

City of Monterey Park Wastewater Collection System Master Plan Update



City of Monterey Park



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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 thorough 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 to 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 Riggan 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	Bradshaw Ave: from 1018 Bradshaw Ave. to Bradshaw 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.

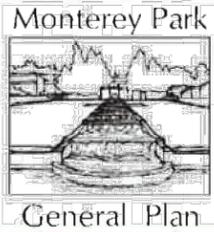
Annual Pipeline CCTV Projects Allowance

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.

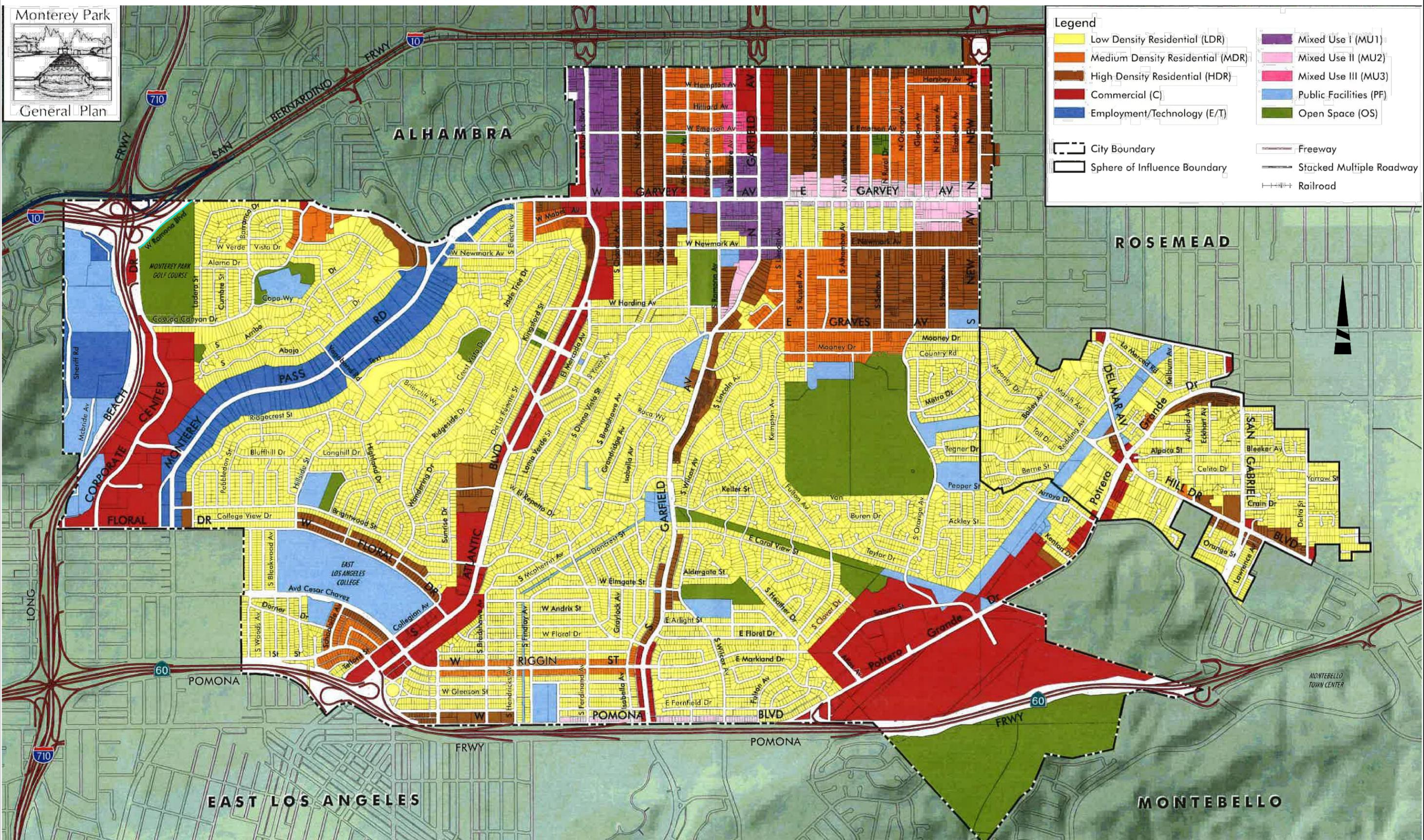
The CIP implementation schedule lists the projects by the corresponding number assigned. Projects that repeat over the timeframe such as CCTV work or the pipeline repair allowance are shown. To keep the recommended CIP projects manageable from an implementation and financial aspect, the improvements 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).



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



USER: ros
 DATE: Nov 12, 2013 5:34pm
 PROJECT: Monterey Park Wastewater Master Plan Update
 DRAWING: PC-FG-BDR 11x17

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET,
 ADJUST SCALES ACCORDINGLY



PREPARED BY:
PHOENIX CIVIL ENGINEERING, INC.
 4532 TELEPHONE ROAD, SUITE 113
 VENTURA, CA 93003
 (805) 658-6800



CITY OF MONTEREY PARK
 WASTEWATER MASTER PLAN UPDATE

LAND USE MAP
FIGURE 1

DWG: P:\Projects\MMTP061301\Waste Water Master Plan\Info\Figures\FIGURE-2 County Timeline.dwg
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USER: rcs
XREFS: City Base Map R14 PC-FG-BDR

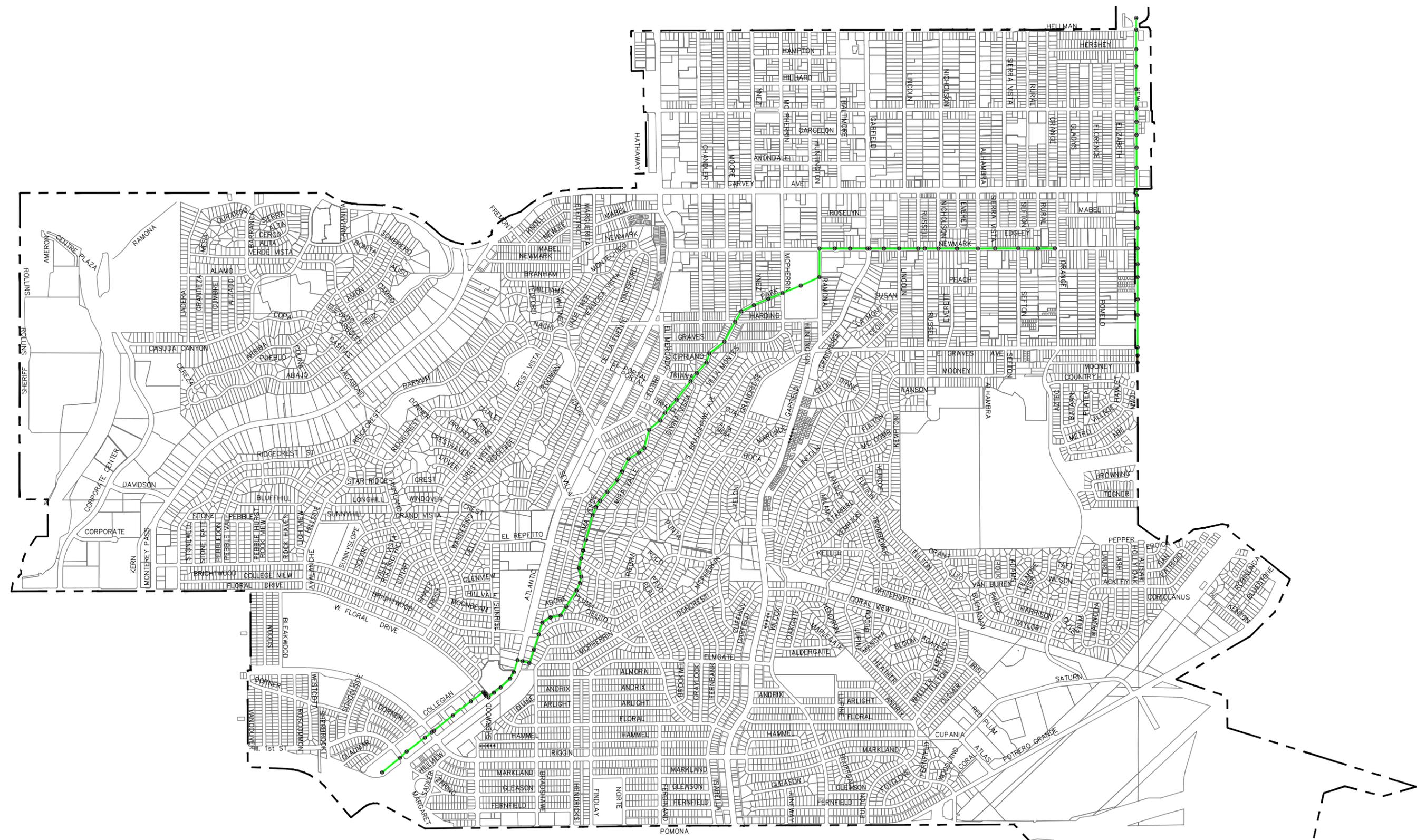
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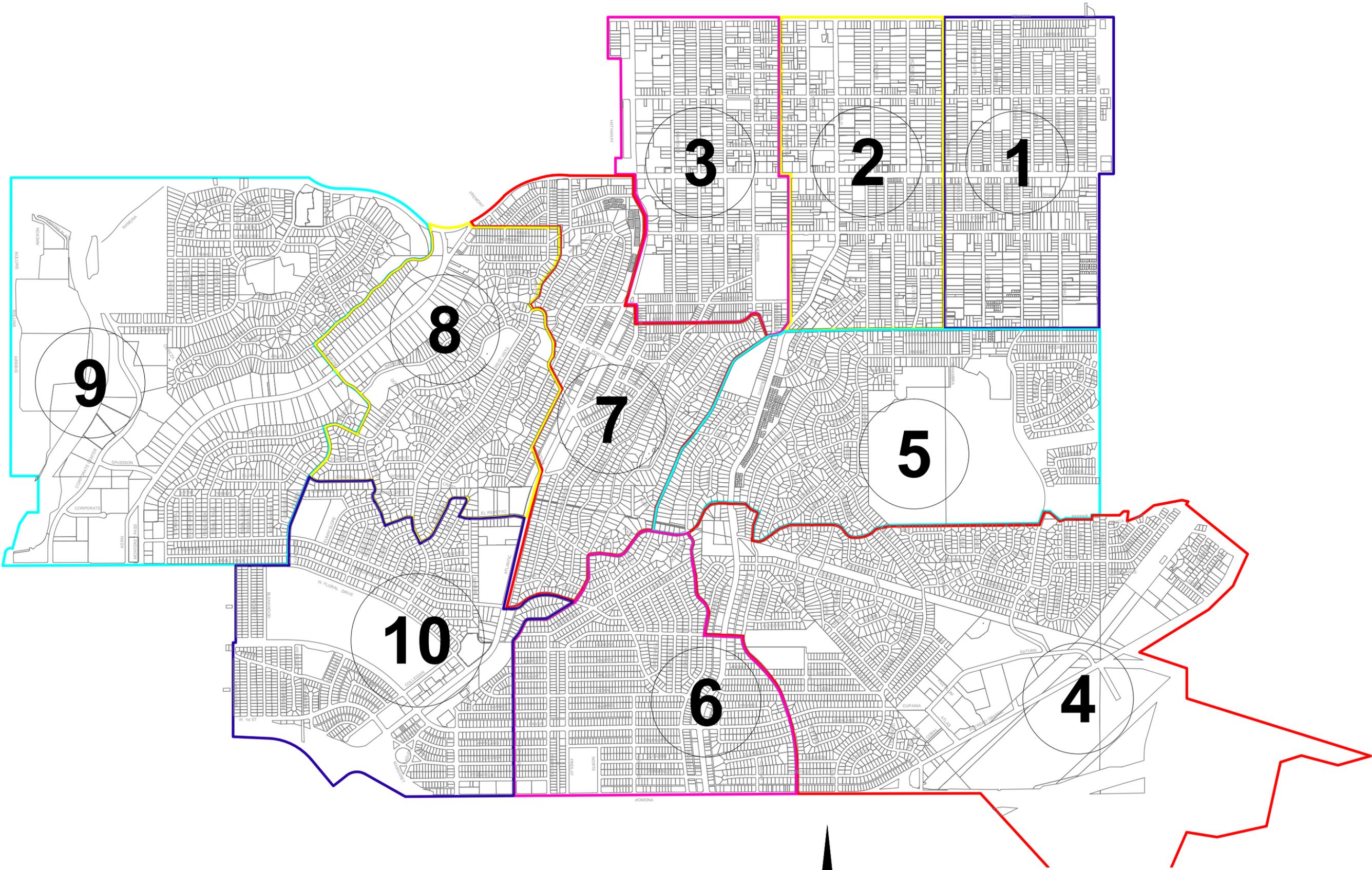
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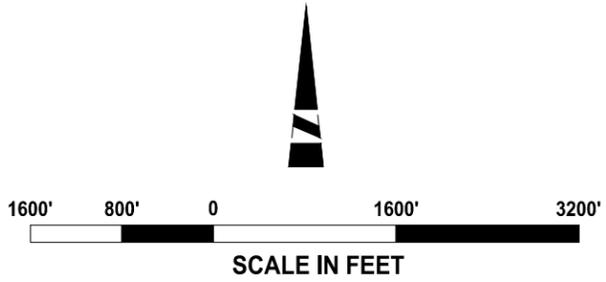
CITY OF MONTEREY PARK
WASTEWATER MASTER PLAN UPDATE
**LOS ANGELES COUNTY
SANITATION DISTRICT FACILITIES**
FIGURE 2



DWG: P:\Projects\MMTP061301\Monterey Park Water Master Plan Update\CAD\Figures\FIGURE-3 CCTV Schedule.dwg USER: rcs
DATE: Jan 14, 2014 9:48am XREFS: PC-FIG-BDR 11x17 City Base Map\02813_nstreet Street Names\02813



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CITY OF MONTEREY PARK
WASTEWATER MASTER PLAN UPDATE
RECOMMENDED CCTV SCHEDULE
FIGURE 3

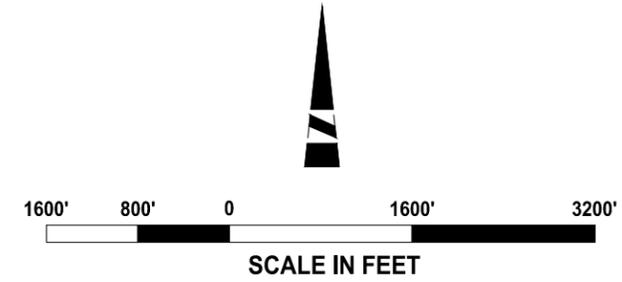
DWG: P:\Projects\MMTP061301_Waste Water Master Plan\Locales\CSD\Figures\FIGURE-4_Capital Imps Proj.dwg USER: ros
 DATE: Nov 12, 2013 11:35am XREFS: City Base Map R14 PC-Fig-BDR 11x17



CAPITAL IMPROVEMENT LEGEND

- 1** GREASE (1996 MASTER PLAN)
- 2** HOT SPOT (1996 MASTER PLAN)
- 3** HYDRAULIC ISSUE (1996 MASTER PLAN)
- 4** CCTV IDENTIFIED ISSUE

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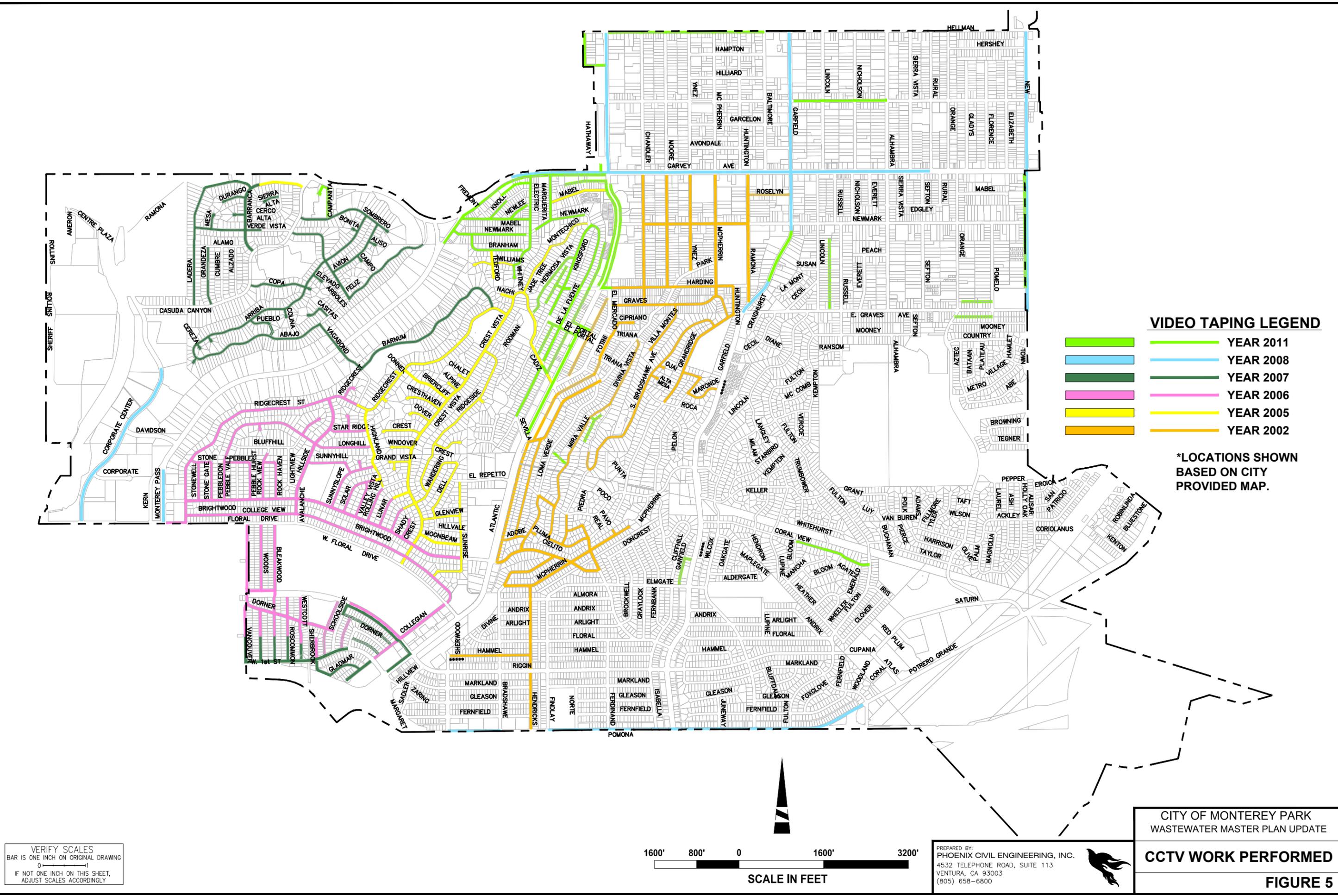


CITY OF MONTEREY PARK
 WASTEWATER MASTER PLAN UPDATE

PIPELINE CAPITAL IMPROVEMENT PROJECTS

FIGURE 4

DWG: P:\Projects\MMTP061301\Waste Water Master Plan\Reports\Figures\Figure-5 CCTV.dwg
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 USER: ros

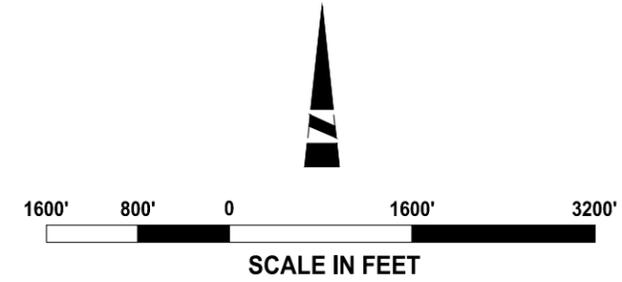


VIDEO TAPING LEGEND

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

*LOCATIONS SHOWN
 BASED ON CITY
 PROVIDED MAP.

VERIFY SCALES
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CITY OF MONTEREY PARK
 WASTEWATER MASTER PLAN UPDATE

CCTV WORK PERFORMED

FIGURE 5

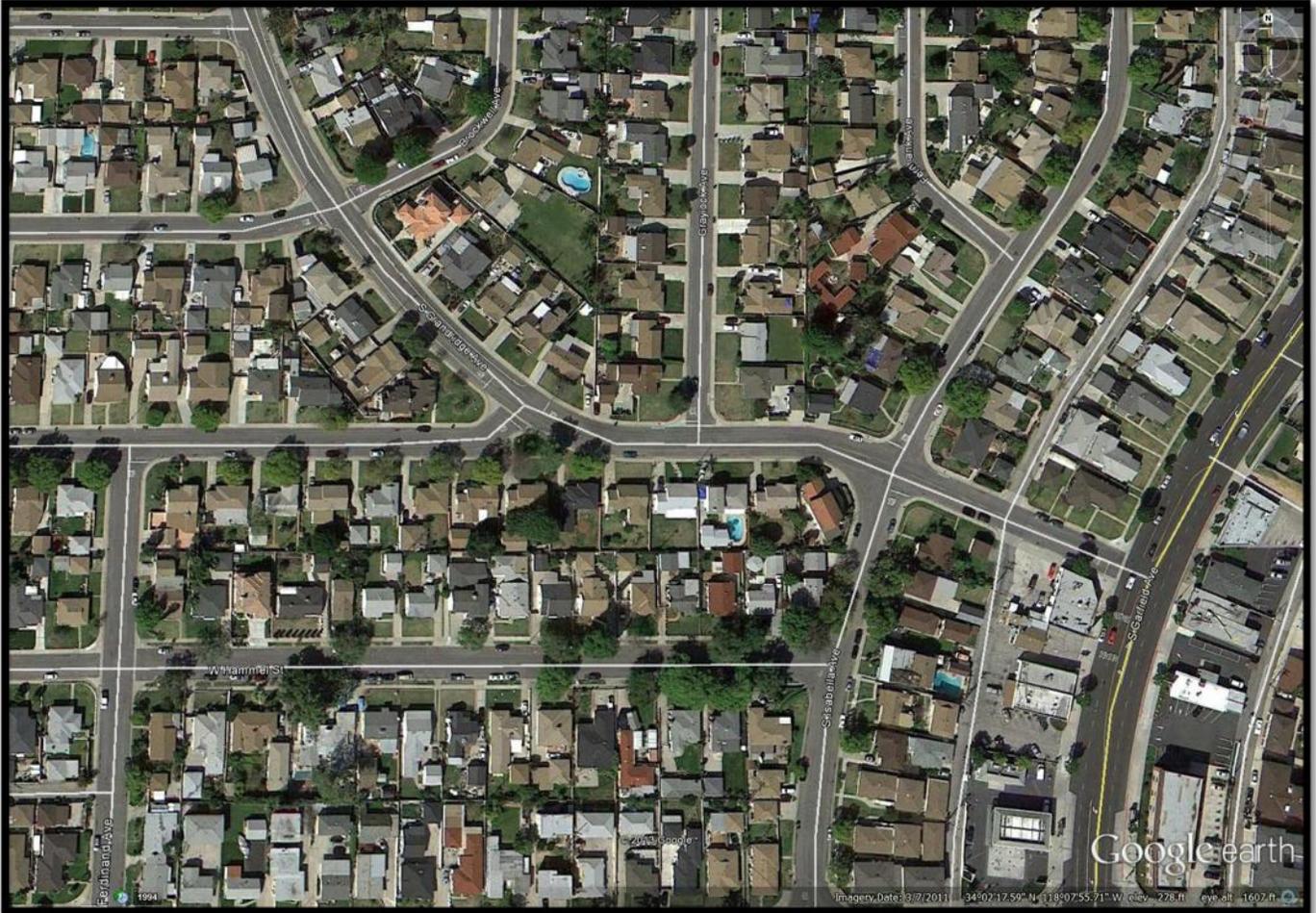
City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project Summary

Project No.	Location	Description	Estimated Cost
1	Grandridge Ave: from Alley east of Isabella to Arlight Street	Pipeline Replacement	\$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 Riggins 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.	Pipeline Replacement	\$176,800
10	Bradshaw Ave: from 1018 Bradshaw Ave. to Bradshaw Pl.	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 Marguerita Ave.	Pipeline Replacement	\$128,800
17	Harding Ave.: from Ynez Ave. to Chandler Ave.	Pipeline Replacement	\$199,100
18	Easement north of El Portal Pl.: from Atlantic Blvd. to Alley west of Atlantic Blvd.	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
		Annual CCTV Prog. (City Staff)	\$221,800
21	Spot Repairs - Multiple Locations - Year 1	Spot Repairs (Various Locations)	\$377,400
22	Spot Repairs - Multiple Locations - Year 2	Spot Repairs (Various Locations)	\$365,000
23	Spot Repairs - Multiple Locations - Year 3	Spot Repairs (Various Locations)	\$385,700
24	Spot Repairs - Multiple Locations - Year 4	Spot Repairs (Various Locations)	\$373,300
25	Cured in Place Pipe Installations - Multiple Locations - Year 1	Cured in Place Pipe Installation	\$569,300
26	Cured in Place Pipe Installations - Multiple Locations - Year 2	Cured in Place Pipe Installation	\$570,400
27	Cured in Place Pipe Installations - Multiple Locations - Year 3	Cured in Place Pipe Installation	\$567,700
28	Cured in Place Pipe Installations - Multiple Locations - Year 4	Cured in Place Pipe Installation	\$794,600
29	Cured in Place Pipe Installations - Multiple Locations - Year 5	Cured in Place Pipe Installation	\$732,400
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
		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		
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
Total By Year			\$2,039,700	\$2,036,200	\$2,100,200	\$2,199,700	\$2,107,600	\$2,071,800	\$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

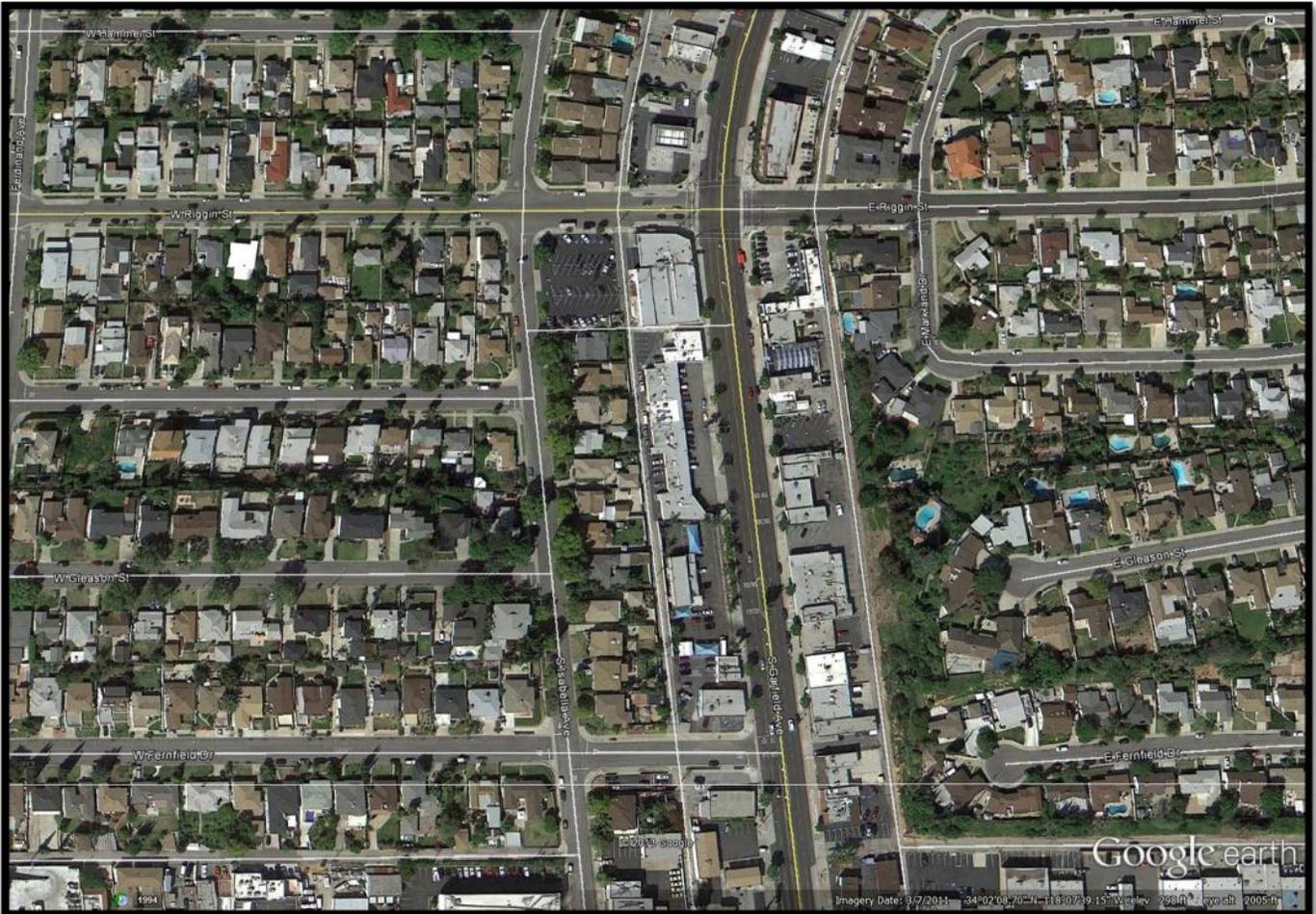
Notes

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 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

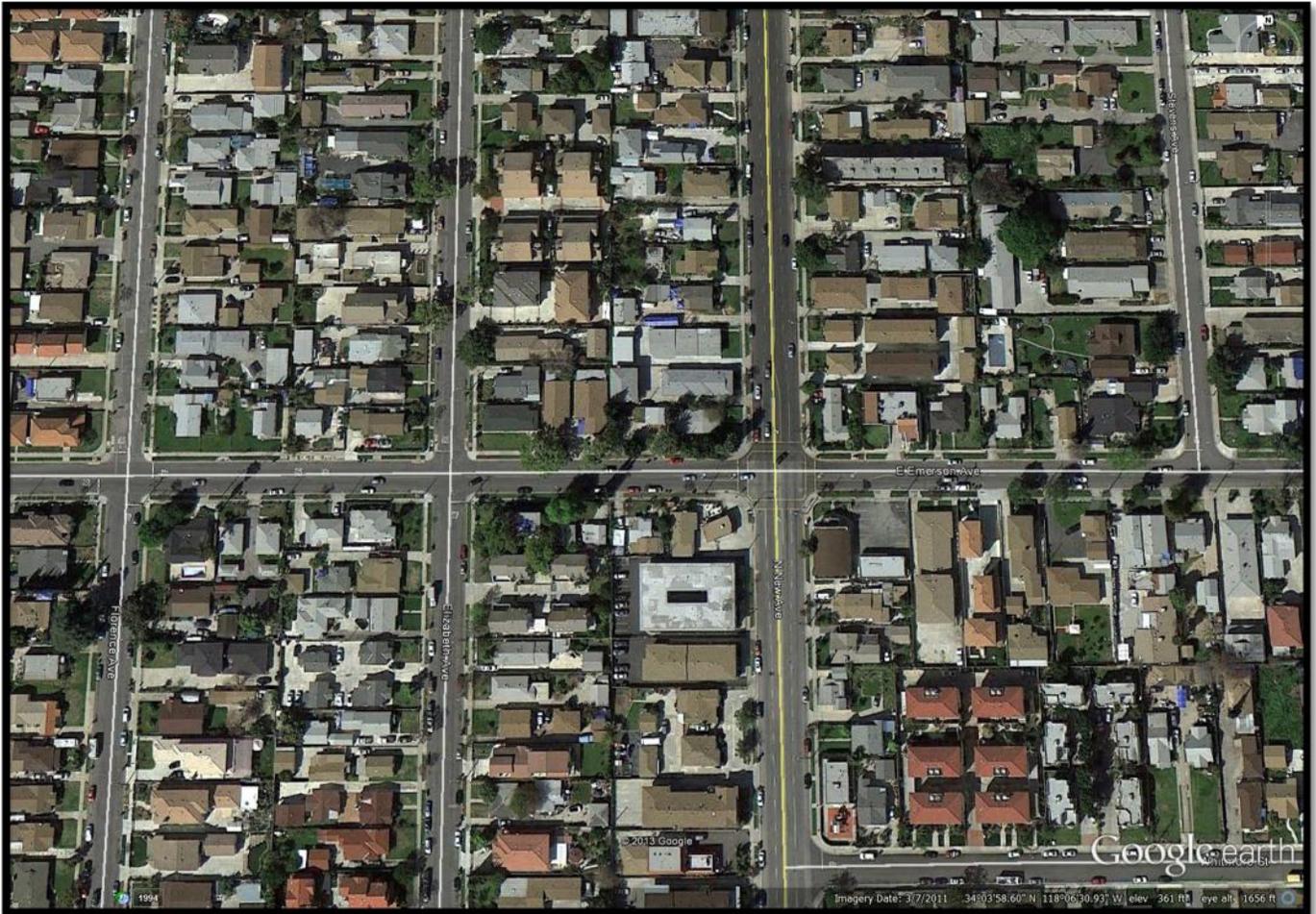
Notes

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

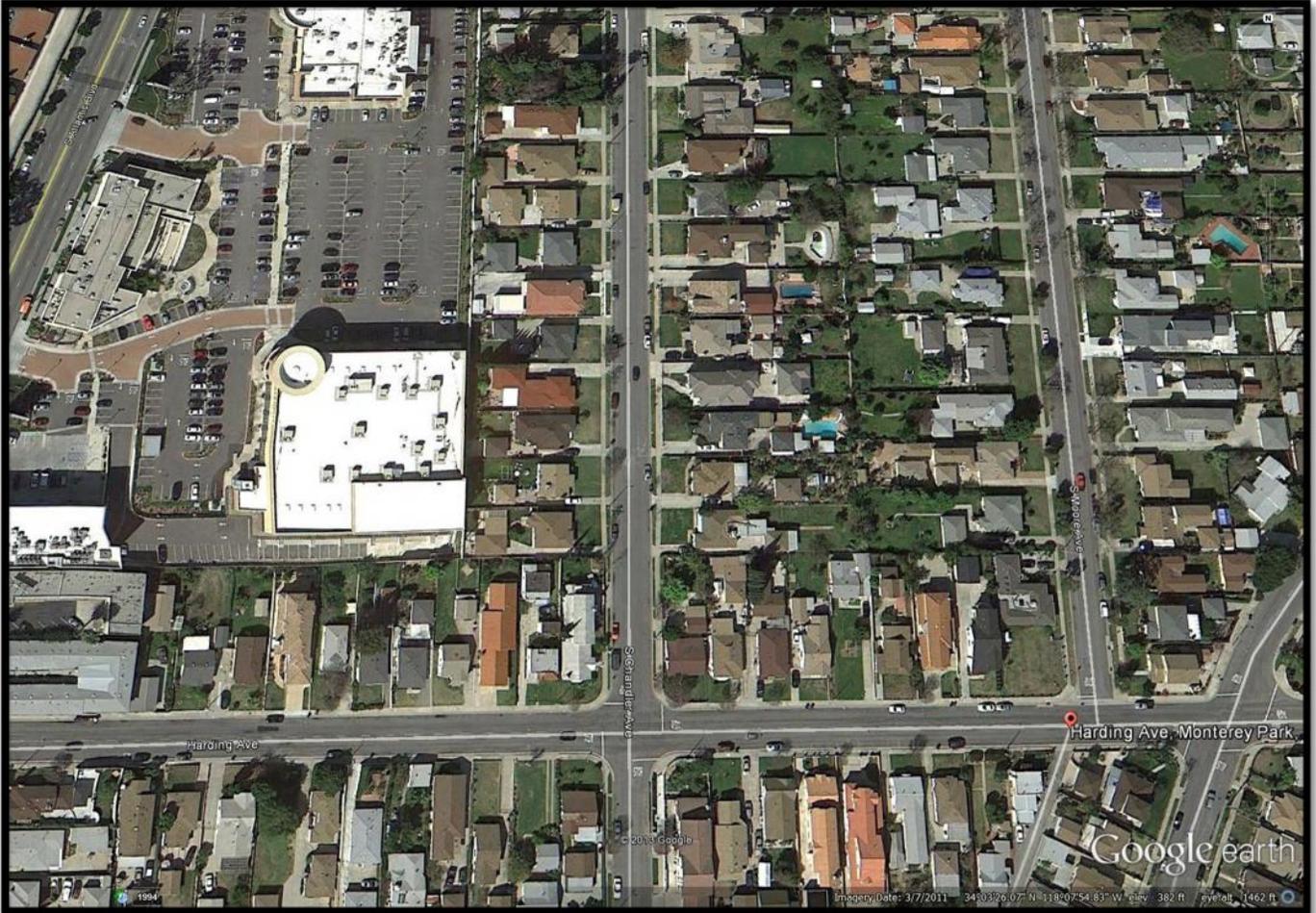
Notes

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
Wastewater Master Plan Update
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

City of Monterey Park
Wastewater System Master Plan Update
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

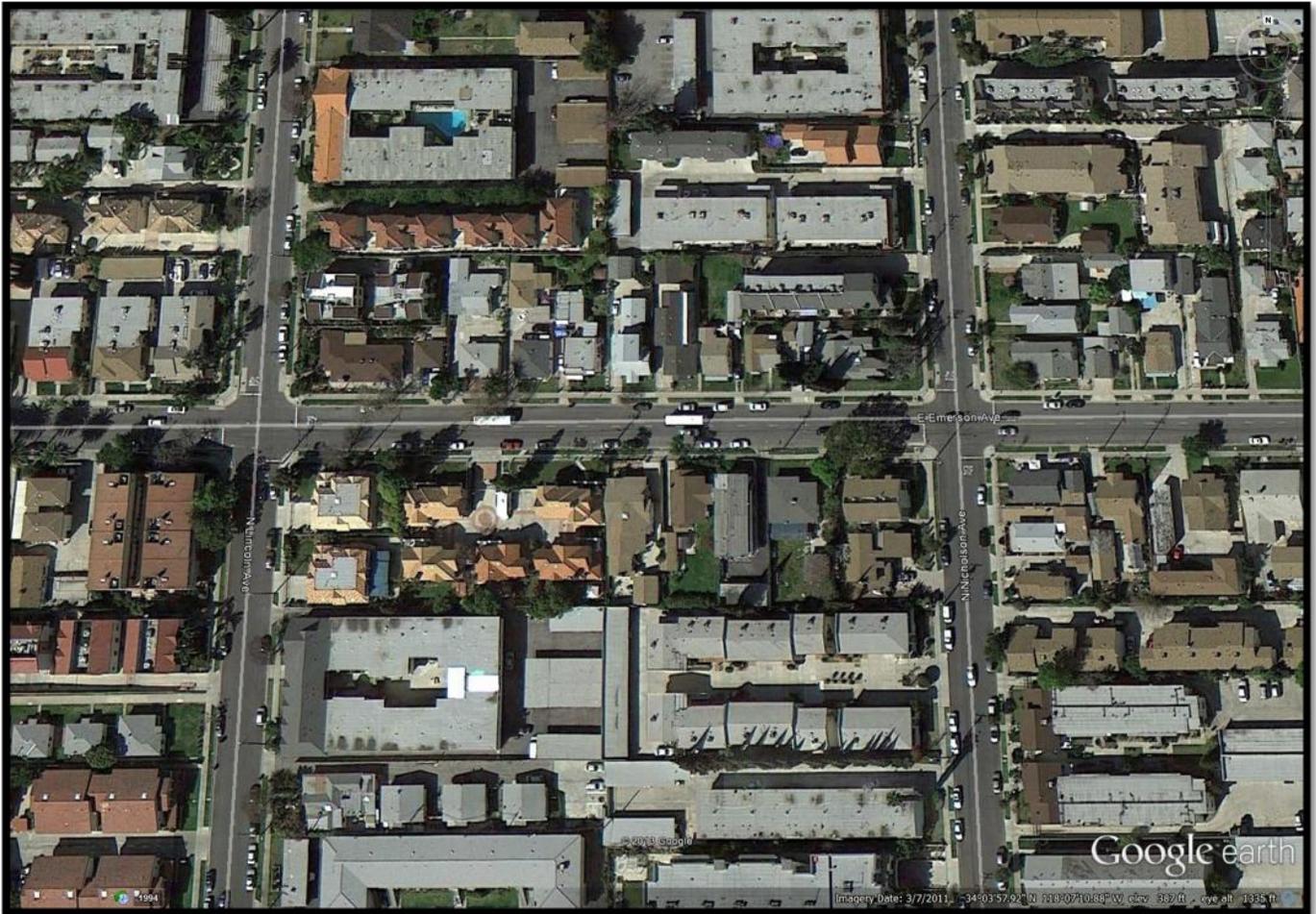
Notes

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).

City of Monterey Park
Wastewater Master Plan Update
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

City of Monterey Park
Wastewater System Master Plan Update
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
Wastewater Master Plan Update
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

City of Monterey Park
Wastewater System Master Plan Update
Opinion of Probable Construction Cost
Capital Improvement Program Project #10
Bradshawe Ave: from 1018 Bradshawe Ave. to Bradshawe 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

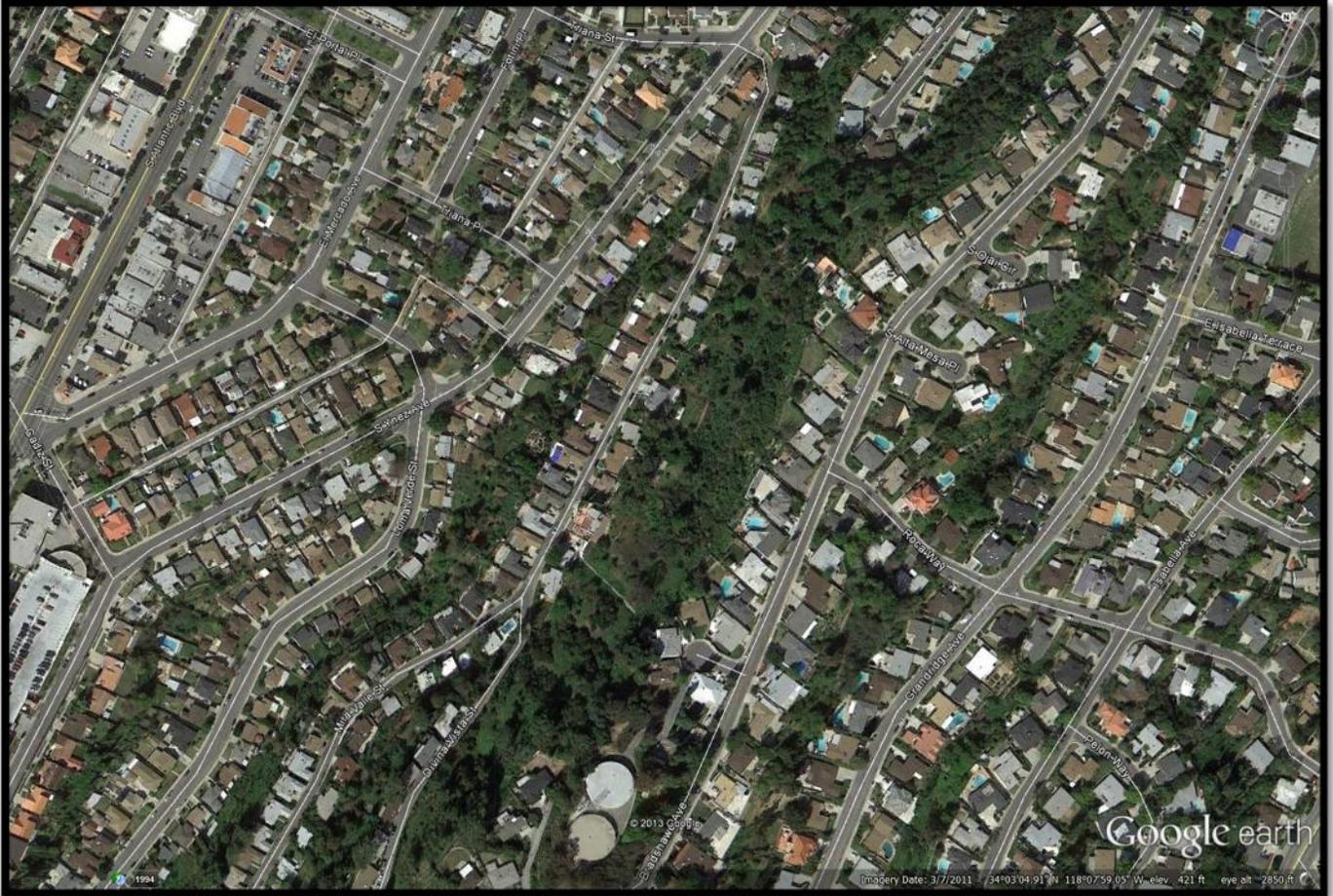
Notes

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).

City of Monterey Park
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).

City of Monterey Park
Wastewater Master Plan Update
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

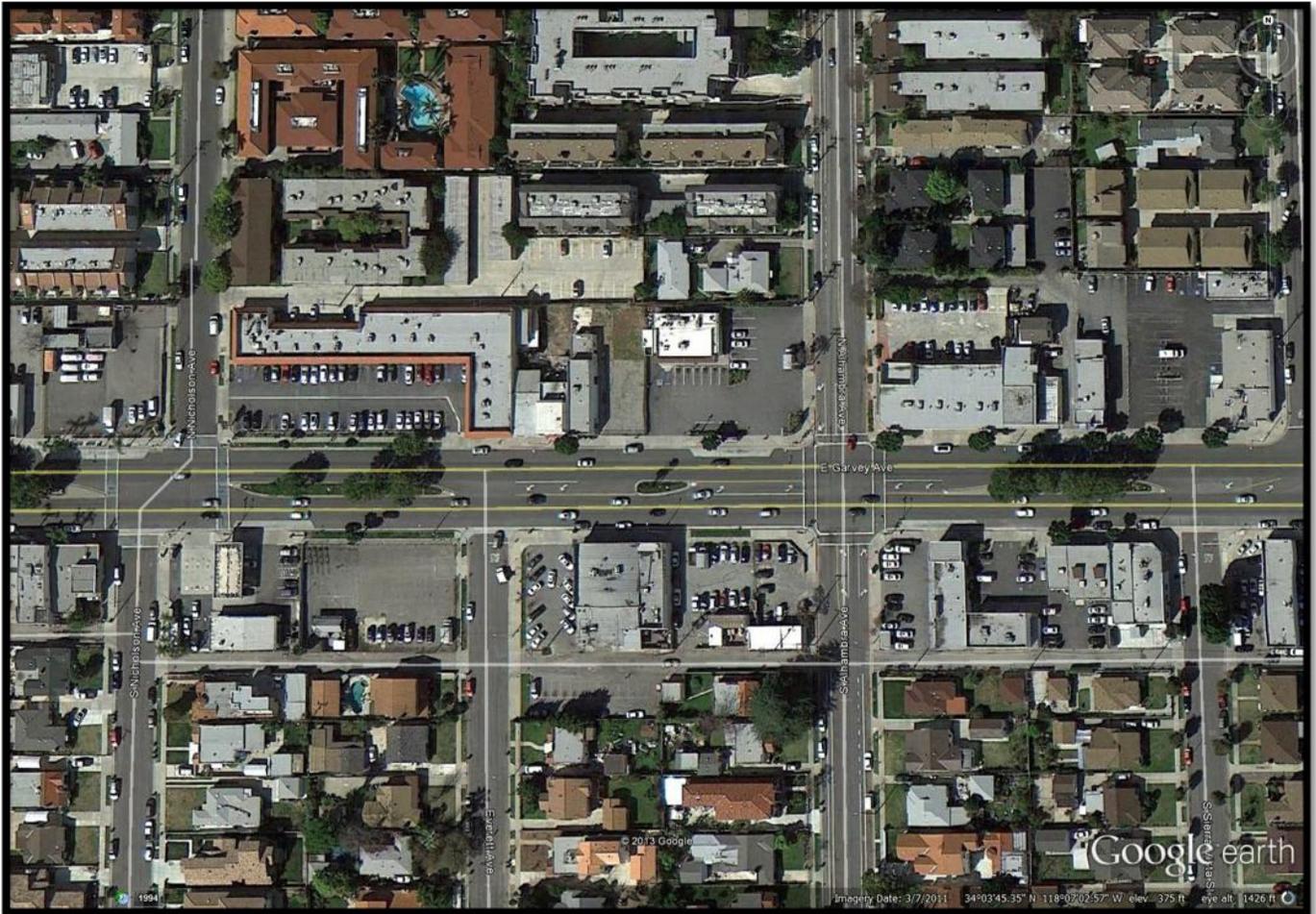
Notes

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).

City of Monterey Park
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

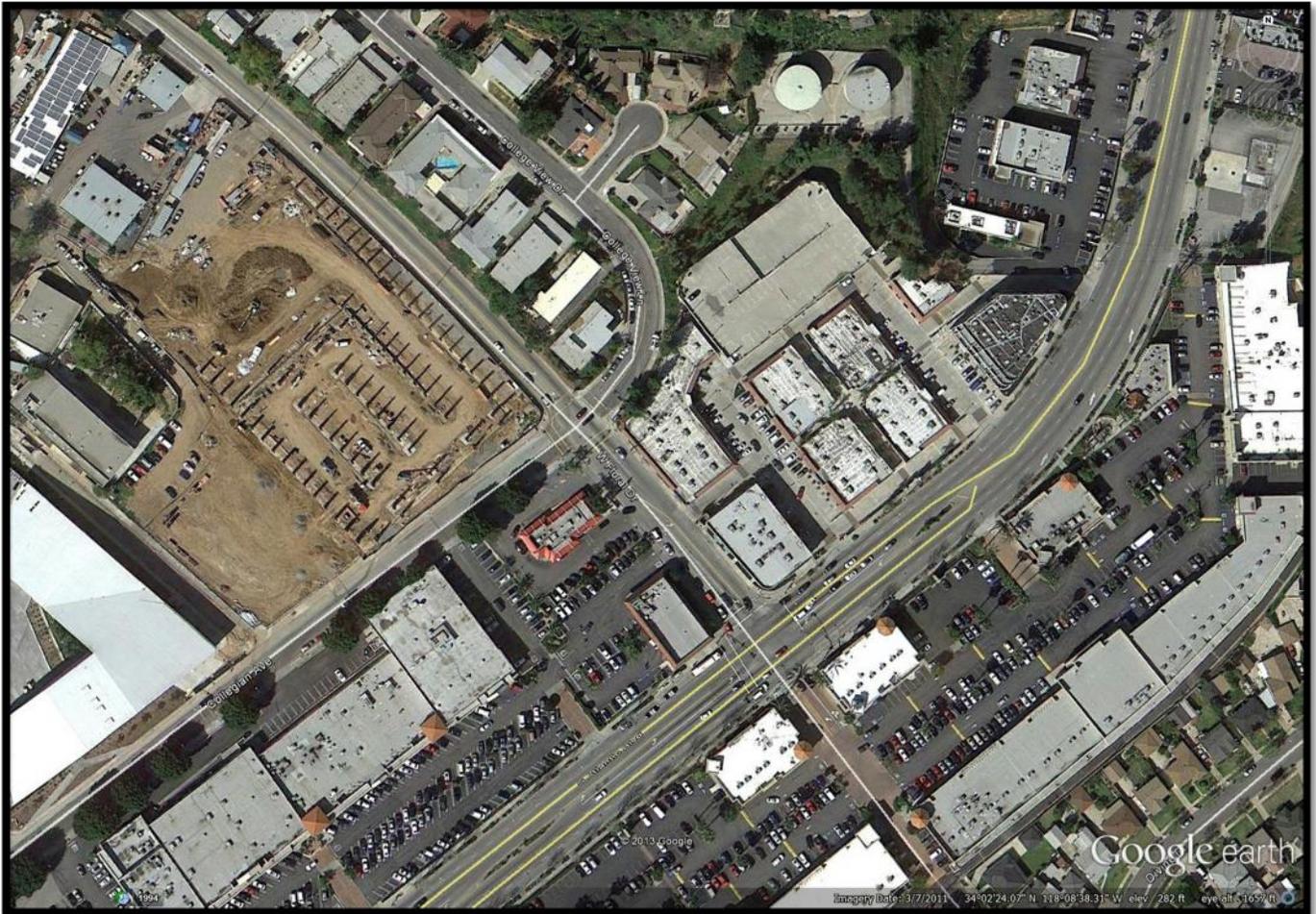
Notes

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).

City of Monterey Park
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

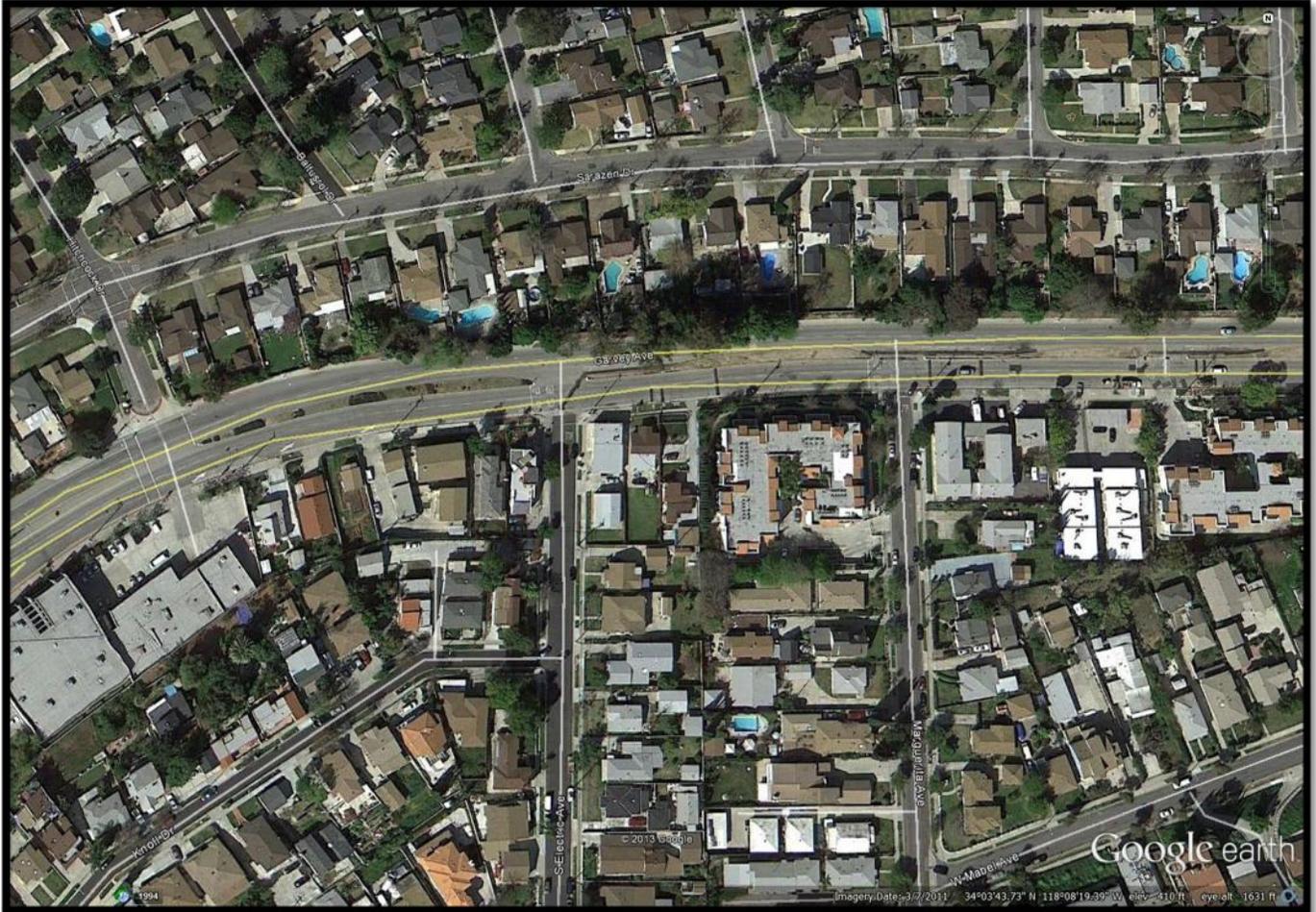
Notes

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

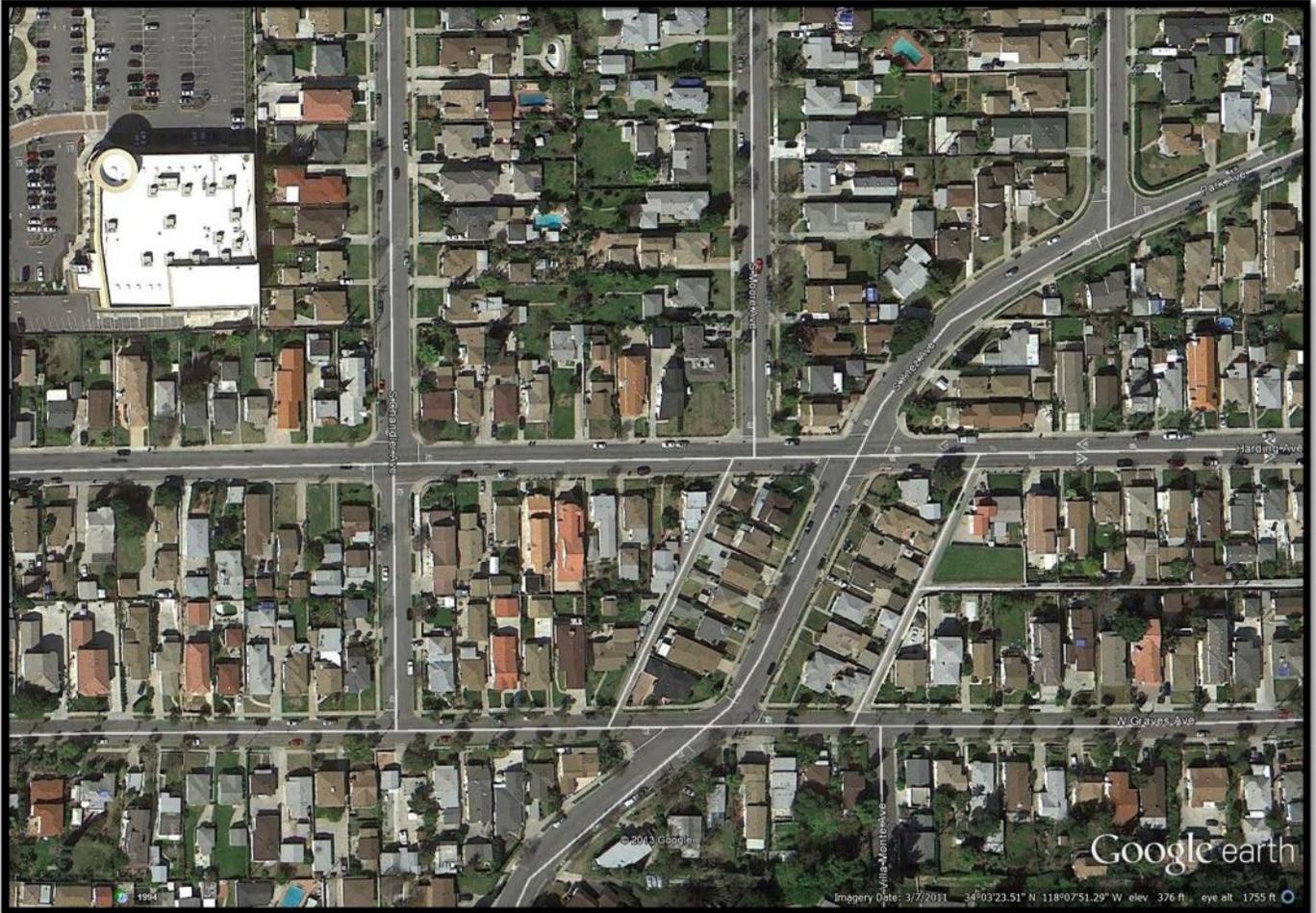
Notes

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).

City of Monterey Park
Wastewater Master Plan Update
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

City of Monterey Park
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).

City of Monterey Park
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

City of Monterey Park
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

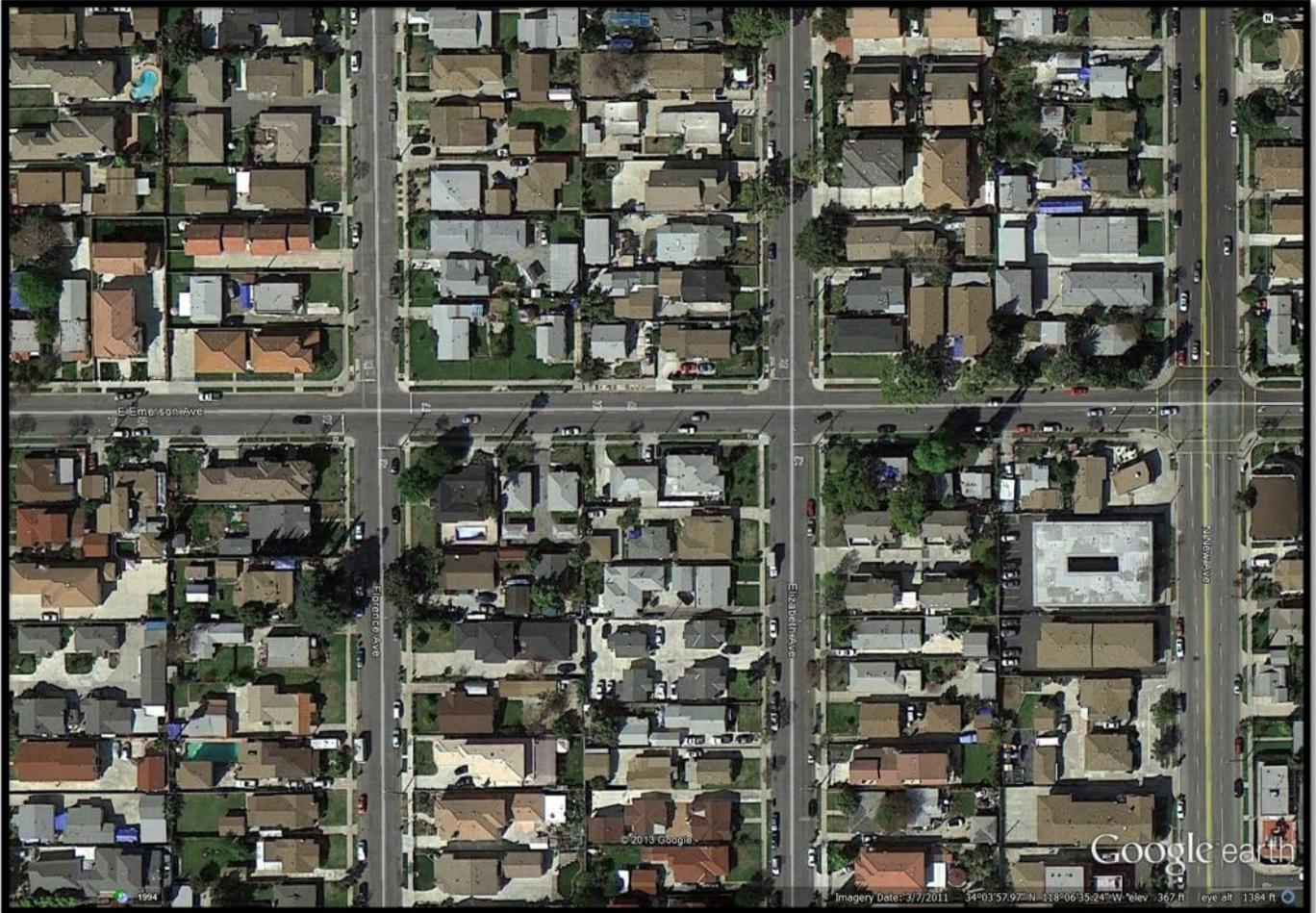
Notes

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).

City of Monterey Park
Wastewater Master Plan Update
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

City of Monterey Park
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

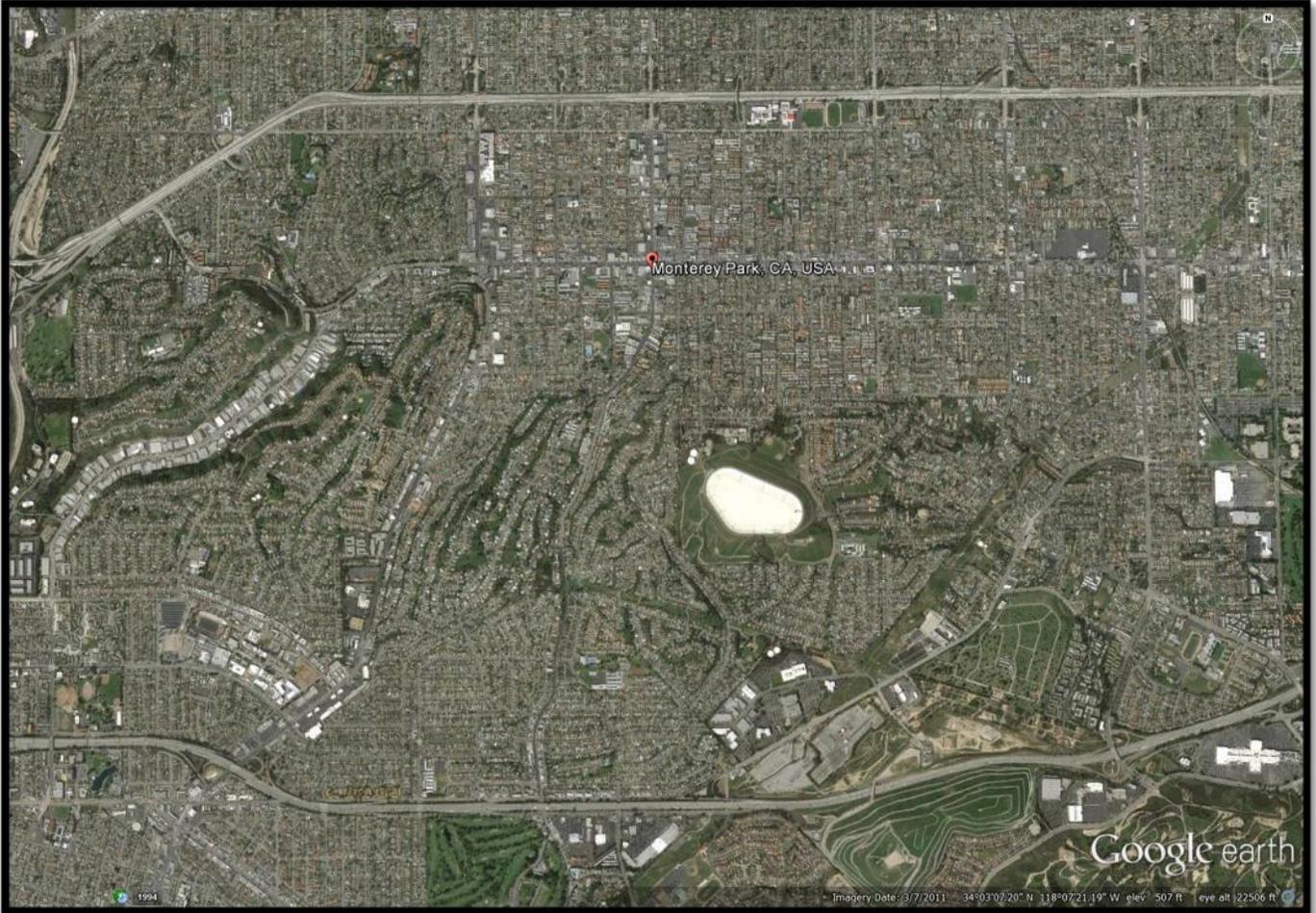
Notes

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).

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



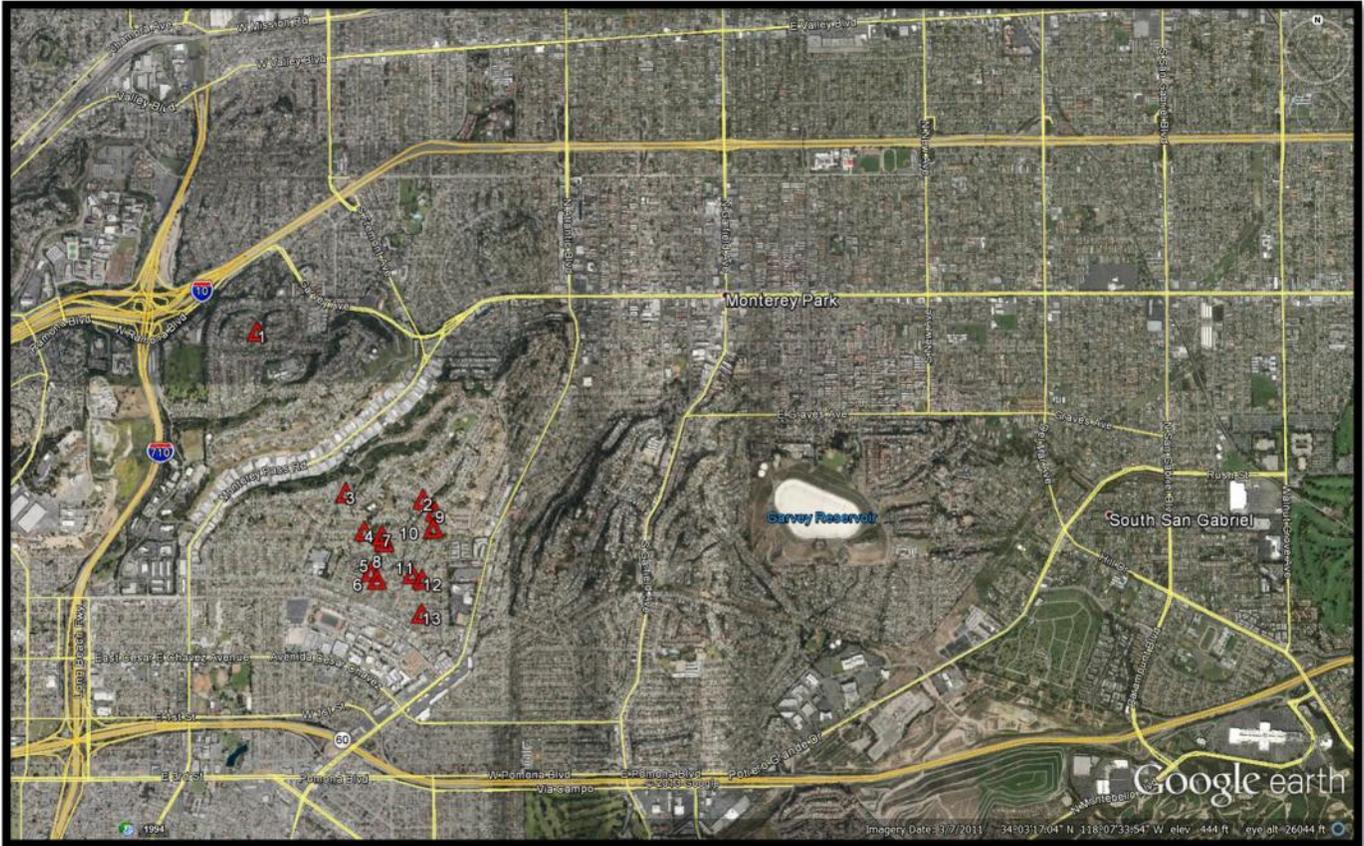
Capital Improvement Project Number	20 – 2009 SSMP
Schedule	10% of System per Year
Description/Location	Annual CCTV Program
Issue	SSMP Requirement
Budget	\$221,800
➤ Design	\$0
➤ Construction	\$221,800

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
Wastewater Master Plan Update
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.

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



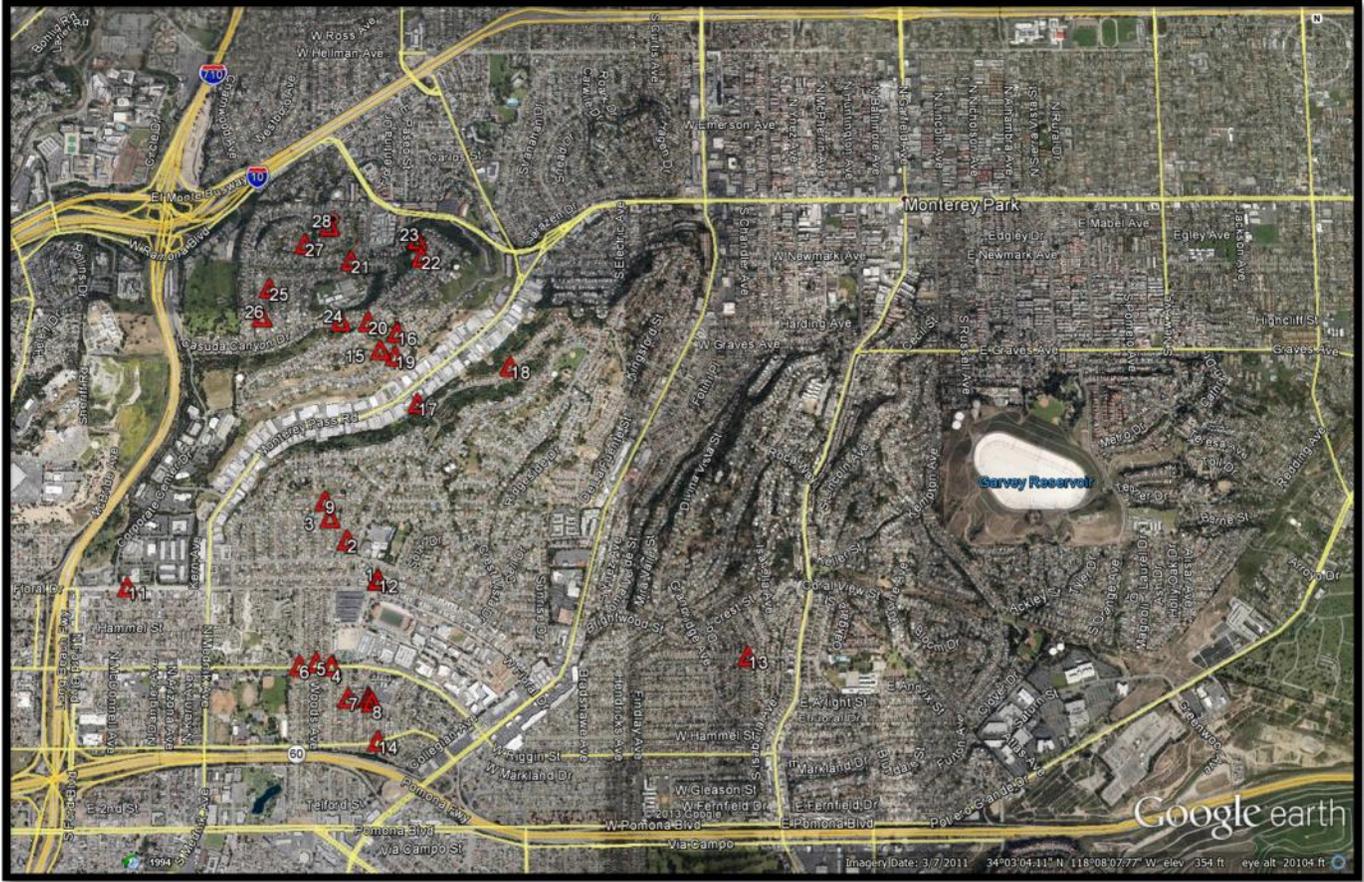
Capital Improvement Project Number	22 – 2013 CCTV Review
Schedule	Year 2
Description/Location	Spot Repairs - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$365,000
➤ Design	\$60,800
➤ Construction	\$304,200

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



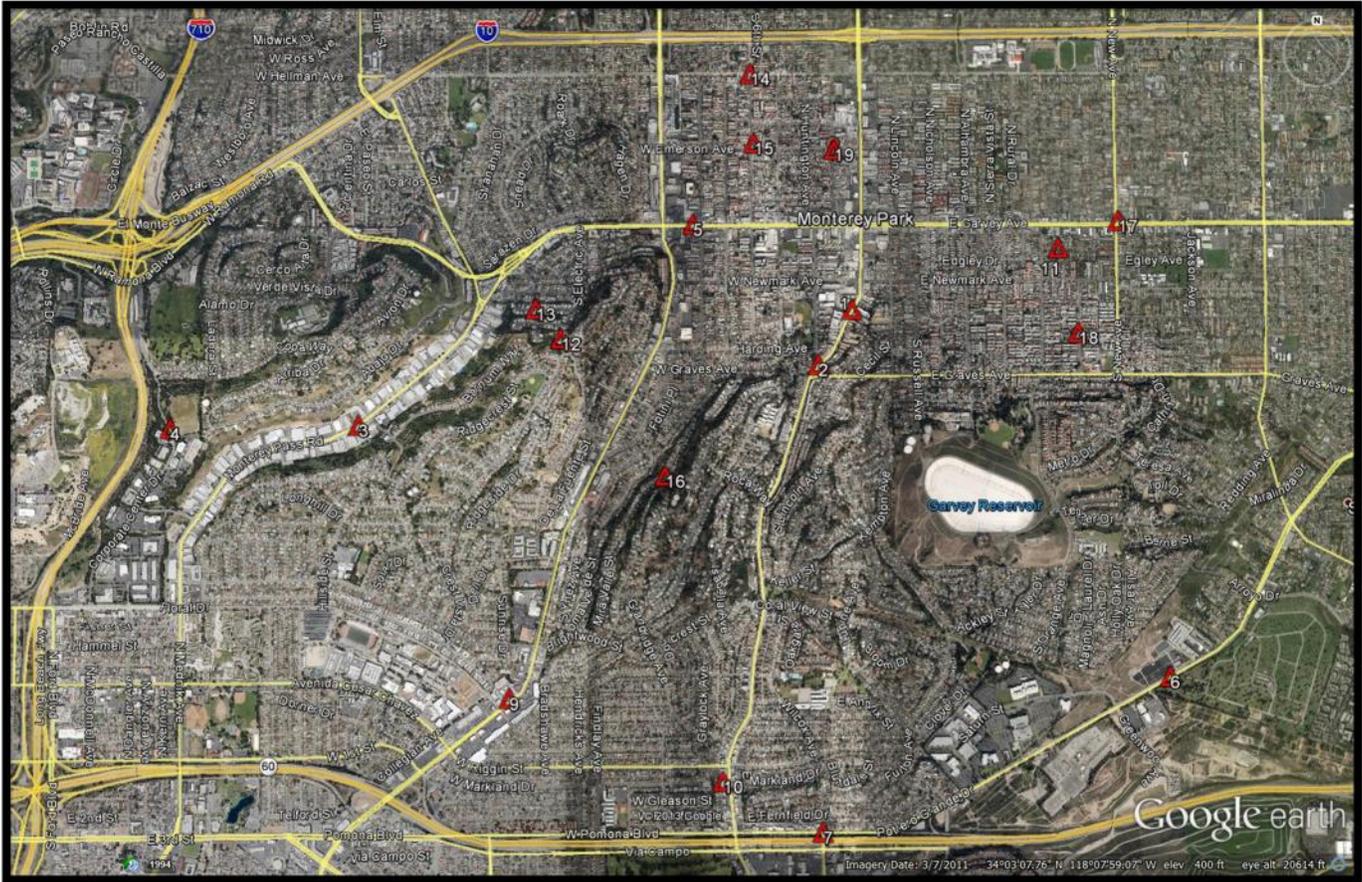
Capital Improvement Project Number	23 – 2013 CCTV Review
Schedule	Year 3
Description/Location	Spot Repairs - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$385,700
➤ Design	\$64,300
➤ Construction	\$321,400

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



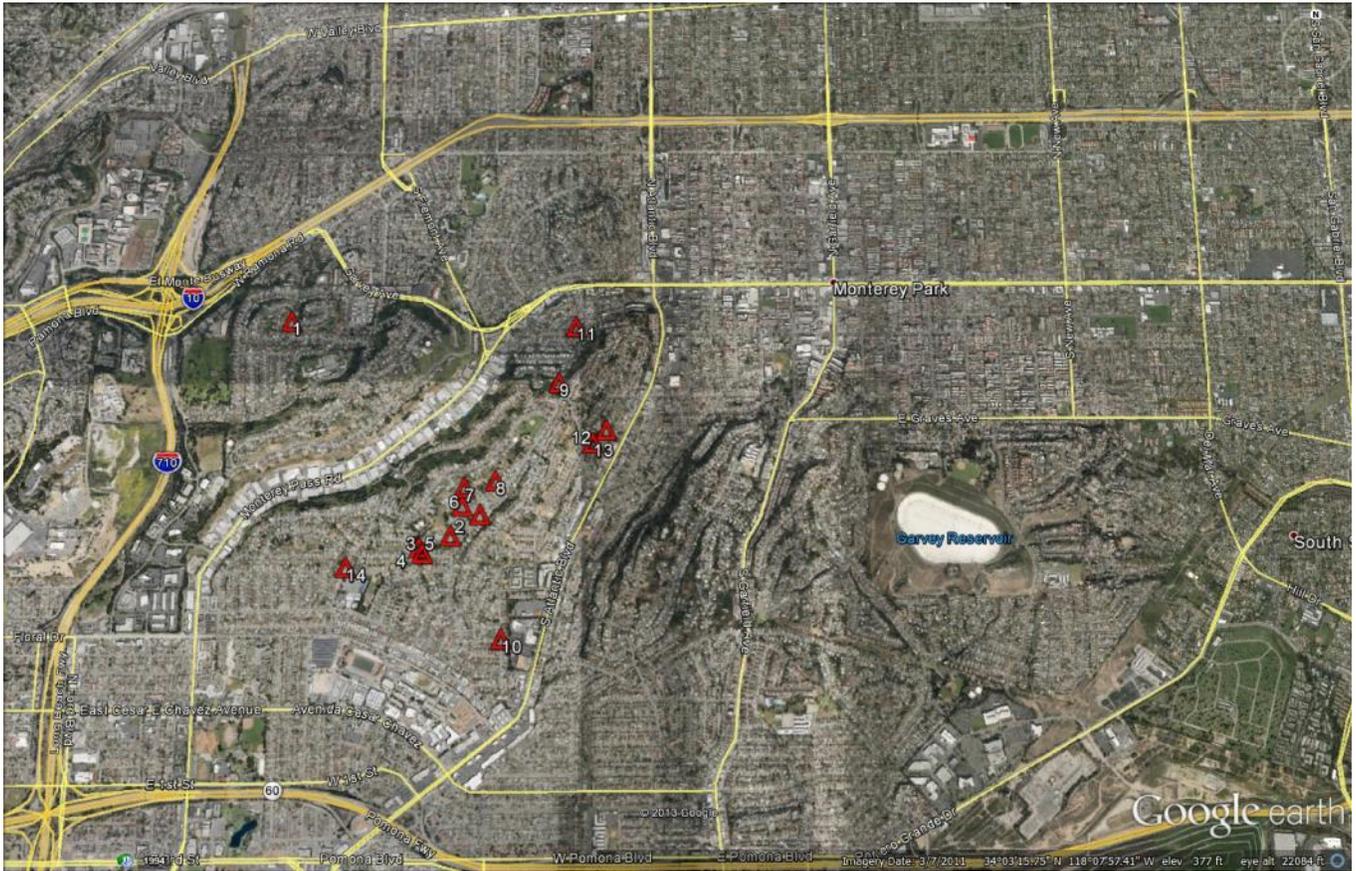
Capital Improvement Project Number	24 – 2013 CCTV Review
Schedule	Year 4
Description/Location	Spot Repairs - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$373,300
➤ Design	\$62,200
➤ Construction	\$311,100

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



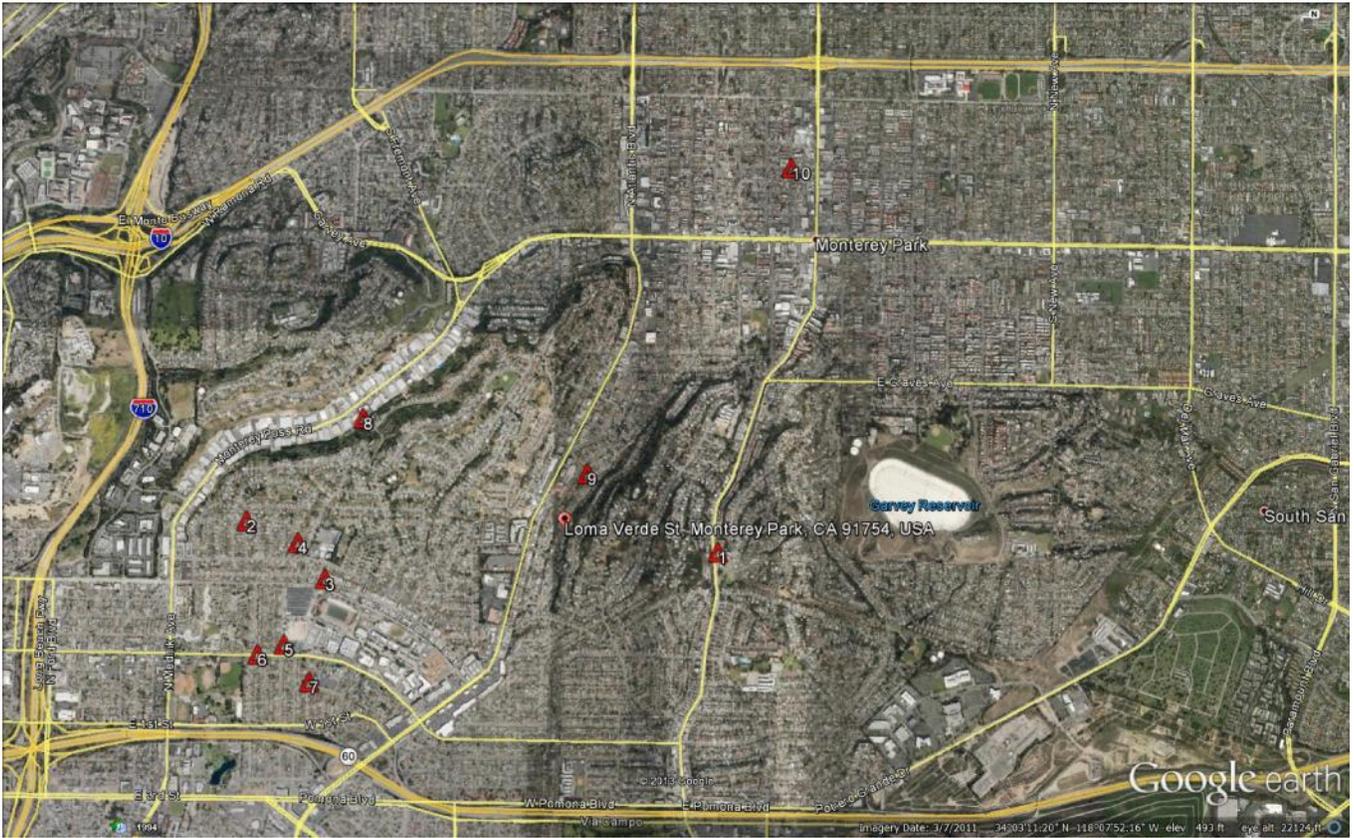
Capital Improvement Project Number	26 – 2013 CCTV Review
Schedule	Year 2
Description/Location	Cured in Place Pipe Installations - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$570,400
➤ Design	\$95,100
➤ Construction	\$475,300

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



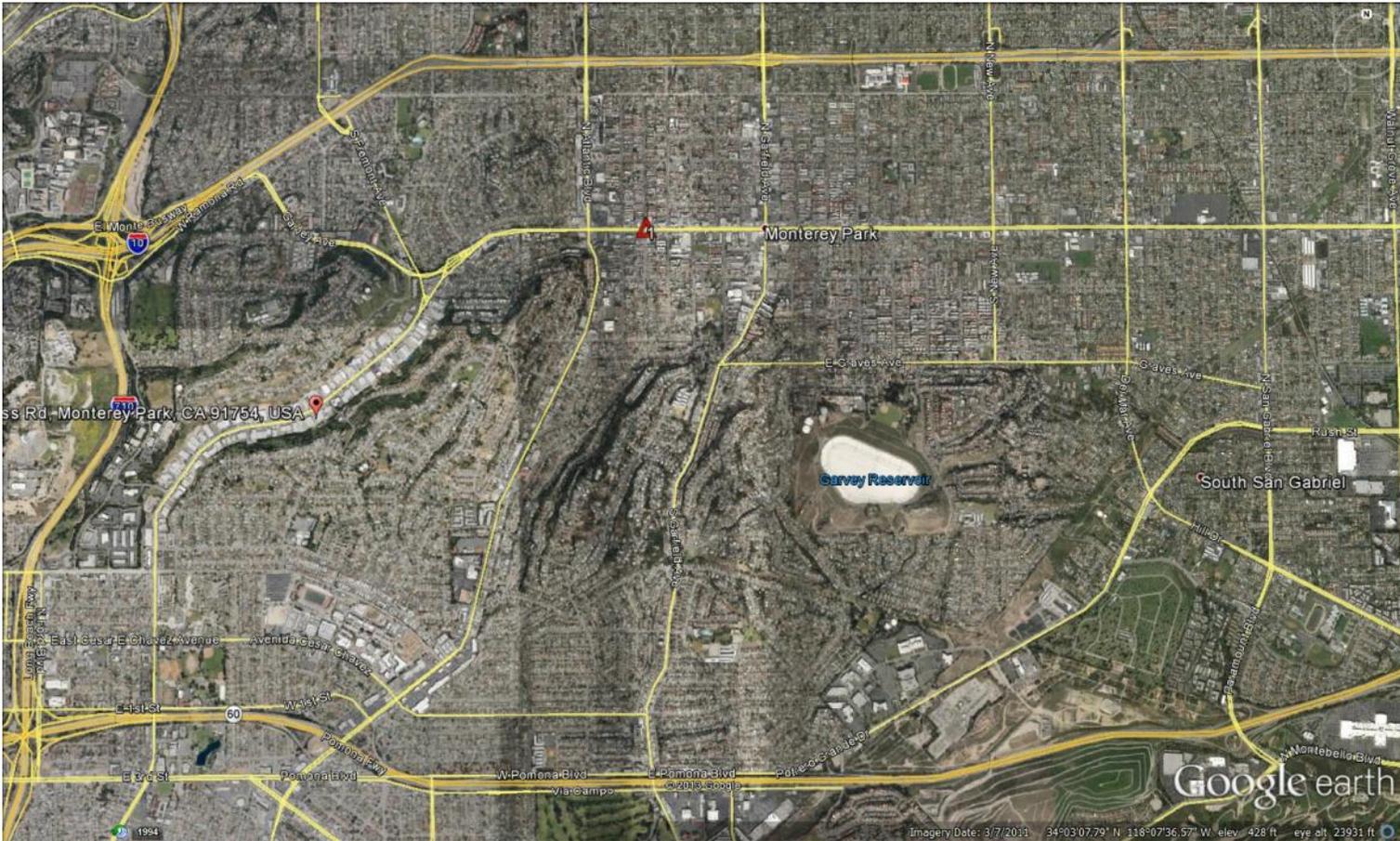
Capital Improvement Project Number	27 – 2013 CCTV Review
Schedule	Year 3
Description/Location	Cured in Place Pipe Installations - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$567,700
➤ Design	\$94,600
➤ Construction	\$473,100

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



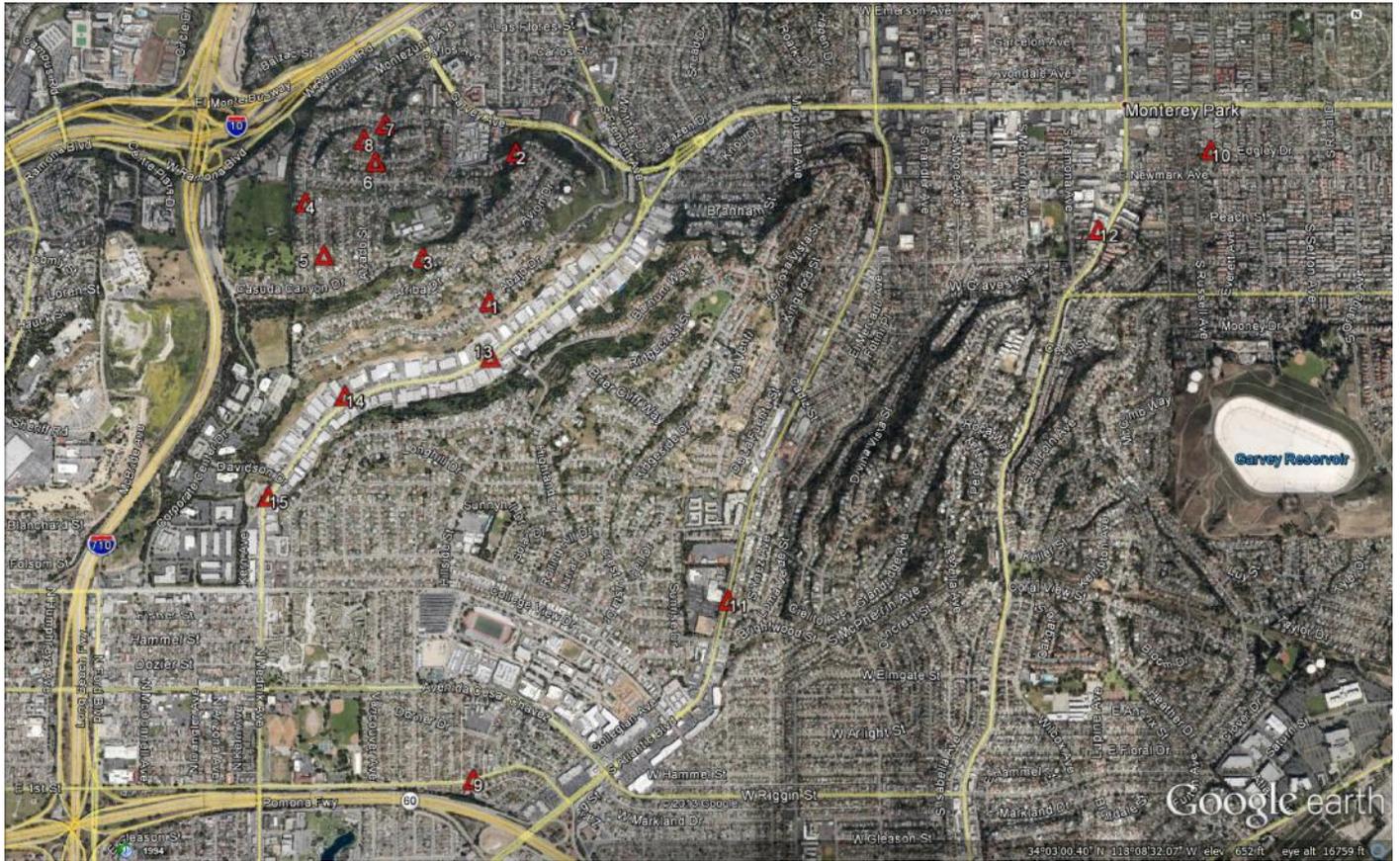
Capital Improvement Project Number	28 – 2013 CCTV Review
Schedule	Year 4
Description/Location	Cured in Place Pipe Installations - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$794,600
➤ Design	\$132,400
➤ Construction	\$662,200

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



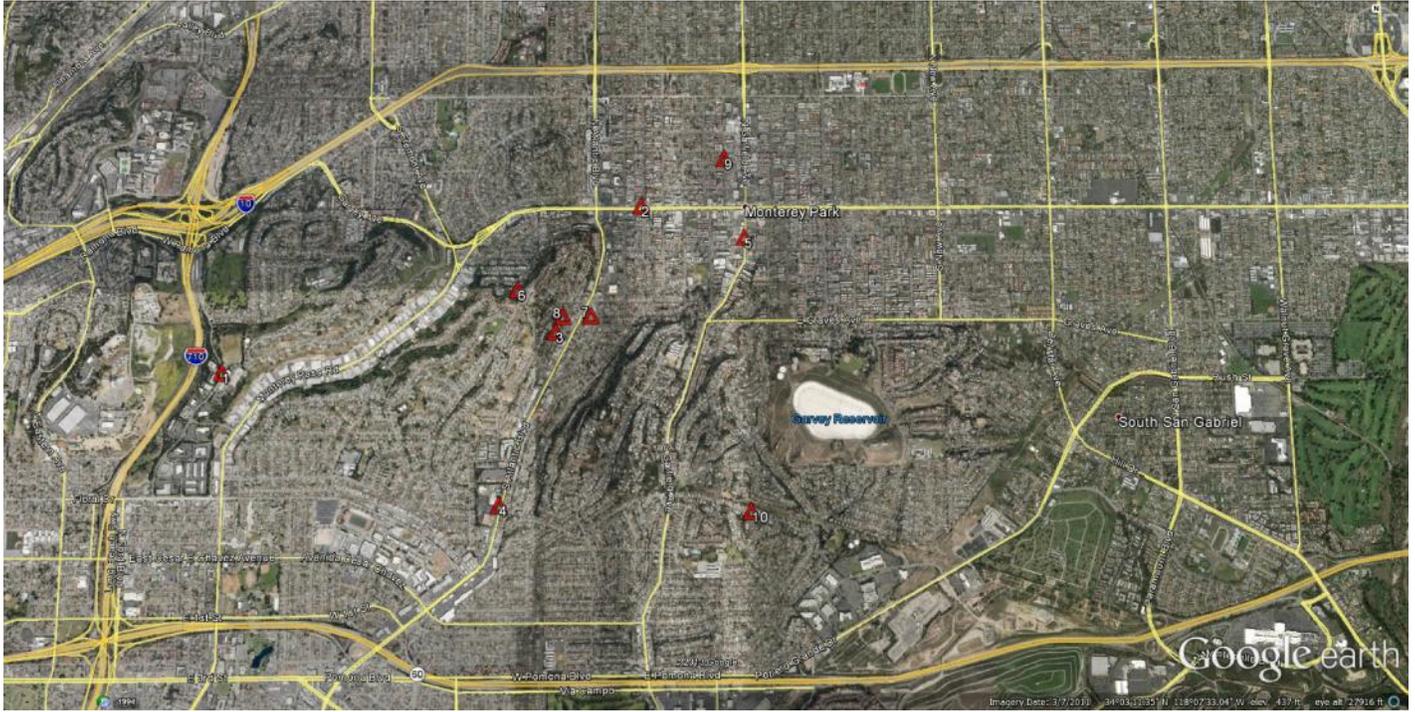
Capital Improvement Project Number	29 – 2013 CCTV Review
Schedule	Year 5
Description/Location	Cured in Place Pipe Installations - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$732,400
➤ Design	\$122,100
➤ Construction	\$610,300

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



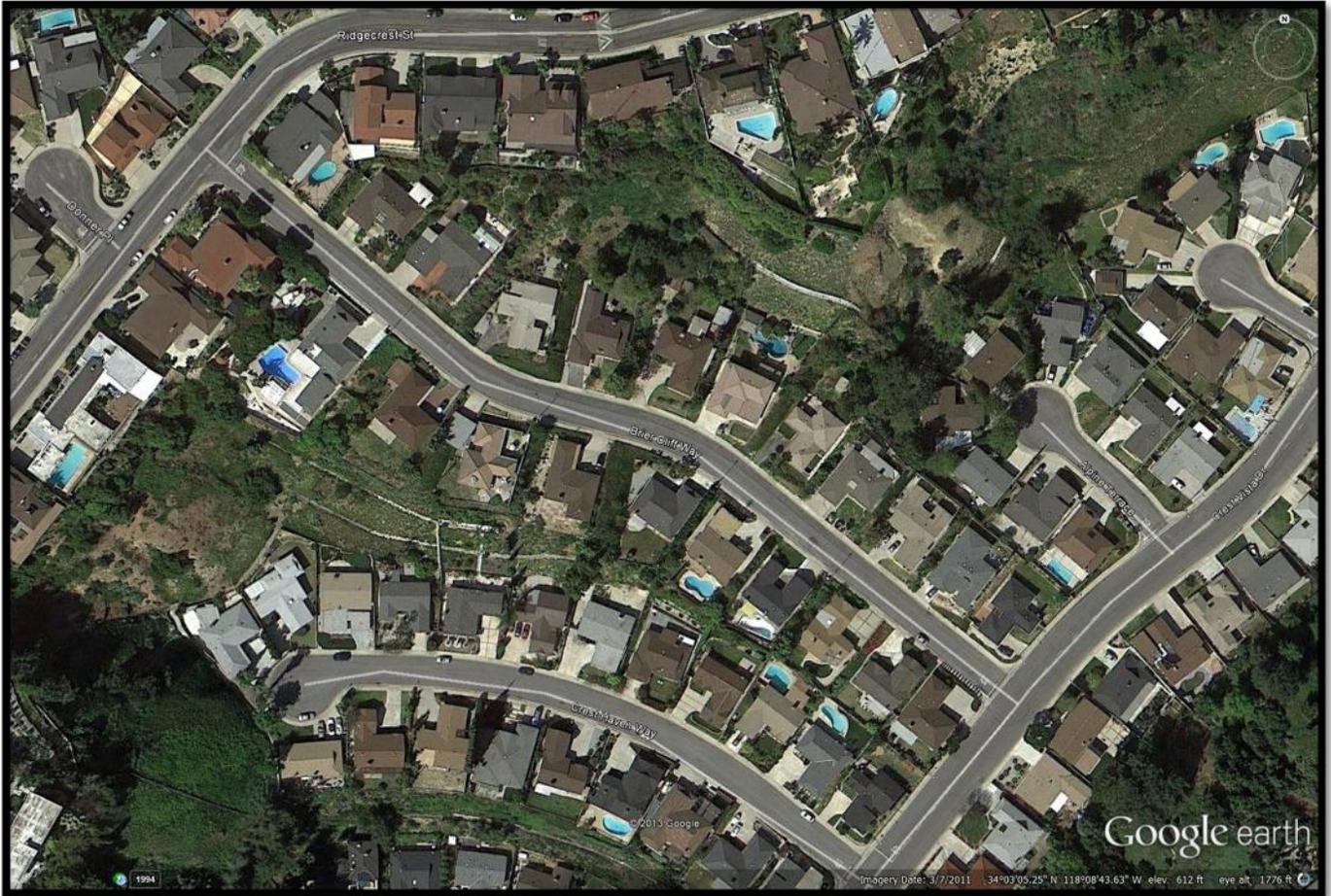
Capital Improvement Project Number	30 – 2013 CCTV Review
Schedule	Year 6
Description/Location	Cured in Place Pipe Installations - Multiple Locations
Issue	Pipeline Structural Deficiency
Budget	\$706,400
➤ Design	\$117,700
➤ Construction	\$588,700

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

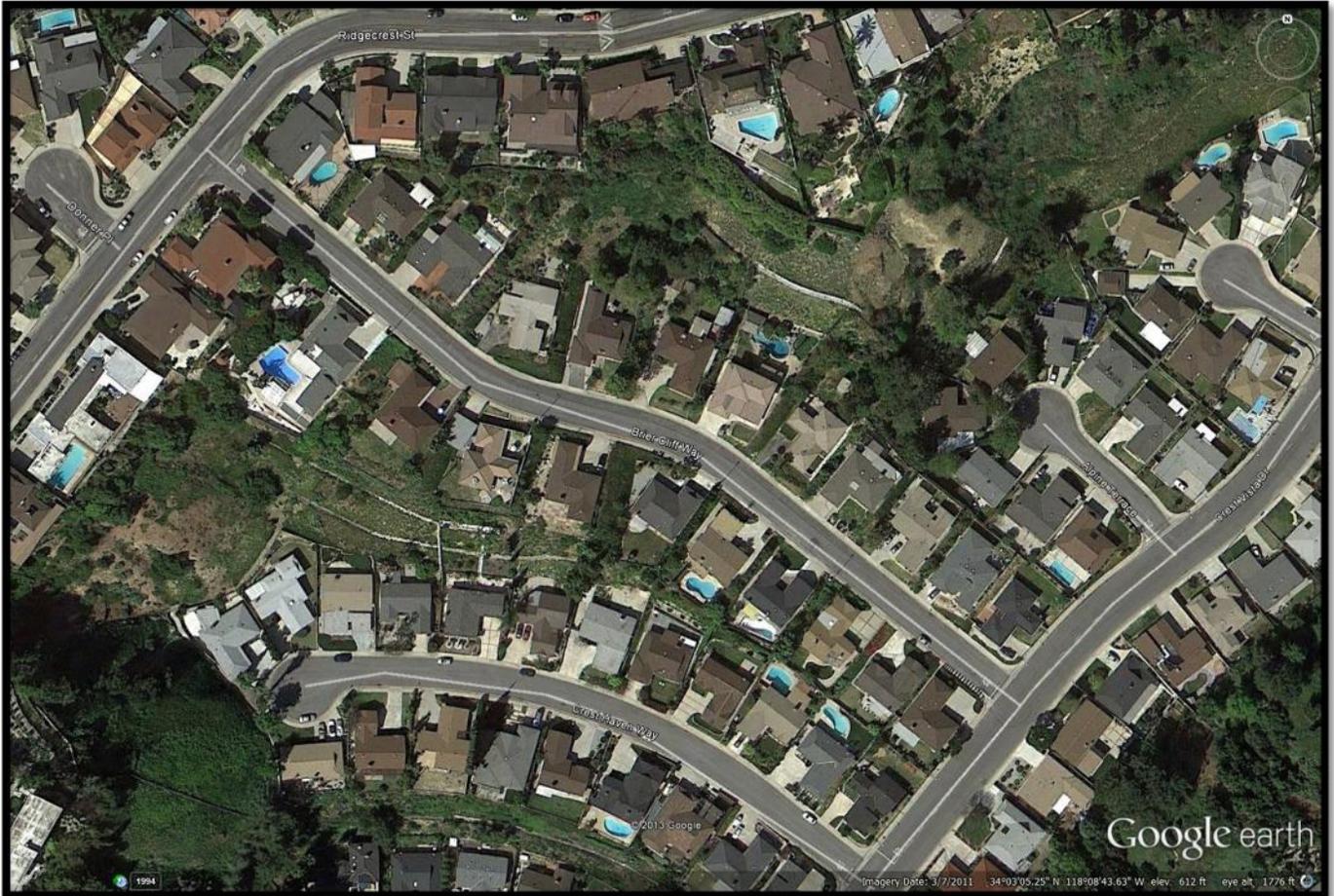
Notes

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

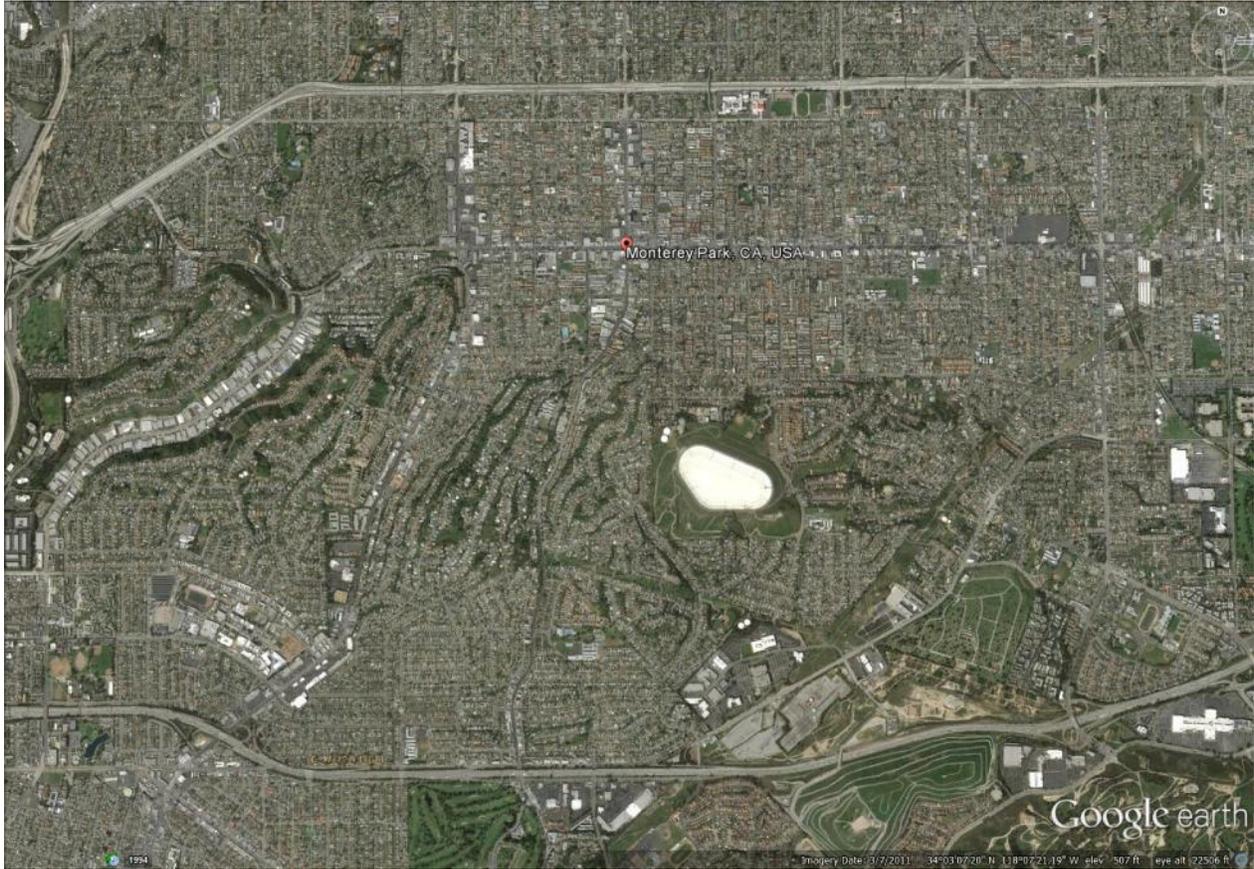


Capital Improvement Project Number	33 – 2009 SSMP
Schedule	Year 3
Description/Location	GIS Based Sanitary Sewer Atlas
Issue	Atlas Does Not Exist
Budget	\$115,000
➤ Design	\$115,000
➤ Construction	\$0

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

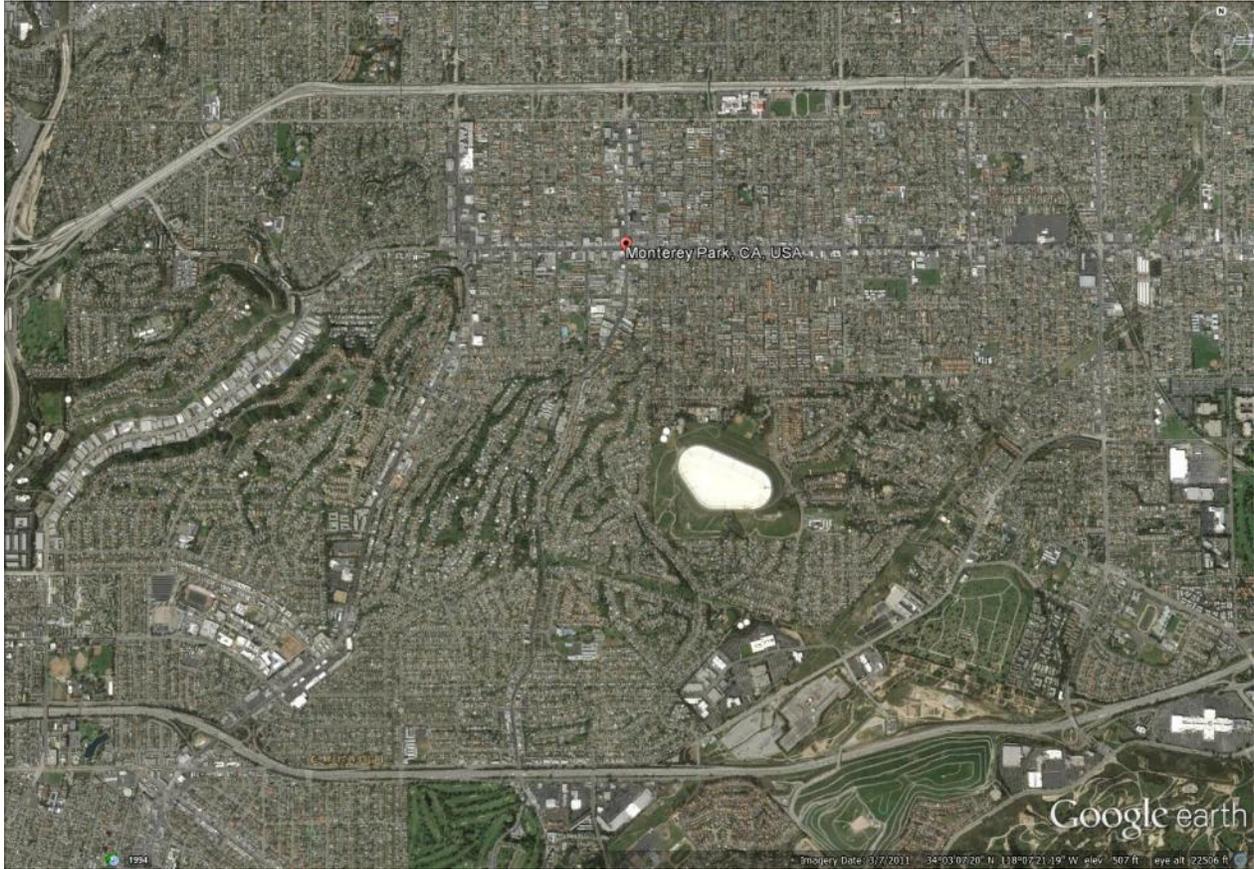


Capital Improvement Project Number	34 – 2009 SSMP
Schedule	Year 5
Description/Location	City-wide
Issue	Inventory All Wastewater Components
Budget	\$115,000
➤ Design	\$115,000
➤ Construction	\$0

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

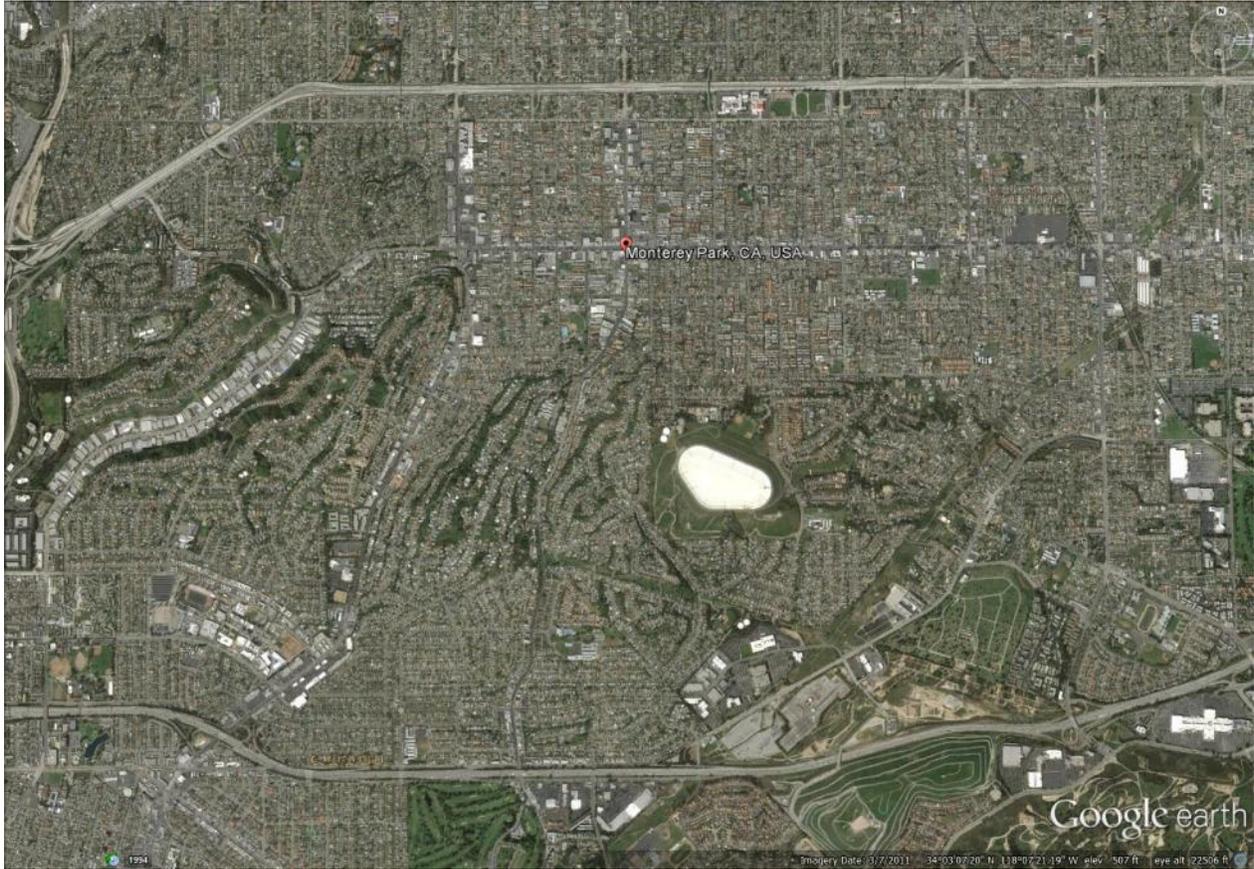


Capital Improvement Project Number	35 - 2009 SSMP
Schedule	Year 6
Description/Location	City-wide
Issue	Computerized Maintenance Management System
Budget	\$287,500
➤ Design	\$287,500
➤ Construction	\$0

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

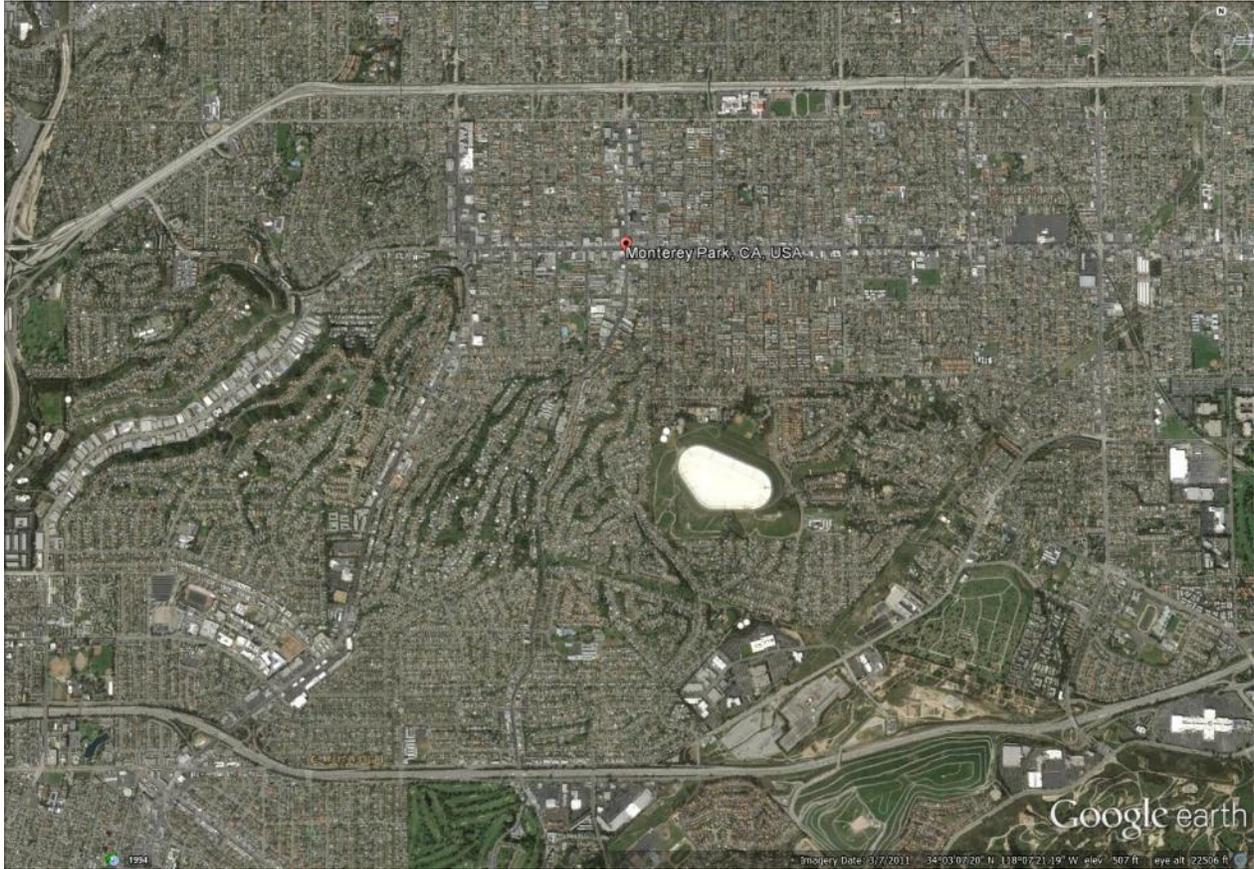


Capital Improvement Project Number	36 – 2009 SSMP
Schedule	Year 1
Description/Location	City-wide
Issue	Expand FOG Program
Budget	\$115,000
➤ Design	\$115,000
➤ Construction	\$0

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

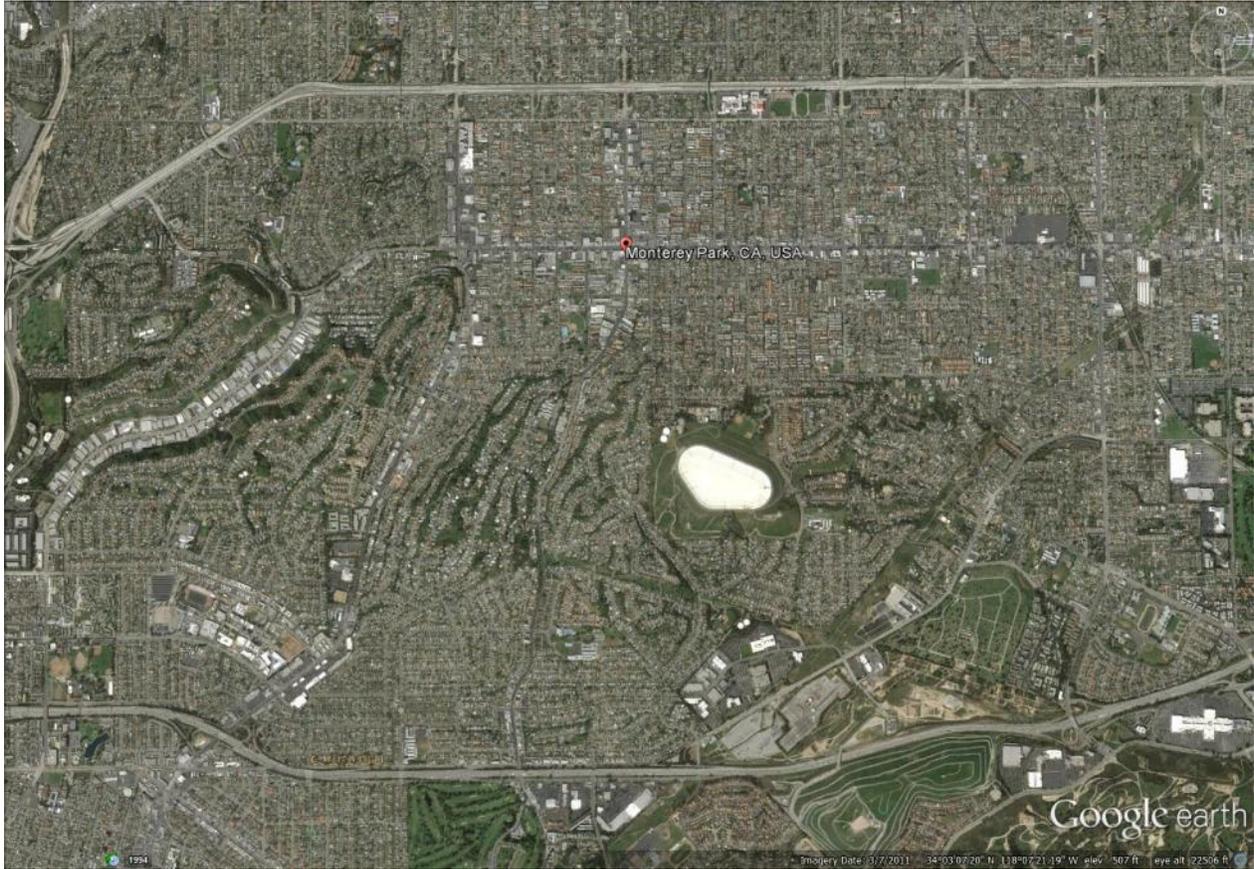


Capital Improvement Project Number	37 – 2009 SSMP
Schedule	Year 1
Description/Location	City-wide
Issue	Expand CCTV Operations Equipment
Budget	\$345,000
➤ Design	\$345,000
➤ Construction	\$0

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 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

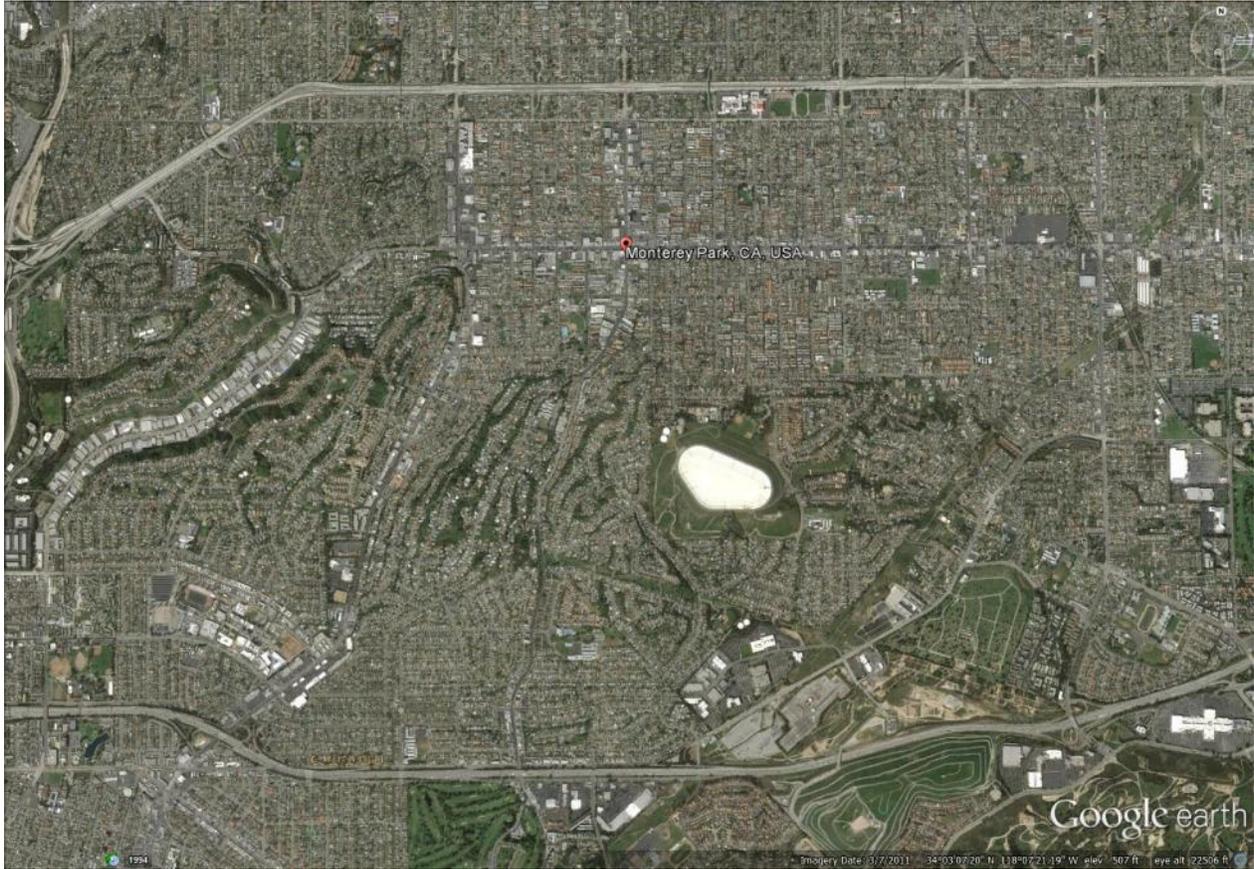


Capital Improvement Project Number	38 – 2009 SSMP
Schedule	Year 7
Description/Location	City-wide
Issue	Develop an Asset Management Plan
Budget	\$575,000
➤ Design	\$575,000
➤ Construction	\$0

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

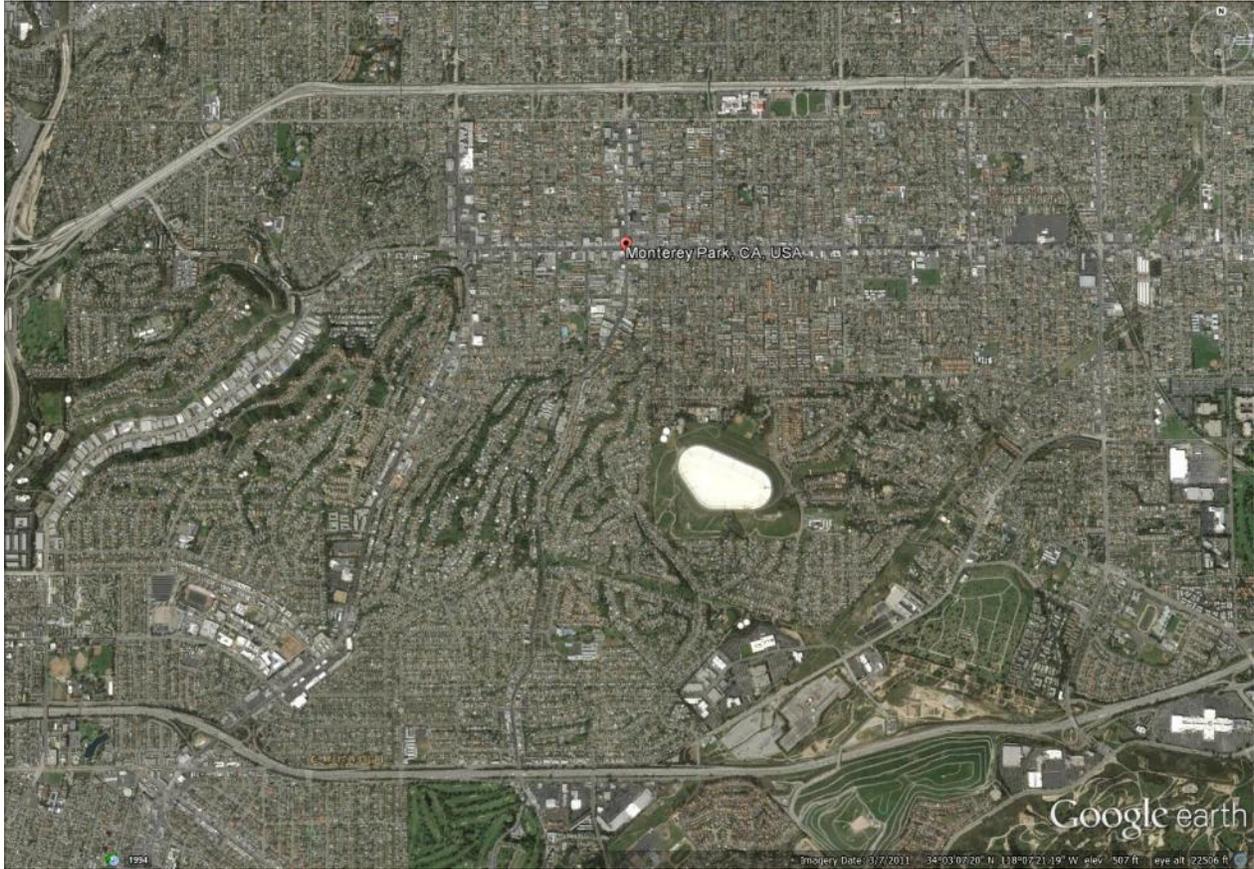


Capital Improvement Project Number	39 – 2009 SSMP
Schedule	Year 2
Description/Location	City-wide
Issue	Upgrade Field Equipment
Budget	\$57,500
➤ Design	\$57,500
➤ Construction	\$0

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

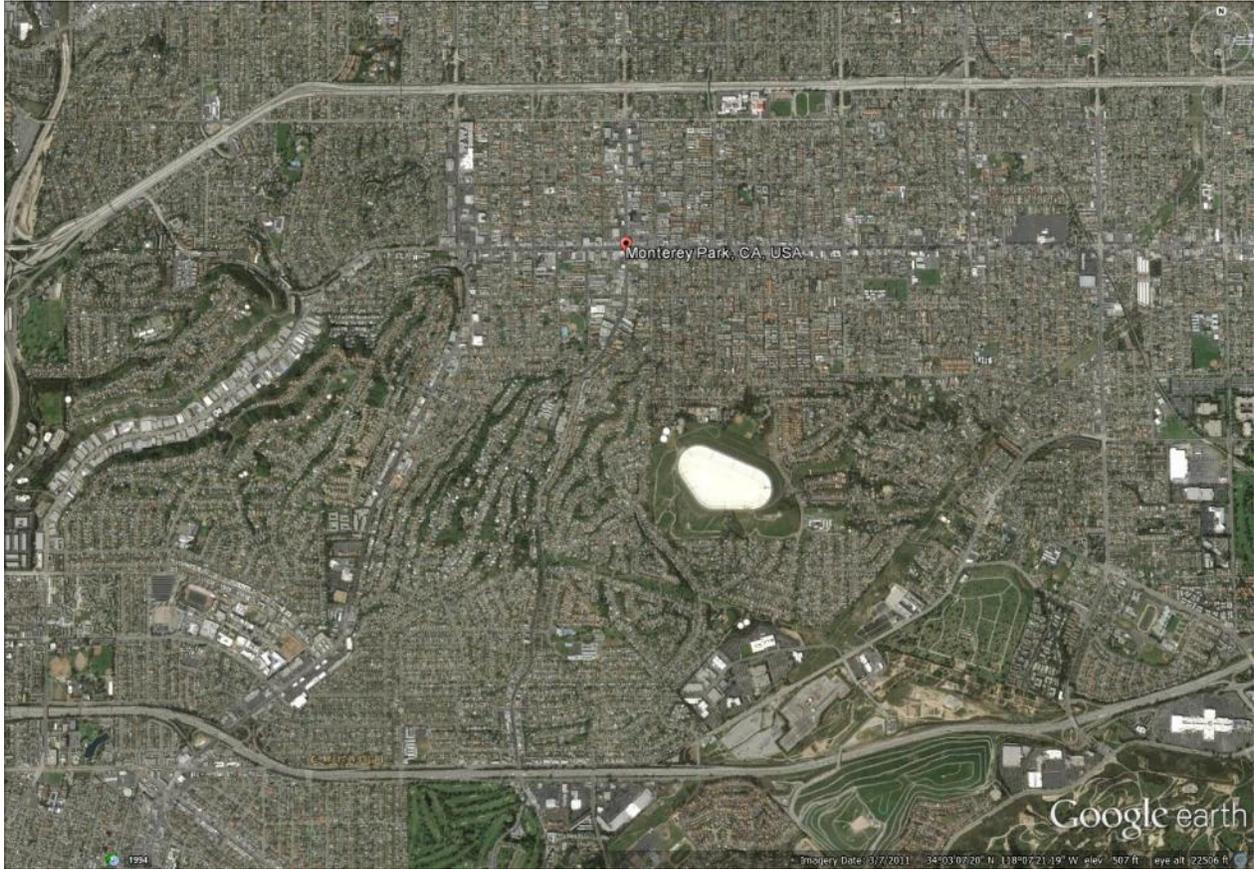


Capital Improvement Project Number	40 – 2009 SSMP
Schedule	Year 2
Description/Location	City-wide
Issue	Ongoing Training
Budget	\$11,500
➤ Design	\$11,500
➤ Construction	\$0

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

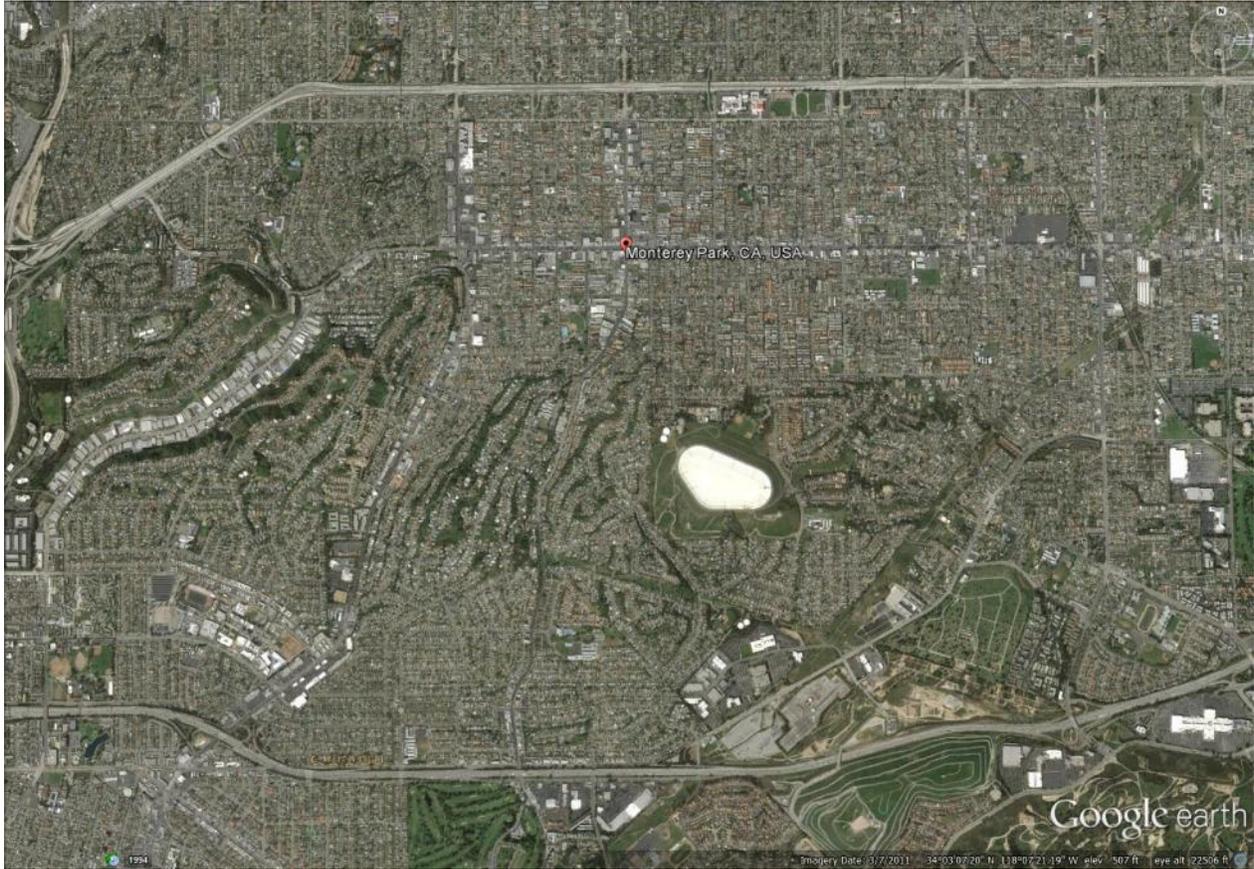


Capital Improvement Project Number	41 – 2009 SSMP
Schedule	Year 1
Description/Location	City-wide
Issue	Update Emergency Overflow Response Plan
Budget	\$17,300
➤ Design	\$17,300
➤ Construction	\$0

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

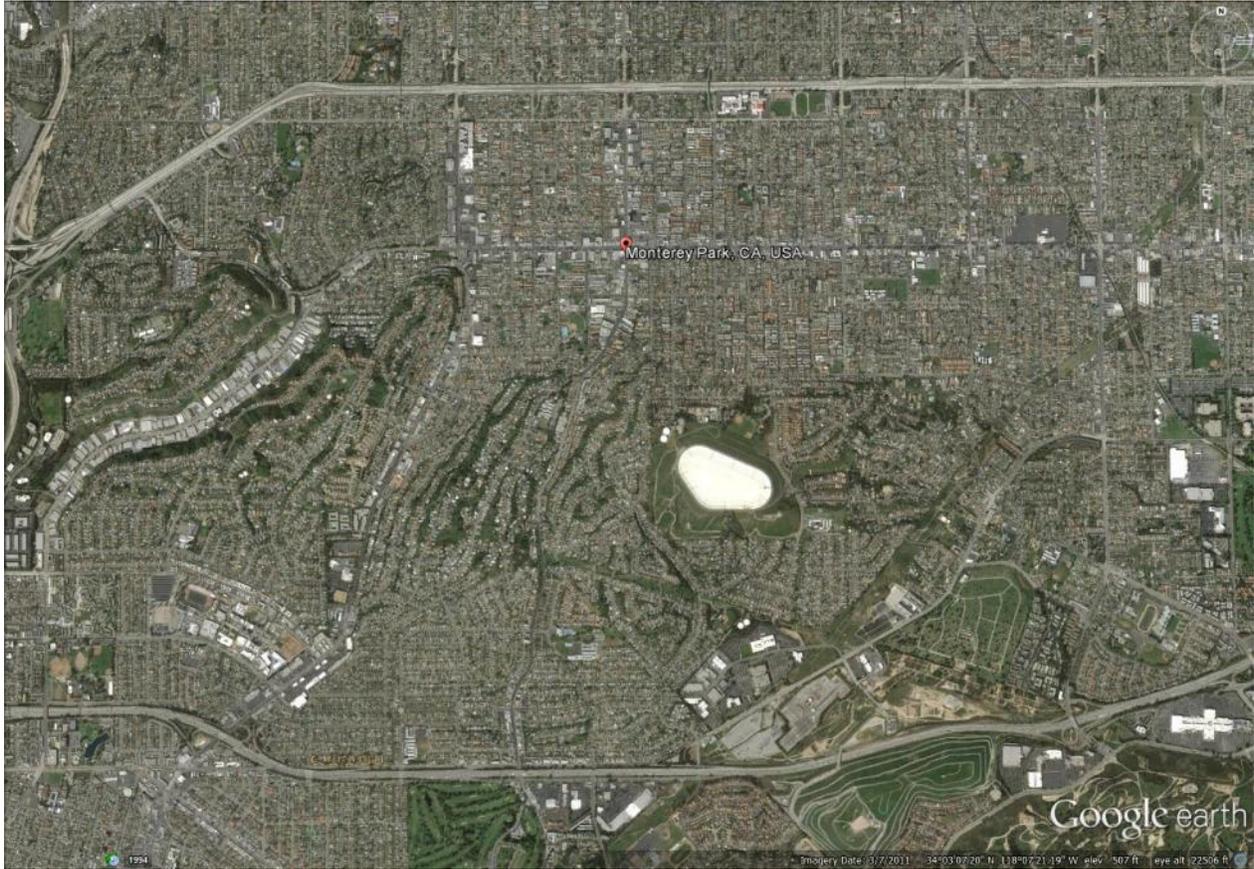


Capital Improvement Project Number	42 – 2009 SSMP
Schedule	Year 6
Description/Location	City-wide
Issue	Flow Monitoring
Budget	\$86,300
➤ Design	\$86,300
➤ Construction	\$0

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

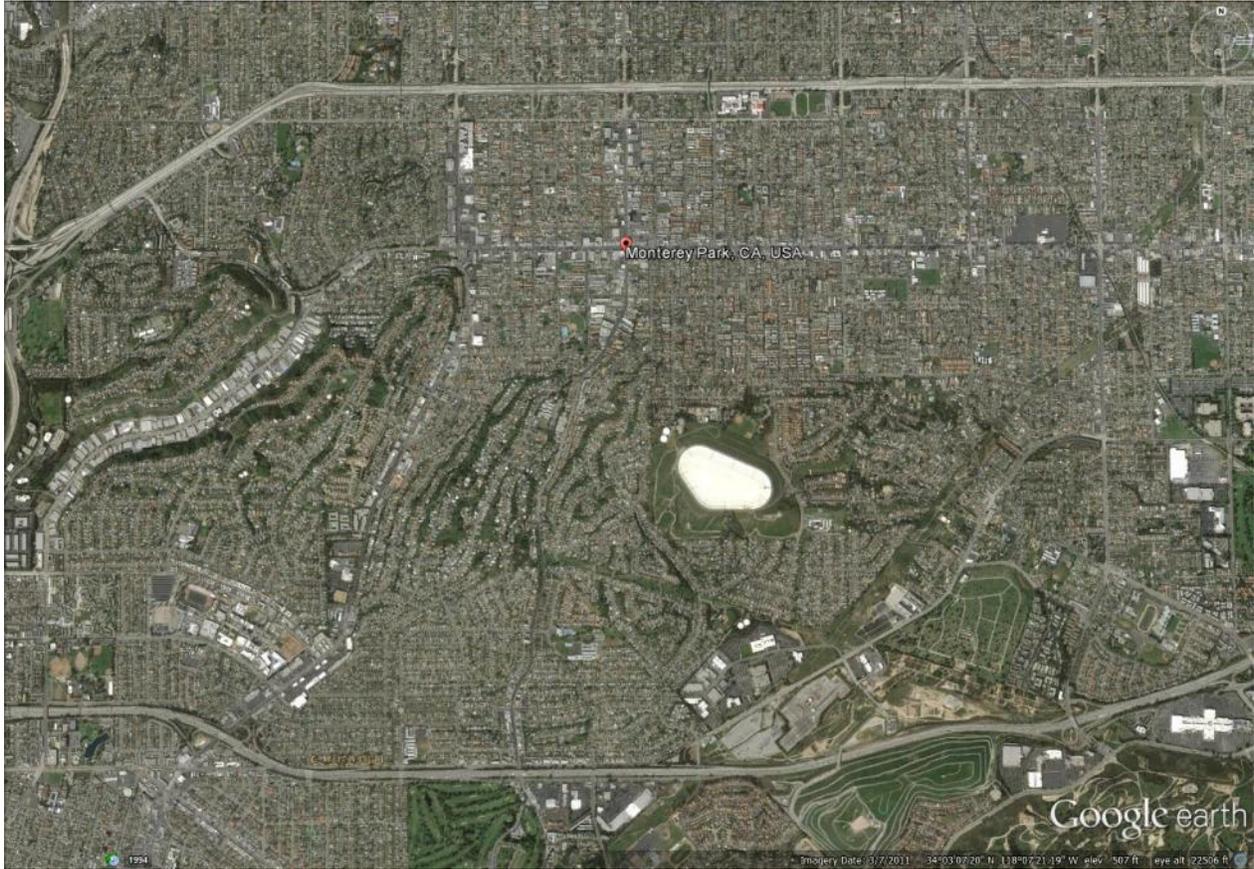


Capital Improvement Project Number	43 – 2009 SSMP
Schedule	Annually
Description/Location	City-wide
Issue	Regular Maintenance of Hot Spots
Budget	\$200,000
➤ Design	\$0
➤ Construction	\$200,000

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	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/construc/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	Notes
								Issue	
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

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								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. Major roots at 208. - Candidate for spot repair.
06/07/05	3	Ridge Crest St.	7+44.33	6+48.62	96.01	8	VCP		No issues
06/07/05	3	Ridge Crest St.	6+48.62	5+05.56	146.21	8	VCP	2	Cracked joint at Sta. 30. Failed pipe and lateral connection at Sta. 75 and 165. Cracked pipe at 230 minor. Candidate for spot repair. 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.	5+05.56	2+59.58	252.04	8	VCP	5	No CCTV found - Spot repair candidate
06/07/05	3	Ridge Crest St.	2+59.58	0+00	264.9	8	VCP	5	No issues
06/07/05	3	Ridge Crest St.	1+00	1+75	76.42	8	VCP	2	Heavy blockage
06/07/05	3	Ridge Crest St.	7+91.80	10+81.95	297.33	8	VCP	2	No issues
06/07/05	3	Donner Pl.	0+00	1+01.10	102.75	8	VCP		Cracked lateral connection at Sta. 140 Failed pipe and lateral connection at 204 - Spot repair candidate.
06/07/05	4	Ridge Crest St.	7+91.80	5+19.83	276.92	8	VCP	5	No issues
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	No issues
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	No issues
06/07/05	4	Ridge Crest St.	9+00	7+43.02	160.19	8	VCP		Cracked pipe at Sta 129 - Spot repair candidate
06/07/05	4	Ridge Crest St.	7+43.02	5+25	222.03	8	VCP	4	No issues
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. 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.	7+14.47	3+63.03	368.34	8	VCP	2, 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.	3+63.03	0+15.49	361.3	8	VCP	5	offset joint severe Sta 16
06/08/05	5	Highland Dr.	0+15.49	5+58.14	170.6	8	VCP	6	

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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	
06/09/05	7	Crest Haven Way	6+80.87	4+77.74	207.95	8	VCP	5	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	4+77.74	2+67.21	214.27	8	VCP	5	Pipe failure at Sta 2 (two segments), 15 (three segments), 28 lateral connection, joint failure at 207 - CIPP candidate.

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								Issue	
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	

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								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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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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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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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								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		
								Issue	Notes	
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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								Issue	
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	Notes
								Issue	
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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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	Notes
								Issue	
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

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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

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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	Cracked pipe segment at Sta 8 and 12 - Spot repair candidate
05/15/06	10	College View Dr.	1401	1291	342.83	10	VCP		No issues
05/15/06	10	College View Dr.	1291	1174	337.73	10	VCP	5, 7	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.	1129	1080	274.37	10	VCP		No issues
05/15/06	10	College View Dr.	1080	1020	336.71	10	VCP	5	Failed pipe at Sta. 185, 204, cracked joint at 268 - Spot repair candidate
05/15/06	11	College View Dr.	1020	1000	134.38	10	VCP	4	Cracked pipe throughout - CIPP candidate
05/15/06	11	College View Dr.	1895	1801	341.3	10	VCP		No issues
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 Cracked lateral connection at Sta. 8, pipe joint cracked at Sta. 144 (two segments), 175 (three segments), - Spot repair candidate.
05/16/06	14	Lightview St.	1300	1380	270.55	8	VCP	5	

**City of Monterey Park
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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 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	Rock Haven St.	1433	1880	362.21	8	VCP	2, 5	Cracked pipe at Sta 271 - Spot repair candidate
05/17/06	16	S.Bleakwood Ave	2001	2025	276.71	8	VCP	1, 4	No issues
05/17/06	16	S.Bleakwood Ave	2025	2049	274.29	8	VCP	2, 4	Crack at Sta 12, throughout - CIPP candidate
05/17/06	16	S.Bleakwood Ave	2049	2069	329.2	8	VCP	2	Roots at Lateral
05/17/06	16	S.Bleakwood Ave	2069	2093	328.7	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

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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	

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
05/23/06	22	Dorner Dr.	2334	2337	253.89	8	VCP	2, 4	Cracked pipe at Sta 206 - Spot repair candidate
05/23/06	22	Dorner Dr.	2337	1530	201.5	8	VCP		No issues
05/23/06	22	Dorner Dr.	1530	1480	325.27	10	VCP	4	Cracked pipe at Sta. 274 - spot repair candidate
05/23/06	22	Sherbrook St.	2407	2435	321.23	8	VCP		No issues
05/23/06	22	Sherbrook St.	2435	2441	81.27	8	VCP		No issues
05/23/06	22	Sherbrook St.	2441	2442	37.45	8	VCP		No issues
05/23/06	22	Sherbrook St.	2442	2448	159.3	8	VCP		No issues
05/23/06	22	Gladmar St.	2429	2414	152.13	8	VCP		No issues
05/23/06	22	Gladmar St.	2414	2405	172.83	8	VCP		No issues
05/23/06	22	Gladmar St.	2405	2389	184.34	8	VCP		No issues
05/23/06	22	Gladmar St.	2389	2337	136.39	8	VCP		No issues
05/23/06	23	Pebble Vale St.	1430	1460	328.19	8	VCP	5	Cracked pipe at Sta 4, 19 (two segments), 94 (two segments), cracked pipe and lateral connection at 57, 125 (two segments), 204 - CIPP candidate
05/23/06	23	Pebble Vale St.	1460	2060	331.83	8	VCP		No issues
05/24/06	24	Bluffhill Dr.	1758	1782	176.67	8	VCP	4	Cracked pipe at Sta 0 (MH), 68, throughout - CIPP candidate
05/24/06	24	Bluffhill Dr.	1782	1876	356.66	8	VCP	5	Cracked pipe joint at Sta. 264 (two segments), failed pipe 339 (three segments) - spot repair candidate
05/24/06	24	Bluffhill Dr.	1876	1966	33.72	8	VCP	1	Blockage abandoned CCTV
05/24/06	24	Bluffhill Dr.	1966	1876	305.58	8	VCP	4	Reverse of previous - Cracked pipe joint at Sta 91 - Spot repair candidate
05/24/06	24	Bluffhill Dr.	1966	2066	335.36	8	VCP		No issues
05/24/06	24	Bluffhill Dr.	2066	1245	184.64	8	VCP		No issues
05/24/06	24	College View Dr.	2081	2181	357.57	8	VCP	1, 2, 5	Cracked pipe joint at Sta. 151 (two segments), 182, 199, 216, 287, cracked pipe and lateral at 222, 260 - CIPP candidate
05/24/06	24	College View Dr.	2181	2267	305.78	8	VCP	4	Cracked pipe and lateral connection at Sta. 167, cracked pipe at Sta. 244 (two segments), 292 (three segments) - CIPP candidate
05/24/06	24	College View Dr.	2267	2321	304.57	8	VCP	5	Failed pipe at Sta. 103 (four segments) - Spot repair candidate
05/24/06	25	First St.	1266	1298	225.42	8	VCP	2, 4	Cracked pipe joint at Sta 222 - Spot repair candidate
05/24/06	25	First St.	1298	1314	134.57	8	VCP	2	

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
05/25/06	26	First St.	1314	1342	195.54	8	VCP		No issues
05/25/06	26	First St.	1342	2441	118.62	8	VCP	7	Abandoned inspection no reverse - debris in line
05/25/06	26	First St.	1266	1233	325.57	8	VCP		No issues
05/25/06	26	First St.	1233	2333	124.17	8	VCP		No issues
05/25/06	26	First St.	2397	1850	256.42	8	VCP		No issues
05/25/06	26	First St.	1850	1800	258.64	8	VCP		No issues
05/25/06	26	First St.	1800	1700	134.27	8	VCP	2	
05/25/06	26	First St.	1700	2441	164.05	8	VCP	2	
05/25/06	26	First St.	2398	2399	294.27	8	VCP		No issues
05/25/06	26	Woods Ave.	2399	129	343.74	8	VCP		No issues
05/25/06	27	Brooklyn	2093A	2093B	268.03	8	VCP		No issues
05/25/06	27	Brooklyn	2093B	2093C	42	8	VCP	2	Blockage abandoned CCTV
05/25/06	27	Brooklyn	2093C	2093B	211.09	8	VCP		Reverse of previous
05/25/06	27	Brooklyn	1950	2313	240.47	8	VCP	2	Blockage abandoned CCTV
05/25/06	27	Brooklyn	2313	1950	108.72	8	VCP		Reverse of previous
05/26/06	28	Floral Dr.	1571	1601	219.67	8	VCP	1, 5, 7	Cracked pipe at Sta. 7, 14, failed pipe at 208 (three segments) - Spot repair candidate
05/26/06	28	Floral Dr.	1601	1600	179.09	8	VCP	4	Cracked pipe at Sta 82 - Spot repair candidate
05/26/06	28	College View Dr.	1001	1020	133.46	8	VCP	4	Cracked pipe at Sta 51, 54 - Spot repair candidate
05/26/06	28	Brightwood St.	890	1901	61.88	8	VCP	2	
05/26/06	28	Alley	2325	2306	56.23	8	VCP		No issues
05/26/06	28	Alley	2306	1320	352.62	8	VCP	1, 4	Cracked pipe at Sta 127, 170 - Spot repair candidate
05/26/06	28	Alley	1320	1260	353.83	8	VCP	2	Roots at Lateral
05/26/06	28	Alley	1260	2301	350.71	8	VCP	1	
05/26/06	28	Alley	2310	2350	321.93	8	VCP	2	Roots at Lateral
05/26/06	28	Alley	2350	1298	322.24	8	VCP		No issues
05/26/06	29	Alley	1262	1218	290.64	8	VCP		No issues
05/26/06	29	Alley	1294	1262	289.12	8	VCP	2, 4	Cracked pipe joint at Sta 71 - Spot repair candidate
05/30/06	30	College View Dr.	1179	1129	354.44	12	VCP		No issues
05/30/06	30	Collegian Ave.	2315	1218	300.03	8	VCP		No issues
05/30/06	30	Collegian Ave.	1218	2333	167.78	8	VCP		No issues
05/30/06	30	Alley	2301	2325	228.86	8	VCP		No issues
05/30/06	30	Alley	2325	2373	234.21	8	VCP		No issues
05/30/06	30	Alley	2373	2405	273.58	8	VCP		No issues
05/30/06	30	Alley	2405	1342	333.14	8	VCP		No issues

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
05/30/06	30	Alley	1480	2405	182.82	8	VCP		No issues
05/30/06	30	Schoolside Ave.	2325	E.L.A.C	255.71	8	VCP		No issues
05/30/06	30	Collegian Ave.	2333	2337	165.96	8	VCP		No issues
05/30/06	30	Collegian Ave.	2337	2441	360.19	8	VCP		No issues
Total Length (ft)					56219.02		10.65	Miles	
2007									
03/15/07		Alley bet. Cadiz and Loma Verde	7+81	3+28	393.61	8	RCP	2, 4	CIPP candidate due to concrete pipe
03/15/07		Alley bet. Cadiz and Loma Verde	3+28	7+81	65.92	8	RCP	4	CIPP candidate due to concrete pipe
03/15/07		Alley bet. Cadiz and Loma Verde	3+28	0+00	232.09	8	RCP	5	Multiple pipe failed sections and showing signs of corrosion failure throughout - CIPP candidate
03/15/07		Alley bet. Cadiz and Loma Verde	0+00	3+28	90.05	8	RCP	5	CIPP candidate due to concrete pipe
03/15/07		Ease East of Graylock Ave.	0+00	1+36	130.33	8	VCP	2, 4, 7	Abandoned inspection no reverse - Cracked pipe at Sta 78 - Spot repair candidate
03/15/07		Ease East of Graylock Ave.	10+37	6+88	357.67	8	VCP	2	
03/15/07		Ease East of Graylock Ave.	6+88	3+40	83.99	8	VCP	2	Abandoned inspection no reverse
04/05/07	1	Baltimore Ave.	4+28	2+16	219.67	8	RCP	2	CIPP candidate due to concrete pipe
04/05/07		Baltimore Ave.	2+16	0+00	216.34	8	RCP	4	Unmapped manhole - CIPP candidate due to concrete pipe
04/05/07		Nicholson Ave.	6+56	3+28	334.45	8	VCP	1	
04/05/07		Nicholson Ave.	3+28	0+00	298.21	8	VCP	1	Unmapped manhole/CCTV abandoned due to blockage
04/05/07		Lincoln Ave.	6+56	3+28	335.56	8	VCP	2	
04/05/07		Lincoln Ave.	3+28	0+00	333.54	8	VCP	1	
04/05/07		Garfield Ave.	8+64	4+24	450.24	8	RCP	1	CIPP candidate due to concrete pipe
04/05/07		Garfield Ave.	4+24	0+00	432.37	8	RCP	1	CIPP candidate due to concrete pipe
04/06/07	2	Garvey Ave.	2+79	7+59	491.94	12	RCP		CIPP candidate due to concrete pipe
04/06/07		Garvey Ave.	7+59	10+66	156.4	12	RCP	1	Blockage abandoned CCTV - CIPP candidate because of concrete pipe
04/06/07		Garvey Ave.	10+66	7+59	106.4	12	RCP		Reverse of previous - CIPP candidate because of concrete pipe
04/06/07		Garvey Ave.	10+66	13+66	306.79	12	RCP	1	CIPP candidate due to concrete pipe
04/06/07		Garvey Ave.	13+66	16+69	302.35	12	RCP	1	Abandoned inspection no reverse - CIPP candidate due to concrete pipe
04/06/07		Garvey Ave.	22+76	25+79	313.25	12	RCP	1	CIPP candidate due to concrete pipe
04/06/07		Garfield Ave.	13+04	8+64	436.82	8	RCP	1, 4	CIPP candidate due to concrete pipe
06/13/07	1	Bleakwood Ave.	2361	2381	264.9	8	VCP		No issues

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
06/13/07	1	Bleakwood Ave.	2381	2397	271.05	8	VCP		No issues
06/13/07	1	Roscommon Ave.	2355	2375	264.9	8	VCP		No issues
06/13/07	1	Roscommon Ave.	2375	2391	272.57	8	VCP		No issues
06/13/07	1	Vancouver Ave.	2366	2383	172.83	8	VCP		No issues
06/13/07	1	Vancouver Ave.	2383	2391	139.51	8	VCP	2, 4	Cracked pipe joint at Sta 99 - Spot repair candidate
06/13/07	1	Vancouver Ave.	2391	2399	121.44	8		2	Blockage abandoned CCTV
06/13/07	1	Vancouver Ave.	2399	2391	109.43	8			reverse of previous
06/13/07	1	First St.	2399	2399	293.16	8	VCP	1	
06/13/07	1	Woods Ave.	2365	2385	263.69	8	VCP		No issues
06/13/07	1	Woods Ave.	2385	2399	273.38	8			No issues
06/13/07	1	First St.	2397	1860	254.5	8	VCP		No issues
06/13/07	1	First St.	1860	1700	258.44	8	VCP	1, 2	
06/13/07	1	First St.	1700	2411	133.96	8	VCP	2	
06/13/07	1	First St.	2411	2441A	162.63	8		2	
06/14/07	2	First St.	1298	1270	224.42	8	VCP		No issues
06/14/07	2	First St.	1298	1314	134.16	8	VCP	2	
06/14/07	2	First St.	1314	1342	194.43	8	VCP		No issues
06/14/07	2	First St.	1342	2439	164.65	8	VCP		No issues
06/14/07	2	Alley bet. Dorner and Collegian	1380	1257	288.12	8	VCP	2	
06/14/07	2	Alley bet. Dorner and Collegian	1257	2325	287.71	8	VCP	2	
06/15/07	2	Alley bet. School and Collegian	1320	2314	222.9	8	VCP	1, 2	
06/15/07	2	Alley bet. School and Collegian	1320	1260	349.8	8	VCP	2	
06/15/07	2	Alley bet. School and Collegian	1260	2301	349.39	8	VCP	1	
06/15/07	2	Alley bet. School and Collegian	2314	2314A	58.05	8	VCP		No issues
06/15/07	2	Alley bet. School and Collegian	2314A	1320	124.78	8	VCP	1, 2	
06/15/07	2	Schoolside Ave.	2314	2305	255.31	8	VCP		No issues
06/15/07	2	Avenida Cesar Chavez	2CC	1CC	220.28	10	PVC		No issues
06/15/07	2	Avenida Cesar Chavez	1CC	0CC	174.14	10	PVC		No issues
06/15/07	2	Avenida Cesar Chavez	2CC	3CC	87.63	10	PVC		No issues
06/15/07	3	Avenida Cesar Chavez	3CC	4CC	132.75	10	PVC		No issues
06/15/07	3	Avenida Cesar Chavez	4CC	5CC	173.43	10	PVC		No issues
06/15/07	3	Avenida Cesar Chavez	5CC	6CC	257.83	10	PVC		No issues
06/15/07	3	Avenida Cesar Chavez	6CC	7CC	106.5	10	PVC		No issues
06/15/07	3	Collegian Ave.	2333	2337	165.06	8	VCP	1	Sand in invert throughout
06/15/07	3	Collegian Ave.	2337	2417	357.77	8	VCP		No issues
06/15/07	3	Sherbrook St.	2448	2426	275.09	8	VCP	1	

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
06/15/07	3	Sherbrook St.	2442	2448	159.4	8	VCP		No issues
06/15/07	3	Sherbrook St.	2442	2439	34.73	8	VCP	7	Blockage abandoned CCTV Rocks in Pipe - Spot repair
06/18/07	4	Gladmar St.	2429	2417	151.23	8	VCP		No issues
06/18/07	4	Gladmar St.	2405	2417	173.13	8	VCP		No issues
06/18/07	4	Gladmar St.	2405	2389	185.85	8	VCP		No issues
06/18/07	4	Gladmar St.	2389	2337	135.17	8	VCP		No issues
06/18/07	4	Casitas St.	530	527	111.05	8	VCP		No issues
06/18/07	4	Casitas St.	530	566	177.98	8	VCP		No issues
06/18/07	4	Casitas St.	566	1670	48.86	8	VCP	5	Failed/Collapsed lateral connection/pipe Sta 2, collapsed pipe at Sta 47 inspection abandoned - spot repair candidate
06/18/07	4	Casitas St.	1670	566	183.23	8	VCP	5	Reverse of previous - failed pipe at Sta 90, 115, 142 (two segments) failed lateral connection and pipe at 121, cracked joint at 110, - spot repair candidate. Failed lateral connection at 77, 80, 144, failed pipe joint at 139 - Spot repair candidate
06/18/07	4	Arbolis St.	501	1624	261.26	8	VCP	4	joint at 139 - Spot repair candidate
06/18/07	4	Granada Dr.	842	816	119.02	8	VCP		No issues
06/18/07	4	Cereza Dr.	763	716	110.74	8	VCP		No issues
06/18/07	4	Topacio Dr.	779	724	114.48	8	VCP		No issues
06/18/07	4	Pueblo Dr.	615	645	157.48	8	VCP		No issues
06/18/07	4	Pueblo Dr.	645	660	117.61	8	VCP		No issues
06/18/07	4	Ease bet. Pueblo and Abajo	660	Main	50.17	8	VCP	1	Blockage abandoned CCTV
06/18/07	4	Ease bet. Pueblo and Abajo	Main	660	40.58	8	VCP		Reverse of previous
06/18/07	4	Vagabond Rd.	690A	690B	225.22	8	VCP		No issues
06/18/07	4	Vagabond Rd.	690B	705	345.76	8	VCP	4	Cracked pipe joint at Sta 26 - Spot repair candidate
06/18/07	4	Vagabond Rd. and Barnum Wy.	835A	835B	77.63	8	VCP		No issues
06/18/07	4	Vagabond Rd. and Barnum Wy.	835B	835C	307.9	8	VCP	4	Cracked pipe at Sta 192, throughout - CIPP candidate Failed pipe at Sta 25 (four segments), failed lateral connection and pipe segment Sta 163 - Spot repair candidate
06/18/07	4	Vagabond Rd. and Barnum Wy.	835C	670	169.7	8	VCP	5, 6	candidate
06/18/07	4	Vagabond Rd.	670	705	56.84	8	VCP	1	
06/19/07	5	Barnum Way	646	660	222.19	8	VCP	2	
06/19/07	5	Barnum Way	660	676	258.13	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	Notes
								Issue	
06/19/07	5	Barnum Way	676	689	144.66	8	VCP	4, 5, 6	Failed lateral connection and pipe Sta 7, 14, cracked pipe at 21, failed pipe at 57, 85 offset at MH - Spot repair candidate
06/19/07	5	Barnum Way	689	693	108.72	8	VCP		No issues
06/19/07	5	Barnum Way	693	705	140.83	8	VCP		No issues
06/19/07	5	Barnum Way	705	729	326.58	8	VCP		No issues
06/19/07	5	Barnum Way	729	737	179.19	8	VCP		No issues
06/19/07	5	Barnum Way	737	761	293.47	8	VCP	2, 6	Offset at Sta 173 - Spot repair candidate
06/19/07	5	Barnum Way	761	777	258.54	8	VCP		No issues
06/19/07	5	Barnum Way	777	793	285.59	8	VCP		No issues
06/19/07	5	Barnum Way	793	809A	283.88	8	VCP		No issues
06/19/07	5	Barnum Way	809A	809B	215.73	8	VCP		No issues
06/19/07	5	Barnum Way	809B	827	281.25	8	VCP		No issues
06/19/07	5	Barnum Way	827	835A	201.6	8	VCP	6	Offset abandoned CCTV Sta 201 - Spot repair candidate
06/19/07	5	Barnum Way	835A	827	39.27	8	VCP		reverse of previous
06/20/07	6	Abajo Dr.	2150	821	76.42	8	VCP		No issues
06/20/07	6	Abajo Dr.	2150	2110	190.19	8	VCP		No issues
06/20/07	6	Abajo Dr.	2110	2070	194.23	8	VCP		No issues
06/20/07	6	Abajo Dr.	2070	2020	275.8	8	VCP		No issues
06/20/07	6	Abajo Dr.	2020	1980	261.06	8	VCP	4	Cracked pipe joint at Sta 67 - Spot repair candidate
06/20/07	6	Abajo Dr.	1980	1930	271.96	8	VCP	1	Blockage abandoned CCTV
06/20/07	6	Abajo Dr.	1930	1980	0	8	VCP		reverse of previous
06/20/07	6	Abajo Dr.	1930	1910	0	8	VCP	1	Blockage abandoned CCTV
06/20/07	6	Abajo Dr.	1910	1930	123.06	8	VCP	1	reverse of previous
06/20/07	6	Abajo Dr.	1910	1890	36.36	8	VCP	1	Blockage abandoned CCTV
06/20/07	6	Abajo Dr.	1890	1910	111.85	8	VCP		reverse of previous
06/20/07	6	Abajo Dr.	1890	1875	112.96	8	VCP		No issues
06/20/07	6	Abajo Dr.	1875	1845	173.84	8	VCP	1, 3	
06/20/07	6	Abajo Dr.	1845	1785	265.91	8	VCP		No issues
06/20/07	6	Abajo Dr.	1785	1725	285.89	8	VCP		No issues
06/20/07	6	Abajo Dr.	1725	1691	160.61	8	VCP		No issues
06/20/07	6	Abajo Dr.	1340	1380	228.76	8	VCP		No issues
06/20/07	7	Abajo Dr.	1380	1410	161.62	8	VCP		No issues
06/20/07	7	Abajo Dr.	1410	1440	228.05	8	VCP		No issues
06/21/07	7	Abajo Dr.	1440	1480	204.83	8	VCP	3	

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
06/21/07	7	Abajo Dr.	1480	1530	245.51	8	VCP		No issues
06/21/07	7	Abajo Dr.	1530	1560	208.26	8	VCP		No issues
06/21/07	7	Abajo Dr.	1560	1590	172.02	8	VCP		No issues
06/21/07	7	Abajo Dr.	1590	1624	232.39	8	VCP		No issues
06/21/07	7	Abajo Dr.	1624	1670	303.96	8	VCP		No issues
06/21/07	7	Abajo Dr.	1670	1691	217.45	8	VCP	5	Failed pipe at Sta 147 (five segments), 193, 199, - CIPP candidate
06/21/07	7	Arriba Dr.	1904	1943	338.19	8	VCP		No issues
06/21/07	7	Arriba Dr.	1943	1999	262.57	8	VCP		No issues
06/21/07	7	Arriba Dr.	2025	1999	146.18	8	VCP		No issues
06/21/07	7	Arriba Dr.	2025	2065	207.15	8	VCP		No issues
06/21/07	7	Arriba Dr.	2065	2075	116.5	8	VCP	2	
06/21/07	7	Arriba Dr.	2075	2127	18.98	8	VCP	7	Blockage abandoned CCTV - Debris in pipe
06/21/07	7	Arriba Dr.	2127	2075	116.8	8	VCP		reverse of previous
06/21/07	7	Arriba Dr.	2127	2157	252.68	8	VCP		No issues
06/21/07	7	Arriba Dr.	2157	2180	98.53	8	VCP	2	
06/21/07	7	Arriba Dr.	2180	2160	105.39	8	VCP		No issues
06/21/07	7	Arriba Dr.	2160	821	105.49	8	VCP	2	
06/22/07	8	Arriba Dr.	1423	1461	192.31	8	VCP	2	
06/22/07	8	Arriba Dr.	1461	1473	156.37	8	VCP	2	
06/22/07	8	Arriba Dr.	1473	1495	165.66	8	VCP		No issues
06/22/07	8	Arriba Dr.	1495	1573	339	8	VCP	2	
06/22/07	8	Arriba Dr.	1573	1566	210.48	8	VCP	2	
06/22/07	8	Arriba Dr.	1635	1566	206.75	8	VCP	2	
06/22/07	8	Arriba Dr.	1655	1701	152.03	8	VCP	1, 2	Abandoned inspection no reverse
06/22/07	8	Arriba Dr.	1655	486	211.09	8	VCP	2	
06/22/07	8	Arriba Dr.	1701	1655	35.94	8	VCP	1, 2	Reverse pull required to complete CCTV
06/22/07	8	Arriba Dr.	1701	1710	93.48	8	VCP		No issues
06/22/07	8	Arriba Dr.	1892	1801	288.72	8	VCP	2	
06/22/07	8	Arriba Dr.	1801	1769	103.58	8	VCP	2	Abandoned inspection no reverse
06/22/07	8	Colina Terrace	1801	582	74.5	8	VCP	2	Blockage abandoned CCTV
06/22/07	8	Colina Terrace	582	1801	20.8	8	VCP		reverse of previous
06/22/07	8	Arriba Dr.	1769	1801	93.58	8	VCP	4, 2	Blockage abandoned CCTV no reverse - Cracked pipe at Sta 12 - Spot repair candidate
06/22/07	8	Arriba Dr.	1769	1737	226.54	8	VCP	2	
06/22/07	8	Arriba Dr.	1737	1710	188.78	8	VCP		No issues
06/22/07	8	Verde Vista	1556	1546	101.66	8	VCP		No issues

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	Notes
								Issue	
06/22/07	8	Verde Vista	1546	1526	220.48	8	VCP		No issues
06/25/07	8	Verde Vista	1526	1516	147.29	8	VCP		No issues
06/25/07	8	Verde Vista	1516	1590	230.17	8	VCP		No issues
06/25/07	8	Verde Vista	1566	1576	146.28	8	VCP	2	
06/25/07	8	Verde Vista	1576	1597	271.76	8	VCP	2	Blockage abandoned CCTV
06/25/07	8	Verde Vista	1597	1576	63.09	8	VCP		reverse of previous
06/25/07	8	Verde Vista	1597	1651	148.7	8	VCP		No issues
06/25/07	8	Verde Vista	1651	1751	309.11	8	VCP	2	
06/25/07	8	Verde Vista	1751	295	147.79	8	VCP	4	Cracked pipe at Sta 45 - Spot repair candidate
06/25/07	8	Verde Vista	1900	1998	380.89	8	VCP		No issues
06/25/07	8	Verde Vista	2172	2084	282.06	8	VCP	2	
06/25/07	8	Verde Vista	2084	1998	280.14	8	VCP	2	
06/25/07	8	Verde Vista	2196	283	319.01	8	VCP		No issues
06/25/07	8	Avion Dr.	1446	1485	195.74	8	VCP		No issues
06/25/07	9	Avion Dr.	1485	1514	162.03	8	VCP		No issues
06/25/07	9	Avion Dr.	1514	1562	162.53	8	VCP		No issues
06/25/07	9	Avion Dr.	1562	1546	207.66	8	VCP		No issues
06/25/07	9	Avion Dr.	1458	1546A	200.89	8	VCP		No issues
06/26/07	9	Campo St.	489	1485	141.03	8	VCP		No issues
06/26/07	9	Aliso St.	385	1386	164.05	8	VCP		No issues
06/26/07	9	Bonita Terrace	1457	1450	112.16	8	VCP	2, 4	Cracked pipe at Sta 6 - Spot repair candidate
06/26/07	9	Sombrero Dr.	1300	1345	239.05	8	VCP	1, 2	
06/26/07	9	Sombrero Dr.	1345	1389	270.85	8	VCP	4	Cracked pipe at Sta 123 - Spot repair candidate
06/26/07	9	Sombrero Dr.	1389	1435	193.32	8	VCP	2, 4	Cracked pipe at Sta 73 - Spot repair candidate
06/26/07	9	Sombrero Dr.	1435	1458	159.1	8	VCP	2	
06/26/07	9	Sombrero Dr.	1458	1500	180.91	8	VCP	4, 5	Failed pipe at Sta 4 (5 segments), 42 (two segments), 53 (two segments), 75 (two segments), multiple failures throughout - CIPP candidate
06/26/07	9	Sombrero Dr.	1500	1558	193.42	8	VCP		No issues
06/26/07	9	Sombrero Dr.	1558	1600	124.78	8	VCP	2, 4	Cracked pipe throughout - CIPP candidate
06/26/07	9	Sombrero Dr.	1600	1700	349.7	8	VCP	2, 4	Cracked pipe at Sta 4, throughout - CIPP candidate
06/26/07	9	Sombrero Dr.	1700	1790	126.09	8	VCP	2	Blockage abandoned CCTV
06/26/07	9	Sombrero Dr.	1790	1700	5.96	8	VCP		reverse of previous
06/26/07	10	Avion Dr.	1379	1345	351.11	8	VCP	2	
06/26/07	10	Feliz St.	1500	1516	342.12	8	VCP		No issues

**City of Monterey Park
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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
06/27/07	11	Copa Way	1640	1710	102.77	8	VCP	2	
06/27/07	11	Copa Way	1710	1769	219.87	8	VCP	2, 4	Cracked pipe at Sta 211, 214 - Spot repair candidate
06/27/07	11	Copa Way	1769	1855	313.56	8	VCP	2	Debris
06/27/07	11	Copa Way	1855	1910	305.28	8	VCP	2, 5	Failed pipe and lateral connection at Sta. 160, 166 - Spot repair candidate
06/27/07	11	Copa Way	1910	1930	117.51	8	VCP	4	Cracked pipe at Sta 66, throughout - CIPP candidate
06/27/07	11	Copa Way	1930	501	113.07	8	VCP	2	Blockage abandoned CCTV
06/27/07	11	Copa Way	501	1930	54.41	8	VCP	1	reverse of previous
06/27/07	11	Ladera St.	283	235	246.93	8	VCP	2	
06/27/07	11	Ladera St.	235	193	288.12	8	VCP	2	
06/27/07	11	Ladera St.	193	167	268.93	8	VCP	2	
06/27/07	11	Ladera St.	167	141	75.21	8	VCP	1	debris abandoned cctv
06/27/07	11	Ladera St.	141	167	198.37	8	VCP	2, 3	reverse of previous
06/27/07	11	Ladera St.	141	119	270.25	8	VCP	1, 4	Debris - Cracked pipe throughout - CIPP candidate
06/27/07	11	Ladera St.	119	103	205.13	8	VCP	4	Cracked pipe throughout - CIPP candidate
06/27/07	11	Ladera St.	103	265	158.59	8	VCP	5	Cracked pipe at Sta 79, 100, throughout - CIPP candidate
06/29/07	12	Ladera St.	327	424	312.04	8	VCP		No issues
06/29/07	12	Ladera St.	424	494	358.78	8	VCP	4	Cracked pipe at Sta 165 - Spot repair candidate
06/29/07	12	Ladera St.	494	532	356.16	8	VCP	1, 2, 4	Infiltration at Sta 202, 294 - Spot repair candidate
06/29/07	12	Ladera St.	532	541	356.06	8	VCP	1, 4	Cracked pipe at Sta 68, throughout - CIPP candidate
06/29/07	12	Grandeza St.	415	461	232.9	8	VCP	1, 4	Cracked pipe at Sta 227 - Spot repair candidate
06/29/07	12	Grandeza St.	461	495	230.78	8	VCP	5	Cracked pipe at Sta 223, throughout - CIPP candidate
06/29/07	12	Grandeza St.	495	537	355.65	8	VCP	5	Cracked pipe at Sta 37, 61, 340, throughout - CIPP candidate
06/29/07	12	Grandeza St.	537	530	265.91	8	VCP	2, 4, 6	Offset joint at Sta 262 - Cracked pipe throughout - CIPP candidate
06/29/07	12	Cerco Alta Dr.	2095	299	224.82	8	VCP	1	
06/29/07	12	Cerco Alta Dr.	1930	1906	235.12	8	VCP	5	Cracked pipe at Sta 180, 190, throughout - CIPP candidate
06/29/07	12	Cerco Alta Dr.	1930	1962	243.19	8	VCP	2	

**City of Monterey Park
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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	Notes
								Issue	
06/29/07	12	Cerco Alta Dr.	1962	1982	172.83	8	VCP	4	Cracked pipe at Sta 91, 158 - Spot repair candidate
06/29/07	12	Cerco Alta Dr.	1982	299	307.3	8	VCP	5	Cracked pipe at Sta 218, 220, throughout - CIPP candidate
07/05/07	13	Barranca Dr.	265	278	219.77	8	VCP	5	Cracked pipe at Sta 84, 92, throughout - CIPP candidate
07/05/07	13	Barranca Dr.	278	298	341.42	8	VCP	1, 4	Cracked pipe throughout - CIPP candidate
07/05/07	13	Barranca Dr.	265	247	185.87	8	VCP		No issues
07/05/07	13	Barranca Dr.	247	226	215.73	8	VCP	2	
07/05/07	13	Barranca Dr.	1995	298	292.96	8	VCP	1, 4	Cracked pipe throughout - CIPP candidate
07/05/07	13	Barranca Dr.	1995	320	279.53	8	VCP	2, 4	Cracked pipe throughout - CIPP candidate
07/05/07	13	Barranca Dr.	320	368	202.1	8	VCP	2, 4	Cracked pipe at Sta 131, throughout - CIPP candidate
07/05/07	13	Durango St.	2097	2029	270.25	8	VCP	1, 2	
07/05/07	13	Durango St.	2029	2001	178.48	8	VCP	4	Cracked pipe throughout - CIPP candidate
07/05/07	13	Sierra Alta Way	1894	1906	235.32	8	VCP	2, 3, 4	Blockage abandoned CCTV - roots - Cracked pipe at Sta 114, 235 - Spot repair candidate
07/05/07	13	Sierra Alta Way	1906	1894	92.47	8	VCP		reverse of previous
07/06/07	14	Avenida Cesar Chavez	CC7	1230	78.64	12	VCP		No issues
07/06/07	14	Avenida Cesar Chavez	1230	2291	183.53	12	VCP		No issues
07/06/07	14	Avenida Cesar Chavez	2291	2291A	11.91	12	VCP		No issues
07/06/07	14	Avenida Cesar Chavez	2291A	2291B	10.2	12	VCP	1	
07/06/07	14	Avenida Cesar Chavez	1000	1000A	316.18	8	VCP		No issues
07/06/07	14	Avenida Cesar Chavez	1000A	2305	60.97	8	VCP		No issues
07/06/07	14	Collegian Ave.	2311	2321	298.31	8	VCP		No issues
07/06/07	14	Collegian Ave.	2321	2325	167.98	8	VCP		No issues
07/06/07	14	First St.	1384	1237	324.36	8	VCP	4	Cracked pipe throughout - CIPP candidate
07/06/07	14	Mesa Way	201	2196	289.12	8	VCP	2	
08/14/07	14	Garvey Ave.	0	1066	312.85	12	RCP	1	CIPP candidate because of concrete pipe
08/14/07	14	Garvey Ave.	1366	1669	308.51	12	RCP	1, 4	CIPP candidate because of concrete pipe
08/14/07	14	Garvey Ave.	1669	1973	309.42	12	RCP	1	CIPP candidate because of concrete pipe

**City of Monterey Park
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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
08/14/07	15	Garvey Ave.	1973	2276	305.48	12	RCP	1	CIPP candidate because of concrete pipe Unmapped MH, blockage abandoned CCTV - CIPP candidate because of concrete pipe
08/14/07	15	Nicholson Ave.	328	0	297.1	8	RCP	1	CIPP candidate because of concrete pipe
Total Length (ft)					49283.22		9.33	Miles	
2008									
10/05/08	1	Atlantic Blv.	24+46	25+66	89.57	8	RCP	1	Abandoned inspection no reverse - CIPP candidate due to concrete pipe
10/05/08	1	Atlantic Blv.	24+46	21+75	264.31	8	NRCP	1	CIPP candidate because of concrete pipe
10/05/08	1	Atlantic Blv.	21+75	19+80	3	8	NRCP	1	Blockage abandoned CCTV (concrete)
10/06/08	1	Atlantic Blv.	19+80	21+75	194.54	8	NRCP		Reverse of previous
10/06/08	1	Atlantic Blv.	19+80	17+75	206.63	8	NRCP		CIPP candidate because of concrete pipe
10/06/08	1	Atlantic Blv.	17+75	13+25	455.15	8	NRCP	1, 6	Offset joint at Sta 436 - CIPP candidate because of concrete pipe
10/06/08	1	Atlantic Blv.	13+25	8+00	3	8	NRCP	1	Blockage abandoned CCTV (grease) - CIPP candidate because of concrete pipe
10/06/08	1	Atlantic Blv.	8+00	13+25	273.51	8	NRCP	1, 2	Reverse of previous - CIPP candidate because of concrete pipe
10/06/08	1	Garfield Ave.	21+85	25+58	372.98	8	NRCP	1	Grease at lateral - CIPP candidate because of concrete pipe
10/07/08	2	Garfield Ave ES.	7+57	3+85	375.48	8	VCP	2	Roots at Lateral
10/07/08	2	Garfield Ave ES.	3+85	0+00	387.07	8	VCP	3, 5, 6	Failed lateral connection at Sta 295, failed pipe at MH - Spot repair candidate
10/07/08	2	Garfield Ave ES.	17+69	15+19	249.12	8	VCP	2, 4	Failed pipe joint at Sta. 110 - Spot repair candidate
10/07/08	2	Garfield Ave ES.	7+57	15+19	13+13	8	VCP	2	
10/07/08	2	Garfield Ave ES.	13+13	10+45	271.31	8	VCP	1, 2, 5, 6	Failed lateral connection at Sta 30, offset at Sta 103 (lateral connection) - Spot repair candidate
10/07/08	2	Garfield Ave ES.	10+45	7+75	272.91	8	VCP	2, 4, 6	Offset joint at Sta 262 - CIPP candidate to assist with roots
10/07/08	3	Garfield Ave ES.	7+75	5+09	269.11	8	VCP	2, 5, 7	Failed pipe soffit at joint - Spot repair candidate
10/07/08	3	Garfield Ave ES.	5+09	2+44	230.52	8	VCP	2	
10/07/08	3	Garfield Ave ES.	Unnamed	2.44	74.48	8	VCP		No issues
10/07/08	3	Garfield Ave ES.	2+44	0+00	205.03	8	VCP		No issues
10/07/08	3	Garfield Ave WS	7+80	5+40	242.82	8	VCP	7	Failed pipe section (exterior penetration) at Sta 224 - Spot repair candidate
10/07/08	3	Garfield Ave WS	5+40	2+70	261.41	8	VCP	1	Blockage abandoned CCTV (grease)
10/08/08	3	Garfield Ave WS	2+70	5+40	32.39	8	VCP		Reverse of previous

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	Notes
								Issue	
10/08/08	3	Garfield Ave WS	2+70	0+00	92.57	8	VCP	1	Blockage abandoned CCTV (grease)
10/08/08	3	Garfield Ave WS	0+00	2+70	0	8	VCP		Reverse of previous - review
10/08/08	3	Garfield Ave WS	16+70	15+08	165.05	8	VCP	1, 2	
10/08/08	3	Garfield Ave WS	15+08	12+83	227.03	8	VCP	2	
10/08/08	3	Garfield Ave WS	12+83	10+09	276.51	8	VCP	2	
10/08/08	3	Garfield Ave WS	10+09	7+50	261.31	8	VCP	5, 7	Failed pipe section at Sta 107, lateral break in at Sta 89, 184 - Spot repair candidates
10/08/08	3	Garfield Ave WS	7+50	4+91	261.41	8	VCP	2, 6	Offset joint at Sta 4 (MH) - spot repair candidate
10/08/08	3	Garfield Ave WS	4+91	2+28	265.51	8	VCP	2, 4	Failed pipe segment at Sta 240 - Spot repair candidate Cracked pipe section at Sta 70, 78, offset at Sta 220 - Spot repair candidates
10/08/08	3	Garfield Ave WS	2+28	0+00	228.53	8	VCP	6	
11/02/08	4	New Ave.	6+60	9+80	316.1	8	VCP	1, 3	
11/02/08	4	New Ave.	9+80	12+97	325.79	8	VCP	1, 3	
11/02/08	4	New Ave.	6+60	3+40	326.59	8	VCP	1, 3	
11/02/08	4	New Ave.	3+40	0+20	320.19	8	VCP	2	tap root out of lateral
11/03/08	4	New Ave.	0+20	0+00	20.19	8	VCP		No issues
11/03/08	4	Monterey Pass Rd.	16+07	12+74	336.09	8	VCP	1	
11/03/08	4	Monterey Pass Rd.	12+74	9+28	135.96	8	VCP	1	Blockage abandoned CCTV (grease)
11/03/08	4	Monterey Pass Rd.	9+28	12+74	215.63	8	VCP	1	rR
11/03/08	4	Monterey Pass Rd.	5+80	9+28	349.99	10	VCP		No issues
11/03/08	4	Monterey Pass Rd.	5+80	2+61	318.7	10	VCP	1	
11/04/08	5	Monterey Pass Rd.	2+61	0+21	244.62	10	VCP	1	
11/04/08	5	Monterey Pass Rd.	0+21	0+00	21.59	10	VCP	1	
11/04/08	5	Monterey Pass Rd.	63+25	63+40	23.59	8	VCP		No issues
11/04/08	5	Monterey Pass Rd.	63+40	66.32	294.3	8	VCP	1	
11/04/08	5	Monterey Pass Rd. & Kern Ave.	13+32	10+95	239.92	12	VCP	1	
11/04/08	5	Monterey Pass Rd. & Kern Ave.	10+95	7+50	350.29	12	VCP		No issues
11/09/08	6	New Ave.	13+00	10+74	226.26	12	VCP		No issues
11/09/08	6	New Ave.	10+74	8+75	201.53	12	VCP		No issues
11/09/08	6	New Ave.	8+75	35+16	7.05	12	VCP		concrete in channel
11/09/08	6	New Ave.	8+75	5+88	288.11	12	VCP		No issues
11/09/08	6	New Ave.	5+88	2+98	291.78	12	VCP		No issues
11/09/08	6	New Ave.	2+98	0+00	299.13	12	VCP	1	
11/10/08	6	New Ave.	13+00	13+10	9.73	12	VCP		No issues
11/10/08	6	New Ave.	21+14	17+89	326.33	12	VCP	3	
11/10/08	6	New Ave.	17+89	14+66	324.34	12	VCP		No issues

**City of Monterey Park
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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
11/10/08	6	New Ave.	14+66	12.+86	180.98	12	VCP		No issues
11/10/08	6	New Ave.	12+86	9+57	327.12	12	VCP		No issues
11/10/08	6	New Ave.	9+57	4+61	496.89	12	VCP		No issues
11/10/08	6	New Ave.	4+61	5+60	426.6	12	VCP	1	
11/10/08	6	New Ave.	5+60	0+00	32.27	12	VCP		No issues
11/10/08	7	Monterey Pass Rd.	53+61	51+04	256.93	12	VCP	1, 4	Cracked pipe at Sta 0 (MH) and 67 - Spot repair candidate
11/10/08	7	Monterey Pass Rd.	51+04	48+25	281.45	12	VCP	4	Cracked pipe at Sta 102, 208, throughout - CIPP candidate
11/10/08	7	Monterey Pass Rd.	48+25	44+75	348.07	12	VCP	4	Cracked pipe at Sta 9, 197, 297, throughout - CIPP candidate
11/10/08	7	Monterey Pass Rd.	44+75	41+25	349.46	12	VCP	3, 4	Cracked pipe at Sta 75, 194 - Spot repair candidate
11/10/08	7	Monterey Pass Rd.	41+25	37+75	350.06	12	VCP	3, 4	Cracked pipe at Sta 136 - Spot repair candidate
11/10/08	7	Monterey Pass Rd.	37+75	34+25	350.06	12	VCP		No issues
11/10/08	7	Monterey Pass Rd.	34+25	30+75	350.45	12	VCP		No issues
11/10/08	7	Monterey Pass Rd.	30+75	27+25	350.65	12	VCP		No issues
11/11/08	7	Monterey Pass Rd.	27+25	23+75	350.06	12	VCP	2	
11/11/08	7	Monterey Pass Rd.	23+75	20+25	352.34	10	VCP	5	Failed pipe joint at Sta 314 - Spot repair candidate
11/11/08	8	Monterey Pass Rd.	20+25	16+75	351.25	10	VCP	4	Cracked pipe at Sta 148, 264, throughout - CIPP candidate
11/11/08	8	Monterey Pass Rd.	16+75	13+32	335.26	10	VCP	1, 4	infiltration - CIPP candidate
11/11/08	8	Monterey Pass Rd.	7+50	4+02	350.35	12	VCP	4	Infiltration, Cracked pipe at Sta 252, throughout - CIPP candidate
11/11/08	8	Monterey Pass Rd.	4+02	0+94	310.54	12	VCP	1, 4	Cracked pipe throughout - CIPP candidate
11/11/08	8	Monterey Pass Rd.	0+94	0+64	28.49	12	VCP		No issues
11/11/08	8	Monterey Pass Rd.	60+00	63+25	320.67	8	VCP	1	
11/11/08	8	Monterey Pass Rd.	60+00	57+00	301.91	8	VCP	1, 4	Cracked pipe throughout - CIPP candidate
11/12/08	8	Monterey Pass Rd.	57+00	53+70	330.6	8	VCP	1, 4, 7	Failed pipe section previously repaired
11/12/08	8	Monterey Pass Rd.	60+50	64+00	350.55	8	VCP	1	
11/12/08	8	Monterey Pass Rd.	60+50	57+00	351.74	8	VCP	1, 4	Cracked pipe at Sta 346 - Spot repair candidate
11/12/08	8	Monterey Pass Rd.	57+00	53+61	340.13	8	VCP	1, 4	Cracked pipe at Sta 65, 335 - Spot repair candidate
11/13/08	9	Monterey Pass Rd.	53+70	53+12	57.38	8	VCP	4	Cracked pipe at Sta 8 - Spot repair candidate
11/13/08	9	Monterey Pass Rd.	76+91	79+91	300.12	8	VCP	1, 4	Debris in pipe - Cracked pipe at Sta 296 - Spot repair candidate

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	
								Issue	Notes
11/13/08	9	Monterey Pass Rd.	76+91	73+66	328.31	8	VCP	1, 4	Cracked pipe at Sta 14, 254, throughout - CIPP candidate
11/13/08	9	Monterey Pass Rd.	73+66	70+91	275.2	8	VCP	1	
11/13/08	9	Monterey Pass Rd.	70+91	67+50	339.63	8	VCP	1, 4	Cracked pipe at Sta 152 - Spot repair candidate
11/13/08	10	Monterey Pass Rd.	67+50	64+00	355.81	8	VCP	1	
11/14/08	10	Corporate Center Dr.	34+67	31+75	293.66	8	VCP	1, 3	
11/14/08	10	Corporate Center Dr.	31+75	28+75	300.71	8	VCP	4	Cracked pipe at Sta 202 - Spot repair candidate
11/14/08	10	Corporate Center Dr.	28+75	25+77	305.88	8	VCP		No issues
11/14/08	10	Corporate Center Dr.	25+77	22+75	298.03	8	VCP	4	Cracked pipe at Sta 293 - Spot repair candidate
11/14/08	10	Corporate Center Dr.	22+75	19+77	303.2	8	VCP	4	Cracked pipe at Sta 3, 20, throughout - CIPP candidate
11/14/08	10	Corporate Center Dr.	19+77	16+35	340.92	8	VCP		No issues
10/06/08		Garfield Ave.	2185	1745	444.35	8	VCP	1	
10/06/08		Garfield Ave.	1745	1304	433.06	8	VCP	1	
10/06/08		Garfield Ave.	1277	1304	23.89	8	RCP		CIPP candidate because of concrete pipe
10/06/08		Garfield Ave.	1277	864	433.66	8	RCP	1	CIPP candidate because of concrete pipe
10/06/08		Garfield Ave.	865	424	445.45	8	RCP	1	CIPP candidate because of concrete pipe
10/06/08		Garfield Ave.	424	0	428.16	8	RCP	1, 7	CIPP candidate because of concrete pipe
11/16/08	11	Corporate Center Dr.	100	325	184.26	8	VCP	1, 2	Abandoned inspection no reverse
11/16/08	11	Corporate Center Dr.	325	551	225.66	8	VCP	1, 3	
11/16/08	11	Corporate Center Dr.	3535	3800	6	8	VCP	1, 4	Abandoned inspection no reverse - debris in line - Cracked pipe at Sta 4 - Spot repair candidate
11/16/08	11	Corporate Center Dr.	3464	3535	68.89	8	VCP	1	
11/16/08	11	Corporate Center Dr.	1635	1400	237.47	8	VCP		No issues
11/16/08	11	Corporate Center Dr.	1400	1288	113.28	8	VCP		No issues
11/16/08	11	Corporate Center Dr.	1288	1100	190.81	8	VCP		No issues
11/16/08	11	Corporate Center Dr.	325	100	45.87	8	VCP		No issues
11/16/08	11	Corporate Center Dr.	1100	800	300.22	8	VCP		No issues
11/16/08	11	Corporate Center Dr.	800	500	302.6	8	VCP	1, 5, 6	Failed pipe joint and offset at Sta. 275 - Spot repair candidate.
11/16/08	11	Corporate Center Dr.	500	358	141.27	8	VCP		No issues
11/16/08	11	Corporate Center Dr.	358	151	78.13	8	VCP	1	Blockage abandoned CCTV
11/16/08	11	Corporate Center Dr.	151	358	127.57	8	VCP	1	reverse of previous
11/16/08	11	Corporate Center Dr.	151	100	49.94	8	VCP	3	
11/16/08	11	Corporate Center Dr.	747	420	330.6	8	VCP	1, 2, 3, 4	Cracked pipe at Sta 689 - Spot repair candidate
11/16/08	11	Corporate Center Dr.	420	100	320.67	8	VCP	1	

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	Notes
								Issue	
11/21/08	17	Garvey Ave.	3321	3052	272.62	8	VCP	1	
11/21/08	17	Garvey Ave.	3052	2890	160.53	8	VCP	1	
11/21/08	17	Garvey Ave.	3565	3321	32.07	8	VCP	1	blockage abandoned CCTV
11/21/08	17	Garvey Ave.	3321	3565	213.94	8	VCP	1	reverse of previous
11/21/08	17	Garvey Ave.	2890	2719	174.23	8	VCP	3, 5	Failed pipe at MH for two segments - Spot repair candidate
11/21/08	17	Garvey Ave.	2719	2673	45.27	8	VCP		No issues
11/21/08	17	Garvey Ave.	2673	2477	197.56	8	VCP		No issues
11/21/08	17	Garvey Ave.	2477	2160	318.88	8	VCP		No issues
11/21/08	17	Garvey Ave.	2160	1931	231.81	8	VCP	1	
11/30/08	12	Garvey Ave.	1930	1711	15.19	8	VCP	1, 5	Metallic bar through pipe wall - Spot repair candidate
11/30/08	12	Garvey Ave.	1711	1488	226.95	8	VCP	1	
11/30/08	12	Garvey Ave.	1488	1116	374.58	8	VCP	1	
11/30/08	12	Garvey Ave.	1116	850	269.64	8	VCP	1, 2	
11/30/08	12	Garvey Ave.	850	595	218.02	8	VCP	5	Cracked pipe segment at Sta 5, debris in flow line which looks like a pipe piece - Spot repair candidate
11/30/08	12	Garvey Ave.	595	331	256.67	8	VCP	2	
11/30/08	12	Garvey Ave.	331	54	69.11	8	VCP		No issues
11/30/08	12	Garvey Ave.	54	13	277.78	8	VCP		No issues
11/30/08	12	Garvey Ave.	1711	1931	203.72	8	VCP	1, 2	Metallic bar through pipe wall - Spot repair candidate
11/30/08	12	Garvey Ave.	595	850	19.16	8	VCP		No issues
11/30/08	12	Garvey Ave.	6970	7193	223.67	8	RCP		CIPP candidate because of concrete pipe
11/30/08	12	Garvey Ave.	6970	6749	223.18	8	RCP		CIPP candidate because of concrete pipe
11/30/08	12	Garvey Ave.	6749	6305	438.71	8	RCP	1, 2, 5	Cracked pipe segment at Sta 2, 7, failed pipe at 10, 13, 38, multiple locations, heavy corrosion evidence, CIPP candidate
12/07/08	13	Garvey Ave.	6305	5830	93.22	8	RCP	1	CIPP candidate because of concrete pipe
12/07/08	13	Garvey Ave.	5830	5355	478.82	8	RCP	1, 5	CIPP candidate because of concrete pipe
12/07/08	13	Garvey Ave.	5355	4880	136.51	12	RCP	1, 3	CIPP candidate because of concrete pipe
12/07/08	13	Garvey Ave.	4880	5385A	337.05	12	RCP	1	CIPP candidate because of concrete pipe
12/07/08	13	Garvey Ave.	4880	4435	483.39	12	RCP	4	CIPP candidate because of concrete pipe
12/07/08	13	Garvey Ave.	4435	4093	309.65	12	RCP	1	CIPP candidate because of concrete pipe
12/07/08	13	Garvey Ave.	4093	3793	300.81	12	RCP	1, 5	CIPP candidate because of concrete pipe
12/07/08	13	Garvey Ave.	3793	3489	304.29	12	RCP	5	CIPP candidate because of concrete pipe

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	Notes
								Issue	
12/08/08	14	Garvey Ave.	3489	3186	306.17	12	RCP	1, 4	CIPP candidate because of concrete pipe
12/08/08	14	Garvey Ave.	3186	2885	301.71	12	RCP	1, 2	CIPP candidate because of concrete pipe
12/08/08	14	Garvey Ave.	2885	2579	309.45	12	RCP	1	Debris in pipe - CIPP candidate because of concrete pipe
12/08/08	14	Garvey Ave.	2138	2579A	392.74	15	RCP	1, 2	Debris in pipe - CIPP candidate because of concrete pipe
12/08/08	14	Garvey Ave.	2138	1754	387.68	15	RCP	2	CIPP candidate because of concrete pipe
12/08/08	14	Garvey Ave.	1754	1424	38.92	15	RCP	2	Blockage abandoned CCTV - CIPP candidate because of concrete pipe
12/08/08	14	Garvey Ave.	1424	1754	291.48	15	RCP	2	reverse of previous - CIPP candidate because of concrete pipe
12/08/08	14	Garvey Ave.	1424	1075	352.93	15	RCP	2	CIPP candidate because of concrete pipe
12/08/08	14	Garvey Ave.	1075	699	377.95	15	RCP	2, 5	Cracked pipe at 15, 108, 342 - CIPP candidate due to concrete pipe
12/29/08	14	New Ave.	1297	1317	16.38	8	VCP		no issues
12/29/08	14	New Ave.	20	40	20.05	12	VCP		no issues
12/29/08	14	New Ave.	0	20	19.36	12	VCP		no issues
12/29/08	14	Garvey Ave.	699	323	383.11	15	RCP	2	CIPP candidate because of concrete pipe
12/29/08	14	Garvey Ave.	323	22	382.62	15	RCP	1	Debris in pipe - CIPP candidate because of concrete pipe
12/29/08	14	Garvey Ave.	7193	7500	33.56	10	VCP	1	Abandoned inspection no reverse
12/29/08	14	Potrero Grande Dr.	3536	3186	353.33	10	VCP	3, 5	Failed pipe at Sta 297 - Spot repair candidate
12/29/08	14	Potrero Grande Dr.	3186	3010	180.98	10	VCP		No issues
12/29/08	14	Potrero Grande Dr.	3010	2726	231.32	15	VCP	1	
12/29/08	14	Potrero Grande Dr.	2726	3010	50.33	15	VCP	1	
12/30/08	15	Garvey Ave.	13	7500	6	10	VCP	1	Blockage abandoned CCTV
12/30/08	15	Garvey Ave.	7500	13	0	10	VCP	1	reverse of previous
12/30/08	15	Pomona Blvd.	2726	2450	273.71	15	VCP	1	
12/30/08	15	Pomona Blvd.	2450	2219	234.5	15	VCP		No issues
12/30/08	16	Pomona Blvd.	2219	1872	353.13	15	VCP	3	
12/30/08	16	Pomona Blvd.	1872	1585	271.43	15	VCP	1	
12/30/08	16	Pomona Blvd.	1585	1534	52.52	15	VCP	1	Debris in pipe
12/30/08	16	Pomona Blvd.	1534	1520	13.3	15	VCP	1	Abandoned inspection no reverse
12/30/08	16	Pomona Blvd.	1472	1520	47.75	15	VCP	1	Debris in pipe
12/30/08	16	Pomona Blvd.	1472	1254	219.01	15	VCP		No issues
12/30/08	16	Pomona Blvd.	1254	1007	232.31	15	VCP	1, 3	Debris in pipe - Abandoned CCTV
12/30/08	16	Pomona Blvd.	1007	1254	12.71	15	VCP	1	Debris in pipe

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	Notes
								Issue	
12/30/08	16	Pomona Blvd.	1007	687	322.75	15	VCP	4	Cracked pipe at Sta 5 - Spot repair candidate
12/30/08	16	Pomona Blvd.	687	367	325.24	15	VCP	4	Cracked pipe at Sta 5 - Spot repair candidate
12/30/08	16	Pomona Blvd.	367	64	302.6	15	VCP	1	
12/30/08	16	Pomona Blvd.	64	7	64.83	15	VCP		No issues
Total Length (ft)					43000.49		8.14	Miles	
2011									
08/01/11		Garfield Ave.	436	DSMH	539.81	8	VCP	2, 5, 6	Joint offset at Sta 261, crack at Sta 268 at MH, failed pipe at 432, heavy roots at all joints, defective lateral connection at Sta 466 - spot repair CIPP may help roots
08/01/11		Garfield Ave.	436	USMH	76.02	8	VCP	2	Blockage abandoned CCTV
08/01/11		South St.	220	117	434.44	8	VCP	1, 2	
08/01/11		South St.	220	250	200.7	8	VCP		No issues
08/01/11		South St.	328	350	393.14	8	VCP	2, 4	Cracked pipe at Sta 6 - Spot repair candidate
08/01/11		South St.	328	Harding	330.65	8	VCP	2	
08/01/11		De La Fuente	Harding	308	54.13	8	VCP	7	Blockage (metal pipe through wall) abandoned CCTV - Spot repair candidate
08/01/11		De La Fuente	Harding	631	676.53	8	RCP	7	Pipe missing at Sta. 159 - Spot repair and CIPP entire pipe because concrete pipe
08/01/11		De La Fuente	631	630	221.3	8	RCP	2	CIPP because of concrete pipe
08/01/11		Atlantic Blvd.	Atl	Mabel	212.74	8	RCP	2	Blockage abandoned CCTV - CIPP because of concrete pipe
08/01/11		Atlantic Blvd.	631	829	1055.15	8	VCP	2, 6	Offset at Sta 154 - Spot repair candidate
08/01/11		Atlantic Blvd.	sevilla	cadiz	900.91	8	VCP	2, 4, 5, 7	Cracked joint at Sta 10, offset at 18, cracked pipe at 177, 204, 206, 640 (MH), failed pipe at 188, 199, 900 - CIPP candidate
08/01/11		Atlantic Blvd.	cadiz	sevilla	136.72	8	VCP		Reverse of previous. Failed pipe missing at Sta 136 - spot repair and CIPP candidate
08/01/11		Garfield Ave.	500	436	270.55	8	VCP	1, 2, 5	Failed pipe and lateral connection at Sta 28, 66 - Spot repair candidate
08/01/11		Garfield Ave.	500	graves	457.02	8	VCP	2	
08/01/11		Atlantic Blvd.	122	404	874.55	8	VCP	2, 5, 6	Cracked joint at Sta 245, 263, 302, cracked pipe at Sta 318, 443, 659, 673, pipe failure at 551, 575, 582 (three segments), 598 (three segments), 610, offset at 618, full pipe at 840 - CIPP candidate
08/01/11		Atlantic Blvd.	404	Harding	803.3	8	VCP	4	

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	Notes
								Issue	
08/03/11		El Portal	alley	atlantic	129.85	8	VCP	1, 2	
08/03/11		Garvey Ave.	mont pass	atlantic	29.15	8	VCP	1, 7	Abandoned CCTV no reversal - debris
08/03/11		Garvey Ave.	Atl	mont pass	1355.85	8	VCP	1, 5	Grease encrustation throughout, cracked pipe at Sta 615 (MH), pipe failure at 620 (MH), hole at Sta 690, 835 (MH) - Spot repair candidate
08/03/11		Garvey Ave.	mont pass	mont pass	24.78	8	VCP	1	Abandoned CCTV no reversal
08/04/11		Garvey Ave.	garvey	atlantic	1051.66	8	VCP	4	Cracked pipe at Sta 409 - Spot repair candidate
08/04/11		Garfield Alley	garfield	elmgate	174.53	8	VCP	2, 4	Cracked pipe joint at Sta. 2, 4, 47, 59, 111 pipe segment cracked 56, pipe failure at 139, 147 - CIPP candidate
08/04/11		Garfield Alley	marguerita	atlantic	790.07	8	VCP	1, 2, 4	Pipe joint cracked at Sta 559, 562 - Spot repair candidate
08/05/11		Mabel	0	mabel	250.75	8	VCP	1	Blockage abandoned CCTV
08/05/11		Mabel	mabel	mont pass	969.57	8	VCP	1, 4	Reverse of previous - Cracked pipe at Sta 927 - Spot repair candidate
08/08/11		Newmark	marguerita	newmark	300.01	8	VCP	4	Cracked pipe at Sta 298 - Spot repair candidate
08/08/11		Newmark	newmark	garvey	516.73	8	VCP	1, 2, 4	Blockage abandoned CCTV - Cracked pipe at Sta 298, 333 - Spot repair candidate
08/08/11		Newmark	garvey	newmark	107.96	8	VCP	1	reverse of previous
08/08/11		Newlee	newlee	Mabel	399.41	8	VCP		No issues
08/08/11		Knoll	knoll	Mabel	285.08	8	VCP		No issues
08/08/11		Newmark	newmark	garvey	677.83	8	VCP	1, 2	Abandoned CCTV no reversal
08/08/11		Whitney Pl	whitney	whitney	250.06	8	VCP	5	Pipe joint cracked at Sta 11, 56, 64, 140, 149, 155, 179, pipe and lateral cracked 135, 146, 221 failed pipe segment (two segments) at 211 and 241 - CIPP candidate
08/08/11		Whitney St.	whitney	electric	600.21	8	VCP	5, 7	Cracked pipe joint at Sta 14, 67, 489 (mh) failed pipe segment at 136, 252, 427- spot repair candidate
08/18/11		Electric	electric	garvey	805.09	8	VCP	5	monitor crack locations
08/18/11		Newmark	newmark	garvey	547.37	8	VCP	2, 4	Failed pipe and lateral connection at Sta. 85, Abandoned CCTV no reversal (15 feet from MH) - Spot repair candidate
08/18/11		Newmark	garvey	newmark	152.54	8	VCP		Blockage abandoned CCTV - debris - Cracked pipe at Sta 17, 342, 536 - Spot repair candidate
08/19/11		Newmark	newmark	garvey	52.64	8	VCP	1	Reverse of previous
08/19/11		Newmark	newmark	garvey	52.64	8	VCP	1	Abandoned CCTV no reversal

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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified	Notes
								Issue	
08/19/11		Branham	branham	newmark	860.81	8	VCP	5	Cracked pipe and lateral connection at Sta 45, failed lateral connection at 299, 313, cracked pipe joint at 409, 715 -Spot repair candidate
08/19/11		Branham	branham	newmark	118.91	8	VCP	4	
08/19/11		Branham	branham	newmark	210.25	8	VCP		
08/19/11		Hellman	Chandler	atlantic	649.67	8	VCP	1, 5, 7	Abandoned CCTV no reversal - Failed pipe at 481, 488, 498, 617 Offset joint at 649 - Spot repair candidate
08/19/11		Hellman	Chandler	baltimore	1420.03	8	VCP	1	
08/19/11		Hellman	mcpherrin	baltimore	291.05	8	VCP	1	Blockage abandoned CCTV
08/19/11		Hellman	baltimore	mcpherrin	52.04	8	VCP	1	reverse of previous
08/19/11		Hellman	hellman	baltimore	541.5	8	VCP	6	Offset lateral connection pipe at 137 - spot repair candidate
08/24/11		Emerson	emerson	alhambra	465.88	8	VCP	2	
08/24/11		Emerson	emerson	lincoln	161.89	8	VCP	1	Abandoned CCTV no reversal
08/24/11		Emerson	emerson	alhambra	248.66	8	VCP	2	
08/24/11		Emerson	emerson	nicholson	239.21	8	VCP	4	Cracked pipe at Sta 194 - Spot repair candidate
08/24/11		Emerson	emerson	alhambra	221	8	VCP	2, 4	Cracked pipe at Sta 8 - Spot repair candidate
08/24/11		Hathaway	516	620	568.87	8	VCP	7	Protruding lateral
08/24/11		Hathaway	516	atlantic	424.69	8	VCP	2	
09/14/11		New Ave.	223	439	308.66	8	VCP	1, 4	Cracked pipe at Sta 57, 108, 176, 186 - Spot repair candidate
09/14/11		Pomelo	529	USMH	443.59	8	VCP	2	Abandoned CCTV no reversal
09/14/11		Pomelo	601	USMH	250.85	8	VCP	4	Abandoned CCTV no reversal (protruding lateral) - Cracked pipe at Sta 249 - Spot repair candidate
09/14/11		El Mercado Alley	601	el mercado	364.78	8	RCP	7	Pipe missing abandoned CCTV - Pipe incorrectly identified as VCP on tape. Missing/failed pipe from Sta 15 to 30 soil visible entire reach (two total) failed pipe due to corrosion - Replacement candidate
09/14/11		El Mercado Alley	el portal	601	267.77	8	RCP	1	Debris abandoned CCTV - CIPP candidate due to concrete pipe

**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	Notes
								Issue	
09/15/11		De La Fuente	737	kingsford	517.13	8	RCP	5	Incorrectly identified as VCP. It is concrete pipe. Failed pipe at MH Sta 2 (two segments), 11 (two segments), 23 (two segments), 32 (two segments), 48 (two segments), 57 (three segments), 72 (two segments), 92 (two segments), 102 (two segments), 114 (two segments), 124 (four segments), 203 (five segments), 237 (three segments) failed/partially collapsed pipe at 306, failed pipe at 366 (two segments), 390 (six segments), 473, 494, 512 - CIPP candidate
09/20/11		Divina Vista	851	933	538.22	8	VCP	2, 5	Abandoned CCTV no reversal - failed pipe at Sta 2, 11, 61 (MH), lateral connection joint offset at Sta 257, pipe joint failure at 330, 338 - Spot repair candidate
09/20/11		Divina Vista	851	847	78.71	8	VCP	4	Cracked pipe at Sta 3 - Spot repair candidate
09/20/11		Divina Vista	851	mira valle	104.18	8	VCP	5	Failed pipe at Sta 3 (MH), 17 (two segments), 25, 99 - Spot repair candidate
09/20/11		Divina Vista	927	933	138.01	8	VCP	7	Failed pipe joint at Sta 125, collapsed pipe at Sta 137 - Spot repair candidate
09/20/11		De La Fuente Easement	344	314	291.95	8	VCP	2, 5	Abandoned CCTV no reversal - Multiple joint offsets throughout, pipe failure at Sta 159 (MH) - CIPP candidate
09/20/11		De La Fuente Easement	344	Harding	279.81	8	VCP	2, 5, 6	Blockage abandoned CCTV - Offset at Sta 2, Failed pipe at 156 and 163, - CIPP candidate (roots)
09/20/11		De La Fuente Easement	Harding	344	507.47	8	VCP	2, 5, 6	Reverse of previous - Drilled bar through pipe wall at Sta 55, offset at 280 - CIPP candidate
09/22/11		New Ave.	319	439	560.61	8	VCP	1, 4	Abandoned CCTV no reversal blockage - Cracked pipe at Sta 30, 324 - Spot repair candidate
09/22/11		Baltimore Ave.	hampton	hellman	418.02	8	VCP	5,7	Failed pipe at Sta 8, 11, 42, 49, 55, 356 (hole) - Spot repair candidate/CIPP candidate
09/22/11		Baltimore Ave.	hampton	emerson	885.19	8	VCP	5	Failed pipe at Sta 7, cracked joint at 35, 41, 63, 79, 97, 133, 208, 242, 267, 432 - CIPP candidate
09/22/11		Kingsford	729	harding	927.98	8	VCP	5, 7	Hole at Sta 2, offset at 3, cracked pipe segment at 232 - Spot repair, monitor crack

**City of Monterey Park
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Date	Tape ID	Street Location	From MH	To MH	Length	Diameter	Pipe Material	Identified Issue	Notes
09/22/11		Harding	kingsford	503	159.61	8	VCP		No issues
09/26/11		Garfield Ave.	ramona	newmark	1190.08	8	VCP	2, 5, 6	Cracked pipe joint at 270, 620, 924 failed lateral connection at 459, failed pipe 747, 777, offset joint at 934 - CIPP candidate
09/26/11		Hermosa Vista	470	cadiz	331.95	8	VCP	3	
09/26/11		Hermosa Vista	470	410	199.01	8	lined VCP	6	abandoned CCTV blockage - offset in liner
09/26/11		Hermosa Vista	470	kingsford	139.21	8	VCP		No issues
09/26/11		Hermosa Vista	606	610	122.59	8	VCP	2	
09/26/11		Hermosa Vista	606	kingsford	1102.31	8	VCP	2, 5	Failed pipe at Sta 64 (two segments), cracked pipe joint at 175 - Spot repair candidate Failed pipe at Sta 4, 528, 1011 cracked pipe joint at 394, 457, 969, 987, 1125, 1149 - Spot repair candidate/CIPP to control roots
09/26/11		De La Fuente	sevilla	cadiz	1207.09	8	VCP	2, 5	
09/26/11		Cadiz	delafuente	alley	201	8	VCP	1	
09/26/11		De La Fuente	el portal	cadiz	576.63	8	RCP	2, 5	Pipe incorrectly identified as VCP. Failed lateral connection at Sta 75, failed pipe at 94, 101, 121, 130, 155, 194,209 (six segments), 236 (three segments), almost every segment cracked or showing signs of corrosion failure -CIPP candidate
09/26/11		De La Fuente	el portal	Harding	690.06	8	RCP	2, 5	Multiple failed pipe segments and signs of corrosion. Blockage abandoned CCTV - CIPP candidate
09/26/11		De La Fuente	Harding	el portal	99.11	8	RCP	5	Reverse of previous - Multiple failed pipe segments and signs of corrosion - CIPP candidate
09/28/11		Coral View St.	bloom	fulton	586.88	8	VCP	4	Failed pipe joint at Sta 4, 348, 359, 363, 491, 521, 581 - CIPP candidate
Total Length (ft)					37071.72		7.02	Miles	

- Grease 1
- Roots 2
- Sag 3
- Cracks (light) 4
- Cracks (fail) 5
- Offset joints 6
- Holes 7