100,000.00	\$100,000.00
	Subtotal				\$100,000.00
	Contingency	15%			\$15,000.00
	Total				\$115,000.00
	Budget				\$115,000.00

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	37 – 2009 SSMP
Schedule	Year 1
Description/Location	City-wide
Issue	Expand CCTV Operations Equipment
Budget	\$345,000
➤ Design	\$345,000
➤ Construction	\$0

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #37
CCTV System Expansion

Item	Description	Quantity	Unit	Unit Price	Total Price
	Expand CCTV operations equipment and staffing to include one additional CCTV van and two additional staff members to properly perform				
1	CCTV inspections of new and existing lines	1	LS	\$300,000.00	\$300,000.00
	Subtotal				\$300,000.00
	Contingency	15%			\$45,000.00
	Total				\$345,000.00
	Budget				\$345,000.00

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	38 – 2009 SSMP
Schedule	Year 7
Description/Location	City-wide
Issue	Develop an Asset Management Plan
Budget	\$575,000
➤ Design	\$575,000
➤ Construction	\$0

City of Monterey Park
 Wastewater System Master Plan Update
 Opinion of Probable Construction Cost
 Capital Improvement Program Project #38
 Implement Asset Management Plan

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Implement an asset management plan to actively develop rehabilitation and replacement programs for the collection system.	1	LS	\$500,000.00	\$500,000.00
	Subtotal				\$500,000.00
	Contingency	15%			\$75,000.00
	Total				\$575,000.00
	Budget				\$575,000.00

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	39 – 2009 SSMP
Schedule	Year 2
Description/Location	City-wide
Issue	Upgrade Field Equipment
Budget	\$57,500
➤ Design	\$57,500
➤ Construction	\$0

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #39
Upgrade Field Equipment

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Upgrade field equipment to make CCTV software compatible with other office software. Move towards electronic maps on hard mounted lap tops in the field crew trucks.	1	LS	\$50,000.00	\$50,000.00
	Subtotal				\$50,000.00
	Contingency	15%			\$7,500.00
	Total				\$57,500.00
	Budget				\$57,500.00

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	40 – 2009 SSMP
Schedule	Year 2
Description/Location	City-wide
Issue	Ongoing Training
Budget	\$11,500
➤ Design	\$11,500
➤ Construction	\$0

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #40
Ongoing Staff Training

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Provide ongoing training for the City's collection system staff to be proficient in the use of the CMMS and GIS for collection system maintenance activities	1	LS	\$10,000.00	\$10,000.00
	Subtotal				\$10,000.00
	Contingency	15%			\$1,500.00
	Total				\$11,500.00
	Budget				\$11,500.00

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	41 – 2009 SSMP
Schedule	Year 1
Description/Location	City-wide
Issue	Update Emergency Overflow Response Plan
Budget	\$17,300
➤ Design	\$17,300
➤ Construction	\$0

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #41
Update Emergency Overflow Response Plan

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Update recently prepared Emergency Overflow Response Plan. Complete the plan and include systematic review annually of the plan in meeting the requirements of the SSMP.	1	LS	\$15,000.00	\$15,000.00
	Subtotal				\$15,000.00
	Contingency	15%			\$2,300.00
	Total				\$17,300.00
	Budget				\$17,300.00

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	42 – 2009 SSMP
Schedule	Year 6
Description/Location	City-wide
Issue	Flow Monitoring
Budget	\$86,300
➤ Design	\$86,300
➤ Construction	\$0

City of Monterey Park
 Wastewater System Master Plan Update
 Opinion of Probable Construction Cost
 Capital Improvement Program Project #42
 Implement Flow Monitoring

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Implement flow monitoring at key locations (10 and 2 rain gauges) for a period of three months between December and March to collection information on the extent of the I/I during the wet and dry weather conditions.	1	LS	\$75,000.00	\$75,000.00
	Subtotal				\$75,000.00
	Contingency	15%			\$11,300.00
	Total				\$86,300.00
	Budget				\$86,300.00

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	43 – 2009 SSMP
Schedule	Annually
Description/Location	City-wide
Issue	Regular Maintenance of Hot Spots
Budget	\$200,000
➤ Design	\$0
➤ Construction	\$200,000

City of Monterey Park
 Wastewater System Master Plan Update
 Opinion of Probable Construction Cost
 Capital Improvement Program Project #43
 Allowance for Regular Hot Spot Maintenance

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Allowance for regular maintenance at identified hot spot locations	1	LS	\$200,000.00	\$200,000.00
	Subtotal				\$200,000.00
	Contingency	15%			\$30,000.00
	Total				\$230,000.00
	Budget				\$230,000.00

City of Monterey Park
Wastewater Master Plan Update
Capital Improvement Project Budget Worksheets



Capital Improvement Project Number	44 – 2013 CCTV Review
Schedule	Annually
Description/Location	Annual CCTV Areas
Issue	Annual Pipeline Repairs from CCTV Work
Budget	\$810,000
➤ Design	\$135,000
➤ Construction	\$675,000

City of Monterey Park
 Wastewater System Master Plan Update
 Opinion of Probable Construction Cost
 Capital Improvement Program Project #44
 Annual Pipeline Repairs Discovered on CCTV

Item	Description	Quantity	Unit	Unit Price	Total Price
1	Allowance for implementation of pipeline repairs for areas discovered on annual CCTV work (spot repairs/CIPP)	1	LS	\$500,000.00	\$500,000.00
	Subtotal				\$500,000.00
	Contingency	15%			\$75,000.00
	Overhead/Profit/Bonds/Insurance	20%			\$100,000.00
	Design and Construction Phase Services	20%			\$135,000.00
	Total				\$810,000.00
	Budget				\$810,000.00

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost

Project Quantities Item	Quantity	Unit	Unit Cost
Excavation	1	LF	\$25.00
Manhole Installation	1	LS	\$8,300.00
Pipeline Installation (8-inch)	1	LF	\$69.00
Pipeline Installation (10-inch)	1	LF	\$79.00
Pipeline Installation (12-inch)	1	LF	\$89.00
Backfill and Compaction	1	LF	\$51.00
Pressure Testing	1	LS	\$745.00
Cured in Place Pipe Installation (8-inch)	1	LF	\$35.00
Cured in Place Pipe Installation (10-inch)	1	LF	\$45.00
Cured in Place Pipe Installation (12-inch)	1	LF	\$55.00
CCTV Contract Work	1	LF	\$2.50
CCTV City Employees	1	LF	\$2.90
Spot Repair	1	EA	\$2,560.00

General Notes

Labor rates are based on the California Department of Industrial Relations website www.dir.ca.gov/dslr.
Equipment rental rates are based on Caltrans Equipment Rental Rates website www.dot.ca.gov/hq/construct/eqrr.
Excavation activity includes two laborers, a backhoe operator, half time of the superintendent and work truck, dump truck, backhoe and shoring. It is assumed that a typical day of excavation will be 120 linear feet for an 8 hour period.
Pipe installation activity includes two laborers, a backhoe operator, backhoe, half time of the superintendent and work truck, traffic control, shoring, and air compressor and tools. It is assumed that 120 linear feet of pipe can be installed in 4 hours.
Manhole installation activity includes a laborer, crane operator, half time of the superintendent and work truck, backhoe and traffic control. A manhole installed can be performed in four hours.
Backfill and compaction activity includes two laborers, backhoe operator, half time of the superintendent and work truck, backhoe, dump truck, sweeper, compactor, equipment trailer and traffic control. It is estimated that a 120 foot long trench can be backfilled and compacted in one 4 hour period.
Pavement installation assumes that the 3 foot wide trench can be repaved in one 4 hour period.
Pressure testing activity includes a laborer and the superintendent and work truck.
Tie in activity includes two laborers, a backhoe operator, superintendent, work truck, backhoe, generator, shoring and traffic control.
Excavation is assumed to take 12 hours. Manhole placement is calculated at 4 hours.
Pipeline installation is at a rate of 120 feet per 8 hour day to install and 2 hours to make the tie in connection. Pipeline depth is assumed to be 6 feet on average.
Pressure testing is assumed to be 6 hours. Backfilling and compaction is assumed to be 8 hours.
CCTV Contract Work includes performing the work at \$2.50/lf.
CCTV City Employees assumes that the cost of the CCTV van and vactor truck as well as the salaries of the two employees is included. For purposes of this analysis, it is assumed that the crew can CCTV 1,500 feet of pipe in one work day. The cost of the equipment is spread over a 10 year period. The CCTV program repeats on a 10 year timeframe.
Spot Repair is estimated to be replacement of one segment of pipe 10 feet in length.
Cured in place pie cost could be lower depending on the quantity of the project. For purposes of this estimate, the project length was assumed to be 10,000 lf.

Item	Unit cost	Unit
Excavation	\$21.00	cubic yard
Backfill	\$20.00	cubic yard
60-inch diameter manhole	\$8,000.00	each
Miscellaneous Concrete	\$120.00	cubic yard
Crushed Miscellaneous Base	\$30.00	cubic yard
Asphalt Concrete Pavement	\$3.00	square foot
8-inch diameter PVC pipe	\$35.00	linear foot
10-inch diameter PVC pipe	\$45.00	linear foot
12-inch diameter PVC pipe	\$55.00	linear foot
Cured in Place Pipe Installation (8-inch)	\$35.00	linear foot
Cured in Place Pipe Installation (10-inch)	\$45.00	linear foot
Cured in Place Pipe Installation (12-inch)	\$55.00	linear foot
CCTV Work	\$2.50	linear foot
City Sewer Crew Leader	\$48.00	hour
City Senior Maintenance Worker	\$36.00	hour
CCTV Van	\$185,000.00	each
Vactor Truck	\$350,000.00	each
Laborer	\$47.33	hour
Backhoe Operator	\$60.08	hour
Superintendent	\$56.80	hour
Air Compressor/Tools	\$19.35	hour
Compactor (hand operated)	\$8.82	hour
Motorized sweeper	\$27.88	hour
Shoring (8' deep, 15' wide, 10' long)	\$32.48	hour
Traffic Control	\$29.44	hour
Backhoe	\$52.03	hour
Dump Truck	\$33.12	hour
Crane	\$40.61	hour
Work Truck	\$19.98	hour
Equipment Trailer	\$12.97	hour

Activity Duration Estimates	Length	Unit
Excavation	\$368.07	hour
Pipeline installation	\$326.42	hour
Manhole unloading and setting	\$227.26	hour
Backfill operations	\$357.38	hour
Pressure testing	\$124.11	hour
Tie in to existing	\$364.81	hour

APPENDIX

**City of Monterey Park
Water Master Plan Update
CCTV Review Sheet**

Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified Issue	Notes
03/10/05	1A	Barranca Dr.	2	3	341.95	8	VCP	4	Minor crack at Sta. 74, 84, 117. Failed pipe at 93. Major infiltration at failed joints at 117 and at 202. Candidate for spot repairs.
03/10/05	1A	Barranca Dr.	1	2	218.98	8	VCP	5	Joint crack at Sta. 10, 131, 141, 151, 182. Failed joint at 84 and 106 - major infiltration. Failed pipe at 186. Candidate for CIPP.
06/06/05	1	Crest Vista Dr.	11+62.12	8+25	348.34	8	VCP	5	Major crack at joint for length of pipe (10 feet) at Sta 89.06. Pipe offset - Spot repair.
06/06/05	1	Crest Vista Dr.	8+25	5+12.04	323.45	8	VCP		
06/06/05	1	Crest Vista Dr.	5+12.04	2+34.01	286.1	8	VCP	5	Cracked joint at multiple stations. Candidate for CIPP.
06/06/05	1	Crest Vista Dr.	2+34.01	0+00	238.35	8	VCP		
06/06/05	1	Crest Vista Dr.	0+00	5+81.50	255.19	8	VCP	5	Cracked joint at Sta 146. Pipe crack at 228. Failed pipe section at 231. Spot repairs.
06/06/05	1	Crest Vista Dr.	5+81.50	2+88.50	303.96	8	VCP	5	Cracked joint at Sta. 50, 142, 153. Failed pipe at Sta 108 - four pipe sections. Candidate for CIPP.
06/06/05	1	Crest Vista Dr.	2+88.50	00+00	267.94	8	VCP	2, 4	Joint separation at Sta. 126, 146. Cracked joint at 261. Spot repair.
06/06/05	1	Crest Vista Dr.	00+00	2+88.50	10.51	8	VCP	2	Reverse of previous
06/06/05	2	Crest Vista Dr.	00+00	1+22.34	332.04	8	VCP	5,7	Cracked joint and roots at Sta. 5. Failed connection with void behind pipe at Sta 60. Failed main pipe at Sta. 60, 67, 253, 267. Cracked pipe at 86, 143, 165. Failed main pipe with voids at 158 at lateral. CIPP candidate.
06/06/05	2	Crest Vista Dr.	1+22.34	unknown	125.71	8	VCP		No issues
06/06/05	2	Crest Vista Dr.	unknown	20+35	131.52	8	VCP	4	Crack at Sta. 44, 99 - Spot repair candidate
06/06/05	2	Crest Vista Dr.	20+35	17+14.81	329.16	8	VCP	6	Minor offset
06/06/05	2	Crest Vista Dr.	17+14.81	14+68.18	251.92	8	VCP	4	Crack at Sta. 228 - Spot repair candidate
06/06/05	2	Crest Vista Dr.	14+68.18	12+23.77	251.82	8	VCP	6	Minor offset
06/06/05	2	Crest Vista Dr.	12+23.77	8+93.50	336	8	VCP		No issues
06/06/05	2	Crest Vista Dr.	8+93.50	6+16.55	284.88	8	VCP	4	Crack at Sta. 108 - Spot repair candidate
06/06/05	2	Crest Vista Dr.	6+16.55	3+60	262.74	8	VCP		No issues
06/06/05	2	Crest Vista Dr.	3+60	1+100	265.59	8	VCP		Stationing is suspect
06/06/05	3	Crest Vista Dr.	19+52.12	16+02.12	359.47	8	VCP		No issues
06/06/05	3	Crest Vista Dr.	16+02.12	12+75	336.1	8	VCP		No issues
06/06/05	3	Crest Vista Dr.	12+75	11+62.12	115.09	8	VCP		No issues

**City of Monterey Park
Water Master Plan Update
CCTV Review Sheet**

Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified Issue	Notes
06/07/05	3	Ridge Crest St.	10+64.17	7+44.33	327.12	8	VCP	2, 5	Cracked joint at Sta. 101. Failed pipe at Sta. 204.
06/07/05	3	Ridge Crest St.	7+44.33	6+48.62	96.01	8	VCP		Major roots at 208. - Candidate for spot repair.
06/07/05	3	Ridge Crest St.	6+48.62	5+05.56	146.21	8	VCP	2	No issues Cracked joint at Sta. 30. Failed pipe and lateral connection at Sta. 75 and 165. Cracked pipe at 230 minor. Candidate for spot repair.
06/07/05	3	Ridge Crest St.	5+05.56	2+59.58	252.04	8	VCP	5	Cracked pipe at 17, major tap root at Sta. 25 and 43. Failed pipe and lateral connection at Sta 118 - Spot repair candidate
06/07/05	3	Ridge Crest St.	2+59.58	0+00	264.9	8	VCP	5	No CCTV found - Spot repair candidate
06/07/05	3	Ridge Crest St.	1+00	1+75	76.42	8	VCP		No issues
06/07/05	3	Ridge Crest St.	7+91.80	10+81.95	297.33	8	VCP	2	Heavy blockage
06/07/05	3	Donner Pl.	0+00	1+01.10	102.75	8	VCP		No issues
06/07/05	4	Ridge Crest St.	7+91.80	5+19.83	276.92	8	VCP	5	Cracked lateral connection at Sta. 140 Failed pipe and lateral connection at 204 - Spot repair candidate.
06/07/05	4	Ridge Crest St.	5+19.83	2+44.83	282.63	8	VCP		No issues
06/07/05	4	Ridge Crest St.	2+44.83	1+42.30	254.17	8	VCP		No issues
06/07/05	4	Ridge Crest St.	1+42.30	0+00	146.11	8	VCP	2	
06/07/05	4	Summit Pl.	0+89.91	0+00	91.22	8	VCP		No issues
06/07/05	4	Ridge Crest St.	10+64.17	13+20.09	262.23	8	VCP	2	
06/07/05	4	Ridge Crest St.	9+00	7+43.02	160.19	8	VCP		No issues
06/07/05	4	Ridge Crest St.	7+43.02	5+25	222.03	8	VCP	4	Cracked pipe at Sta 129 - Spot repair candidate
06/07/05	4	Ridge Crest St.	5+25	3+26.82	202.74	8	VCP		No issues
06/07/05	4	Ridge Crest St.	3+26.82	2+28.94	99.89	8	VCP		No issues
06/07/05	4	Ridge Crest St.	2+28.94	0+00	235.39	8	VCP		No issues
06/08/05	5	Highland Dr.	7+14.47	8+82.21	171.32	8	VCP	2	Heavy blockage roots at Sta 46, 86, 99, and 120.
06/08/05	5	Highland Dr.	7+14.47	3+63.03	368.34	8	VCP	2, 5	Roots at lateral Sta 111, 159. Cracked joint at 205, 209, 328, 350 - lateral connection and pipe failure at 289, 292 - Spot repair recommended.
06/08/05	5	Highland Dr.	3+63.03	0+15.49	361.3	8	VCP	5	Pipe failure at manhole 3+63 for first 10 feet, Sta 17 two segments, 29 (offset), 33 two segments, 54 multiple segments, major failure at 70, 343 - CIPP candidate
06/08/05	5	Highland Dr.	0+15.49	5+58.14	170.6	8	VCP	6	offset joint severe Sta 16

**City of Monterey Park
Water Master Plan Update
CCTV Review Sheet**

Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified Issue	Notes
06/08/05	5	Highland Dr.	5+58.14	3+15.69	251.82	8	VCP	6	Lateral failed at Sta 16 - Spot repair candidate Offset at Sta 161
06/08/05	5	Highland Dr.	3+15.69	0+50	278.35	8	VCP	4	Cracked pipe at Sta 255 - Spot repair candidate
06/08/05	5	Rolling Hills Dr.	5+44.13	2+70.61	5.92	8	VCP	2	Blockage abandoned CCTV(major)
06/08/05	5	Rolling Hills Dr.	2+70.61	5+44.13	127.03	8	VCP	2	Reverse of previous
06/08/05	5	Rolling Hills Dr.	2+70.61	0+50	225.19	8	VCP	4	Cracked joint at Sta. 198 - Spot repair candidate Offset joint at Sta 281. Cracked joint at Sta 212, 240 - Spot repair candidate
06/08/05	6	Lunar Dr.	2+86.92	0+00	298.55	8	VCP	6	Cracked joint at Sta 5 - Spot repair candidate
06/08/05	6	Grand Vista Way	4+10.88	3+02.88	113.77	8	VCP	4	No issues
06/08/05	6	Grand Vista Pl.	2+02	0+50	155.09	8	VCP		Pipe failure and lateral connection at Sta 12, 155, 299. Cracked joint at 274. Offset joint at 278 - Spot repair candidates.
06/08/05	6	Windover	3+97.58	0+83.58	325.9	8	VCP	5	Pipe failure at Sta 3, 41, 62. Cracked joint at 47. CIPP candidates.
06/08/05	6	Windover	0+83.58	0+00	83.97	8	VCP	5	Pipe failure at Sta 113 (major). Cracked joint Sta 118. Spot repair candidates.
06/08/05	6	Grand Vista Way	3+02.88	0+00	314.16	8	VCP	5	Blockage abandoned CCTV Sta 294. Sta 5 Cracked pipe, heavy roots. Cracked pipe at Sta 10, 48. CIPP candidate.
06/09/05	6	West Crest Way	7+23.11	4+23.11	294.98	8	VCP	2	Reverse of previous
06/09/05	6	West Crest Way	4+23.11	7+23.11	10.2	8	VCP	2	Heavy roots Sta 26 and 38. Cracked joint at Sta. 176, 213, 221, 270, 294. CIPP candidate.
06/09/05	6	West Crest Way	4+23.11	2+51.4	297.33	8	VCP	2, 4	Missing pipe at Sta 74. Pipe failure at lateral connection Sta 12, 69, 74 (two segments). Pipe crack at Sta 86, 102, 114, 123. - CIPP candidates
06/09/05	6	West Crest Way	2+51.4	0+00	135.71	8	VCP	5, 7	Roots at Lateral
06/09/05	7	Dover Way	4+05.71	2+63.5	147.44	8	Lined VCP	2	
06/09/05	7	Dover Way	2+63.5	0+00	268.66	8	Lined VCP	2	Pipe failure at Sta 75 two segments, Sta 98, 104 (with lateral) two segments, 155, 179, 186 eight segments, CIPP candidate
06/09/05	7	Crest Haven Way	6+80.87	4+77.74	207.95	8	VCP	5	Pipe failure at Sta 2 (two segments), 15 (three segments), 28 lateral connection, joint failure at 207 - CIPP candidate.
06/09/05	7	Crest Haven Way	4+77.74	2+67.21	214.27	8	VCP	5	

**City of Monterey Park
Water Master Plan Update
CCTV Review Sheet**

Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified Issue	Notes
06/09/05	7	Crest Haven Way	2+67.21	0+00	219.17	8	VCP	5, 7	Inspection abandoned broken pipe - failed lateral connection at Sta 77. Failed pipe at 161, hole at 164, pipe failure at 170, 192, 209 (four segments). Pipe missing at 218 - CIPP candidates.
06/09/05	7	Crest Haven Way	0+00	2+67.21	52.45	8	VCP	5	Reverse of previous - pipe failure at manhole back for entire reach. CIPP candidate.
06/09/05	7	Briarcliff Way	8+08.66	6+11.66	204.07	8	VCP	4	Pipe crack at joint Sta 17, 40, 63, 78, 81, 113. CIPP candidate.
06/09/05	7	Briarcliff Way	6+11.66	4+52.29	162.74	8	VCP	5	Pipe failure at Sta 30 (three segments), joint crack at lateral Sta 57 (four segments) 125, failure at Sta 84 (three segments), Sta 131 (six segments) - Spot repair candidate/CIPP.
06/09/05	7	Briarcliff Way	4+52.29	1+21	342.53	8	VCP	4	Lateral failed at Sta 103, 334, crack at joint at Sta 262, pipe failure at 295, - CIPP candidate
06/09/05	8	Briarcliff Way	1+21	0+00	122.03	8	VCP	5, 7	Failed pipe at Sta 12 (six segments) pipe missing, failed pipe at lateral connection cracked Sta 54 (eight segments, missing pipe soffit Sta 83 (two segments) - Pipeline replacement candidate.
06/09/05	8	Alpine Terr.	2+27.25	0+00	231.52	8	VCP	5, 7	Cracked pipe at Sta 97, cracked joint at 139, pipe failure at Sta 142, lateral failure at 150 (missing pipe), failed lateral connection 171, pipe failure 172 to Sta 230) - pipe replacement candidate.
06/09/05	8	Chalet Terr.	1+76.84	0+00	179.38	8	VCP	5, 7	Failed lateral connection Sta 14, 48, pipe failure Sta 100 to Sta 118, Sta 134 to Sta 150 - CIPP candidate
06/13/05	8	Rodman Cir.	9+00	9+65	60.61	8	VCP		No issues
06/13/05	8	Rodman Cir.	9+00	5+79.92	331.61	8	VCP		No issues
06/13/05	8	Rodman Cir.	5+79.92	2+77.42	196.52	8	VCP	2	Abandoned inspection no reverse
06/13/05	8	Ridgeside Dr.	13+31.37	10+99.75	239.37	8	VCP		No issues
06/13/05	8	Ridgeside Dr.	10+99.75	9+38.44	165.19	8	VCP		No issues
06/13/05	8	Ridgeside Dr.	9+38.44	6+75	271.31	8	VCP	2, 5, 7	Pipe failure three segments missing pipe Sta 2, cracked joint at 27 - Spot repair candidate.
06/13/05	8	Ridgeside Dr.	6+75	3+46.94	341.3	8	VCP		No issues
06/13/05	9	Ridgeside Dr.	3+46.94	2+45.20	103.26	8	VCP	2	

**City of Monterey Park
Water Master Plan Update
CCTV Review Sheet**

Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
06/13/05	9	Ridgeside Dr.	2+45.20	0+00	254.27	8	VCP		No issues
06/13/05	9	Ridgeside Circle	0+99.73	0+00	99.69	8	VCP		No issues
06/13/05	9	Ridgeside Dr.	11+38.10	7+90.21	339.47	8	VCP	2, 4	Cracked pipe at Sta 316 - Spot repair candidate
06/13/05	9	Ridgeside Dr.	7+90.21	4+96.5	307.22	8	VCP	2	
06/13/05	9	Ridgeside Dr.	4+96.5	1+95.71	315.69	8	VCP	2, 4	Cracked pipe at Sta 4 (MH) and 310 - Spot repair candidate
06/13/05	9	Ridgeside Dr.	1+95.71	0+00	202.84	8	VCP	4	Pipe failure at Sta 44, lateral cracked at Sta 47, 142 (one segment) - Spot Repair candidate.
06/13/05	9	Ridgeside Dr.	9+23.74	6+96.11	236.52	8	VCP		No issues
06/13/05	9	Ridgeside Dr.	6+96.11	3+44.66	365.89	8	VCP		No issues
06/13/05	9	Ridgeside Dr.	3+44.66	0+00	251	8	VCP		No issues
06/15/05	10	East Crest Way	5+54.41	4+22.41	134.58	8	VCP	4	Pipe failure at lateral connection Sta 14 - Spot repair candidate
06/15/05	10	East Crest Way	4+22.41	2+38.61	186.72	8	VCP	4	Pipe failure at Sta 2 (two segments) - Spot repair candidate
06/15/05	10	East Crest Way	2+38.61	0+00	243.96	8	VCP		No issues
06/15/05	10	Wandering Dr.	10+47.53	7+50.41	307.73	8	VCP	2, 4	Cracked pipe at Sta 127 - Spot repair candidate
06/15/05	10	Wandering Dr.	7+50.41	3+98.91	363.14	8	VCP	2	Roots at Lateral
06/15/05	10	Wandering Dr.	3+98.91	2+60.57	143.26	8	VCP		No issues
06/15/05	10	Wandering Dr.	2+60.57	1+00.47	162.23	8	VCP	5, 7	Hole in pipe at Sta 108 segment failed, cracked pipe at 145 - Spot repair candidate.
06/15/05	10	Wandering Dr.	10+47.53	12+15.63	174.48	8	VCP		No issues
06/15/05	10	Dell Dr.	12+54.04	9+25	277.33	8	VCP	2	Blockage abandoned CCTV
06/15/05	10	Dell Dr.	9+25	12+54.04	60.51	8	VCP	2	Reverse of previous
06/15/05	10	Dell Dr.	9+25	5+70.94	364.16	8	VCP	2	
06/15/05	10	Dell Dr.	5+70.94	2+69.67	308.45	8	VCP	2, 4	Cracked pipe at Sta 135 - Spot repair candidate
06/15/05	11	Dell Dr.	2+69.67	1+00	172.34	8	VCP	4	Pipe failure at Sta 1, failed lateral connection Sta 62 - Spot repair candidate.
06/15/05	11	Glenview Terr.	6+58.89	3+47.31	320.08	8	VCP		No issues
06/15/05	11	Glenview Terr.	3+47.31	1+15	237.94	8	VCP		No issues
06/15/05	11	Moonbeam Dr.	5+92.97	3+53	145.5	8	VCP	2	
06/15/05	11	Moonbeam Dr.	3+53	1+00	359.36	8	VCP	2, 4	Cracked pipe section at Sta 101 - Spot repair candidate
06/15/05	11	Moonbeam Dr.	3+51.33	1+00	257.53	8	VCP	2, 4	Failed lateral connection Sta 101, cracked joint at 178 - Spot repair candidates
06/16/05	11	Sunrise Dr.	8+00	9+55.53	157.64	8	VCP		No issues

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified Issue	Notes
06/16/05	11	Sunrise Dr.	8+00	5+45.50	258.86	8	VCP	4	Failed pipe segment Sta 86 - Spot repair candidate
06/16/05	11	Sunrise Dr.	5+45.50	2+97.50	258.86	8	VCP	2, 4	Cracked pipe at Sta 240 - Spot repair candidate
06/16/05	11	Sunrise Dr.	2+97.50	0+00	306.41	8	VCP	4	Cracked pipe at Sta 152 - Spot repair candidate
06/16/05	11	Sunrise Dr.	1+41.13	0+00	142.44	8	VCP		No issues
06/16/05	11	Sunrise Dr.	9+40.96	12+04.57	269.78	8	VCP		No issues
06/16/05	12	Sunrise Dr.	9+40.96	7+00.54	245.09	8	VCP	4	Failed pipe at Sta 99, 135 - Spot repair candidates.
06/16/05	12	Sunrise Dr.	7+00.54	3+50	359.67	8	VCP		No issues
06/16/05	12	Sunrise Dr.	3+50	2+51.72	99.48	8	VCP	5	Cracked joint at Sta 15, Pipe failure at Sta 43, 71, 75 (major missing pipe in flowline) two segments, 88 - Spot repair candidate.
06/16/05	12	Sunrise Dr.	2+51.72	1+00	152.44	8	VCP	5	Cracked pipe at Sta 7. Failed pipe at Sta 15 (three segments), 68, 76 (seven segments), 110 (three segments) - CIPP candidate.
06/16/05	12	Sunrise Pl.	2+50	1+00	152.95	8	VCP		No issues
06/16/05	12	Newmark Ave.	13+98.5	11+80	224.17	8	VCP		No issues
06/16/05	12	Newmark Ave.	11+80	9+10	278.86	8	VCP	2	Roots at Lateral
06/16/05	12	Newmark Ave.	9+10	6+40	183.76	8	VCP	2	Blockage abandoned CCTV
06/16/05	12	Newmark Ave.	6+40	9+10	72.04	8	VCP	2	Reverse of previous
06/16/05	12	Newmark Ave.	6+40	unknown	238.66	8	VCP		No issues
06/16/05	12	Newmark Ave.	unknown	4+10	45.61	8	VCP		No issues
06/20/05	13	Newmark Ave.	1+29.5	4+10	240.09	8	VCP		No issues
06/20/05	13	Newmark Ave.	1+29.5	0+01	54.49	8	VCP	7	Protruding lateral abandoned CCTV
06/20/05	13	Newmark Ave.	0+01	1+29.5	77.24	8	VCP	7	Reverse of previous
06/20/05	13	Mabel Ave.	12+25	9+06	90.91	8	VCP	2	Blockage abandoned CCTV
06/20/05	13	Mabel Ave.	9+06	12+25	235.9	8	VCP	2	Reverse of previous
06/20/05	13	Mabel Ave.	9+06	7+03.50	208.66	8	VCP		No issues
06/20/05	13	Mabel Ave.	7+03.50	5+17.60	191.31	8	VCP		No issues
06/20/05	13	Mabel Ave.	5+17.60	2+60	265.7	8	VCP		No issues
06/20/05	13	Mabel Ave.	2+60	0+04.50	256.31	8	VCP		No issues
06/21/05	13	Branham St.	12+28.70	9+23.13	313.65	8	VCP	2	
06/21/05	13	Branham St.	9+23.13	6+46.82	284.88	8	VCP	4	Cracked pipe at Sta 7 - Spot repair candidate
06/21/05	13	Branham St.	6+46.82	3+70	284.06	8	VCP		No issues
06/21/05	13	Branham St.	3+70	2+49.78	120.81	8	VCP	2, 4	Cracked pipe at Sta 10 - Spot repair candidate
06/21/05	14	Branham St.	2+49.78	0+38.3	216.82	8	VCP		No issues
06/21/05	14	Williams St.	3+70.49	2+12.09	162.13	8	VCP		No issues

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								Issue	Notes
06/21/05	14	Williams St.	2+12.09	0+00	217.74	8	VCP		No issues
06/21/05	14	Williams St.	3+03.10	2+00.84	103.77	8	VCP		No issues
06/21/05	14	Williams St.	2+00.84	0+00	204.78	8	VCP		No issues
06/21/05	14	Whitney Pl.	9+78.81	7+29.59	257.02	8	VCP	2, 5	Cracked lateral connection at Sta. 58, 67, 138, 151 cracked joint at 135, 144, cracked pipe and lateral connection at Sta 224, failed pipe at 248 (two segments) - CIPP candidate.
06/21/05	14	Tedford Way	5+25.48	2+63.95	263.66	8	VCP	2	Roots at Lateral
06/21/05	14	Tedford Way	2+63.95	0+00	273.04	8	VCP		No issues
06/22/05	14	Electric Ave.	7+29.59	5+81.05	139.17	8	VCP	4	Cracked pipe joint at Sta 14, 90, 131, 134 - CIPP candidate
06/22/05	14	Electric Ave.	5+81.05	4+71.54	112.95	8	VCP	2, 4	Roots at Lateral, failed pipe at Sta 108. Spot repair candidate.
06/22/05	15	Electric Ave.	4+71.54	2+40.58	234.98	8	VCP	2	Roots at Lateral
06/22/05	15	Electric Ave.	2+40.58	unknown	109.48	8	VCP		No issues
06/22/05	15	Electric Ave.	unknown	0+00	1.22	8	VCP	7	Protruding lateral abandoned CCTV
06/22/05	15	Electric Ave.	8+35	10+75.50	248.05	8	VCP		No issues
06/22/05	15	Electric Ave.	0+00	unknown	167.03	8	VCP		Reverse of previous
06/22/05	15	Electric Ave.	8+35	5+47	296.41	8	VCP		No issues
06/22/05	15	Electric Ave.	5+47	3+99	151.62	8	VCP		No issues
06/22/05	15	Electric Ave.	3+99	2+62	141.52	8	VCP		No issues
06/22/05	15	Electric Ave.	2+62	1+36	128.77	8	VCP		No issues
06/22/05	15	Electric Ave.	1+36	0+00	134.89	8	VCP		No issues
06/22/05	15	Marguerita Ave.	7+19.5	5+28	173.56	8	VCP		No issues
06/22/05	15	Marguerita Ave.	5+28	1+80	123.36	8	VCP	1	Rock in the pipe
06/22/05	15	Marguerita Ave.	1+80	5+28	6.73	8	VCP		Reverse of previous
06/23/05	16	Marguerita Ave.	1+80	0+00	3.37	8	VCP	1	Blockage abandoned CCTV
06/23/05	16	Marguerita Ave.	0+00	1+80	82.75	8	VCP	1	Reverse of previous unable to finish due to rock in pipe.
06/23/05	16	Newmark Ave.	3+00	0+00	305.9	8	VCP	4	Failed pipe segment at Sta 0 - Spot repair candidate.
06/23/05	16	Marguerita Ave.	8+56	7+19.5	163.25	8	VCP	2	Roots at Lateral
06/23/05	16	Newlee Ave.	4+00	1+74.60	230.9	8	VCP		No issues
06/23/05	16	Newlee Ave.	1+74.60	0+00	178.15	8	VCP		No issues
06/23/05	16	Knoll Ave.	2+86	1+70	119.79	8	VCP	2	Roots at Lateral
06/23/05	16	Knoll Ave.	1+70	0+00	172.74	8	VCP		No issues
06/23/05	16	Mabel Ave.	9+75	7+03.50	0	8	VCP	2	Blockage abandoned CCTV

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								Issue	Notes
06/23/05	16	Mabel Ave.	7+03.50	9+75	129.28	8	VCP	2	Reverse of previous
06/27/05	16	Mabel Ave.	7+03.50	4+32	281.92	8	VCP		No issues
06/27/05	16	Mabel Ave.	4+32	2+12	225.19	8	VCP		No issues
06/27/05	16	Mabel Ave.	2+12	0+00	214.27	8	VCP	6	offset joint severe - Sta 84, 88 Spot repair candidate.
06/27/05	17	Newmark Ave.	5+70	4+60	112.14	8	VCP		No issues
06/27/05	17	Newmark Ave.	4+60	0+45	28.26	8	VCP	2	Blockage abandoned CCTV
06/27/05	17	Newmark Ave.	0+45	4+60	292.43	8	VCP	2	Reverse of previous
06/27/05	17	Newmark Ave.	0+45	0+00	44.28	8	VCP		No issues
06/27/05	17	Newmark Ave.	14+10	12+73	142.85	8	VCP		No issues
06/27/05	17	Kingsford St.	12+73	11+03.5	171.62	8	VCP		No issues
06/27/05	17	Kingsford St.	11+03.5	8+00	312.73	8	VCP	2	Roots at Lateral
06/27/05	17	Kingsford St.	8+00	6+01	204.88	8	VCP		No issues
06/27/05	17	Kingsford St.	6+01	2+86	325.18	8	VCP	2	Roots at Lateral
06/27/05	17	Kingsford St.	2+86	0+00	294.98	8	VCP	2	Roots at Lateral
06/27/05	17	Kingsford St.	9+24	7+00	118.56	8	VCP	2	Blockage abandoned CCTV
06/27/05	17	Kingsford St.	7+00	9+24	107.85	8	VCP	2, 6	Reverse of previous, offset at Sta 83 - Spot repair candidate.
06/27/05	18	Kingsford St.	7+00	3+50	243.86	8	VCP	2	Blockage abandoned CCTV
06/28/05	18	Kingsford St.	3+50	7+00	92.34	8	VCP	2	Reverse of previous
06/28/05	18	Kingsford St.	3+50	0+00	356.1	8	VCP	2	Roots at Lateral
06/28/05	18	Jade Tree St.	109+03.7	111+51.6	253.96	8	VCP		No issues
06/28/05	18	Jade Tree St.	109+03.7	106+55.3	253.25	8	VCP		No issues
06/28/05	18	Jade Tree St.	106+55.3	104+25.2	236.11	8	VCP		No issues
06/28/05	18	Jade Tree St.	104+25.2	101+00	331.61	8	VCP		No issues
06/28/05	18	Montichico Ave.	101+00	100+05	94.48	8	VCP	1	
06/28/05	18	Montechico Dr.	0+00	2+70	5.41	8	VCP	7	Protruding lateral abandoned CCTV
06/28/05	18	De La Fuente	12+00	9+00	17.86	8	VCP	2, 7	Blockage abandoned CCTV
06/28/05	18	De La Fuente	9+00	12+00	250.9	8	VCP	2	Reverse of previous
06/28/05	18	De La Fuente	9+00	6+00	309.06	8	VCP	2, 4	Cracked pipe at Sta 93 - Spot repair candidate
06/28/05	19	De La Fuente	11+43	10+12	131	8	VCP	2	
06/28/05	19	De La Fuente	10+12	7+26	290	8	VCP	2	
06/28/05	19	De La Fuente	5+21	3+22	200.19	8	VCP		No issues
06/28/05	19	De La Fuente	3+22	1+21	200.69	8	VCP		No issues
06/28/05	19	De La Fuente	1+21	0+00	120.13	8	VCP		No issues
06/28/05	20	De La Fuente	6+00	3+00	309.98	8	VCP	1	grease at lateral
06/29/05	20	De La Fuente	0+00	3+00	308.14	8	VCP		No issues

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	Notes
								Issue	
06/29/05	20	Cadiz St.	2+01.22	0+00	204.37	8	VCP		No issues
06/29/05	20	De La Fuente	10+75	13+55	288.25	8	Concrete Pipe	5	CIPP candidate
06/29/05	20	De La Fuente	10+75	7+82.35	301.82	8	Concrete Pipe	5, 7	Holes in pipe - CIPP Candidate
06/29/05	20	De La Fuente	7+82.35	3+50	447.32	8	Concrete Pipe	5	CIPP candidate
06/29/05	21	De La Fuente	0-02	3+50	101.12	8	Concrete Pipe	7	Protruding lateral abandoned CCTV - CIPP candidate.
06/29/05	21	De La Fuente	3+50	0-02	257.43	8	Concrete Pipe	5	Reverse of previous. CIPP candidate.
06/30/05	21	Alley	6+73.55	4+50	228.25	8	Concrete Pipe	5, 7	CIPP candidate
06/30/05	21	Alley	4+50	0+00	465.17	8	Concrete Pipe	1	CIPP candidate
06/30/05	21	Alley	5+15	unknown	304.37	8	Concrete Pipe	1	CIPP candidate
06/30/05	21	Alley	unknown	unknown	310.29	8	Concrete Pipe	1, 5	CIPP candidate
06/30/05	22	Alley	2+11	3+78	330.28	8	VCP		No issues
06/30/05	22	Alley	2+11	3+78	330.28	8	VCP	2	Roots at Lateral
06/30/05	22	El Portal	1+23.80	0+00	132.85	8	VCP	2	
06/30/05	22	Harding Ave.	1+60	0+00	163.56	8	VCP		No issues
06/30/05	22	Hermosa Vista	4+72.28	6+91.44	227.03	8	VCP	4	Cracked lateral connection at Sta 219- Spot repair candidate.
06/30/05	22	Hermosa Vista	4+72.28	3+49.62	126.83	8	VCP	4	Cracked pipe joint at Sta 90 - Spot repair candidate
06/30/05	22	Hermosa Vista	3+49.62	1+00	259.27	8	VCP	4	Cracked pipe section at Sta 64 - Spot repair candidate
06/30/05	22	Hermosa Vista	8+33.29	4+73.28	372.32	8	VCP		No issues
07/01/05	22	Hermosa Vista	4+73.28	1+23.28	364.06	8	VCP	2, 5	Roots at several joints severe, failed pipe at Sta. 340. Spot repair candidate.
07/01/05	22	Hermosa Vista	1+23.28	0+00	126.73	8	VCP	2	
07/01/05	22	Cadiz St.	141+00	140+11.0	90.2	8	VCP		No issues
07/01/05	22	Nachi Way	132+46.4	130+00	254.17	8	VCP		No issues
07/01/05	22	Crest Vista Dr.	122+36.2	124+46.3	216.01	8	VCP		No issues
Total Length (ft)					48525.66		9.19	Miles	
					2006				
05/08/06	1	Ridgecrest Wy	1540	1580	119.61	8	VCP	2	
05/08/06	1	Ridge Crest Way	1540	970	214.29	8	VCP	2, 4	Failed pipe at Sta 0 (MH) - Spot repair candidate Failed lateral connection Sta 2, 101, failed pipe at Sta. 111 (four segments holes visible), - Spot repair candidate.
05/08/06	1	Ridge Crest St.	940	970	340.82	8	VCP	1, 5	
05/08/06	1	Ridge Crest St.	970	979	137.91	8	VCP		No issues
05/08/06	1	Ridge Crest St.	979	1001	174.43	8	VCP		No issues

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified Issue	Notes
05/08/06	1	Ridge Crest St.	1024	1001	356.17	8	VCP		No issues
05/08/06	1	Ridge Crest St.	1028	1037	228.74	8	VCP		No issues
05/08/06	1	Ridge Crest St.	1037	1071	348.24	8	VCP		No issues
05/08/06	1	Ridge Crest St.	1071	1087	326.78	8	VCP		No issues
05/08/06	1	Ridge Crest St.	1087	1137	206.46	8	VCP	1,2	Blockage abandoned CCTV
05/08/06	1	Ridge Crest St.	1137	1087	60.31	8	VCP	2	Reverse of previous
05/08/06	1	Ridge Crest St.	1137	1175	167.61	8	VCP	2, 4	Cracked pipe joint at Sta 110 - Spot repair candidate
05/08/06	1	Ridge Crest St.	1175	1225	359.94	8	VCP	2, 4	Failed pipe section at Sta 233 - Spot repair candidate
05/08/06	1	Ridge Crest St.	1225	1293	72.21	8	VCP	2	Blockage abandoned CCTV
05/08/06	1	Ridge Crest St.	1293	1225	230.47	8	VCP	2, 4	Reverse of previous - cracked pipe joint at Sta 130 - Spot repair candidate
05/08/06	1	Ridge Crest St.	1293	1345	335.02	8	VCP		No issues
05/08/06	1	Ridge Crest St.	1345	1445	313.05	8	VCP	4	Cracked pipe joints at Sta 36, 274 - Spot repair candidate
05/09/06	2	Ridgecrest St.	1445	1501	358.18	8	VCP	4	Failed pipe at Sta 15 - Spot repair candidate
05/09/06	2	Ridge Crest St.	1501	1541	264.29	8	VCP		No issues
05/09/06	2	Ridge Crest St.	1541	1571	139.41	8	VCP	1, 4	Blockage abandoned CCTV no reverse - Cracks throughout reach - CIPP candidate
05/09/06	2	Hillside St.	1001	1128	348.59	8	VCP	1, 5	Cracked lateral connection at Sta. 149, failed lateral connection at Sta. 208, 226, cracked pipe joint at 216, failed pipe at Sta 226 (five segments) - Spot repair candidate.
05/09/06	2	Hillside St.	1128	1200	290.54	8	VCP	4	Cracked pipe joints at Sta 79, 96, 285 and throughout - CIPP candidate
05/09/06	2	Hillside St.	1200	1265	376.85	8	VCP	1, 2, 4	Cracked pipe joints at Sta 43, 203, 229, throughout - CIPP candidate
05/09/06	2	Hillside St.	1265	1295	204.12	8	VCP	4	Cracks throughout reach - CIPP candidate
05/09/06	2	Hillside St.	1295	1323	197.97	8	VCP	4	Cracks throughout reach - CIPP candidate
05/09/06	2	Hillside St.	1323	1389	265.81	8	VCP	4	Cracks throughout reach - CIPP candidate
05/09/06	2	Hillside St.	1389	1467	238.04	8	VCP	4	Cracks throughout reach - CIPP candidate
05/09/06	2	Hillside St.	1467	1800	230.67	8	VCP		No issues
05/09/06	2	Hillside St.	1800	1800A	297.1	8	VCP	2, 4	Cracks throughout reach - CIPP candidate
05/10/06	3	Sunnyhill Drive	1481	1581	272.27	8	VCP	2	
05/10/06	3	Sunnyhill Drive	1581	1641	307.15	8	VCP	2	

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified Issue	Notes
05/10/06	3	Sunnyhill Drive	1641	1323	179.51	8	VCP	5, 6, 7	Cracked pipe joint at Sta 26, failed pipe at Sta 67 (five segments holes visible), 115 (two segments), 140 (two segments), 156, 174, failed lateral connection at Sta 73, offset at 163 - CIPP candidate.
05/10/06	3	Longhill Dr.	1414	1481	245.42	8	VCP	5	Cracked pipe at Sta 24, failed pipe and lateral connection Sta 41 (three segments), 61 (two segments), Spot repair candidate.
05/10/06	3	Longhill Dr.	1481	1556	256.4	8	VCP	2	
05/10/06	3	Longhill Dr.	1556	1622	275.62	8	VCP	1	
05/10/06	3	Longhill Dr.	1622	1265	178.49	8	VCP	5	Failed lateral connection at Sta. 42 (two segments), failed pipe segment at 54 (three segments holes visible), 72 (two segments), 90 (six segments), cracked joint at Sta. 80, 87 - CIPP candidate.
05/10/06	3	North Ridge Pl.	1100	1480	309.9	8	VCP	5	Cracked pipe at Sta 1, failed lateral connection and pipe joint at Sta. 7 (two segments), 45 - Spot repair candidate.
05/10/06	3	Star Ridge Dr.	1418	1480	194.56	8	VCP	4	Cracked pipe at Sta 4 (MH) - Spot repair candidate
05/10/06	3	Star Ridge Dr.	1480	1580	234.43	8	VCP	4	Cracks throughout reach - CIPP candidate
05/10/06	3	Star Ridge Dr.	1580	1200	155.81	8	VCP		No issues
05/10/06	3	Sunnyslope Pl.	1379	1380	175.75	8	VCP		No issues
05/10/06	3	Sunnyslope Dr.	1366	1380	141.47	8	VCP		No issues
05/10/06	3	Sunnyslope Dr.	1380	1391	101.6	8	VCP	2	Blockage abandoned CCTV
05/10/06	3	Sunnyslope Dr.	1391	1380	61.33	8	VCP	2	Reverse of previous
05/11/06	4	Stone Ct.	1320	2267	252.54	8	VCP	2	
05/11/06	4	Stone Gate St.	1363	1460	316.71	8	VCP	4	Cracked pipe at Sta 228 - Spot repair candidate
05/11/06	4	Stone Gate St.	1460	2200	282.44	8	VCP	4	Cracks throughout reach - CIPP candidate
05/11/06	4	Stonewell St.	2267	1433	385.57	8	VCP	2, 4	Cracks throughout reach - CIPP candidate
05/11/06	4	Stonewell St.	1433	2280	390.75	8	VCP	2, 5	Failed lateral connection at Sta. 6, cracked pipe joint at 67, 160, failed pipe segment at 84 (three segments holes visible) - Spot repair candidate.
05/11/06	4	Longhill Dr.	1845	1801	178.49	8	VCP	1	

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05/11/06	4	Longhill Dr.	1801	1750	357.8	8	VCP	1, 5, 7	Cracked pipe joint at Sta. 120, failed pipe at 148 (two segments), failed pipe and lateral connection at Sta. 167 (six segments), 186 (seven segments holes visible), 272 (three segments) - CIPP candidate
05/11/06	4	Longhill Dr.	1750	1265	308.07	8	VCP	4	Cracks throughout reach - CIPP candidate
05/11/06	4	Longhill Dr.	1845	1175	358.21	8	VCP	5, 7	Failed pipe at Sta. 82, failed pipe and lateral connection Sta. 165 - Spot repair candidate.
05/11/06	4	Longhill Dr.	1175	2047	283.76	8	VCP	2	
05/11/06	4	Longhill Dr.	2047	1189	159.07	8	VCP	2	Blockage abandoned CCTV
05/11/06	4	Longhill Dr.	1189	2047	70.79	8	VCP	2	Reverse of previous
05/11/06	4	Pebbledon St.	1189	1245	261.89	8	VCP	4	Cracks throughout reach - CIPP candidate
05/11/06	4	Pebbledon St.	1245	1323	356.48	8	VCP	5	Cracked pipe joint at Sta. 4, failed pipe at 132 (two segments), 156 (two segments), 172, 178 (two segments), 187 (two segments), 225 (two segments), 320, failed pipe and lateral connection 198 (two segments), CIPP candidate.
05/12/06	5	Bluffhill Dr.	1601	1679	258.03	8	VCP	4	Cracks throughout reach - CIPP candidate
05/12/06	5	Bluffhill Dr.	1679	1750	217.55	8	VCP	4	Cracks throughout reach - CIPP candidate
05/12/06	5	Long Hill Way	1190	1175	123.27	8	VCP	2	
05/12/06	5	Pebbledon St.	1323	1433	381.3	8	VCP	5	Cracked pipe joint at Sta 1, 140, 106 (two segments), 119 (two segments), 152, cracked pipe and lateral connection Sta 173, lateral blocked/failed cap Sta 284 - Spot repair candidate.
05/12/06	5	Pebbledon St.	1433	2140	383.43	8	VCP	4	Cracks throughout reach - CIPP candidate
05/12/06	5	Pebble Ct.	2001	2061	247.04	8	VCP	1, 4	Cracks throughout reach - CIPP candidate
05/12/06	5	Pebble Ct.	2061	1323	255.18	8	VCP	1, 2, 4	Cracks throughout reach - CIPP candidate
05/12/06	5	Pebble Hurst St.	1340	1460	345.5	8	VCP	4	Cracked pipe at Sta 191 - Spot repair candidate
05/12/06	5	Pebble Hurst St.	1460	1990	308.07	8	VCP	2, 5	Failed lateral connection at Sta. 7 (holes visible), failed pipe and lateral connection at 9 (holes visible), failed pipe at 57 (three segments), 233 (two segments), 254 (three segments) - CIPP candidate.
05/12/06	6	Solar Dr.	1411	1461	353.8	8	VCP	2, 4	Cracked pipe at Sta 155 - Spot repair candidate
05/12/06	6	Solar Dr.	1461	1501	220.4	8	VCP	2, 4	Cracked pipe at Sta 15 - Spot repair candidate

**City of Monterey Park
Water Master Plan Update
CCTV Review Sheet**

Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
05/12/06	6	Solar Dr.	1501	intersection	352.2	8	VCP	2	
05/12/06	6	Valley Vista Dr.	1580	1490	257	8	VCP	2	
05/12/06	6	Valley Vista Dr.	1580	intersection	304.4	8	VCP	2, 6	Offset joint at Sta 275 - Spot repair candidate
05/12/06	6	Rolling Hill Dr.	1501	1591	332.7	8	VCP	2, 4	Cracked pipe at Sta 148 - Spot repair candidate
05/12/06	6	Rolling Hill Dr.	1591	intersection	279.7	8	VCP	4	Cracked pipe at Sta 85, 226 - Spot repair candidate
05/12/06	6	Lunar Dr.	1531	1561	98.4	8	VCP	2	
05/12/06	6	Lunar Dr.	1561	1531	51.2	8	VCP	2	
05/12/06	6	Lunar Dr.	1561	intersection	352.2	8	VCP	4	Cracked pipe at Sta 183, 262 - Spot repair candidate
05/12/06	7	Sunnyslope Dr.	1391	1440	226.8	8	VCP	2	
05/12/06	7	Sunnyslope Dr.	1440	1500	265.86	8	VCP		No issues
05/12/06	7	Sunnyslope Dr.	1500	1590	359.33	8	VCP		No issues
05/12/06	8	Wandering Dr.	1601	intersection	145.8	8	VCP	2	
05/12/06	8	Wandering Dr.	intersection	1601	88.2	8	VCP	2	Roots at Lateral
05/12/06	8	Shady Crest Dr.	1621	1651	160.1	8	VCP	2	Roots at Lateral
05/12/06	8	Shady Crest Dr.	1651	intersection	242.1	8	VCP	2	Roots at Lateral
05/15/06	9	Brightwood St.	1880	1920	248.24	8	VCP	5	Cracked pipe and lateral connection at Sta. 26, 156 (two segments), - Spot repair candidate.
05/15/06	9	Brightwood St.	1920	1990	247.84	8	VCP	5	Cracked pipe and lateral connection at Sta. 19, 101, cracked pipe joint at 56, 77 (two segments), 156, 183 - Spot repair candidate.
05/15/06	9	Brightwood St.	1990	2080	248.04	8	VCP	5	Cracked pipe joint at Sta 18 (two segments), 28, 63, cracked pipe and lateral connection at 91 (seven segments), 146, 148, 217 (three segments) - CIPP candidate.
05/15/06	9	Brightwood St.	2080	2140	247.43	8	VCP	4	Cracked pipe joints at Sta 148, throughout - CIPP candidate
05/15/06	9	Brightwood St.	2140	2200	248.24	8	VCP	4	Cracked pipe joint at Sta 18, throughout - CIPP candidate
05/15/06	9	Brightwood St.	2200	2280	249.15	8	VCP	4	Cracked pipe joint at Sta 42, throughout - CIPP candidate
05/15/06	9	Brightwood St.	2280	1501	251.07	8	VCP	4	Cracked pipe joint at Sta 46, throughout - CIPP candidate
05/15/06	9	Brightwood St.	1880	1800	376.15	8	VCP		No issues
05/15/06	9	Brightwood St.	1590	1690	364.64	8	VCP	4	Cracked pipe joint at Sta 298, throughout - CIPP candidate

**City of Monterey Park
Water Master Plan Update
CCTV Review Sheet**

Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
05/15/06	10	College View Dr.	1690	1600	325.39	10	VCP		No issues
05/15/06	10	College View Dr.	1600	1501	339.16	10	VCP	4	Cracked pipe throughout - CIPP candidate Cracked pipe segment at Sta 8 and 12 - Spot repair candidate
05/15/06	10	College View Dr.	1501	1441	244.78	10	VCP	4	No issues
05/15/06	10	College View Dr.	1401	1291	342.83	10	VCP		Failed pipe and lateral connection at Sta. 5, 290, cracked pipe joint at 206, 247, 317, failed pipe at 325, hole in pipe at Sta. 222 - Spot repair candidate.
05/15/06	10	College View Dr.	1291	1174	337.73	10	VCP	5, 7	No issues
05/15/06	10	College View Dr.	1129	1080	274.37	10	VCP		Failed pipe at Sta. 185, 204, cracked joint at 268 - Spot repair candidate
05/15/06	10	College View Dr.	1080	1020	336.71	10	VCP	5	Cracked pipe throughout - CIPP candidate
05/15/06	11	College View Dr.	1020	1000	134.38	10	VCP	4	No issues
05/15/06	11	College View Dr.	1895	1801	341.3	10	VCP	4	Cracked pipe throughout - CIPP candidate
05/15/06	11	College View Dr.	1895	1983	347.83	10	VCP	4	Cracked pipe throughout - CIPP candidate
05/15/06	11	College View Dr.	1983	2081	346.41	10	VCP	4	Cracked pipe throughout - CIPP candidate
05/15/06	12	Brightwood St.	1690	1800	362.72	8	VCP	4, 7	Cracked pipe at Sta 227, throughout - CIPP candidate
05/15/06	12	Brightwood St.	1590	1520	63.5	8	VCP	1, 2	Blockage abandoned CCTV
05/15/06	12	Brightwood St.	1520	1590	171.52	8	VCP	1,2	Reverse of previous
05/15/06	12	Brightwood St.	1520	1480	248.24	8	VCP		No issues
05/16/06	13	Brightwood St.	1480	1420	247.03	8	VCP	5	Failed pipe at Sta. 7 (five segments) - Spot repair candidate.
05/16/06	13	Brightwood St.	1420	1360	248.44	8	VCP	2, 4	Cracked pipe at Sta 47, throughout - CIPP candidate
05/16/06	13	Brightwood St.	1360	1300	252.98	8	VCP	4	Cracked pipe joint at Sta 9 - Spot repair candidate
05/16/06	13	Brightwood St.	1300	1244	232.09	8	VCP	4	Cracked pipe throughout - CIPP candidate
05/16/06	13	Brightwood St.	1244	1190	259.14	8	VCP	5, 7	Failed pipe joint at 232 (two segments) - Spot repair candidate.
05/16/06	13	Brightwood St.	1110	1190	328.8	8	VCP	1	
05/16/06	13	Brightwood St.	1081	1021	200.19	8	VCP	1	
05/16/06	13	Brightwood St.	1021	1800	352.42	8	VCP	4	Cracked pipe at Sta 64, 66, 241, throughout - CIPP candidate
05/16/06	14	Lightview St.	1300	1380	270.55	8	VCP	5	Cracked lateral connection at Sta. 8, pipe joint cracked at Sta. 144 (two segments), 175 (three segments), - Spot repair candidate.

**City of Monterey Park
Water Master Plan Update
CCTV Review Sheet**

Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified Issue	Notes
05/16/06	14	Lightview St.	1380	1423	221.39	8	VCP	4	Cracked pipe at Sta 17, throughout - CIPP candidate
05/16/06	14	Lightview St.	1423	1467	161.52	8	VCP	4	Cracked pipe at Sta 16, throughout - CIPP candidate
05/17/06	15	Rock View St.	1305	1323	134.27	8	VCP	5	Cracked lateral connection and pipe joint at Sta. 69, cracked pipe at 72, 97 - Spot repair candidate
05/17/06	15	Rock View St.	1323	1437	372.51	8	VCP	2, 5	Cracked pipe at Sta. 5, cracked pipe joint at 11, 14, 35, 110 (four segments), cracked pipe at 39, (two segments), cracked pipe at 57 (two segments), 156 (five segments), 180 (five segments), 235 (three segments), 269 (two segments), cracked lateral and pipe at 64, 78 (two segments), 145 (two segments), 228 (two segments), 294 (two segments) - CIPP candidate
05/17/06	15	Rock View St.	1437	1920	371.4	8	VCP	4	Cracked pipe and lateral connection at Sta. 77, 150, 304, cracked pipe at 249 (two segments), 318 (three segments), 340 (three segments) - CIPP candidate
05/17/06	15	Rock Haven St.	1320	1433	368.37	8	VCP	2, 5	Cracked pipe joint at Sta 28 (four segments), 96, 156, cracked pipe and lateral connection 69, 110 (two segments), 199 (two segments) - CIPP candidate
05/17/06	16	Rock Haven St.	1433	1880	362.21	8	VCP	2, 5	Roots at Lateral, cracked pipe at Sta 4 (two segments), 195, 240, 260 (two segments), cracked pipe and lateral connection 53, 82, 212 - CIPP candidate
05/17/06	16	S. Bleakwood Ave	2001	2025	276.71	8	VCP	1, 4	Cracked pipe at Sta 271 - Spot repair candidate
05/17/06	16	S. Bleakwood Ave	2025	2049	274.29	8	VCP		No issues
05/17/06	16	S. Bleakwood Ave	2049	2069	329.2	8	VCP	2, 4	Crack at Sta 12, throughout - CIPP candidate
05/17/06	16	S. Bleakwood Ave	2069	2093	328.7	8	VCP	2	Roots at Lateral
05/17/06	16	S. Bleakwood Ave	2093	2313	71.88	8	VCP	1	Blockage abandoned CCTV
05/17/06	16	S. Bleakwood Ave	2313	2093	57.04	8	VCP		Reverse of previous
05/18/06	17	S. Bleakwood Ave.	2313	2325	310.12	8	VCP		No issues
05/18/06	17	S. Bleakwood Ave	2357	2325	321.53	8	VCP	1, 4	Cracked pipe at Sta 82 - Spot repair candidate
05/18/06	17	S. Bleakwood Ave	2361	2331	264.59	8	VCP		No issues

**City of Monterey Park
Water Master Plan Update
CCTV Review Sheet**

Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified Issue	Notes
05/18/06	17	S.Bleakwood Ave	2331	2392	269.64	8	VCP		No issues
05/18/06	17	S.Woods Ave.	2358	1929	401.28	8	VCP	2	Buried manhole
05/18/06	17	S.Woods Ave.	2365	2385	265.7	8	VCP		No issues
05/18/06	17	S.Woods Ave.	2385	2399	273.48	8	VCP		No issues
05/18/06	18	S. Woods Ave.	2002	2026	302.35	8	VCP	5	Cracked pipe and lateral connection at Sta 4, 7, 59, 108, 255, 258, 282 - CIPP Candidate
05/18/06	18	S.Woods Ave.	2026	2050	302.35	8	VCP	1, 5	Cracked pipe joint at Sta. 66, 138, cracked pipe and lateral connection at 160 - Monitor cracks, spot repair candidate.
05/18/06	18	S.Woods Ave.	2050	2074	302.25	8	VCP	2, 4	Cracked pipe at Sta 14, 111 and throughout - CIPP candidate
05/19/06	19	S. Woods Ave.	2074	2094	300.33	8	VCP		No issues
05/19/06	19	S.Vancouver Ave.	2001	2021	248.44	8	VCP	1, 2, 4	Cracked pipe at Sta 141 - CIPP candidate due to roots
05/19/06	19	S.Vancouver Ave.	2021	2041	248.14	8	VCP	2	
05/19/06	19	S.Vancouver Ave.	2041	2069	357.97	8	VCP	4	Cracked pipe at Sta 274 and 328 - Spot repair candidate
05/19/06	19	S.Vancouver Ave.	2069	2093	355.95	8	VCP		No issues
05/19/06	19	S.Vancouver Ave.	2312	2323	136.79	8	VCP	2	
05/19/06	20	S. Vancouver Ave.	2323	2327	85.61	8	VCP	2	
05/19/06	20	S.Vancouver Ave.	2362	2338	300.53	8	VCP	2	Roots at Lateral
05/19/06	20	S.Vancouver Ave.	2338	2327	164.65	8	VCP	4	Cracked pipe at Sta 85 - Spot repair candidate
05/19/06	20	S.Vancouver Ave.	2366	2382	172.73	8	VCP	1	Substantial grease
05/19/06	20	S.Vancouver Ave.	2382	2390	140.32	8	VCP		No issues
05/19/06	20	S.Vancouver Ave.	2390	2398	122.15	8	VCP	2	Blockage abandoned CCTV
05/22/06	21	S. Roscommon Ave.	2355	2374	266.21	8	VCP		No issues
05/22/06	21	S.Roscommon Ave.	2374	2390	272.06	8	VCP		No issues
05/22/06	21	S.Roscommon Ave.	2350	2334	247.13	8	VCP		No issues
05/22/06	21	S.Roscommon Ave.	2311	2334	323.65	8	VCP		No issues
05/22/06	21	S.Westcott Ave.	2309	2329	266.21	8	VCP	2, 4	Cracked pipe at Sta 138 - Spot repair candidate
05/22/06	21	Westcott Ave.	2329	2337	168.79	8	VCP	4	Cracked pipe at Sta 57 - Spot repair candidate
05/22/06	21	Westcott Ave.	2388	2356	355.75	8	VCP		No issues
05/22/06	21	Westcott Ave.	2356	2340	162.53	8	VCP		No issues
05/22/06	21	Westcott Ave.	2340	2337	123.97	8	VCP	4	Cracked pipe at Sta 23 - Spot repair candidate
05/22/06	21	Dorner Dr.	2327	1929	275.5	8	VCP	2, 4	Cracked pipe throughout - CIPP candidate
05/23/06	22	Dorner Dr.	1929	2328	271.56	8	VCP	2	
05/23/06	22	Dorner Dr.	2328	2334	274.59	8	VCP	2	

MID YEAR REVIEW REPORT

City of Monterey Park

Fiscal Year 2013 - 2014



**City of Monterey Park
Five Year Financial Projection
Refuse Fund**

	Estimated Actual 2013-14	Long-Term Projection					Notes
		2014-15	2015-16	2016-17	2017-18	2018-19	
Beginning Unrestricted Net Assets	\$2,203,919	\$1,413,112	\$481,612	\$2,300	(\$429,100)	(\$808,400)	
Revenues:							
Refuse Fees	5,500,000	5,500,000	6,093,288	6,276,000	6,464,000	6,858,000	(1)
Waste Management Fees	330,000	330,000	340,000	350,000	361,000	372,000	
Total Revenues	5,830,000	5,830,000	6,433,288	6,626,000	6,825,000	7,030,000	
Expenditures:							
Salaries & Benefits	779,562	840,000	861,000	883,000	905,000	928,000	(2)
Maintenance & Operation	41,335	42,000	43,000	44,000	45,000	46,000	(3)
Waste Reduction-AB 939	2,000	2,000	2,000	2,000	2,000	2,000	(4)
Refuse Pick-Up Contract	5,000,000	5,100,000	5,202,000	5,306,000	5,412,000	5,520,000	(4)
Other Contracted Services	156,088	160,700	166,000	171,000	176,000	181,000	(5)
Utilities	13,800	14,200	14,600	15,000	15,500	16,000	(6)
Allocated Costs	270,000	278,000	286,000	295,000	304,000	313,000	(7)
Vehicle Operating	7,262	7,600	8,000	8,400	8,800	9,200	(8)
NPDES	104,000	107,000	110,000	113,000	116,000	119,000	(9)
Small Capital	20,000	10,000	20,000	20,000	20,000	20,000	(10)
Capital Projects - Carryover	26,760						
OPEB Set Aside	200,000	200,000	200,000	200,000	200,000	200,000	
Total Expenditures	6,620,807	6,761,500	6,912,600	7,057,400	7,204,300	7,354,200	
Ending Unrestricted Net Assets	\$1,413,112	\$481,612	\$2,300	(\$429,100)	(\$808,400)	(\$1,132,600)	
Future Capital Projects:							(10)

**City of Monterey Park
Five Year Financial Projection
Refuse Fund
Notes**

- (1) **Estimated 3% CPI increase for refuse rates (does not include commercial refuse fees, which are collected by refuse contractor). The rates have not been increased for over 4 years. The City anticipates a 218 rate increase to offset deficits, starting 2015-16.**
- (2) **2.5% Increase in salaries & benefits.**
- (3) **2% increase in maintenance, supplies and other operating costs.**
- (4) **2% increase in contracted services for waste reduction and monitoring, and refuse pick-up (does not include commercial refuse service pick-up contract).**
- (5) **3% increase in other contracted services, including legal fees, accounting and auditing, and data processing services.**
- (6) **3% increase in utilities.**
- (7) **Administrative support provided by the City.**
- (8) **5% increase in vehicle operating costs.**
- (9) **Federally Mandated National Pollutant Discharge Elimination System, estimated increase 3%.**
- (10) **Source: Preliminary Five-Year Capital Improvement Program. Amounts shown for future capital projects have not been included in fund balance calculation.**