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CITY OF EL CERRITO

STORM DRAINAGE MASTER PLAN

TECHNICAL APPENDICES

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APPENDIX A

STORM DRAIN INFORMATION SYSTEM

EL CERRITO STORM DRAINAGE MASTER PLAN
STORM DRAIN INFORMATION SYSTEM

The El Cerrito Storm Drain Information system was developed to allow the systematic storage and retrieval of specific information about the existing facilities in the storm drain system. It also allowed the rapid determination of deficiencies in the storm drain system, and allowed the priority of deficiencies to be established.

The storm drain information system was set up using the dBase IV database management system software. The system includes several database files and a number of computer programs coded in the dBase IV programming language for accessing and printing the information stored in the database files.

DATA BASE FILES

The storm drain information system contains two main database files and several auxiliary files. The main files contain information about the storm drain facilities and the hydrology segments used to compute flows in the storm drains.

Storm Drain File

The storm drain file (ELCSD.DBF) contains information about the storm drain facilities. A description of the fields contained in this file is contained in Table A-1 and a current listing of the information in the file is contained in Appendix B.

Data records were entered for each significant segment of the storm drain system. A different record was used each time the characteristics of the storm drain changed. These characteristics generally included the drain size, material, and slope. Separate data records were also generally used at significant junctions or where a manhole or junction box is located in the storm drain system. Data records were not entered for minor drainage pipes, such as those connecting catchbasins with mainline drains, or for other short branches. Separate data records were used where significant inflows to the storm drain system occur, but in some cases where a number of inlets occurred in a short distance, these were consolidated to one data record. Separate data records were entered for open channel segments when they occurred between other storm drain facility segments. Information on the length and slope of open channel segments is utilized to calculate travel times in the storm drain system. Normally no information is contained in the database on open channel segments upstream of storm drains. The database does not contain information on storm drain segments outside of El Cerrito that drain into the city.

Hydrology Subarea File

The hydrology subarea file (ELCHYD.DBF) contains information about the hydrology subareas and junction node points in the storm drain system. A description of the fields contained in this file is presented in Table A-2. A current listing of the hydrology subarea file is contained in Appendix B.

Data records are contained in this file for each subarea for which drainage flows are computed, and for each junction node point in the storm drain system.

If a junction node point does not have any drainage area that contributes to the storm drain flows, it is not necessary to input any of the data for this point. If the file does not contain a record for such a node point, the computer program that calculates the hydrology of the storm drain system will add a data record in order to store calculated information for that junction point.

Cost File

Estimated construction costs for storm drain facilities are contained in the file ELCCOST.DBF. Table A-3 describes the fields contained in this file.

Split Flow File

Information used to compute flows where the flow is split into two different storm drains with different flow characteristics is contained in the file ELCSPLT.DBF. A description of the fields contained in this file is presented in Table A-4.

HYDROLOGY AND STORM DRAIN LINKAGE

The drain segments in the storm drain database are identified with a drain number, and the information in the database is stored in ascending drain number order. These numbers have been assigned in downstream to upstream order, with the lowest numbers in the basins in the northern part of the city, and the highest numbers in the southern part of the city. In working upstream in the storm drain system, at a junction point where two branches of the storm drain meet, the northern branch is usually followed first. When the end of the branch line is encountered, the next storm drain segments in the database are those on the southern branch at the next downstream junction node. At the upstream end of a storm drain line, an "E" is coded in the "End" field of the drain segment to indicate that this is the last storm drain in this line.

The data base system has been set up to allow two decimal places for drain segment numbers (e.g., 823.28). For ease of reference in the Master Plan, sequential whole numbers have been used for the storm drain numbers. In the future, if additional information is obtained about the storm drain system, it may be necessary to add additional drain segments. In this case, drain

numbers for the new segments should be assigned in the proper sequential order, using the decimal values of drain numbers. Additional drain data records are added to the end of the database. A sort of the data base by drain number is required before the hydrology and hydraulic analysis of the drain system can be performed.

The drain segment numbers are not shown on the storm drain maps, but the segments can be identified from the junction node numbers, which are shown on the storm drain maps.

To identify junction points where storm drains join, junction node numbers have also been assigned to the storm drain system. Node points are also the points where the database system assumes that inflows to the drain system occur. Therefore, additional node points have been added where significant inflows occur, even if these are not at locations where branch drains join.

For easy reference, the junction node numbers have been assigned by basin number, with numbers beginning with 100 in basin 1, numbers beginning with 200 in basin 2, etc. Due to the number of node points required, node numbers beginning with 800 and 900 are all located in basin 8. The database system does not require that nodes be assigned in any order, and node numbers may have one decimal place (e.g., 209.5). For the Storm Drainage Master Plan, nodes have been generally assigned sequential whole numbers. For future additions to the database, new node numbers with decimal parts may be used if it is desired to maintain the present sequential order of nodes.

The numbering path used for junction nodes follows the same numbering path as that used for storm drain segments. In each basin, the lowest number is located at the outflow point of the basin, and numbers have been assigned sequentially upstream. At junction points, the northern most branch has been numbered first, with other branches covered after the end of the first branch is reached.

For each storm drain segment, there are data fields for downstream junction node and upstream junction node number. Identification numbers of nodes should be entered in these fields if the nodes are located at the downstream or upstream end of the drain segment. Downstream node numbers are only used at the beginning of each basin or after the end of a storm drain branch line, in order to indicate where the next storm drain branch starts. Except for junction nodes at the downstream outlet of a basin, downstream node numbers should refer to a junction node number which has appeared previously in the database as an upstream junction node. A node number should appear in the downstream junction node data field once for nodes at the downstream end of each watershed basin, or once for each additional branch drain at a junction point after the first branch (one time for two branches, two times for three branches). Each node number should appear once and only once in an upstream junction node data field.

It is not necessary that the most upstream drain segment in a branch storm drain line contain an upstream junction node. In some cases, the upstream end of a storm drain has a drainage area that is too small to consider for the analysis of flows. In these cases, the most upstream junction

node is located downstream of the end of the drain. For storm drain segments located upstream of the last junction node, no flows are calculated, but capacity of the drain segments are calculated with the database programs.

A special coding has been used for parallel drains in the database system. At the upstream end of parallel pipes, two node numbers are required, representing the upstream end of two separate flow paths. For the master plan analysis, the two numbers used are a normal junction node number and a dummy node number ending in .9. For instance, 813 and 812.9 are both located at the same point, and 812.9 represents the dummy node used for computation of parallel pipe flow. The splitflow database file contains data showing the flow split and the flow paths that should be used for parallel pipes.

HYDROLOGY ANALYSIS

Computations of the hydrology flows for El Cerrito were preformed using a computer program developed for this purpose using the dBase IV programming language. Information for the hydrology analysis was stored in the hydrology subarea file (ELCHYD.DBF), with data fields as described in Table A-2, and data as listed in Appendix B. This file contains for each hydrology subarea the necessary hydrologic data, including the drainage area, the roof to gutter time, the runoff coefficient, the average annual rainfall, and the length and slope of open space and roadway gutters necessary to compute time of concentration for upstream ends of the storm drain system. For larger watersheds flowing into El Cerrito, a precomputed time of concentration was input into the hydrology database.

The actual program code is contained in a program called ELCSDQ, which stands for El Cerrito Storm Drain flow. This program performs both the hydrology analysis and the hydraulic analysis (described in the section below) during one pass through the storm drain information database. The procedure followed by the hydrology portion of the computer program starts computations at an upstream node point of the storm drain system. A time of concentration is computed for the upstream subarea based on the travel time from the most distant point in the subarea to the inlet node point. This time of concentration is utilized with the rainfall intensity equation to estimate the 10-year and 100-year intensity rainfall for that subarea. The product of the drainage area times the runoff coefficient times the rainfall intensity provides the 10-year and 100-year flow estimate at that node point.

For downstream storm drain segments, the initial flow value calculated for the upstream node is utilized until another hydrology node point is encountered. For each intervening drain segment, the velocity of flow in the drain is calculated, and the travel time through the length of the drain is added to the initial time of concentration computed for the upstream node. At the next downstream node point, the resulting time is utilized to compute new rainfall intensities. These intensities are lower than those computed for upstream areas, due to the nature of the rainfall frequency curves which have lower average rainfall over longer periods of time. The total drainage area and the total drainage area times runoff coefficient is accumulated to

represent the applicable values for the entire watershed upstream of the new node point, and total flows are calculated.

For each hydrology node point, the drainage areas, computed time of concentration, and computed flows are stored by the computer program in the hydrology database. At junction points where two storm drain branches meet, the program starts at the upstream end of the other branch entering the junction and computes the flows in that branch in a similar manner. At the junction itself, the program utilizes the longest time of concentration in all of the branches to compute the total flow at and downstream of the junction.

The computed flows are intended for the purpose of determining the deficiencies of the main storm drain system only. The estimation of flows at points other than the hydrology node points used for the Storm Drain Master Plan would require a separate analysis of the drainage areas and time of concentration at these locations. The difference in peak flow between two different node points does not represent the required capacity of inlets or connector drains at that location. Due to the timing of storm hydrographs, the required flow capacity at such inlets would generally be higher than this difference and would require a separate analysis. No information for the computation of time of concentration is contained in the hydrology database for subareas other than those at the upstream end of storm drain segments.

In analyzing total flows at various locations in the storm drain system, it was assumed that the path of all flows would remain the same as the path of the existing storm drain system. In cases where the flow exceeds the capacity of the storm drain system, overflows to the streets may follow actual routes that are different than the existing drains. These actual routes have not been determined or utilized in the evaluation of the storm drain system.

HYDRAULIC ANALYSIS

The hydraulic flow capacity of the existing storm drain facilities was estimated for all significant drain segments in the City. Open channel ditches and creeks were generally not analyzed for capacity, since it appeared during the field inspection phase of the Master Plan that these open drains would not represent constraints to storm flows in the drainage system.

The hydraulic computations were done using the dBase IV computer program ELCSDQ described above that also performs hydrology computations. The hydraulic capacity of drain segments was stored automatically by the computer program in a field of the storm drain information database.

For the hydraulic calculations, a full flow condition without surcharge in the storm drain was assumed. This assumption is somewhat conservative in that theoretically a slightly greater flow can actually be carried in a drain when the drain is not quite full. Also, under pressure flow (surcharge) conditions, the slope of the hydraulic gradeline can be steeper than the slope of the pipe itself, allowing greater flow to occur. Under actual flow conditions, some minor losses

such as those at bends, inlets, and manholes need to be included, which may reduce the actual flow capacity. For short, single drain segments, the actual flow capacity may be greater than the estimated full flow capacity. However, for long drain segments, or for several different drain segments in a row, the actual flow capacity will probably not be significantly greater than the full flow capacity.

The Manning formula was utilized for the estimate of hydraulic capacity. Manning's "n" value roughness coefficients of 0.013 were used for concrete drains (concrete pipe and concrete box culverts) and smooth metal pipe, while a value of 0.024 was utilized for corrugated metal pipe. A value of 0.030 was utilized for open channel areas. These coefficients are not stored in the database file, but are assigned by the computer program based on the drain material type code stored in the storm drain database.

Although hydraulic capacities were not estimated for open channel areas, a velocity was estimated for the purpose of estimating the travel time through the reach. Velocities were estimated by assuming a channel sideslope of 1:1, using a bottom width of one foot for every 50 cfs of flow, and estimating the channel flow characteristics necessary to carry the 10-year flow with the channel slope given in the storm drain information database.

TABLE A-1 STORM DRAIN DATABASE FILE ELCSD.DBF	
Field Name	Explanation
DRAIN	The storm drain number used to access the storm drain segments. Storm drain segments are stored in the storm drain database file in drain number order.
DS_JNCTN	If the downstream end of the drain segment is located at a junction point or hydrology inflow point, the junction number at the downstream end.
JNCTN	If the upstream end of the drain segment is located at a junction point or hydrology inflow point, the junction number at the upstream end.
END	If the current drain segment is the most upstream drain segment in the drain line branch, this field contains an "E". Otherwise, this field is blank.
MAP	The storm drain map number that shows the location of the storm drain segment. If the segment is shown on more than one map, normally the map number showing the downstream end of the drain segment is used.
H_DIA	The height or diameter of the storm drain segment. May be in feet or inches. If the number is greater than 8, it is assumed to be inches.
WIDTH	The width of the storm drain segment if the segment has a rectangular section. May be in feet or inches. If the number is greater than 8, it is assumed to be inches.

TYPE	A code showing the material type and shape of the storm drain segment. The following codes are currently used in the database file: RCP Reinforced concrete pipe RCB Reinforced concrete box culvert RCC Reinforced concrete channel HECP Horizontal elliptical concrete pipe VCP Vitrified clay pipe CMP Corrugated metal pipe CMPA Corrugated metal pipe arch BRDG Bridge OPEN Open natural or earth channel RKW Open channel with rock walls TRB Transition box culvert WDB Wooden box TILE Tile ST Steel pipe IP Iron pipe CLAY Clay pipe CI Cast iron pipe POND Pond or storage basin If there are two parallel drains of the same size and material, a 2 may be added to any code. For instance, 2RCP for two parallel RCP pipes.
LEN	Length of drain segment (feet).
SLOPE	Slope of drain segment (feet per foot).
S_TY	Source of drain slope information. If blank, the slope was obtained from previous storm drain maps or drawings and is assumed to be the actual slope of the drain. The following codes are currently used in the database: C Calculated from upstream and downstream invert elevations A Average slope calculated for several storm drain segments based on invert elevations E Estimated slope based on ground elevations or geographic region where no better slope information is available
STREET	Street or other location name of the downstream end of the drain segment.

ROW	Type of right-of-way where drain segment is located. If blank, public right-of-way (including schools, BART, public agency) is assumed. The following codes are currently used in the database: PR — Private land is located along some or all of the storm drain segment ES — A drainage easement is located along some or all of the storm drain segment The information on right-of-way is only an indication of land ownership based on information from existing city maps, and is not a determination of the actual ownership or presence or lack of easements.
GOOD	If the condition of the storm drain segment is known to be good, a "Y" is shown in this field, or if the condition is known to be not good, an "N" is shown in this field. If the field is blank, the condition is assumed based only on the material of the drain.
FLOOD	If flooding damage is known or assumed to occur at this storm drain segment, a "Y" is entered in this field.
DS_INV	The elevation of the downstream invert of the storm drain segment, if known.
US_INV	The elevation of the upstream invert of the storm drain segment, if known.
US_GR	The elevation of the ground at the upstream end of the storm drain segment, if known.

US_GR_TY	A code indicating the source of the ground elevation information. The following codes are currently used in the database: BM A benchmark located at the storm drain NB A benchmark located near the storm drain TC Top of curb elevation CB Top of grate elevation at a catchbasin inlet MH Rim elevation at a manhole JB Top elevation at a junction box HW Top of headwall elevation

COMPUTED DATA FIELDS

The following fields are normally calculated and automatically entered into the database with the computer programs written for the storm drain information system:

DQ_10	The computed 10-year flow in this storm drain segment (cfs).
DQ_100	The computed 100-year flow in this storm drain segment (cfs).
CAP	The computed full flow capacity of this storm drain segment (cfs).
PTS	The computed number of deficiency priority points for this storm drain segment.
NH_DIA	The computed diameter of a replacement pipe or parallel pipe for drain segments that do not have sufficient capacity to carry the 10-year flow.
RFL	Replacement pipe flag. Contains a "P" if the replacement pipe is assumed to be a parallel pipe large enough to carry excess flow.
NCOST	The estimated construction cost of a replacement pipe or parallel pipe ($1000).

TABLE A-2 HYDROLOGY DATABASE FILE ELCHYD.DBF	
Field	Explanation
JNCTN	The junction number used for locating the junction or the inflow to the storm drain system.
AREA	The drainage area of the hydrology subarea (acres).
TROOF	The estimated time for the roof to gutter component of the time of concentration (minutes).
COEF	The rational formula runoff coefficient for the hydrology subarea.
RAIN	The average annual rainfall for the hydrology subarea (inches).
L_OPN	The length of open (natural ground) area used for computing time of concentration for the hydrology subarea (feet).
S_OPN	The average slope of open (natural ground) area used for computing time of concentration for the hydrology subarea (feet per foot).
L_GUT	The length of street gutter used for computing the time of concentration for the hydrology subarea (feet).
S_GUT	The average slope of street gutter used for computing the time of concentration for the hydrology subarea (feet per foot).
COMPUTED DATA FIELDS The following fields are normally calculated and automatically entered into the database with the computer programs written for this information system:	
TAREA	The total drainage area contributing flow to the junction point (acres).
CAREA	The total of drainage area times runoff coefficient for the entire drainage area contributing flow to the junction point (acres).
TC	The time of concentration used for calculating the rainfall intensity for the entire drainage area (minutes).
HQ10	The calculated total 10-year flow at the junction point (cfs).
HQ100	The calculated total 100-year flow at the junction point (cfs).

TABLE A-3 COST DATABASE FILE ELCCOST.DBF	
Field	Explanation
SIZE	Diameter of replacement pipe (inches).
REPR_CST	Replacement cost for construction projects on specific routes ($/foot).
REPL_CST	Replacement cost for general planning of replacements ($/foot).
REHB_CST	Cost for rehabilitation of existing drains ($/foot).

TABLE A-4 SPLIT FLOW DATABASE FILE ELCSPLT.DBF	
Field	Explanation
N1	Junction node number which has the total flow from upstream.
N2	Junction node number to which flow will be split.
C1	Fraction of total flow which will go downstream of node N1.
C2	Fraction of total flow which will go downstream of node N2.

APPENDIX B

STORM DRAIN INFORMATION LISTING

STORM DRAIN DATABASE LISTING

FILE ELCSD.DBF

EL CERRITO STORM DRAIN MASTER PLAN
STORM DRAIN INFORMATION DATABASE

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
1.00	100.0	101.0	4			OPEN	160	0.0500	E	SILVA AVE	PR						101.9		146.9
2.00			4	30.00	30.00	RCB	190	0.0500	E	SILVA AVE	PR			135.00	E	116.8	101.2		145.8
3.00		102.0	4	36.00		RCP	30	0.0500	E	SILVA AVE				166.00	NB	149.1	101.2		145.8
4.00		E	4	12.00		RCP	80	0.0200	E	BROOKS AVE						5.0			
5.00	102.0		4	36.00		RCP	20	0.0500	E	BROOKS AVE						149.1	91.2		131.4
6.00		103.0	4			OPEN	280	0.0500	E	ZARA AVE	PR						91.2		131.4
7.00			4			OPEN	40	0.0500	E	YUBA AVE							77.9		112.1
8.00		104.0	4	24.00		RCP	50	0.0500	E	YUBA AVE						50.6	77.9	EEE	112.1
9.00		105.0	E 4	24.00		RCP	60	0.0500	E	YUBA AVE	PR					50.6	71.7	EE	103.2
10.00	103.0		4	18.00		CMP	65	0.0500	E	YUBA AVE						12.7	16.6	EE	23.8
11.00			4	18.00		CMP	20	0.0500	E	YUBA AVE	PR					12.7	16.6	EE	23.8
12.00			12	18.00		RCP	180	0.0500	E	YUBA AVE	PR					23.5	16.6		23.8
13.00		106.0	12	18.00		RCP	70	0.0500	E	SONOMA AVE						23.5	16.6		23.8
14.00		107.0	12	18.00		RCP	190	0.1425		SONOMA AVE	PR		241.50			39.7	14.4		20.6
15.00			12	18.00		RCP	390	0.0552	E	RAY AVE	PR	241.50		295.20	BM	24.7	11.7		16.8
16.00		108.0	12	18.00		RCP	30	0.0500	E	TULARE AVE						23.5	11.7		16.8
17.00			12	12.00		RCP	100	0.0500	E	TULARE AVE						8.0	10.1	EE	14.5
18.00			12	12.00		RCP	115	0.0500	E	TULARE AVE	PR					8.0	10.1	EE	14.5
19.00			12	12.00		RCP	55	0.0500	E	MIRA VISTA DR	PR					8.0	10.1	EE	14.5
20.00			12	12.00		RCP	100	0.0500	E	MIRA VISTA DR	PR					8.0	10.1	EE	14.5
21.00		109.0	12	10.00			60	0.0500	E	MIRA VISTA DR						2.7	10.1	EEEE	14.5
22.00			12			OPEN	125	0.0500	E	MIRA VISTA DR	PR						8.0		11.4
23.00			12	12.00		TC	110	0.0500	E	FRANCISCO WAY	PR					4.3	8.0	EEE	11.4
24.00		110.0	12	14.00		CI	20	0.0500	E	FRANCISCO WAY	PR					6.5	8.0	.	11.4
25.00			12	12.00		RCP	220	0.0500	E	FRANCISCO WAY	PR			360.00	NB	8.0	5.1		7.3
26.00		111.0	12	12.00			20	0.0500	E	CARQUINEZ AVE						4.3	5.1	.	7.3
27.00			12	12.00		CMP	240	0.0500	E	CARQUINEZ AVE						4.3	2.2		3.1
28.00		112.0	12	12.00		CMP	25	0.0500	E	TASSAJARA AVE				380.60	BM	4.3	2.2		3.1
29.00		E	12	12.00		CMP	60	0.0500	E	TASSAJARA AVE	PR					4.3			
30.00	102.0		4	10.00	26.00	RCB	115	0.0200	E	BROOKS AVE						13.1	7.3		10.5
31.00		113.0	4	15.00		RCP	280	0.0200	E	BROOKS AVE						9.1	7.3		10.5
32.00			3	15.00		RCP	130	0.0120		BROOKS AVE			172.90			7.1	6.1		8.7
33.00		114.0	E 3	12.00		RCP	60	0.0650		BARRET AVE		173.20	177.30			9.1	6.1		8.7
34.00	200.0	201.0	3			OPEN	530	0.1000	E	POINSETT AVE	PR			120.00	E		96.7		140.0
35.00		202.0	3	30.00		RCP	70	0.1500	E	POINSETT AVE	PR					158.9	94.0		136.2
36.00		203.0	3	24.00		CMP	140	0.1500	E	POINSETT AVE	PR			151.80	NB	47.5	84.9	EEE	122.9

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
37.00		204.0	3	24.00		CMP	290	0.0900	E	POINSETT AVE						36.8	84.9	EEEE	122.9
38.00			11	24.00		CMP	320	0.0900	E	ROSALIND AVE						36.8	84.7	EEEE	122.6
39.00		205.0	11	24.00		CMP	100	0.0900	E	ROSALIND AVE				217.10	NB	36.8	84.7	EEEE	122.6
40.00			11	21.00		RCP	170	0.0500	E	EDWARDS AVE						35.4	6.1		8.7
41.00		206.0	E 12	18.00		RCP	100	0.0500	E	EDWARDS AVE						23.5	6.1		8.7
42.00	205.0		11	24.00		CMP	130	0.1200	E	ROSALIND AVE	PR					42.5	77.4	EEE	111.9
43.00		207.0	11			OPEN	240	0.1200		BARRETT AVE							77.4		111.9
44.00		208.0	11	24.00	30.00	RCB	150	0.1200	E	BARRETT AVE	PR			284.10	NB	133.8	76.0		110.0
45.00			11	24.00		RCP	210	0.0800	E	BARRETT AVE	PR		298.90			64.0	68.9	E	99.6
46.00		209.0	11	24.00		RCP	35	0.0800	E	MIRA VISTA DR						64.0	68.9	E	99.6
47.00		210.0	11	21.00		RCP	510	0.0800	E	BARRETT AVE	PR			348.90	NB	44.8	65.6	EE	94.9
48.00		211.0	11	21.00		RCP	80	0.0700	E	CARQUINEZ AVE	PR					41.9	55.4	EE	80.1
49.00		212.0	E 11	12.00		RCP	210	0.0500	E	TASSAJARA PK						8.0	4.5		6.5
50.00	211.0	213.0	11	21.00		RCP	140	0.0700	E	TASSAJARA PARK	PR					41.9	52.4	EE	75.8
51.00		214.0	11	12.00		2RCP	80	0.0700	E	TASSAJARA PARK			368.10	370.00	NB	18.9	12.2		17.4
52.00			11	15.00		RCP	190	0.1100		BARRETT AVE		370.00	385.54			21.4	10.0		14.3
53.00			11	15.00		RCP	80	0.0760		BARRETT AVE		385.54	392.00	408.30	NB	17.8	10.0		14.3
54.00		215.0	12	18.00		RCP	240	0.0100		MONTA VISTA AVE		393.08	395.11			10.5	10.0		14.3
55.00			12	12.00		RCP	260	0.0700		MONTA VISTA AVE		395.61	403.71			9.4	8.1		11.6
56.00			12	12.00		RCP	110	0.0600		MONTA VISTA AVE		403.71				8.7	8.1		11.6
57.00			12	12.00		RCP	235	0.0500	E	ALTA VISTA DR						8.0	8.1	E	11.6
58.00			12	12.00		CMP	70	0.0500	E	LA HONDA AVE						4.3	8.1	EEE	11.6
59.00		216.0	12	12.00		RCP	30	0.0500	E	LA HONDA AVE						8.0	8.1	E	11.6
60.00			12	12.00		RCP	330	0.0500	E	LA HONDA AVE	PR					8.0	3.0		4.2
61.00		217.0	E 12	12.00		RCP	150	0.0500	E	TAMALPAIS AVE	PR					8.0	3.0		4.2
62.00	213.0	218.0	11	21.00		RCP	300	0.0500	E	TASSAJARA PARK						35.4	43.9	.	63.5
63.00			11	15.00		RCP	25	0.0500	E	TASSAJARA PARK						14.4	24.8	EEE	35.8
64.00		219.0	11	15.00		RCP	25	0.0500	E	TASSAJARA AVE						14.4	24.8	EEE	35.8
65.00			11	18.00		RCP	220	0.0500	E	TASSAJARA AVE						23.5	22.9		33.1
66.00			11	18.00		RCP	100	0.0500	E	TASSAJARA AVE	PR					23.5	22.9		33.1
67.00			11			OPEN	190										22.9		33.1
68.00			11	18.00		CMP	50	0.0500	E	BARRETT AVE	PR					12.7	22.9	EEE	33.1
69.00		220.0	11	18.00		CMP	36	0.0500	E	BARRETT AVE			92.50			12.7	22.9	EEE	33.1
70.00			11	18.00		CMP	80	0.0450		BARRETT AVE		96.60	100.00			12.1	19.8	***	28.6
71.00			11	18.00		RCP	60	0.0300		TAMALPAIS AVE		100.00	105.00			18.2	19.8	*	28.6
72.00			11	18.00		CMP	110	0.0500	E	TAMALPAIS AVE	PR					12.7	19.8	EEE	28.6
73.00			19			OPEN	120			ARLINGTON BLVD	PR						19.8		28.6
74.00		221.0	E 19	15.00		CMP	90	0.0500	E	ARLINGTON BLVD						7.8	19.8	EEEE	28.6

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DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
75.00	218.0	222.0	11	15.00		RCP	280	0.0500	E	TASSAJARA PARK						14.4	22.8	EEE	32.7
76.00			11			OPEN	200			TASSAJARA AVE	PR						19.9		28.5
77.00		223.0	11	12.00		RCP	40	0.0500	E	TAMALPAIS AVE						8.0	19.9	EEEE	28.5
78.00			11	12.00		RCP	230	0.0500	E	TAMALPAIS AVE	PR					8.0	16.8	EEEE	24.1
79.00		224.0	E 11	12.00		RCP	30	0.0500	E	ARLINGTON BLVD				478.60	TC	8.0	16.8	EEEE	24.1
80.00	202.0		3	12.00		RCP	85	0.0500	E	POINSETT AVE	PR					8.0	14.7	EEE	21.0
81.00		225.0	3	12.00		RCP	20	0.0500	E	POINSETT AVE						8.0	14.7	EEE	21.0
82.00			3	12.00		RCP	50	0.0500	E	LUDWIG AVE			145.70			8.0	8.7	E	12.4
83.00			3	12.00		RCP	140	0.0690		LUDWIG AVE		145.90	155.60			9.4	8.7		12.4
84.00			11	12.00		RCP	215	0.0600		LUDWIG AVE		155.60	167.60			8.7	8.7		12.4
85.00			11	12.00		RCP	300	0.0940		LUDWIG AVE		167.60	194.98			10.9	8.7		12.4
86.00		226.0	11	12.00		RCP	60	0.0680		JORDAN AVE		195.26	201.60			9.3	8.7		12.4
87.00			11	15.00		CMP	150	0.0500	E	JORDAN AVE	PR					7.8	5.1		7.2
88.00			11	12.00		RCP	90	0.0500	E	EDWARDS AVE	PR					8.0	5.1		7.2
89.00			11	12.00		RCP	24	0.0500	E	EDWARDS AVE						8.0	5.1		7.2
90.00		227.0	E 11	12.00		RCP	80	0.0500	E	EDWARDS AVE						8.0	5.1		7.2
91.00	300.0	302.0	2			OPEN	530			SAN PABLO AVE							90.5		130.5
92.00		303.0	E 2	21.00		VCP	80	0.0500	E	CONLON AVE						35.4	4.1		5.8
93.00	302.0	304.0	2	36.00		RCP	85	0.0100		CONLON AVE		74.40	75.00	81.00	NB	66.7	86.6	**	124.8
94.00		305.0	2	30.00		RCP	260	0.0350		CONLON AVE		75.00	84.53			76.7	84.3	*	121.5
95.00			2	30.00		RCP	390	0.0600		CONLON AVE		84.75	108.15			100.5	82.1		118.2
96.00		306.0	3	30.00		RCP	20	0.1000		CONLON AVE		110.35		116.00	BM	129.7	82.1		118.2
97.00			3	30.00		RCP	90	0.0450		CONLON AVE			116.90			87.0	77.7		111.9
98.00		307.0	3	30.00		RCP	145	0.0700		CONLON AVE		117.80	125.50			108.5	77.7		111.9
99.00			3	12.00		RCP	50	0.0500	E	CONLON AVE						8.0	7.1		10.1
100.00		308.0	3	12.00		RCP	115	0.0500	E	CONLON AVE						8.0	7.1		10.1
101.00			3	10.00		RCP	40	0.0500	E	CONLON AVE				141.80	BM	4.9	3.9		5.5
102.00		309.0	E 3	12.00		RCP	190	0.0500	E	CONLON AVE						8.0	3.9		5.5
103.00	308.0	310.0	E 3	10.00		RCP	100	0.0500	E	CEDAR ST				158.50	BM	4.9	3.7		5.3
104.00	307.0	311.0	11	18.00		RCP	240	0.1000	E	CANYON TRAIL PK	PR					33.2	31.6		45.3
105.00			11	18.00		RCP	340	0.1000	E	FERN ST	PR					33.2	27.0		38.7
106.00		312.0	11	18.00		RCP	30	0.1000	E	GLORIA ST						33.2	27.0		38.7
107.00			11	18.00		CMP	170	0.1000	E	GLORIA ST	PR					18.0	24.5	EE	35.0
108.00			11	15.00		CMP	110	0.1000	E	JORDAN AVE	PR					11.1	24.5	EEEE	35.0
109.00		313.0	11	15.00		CMP	40	0.1000	E	JORDAN AVE						11.1	24.5	EEEE	35.0
110.00			11			OPEN	310	0.1000	E	JORDAN AVE	PR						19.7		28.2
111.00		314.0	11	15.00		RCP	50	0.1000	E	TULARE AVE						20.4	19.7		28.2
112.00			11			OPEN	140	0.1000	E	TULARE AVE	PR						16.0		22.9

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113.00			11	12.00		RCP	100	0.1000	E	MIRA VISTA DR	PR					11.3	16.0	EE	22.9
114.00		315.0	11	12.00		CMP	30	0.1000	E	MIRA VISTA DR				294.40	BM	6.1	16.0	EEEE	22.9
115.00			11	12.00		RCP	150	0.2000	E	MIRA VISTA DR	PR					15.9	9.5		13.6
116.00			11			OPEN	130	0.2000	E	CARQUINEZ AVE	PR			352.00	BM		9.5		13.6
117.00		316.0	11	12.00		CMP	40	0.0500	E	CARQUINEZ AVE						4.3	9.5	EEEE	13.6
118.00		317.0	E 11	12.00		RCP	230	0.0500	E	ALVA AVE						8.0	4.2		6.0
119.00	307.0		3	30.00		RCP	100	0.0500	E	CANYON TRAIL PK		152.70				91.7	46.8		67.4
120.00		318.0	11			OPEN	600	0.0500	E	CANYON TRAIL PK							46.8		67.4
121.00		319.0	E 10	12.00		RCP	250	0.0500	E	CANYON TRAIL PK						8.0	2.3		3.2
122.00	318.0		11			OPEN	150	0.0500	E	CANYON TRAIL PK							34.2		49.2
123.00		320.0	10	30.00		RCP	270	0.0500	E	CANYON TRAIL PK						91.7	34.2		49.2
124.00		321.0	E 10	15.00		RCP	380	0.0500	E	CANYON TRAIL PK						14.4	4.3		6.2
125.00	320.0		11	24.00		RCP	230	0.0500	E	CANYON TRAIL PK						50.6	31.6		45.4
126.00			11	24.00		CMP	200	0.0800	E	JORDAN AVE	PR			300.00	NB	34.7	31.6		45.4
127.00		322.0	11	18.00		RCP	28	0.1000	E	MIRA VISTA DR						33.2	31.6		45.4
128.00			11	18.00		RCP	320	0.1000	E	JORDAN AVE	PR					33.2	28.6		41.1
129.00		323.0	11	18.00		RCP	28	0.1000	E	CARQUINEZ AVE						33.2	28.6		41.1
130.00			11	18.00		RCP	220	0.1000	E	CARQUINEZ AVE	PR					33.2	25.7		36.9
131.00		324.0	11	18.00		RCP	24	0.1000	E	ALVA AVE						33.2	25.7		36.9
132.00			11	18.00		RCP	230	0.1000	E	ALVA AVE	PR					33.2	24.2		34.7
133.00		325.0	11	18.00		RCP	24	0.0500	E	TAMALPAIS AVE				402.50	NB	23.5	24.2	E	34.7
134.00			11	18.00		RCP	240	0.0500	E	CUTTING BLVD	PR			431.80	BM	23.5	20.3		29.2
135.00		326.0	11	18.00		CMP	45	0.0500	E	ARLINGTON BLVD						12.7	20.3	EEE	29.2
136.00			11	18.00		RCP	280	0.0500	E	CUTTING BLVD	PR					23.5	12.3		17.6
137.00		327.0	11	12.00			120	0.0500	E	LAGUNITAS AVE						4.3	12.3	EEEE	17.6
138.00		328.0	E 11	12.00		CMP	730	0.0500	E	LAGUNITAS AVE						4.3	8.4	EEE	12.0
139.00	400.0	402.0	1	48.00		RCP	130	0.0030	E	CYPRESS AVE	PR					78.7	168.7	EEEE	244.1
140.00			1	3.00	4.00	RCB	50	0.0030		CYPRESS AVE			26.95			67.8	171.1	****	247.5
141.00		403.0	1	43.00	68.00	HECP	218	0.0045		CYPRESS AVE	PR	26.95	27.91			136.2	171.1	**	247.5
142.00			1	48.00		RCP	99	0.0050		SCHOOL ST		27.91	28.44			101.6	172.3	***	248.8
143.00			1	48.00		RCP	120	0.0042		POTRERO AVE		28.44	28.86			93.1	172.3	***	248.8
144.00			1	28.00	80.00	TRB	40	0.0050		POTRERO AVE		28.86	29.02			61.8	172.3	****	248.8
145.00			1	48.00		RCP	195	0.0018		POTRERO AVE		29.02	29.38			60.9	172.3	****	248.8
146.00			1	48.00		RCP	108	0.0052		GORDON AVE		29.38	29.95			103.6	172.3	***	248.8
147.00		404.0	1	48.00		RCP	240	0.0052		GORDON AVE		29.95	31.20			103.6	172.3	***	248.8
148.00		405.0	1	48.00		RCP	252	0.0151		VICTOR AVE		31.20	35.08			176.5	163.7		236.2
149.00		405.9	E 1	24.00		2RCP	250	0.0100	E	I-80		35.70				45.2	32.8		47.4
150.00	405.0	406.0	1	54.00		RCP	250	0.0100	E	I-80		35.70				196.7	131.3		189.4

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151.00		407.0	1	42.00		RCP	250	0.0048		PEERLESS AVE			39.40			69.7	68.5		98.7
152.00			1	42.00		RCP	380	0.0048		PEERLESS AVE		39.40	41.20			69.7	67.5		97.1
153.00		408.0	2	36.00		RCP	380	0.0130	C	CUTTING BLVD		41.80				76.1	67.5		97.1
154.00			2	36.00		RCP	25	0.0130	C	CUTTING BLVD			47.33			76.1	50.9		73.3
155.00			2	36.00		RCP	140	0.0090		CUTTING BLVD		47.33				63.3	50.9		73.3
156.00		409.0	2	36.00		RCP	80	0.0200		CUTTING BLVD						94.3	50.9		73.3
157.00		410.0	10	24.00		RCP	100	0.0200		BART						32.0	30.2		43.5
158.00			10	24.00		RCP	60	0.0200	E	BART						32.0	29.8		42.8
159.00			10			OPEN	250	0.0200	E	BART							29.8		42.8
160.00		411.0	2	24.00		RCP	70	0.0200	E	BART			65.00			32.0	29.8		42.8
161.00			2	18.00		RCP	100	0.0200	E	BART		65.00				14.9	5.3		7.5
162.00			2			OPEN	350	0.0200	E	BART							5.3		7.5
162.50			2	24.00		RCP	170	0.0200	E	KEY BLVD	PR					32.0	5.3		7.5
163.00		412.0	E 2	24.00		CMP	60	0.0200	E	KEY BLVD	PR					17.3	5.3		7.5
164.00	411.0	413.0	10	18.00		RCP	320	0.0480		KNOTT AVE			77.00			23.0	20.0		28.7
165.00			10	18.00		RCP	370	0.0600		KNOTT AVE		77.00		117.30	BM	25.7	18.0		25.9
166.00		414.0	10	18.00		RCP	140	0.0500	E	HAGEN BLVD						23.5	18.0		25.9
167.00			10	18.00		RCP	25	0.0500	E	HAGEN BLVD						23.5	11.7		16.8
168.00			10	12.00		CMP	140	0.0500	E	HAGEN BLVD	PR					4.3	11.7	EEEE	16.8
169.00			10	12.00		CMP	140	0.0500	E	HARPER ST	PR					4.3	11.7	EEEE	16.8
170.00		415.0	10	12.00		CMP	40	0.0500	E	HARPER ST						4.3	11.7	EEEE	16.8
171.00			10	12.00		CMP	130	0.0500	E	HARPER ST	PR					4.3	2.6		3.7
172.00			10	12.00		CMP	100	0.0500	E	TAPSCOTT AVE	PR					4.3	2.6		3.7
173.00		416.0	E 10	15.00		CMP	40	0.0500	E	TAPSCOTT AVE				237.70	NB	7.8	2.6		3.7
174.00	409.0		10	21.00		RCP	180	0.0200	E	CUTTING BLVD			55.40	62.70	NB	22.4	22.6	E	32.4
175.00			10	21.00		RCP	50	0.0280	C	CUTTING BLVD		55.40	56.80			26.5	22.6		32.4
176.00			10	18.00		RCP	30	0.0330	C	CUTTING BLVD		57.30	58.30			19.1	22.6	.	32.4
177.00		417.0	10	18.00		RCP	100	0.0200	E	CUTTING BLVD		58.30				14.9	22.6	EEE	32.4
178.00		418.0	10	18.00		RCP	300	0.0200	E	CUTTING BLVD						14.9	12.9		18.6
179.00			10	12.00		VCP	200	0.0200	E	CUTTING BLVD						5.0	5.6	.	8.0
180.00		419.0	E 10	12.00		CMP	540	0.1000	E	CUTTING BLVD	PR					6.1	5.6		8.0
181.00	406.0		1	36.00		RCP	390	0.0100	E	HILL ST						66.7	96.7	EE	139.3
182.00		420.0	9	30.00		CMP	200	0.0100	E	HILL ST			48.60	52.10	BM	22.2	96.7	EEEE	139.3
183.00			9	30.00		CMP	210	0.0170	A	HILL ST						29.0	81.9	****	117.7
184.00			9	30.00		CMP	150	0.0170	A	HILL ST						29.0	81.9	****	117.7
185.00		421.0	9	30.00		CMP	140	0.0170	A	HILL ST				57.50	BM	29.0	81.9	****	117.7
186.00		422.0	9	27.00		VCP	240	0.0170	A	HILL ST			61.70	68.40	MH	40.4	69.7	***	100.1
187.00			9	30.00		RCP	120	0.0180	C	LIBERTY ST		61.70	63.90	68.70	MH	55.0	65.8	.	94.5

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188.00			9	30.00		RCP	50	0.0400	E	LIBERTY ST			67.30			82.0	65.8		94.5
189.00			9	24.00		2RCP	120	0.0341		LIBERTY ST	PR					83.6	65.8		94.5
190.00			9	36.00		RCP	15	0.0526		ELM ST	PR		71.90			153.0	65.8		94.5
191.00			9	36.00		RCP	140	0.0260		ELM ST	PR	72.70	73.53	78.10	TC	107.6	65.8		94.5
192.00		423.0	9	30.00		RCP	80	0.0400	A	ELM ST						82.0	65.8		94.5
193.00			9	30.00		RCP	240	0.0400	A	ELM ST	PR					82.0	57.5		82.5
194.00			10	24.00		CMP	130	0.0400	A	ELM ST	PR		92.80			24.5	57.5	****	82.5
195.00		424.0	10	24.00		RCP	80	0.0500	E	WALNUT ST	PR	92.80				50.6	57.5	.	82.5
196.00		425.0	E 10	12.00		RCP	150	0.1000	E	WALNUT ST						11.3	3.8		5.4
197.00	424.0		10	24.00		CMP	370	0.1000	E	WALNUT ST	PR					38.8	55.9	EE	80.1
198.00		426.0	10	24.00		CMP	40	0.1000	E	GLEN MAWR AVE						38.8	55.9	EE	80.1
199.00			10	24.00		CMP	220	0.1000	E	GLEN MAWR AVE	PR					38.8	50.8	EE	72.8
200.00		427.0	10	24.00		CMP	25	0.1000	E	SNOWDON AVE						38.8	50.8	EE	72.8
201.00		428.0	10	24.00		CMP	220	0.1000	E	SNOWDON AVE	PR					38.8	45.8	.	65.5
202.00			10	24.00		CMP	50	0.0700	E	KENILWORTH AVE				190.00	BM	32.4	36.8	.	52.6
203.00		429.0	10	24.00		RCP	440	0.0700	E	DOWNEY PL						59.9	36.8		52.6
204.00			10	24.00		RCP	150	0.0700	E	WILSON WAY						59.9	33.8		48.3
205.00		430.0	10	24.00		RCP	60	0.0700	E	WILSON WAY						59.9	33.8		48.3
206.00		431.0	10	15.00		CMP	80	0.0700	E	CUTTING BLVD				245.10	BM	9.3	12.9	EE	18.4
207.00		432.0	E 10	12.00		RCP	250	0.0700	E	HAGEN BLVD						9.4	2.7		3.9
208.00	430.0	433.0	10	24.00		RCP	175	0.0500	E	CUTTING BLVD						50.6	22.4		32.0
209.00			10	24.00		RCP	70	0.0500	E	CUTTING BLVD						50.6	15.3		21.8
210.00		434.0	10	24.00		RCP	70	0.0500	E	CUTTING BLVD			271.63			50.6	15.3		21.8
211.00			10	24.00		RCP	280	0.2000		CUTTING BLVD		272.00				101.2	10.8		15.4
212.00			11	24.00		RCP	60	0.0360		CUTTING BLVD	PR		341.41			42.9	10.8		15.4
213.00			11	24.00		RCP	140	0.1040	C	TAMALPAIS AVE	PR	341.41	356.18			73.0	10.8		15.4
214.00			11	24.00		RCP	60	0.0560	C	TAMALPAIS AVE		356.18	360.14			53.5	10.8		15.4
215.00			11	24.00		RCP	110	0.0500	E	ARLINGTON BLVD	PR			403.40	NB	50.6	10.8		15.4
216.00		435.0	E 11	24.00		CMP	40	0.0500	E	ARLINGTON BLVD						27.4	10.8		15.4
217.00	434.0		10	18.00		RCP	110	0.0500	E	CUTTING BLVD						23.5	5.8		8.3
218.00			10	18.00		RCP	120	0.0500	E	TAMALPAIS AVE						23.5	5.8		8.3
219.00		436.0	E 10	15.00		RCP	100	0.0500	E	TAMALPAIS AVE						14.4	5.8		8.3
220.00	500.0		8	4.00	4.00	RCB	110	0.0070	A	S 56TH ST		35.00				153.0	175.7	.	254.5
221.00		502.0	8	4.00	4.00	RCB	60	0.0070	A	S 56TH ST						153.0	175.7	.	254.5
222.00		503.0	E 8	24.00		RCP	110	0.0100	E	S 56TH ST						22.6	9.5		13.6
223.00	502.0	504.0	8	4.00	4.00	RCB	210	0.0070	A	S 56TH ST			37.80			153.0	170.4	.	246.8
224.00		505.0	9	4.00	6.00	RCB	364	0.0027	C	I-80		37.80		41.50	CB	161.0	168.9	*	244.5
225.00		506.0	9	4.00	6.00	RCB	80	0.0027	C	POTRERO AVE			39.00			161.0	169.7	*	245.6

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DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
226.00			9	4.00	6.00	RCB	40	0.0160	A	POTRERO AVE						391.9	126.4		182.9
227.00			9	2.00	5.00	RCB	160	0.0160	A	POTRERO AVE	PR					115.5	126.4	*	182.9
228.00			9	3.00	4.00	RCB	230	0.0160	A	SAN PABLO AVE	PR					156.6	126.4		182.9
229.00		507.0	9	3.00	4.00	RCB	70	0.0160	A	SAN PABLO AVE			47.00	51.90	TC	156.6	126.4		182.9
230.00			9	38.00	60.00	HECP	29	0.0150		SAN PABLO AVE		47.10	47.54	52.60	MH	177.0	125.6		181.5
231.00			9	38.00	60.00	HECP	325	0.0070		BLAKE ST		47.64	49.92	57.90	MH	120.9	125.6	*	181.5
232.00			9	38.00	60.00	HECP	39	0.0900		BLAKE ST		50.02	53.50			433.5	125.6		181.5
233.00		508.0	9			BRG	40			BART			55.70				125.6		181.5
234.00			9	2.50	3.50	RCB	85	0.0150	A	LEXINGTON AVE	PR	55.70				99.2	98.2		142.0
235.00		509.0	9	2.00	3.50	RCB	25	0.0150	A	LEXINGTON AVE			57.43			72.5	98.2	**	142.0
236.00			9	39.00		RCP	140	0.0200	A	LEXINGTON AVE	PR	57.43				116.8	97.2		140.4
237.00			9	2.50	3.00	RCB	140	0.0200	A	LIBERTY ST	PR		63.30			93.9	97.2	*	140.4
238.00			9	2.50	3.50	RCB	30	0.0230	C	LIBERTY ST		63.30	64.00			122.9	97.2		140.4
239.00		510.0	9	4.00	4.00	WDB	150	0.0320		LIBERTY ST	PR	64.00				177.2	97.2		140.4
240.00			9	4.00	4.00	OPEN	75	0.0320		ELM ST	PR		71.70			177.2	95.5		137.9
241.00		511.0	9	2.50	3.50	RCB	45	0.0300	E	ELM ST						140.3	95.5		137.9
242.00			9	15.00		RCP	160	0.0200	E	ELM ST						9.1	1.9		2.7
243.00		512.0	E	9	15.00		RCP	140	0.0200	E	ELM ST					9.1	1.9		2.7
244.00	511.0		9	2.50	3.50	RCB	130	0.0450		ELM ST	PR		79.00	84.00	JB	171.9	92.4		133.4
245.00		513.0	9	36.00		RCP	300	0.0250		MANOR CIR		79.00	87.00	95.50	CB	105.5	92.4		133.4
246.00			9	36.00		RCP	110	0.0250		MANOR CIR	PR	90.70				105.5	90.9		131.3
247.00			9	36.00		RCP	125	0.0350	A	WALNUT ST	PR					124.8	90.9		131.3
248.00		514.0	9	36.00		CMP	35	0.0350	A	WALNUT ST						67.6	90.9	**	131.3
249.00			9	30.00	32.00	RCB	150	0.0350	A	WALNUT ST	PR					106.5	85.9		123.9
250.00			9	3.30	3.60	RCC	100	0.0350	A	BLAKE ST	PR					124.5	85.9		123.9
251.00			9	2.70	2.60	RCB	80	0.0350	A	BLAKE ST	PR					114.1	85.9		123.9
252.00			9	36.00		RCP	90	0.0350	A	WESLEY AVE	PR					124.8	85.9		123.9
253.00		515.0	9	36.00		RCP	35	0.0350	A	WESLEY AVE			117.00			124.8	85.9		123.9
254.00			10	36.00		RCP	110	0.1000	A	WESLEY AVE	PR					210.9	84.0		121.2
255.00			10	32.00	32.00	RCB	140	0.1000	A	GANGES AVE	PR					196.2	84.0		121.2
256.00		516.0	10	32.00	32.00	RCB	40	0.1000	A	GANGES AVE						196.2	84.0		121.2
257.00			10	32.00	32.00	RCB	260	0.1000	A	GANGES AVE	PR					196.2	82.7		119.3
258.00		517.0	10	36.00		RCP	110	0.1000	A	HILLSIDE PK						210.9	82.7		119.3
259.00		518.0	10	36.00		RCP	30	0.1000	A	HILLSIDE PK						210.9	79.3		114.4
260.00		519.0	E	10			170	0.1000	A	GANGES AVE				186.30	NB		14.8		21.1
261.00	518.0		10	36.00		RCP	490	0.1000	A	HILLSIDE PK						210.9	69.7		100.4
262.00			10	21.00		RCP	70	0.1000	A	HILLSIDE PK						50.1	69.7	**	100.4
263.00		520.0	10	21.00		RCP	70	0.1000	A	HILLSIDE PK						50.1	69.7	**	100.4

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DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
264.00			10	21.00		RCP	260	0.1000	A	HILLSIDE PK						50.1	40.1		57.6
265.00		521.0	10	21.00		RCP	80	0.1000	A	HILLSIDE PK			309.00			50.1	40.1		57.6
266.00			10			OPEN	500	0.2000	E	HILLSIDE PK							34.2		49.1
267.00		522.0	18	48.00		CMP	100	0.0500	E	ARLINGTON BLVD	PR					174.0	34.2		49.1
268.00		523.0 E	18	18.00		CMP	270	0.0500	E	ARLINGTON BLVD						12.7	7.1		10.2
269.00	522.0		18	48.00		CMP	40	0.0500	E	ARLINGTON BLVD						174.0	28.9		41.5
270.00			18	48.00		CMP	95	0.0500	E	ARLINGTON BLVD						174.0	28.9		41.5
271.00		524.0	18	48.00		CMP	95	0.0500	E	ARLINGTON BLVD						174.0	28.9		41.5
272.00			18	42.00		CMP	50	0.0500	E	ARLINGTON BLVD						121.9	25.5		36.6
273.00			19	21.00		RCP	115	0.0500	E	SCENIC AVE	PR					35.4	25.5		36.6
274.00			19	21.00		RCP	130	0.0500	E	SCENIC AVE	PR					35.4	25.5		36.6
275.00		525.0	19	21.00		RCP	120	0.0500	E	PEBBLE BEACH DR						35.4	25.5		36.6
276.00		526.0 E	19	12.00		RCP	280	0.0500	E	PEBBLE BEACH DR						8.0	6.3		9.0
277.00	525.0		19	18.00		RCP	45	0.0500	E	PEBBLE BEACH DR						23.5	17.1		24.5
278.00			19	15.00		RCP	190	0.0500	E	PEBBLE BEACH DR						14.4	17.1	.	24.5
279.00		527.0	19	15.00		RCP	30	0.0500	E	PEBBLE BEACH DR			525.90	529.90	TC	14.4	17.1	.	24.5
280.00			19	15.00		RCP	100	0.0200		PEBBLE BEACH DR	PR	525.90	528.00	532.00	MH	9.1	14.5	***	20.8
281.00		528.0	19	15.00		RCP	30	0.4500		PEBBLE BEACH DR	PR	528.00	539.00	543.90	MH	43.3	14.5		20.8
282.00			19	12.00		RCP	420	0.1100		MIRA VISTA CC	PR					11.8	8.0		11.5
283.00			19	12.00		RCP	230	0.0700		MIRA VISTA CC	PR					9.4	8.0		11.5
284.00			19	12.00		RCP	380	0.1100		MIRA VISTA CC	PR					11.8	8.0		11.5
285.00			19	12.00		RCP	90	0.0200		MIRA VISTA CC	PR					5.0	8.0	***	11.5
286.00		529.0	19	12.00		RCP	160	0.1700		MIRA VISTA CC	PR					14.7	8.0		11.5
287.00		E	19	12.00		RCP	50	0.0500	E	SPYGLASS LN	PR					8.0			
288.00	520.0		10			OPEN	1170	0.0500	E	HILLSIDE PK							16.5		23.7
289.00			18	30.00		RCP	190	0.0500	E	ARLINGTON BLVD						91.7	16.5		23.7
290.00			18	30.00		RCP	80	0.0500	E	ARLINGTON BLVD						91.7	16.5		23.7
291.00		530.0 E	18	12.00		RCP	160	0.0500	E	ARLINGTON BLVD						8.0	16.5	EEEE	23.7
292.00	508.0	531.0	9	21.00		RCP	40	0.0200	E	BART				60.50	NB	22.4	31.1	EE	44.7
293.00			9				70	0.0200	E	BLAKE ST							3.9		5.5
294.00		532.0 E	9	12.00		RCP	40	0.0200	E	LEXINGTON AVE						5.0	3.9		5.5
295.00	531.0	533.0	9	18.00		RCP	650	0.0250	E	BLAKE ST				78.90	NB	16.6	29.1	EEE	41.8
296.00		534.0	9	18.00		RCP	500	0.0250	E	BLAKE ST				92.90	NB	16.6	28.7	EEE	41.2
297.00		535.0	9	18.00		RCP	280	0.0200	E	NORVELL ST						14.9	16.7	.	24.0
298.00		536.0	9	18.00		RCP	300	0.0200	E	NORVELL ST						14.9	17.7	.	25.3
299.00			9	15.00		RCP	580	0.0418		PLANK AVE						13.2	13.8	*	19.7
301.00			17	12.00		RCP	60	0.0500	E	NAVELLIER ST						8.0	13.8	EEE	19.7
302.00		537.0 E	17	12.00		RCP	70	0.0500	E	NAVELLIER ST						8.0	13.8	EEE	19.7

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DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
303.00	535.0	538.0 E	9	12.00		CMP	280	0.0200	E	NORVELL ST						2.7	2.9	E	4.2
304.00	506.0		9	36.00		RCP	345	0.0068		POTRERO AVE		39.00	41.33			55.0	37.0		53.3
305.00		539.0	9	30.00		RCP	240	0.0080		POTRERO AVE		41.83	45.00			36.7	37.0	*	53.3
306.00		540.0 E	9	21.00		RCP	320	0.0100	E	SAN PABLO AVE						15.9	11.8		17.0
307.00	539.0		9	16.00	25.00	CMPA	54	0.0200	E	POTRERO AVE			46.51			13.4	31.4	EEEE	44.9
308.00			9	16.00	25.00	CMPA	71	0.0200	E	POTRERO AVE						13.4	31.4	EEEE	44.9
309.00			9	21.00		RCP	250	0.0200	E	POTRERO AVE						22.4	31.4	EE	44.9
310.00			9	21.00		RCP	100	0.0280		POTRERO AVE			56.91	63.30	MH	26.5	31.4	.	44.9
311.00		541.0	9	21.00		RCP	74	0.0120		POTRERO AVE		57.16	58.00	61.50	NB	17.4	31.4	***	44.9
312.00		542.0	9	18.00		RCP	300	0.0200	E	POTRERO AVE				68.50	NB	14.9	22.7	EEE	32.5
313.00		543.0	9	18.00		RCP	230	0.0200	E	POTRERO AVE				75.10	NB	14.9	18.0	.	25.8
314.00		544.0	9	18.00		RCP	265	0.0200	E	POTRERO AVE				80.80	NB	14.9	11.4		16.2
315.00			9	12.00		RCP	130	0.0500	E	POTRERO AVE				99.80	NB	8.0	5.5		7.8
316.00		545.0 E	9	12.00		RCP	130	0.0500	E	EVERETT AVE						8.0	5.5		7.8
317.00	600.0		8	42.00		RCP	820	0.0167	C	CARLOS AVE		35.00	48.62			130.0	236.7	***	342.4
318.00		602.0	8	3.00	8.00	RCB	90	0.0200	A	SAN PABLO AVE						411.1	236.7		342.4
319.00			8	2.00	8.00	RCB	30	0.0200	A	SAN PABLO AVE						222.9	223.2	*	322.6
320.00			8	4.00	5.00	RCB	100	0.0200	A	SAN PABLO AVE			53.50			346.8	223.2		322.6
321.00			8	48.00		RCP	126	0.0120		KEARNY ST		53.50	55.00			157.4	223.2	**	322.6
322.00			8	3.00	4.00	RCB	45	0.0230		KEARNY ST		55.50	56.62			187.7	223.2	.	322.6
323.00		603.0	8	48.00		RCP	194	0.0252		KEARNY ST						228.0	223.2		322.6
324.00			9	48.00		RCP	20	0.0300	C	GLADYS AVE		59.80	60.40	66.80	MH	248.8	156.3		225.8
325.00			9	42.00		RCP	75	0.0100		GLADYS AVE		60.40	61.10			100.6	156.3	***	225.8
326.00			9	42.00		RCP	135	0.0100		GLADYS AVE		61.20	62.54			100.6	156.3	***	225.8
327.00			9	42.00		RCP	145	0.0130		GLADYS AVE		62.54	64.42	71.40	MH	114.7	156.3	**	225.8
328.00			9	42.00		RCP	80	0.0100		LIBERTY ST		64.42	65.02	70.80	CB	100.6	156.3	***	225.8
329.00		604.0	9	3.00	4.00	RCB	30	0.0300	E	LIBERTY ST		67.00				214.4	156.3		225.8
330.00			9	36.00		RCP	200	0.0300	E	LIBERTY ST	PR					115.5	157.0	EE	226.8
331.00			9	36.00		CMP	30	0.0300	E	ELM ST	PR					62.6	157.0	EEEE	226.8
332.00		605.0	9	3.00	4.00	RCB	30	0.0300	E	ELM ST				79.90	NB	214.4	157.0		226.8
333.00			9	2.50	2.50	MAS	230	0.0300	E	ELM ST	PR					49.0	159.3	EEEE	230.0
334.00			9	2.50	2.50	MAS	40	0.0300	E	RICHMOND ST						49.0	159.3	EEEE	230.0
335.00		606.0	9	3.00	4.00	RCB	110	0.0300	E	RICHMOND ST	PR					214.4	159.3		230.0
336.00			9	2.50	2.50	MAS	115	0.0300	E	EVERETT ST	PR					49.0	158.5	EEEE	228.7
337.00			9	3.00	4.00	RCB	30	0.0300	E	EVERETT ST				95.90	BM	214.4	158.5		228.7
338.00		607.0	9	36.00		RCP	230	0.0300	E	EVERETT ST	PR					115.5	158.5	EE	228.7
339.00		608.0 E	9				110	0.0500	E	NORVELL ST							6.8		9.8
340.00	607.0	609.0	9	36.00		RCP	40	0.0200	E	NORVELL ST						94.3	153.9	EEE	222.0

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341.00			9	30.00		RCP	45	0.0500	E	NORVELL ST				105.90	BM	91.7	55.5		80.1
342.00			9	30.00		RCP	110	0.0500	E	GLADYS AVE						91.7	55.5		80.1
343.00		610.0	9	30.00		RCP	125	0.0500	E	GLADYS AVE	PR					91.7	55.5		80.1
344.00		611.0	17	30.00		RCP	285	0.0500	E	GLADYS AVE	PR					91.7	55.9		80.7
345.00		612.0	E 17	12.00		RCP	160	0.0500	E	MOUND ST						8.0	3.8		5.3
346.00	611.0		17	24.00		RCP	310	0.0500	E	GLADYS AVE	PR					50.6	54.0	E	77.9
347.00		613.0	17	30.00		RCP	80	0.0500	E	NAVELLIER ST						91.7	54.0		77.9
348.00		614.0	17	30.00		RCP	320	0.0900		WILDWOOD PL	PR		183.10			123.1	50.2		72.4
349.00			17	30.00		RCP	275	0.0500	E	POTRERO AVE	PR	183.10				91.7	40.8		58.8
350.00			17	30.00		RCP	270	0.0500	E	POTRERO AVE	PR					91.7	40.8		58.8
351.00		615.0	17	30.00		RCP	220	0.0500	E	POTRERO AVE			325.30			91.7	40.8		58.8
352.00		616.0	18	30.00		RCP	370	0.1600		POTRERO AVE		325.30				164.1	33.3		48.0
353.00			18	24.00		RCP	60	0.2000		POTRERO AVE		378.31	390.91			101.2	22.8		32.8
354.00			18	24.00		RCP	330	0.1690		POTRERO AVE		390.91	449.30	459.20	TC	93.0	22.8		32.8
355.00			18	24.00		RCP	80	0.1690		POTRERO AVE		449.55	464.00	467.80	TC	93.0	22.8		32.8
356.00		617.0	18	24.00		RCP	35	0.0403		POTRERO AVE		452.37	453.90			45.4	22.8		32.8
357.00			18	18.00		RCP	130	0.1660		POTRERO AVE		453.90		489.10	BM	42.8	8.1		11.6
358.00			18	18.00		RCP	170	0.0500	E	POTRERO AVE						23.5	8.1		11.6
359.00		618.0	E 18	18.00		RCP	300	0.0500	E	POTRERO AVE						23.5	8.1		11.6
360.00	617.0		18				50	0.0500	E	POTRERO AVE	PR						16.6		23.9
361.00		619.0	18				90	0.0500	E	POTRERO AVE	PR						16.6		23.9
362.00			18			OPEN	130	0.0500	E	POTRERO AVE							4.9		7.0
363.00			18	18.00		CMP	130	0.0500	E	JULIAN DR			574.50	580.00	TC	12.7	4.9		7.0
364.00			18	18.00		CMP	65	0.0600		JULIAN DR		574.50	578.00	583.90	TC	13.9	4.9		7.0
365.00			18	18.00		CMP	60	0.0760		JULIAN DR		578.00	579.00			15.7	4.9		7.0
366.00			18	18.00		CMP	70	0.0760		JULIAN DR		579.00	593.50			15.7	4.9		7.0
367.00			18	18.00		CMP	75	0.2130		MADERA CIR		593.50	609.50			26.3	4.9		7.0
368.00			18	18.00		CMP	45	0.3560		MADERA CIR		609.50	628.50			34.0	4.9		7.0
369.00			18	18.00		CMP	60	0.3850		MADERA CIR		628.50	644.20	651.60	MH	35.3	4.9		7.0
370.00			18	21.00		RCP	35	0.0114		MADERA CIR		644.20	644.60	651.40	TC	16.9	4.9		7.0
371.00			18	21.00		RCP	50	0.0080		MADERA CIR		644.60	645.00	652.00	MH	14.2	4.9		7.0
372.00			18	18.00		RCP	235	0.1360		MADERA CIR		645.00	677.00	684.60	MH	38.7	4.9		7.0
373.00			18	18.00		RCP	45	0.0330		MADERA CIR		677.00	678.50	687.60	TC	19.1	4.9		7.0
374.00			18	18.00		RCP	90	0.0870		MADERA CIR	PR	678.50	679.80			31.0	4.9		7.0
375.00			18	18.00		RCP	20	0.0150	C	MADERA CIR	PR	679.80	680.10			12.9	4.9		7.0
376.00		620.0	E 18	18.00		RCP	140	0.0500	E	ARLINGTON BLVD	PR					23.5	4.9		7.0
377.00	609.0	621.0	17	36.00		RCP	740	0.0300	E	CAMERON SCH						115.5	96.6		138.7
378.00			17	30.00		CMP	50	0.0500	E	LAWRENCE ST						49.7	93.2	EEE	133.8

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
379.00		622.0	17	30.00		CMP	70	0.0500	E	LAWRENCE ST	PR					49.7	93.2	EEE	133.8
380.00			17	30.00		CMP	60	0.0500	E	NAVELLIER ST	PR					49.7	77.5	EEE	111.3
381.00			17	24.00		RCP	80	0.0500	E	NAVELLIER ST	PR		143.80			50.6	77.5	EEE	111.3
382.00		623.0	17	27.00		VCP	40	0.0500	E	NAVELLIER ST						69.3	77.5	.	111.3
383.00			17			OPEN	150	0.0500	E	NAVELLIER ST	PR						69.6		99.9
384.00		624.0	17	30.00		RCP	170	0.0500	E	NAVELLIER ST						91.7	69.6		99.9
385.00		625.0	17	27.00		RCP	10	0.0500	E	NAVELLIER ST						69.3	54.9		78.7
386.00		626.0	17			OPEN	850	0.0500	E	HILLSIDE PK							47.7		68.3
387.00		627.0	18			OPEN	280	0.0500	E	DOUGLAS DR							48.8		69.8
388.00			18			OPEN	150	0.0500	E	DOUGLAS DR							30.3		43.3
389.00			18	24.00		RCP	250	0.0500	E	DOUGLAS DR	PR					50.6	30.3		43.3
390.00		628.0	18	24.00		CMP	115	0.0500	E	EBMUD RESERVOIR						27.4	30.3	.	43.3
391.00			18			OPEN	550	0.0500	E	EBMUD RESERVOIR							20.6		29.3
392.00		629.0	18	24.00		CMP	20	0.0500	E	MADERA CIR			596.00			27.4	20.6		29.3
393.00			18	15.00		RCP	110	0.3100		MADERA CIR		596.00	630.00	637.50	TC	36.0	5.4		7.6
394.00		630.0	E 18	15.00		RCP	70	0.0500	E	MADERA CIR						14.4	5.4		7.6
395.00	629.0	631.0	18	21.00		RCP	118	0.0500	E	MADERA CIR	PR			642.90	MH	35.4	15.4		22.0
396.00			18	12.00		RCP	280	0.0500	E	MADERA SCH						8.0	4.4		6.3
397.00		632.0	E 18	10.00		RCP	200	0.0500	E	MADERA SCH						4.9	4.4		6.3
398.00	631.0		18	18.00		RCP	420	0.0900	E	MADERA SCH						31.5	11.9		16.9
399.00		633.0	E 18	12.00		RCP	60	0.0900	E	DEVONSHIRE DR			674.52	689.00	MH	10.7	11.9	.	16.9
400.00	624.0	634.0	17	10.00		RCP	280	0.2000	E	NAVELLIER ST	PR					9.8	15.3	EEE	21.9
401.00			17			OPEN	1400	0.0500	E	HILLSIDE PK							8.1		11.6
402.00		635.0	E 17	12.00		RCP	240	0.0600	E	KENT DR	PR			675.40	NB	8.7	8.1		11.6
403.00	622.0		17	24.00		CMP	30	0.0500	E	LAWRENCE ST	PR					27.4	17.7		25.4
404.00			17	24.00		CMP	270	0.0500	E	LAWRENCE ST	PR					27.4	17.7		25.4
405.00			17	24.00		CMP	60	0.0500	E	SCOTT ST						27.4	17.7		25.4
406.00			17			OPEN	80	0.0500	E	SCOTT ST	PR						17.7		25.4
407.00			17	24.00		CMP	100	0.0500	E	NAVELLIER ST	PR			193.10	NB	27.4	17.7		25.4
408.00			17	24.00		CMP	30	0.0500	E	NAVELLIER ST						27.4	17.7		25.4
409.00		636.0	E 17	24.00		RCP	100	0.0500	E	NAVELLIER ST	PR					50.6	17.7		25.4
409.50	609.0	637.0	E 9	15.00		RCP	600	0.0200	E	NORVELL ST						9.1	7.0		10.1
410.00	603.0	638.0	8	48.00		RCP	572	0.0020		BART			60.67			64.2	76.1	.	109.6
411.00		639.0	E 8	18.00		CMP	120	0.0200	E	DONAL AVE	PR		66.93			8.1	14.0	EEE	20.1
412.00	638.0	640.0	8	48.00		RCP	24	0.0050		BART		60.67	61.20			101.6	67.6		97.0
413.00		641.0	8	18.00		CMP	120	0.0200	E	DONAL AVE	PR		66.80			8.1	17.2	EEEE	24.7
414.00			8			ST	650	0.0200	E	DONAL AVE							9.3		13.3
415.00		642.0	8	12.00		CMP	240	0.0200	E	ELM ST	PR			81.90	TC	2.7	9.3	EEEE	13.3

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DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
415.20			8	0.50	2.00	CMPA	40	0.0200	E	RICHMOND ST				82.20	TC	3.0	4.3	EE	6.1
416.00		643.0 E	8	12.00		CMP	230	0.0200	E	RICHMOND ST	PR					2.7	4.3	EEE	6.1
417.00	640.0		8	24.00		RCP	300	0.0170	C	BART			66.40	69.50	CB	29.5	50.5	***	72.3
418.00			8	24.00		RCP	170	0.0100	C	BART			68.00	70.50	CB	22.6	50.5	****	72.3
419.00		644.0	8	24.00		RCP	145	0.0150	E	BART						27.7	50.5	EEE	72.3
420.00		645.0	8	15.00		RCP	240	0.0150	E	MANILA AVE				76.60	BM	7.9	47.7	EEEE	68.3
421.00			8	15.00		RCP	290	0.0170	E	MANILA AVE				81.50	NB	8.4	39.5	EEEE	56.4
422.00		646.0	8	15.00		RCP	250	0.0280	E	MANILA AVE			84.50	88.60	TC	10.8	39.5	EEEE	56.4
423.00		647.0	16	15.00		RCP	480	0.0400	E	MANILA AVE				110.00	BM	12.9	30.6	EEEE	43.7
424.00			16	15.00		RCP	500	0.0500	E	MANILA AVE						14.4	11.8		16.8
425.00		648.0	16	12.00		RCP	220	0.0500	E	MANILA AVE				148.60	BM	8.0	11.8	EE	16.8
426.00			16	12.00		RCP	90	0.0800	E	LAWRENCE ST						10.1	9.8		14.0
427.00			16	12.00		TILE	210	0.0800	E	LAWRENCE ST	ES					10.1	9.8		14.0
428.00			16	12.00		RCP	60	0.0800	E	SCOTT ST						10.1	9.8		14.0
429.00		649.0	16	12.00		TILE	25	0.0800	E	SCOTT ST						10.1	9.8		14.0
430.00		650.0 E	16	12.00		VCP	180	0.0800	E	SCOTT ST	ES			201.00	NB	10.1	6.0		8.6
431.00	602.0	651.0	8	24.00		RCP	240	0.0100	E	SAN PABLO AVE						22.6	18.0		25.8
432.00		652.0	8	24.00		RCP	380	0.0100	E	SAN PABLO AVE						22.6	14.3		20.5
433.00		653.0	8	21.00		RCP	390	0.0100	E	SAN PABLO AVE						15.9	2.3		3.2
434.00		654.0 E	8	12.00		RCP	260	0.0100	E	SAN PABLO AVE						3.6	2.4		3.4
435.00	652.0	655.0 E	8	15.00		RCP	270	0.0100	E	SAN PABLO AVE						6.5	6.0		8.5
436.00	700.0		7	2.50	3.50	2RCB		0.0100	E	SANTA CRUZ AVE						162.1	350.0	EEEE	507.1
437.00			7	4.00	4.00	RCB	80	0.0100	E	SAN PABLO AVE						182.9	350.0	EEE	507.1
438.00		701.0	7	2.50	7.00	RCB	150	0.0135		SAN PABLO AVE				41.60	BM	220.0	350.0	***	507.1
439.00		702.0	7	2.50	7.00	RCB	300	0.0200	E	SAN PABLO AVE						267.8	272.4	E	394.6
440.00		703.0	7	48.00		CMP	360	0.0100	E	SAN PABLO AVE			53.00			77.8	221.5	EEEE	320.7
441.00		706.9 E	7	24.00		RCP	150	0.0400		MOESER LN			56.10			45.2	84.5	***	122.3
442.00	703.0	704.0	7	48.00		CMP	25	0.0100	E	MOESER LN						77.8	138.0	EEE	199.7
443.00		705.0	7	24.00		CMP	300	0.0100	E	SAN PABLO AVE						12.3	14.7	.	21.1
444.00			7	24.00		CMP	240	0.0100	E	SAN PABLO AVE				57.90	BM	12.3	12.3		17.6
445.00		706.0 E	7	24.00		CMP	50	0.0100	E	PORTOLA DR						12.3	12.3		17.6
446.00	704.0	707.0	7	2.00	4.00	RCB	150	0.0100	E	MOESER LN			56.10			69.8	126.7	EEE	183.4
447.00			7	48.00		RCP	20	0.0100	E	MOESER LN						143.6	214.8	EE	310.6
450.00			7	48.00		RCP	500	0.0100	E	MOESER LN			53.70			143.6	214.8	EE	310.6
451.00			7	48.00		RCP	130	0.0100	E	PORTOLA DR						143.6	214.8	EE	310.6
458.00		708.0	7	54.00		RCP	218	0.0100	C	PORTOLA DR		61.10	63.30	69.70	HW	196.7	214.8	*	310.6
458.20			7			OPEN	50	0.0200	E	BART							209.8		303.1
459.00			7	36.00		RCP	275	0.0260	A	BART	PR					107.6	209.8	***	303.1

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DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
460.00		709.0	8	33.00		RCP	470	0.0260	A	LIBERTY ST	PR		84.10	89.10	CB	85.3	209.8	****	303.1
461.00			16	33.00		RCP	45	0.0440		SCHMIDT LN		84.10	86.10	90.40	CB	110.9	200.3	***	288.9
462.00			16	36.00		CMP	120	0.0330		SCHMIDT LN			89.40	94.00	MH	65.6	200.3	****	288.9
463.00			16	36.00		CMP	200	0.0300	E	SCHMIDT LN				99.70	TC	62.6	200.3	EEEE	288.9
464.00			16	4.00	4.00	RCB	320	0.0300	E	SCHMIDT LN				109.40	NB	316.8	200.3		288.9
465.00			16				180	0.0300	E	SCHMIDT LN							200.3		288.9
466.00		710.0	16	36.00		RCP	310	0.0370		SCHMIDT LN				127.00	NB	128.3	200.3	***	288.9
467.00		711.0	16	36.00		RCP	250	0.0370		SCHMIDT LN				138.20	BM	128.3	195.2	***	281.4
468.00			16	36.00		RCP	140	0.0400		SCHMIDT LN						133.4	188.4	**	271.6
469.00			16	36.00		RCP	100	0.0400		SCHMIDT LN				147.50	BM	133.4	188.4	**	271.6
470.00			16	36.00		RCP	80	0.0400	E	SCHMIDT LN						133.4	188.4	EE	271.6
471.00			16	3.00	4.00	RCB	55	0.0400	E	SCHMIDT LN				153.20	BM	247.6	188.4		271.6
472.00		712.0	16	36.00		CMP	60	0.0400	E	SCHMIDT LN						72.3	188.4	EEEE	271.6
473.00		713.0	16	36.00		RCP	475	0.0500	E	SCHMIDT LN						149.1	170.8	.	246.0
474.00			16	36.00		RCP	350	0.0500	E	SCHMIDT LN						149.1	156.5	E	225.2
475.00			16	30.00		CMP	750	0.1500	E	HILLSIDE PK						86.1	156.5	EEE	225.2
476.00		714.0	24			OPEN	100	0.0500	E	HILLSIDE PK							156.5		225.2
477.00		715.0	24			OPEN	300	0.0500	E	HILLSIDE PK							144.9		208.4
478.00		716.0	24			OPEN	50	0.0500	E	HILLSIDE PK							119.2		171.4
479.00			16			OPEN	1450	0.0500	E	HILLSIDE PK							24.2		34.7
480.00		717.0	25	15.00		CMP	100	0.1000	E	CONTRA COSTA DR	PR			663.30	NB	11.1	24.2	EEEE	34.7
481.00		718.0	25	15.00		CMP	60	0.1000	E	CONTRA COSTA DR	PR					11.1	14.0	EE	20.1
482.00		719.0 E	25	12.00		CMP	240	0.1000	E	CONTRA COSTA DR						6.1	11.8	EEE	16.9
483.00	717.0		25	12.00		RCP	300	0.0500	E	CONTRA COSTA DR	PR					8.0	11.2	EE	16.0
484.00		720.0	25	12.00		RCP	60	0.0500	E	BREWSTER DR						8.0	11.2	EE	16.0
485.00			25	12.00		RCP	220	0.0500	E	BREWSTER DR						8.0	5.8		8.2
486.00		721.0 E	25	12.00		CMP	100	0.0500	E	BREWSTER DR				702.70	BM	4.3	5.8	EE	8.2
487.00	716.0		24	30.00		CMP	130	0.4000	C	DUKE CT	PR	417.50	470.00			140.5	92.2		132.5
488.00		722.0	24	30.00		RCP	110	0.0140		DUKE CT		470.00	471.90	479.00	MH	48.5	92.2	***	132.5
489.00			24	18.00		RCP	200	0.0500	E	DUKE CT	PR					23.5	12.6		18.0
490.00			24	18.00		RCP	30	0.0500	E	BARON CT						23.5	12.6		18.0
491.00			24	18.00		RCP	100	0.0500	E	BARON CT						23.5	12.6		18.0
492.00			24	18.00		RCP	150	0.0500	E	SHEVLIN DR						23.5	12.6		18.0
493.00			25	18.00		RCP	55	0.0500	E	SHEVLIN DR						23.5	12.6		18.0
494.00		723.0	25	18.00		CMP	120	0.0500	E	KING DR						12.7	12.6		18.0
495.00			25			OPEN	380	0.0500	E	KING DR	PR						3.2		4.6
496.00		724.0 E	25	12.00		CMP	100	0.0500	E	CONTRA COSTA DR	PR					4.3	3.2		4.6
497.00	722.0	725.0	24	30.00		RCP	100	0.0390		DUKE CT		471.90	477.60	485.10	CB	81.0	81.6	*	117.3

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DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
498.00			24	36.00		RCP	155	0.0530		SHEVLIN DR		477.60	485.86			153.6	80.5		115.6
499.00			24	30.00		RCP	180	0.1660		SHEVLIN DR		486.36	516.35			167.1	80.5		115.6
500.00			24	30.00		RCP	90	0.0900		SHEVLIN DR		516.35	525.25			123.1	80.5		115.6
501.00			25	30.00		CMP	180	0.2400	C	KING DR	PR	525.33	569.20			108.8	80.5		115.6
502.00			25			OPEN	290	0.2000	E	KING DR			631.50				80.5		115.6
503.00		726.0	25	30.00		RCP	40	0.1500	E	CONTRA COSTA DR						158.9	80.5		115.6
504.00			25	24.00		RCP	160	0.1500	E	CONTRA COSTA DR						87.6	76.2		109.4
505.00		727.0	25	24.00		CMP	110	0.1500	E	BREWSTER DR						47.5	76.2	EEE	109.4
506.00			25	24.00		CMP	90	0.1500	E	ARLINGTON BLVD				700.40	BM	47.5	37.0		52.9
507.00		728.0	25	24.00		CMP	50	0.0500	E	ARLINGTON BLVD						27.4	37.0	EE	52.9
508.00		729.0 E	25	12.00		CMP	70	0.0500	E	ARLINGTON PK						4.3	5.1	.	7.3
509.00	728.0		25			POND	500	0.0200	E	ARLINGTON PK							28.6		40.8
510.00			25	24.00		RCP	160	0.0500	E	ARLINGTON PK						50.6	28.6		40.8
511.00		730.0	25	21.00		RCP	250	0.0500	E	ARLINGTON PK						35.4	28.6		40.8
512.00			25	21.00		RCP	100	0.2520		ARLINGTON PK			750.50	758.10	TC	79.5			
513.00			25	15.00		RCP	110	0.1136		THORS BAY RD		750.50	773.78	781.40	MH	21.8			
514.00		E	25	12.00		CMP	280	0.1300		JAMES PL		773.78	776.50	780.00	TC	7.0			
515.00			25	15.00		RCP	85	0.2010		THORS BAY RD		773.78	790.87	795.60	TC	29.0			
516.00		E	25	15.00		RCP	120	0.0150		THORS BAY RD	PR	795.20	797.00	800.50	CB	7.9			
517.00	727.0		25	18.00		RCP	100	0.1000	E	ARLINGTON BLVD				700.40	NB	33.2	42.1	EE	60.4
518.00		731.0	25	18.00		RCP	35	0.0500	E	ARLINGTON BLVD						23.5	42.1	EEE	60.4
519.00		732.0 E	25	12.00		CMP	400	0.0700	E	ARLINGTON BLVD	PR			731.20	NB	5.1	9.8	EEE	14.1
520.00	731.0		25	18.00		RCP	260	0.0500	E	ARLINGTON BLVD				721.80	NB	23.5	34.7	EE	49.6
521.00		733.0	25	18.00		RCP	180	0.0500	E	VILLA NUEVA DR						23.5	34.7	EE	49.6
522.00			25	21.00		RCP	150	0.0500	E	VILLA NUEVA DR	PR					35.4	22.4		32.0
523.00			25	24.00		RCP	380	0.0500	E	VILLA NUEVA DR	PR					50.6	22.4		32.0
524.00		734.0	25	18.00		RCP	35	0.0500	E	DON CAROL DR						23.5	22.4		32.0
525.00			25	18.00		CMP	210	0.0500	E	DON CAROL DR	PR					12.7	12.0		17.1
526.00			25	18.00		CMP	65	0.0500	E	ARBOR DR	PR					12.7	12.0		17.1
527.00			25	15.00		RCP	110	0.0500	E	ARBOR DR			773.00	777.00	TC	14.4	12.0		17.1
528.00		735.0	25	12.00		RCP	200	0.1500		ARBOR DR		773.00	801.95	806.90	TC	13.8	12.0		17.1
529.00		E	25	12.00		RCP	90	0.0150		ARBOR DR		801.95		807.40	TC	4.4			
530.00	715.0		24	27.00		RCP	135	0.0500	E	EARL CT	PR					69.3	27.2		39.0
531.00			24	21.00		RCP	190	0.0500	E	EARL CT						35.4	27.2		39.0
532.00		736.0	24	21.00		RCP	85	0.0500	E	EARL CT						35.4	27.2		39.0
533.00			24	21.00		RCP	335	0.0500	E	BURNS CT						35.4	24.2		34.8
534.00			24	30.00		CMP	70	0.0500	E	BURNS CT			541.30			49.7	24.2		34.8
535.00			24	30.00		CMP	130	0.0500	E	BURNS CT	PR					49.7	24.2		34.8

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DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
536.00		737.0	24	15.00		VCP	25	0.0500	E	KING DR						14.4	24.2	EEE	34.8
537.00			24	15.00		VCP	60	0.0500	E	KING DR						14.4	16.7	.	24.0
538.00		738.0	24	15.00		VCP	310	0.2000	E	KING DR	PR					28.9	16.7		24.0
539.00			24	15.00		RCP	210	0.0500	E	CONTRA COSTA DR						14.4	7.9		11.4
540.00			24	15.00		RCP	280	0.0500	E	CONTRA COSTA DR	PR					14.4	7.9		11.4
541.00		739.0	E 25	12.00		RCP	25	0.0500	E	HAVENS PL						8.0	7.9		11.4
542.00	714.0	740.0	E 24	12.00		CMP	460	0.0500	E	MOESER LN						4.3	1.6		2.3
543.00	709.0		E 16	12.00		CMP	230	0.0400		SCHMIDT LN						3.9			
544.00	709.0	741.0	16	24.00		RCP	100	0.0065		SCHMIDT LN						18.2	25.3	**	36.2
545.00			16	18.00		RCP	275	0.0085		RICHMOND ST						9.7			
546.00			E 16	12.00		RCP	50	0.0120		RICHMOND ST						3.9			
547.00	741.0		16	24.00		RCP	60	0.0140		RICHMOND ST						26.8	18.4		26.4
548.00			16	24.00		RCP	70	0.0210								32.8	18.4		26.4
549.00			16	24.00		RCP	122	0.0123								25.1	18.4		26.4
550.00			16	24.00		RCP	34	0.0100								22.6	18.4		26.4
551.00			16	24.00		RCP	70	0.0286								38.3	18.4		26.4
552.00			16	24.00		RCP	145	0.0177								30.1	18.4		26.4
553.00		742.0	E 16	24.00		RCP	70	0.0188								31.0	18.4		26.4
554.00	708.0		7	15.00		RCP	75	0.0200	E	BART						9.1	6.9		9.8
555.00		743.0	E 7	15.00		RCP	240	0.0200	E	PORTOLA DR						9.1	6.9		9.8
556.00	702.0		7	2.00	7.00	RCB	25	0.0200	E	SAN PABLO AVE						191.4	65.7		94.4
557.00			7	30.00		VCP	50	0.0200	E	SAN PABLO AVE	PR					58.0	65.7	.	94.4
558.00			7	21.00		VCP	165	0.0200	E	KEARNEY ST	PR					22.4	65.7	EEEE	94.4
559.00		744.0	7	21.00		VCP	30	0.0200	E	KEARNEY ST						22.4	65.7	EEEE	94.4
560.00		745.0	7	21.00		VCP	220	0.0200	E	KEARNEY ST	PR					22.4	64.3	EEEE	92.4
561.00			15	21.00		VCP	130	0.0200	E	LEXINGTON AVE	PR					22.4	64.0	EEEE	91.9
562.00		746.0	15	7.50	9.00	RCC	50	0.0200	E	BART						24.0	64.0	EEEE	91.9
563.00			15			OPEN	150	0.0200	E	BART							45.5		65.3
564.00		747.0	15	21.00		RCP	130	0.0200	E	BART						22.4	45.5	EEEE	65.3
565.00			15	15.00		RCP	180	0.0200	E	MOESER LN						9.1	45.1	EEEE	64.7
566.00		748.0	15	15.00		RCP	40	0.0200	E	MOESER LN						9.1	45.1	EEEE	64.7
567.00		749.0	15	15.00		RCP	300	0.0300	E	MOESER LN						11.2	40.7	EEEE	58.3
568.00		750.0	15	15.00		RCP	200	0.0300	E	MOESER LN						11.2	37.8	EEEE	54.1
569.00			15	15.00		RCP	270	0.0300	E	MOESER LN						11.2	33.4	EEEE	47.7
570.00			15	15.00		RCP	200	0.0550		MOESER LN						15.2	33.4	****	47.7
571.00		751.0	15	15.00		RCP	50	0.0500	E	MOESER LN						14.4	33.4	EEEE	47.7
572.00			E 15	12.00		RCP	120	0.0500	E	COMMUNITY CENTER						8.0			
573.00	746.0		15	21.00		VCP	180	0.0200	E	LIBERTY ST	PR					22.4	19.9		28.5

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574.00		752.0	15	21.00		VCP	40	0.0200	E	LIBERTY ST						22.4	19.9		28.5
575.00		753.0	15	21.00		RCP	230	0.0200	E	LIBERTY ST	PR					22.4	17.4		24.8
576.00		754.0	15	21.00		RCP	290	0.0200	E	ELM ST	PR					22.4	14.5		20.8
577.00		755.0	15	21.00		RCP	230	0.0200	E	RICHMOND ST	PR					22.4	12.7		18.1
578.00		756.0	15	21.00		RCP	250	0.0200	E	EVERETT ST	PR					22.4	8.3		11.8
579.00		757.0 E	15	21.00		RCP	130	0.0200	E	NORVELL ST	PR					22.4	5.5		7.8
580.00	701.0	758.0	7	30.00		RCP	220	0.0200	E	WALDO AVE				45.30	NB	58.0	89.3	EEE	128.8
581.00		759.0	15	30.00		RCP	280	0.0200	E	WALDO AVE				52.20	NB	58.0	84.9	EE	122.4
582.00		760.0	15	30.00		RCP	180	0.0200	E	WALDO AVE						58.0	82.7	EE	119.3
583.00		761.0	15	30.00		RCP	130	0.0200	E	WALDO AVE						58.0	81.1	EE	116.8
584.00		762.0	15	30.00		RCP	280	0.0368		WALDO AVE				69.10	BM	78.7	77.9		112.2
585.00		763.0	15	27.00		RCP	290	0.0300		WALDO AVE			72.66	76.60	NB	53.6	75.0	**	108.0
586.00			15	27.00		RCP	125	0.0170		WALDO AVE		72.66	73.51			40.4	72.2	***	104.0
587.00		764.0	15	27.00		RCP	85	0.0460		WALDO AVE		73.51	83.12	86.50	BM	66.4	72.2	*	104.0
588.00			15	24.00		RCP	270	0.0500		WALDO AVE		83.12	94.60			50.6	70.4	**	101.3
589.00		765.0	15	24.00		RCP	120	0.0140		WALDO AVE				106.90	NB	26.8	70.4	****	101.3
590.00			15	24.00		RCP	270	0.0150	E	ASHBURY AVE						27.7	67.2	EEEE	96.6
591.00		766.0	15	24.00		RCP	230	0.0423		ASHBURY AVE	PR			110.41		46.5	67.2	**	96.6
592.00			15	21.00		RCP	70	0.0200		POMONA AVE		110.90				22.4	21.5		30.8
593.00		767.0	15	24.00		RCP	60	0.0200	E	POMONA AVE						32.0	21.5		30.8
594.00		E	15	15.00		RCP	370	0.0200	E	POMONA AVE						9.1			
595.00	766.0		15	24.00		RCP	70	0.0650		POMONA AVE						57.7	49.3		70.8
596.00			15	24.00		RCP	300	0.0500	E	CERRITO VISTA PK						50.6	49.3		70.8
597.00		768.0	15	24.00		RCP	150	0.0500	E	CERRITO VISTA PK						50.6	49.3		70.8
598.00			15	18.00		RCP	230	0.0500	E	CERRITO VISTA PK						23.5	17.2		24.5
599.00			15	18.00		RCP	380	0.0500	E	CERRITO VISTA PK						23.5	17.2		24.5
600.00		769.0	16	15.00		RCP	50	0.0500	E	AVIS DR						14.4	17.2	.	24.5
601.00			16	15.00		RCP	570	0.0500	E	MOESER LN						14.4	6.4		9.1
602.00		770.0 E	16	15.00		RCP	70	0.0500	E	MOESER LN						14.4	6.4		9.1
603.00	768.0	771.0	15	24.00		RCP	100	0.0500	E	AVIS DR						50.6	36.4		52.3
604.00			15	24.00		RCP	400	0.0500	E	DEL MAR SCH						50.6	29.0		41.7
605.00			15			OPEN	100	0.0500	E	BALRA DR	PR						29.0		41.7
606.00		772.0	15	30.00		CMP	50	0.0500	E	BALRA DR						49.7	29.0		41.7
607.00		773.0	24			OPEN	350	0.0500	E	BALRA DR	PR						24.0		34.5
608.00			24	30.00		CMP	200	0.0500	E	GALVIN DR	PR					49.7	12.7		18.2
609.00		774.0	24	30.00		CMP	40	0.0500	E	GALVIN DR						49.7	12.7		18.2
610.00			24			OPEN	100	0.0500	E	GALVIN DR	PR						8.9		12.7
611.00			24	24.00		CMP	410	0.0500	E	GALVIN DR	PR		339.70	342.80	CB	27.4	8.9		12.7

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612.00		775.0	24	30.00		CMP	45	0.0440		SEAVIEW DR		339.70	335.20	341.60	CB	46.6	8.9		12.7
613.00			24	24.00		CMP	170	0.0500	E	SEAVIEW DR		335.20				27.4	4.3		6.1
614.00		776.0	24			OPEN	500	0.0500	E	SEAVIEW DR							4.3		6.1
615.00			24	15.00		RCP	100	0.0500	E	SHEVLIN DR						14.4			
616.00			24	15.00		RCP	50	0.0500	E	MOESER LN						14.4			
617.00		E	24	12.00		RCP	50	0.0500	E	MOESER LN						8.0			
618.00	773.0	777.0	24			OPEN	150	0.0500	E	GALVIN DR	PR						12.5		17.9
619.00			24	24.00		CMP	110	0.0500	E	GALVIN DR	PR					27.4	5.4		7.7
620.00			24	30.00		CMP	380	0.0500	E	GALVIN DR	PR					49.7	5.4		7.7
621.00		778.0 E	24	30.00		CMP	100	0.0500	E	SEAVIEW DR	PR			377.70	NB	49.7	5.4		7.7
622.00	800.0	802.0	13			OPEN	800			CERRITO CR							972.4		1413.8
623.00		803.0	13	3.00	5.00	2RCB	170	0.0090	C	ADAMS ST		8.00	9.58	13.80	MH	311.6	522.2	***	757.5
624.00			13	24.00		RCP	108	0.0070		CARLSON BLVD		9.58	10.43			18.9	18.9		27.3
625.00			13	24.00		RCP	80	0.0070	E	CARLSON BLVD			9.69			18.9	18.9		27.3
626.00			13	24.00		RCP	244	0.0070	C	CARLSON BLVD		9.69	11.45	14.40	MH	18.9	18.9		27.3
627.00		804.0	13	21.00		RCP	206	0.0040		CARLSON BLVD		11.45	12.63	16.50	MH	10.0	18.9	***	27.3
628.00		805.0	13	21.00		RCP	320	0.0040		CARLSON BLVD		12.63	13.92	17.70	MH	10.0	15.5	***	22.3
629.00		806.0 E	13	18.00		RCP	310	0.0040		CARLSON BLVD		13.92	15.50	19.40	TC	6.6	11.7	***	16.9
630.00	803.0	807.0	13	3.00	5.00	2RCB	260	0.0070	C	CARLSON BLVD						274.8	499.5	***	724.3
631.00		807.9 E	13	3.00	5.00	2RCB	530	0.0070	C	SAN PABLO AVE						274.8	492.0	***	713.1
632.00	802.0		13	3.25	6.50	RCB	190	0.0070		ADAMS ST		8.00	9.44			213.1	265.0	.	384.0
633.00			13	3.25	6.50	RCB	285	0.0010	C	CARLSON BLVD		9.46	9.86			80.6	265.0	****	384.0
634.00			13	3.25	6.50	RCB	140	0.0010		CARLSON BLVD		9.86	10.19	14.90	BM	80.6	265.0	****	384.0
635.00			13	4.00	8.00	RCB	220	0.0020		LASSEN ST		10.19	10.76			198.2	265.0	**	384.0
636.00		808.0	13	4.00	8.00	RCB	130	0.0070	C	SAN PABLO AVE		14.20	15.20	21.10	NB	370.7	265.0		384.0
637.00		809.0	13	3.00	5.00	RCB	40	0.0100	A	SAN PABLO AVE						164.2	286.3	***	414.8
638.00		810.0	13	3.00	5.00	RCB	200	0.0100	A	SAN PABLO AVE			17.83	23.30	MH	164.2	280.2	***	405.9
639.00		811.0	13	24.00		RCP	472	0.0045		SAN PABLO AVE		17.83	19.99	26.80	MH	15.2	37.6	****	54.4
639.20			13	24.00		RCP	150	0.0045		SAN PABLO AVE		19.99	20.67			15.2	33.7	****	48.4
639.30			13	24.00		RCP	650	0.0045		SAN PABLO AVE		20.67	23.59	29.20	BM	15.2	33.7	****	48.4
639.50			14	24.00		RCP	448	0.0045		SAN PABLO AVE		23.59	24.49	29.30	MH	15.2	33.7	****	48.4
640.00		812.9 E	14	24.00		RCP	448	0.0045		SAN PABLO AVE		24.49	26.63	30.40	MH	15.2	33.7	****	48.4
641.00	810.0	812.0	13	30.00		CMP	480	0.0045		SAN PABLO AVE				27.10	BM	14.9	35.2	****	50.8
642.00			13	27.00		VCP	780	0.0040	A	SAN PABLO AVE						19.6	33.7	***	48.4
643.00		813.0	14	24.00		VCP	690	0.0040	A	SAN PABLO AVE			25.50	31.00	MH	14.3	33.7	****	48.4
644.00			14	24.00		CMP	150	0.0130	A	SAN PABLO AVE		25.50				14.0	29.8	****	42.7
645.00			14	24.00		RCP	300	0.0130	A	SAN PABLO AVE	PR					25.8	29.8	.	42.7
646.00		814.9 E	14	24.00		RCP	40	0.0130	A	KEARNEY ST			32.05			25.8	29.8	.	42.7

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647.00	813.0	814.0	14	24.00		RCP	240	0.0180		EUREKA AVE		25.50	30.24	42.70	MH	30.4	22.0		31.7
648.00		815.0	14	24.00		RCP	362	0.0050		KEARNEY AVE		30.24	32.05			16.0	19.8	.	28.5
649.00		816.0	14				90	0.0200	E	KEARNEY AVE		32.05	33.80				31.8		45.6
649.10		E	14	12.00		RCP	260	0.0180	C	KEARNEY AVE		33.80	38.70			4.8			
650.00	816.0		14	30.00		RCP	430	0.0250	A	FAIRMONT SCH						64.9	32.7		46.8
651.00			14	24.00		CMP	28	0.0250	A	BART						19.4	32.7	***	46.8
652.00		817.0	14	24.00		VCP	43	0.0250	A	BART						35.8	32.7		46.8
653.00		818.0	14	21.00		CMP	65	0.0250	A	LIBERTY ST	PR					13.6	31.8	****	45.6
654.00		819.0	E 14	12.00		CMP	270	0.0310	E	LIBERTY ST			54.80	58.20	BM	3.4	5.0	EE	7.1
655.00	818.0		14	21.00		CMP	30	0.0250	A	LIBERTY ST						13.6	24.8	***	35.5
656.00		820.0	14	21.00		CMP	220	0.0250	A	LIBERTY ST	PR		55.10			13.6	24.8	***	35.5
657.00		821.0	14	15.00		RCP	250	0.0500	A	ELM ST		55.10	67.73	70.50	NB	14.4	10.6		15.1
658.00		822.0	15	15.00		RCP	260	0.0300	E	STOCKTON AVE		68.42		79.30	BM	11.2	8.6		12.3
659.00		823.0	E 15	12.00		RCP	230	0.0300	E	STOCKTON AVE				87.50	NB	6.2	6.4	E	9.1
660.00	820.0		14	21.00		CMP	4	0.0190	A	ELM ST		55.10				11.8	11.7		16.7
661.00			14	15.00		CMP	100	0.0190	A	ELM ST						4.8	11.7	****	16.7
662.00		824.0	15	15.00		CMP	235	0.0190	A	ELM ST	PR					4.8	11.7	****	16.7
663.00			15	15.00		CMP	140	0.0190	A	RICHMOND ST	PR					4.8	7.6	***	10.8
664.00			15	15.00		CMP	25	0.0190	A	EVERETT ST	PR					4.8	7.6	***	10.8
665.00			15	15.00			100	0.0190	A	EVERETT ST	PR		67.50	70.50	TC	4.8	7.6	***	10.8
666.00		825.0	15	12.00		RCP	30	0.0200	E	EVERETT ST		67.50	68.10	71.00	TC	5.0	7.6	EEE	10.8
667.00		826.0	E 15				260	0.0200	E	EVERETT ST	PR						4.0		5.6
668.00	810.0	827.0	13	3.00	5.00	RCB	215	0.0100	E	SAN PABLO AVE	PR					164.2	224.6	EE	324.7
669.00			13	2.50	6.00	RCB	50	0.0100	E	KEARNY ST			19.40	22.10	CB	157.7	227.9	EE	329.3
670.00			13	3.00	6.00	RCB	270	0.0085	A	KEARNY ST	PR					189.7	227.9	.	329.3
671.00		828.0	13	3.00	6.00	RCB	35	0.0085	A	LEXINGTON AVE			22.00			189.7	227.9	.	329.3
672.00		829.0	13	21.00		RCP	250	0.0090		LEXINGTON AVE		22.00	24.40	27.50	NB	15.0	20.5	**	29.6
673.00		E	13	18.00		RCP	55	0.0210		LEXINGTON AVE			25.60			15.2			
674.00	828.0	830.0	13	3.00	5.00	RCB	300	0.0220	C	LEXINGTON AVE	PR	22.00	28.70			243.6	206.3		298.1
675.00			13	4.00	6.00	RCB	100	0.0200	E	CENTRAL AVE						438.1	200.8		290.0
676.00			13	3.00	6.70	RCB	150	0.0200	E	CENTRAL AVE	PR					332.7	200.8		290.0
676.20			14	34.00	69.00	RCB	60	0.0200	E	OAK ST	PR					254.3	200.8		290.0
676.30			14	48.00	64.00	RCB	60	0.0200	E	OAK ST	PR					377.0	200.8		290.0
677.00		831.0	14	4.00	6.00	RCB	50	0.0200	E	OAK ST						438.1	200.8		290.0
678.00		832.0	14	4.50	8.00	RCB	80	0.0200	E	BART						742.1	200.2		289.1
679.00			14	40.00	40.00	RCB	60	0.0200	E	BART						159.1	194.3	.	280.6
680.00		833.0	14	4.00	6.00	RCB	135	0.0200	E	BART						438.1	194.3		280.6
681.00			14	3.00	5.00	RCB	360	0.0200	E	ELM ST	PR		50.10	54.20	TC	232.3	189.2		273.0

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DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
720.00			23	30.00		CMP	40	0.0800	E	TERRACE DR	PR					62.8	52.3		75.0
721.00			23			OPEN	220	0.1000	E	TERRACE DR	PR						52.3		75.0
722.00			24	30.00		CMP	110	0.1000	E	SEAVIEW DR	PR					70.3	52.3		75.0
723.00			24	30.00		CMP	50	0.1000	E	SEAVIEW DR						70.3	52.3		75.0
724.00		844.0	24	30.00		CMP	40	0.1000	E	SEAVIEW DR						70.3	52.3		75.0
725.00			24			OPEN	430	0.1000	E	SEAVIEW DR	PR						36.1		51.8
726.00		845.0	24	24.00		CMP	140	0.1000	E	SHEVLIN DR	PR					38.8	36.1		51.8
727.00			24	24.00		CMP	90	0.1000	E	SHEVLIN DR						38.8	30.3		43.4
728.00			24	24.00		RCP	210	0.1000	E	SHEVLIN DR						71.5	30.3		43.4
729.00			24			OPEN	80	0.1000	E	KING DR	PR						30.3		43.4
730.00		846.0	24	24.00		CMP	100	0.1000	E	KING DR	PR					38.8	30.3		43.4
731.00			24	18.00		RCP	60	0.0500	E	KING DR						23.5	17.7		25.4
732.00			24	18.00		RCP	140	0.0500	E	KING DR						23.5	17.7		25.4
733.00			24	18.00		RCP	105	0.0500	E	KING DR						23.5	17.7		25.4
734.00		847.0	24	18.00		RCP	60	0.0500	E	KING DR						23.5	17.7		25.4
735.00		848.0	24	15.00		RCP	350	0.1000	E	MOESER LN						20.4	15.0		21.4
736.00		849.0	24	15.00		RCP	320	0.1000	E	MOESER LN						20.4	12.9		18.4
737.00			24	12.00		RCP	110	0.1000	E	MOESER LN						11.3			
738.00			24	12.00		RCP	200	0.1000	E	MOESER LN						11.3			
739.00		E	24	12.00		RCP	170	0.1000	E	MOESER LN						11.3			
740.00	846.0		24	24.00		CMP	30	0.0500	E	KING DR						27.4	11.0		15.6
741.00			24	12.00		RCP	310	0.1000	E	KING DR						11.3	11.0		15.6
742.00		850.0 E	24	18.00		RCP	80	0.0500	E	KING DR						23.5	11.0		15.6
743.00	844.0		24			OPEN	250	0.0500	E	SEAVIEW DR	PR						10.9		15.6
744.00		851.0 E	24	24.00		CMP	100	0.0500	E	SHEVLIN DR						27.4	10.9		15.6
745.00	842.0		23			OPEN	175	0.0500	E	SEAVIEW DR	PR						54.1		77.6
746.00			23	48.00		CMP	70	0.0500	E	SEAVIEW DR	PR					174.0	54.1		77.6
747.00		852.0	23	48.00		CMP	25	0.0500	E	SEAVIEW DR						174.0	54.1		77.6
748.00			23	21.00		RCP	55	0.0500	E	HUBER PK						35.4			
749.00			23	18.00		RCP	80	0.0500	E	HUBER PK						23.5			
750.00		E	23	18.00		VCP	20	0.0500	E	HUBER PK						23.5			
751.00	852.0		23	48.00		CMP	25	0.0500	E	HUBER PK						174.0	35.9		51.5
752.00		853.0	23	21.00		VCP	160	0.0500	E	HUBER PK						35.4	35.9	E	51.5
753.00			23			OPEN	700	0.0500	E	HUBER PK							1.5		2.1
754.00		854.0 E	24	30.00		CMP	80	0.0500	E	SHELVIN DR						49.7	1.5		2.1
755.00	853.0		23			OPEN	570	0.0500	E	HUBER PK	PR						36.4		52.1
756.00		855.0	23	36.00		CMP	50	0.0500	E	TERRACE DR						80.8	36.4		52.1
757.00			23	24.00		CMP	270	0.1000	E	TERRACE DR	PR					38.8	34.0		48.6

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DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
758.00			24			OPEN	250	0.1000	E	TERRACE DR	PR						34.0		48.6
759.00		856.0	24	24.00		CMP	80	0.1000	E	CONTRA COSTA DR						38.8	34.0		48.6
760.00			24			OPEN	300	0.1000	E	CONTRA COSTA DR	PR						24.4		34.9
761.00		857.0	24	30.00		RCP	50	0.1000	E	BAY TREE LN	PR		564.00			129.7	24.4		34.9
762.00			24	15.00		RCP	400	0.0500	E	BAY TREE LN						14.4	14.5	E	20.7
763.00		858.0	24	15.00		RCP	60	0.0500	E	GELSTON PL						14.4	14.5	E	20.7
764.00		859.0	24	12.00		RCP	430	0.1000	E	GELSTON PL	PR					11.3	9.3		13.2
765.00			24	12.00		RCP	170	0.0500	E	BATES AVE						8.0			
766.00		E	24	0.50		CLAY	420	0.0500	E	ROBERTA AVE						0.7			
767.00	836.0		14	12.00		CMP	245	0.0200	E	EUREKA AVE						2.7	7.3	EEEE	10.4
768.00			14	12.00		CMP	50	0.0200	E	EUREKA AVE						2.7	7.3	EEEE	10.4
769.00			22	15.00		CMP	120	0.0200	E	EUREKA AVE						5.0	7.3	EE	10.4
770.00		860.0	22	15.00		CMP	40	0.0200	E	ASHBURY AVE						5.0	7.3	EE	10.4
771.00		E	22	10.00		CMP	250	0.0200	E	ASHBURY AVE				109.40	BM	1.7			
772.00	834.0	861.0	14	15.00		RCP	130	0.0200	E	LINCOLN AVE				62.10	BM	9.1	20.0	EEEE	28.6
773.00			14	15.00		RCP	260	0.0200	E	LINCOLN AVE				67.90	BM	9.1	12.1	EE	17.3
774.00			14	15.00			135	0.0200	E	NORVELL AVE						5.0	12.1	EEEE	17.3
775.00			14	15.00		CMP	105	0.0200	E	NORVELL AVE	ES					5.0	12.1	EEEE	17.3
776.00			14	15.00			130	0.0200	E	ALBEMARLE ST	ES					5.0	12.1	EEEE	17.3
777.00			14	15.00			90	0.0200	E	ALBEMARLE ST						5.0	12.1	EEEE	17.3
778.00		862.0	14	15.00			50	0.0200	E	ALBEMARLE ST						5.0	12.1	EEEE	17.3
779.00			14	15.00		CMP	300	0.0200	E	ALBEMARLE ST	PR					5.0	6.2	EE	8.8
780.00		863.0	E 14	15.00		CMP	35	0.0200	E	CLAYTON ST						5.0	6.2	EE	8.8
781.00	808.0		13	48.00		RCP	420	0.0060		FAIRMOUNT AVE		16.20	18.82			111.3	237.2	****	343.4
782.00			13	48.00		RCP	330	0.0260		FAIRMOUNT AVE		19.00	24.10			231.6	237.2	*	343.4
783.00			13	48.00		RCP	65	0.0100		FAIRMOUNT AVE		24.20	25.20			143.6	237.2	***	343.4
784.00		864.0	13	42.00		RCP	300	0.0220	A	FAIRMOUNT AVE						149.2	237.2	***	343.4
784.20			13	42.00		RCP	280	0.0220	A	FAIRMOUNT AVE			38.40			149.2	236.9	***	342.5
785.00			13	42.00		RCP	260	0.0080		RICHMOND ST		38.40	41.10	47.80	MH	90.0	236.9	****	342.5
786.00		865.0	13	42.00		RCP	310	0.0060		RICHMOND ST		41.30				77.9	236.9	****	342.5
787.00		866.0	14	36.00		RCP	90	0.0200	E	RICHMOND ST			43.10	49.30	MH	94.3	222.3	EEEE	321.5
787.20			14	18.00		RCP	130	0.0130	C	RICHMOND ST		44.10	45.80	48.60	TC	12.0			
787.30		E	14	18.00		RCP	40	0.0100	C	RICHMOND ST		45.80	46.20	48.90	TC	10.5			
788.00	866.0		14	36.00		RCP	280	0.0280	A	RICHMOND ST	PR					111.6	222.0	***	320.9
789.00		867.0	14	42.00		RCP	250	0.0280	A	EVERETT ST	PR					168.4	222.0	**	320.9
790.00			14	36.00		RCP	30	0.0280	A	NORVELL ST						111.6	220.7	***	318.9
791.00			14	36.00		RCP	250	0.0280	A	NORVELL ST	PR					111.6	220.7	***	318.9
792.00		868.0	14	36.00		RCP	30	0.0280	A	ALBEMARLE ST						111.6	220.7	***	318.9

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793.00			14	36.00		RCP	250	0.0280	A	ALBEMARLE ST	PR					111.6	221.0	***	319.3
794.00		869.0	22	36.00		RCP	50	0.0280	A	CLAYTON ST						111.6	221.0	***	319.3
795.00			22			OPEN	200	0.0280	A	CLAYTON ST	PR						221.7		320.1
796.00			22	42.00		RCP	210	0.0200		ASHBURY AVE	PR		85.90			142.3	221.7	***	320.1
797.00		870.0	22	42.00		RCP	80	0.0320		ASHBURY AVE		85.90	88.50			180.0	221.7	.	320.1
798.00		871.0	22	36.00		RCP	510	0.0300		EL CERRITO HS		88.50	104.00			115.5	85.9		123.5
799.00			22	30.00		RCP	280	0.0400		EL CERRITO HS			119.00			82.0	69.5		99.9
800.00			22	30.00		RCP	65	0.1020		EL CERRITO HS			126.00			131.0	69.5		99.9
801.00		872.0	22	30.00		RCP	70	0.0500	E	EUREKA AVE						91.7	69.5		99.9
802.00			23	30.00		RCP	100	0.0500	E	EUREKA AVE	PR					91.7	69.0		99.1
803.00			23			OPEN	240	0.1000	E	EUREKA AVE	PR						69.0		99.1
804.00		873.0	23	30.00		CMP	110	0.1000	E	COLUSA AVE						70.3	69.0		99.1
805.00			23			OPEN	440	0.1000	E	COLUSA AVE	PR						65.2		93.6
806.00		874.0	23	30.00		CMP	80	0.1000	E	BALRA AVE						70.3	65.2		93.6
807.00		875.0	23			OPEN	60	0.1000	E	BALRA AVE	PR						57.9		83.1
808.00			23	10.00		TILE	35	0.1000	E	BALRA DR	PR					6.9	11.7	EEE	16.7
809.00			23			OPEN	360	0.1000	E	BALRA DR							11.7		16.7
810.00		876.0	23	30.00		CMP	50	0.1000	E	SEAVIEW DR						70.3	11.7		16.7
811.00			23	12.00		RCP	70	0.1000	E	SEAVIEW DR	PR					11.3	8.2		11.7
812.00			23			OPEN	22	0.1000	E	SEAVIEW DR	PR						8.2		11.7
813.00			23				18	0.1000	E	SEAVIEW DR	PR						8.2		11.7
814.00			23			OPEN	80	0.1000	E	SEAVIEW DR	PR						8.2		11.7
815.00			23	15.00		RCP	170	0.1000	E	TERRACE DR	PR					20.4	8.2		11.7
816.00		877.0	E 23	30.00		RCP	30	0.1000	E	HANCOCK WAY						129.7	8.2		11.7
817.00	875.0		23	24.00		CMP	100	0.1000	E	BALRA AVE	PR					38.8	49.6	EE	71.1
818.00			23			OPEN	150	0.1000	E	EUREKA AVE	PR						49.6		71.1
819.00			23	30.00		CMP	80	0.1000	E	EUREKA AVE	PR					70.3	49.6		71.1
820.00			23			OPEN	20	0.1000	E	SEAVIEW DR	PR						49.6		71.1
821.00			23	30.00		CMP	40	0.1000	E	SEAVIEW DR	PR					70.3	49.6		71.1
822.00		878.0	23	30.00		CMP	40	0.1000	E	SEAVIEW DR						70.3	49.6		71.1
823.00		879.0	23	30.00		CMP	300	0.1000	E	SEAVIEW DR	PR					70.3	43.3		62.1
824.00			23	30.00		CMP	60	0.1000	E	MIDCREST WAY						70.3	38.9		55.7
825.00			23			OPEN	80	0.1000	E	MIDCREST WAY	PR						38.9		55.7
826.00			23	24.00		CMP	100	0.1000	E	EUREKA AVE	PR					38.8	38.9	E	55.7
827.00		880.0	E 23	24.00		CMP	450	0.1000	E	EUREKA AVE	PR					38.8	38.9	E	55.7
828.00	871.0		22	18.00		CMP	240	0.1000	E	EL CERRITO HS		106.33				18.0	21.3	.	30.4
829.00		881.0	22	24.00		CMP	120	0.1000	E	COLUSA AVE	PR					38.8	21.3		30.4
830.00			22	36.00		CMP	100	0.1000	E	COLUSA AVE	PR					114.3	18.1		25.8

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831.00			22	36.00		CMP	220	0.1000	E	BONNIE DR	PR					114.3	18.1		25.8
832.00			22	36.00		CMP	190	0.1000	E	BONNIE DR	PR					114.3	18.1		25.8
833.00		882.0	22	36.00		CMP	50	0.1000	E	ERROL DR	PR					114.3	18.1		25.8
834.00			22	36.00		CMP	70	0.1000	E	ERROL DR						114.3	7.0		9.9
835.00			22	30.00		CMP	180	0.1000	E	BALRA DR	PR					70.3	7.0		9.9
836.00			22	30.00		CMP	100	0.1000	E	ERROL DR						70.3	7.0		9.9
837.00			22	36.00		CMP	440	0.1000	E	ERROL DR	PR					114.3	7.0		9.9
838.00		883.0 E	22	24.00		CMP	150	0.1000	E	SEAVIEW DR	PR					38.8	7.0		9.9
839.00	870.0	883.7 E	22	24.00		VCP	600	0.0200		EL CERRITO HS		88.50				32.0	40.2	**	58.0
840.00	870.0	883.8	22	36.00		RCP	600	0.0120		EL CERRITO HS		88.50	90.10			73.1	93.8	**	135.4
841.00		884.0	22	2.70	3.30	RCB	110	0.1000	E	COLUSA AVE	PR					264.1	134.3		193.7
842.00			22	36.00		CMP	65	0.1000	E	COLUSA AVE						114.3	120.6	E	173.9
843.00			22	36.00		CMP	40	0.1000	E	COLUSA AVE			111.80			114.3	120.6	E	173.9
844.00			22	36.00		CMP	120	0.1000	E	COLUSA AVE	PR					114.3	120.6	E	173.9
845.00			22	30.00		CMP	150	0.1000	E	BONNIE DR	PR					70.3	120.6	EEE	173.9
846.00		885.0	22			OPEN	140	0.1000	E	BONNIE DR	PR						120.6		173.9
847.00			22	36.00		CMP	50	0.1000	E	BALRA DR						114.3	117.0	E	168.7
848.00		886.0	22	36.00		CMP	30	0.1000	E	BALRA DR						114.3	117.0	E	168.7
849.00		887.0	22	30.00		IP	230	0.1000	E	BALRA DR	PR					70.3	114.4	EEE	164.8
850.00			22	30.00		CMP	110	0.1000	E	VILLAGE DR	PR					70.3	112.6	EEE	162.2
851.00			22			OPEN	50	0.1000	E	SEAVIEW DR	PR						112.6		162.2
852.00			22	30.00		CMP	70	0.1000	E	SEAVIEW DR	PR					70.3	112.6	EEE	162.2
853.00		888.0 E	22	30.00		CMP	60	0.1000	E	SEAVIEW DR						70.3	112.6	EEE	162.2
854.00	884.0		22	10.00		VCP	110	0.1000	E	COLUSA AVE	PR		115.70	119.40	CB	6.9	11.1	EEE	15.8
855.00		889.0	22	10.00		VCP	120	0.0800	E	SUSAN AVE						6.2	11.1	EEE	15.8
856.00			22	18.00		CMP	350	0.0800	E	BONNIE DR	PR					16.1	7.7		11.0
857.00		890.0	22	15.00		VCP	30	0.0800	E	BALRA DR						18.3	7.7		11.0
858.00			22	15.00		CMP	190	0.0800	E	BALRA DR	PR					9.9	4.1		5.9
859.00		891.0 E	22				30	0.0800	E	VILLAGE DR				182.50	BM		4.1		5.9
860.00	865.0		14	18.00		CMP	280	0.0250	E	CENTRAL AVE				57.60	NB	9.0	16.3	EEE	23.5
861.00		892.0	14	18.00		CMP	260	0.0250	E	CENTRAL AVE				63.40	NB	9.0	16.3	EEE	23.5
862.00		893.0	14	18.00		CMP	250	0.0250	E	CENTRAL AVE				69.60	BM	9.0	14.3	EEE	20.6
863.00			22	18.00		CMP	260	0.0250	E	CENTRAL AVE			72.40	74.80		9.0	3.6		5.2
864.00		894.0	22	18.00		CMP	290	0.0320	C	CENTRAL AVE		72.40	81.65	87.20	BM	10.2	3.6		5.2
865.00		E	22	15.00		RCP	230	0.0120		ASHBURY AVE		81.65	84.80			7.1			
866.00	808.0		13	4.00	5.00	RCB	560	0.0150	A	FAIRMOUNT AVE						300.4	250.8		363.1
867.00		895.0	13	4.00	5.00	RCB	390	0.0150	A	FAIRMOUNT AVE						300.4	250.8		363.1
868.00			13	30.00		RCP	160	0.0150	A	FAIRMOUNT AVE						50.2	7.1		10.2

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
869.00		896.0 E	13	30.00		RCP	280	0.0150	A	FAIRMOUNT AVE			36.40			50.2	7.1		10.2
869.10			13	30.00		RCP	30	0.0300	C	FAIRMOUNT AVE		36.40	37.30	45.90	MH	71.0			
869.20		E	13	24.00		RCP	50	0.0200	E	RICHMOND ST		40.10				32.0			
870.00	895.0		13	4.00	4.00	RCB	30	0.0200	E	EL CERRITO PLAZA	PR					258.7	230.7		333.8
871.00			13	36.00		2RCP	460	0.0200	E	EL CERRITO PLAZA	PR					188.7	230.7	.	333.8
872.00			13	18.00	60.00	CMPA	40	0.0200	E	BART						45.5	230.7	EEEE	333.8
873.00			13	48.00		CMP	120	0.0200	E	CORONADO ST	PR					110.0	230.7	EEEE	333.8
874.00		897.0	13	48.00		CMP	30	0.0200	E	CORONADO ST						110.0	230.7	EEEE	333.8
875.00			13	48.00		CMP	250	0.0200	E	CORONADO ST	PR					110.0	229.7	EEEE	332.1
876.00			13	48.00		CMP	30	0.0200	E	VICTORIA PL						110.0	229.7	EEEE	332.1
877.00			13	48.00		CMP	120	0.0200	E	VICTORIA PL	PR					110.0	229.7	EEEE	332.1
878.00			21	4.00	4.00	RCB	135	0.0200	E	BEHRENS AVE	PR		60.40			258.7	229.7		332.1
879.00			21	4.00	5.00	RCB	50	0.0200	C	BEHRENS AVE		60.40	61.39			346.8	229.7		332.1
880.00		898.0	21	3.40	4.00	RCB	135	0.0440	C	BEHRENS AVE	PR	61.39	67.37			308.2	229.7		332.1
881.00		899.0	21	3.00	4.00	RCB	380	0.0168	C	HARDING SCH		67.37	73.75	83.75	TC	160.4	228.1	**	329.6
882.00		900.0	21	18.00		RCP	260	0.0153		ASHBURY AVE			81.40	86.32	MH	13.0	34.7	****	49.5
883.00			21	15.00		RCP	70	0.0300	E	FAIRMOUNT AVE		81.40				11.2	26.5	EEEE	37.7
884.00			21	15.00		RCP	660	0.0309		FAIRMOUNT AVE						11.4	26.5	****	37.7
885.00			22	15.00		CMP	40	0.0300	E	FAIRMOUNT AVE						6.1	26.5	EEEE	37.7
886.00		901.0	22	21.00		RCP	55	0.0300	E	FAIRMOUNT AVE						27.4	26.5		37.7
887.00		902.0 E	22	12.00		RCP	80	0.0300	E	COLUSA AVE						6.2	2.5		3.5
888.00	899.0		21	3.00	4.00	RCB	60	0.0230	C	ASHBURY AVE		73.75	75.15			187.7	207.2	.	299.2
889.00			21	3.00	3.00	RCB	150	0.0300	C	ASHBURY AVE		75.15	79.75			147.1	207.2	**	299.2
890.00		903.0	21	36.00		RCP	230	0.0260	C	ASHBURY AVE	PR	79.75	85.80			107.6	207.2	***	299.2
891.00			21	36.00		RCP	40	0.0240	C	POMONA AVE		85.80	86.75			103.3	208.2	****	300.6
892.00			21	36.00		RCP	225	0.0372		POMONA AVE	PR		95.72	99.70	CB	128.6	208.2	***	300.6
893.00			21	48.00		RCP	30	0.0430	C	RAMONA AVE		95.72	97.00	100.30	CB	297.9	208.2		300.6
893.10			21	36.00		RCP	20	0.0300	E	RAMONA AVE						115.5	208.2	EEE	300.6
894.00			21	36.00		RCP	97	0.0150		RAMONA AVE	ES		98.50	101.90		81.7	208.2	****	300.6
894.10			21	36.00		RCP	18	0.0600	C	RAMONA AVE		98.50	99.60	102.80	CB	163.4	208.2	**	300.6
895.00			22	36.00		VCP	110	0.0450	C	CARMEL AVE	PR	99.60	104.54	110.74	CB	141.5	208.2	**	300.6
896.00		904.0	22	36.00		RCP	32	0.0280		CARMEL AVE		104.54	105.45	111.25	CB	111.6	208.2	***	300.6
897.00			22	36.00		RCP	125	0.0140		PK		105.45	107.30			78.9	204.1	****	294.6
898.00			22	36.00		RCP	40	0.0750	C	COLUSA AVE		107.30	110.29	120.14	MH	182.7	204.1	.	294.6
898.20		905.0 E	22	4.00	4.00	RKW	75	0.0500	E	COLUSA AVE						221.5	204.1		294.6
899.00	802.0		13			OPEN	400			CERRITO CR							255.5		371.2
900.00			13	4.00	7.00	RCB	420	0.0180		SAN PABLO AVE			18.40			504.3	255.5		371.2
901.00		906.0	13			OPEN	270	0.0150	C	EL CERRITO PLAZA							255.5		371.2

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
902.00			13			OPEN	160	0.0150	C	EL CERRITO PLAZA			25.30				246.5		357.6
903.00			13	4.00	6.00	RCB	100	0.0130		CORNELL AVE		25.30	26.60			353.2	246.5		357.6
904.00			13			OPEN	400	0.0030	C	EL CERRITO PLAZA		26.60	27.80				246.5		357.6
905.00			13	42.00		2RCP	280	0.0580	C	EL CERRITO PLAZA		27.80	44.00			484.6	246.5		357.6
906.00		907.0	21	6.00	7.50	RCB	60	0.0400	C	BART		44.00	46.35			1446.1	246.5		357.6
907.00		908.0	21	24.00		VCP	600	0.0160	C	ALBANY SCH		46.35	56.00			28.6	86.7	****	124.4
908.00		909.0	21	24.00		VCP	520	0.0230	C	BEHRENS AVE		56.00	68.00			34.3	73.9	****	106.0
909.00		910.0	21	21.00		VCP	250	0.0430	C	LYNN AVE		68.00	78.80			32.9	60.5	***	86.7
909.20			21	24.00		RCP	112	0.0266		LYNN AVE		78.80				36.9	43.6	.	62.4
910.00		911.0	21	21.00		RCP	144	0.0260		LYNN AVE			86.00			25.6	43.6	***	62.4
911.00		912.0	21	21.00		RCP	240	0.0400		LYNN AVE			96.00			31.7	35.2	.	50.4
912.00		913.0	21	21.00		RCP	160	0.0550		LYNN AVE						37.2	26.6		38.1
913.00			21	21.00		RCP	280	0.0770	C	LYNN AVE			126.40	132.60	BM	44.0	14.5		20.7
914.00		914.0	21	27.00		RCP	44	0.0090	C	COLUSA AVE			126.80			29.4	14.5		20.7
915.00			21	27.00		RCP	200	0.0080		COLUSA AVE		128.60	130.30			27.7			
916.00			21	27.00		RCP	60			VALLEY RD		131.50	131.85			43.8			
917.00		E	21	27.00		RCP	30			VALLEY RD			132.00			43.8			
918.00	907.0		21	42.00		2RCP	550	0.0200	E	ALBANY SCH						284.6	182.3		264.1
919.00			21			OPEN	20	0.0200	E	BEHRENS AVE							182.3		264.1
920.00			21	3.00	5.00	RCB	20	0.0200	E	BEHRENS AVE						232.3	182.3		264.1
921.00			21			OPEN	20	0.0200	E	BEHRENS AVE							182.3		264.1
922.00			21	3.50	5.00	RCB	210	0.0200	E	BEHRENS AVE				71.90	NB	288.4	182.3		264.1
923.00			21			OPEN	120	0.0200	E	BEHRENS AVE							182.3		264.1
924.00			21	4.00	5.00	RCB	150	0.0200	E	ASHBURY AVE				80.11	CB	346.8	182.3		264.1
925.00			21			OPEN	220	0.0200	E	ASHBURY AVE							182.3		264.1
926.00		915.0	21	4.00	5.00	RCB	60	0.0200	E	POMONA AVE						346.8	182.3		264.1
927.00			21			OPEN	200	0.0200	E	POMONA AVE							183.8		266.0
928.00			21	4.00	4.50	RCB	90	0.0200	E	RAMONA AVE						302.3	183.8		266.0
929.00			21			OPEN	200	0.0200	E	RAMONA AVE							183.8		266.0
930.00			21	3.00	5.00	RCB	50	0.0200	E	CARMEL AVE						232.3	183.8		266.0
931.00			21			OPEN	170	0.0200	E	CARMEL AVE			96.60				183.8		266.0
932.00			21	3.50	5.00	RCB	50	0.0200	E	SAN CARLOS AVE			97.60			288.4	183.8		266.0
933.00		916.0 E	21			OPEN	270	0.0200	E	SAN CARLOS AVE							183.8		266.0
934.00			28	12.00		CMP	140	0.0500	E	ARLINGTON BLVD	PR					4.3			
935.00			28	10.00		VCP	160	0.0500	E	CRAFT AVE	PR					4.9			
936.00			28	24.00		CMP		0.0500	E	CRAFT AVE						27.4			
937.00			28	24.00		CMP	30	0.0500	E	CRAFT AVE						27.4			
938.00			28	12.00		CMP	190	0.0500	E	CRAFT AVE						4.3			

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DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW
939.00		E	28	12.00		CMP	35	0.0500	E	CRAFT AVE						4.3			

HYDROLOGY DATABASE LISTING

FILE ELCHYD.DBF

JUNCTION NO.	LOCAL AREA (ac)	TOTAL AREA (ac)	COEF AREA (ac)	ROOF TIME (min)	RUNOFF COEF	LENGTH OPEN (ft)	SLOPE OPEN	LENGTH GUTTER (ft)	SLOPE GUTTER	TIME CONC (min)	10-YR FLOW (cfs)	100-YR FLOW (cfs)
100.0		108.78	54.40							15.0	101.9	146.9
101.0	1.42	108.78	54.40		0.50					14.8	101.9	146.9
102.0	5.72	107.36	53.69		0.50					14.6	101.2	145.8
103.0		95.42	47.72							14.2	91.2	131.4
104.0	6.63	81.15	40.58		0.50					14.1	77.9	112.1
105.0	74.52	74.52	37.26	14	0.50					14.0	71.7	103.2
106.0	2.00	14.27	7.14		0.50					9.3	16.6	23.8
107.0	2.53	12.27	6.14		0.50					9.2	14.4	20.6
108.0	1.72	9.74	4.87		0.50					8.7	11.7	16.8
109.0	1.97	8.02	4.01		0.50					7.9	10.1	14.5
110.0	2.30	6.05	3.03		0.50					7.2	8.0	11.4
111.0	2.23	3.75	1.88		0.50					6.7	5.1	7.3
112.0	1.52	1.52	0.76	5	0.50			250	0.0500	5.9	2.2	3.1
113.0	1.17	6.22	3.11		0.50					9.2	7.3	10.5
114.0	5.05	5.05	2.53	5	0.50			1000	0.0500	8.7	6.1	8.7
200.0		136.26	61.21							21.9	96.7	140.0
201.0	3.42	136.26	61.21		0.50					21.2	96.7	140.0
202.0		132.84	59.50							21.2	94.0	136.2
203.0	1.40	117.34	53.51		0.35					21.0	84.9	122.9
204.0	1.68	115.94	53.02		0.50					20.6	84.9	122.9
205.0	5.14	114.26	52.18		0.50					20.0	84.7	122.6
206.0	4.84	4.84	2.42	5	0.50			900	0.0650	7.9	6.1	8.7
207.0	1.86	104.28	47.19		0.50					19.6	77.4	111.9
208.0	9.14	102.42	46.26		0.50					19.5	76.0	110.0
209.0	4.82	93.28	41.69		0.50					19.3	68.9	99.6
210.0	15.38	88.46	39.28		0.40					18.9	65.6	94.9
211.0		73.08	33.13							18.8	55.4	80.1
212.0	3.81	3.81	1.91	5	0.50			950	0.0400	9.0	4.5	6.5
213.0		69.27	31.22							18.7	52.4	75.8
214.0	2.30	10.57	5.29		0.50					9.6	12.2	17.4
215.0	2.02	8.27	4.14		0.50					8.6	10.0	14.3
216.0	4.09	6.25	3.13		0.50					7.5	8.1	11.6
217.0	2.16	2.16	1.08	5	0.50			450	0.0500	6.7	3.0	4.2
218.0		58.70	25.93							18.3	43.9	63.5
219.0	3.05	29.22	14.61		0.50					18.2	24.8	35.8
220.0	4.32	26.17	13.09		0.50					17.0	22.9	33.1
221.0	21.85	21.85	10.93		0.50	1900	0.0850			15.8	19.8	28.6
222.0	3.44	29.48	11.32		0.50					12.7	22.8	32.7
223.0	3.24	26.04	9.60		0.50					12.0	19.9	28.5
224.0	22.80	22.80	7.98		0.35	1650	0.1200			11.6	16.8	24.1
225.0	8.82	15.50	5.99		0.30					8.4	14.7	21.0
226.0	2.98	6.68	3.34		0.50					7.3	8.7	12.4
227.0	3.70	3.70	1.85	5	0.50			550	0.0800	6.6	5.1	7.2
300.0		106.77	49.66							16.9	90.5	130.5
302.0	1.58	106.77	49.66		0.50					15.7	90.5	130.5
303.0	3.17	3.17	1.59	5	0.50			700	0.0500	7.6	4.1	5.8
304.0	3.28	102.02	47.28		0.50					15.5	86.6	124.8
305.0	3.33	98.74	45.64		0.50					15.3	84.3	121.5
306.0	5.19	95.41	43.98		0.50					14.9	82.1	118.2
307.0		90.22	41.38							14.7	77.7	111.9
308.0		5.58	2.79							7.8	7.1	10.1
309.0	2.96	2.96	1.48	5	0.50			650	0.0500	7.4	3.9	5.5
310.0	2.62	2.62	1.31	5	0.50			300	0.0500	6.1	3.7	5.3
311.0	4.59	29.14	14.57		0.50					10.9	31.6	45.3
312.0	2.85	24.55	12.28		0.50					10.6	27.0	38.7

JUNCTION NO.	LOCAL AREA (ac)	TOTAL AREA (ac)	COEF AREA (ac)	ROOF TIME (min)	RUNOFF COEF	LENGTH OPEN (ft)	SLOPE OPEN	LENGTH GUTTER (ft)	SLOPE GUTTER	TIME CONC (min)	10-YR FLOW (cfs)	100-YR FLOW (cfs)
313.0	4.71	21.70	10.85		0.50					10.0	24.5	35.0
314.0	3.47	16.99	8.50		0.50					9.5	19.7	28.2
315.0	5.65	13.52	6.76		0.50					9.0	16.0	22.9
316.0	4.45	7.87	3.94		0.50					8.6	9.5	13.6
317.0	3.42	3.42	1.71	5	0.50			950	0.0600	8.2	4.2	6.0
318.0	12.01	55.50	24.02		0.50					13.6	46.8	67.4
319.0	1.61	1.61	0.81	5	0.50			350	0.0500	6.3	2.3	3.2
320.0		41.88	17.21							13.1	34.2	49.2
321.0	3.26	3.26	1.63	5	0.50			550	0.0500	7.1	4.3	6.2
322.0	3.28	38.62	15.58		0.50					12.5	31.6	45.4
323.0	3.08	35.34	13.94		0.50					12.2	28.6	41.1
324.0	1.63	32.26	12.40		0.50					12.0	25.7	36.9
325.0	4.02	30.63	11.58		0.50					11.8	24.2	34.7
326.0	7.94	26.61	9.57		0.50					11.4	20.3	29.2
327.0	7.19	18.67	5.60		0.30					10.6	12.3	17.6
328.0	11.48	11.48	3.44		0.30	1250	0.1300			8.4	8.4	12.0
400.0		197.35	103.36							20.2	168.7	244.1
402.0		197.35	103.36							19.8	168.7	244.1
403.0	9.23	197.35	103.36		0.50					19.2	171.1	247.5
404.0	11.46	188.12	98.75		0.50					17.2	172.3	248.8
405.0	2.57	176.66	93.02		0.50					16.9	163.7	236.2
405.9		34.82	18.35							16.3	32.8	47.4
406.0	6.84	139.27	73.38		0.50					16.3	131.3	189.4
407.0	4.45	75.25	37.63		0.50					15.7	68.5	98.7
408.0	18.09	70.80	35.41		0.50					14.3	67.5	97.1
409.0		52.71	26.36							13.9	50.9	73.3
410.0	1.42	31.13	15.57		0.50					13.7	30.2	43.5
411.0	6.04	29.71	14.86		0.50					12.8	29.8	42.8
412.0	4.04	4.04	2.02	5	0.50			800	0.0750	7.4	5.3	7.5
413.0	2.34	19.63	9.82		0.50					12.4	20.0	28.7
414.0	6.52	17.29	8.65		0.50					11.8	18.0	25.9
415.0	8.47	10.77	5.39		0.50					10.8	11.7	16.8
416.0	2.30	2.30	1.15	5	0.50			850	0.0200	10.0	2.6	3.7
417.0	9.53	21.58	10.79		0.50					11.7	22.6	32.4
418.0	7.23	12.05	6.03		0.50					11.1	12.9	18.6
419.0	4.82	4.82	2.41	5	0.50			1300	0.0600	9.4	5.6	8.0
420.0	10.38	92.00	50.68		0.95					14.2	96.7	139.3
421.0	13.15	81.62	40.82		0.50					12.8	81.9	117.7
422.0	5.39	68.47	34.24		0.50					12.4	69.7	100.1
423.0	9.27	63.08	31.55		0.50					11.8	65.8	94.5
424.0		53.81	26.91							11.2	57.5	82.5
425.0	2.80	2.80	1.40	5	0.50			500	0.0500	6.9	3.8	5.4
426.0	5.28	51.01	25.51		0.50					10.7	55.9	80.1
427.0	5.14	45.73	22.87		0.50					10.3	50.8	72.8
428.0	8.72	40.59	20.30		0.50					10.0	45.8	65.5
429.0	2.85	31.87	15.94		0.50					9.6	36.8	52.6
430.0		29.02	14.52							9.4	33.8	48.3
431.0	7.92	9.99	5.00		0.50					7.5	12.9	18.4
432.0	2.07	2.07	1.04	5	0.50			750	0.0850	7.1	2.7	3.9
433.0	6.13	19.03	9.52		0.50					9.2	22.4	32.0
434.0		12.90	6.45							9.0	15.3	21.8
435.0	8.84	8.84	4.42	5	0.50			1250	0.0900	8.5	10.8	15.4
436.0	4.06	4.06	2.03	5	0.50			500	0.1600	6.0	5.8	8.3
500.0		240.86	112.77							22.2	175.7	254.5
502.0		240.86	112.77							21.9	175.7	254.5
503.0	8.52	8.52	4.26	5	0.50			900	0.0200	10.3	9.5	13.6

JUNCTION NO.	LOCAL AREA (ac)	TOTAL AREA (ac)	COEF AREA (ac)	ROOF TIME (min)	RUNOFF COEF	LENGTH OPEN (ft)	SLOPE OPEN	LENGTH GUTTER (ft)	SLOPE GUTTER	TIME CONC (min)	10-YR FLOW (cfs)	100-YR FLOW (cfs)
504.0	6.24	232.34	108.51		0.50					21.5	170.4	246.8
505.0		226.10	105.39							20.6	168.9	244.5
506.0	15.54	226.10	105.39		0.50					20.4	169.7	245.6
507.0	3.88	169.95	77.31		0.50					19.7	126.4	182.9
508.0		166.07	75.37							19.0	125.6	181.5
509.0	3.05	132.78	58.72		0.50					18.8	98.2	142.0
510.0	2.55	129.73	57.20		0.50					18.2	97.2	140.4
511.0	3.54	127.18	55.92		0.50					18.0	95.5	137.9
512.0	1.38	1.38	0.69	5	0.50			500	0.0500	6.9	1.9	2.7
513.0	2.50	122.26	53.46		0.50					17.6	92.4	133.4
514.0	7.23	119.76	52.21		0.50					17.3	90.9	131.3
515.0	2.59	112.53	48.60		0.50					16.8	85.9	123.9
516.0	2.02	109.94	47.30		0.50					16.6	84.0	121.2
517.0	3.83	107.92	46.29		0.50					16.4	82.7	119.3
518.0		104.09	44.38							16.3	79.3	114.4
519.0	11.71	11.71	5.86	5	0.50			1100	0.1000	7.9	14.8	21.1
520.0	19.83	92.38	38.52		0.50					16.0	69.7	100.4
521.0	6.70	45.16	20.38		0.50					13.4	40.1	57.6
522.0		38.46	17.03							12.8	34.2	49.1
523.0	5.58	5.58	2.79	5	0.50			850	0.0700	7.7	7.1	10.2
524.0	3.79	32.88	14.24		0.50					12.5	28.9	41.5
525.0	3.65	29.09	12.35		0.50					12.0	25.5	36.6
526.0	4.78	4.78	2.39	5	0.50			800	0.1000	7.1	6.3	9.0
527.0	2.59	20.66	8.13		0.50					11.7	17.1	24.5
528.0	11.00	18.07	6.84		0.30					11.4	14.5	20.8
529.0	7.07	7.07	3.54	5	0.50			1300	0.0500	9.8	8.0	11.5
530.0	27.39	27.39	8.22		0.30	1750	0.1100			12.8	16.5	23.7
531.0		33.29	16.65							15.0	31.1	44.7
532.0	3.28	3.28	1.64	5	0.50			800	0.0250	9.2	3.9	5.5
533.0	1.31	30.01	15.01		0.50					13.8	29.1	41.8
534.0	12.33	28.70	14.36		0.50					12.9	28.7	41.2
535.0		16.37	8.19							12.4	16.7	24.0
536.0	3.79	13.66	6.83		0.50					7.4	17.7	25.3
537.0	9.87	9.87	4.94	5	0.50			500	0.1000	6.3	13.8	19.7
538.0	2.71	2.71	1.36	5	0.50			1250	0.0300	11.0	2.9	4.2
539.0		40.61	20.31							15.7	37.0	53.3
540.0	12.65	12.65	6.33	5	0.50			650	0.0030	14.9	11.8	17.0
541.0	8.29	27.96	13.98		0.50					10.1	31.4	44.9
542.0	4.41	19.67	9.84		0.50					9.5	22.7	32.5
543.0	5.90	15.26	7.63		0.50					9.1	18.0	25.8
544.0	4.98	9.36	4.68		0.50					8.6	11.4	16.2
545.0	4.38	4.38	2.19	5	0.50			650	0.0300	8.1	5.5	7.8
600.0		311.51	143.67							20.5	236.7	342.4
602.0	3.26	311.51	143.67		0.50					19.4	236.7	342.4
603.0	3.60	291.56	133.69		0.50					18.9	223.2	322.6
604.0	0.57	206.21	91.94		0.50					18.2	156.3	225.8
605.0	0.62	205.64	91.65		0.50					17.9	157.0	226.8
606.0	3.56	205.02	91.34		0.50					17.2	159.3	230.0
607.0		201.46	89.56							16.7	158.5	228.7
608.0	5.42	5.42	2.71	5	0.50			850	0.0600	7.9	6.8	9.8
609.0	11.09	196.04	86.85		0.50					16.7	153.9	222.0
610.0		62.22	31.11							16.4	55.5	80.1
611.0		62.22	31.11							16.2	55.9	80.7
612.0	2.80	2.80	1.40	5	0.50			500	0.0450	7.0	3.8	5.3
613.0	4.52	59.42	29.71		0.50					15.8	54.0	77.9
614.0	11.25	54.90	27.45		0.50					15.6	50.2	72.4

JUNCTION NO.	LOCAL AREA (ac)	TOTAL AREA (ac)	COEF AREA (ac)	ROOF TIME (min)	RUNOFF COEF	LENGTH OPEN (ft)	SLOPE OPEN	LENGTH GUTTER (ft)	SLOPE GUTTER	TIME CONC (min)	10-YR FLOW (cfs)	100-YR FLOW (cfs)
615.0	8.20	43.65	21.83		0.50					14.9	40.8	58.8
616.0	11.43	35.45	17.73		0.50					14.7	33.3	48.0
617.0		24.02	12.01							14.4	22.8	32.8
618.0	6.82	6.82	3.41	5	0.50			1050	0.0500	8.9	8.1	11.6
619.0	12.49	17.20	8.60		0.50					13.9	16.6	23.9
620.0	4.71	4.71	2.36	5	0.50			1650	0.0400	11.9	4.9	7.0
621.0	4.04	116.67	47.16		0.50					12.3	96.6	138.7
622.0		112.63	45.14							12.1	93.2	133.8
623.0	8.65	86.28	37.23		0.50					11.9	77.5	111.3
624.0		77.63	32.91							11.5	69.6	99.9
625.0	16.05	58.28	25.94		0.30					11.5	54.9	78.7
626.0		42.23	21.12							10.0	47.7	68.3
627.0	17.03	42.23	21.12		0.50					9.5	48.8	69.8
628.0	9.27	25.20	12.61		0.50					8.7	30.3	43.3
629.0		15.93	7.97							7.5	20.6	29.3
630.0	4.06	4.06	2.03	5	0.50			750	0.0800	7.2	5.4	7.6
631.0		11.87	5.94							7.4	15.4	22.0
632.0	3.03	3.03	1.52	5	0.50			200	0.0500	5.8	4.4	6.3
633.0	8.84	8.84	4.42	5	0.50			700	0.0900	6.9	11.9	16.9
634.0	13.52	19.35	6.97		0.30					10.6	15.3	21.9
635.0	5.83	5.83	2.92	5	0.50			650	0.1500	6.4	8.1	11.6
636.0	26.35	26.35	7.91		0.30	1600	0.2500	900	0.1000	10.2	17.7	25.4
637.0	6.06	6.06	3.03	5	0.50			1300	0.0600	9.4	7.0	10.1
638.0		81.75	39.95							14.3	76.1	109.6
639.0	14.46	14.46	7.23	5	0.50			1500	0.0200	13.8	14.0	20.1
640.0	2.73	67.29	32.72		0.50					12.1	67.6	97.0
641.0	8.75	16.21	8.11		0.50					11.4	17.2	24.7
642.0	4.29	7.46	3.73		0.50					8.1	9.3	13.3
643.0	3.17	3.17	1.59	5	0.50			300	0.0200	6.8	4.3	6.1
644.0	3.79	48.35	23.25		0.50					10.9	50.5	72.3
645.0	9.34	44.56	21.35		0.50					10.2	47.7	68.3
646.0	8.52	35.22	16.68		0.50					9.1	39.5	56.4
647.0	15.91	26.70	12.42		0.50					8.3	30.6	43.7
648.0	1.72	10.79	4.47		0.50					7.2	11.8	16.8
649.0	2.87	9.07	3.61		0.50					6.7	9.8	14.0
650.0	6.20	6.20	2.17	5	0.35			400	0.0500	6.5	6.0	8.6
651.0	3.90	16.69	8.35		0.50					11.1	18.0	25.8
652.0	5.95	12.79	6.40		0.50					10.2	14.3	20.5
653.0		1.93	0.97							9.2	2.3	3.2
654.0	1.93	1.93	0.97	5	0.50			550	0.0200	8.2	2.4	3.4
655.0	4.91	4.91	2.46	5	0.50			600	0.0200	8.5	6.0	8.5
700.0		454.26	224.10							22.0	350.0	507.1
701.0	1.97	454.26	224.10		0.50					21.7	350.0	507.1
702.0	4.57	352.46	173.19		0.50					21.4	272.4	394.6
703.0		295.30	137.77							20.4	221.5	320.7
704.0		183.20	85.67							20.4	138.0	199.7
705.0	3.03	15.04	7.52		0.50					13.6	14.7	21.1
706.0	12.01	12.01	6.01	5	0.50			1250	0.0200	12.4	12.3	17.6
706.9		112.10	52.10							20.1	84.5	122.3
707.0	3.44	168.16	78.15		0.50					20.1	126.7	183.4
708.0	5.99	276.82	128.54		0.50					18.8	214.8	310.6
709.0		264.82	122.53							17.9	209.8	303.1
710.0	7.21	246.82	111.31		0.50					16.1	200.3	288.9
711.0	10.10	239.61	107.71		0.50					15.9	195.2	281.4
712.0	21.40	229.51	102.66		0.50					15.5	188.4	271.6
713.0	35.74	208.11	91.96		0.30					15.1	170.8	246.0

JUNCTION NO.	LOCAL AREA (ac)	TOTAL AREA (ac)	COEF AREA (ac)	ROOF TIME (min)	RUNOFF COEF	LENGTH OPEN (ft)	SLOPE OPEN	LENGTH GUTTER (ft)	SLOPE GUTTER	TIME CONC (min)	10-YR FLOW (cfs)	100-YR FLOW (cfs)
714.0	12.88	172.37	81.24		0.50					14.0	156.5	225.2
715.0		158.34	74.22							13.6	144.9	208.4
716.0	9.27	131.71	60.90		0.50					13.5	119.2	171.4
717.0		21.58	10.79							10.1	24.2	34.7
718.0	2.23	12.42	6.21		0.50					10.0	14.0	20.1
719.0	10.19	10.19	5.10	5	0.50			1200	0.0500	9.5	11.8	16.9
720.0	4.61	9.16	4.58		0.50					8.5	11.2	16.0
721.0	4.55	4.55	2.28	5	0.50			750	0.0500	7.8	5.8	8.2
722.0		100.86	45.47							12.5	92.2	132.5
723.0	8.24	10.74	5.37		0.50					9.2	12.6	18.0
724.0	2.50	2.50	1.25	5	0.50			700	0.0500	7.6	3.2	4.6
725.0	3.19	90.12	40.10		0.50					12.4	81.6	117.3
726.0	4.73	86.93	38.51		0.50					11.8	80.5	115.6
727.0		82.20	36.14							11.5	76.2	109.4
728.0	10.03	36.57	16.28		0.30					9.9	37.0	52.9
729.0	4.43	4.43	2.22	5	0.50			1250	0.0500	9.7	5.1	7.3
730.0	22.11	22.11	11.06	5	0.50			1200	0.1600	7.5	28.6	40.8
731.0	2.34	45.63	19.86		0.50					11.4	42.1	60.4
732.0	14.78	14.78	4.43		0.30	1350	0.1000			10.4	9.8	14.1
733.0	10.74	28.51	14.26		0.50					8.5	34.7	49.6
734.0	8.86	17.77	8.89		0.50					7.9	22.4	32.0
735.0	8.91	8.91	4.46	5	0.50			650	0.0800	6.9	12.0	17.1
736.0	3.56	26.63	13.32		0.50					12.4	27.2	39.0
737.0	7.35	23.07	11.54		0.50					11.6	24.2	34.8
738.0	8.49	15.72	7.86		0.50					11.3	16.7	24.0
739.0	7.23	7.23	3.62	5	0.50			1500	0.0500	10.6	7.9	11.4
740.0	1.15	1.15	0.58	5	0.50			600	0.1000	6.6	1.6	2.3
741.0	6.91	18.00	11.22		0.50					10.0	25.3	36.2
742.0	11.09	11.09	7.76	5	0.70			1350	0.0800	9.0	18.4	26.4
743.0	6.01	6.01	3.01	5	0.50			800	0.0200	9.7	6.9	9.8
744.0	2.30	52.59	33.13		0.50					13.1	65.7	94.4
745.0	1.38	50.29	31.98		0.50					12.7	64.3	92.4
746.0	1.88	48.91	31.29		0.50					12.3	64.0	91.9
747.0	1.26	29.84	21.75		0.50					11.7	45.5	65.3
748.0	5.03	28.58	21.12		0.50					11.2	45.1	64.7
749.0	3.26	23.55	18.60		0.50					10.7	40.7	58.3
750.0	5.12	20.29	16.97		0.50					10.3	37.8	54.1
751.0	15.17	15.17	14.41	5	0.95			1200	0.0500	9.5	33.4	47.7
752.0	2.53	17.19	8.60		0.50					9.4	19.9	28.5
753.0	2.73	14.66	7.33		0.50					9.0	17.4	24.8
754.0	1.74	11.93	5.97		0.50					8.5	14.5	20.8
755.0	3.74	10.19	5.10		0.50					8.1	12.7	18.1
756.0	2.23	6.45	3.23		0.50					7.7	8.3	11.8
757.0	4.22	4.22	2.11	5	0.50			650	0.0500	7.4	5.5	7.8
758.0	6.04	99.83	49.93		0.50					16.3	89.3	128.8
759.0	3.05	93.79	46.91		0.50					15.9	84.9	122.4
760.0	2.34	90.74	45.38		0.50					15.7	82.7	119.3
761.0	4.22	88.40	44.21		0.50					15.5	81.1	116.8
762.0	4.04	84.18	42.10		0.50					15.2	77.9	112.2
763.0	3.72	80.14	40.08		0.50					14.8	75.0	108.0
764.0	3.15	76.42	38.22		0.50					14.6	72.2	104.0
765.0	5.19	73.27	36.65		0.50					14.0	70.4	101.3
766.0		68.08	34.05							13.3	67.2	96.6
767.0	19.12	19.12	9.56	5	0.50			1350	0.0500	10.0	21.5	30.8
768.0		48.96	24.49							12.7	49.3	70.8
769.0	8.43	12.93	6.47		0.50					7.1	17.2	24.5

JUNCTION NO.	LOCAL AREA (ac)	TOTAL AREA (ac)	COEF AREA (ac)	ROOF TIME (min)	RUNOFF COEF	LENGTH OPEN (ft)	SLOPE OPEN	LENGTH GUTTER (ft)	SLOPE GUTTER	TIME CONC (min)	10-YR FLOW (cfs)	100-YR FLOW (cfs)
770.0	4.50	4.50	2.25	5	0.50			450	0.1000	6.2	6.4	9.1
771.0	8.03	36.03	18.02		0.50					12.6	36.4	52.3
772.0	5.51	28.00	14.01		0.50					12.0	29.0	41.7
773.0		22.49	11.25							11.2	24.0	34.5
774.0	3.90	11.68	5.84		0.50					10.8	12.7	18.2
775.0	4.43	7.78	3.89		0.50					9.7	8.9	12.7
776.0	3.35	3.35	1.68	5	0.50			750	0.0500	7.8	4.3	6.1
777.0	6.40	10.81	5.41		0.50					9.5	12.5	17.9
778.0	4.41	4.41	2.21	5	0.50			1250	0.0900	8.5	5.4	7.7
800.0		1337.51	696.05							28.4	972.4	1413.8
802.0		1337.51	696.05							27.5	972.4	1413.8
803.0	7.21	657.76	347.10		0.95					23.5	522.2	757.5
804.0	2.48	12.05	11.45		0.95					19.4	18.9	27.3
805.0	2.59	9.57	9.09		0.95					18.2	15.5	22.3
806.0	6.98	6.98	6.63	5	0.95			1000	0.0050	16.8	11.7	16.9
807.0	12.01	638.50	328.80		0.95					23.0	499.5	724.3
807.9		626.49	317.39							22.1	492.0	713.1
808.0		337.34	170.90							22.1	265.0	384.0
809.0	5.35	332.52	182.83		0.95					21.6	286.3	414.8
810.0		327.17	177.75							21.3	280.2	405.9
811.0	5.90	32.75	22.81		0.95					19.4	37.6	54.4
812.0	3.95	30.80	20.96		0.95					18.7	35.2	50.8
812.9		26.85	17.20							13.5	33.7	48.4
813.0	9.48	26.85	17.20		0.95					13.5	33.7	48.4
814.0	3.08	19.53	11.08		0.50					13.1	22.0	31.7
814.9		24.68	14.32							11.9	29.8	42.7
815.0	10.95	16.45	9.54		0.80					11.9	19.8	28.5
816.0		30.18	15.10							11.6	31.8	45.6
817.0	1.03	30.18	15.10		0.50					10.9	32.7	46.8
818.0	3.44	29.15	14.58		0.50					10.7	31.8	45.6
819.0	3.76	3.76	1.88	5	0.50			550	0.0500	7.1	5.0	7.1
820.0	3.42	21.95	10.98		0.50					10.0	24.8	35.5
821.0	1.84	8.91	4.46		0.50					9.0	10.6	15.1
822.0	1.95	7.07	3.54		0.50					8.6	8.6	12.3
823.0	5.12	5.12	2.56	5	0.50			900	0.0600	8.1	6.4	9.1
824.0	3.79	9.62	4.81		0.50					8.6	11.7	16.7
825.0	2.98	5.83	2.92		0.50					7.4	7.6	10.8
826.0	2.85	2.85	1.43	5	0.50			400	0.0500	6.5	4.0	5.6
827.0		263.62	133.98							18.7	224.6	324.7
828.0	5.03	263.62	133.98		0.50					18.2	227.9	329.3
829.0	22.25	22.25	11.13	5	0.50			1750	0.0200	15.3	20.5	29.6
830.0	4.75	236.34	120.34		0.95					17.8	206.3	298.1
831.0	1.06	231.59	115.83		0.50					17.4	200.8	290.0
832.0	7.97	230.53	115.30		0.50					17.4	200.2	289.1
833.0	9.18	222.56	111.32		0.50					17.2	194.3	280.6
834.0	6.91	213.38	106.73		0.50					16.6	189.2	273.0
835.0	5.90	188.62	94.34		0.50					15.8	171.4	247.2
836.0	7.51	182.72	91.39		0.50					15.2	169.1	243.7
837.0	4.94	169.42	84.74		0.50					14.5	160.1	230.6
838.0	15.68	164.48	82.27		0.50					14.1	157.8	227.2
839.0	12.49	12.49	6.25	5	0.50			1200	0.0500	9.5	14.5	20.7
840.0	8.77	136.31	68.18		0.50					13.5	133.3	191.8
841.0	25.30	127.54	63.79		0.50					13.0	127.3	183.0
842.0		102.24	51.14							12.3	104.7	150.4
843.0	1.52	50.83	25.42		0.50					12.0	52.7	75.6
844.0	7.90	49.31	24.66		0.50					11.4	52.3	75.0

JUNCTION NO.	LOCAL AREA (ac)	TOTAL AREA (ac)	COEF AREA (ac)	ROOF TIME (min)	RUNOFF COEF	LENGTH OPEN (ft)	SLOPE OPEN	LENGTH GUTTER (ft)	SLOPE GUTTER	TIME CONC (min)	10-YR FLOW (cfs)	100-YR FLOW (cfs)
845.0	5.97	32.92	16.46		0.50					10.6	36.1	51.8
846.0	3.26	26.95	13.48		0.50					10.1	30.3	43.4
847.0	2.64	15.43	7.72		0.50					9.6	17.7	25.4
848.0	1.95	12.79	6.40		0.50					9.3	15.0	21.4
849.0	10.84	10.84	5.42	5	0.50			1250	0.0700	8.9	12.9	18.4
850.0	8.26	8.26	4.13	5	0.50			900	0.1300	7.1	11.0	15.6
851.0	8.49	8.49	4.25	5	0.50			700	0.0500	7.6	10.9	15.6
852.0	17.61	51.41	25.72		0.50					11.6	54.1	77.6
853.0		33.80	16.91							11.4	35.9	51.5
854.0	1.17	1.17	0.59	5	0.50			950	0.0800	7.8	1.5	2.1
855.0	3.33	32.63	16.32		0.50					10.3	36.4	52.1
856.0	8.82	29.30	14.65		0.50					9.4	34.0	48.6
857.0	8.75	20.48	10.24		0.50					8.9	24.4	34.9
858.0	4.45	11.73	5.87		0.50					8.3	14.5	20.7
859.0	7.28	7.28	3.64	5	0.50			1000	0.0900	7.8	9.3	13.2
860.0	5.79	5.79	2.90	5	0.50			800	0.0500	8.0	7.3	10.4
861.0	8.49	17.85	8.93		0.50					10.2	20.0	28.6
862.0	5.00	9.36	4.68		0.50					7.5	12.1	17.3
863.0	4.36	4.36	2.18	5	0.50			300	0.0500	6.1	6.2	8.8
864.0	10.19	328.65	147.98		0.50					20.6	237.2	343.4
865.0		318.46	142.89							19.2	236.9	342.5
866.0	3.99	297.73	133.76		0.50					19.1	222.3	321.5
867.0	3.79	293.74	131.76		0.50					18.5	222.0	320.9
868.0	1.74	289.95	129.87		0.50					18.2	220.7	318.9
869.0	3.26	288.21	129.00		0.50					17.9	221.0	319.3
870.0	17.88	284.95	127.37		0.50					17.3	221.7	320.1
871.0		87.04	43.53							13.3	85.9	123.5
872.0	1.86	69.46	34.74		0.50					12.9	69.5	99.9
873.0	5.28	67.60	33.81		0.50					12.4	69.0	99.1
874.0	7.12	62.32	31.17		0.50					11.7	65.2	93.6
875.0		55.20	27.61							11.7	57.9	83.1
876.0	2.89	8.97	4.49		0.50					7.4	11.7	16.7
877.0	6.08	6.08	3.04	5	0.50			700	0.1000	6.8	8.2	11.7
878.0	6.47	46.23	23.12		0.50					11.1	49.6	71.1
879.0	5.51	39.76	19.88		0.50					10.8	43.3	62.1
880.0	34.25	34.25	17.13	5	0.50			1300	0.0500	9.8	38.9	55.7
881.0	3.10	17.58	8.79		0.50					8.7	21.3	30.4
882.0	9.27	14.48	7.24		0.50					8.1	18.1	25.8
883.0	5.21	5.21	2.61		0.50	1000	0.1200			7.0	7.0	9.9
883.7		54.01	22.47							16.3	40.2	58.0
883.8		126.02	52.43							16.3	93.8	135.4
884.0	8.13	180.03	74.90		0.50					16.2	134.3	193.7
885.0	4.27	162.60	66.18		0.50					15.7	120.6	173.9
886.0	3.95	158.33	64.05		0.50					15.6	117.0	168.7
887.0	3.19	154.38	62.07		0.50					15.3	114.4	164.8
888.0	151.19	151.19	60.48	15	0.40					15.0	112.6	162.2
889.0	3.03	9.30	4.65		0.50					9.0	11.1	15.8
890.0	3.03	6.27	3.14		0.50					8.3	7.7	11.0
891.0	3.24	3.24	1.62	5	0.50			750	0.0500	7.8	4.1	5.9
892.0	2.62	20.73	9.13		0.50					16.4	16.3	23.5
893.0	11.91	18.11	7.82		0.50					15.6	14.3	20.6
894.0	6.20	6.20	1.86		0.30	450	0.0100	500	0.0200	13.9	3.6	5.2
895.0	13.68	302.66	157.49		0.95					20.9	250.8	363.1
896.0	5.90	5.90	2.95	5	0.50			1000	0.0500	8.7	7.1	10.2
897.0	8.33	283.08	141.54		0.50					19.9	230.7	333.8
898.0	5.26	274.75	137.38		0.50					18.8	229.7	332.1

JUNCTION NO.	LOCAL AREA (ac)	TOTAL AREA (ac)	COEF AREA (ac)	ROOF TIME (min)	RUNOFF COEF	LENGTH OPEN (ft)	SLOPE OPEN	LENGTH GUTTER (ft)	SLOPE GUTTER	TIME CONC (min)	10-YR FLOW (cfs)	100-YR FLOW (cfs)
899.0		269.49	134.75							18.3	228.1	329.6
900.0	8.54	27.67	13.84		0.50					8.0	34.7	49.5
901.0	17.36	19.13	9.57		0.50					6.5	26.5	37.7
902.0	1.77	1.77	0.89	5	0.50			350	0.0500	6.3	2.5	3.5
903.0	2.50	241.82	120.91		0.50					17.9	207.2	299.2
904.0	6.70	239.32	119.66		0.50					17.3	208.2	300.6
905.0	232.62	232.62	116.31	17	0.50					17.0	204.1	294.6
906.0	15.22	342.41	178.05		0.95					26.0	255.5	371.2
907.0	11.39	327.19	163.60		0.50					23.4	246.5	357.6
908.0	14.42	82.42	41.21		0.50					11.6	86.7	124.4
909.0	13.11	68.00	34.00		0.50					10.8	73.9	106.0
910.0	16.05	54.89	27.45		0.50					10.5	60.5	86.7
911.0	7.92	38.84	19.42		0.50					10.1	43.6	62.4
912.0	7.71	30.92	15.46		0.50					9.8	35.2	50.4
913.0	10.81	23.21	11.61		0.50					9.6	26.6	38.1
914.0	12.40	12.40	6.20	5	0.50			1150	0.0500	9.3	14.5	20.7
915.0	7.05	233.38	116.69		0.50					21.7	182.3	264.1
916.0	226.33	226.33	113.17	20	0.50					20.0	183.8	266.0

APPENDIX C

STORM DRAIN DEFICIENCY PRIORITIES

EL CERRITO STORM DRAIN MASTER PLAN
STORM DRAIN INFORMATION DATABASE
DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
331.00			9	36.00		CMP	30	0.0300	E	ELM ST	PR					62.6	157.0	EEEE	226.8	33	42	$9
873.00			13	48.00		CMP	120	0.0200	E	CORONADO ST	PR					110.0	230.7	EEEE	333.8	33	54	$44
875.00			13	48.00		CMP	250	0.0200	E	CORONADO ST	PR					110.0	229.7	EEEE	332.1	33	54	$93
877.00			13	48.00		CMP	120	0.0200	E	VICTORIA PL	PR					110.0	229.7	EEEE	332.1	33	54	$44
791.00			14	36.00		RCP	250	0.0280	A	NORVELL ST	PR					111.6	220.7	***	318.9	32	48	$83
793.00			14	36.00		RCP	250	0.0280	A	ALBEMARLE ST	PR					111.6	221.0	***	319.3	32	48	$83
845.00			22	30.00		CMP	150	0.1000	E	BONNIE DR	PR					70.3	120.6	EEE	173.9	32	30	$33
850.00			22	30.00		CMP	110	0.1000	E	VILLAGE DR	PR					70.3	112.6	EEE	162.2	32	30	$24
852.00			22	30.00		CMP	70	0.1000	E	SEAVIEW DR	PR					70.3	112.6	EEE	162.2	32	30	$15
687.00			14	32.00	60.00	CMPA	50	0.0300	E	EVERETT ST	PR					130.3	171.4	EE	247.2	31	42	$15
789.00		867.0	14	42.00		RCP	250	0.0280	A	EVERETT ST	PR					168.4	222.0	**	320.9	31	48	$83
700.00		838.0	15	48.00		CMP	290	0.0300	E	ASHBURY AVE	PR					134.8	157.8	E	227.2	30	42	$87
194.00			10	24.00		CMP	130	0.0400	A	ELM ST	PR		92.80			24.5	57.5	****	82.5	28	27	$26
36.00		203.0	3	24.00		CMP	140	0.1500	E	POINSETT AVE	PR			151.80	NB	47.5	84.9	EEE	122.9	27	24	$24
42.00	205.0		11	24.00		CMP	130	0.1200	E	ROSALIND AVE	PR					42.5	77.4	EEE	111.9	27	24	$22
379.00		622.0	17	30.00		CMP	70	0.0500	E	LAWRENCE ST	PR					49.7	93.2	EEE	133.8	27	36	$19
380.00			17	30.00		CMP	60	0.0500	E	NAVELLIER ST	PR					49.7	77.5	EEE	111.3	27	30	$13
197.00	424.0		10	24.00		CMP	370	0.1000	E	WALNUT ST	PR					38.8	55.9	EE	80.1	26	24	$63
199.00			10	24.00		CMP	220	0.1000	E	GLEN MAWR AVE	PR					38.8	50.8	EE	72.8	26	24	$37
710.00			23	48.00		CMP	40	0.0800	E	HOTCHKISS AVE	PR					220.1	133.3		191.8	24	36	$11
844.00			22	36.00		CMP	120	0.1000	E	COLUSA AVE	PR					114.3	120.6	.	173.9	24	30	$26
653.00		818.0	14	21.00		CMP	65	0.0250	A	LIBERTY ST	PR					13.6	31.8	****	45.6	23	24	$11
139.00	400.0	402.0	1	48.00		RCP	130	0.0030	E	CYPRESS AVE	PR					78.7	168.7	EEEE	244.1	21	72	$64
333.00			9	2.50	2.50	MAS	230	0.0300	E	ELM ST	PR					49.0	159.3	EEEE	230.0	21	42	$69
336.00			9	2.50	2.50	MAS	115	0.0300	E	EVERETT ST	PR					49.0	158.5	EEEE	228.7	21	42	$35
440.00		703.0	7	48.00		CMP	360	0.0100	E	SAN PABLO AVE			53.00			77.8	221.5	EEEE	320.7	21	60	$108
460.00		709.0	8	33.00		RCP	470	0.0260	A	LIBERTY ST	PR		84.10	89.10	CB	85.3	209.8	****	303.1	21	48	$155
462.00			16	36.00		CMP	120	0.0330		SCHMIDT LN			89.40	94.00	MH	65.6	200.3	****	288.9	21	48	$30
463.00			16	36.00		CMP	200	0.0300	E	SCHMIDT LN				99.70	TC	62.6	200.3	EEEE	288.9	21	48	$49
472.00		712.0	16	36.00		CMP	60	0.0400	E	SCHMIDT LN						72.3	188.4	EEEE	271.6	21	42	$14
817.00	875.0		23	24.00		CMP	100	0.1000	E	BALRA AVE	PR					38.8	49.6	EE	71.1	21	21	$15
872.00			13	18.00	60.00	CMPA	40	0.0200	E	BART						45.5	230.7	EEEE	333.8	21	54	$11
874.00		897.0	13	48.00		CMP	30	0.0200	E	CORONADO ST						110.0	230.7	EEEE	333.8	21	54	$8
876.00			13	48.00		CMP	30	0.0200	E	VICTORIA PL						110.0	229.7	EEEE	332.1	21	54	$8
201.00		428.0	10	24.00		CMP	220	0.1000	E	SNOWDON AVE	PR					38.8	45.8	E	65.5	20	21	$33
442.00	703.0	704.0	7	48.00		CMP	25	0.0100	E	MOESER LN						77.8	138.0	EEE	199.7	20	48	$6
459.00			7	36.00		RCP	275	0.0260	A	BART	PR					107.6	209.8	***	303.1	20	48	$91

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

EL CERRITO STORM DRAIN INFORMATION DATABASE
DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
475.00			16	30.00		CMP	750	0.1500	E	HILLSIDE PK						86.1	156.5	EEE	225.2	20	30	$124
487.00	716.0		24	30.00		CMP	130	0.4000	C	DUKE CT	PR	417.50	470.00			140.5	92.2		132.5	20	21	$20
501.00			25	30.00		CMP	180	0.2400	C	KING DR	PR	525.33	569.20			108.8	80.5		115.6	20	24	$31
717.00			23	30.00		CMP	15	0.0800	E	TERRACE DR	PR					62.8	52.7		75.6	20	24	$3
718.00			23	48.00		CMP	75	0.0800	E	TERRACE DR	PR					220.1	52.7		75.6	20	24	$13
720.00			23	30.00		CMP	40	0.0800	E	TERRACE DR	PR					62.8	52.3		75.0	20	24	$7
722.00			24	30.00		CMP	110	0.1000	E	SEAVIEW DR	PR					70.3	52.3		75.0	20	24	$19
746.00			23	48.00		CMP	70	0.0500	E	SEAVIEW DR	PR					174.0	54.1		77.6	20	27	$14
788.00	866.0		14	36.00		RCP	280	0.0280	A	RICHMOND ST	PR					111.6	222.0	***	320.9	20	48	$92
790.00			14	36.00		RCP	30	0.0280	A	NORVELL ST						111.6	220.7	***	318.9	20	36 P	$6
792.00		868.0	14	36.00		RCP	30	0.0280	A	ALBEMARLE ST						111.6	220.7	***	318.9	20	36 P	$6
796.00			22	42.00		RCP	210	0.0200		ASHBURY AVE	PR		85.90			142.3	221.7	***	320.1	20	54	$78
849.00		887.0	22	30.00		IP	230	0.1000	E	BALRA DR	PR					70.3	114.4	EEE	164.8	20	30	$51
853.00		888.0 E	22	30.00		CMP	60	0.1000	E	SEAVIEW DR						70.3	112.6	EEE	162.2	20	30	$10
890.00		903.0	21	36.00		RCP	230	0.0260	C	ASHBURY AVE	PR	79.75	85.80			107.6	207.2	***	299.2	20	48	$76
892.00			21	36.00		RCP	225	0.0372		POMONA AVE	PR		95.72	99.70	CB	128.6	208.2	***	300.6	20	48	$74
141.00		403.0	1	43.00	68.00	HECP	218	0.0045		CYPRESS AVE	PR	26.95	27.91			136.2	171.1	**	247.5	19	60	$87
330.00			9	36.00		RCP	200	0.0300	E	LIBERTY ST	PR					115.5	157.0	EE	226.8	19	42	$60
338.00		607.0	9	36.00		RCP	230	0.0300	E	EVERETT ST	PR					115.5	158.5	EE	228.7	19	42	$69
668.00	810.0	827.0	13	3.00	5.00	RCB	215	0.0100	E	SAN PABLO AVE	PR					164.2	224.6	EE	324.7	19	60	$86
683.00			14	36.00		RCP	130	0.0300	E	LINCOLN AVE	PR					115.5	171.4	EE	247.2	19	42	$39
686.00			14	36.00		RCP	80	0.0300	E	EVERETT ST	PR					115.5	171.4	EE	247.2	19	42	$24
691.00			14	2.90	2.90	RCB	10	0.0300	E	NORVELL ST	PR					134.4	171.4	EE	247.2	19	42	$3
692.00		835.0	14	36.00		VCP	55	0.0300	E	NORVELL ST	PR					115.5	171.4	EE	247.2	19	42	$17
693.00			14	48.00		CMP	70	0.0300	E	NORVELL ST						134.8	169.1	EE	243.7	19	42	$16
895.00			22	36.00		VCP	110	0.0450	C	CARMEL AVE	PR	99.60	104.54	110.74	CB	141.5	208.2	**	300.6	19	42	$33
37.00		204.0	3	24.00		CMP	290	0.0900	E	POINSETT AVE						36.8	84.9	EEEE	122.9	18	27	$44
38.00			11	24.00		CMP	320	0.0900	E	ROSALIND AVE						36.8	84.7	EEEE	122.6	18	27	$48
39.00		205.0	11	24.00		CMP	100	0.0900	E	ROSALIND AVE				217.10	NB	36.8	84.7	EEEE	122.6	18	27	$15
108.00			11	15.00		CMP	110	0.1000	E	JORDAN AVE	PR					11.1	24.5	EEEE	35.0	18	18	$14
168.00			10	12.00		CMP	140	0.0500	E	HAGEN BLVD	PR					4.3	11.7	EEEE	16.8	18	15	$15
169.00			10	12.00		CMP	140	0.0500	E	HARPER ST	PR					4.3	11.7	EEEE	16.8	18	15	$15
182.00		420.0	9	30.00		CMP	200	0.0100	E	HILL ST			48.60	52.10	BM	22.2	96.7	EEEE	139.3	18	42	$45
183.00			9	30.00		CMP	210	0.0170	A	HILL ST						29.0	81.9	****	117.7	18	36	$42
184.00			9	30.00		CMP	150	0.0170	A	HILL ST						29.0	81.9	****	117.7	18	36	$30
185.00		421.0	9	30.00		CMP	140	0.0170	A	HILL ST				57.50	BM	29.0	81.9	****	117.7	18	36	$28
413.00		641.0	8	18.00		CMP	120	0.0200	E	DONAL AVE	PR		66.80			8.1	17.2	EEEE	24.7	18	21	$18
415.00		642.0	8	12.00		CMP	240	0.0200	E	ELM ST	PR			81.90	TC	2.7	9.3	EEEE	13.3	18	18	$31
480.00		717.0	25	15.00		CMP	100	0.1000	E	CONTRA COSTA DR	PR			663.30	NB	11.1	24.2	EEEE	34.7	18	18	$13

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
558.00			7	21.00		VCP	165	0.0200	E	KEARNEY ST	PR					22.4	65.7	EEEE	94.4	18	36	$45
560.00		745.0	7	21.00		VCP	220	0.0200	E	KEARNEY ST	PR					22.4	64.3	EEEE	92.4	18	36	$59
561.00			15	21.00		VCP	130	0.0200	E	LEXINGTON AVE	PR					22.4	64.0	EEEE	91.9	18	36	$35
662.00		824.0	15	15.00		CMP	235	0.0190	A	ELM ST	PR					4.8	11.7	****	16.7	18	18	$31
670.00			13	3.00	6.00	RCB	270	0.0085	A	KEARNY ST	PR					189.7	227.9	*	329.3	18	60	$108
690.00			14	3.00	3.00	RCB	30	0.0300	E	NORVELL ST	PR					147.1	171.4	E	247.2	18	42	$9
698.00			15	48.00		CMP	140	0.0300	E	CLAYTON ST						134.8	160.1	E	230.6	18	42	$32
699.00		837.0	15	48.00		CMP	60	0.0300	E	ASHBURY AVE						134.8	160.1	E	230.6	18	42	$14
871.00			13	36.00		2RCP	460	0.0200	E	EL CERRITO PLAZA	PR					188.7	230.7	E	333.8	18	54	$170
68.00			11	18.00		CMP	50	0.0500	E	BARRETT AVE	PR					12.7	22.9	EEE	33.1	17	18	$7
72.00			11	18.00		CMP	110	0.0500	E	TAMALPAIS AVE	PR					12.7	19.8	EEE	28.6	17	18	$14
378.00			17	30.00		CMP	50	0.0500	E	LAWRENCE ST						49.7	93.2	EEE	133.8	17	36	$10
381.00			17	24.00		RCP	80	0.0500	E	NAVELLIER ST	PR		143.80			50.6	77.5	EEE	111.3	17	30	$18
411.00		639.0	E 8	18.00		CMP	120	0.0200	E	DONAL AVE	PR		66.93			8.1	14.0	EEE	20.1	17	18	$16
416.00		643.0	E 8	12.00		CMP	230	0.0200	E	RICHMOND ST	PR					2.7	4.3	EEE	6.1	17	12	$21
505.00		727.0	25	24.00		CMP	110	0.1500	E	BREWSTER DR						47.5	76.2	EEE	109.4	17	24	$14
519.00		732.0	E 25	12.00		CMP	400	0.0700	E	ARLINGTON BLVD	PR			731.20	NB	5.1	9.8	EEE	14.1	17	15	$44
656.00		820.0	14	21.00		CMP	220	0.0250	A	LIBERTY ST	PR		55.10			13.6	24.8	***	35.5	17	21	$33
663.00			15	15.00		CMP	140	0.0190	A	RICHMOND ST	PR					4.8	7.6	***	10.8	17	15	$15
664.00			15	15.00		CMP	25	0.0190	A	EVERETT ST	PR					4.8	7.6	***	10.8	17	15	$3
9.00		105.0	E 4	24.00		RCP	60	0.0500	E	YUBA AVE	PR					50.6	71.7	EE	103.2	16	30	$13
11.00			4	18.00		CMP	20	0.0500	E	YUBA AVE	PR					12.7	16.6	EE	23.8	16	18	$3
47.00		210.0	11	21.00		RCP	510	0.0800	E	BARRETT AVE	PR			348.90	NB	44.8	65.6	EE	94.9	16	27	$102
48.00		211.0	11	21.00		RCP	80	0.0700	E	CARQUINEZ AVE	PR					41.9	55.4	EE	80.1	16	24	$14
50.00	211.0	213.0	11	21.00		RCP	140	0.0700	E	TASSAJARA PARK	PR					41.9	52.4	EE	75.8	16	24	$24
107.00			11	18.00		CMP	170	0.1000	E	GLORIA ST	PR					18.0	24.5	EE	35.0	16	18	$22
126.00			11	24.00		CMP	200	0.0800	E	JORDAN AVE	PR			300.00	NB	34.7	31.6		45.4	16	21	$30
198.00		426.0	10	24.00		CMP	40	0.1000	E	GLEN MAWR AVE						38.8	55.9	EE	80.1	16	24	$5
200.00		427.0	10	24.00		CMP	25	0.1000	E	SNOWDON AVE						38.8	50.8	EE	72.8	16	24	$3
248.00		514.0	9	36.00		CMP	35	0.0350	A	WALNUT ST						67.6	90.9	**	131.3	16	36	$7
267.00		522.0	18	48.00		CMP	100	0.0500	E	ARLINGTON BLVD	PR					174.0	34.2		49.1	16	21	$15
481.00		718.0	25	15.00		CMP	60	0.1000	E	CONTRA COSTA DR	PR					11.1	14.0	EE	20.1	16	15	$7
591.00		766.0	15	24.00		RCP	230	0.0423		ASHBURY AVE	PR			110.41		46.5	67.2	**	96.6	16	30	$51
726.00		845.0	24	24.00		CMP	140	0.1000	E	SHEVLIN DR	PR					38.8	36.1		51.8	16	21	$21
730.00		846.0	24	24.00		CMP	100	0.1000	E	KING DR	PR					38.8	30.3		43.4	16	18	$13
757.00			23	24.00		CMP	270	0.1000	E	TERRACE DR	PR					38.8	34.0		48.6	16	21	$41
779.00			14	15.00		CMP	300	0.0200	E	ALBEMARLE ST	PR					5.0	6.2	EE	8.8	16	15	$33
819.00			23	30.00		CMP	80	0.1000	E	EUREKA AVE	PR					70.3	49.6		71.1	16	21	$12
821.00			23	30.00		CMP	40	0.1000	E	SEAVIEW DR	PR					70.3	49.6		71.1	16	21	$6

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
823.00		879.0	23	30.00		CMP	300	0.1000	E	SEAVIEW DR	PR					70.3	43.3		62.1	16	21	$45
826.00			23	24.00		CMP	100	0.1000	E	EUREKA AVE	PR					38.8	38.9	.	55.7	16	21	$15
827.00		880.0 E	23	24.00		CMP	450	0.1000	E	EUREKA AVE	PR					38.8	38.9	.	55.7	16	21	$68
195.00		424.0	10	24.00		RCP	80	0.0500	E	WALNUT ST	PR	92.80				50.6	57.5	E	82.5	15	27	$16
307.00	539.0		9	16.00	25.00	CMPA	54	0.0200	E	POTRERO AVE			46.51			13.4	31.4	EEEE	44.9	15	24	$7
308.00			9	16.00	25.00	CMPA	71	0.0200	E	POTRERO AVE						13.4	31.4	EEEE	44.9	15	24	$9
557.00			7	30.00		VCP	50	0.0200	E	SAN PABLO AVE	PR					58.0	65.7	E	94.4	15	36	$14
641.00	810.0	812.0	13	30.00		CMP	480	0.0045		SAN PABLO AVE				27.10	BM	14.9	35.2	****	50.8	15	36	$97
644.00			14	24.00		CMP	150	0.0130	A	SAN PABLO AVE		25.50				14.0	29.8	****	42.7	15	27	$23
885.00			22	15.00		CMP	40	0.0300	E	FAIRMOUNT AVE						6.1	26.5	EEEE	37.7	15	21	$4
651.00			14	24.00		CMP	28	0.0250	A	BART						19.4	32.7	***	46.8	14	24	$4
507.00		728.0	25	24.00		CMP	50	0.0500	E	ARLINGTON BLVD						27.4	37.0	EE	52.9	13	24	$6
2.00			4	30.00	30.00	RCB	190	0.0500	E	SILVA AVE	PR			135.00	E	116.8	101.2		145.8	12	36	$51
74.00		221.0 E	19	15.00		CMP	90	0.0500	E	ARLINGTON BLVD						7.8	19.8	EEEE	28.6	12	18	$9
78.00			11	12.00		RCP	230	0.0500	E	TAMALPAIS AVE	PR					8.0	16.8	EEEE	24.1	12	18	$30
87.00			11	15.00		CMP	150	0.0500	E	JORDAN AVE	PR					7.8	5.1		7.2	12	12	$14
109.00		313.0	11	15.00		CMP	40	0.1000	E	JORDAN AVE						11.1	24.5	EEEE	35.0	12	18	$4
114.00		315.0	11	12.00		CMP	30	0.1000	E	MIRA VISTA DR				294.40	BM	6.1	16.0	EEEE	22.9	12	15	$2
117.00		316.0	11	12.00		CMP	40	0.0500	E	CARQUINEZ AVE						4.3	9.5	EEEE	13.6	12	15	$3
163.00		412.0 E	2	24.00		CMP	60	0.0200	E	KEY BLVD	PR					17.3	5.3		7.5	12	15	$7
170.00		415.0	10	12.00		CMP	40	0.0500	E	HARPER ST						4.3	11.7	EEEE	16.8	12	15	$3
171.00			10	12.00		CMP	130	0.0500	E	HARPER ST	PR					4.3	2.6		3.7	12	12	$12
172.00			10	12.00		CMP	100	0.0500	E	TAPSCOTT AVE	PR					4.3	2.6		3.7	12	12	$9
180.00		419.0 E	10	12.00		CMP	540	0.1000	E	CUTTING BLVD	PR					6.1	5.6		8.0	12	12	$49
202.00			10	24.00		CMP	50	0.0700	E	KENILWORTH AVE				190.00	BM	32.4	36.8	E	52.6	12	21	$6
227.00			9	2.00	5.00	RCB	160	0.0160	A	POTRERO AVE	PR					115.5	126.4	.	182.9	12	42	$48
228.00			9	3.00	4.00	RCB	230	0.0160	A	SAN PABLO AVE	PR					156.6	126.4		182.9	12	42	$69
335.00		606.0	9	3.00	4.00	RCB	110	0.0300	E	RICHMOND ST	PR					214.4	159.3		230.0	12	42	$33
390.00		628.0	18	24.00		CMP	115	0.0500	E	EBMUD RESERVOIR						27.4	30.3	E	43.3	12	21	$13
403.00	622.0		17	24.00		CMP	30	0.0500	E	LAWRENCE ST	PR					27.4	17.7		25.4	12	18	$4
404.00			17	24.00		CMP	270	0.0500	E	LAWRENCE ST	PR					27.4	17.7		25.4	12	18	$35
407.00			17	24.00		CMP	100	0.0500	E	NAVELLIER ST	PR			193.10	NB	27.4	17.7		25.4	12	18	$13
496.00		724.0 E	25	12.00		CMP	100	0.0500	E	CONTRA COSTA DR	PR					4.3	3.2		4.6	12	12	$9
525.00			25	18.00		CMP	210	0.0500	E	DON CAROL DR	PR					12.7	12.0		17.1	12	15	$23
526.00			25	18.00		CMP	65	0.0500	E	ARBOR DR	PR					12.7	12.0		17.1	12	15	$7
535.00			24	30.00		CMP	130	0.0500	E	BURNS CT	PR					49.7	24.2		34.8	12	21	$20
608.00			24	30.00		CMP	200	0.0500	E	GALVIN DR	PR					49.7	12.7		18.2	12	15	$22
611.00			24	24.00		CMP	410	0.0500	E	GALVIN DR	PR		339.70	342.80	CB	27.4	8.9		12.7	12	15	$45
619.00			24	24.00		CMP	110	0.0500	E	GALVIN DR	PR					27.4	5.4		7.7	12	12	$10

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DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
620.00			24	30.00		CMP	380	0.0500	E	GALVIN DR	PR					49.7	5.4		7.7	12	12	$34
621.00		778.0	E	24	30.00		CMP	100	0.0500	E	SEAVIEW DR	PR			377.70	NB	49.7	5.4		7.7	12	12	$9
645.00				14	24.00		RCP	300	0.0130	A	SAN PABLO AVE	PR					25.8	29.8	*	42.7	12	27	$60
661.00				14	15.00		CMP	100	0.0190	A	ELM ST						4.8	11.7	****	16.7	12	18	$10
674.00	828.0	830.0		13	3.00	5.00	RCB	300	0.0220	C	LEXINGTON AVE	PR	22.00	28.70			243.6	206.3		298.1	12	48	$99
676.00				13	3.00	6.70	RCB	150	0.0200	E	CENTRAL AVE	PR					332.7	200.8		290.0	12	48	$50
676.20				14	34.00	69.00	RCB	60	0.0200	E	OAK ST	PR					254.3	200.8		290.0	12	48	$20
676.30				14	48.00	64.00	RCB	60	0.0200	E	OAK ST	PR					377.0	200.8		290.0	12	48	$20
681.00				14	3.00	5.00	RCB	360	0.0200	E	ELM ST	PR		50.10	54.20	TC	232.3	189.2		273.0	12	48	$119
682.00		834.0		14	3.00	5.00	RCB	180	0.0300	E	RICHMOND ST	PR	50.10				284.5	189.2		273.0	12	48	$59
688.00				14	2.80	3.80	RCB	80	0.0300	E	EVERETT ST	PR					182.5	171.4		247.2	12	42	$24
705.00	838.0			15	48.00		CMP	30	0.0800	E	POMONA AVE						220.1	133.3		191.8	12	36	$6
707.00				15	42.00	42.00	RCB	110	0.0800	E	HOTCHKISS AVE	PR					362.3	133.3		191.8	12	36	$30
708.00				23	3.50	4.00	RCB	130	0.0800	E	HOTCHKISS AVE	PR					432.3	133.3		191.8	12	36	$35
712.00		840.0		23	48.00		CMP	40	0.0800	E	COLUSA AVE						220.1	133.3		191.8	12	36	$8
714.00		841.0		23	48.00		CMP	50	0.0800	E	BALRA DR						220.1	127.3		183.0	12	36	$10
767.00	836.0			14	12.00		CMP	245	0.0200	E	EUREKA AVE						2.7	7.3	EEEE	10.4	12	15	$20
768.00				14	12.00		CMP	50	0.0200	E	EUREKA AVE						2.7	7.3	EEEE	10.4	12	15	$4
775.00				14	15.00		CMP	105	0.0200	E	NORVELL AVE	ES					5.0	12.1	EEEE	17.3	12	18	$10
829.00		881.0		22	24.00		CMP	120	0.1000	E	COLUSA AVE	PR					38.8	21.3		30.4	12	18	$16
830.00				22	36.00		CMP	100	0.1000	E	COLUSA AVE	PR					114.3	18.1		25.8	12	15	$11
831.00				22	36.00		CMP	220	0.1000	E	BONNIE DR	PR					114.3	18.1		25.8	12	15	$24
832.00				22	36.00		CMP	190	0.1000	E	BONNIE DR	PR					114.3	18.1		25.8	12	15	$21
833.00		882.0		22	36.00		CMP	50	0.1000	E	ERROL DR	PR					114.3	18.1		25.8	12	15	$6
835.00				22	30.00		CMP	180	0.1000	E	BALRA DR	PR					70.3	7.0		9.9	12	12	$16
837.00				22	36.00		CMP	440	0.1000	E	ERROL DR	PR					114.3	7.0		9.9	12	12	$40
838.00		883.0	E	22	24.00		CMP	150	0.1000	E	SEAVIEW DR	PR					38.8	7.0		9.9	12	12	$14
841.00		884.0		22	2.70	3.30	RCB	110	0.1000	E	COLUSA AVE	PR					264.1	134.3		193.7	12	36	$30
842.00				22	36.00		CMP	65	0.1000	E	COLUSA AVE						114.3	120.6	.	173.9	12	30	$11
843.00				22	36.00		CMP	40	0.1000	E	COLUSA AVE			111.80			114.3	120.6	.	173.9	12	30	$7
847.00				22	36.00		CMP	50	0.1000	E	BALRA DR						114.3	117.0	.	168.7	12	30	$8
848.00		886.0		22	36.00		CMP	30	0.1000	E	BALRA DR						114.3	117.0	.	168.7	12	30	$5
856.00				22	18.00		CMP	350	0.0800	E	BONNIE DR	PR					16.1	7.7		11.0	12	12	$32
858.00				22	15.00		CMP	190	0.0800	E	BALRA DR	PR					9.9	4.1		5.9	12	12	$17
870.00	895.0			13	4.00	4.00	RCB	30	0.0200	E	EL CERRITO PLAZA	PR					258.7	230.7		333.8	12	54	$11
878.00				21	4.00	4.00	RCB	135	0.0200	E	BEHRENS AVE	PR		60.40			258.7	229.7		332.1	12	54	$50
880.00		898.0		21	3.40	4.00	RCB	135	0.0440	C	BEHRENS AVE	PR	61.39	67.37			308.2	229.7		332.1	12	48	$45
23.00				12	12.00		TC	110	0.0500	E	FRANCISCO WAY	PR					4.3	8.0	EEE	11.4	11	15	$12
58.00				12	12.00		CMP	70	0.0500	E	LA HONDA AVE						4.3	8.1	EEE	11.6	11	15	$6

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

EL CERRITO STORM DRAIN INFORMATION DATABASE
DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
69.00		220.0	11	18.00		CMP	36	0.0500	E	BARRETT AVE			92.50			12.7	22.9	EEE	33.1	11	18	$4
70.00			11	18.00		CMP	80	0.0450		BARRETT AVE		96.60	100.00			12.1	19.8	***	28.6	11	18	$8
80.00	202.0		3	12.00		RCP	85	0.0500	E	POINSETT AVE	PR					8.0	14.7	EEE	21.0	11	18	$11
135.00		326.0	11	18.00		CMP	45	0.0500	E	ARLINGTON BLVD						12.7	20.3	EEE	29.2	11	18	$4
138.00		328.0	E 11	12.00		CMP	730	0.0500	E	LAGUNITAS AVE						4.3	8.4	EEE	12.0	11	15	$60
280.00			19	15.00		RCP	100	0.0200		PEBBLE BEACH DR	PR	525.90	528.00	532.00	MH	9.1	14.5	***	20.8	11	18	$13
285.00			19	12.00		RCP	90	0.0200		MIRA VISTA CC	PR					5.0	8.0	***	11.5	11	15	$10
400.00	624.0	634.0	17	10.00		RCP	280	0.2000	E	NAVELLIER ST	PR					9.8	15.3	EEE	21.9	11	12	$25
482.00		719.0	E 25	12.00		CMP	240	0.1000	E	CONTRA COSTA DR						6.1	11.8	EEE	16.9	11	15	$20
655.00	818.0		14	21.00		CMP	30	0.0250	A	LIBERTY ST						13.6	24.8	***	35.5	11	21	$3
665.00			15	15.00			100	0.0190	A	EVERETT ST	PR		67.50	70.50	TC	4.8	7.6	***	10.8	11	15	$11
808.00			23	10.00		TILE	35	0.1000	E	BALRA DR	PR					6.9	11.7	EEE	16.7	11	15	$4
854.00	884.0		22	10.00		VCP	110	0.1000	E	COLUSA AVE	PR		115.70	119.40	CB	6.9	11.1	EEE	15.8	11	12	$10
860.00	865.0		14	18.00		CMP	280	0.0250	E	CENTRAL AVE				57.60	NB	9.0	16.3	EEE	23.5	11	18	$27
861.00		892.0	14	18.00		CMP	260	0.0250	E	CENTRAL AVE				63.40	NB	9.0	16.3	EEE	23.5	11	18	$25
862.00		893.0	14	18.00		CMP	250	0.0250	E	CENTRAL AVE				69.60	BM	9.0	14.3	EEE	20.6	11	18	$25
10.00	103.0		4	18.00		CMP	65	0.0500	E	YUBA AVE						12.7	16.6	EE	23.8	10	18	$6
18.00			12	12.00		RCP	115	0.0500	E	TULARE AVE	PR					8.0	10.1	EE	14.5	10	15	$13
19.00			12	12.00		RCP	55	0.0500	E	MIRA VISTA DR	PR					8.0	10.1	EE	14.5	10	15	$6
20.00			12	12.00		RCP	100	0.0500	E	MIRA VISTA DR	PR					8.0	10.1	EE	14.5	10	15	$11
35.00		202.0	3	30.00		RCP	70	0.1500	E	POINSETT AVE	PR					158.9	94.0		136.2	10	27	$14
44.00		208.0	11	24.00	30.00	RCB	150	0.1200	E	BARRETT AVE	PR			284.10	NB	133.8	76.0		110.0	10	24	$26
45.00			11	24.00		RCP	210	0.0800	E	BARRETT AVE	PR		298.90			64.0	68.9	.	99.6	10	27	$42
113.00			11	12.00		RCP	100	0.1000	E	MIRA VISTA DR	PR					11.3	16.0	EE	22.9	10	15	$11
189.00			9	24.00		2RCP	120	0.0341		LIBERTY ST	PR					83.6	65.8	.	94.5	10	30	$26
190.00			9	36.00		RCP	15	0.0526		ELM ST	PR		71.90			153.0	65.8		94.5	10	27	$3
191.00			9	36.00		RCP	140	0.0260		ELM ST	PR	72.70	73.53	78.10	TC	107.6	65.8		94.5	10	30	$31
193.00			9	30.00		RCP	240	0.0400	A	ELM ST	PR					82.0	57.5		82.5	10	27	$48
206.00		431.0	10	15.00		CMP	80	0.0700	E	CUTTING BLVD				245.10	BM	9.3	12.9	EE	18.4	10	15	$7
234.00			9	2.50	3.50	RCB	85	0.0150	A	LEXINGTON AVE	PR	55.70				99.2	98.2		142.0	10	42	$26
236.00			9	39.00		RCP	140	0.0200	A	LEXINGTON AVE	PR	57.43				116.8	97.2		140.4	10	42	$42
237.00			9	2.50	3.00	RCB	140	0.0200	A	LIBERTY ST	PR		63.30			93.9	97.2	.	140.4	10	42	$42
239.00		510.0	9	4.00	4.00	WDB	150	0.0320		LIBERTY ST	PR	64.00				177.2	97.2		140.4	10	36	$41
244.00	511.0		9	2.50	3.50	RCB	130	0.0450		ELM ST	PR		79.00	84.00	JB	171.9	92.4		133.4	10	36	$35
246.00			9	36.00		RCP	110	0.0250		MANOR CIR	PR	90.70				105.5	90.9		131.3	10	36	$30
247.00			9	36.00		RCP	125	0.0350	A	WALNUT ST	PR					124.8	90.9		131.3	10	36	$34
249.00			9	30.00	32.00	RCB	150	0.0350	A	WALNUT ST	PR					106.5	85.9		123.9	10	36	$41
250.00			9	3.30	3.60	RCC	100	0.0350	A	BLAKE ST	PR					124.5	85.9		123.9	10	36	$27
251.00			9	2.70	2.60	RCB	80	0.0350	A	BLAKE ST	PR					114.1	85.9		123.9	10	36	$22

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DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
252.00			9	36.00		RCP	90	0.0350	A	WESLEY AVE	PR					124.8	85.9		123.9	10	36	$24
254.00			10	36.00		RCP	110	0.1000	A	WESLEY AVE	PR					210.9	84.0		121.2	10	27	$22
255.00			10	32.00	32.00	RCB	140	0.1000	A	GANGES AVE	PR					196.2	84.0		121.2	10	27	$28
257.00			10	32.00	32.00	RCB	260	0.1000	A	GANGES AVE	PR					196.2	82.7		119.3	10	27	$52
343.00		610.0	9	30.00		RCP	125	0.0500	E	GLADYS AVE	PR					91.7	55.5		80.1	10	27	$25
344.00		611.0	17	30.00		RCP	285	0.0500	E	GLADYS AVE	PR					91.7	55.9		80.7	10	27	$57
346.00	611.0		17	24.00		RCP	310	0.0500	E	GLADYS AVE	PR					50.6	54.0	.	77.9	10	27	$62
348.00		614.0	17	30.00		RCP	320	0.0900		WILDWOOD PL	PR		183.10			123.1	50.2		72.4	10	24	$54
415.20			8	0.50	2.00	CMPA	40	0.0200	E	RICHMOND ST				82.20	TC	3.0	4.3	EE	6.1	10	12	$3
483.00	717.0		25	12.00		RCP	300	0.0500	E	CONTRA COSTA DR	PR					8.0	11.2	EE	16.0	10	15	$33
486.00		721.0 E	25	12.00		CMP	100	0.0500	E	BREWSTER DR				702.70	BM	4.3	5.8	EE	8.2	10	12	$7
654.00		819.0 E	14	12.00		CMP	270	0.0310	E	LIBERTY ST			54.80	58.20	BM	3.4	5.0	EE	7.1	10	12	$18
719.00		843.0	23	30.00		CMP	30	0.0800	E	TERRACE DR				290.00	NB	62.8	52.7		75.6	10	24	$4
723.00			24	30.00		CMP	50	0.1000	E	SEAVIEW DR						70.3	52.3		75.0	10	24	$6
724.00		844.0	24	30.00		CMP	40	0.1000	E	SEAVIEW DR						70.3	52.3		75.0	10	24	$5
747.00		852.0	23	48.00		CMP	25	0.0500	E	SEAVIEW DR						174.0	54.1		77.6	10	27	$4
769.00			22	15.00		CMP	120	0.0200	E	EUREKA AVE						5.0	7.3	EE	10.4	10	15	$10
770.00		860.0	22	15.00		CMP	40	0.0200	E	ASHBURY AVE						5.0	7.3	EE	10.4	10	15	$3
780.00		863.0 E	14	15.00		CMP	35	0.0200	E	CLAYTON ST						5.0	6.2	EE	8.8	10	15	$3
802.00			23	30.00		RCP	100	0.0500	E	EUREKA AVE	PR					91.7	69.0		99.1	10	27	$20
804.00		873.0	23	30.00		CMP	110	0.1000	E	COLUSA AVE						70.3	69.0		99.1	10	24	$14
806.00		874.0	23	30.00		CMP	80	0.1000	E	BALRA AVE						70.3	65.2		93.6	10	24	$10
24.00		110.0	12	14.00		CI	20	0.0500	E	FRANCISCO WAY	PR					6.5	8.0	E	11.4	9	15	$2
140.00			1	3.00	4.00	RCB	50	0.0030		CYPRESS AVE			26.95			67.8	171.1	****	247.5	9	54 P	$14
144.00			1	28.00	80.00	TRB	40	0.0050		POTRERO AVE		28.86	29.02			61.8	172.3	****	248.8	9	54 P	$11
145.00			1	48.00		RCP	195	0.0018		POTRERO AVE		29.02	29.38			60.9	172.3	****	248.8	9	72 P	$72
334.00			9	2.50	2.50	MAS	40	0.0300	E	RICHMOND ST						49.0	159.3	EEEE	230.0	9	36 P	$8
436.00	700.0		7	2.50	3.50	2RCB		0.0100	E	SANTA CRUZ AVE						162.1	350.0	EEEE	507.1	9	54 P	
443.00		705.0	7	24.00		CMP	300	0.0100	E	SAN PABLO AVE						12.3	14.7	E	21.1	9	21	$34
508.00		729.0 E	25	12.00		CMP	70	0.0500	E	ARLINGTON PK						4.3	5.1	E	7.3	9	12	$5
633.00			13	3.25	6.50	RCB	285	0.0010	C	CARLSON BLVD		9.46	9.86			80.6	265.0	****	384.0	9	72 P	$105
634.00			13	3.25	6.50	RCB	140	0.0010		CARLSON BLVD		9.86	10.19	14.90	BM	80.6	265.0	****	384.0	9	72 P	$52
781.00	808.0		13	48.00		RCP	420	0.0060		FAIRMOUNT AVE		16.20	18.82			111.3	237.2	****	343.4	9	54 P	$117
785.00			13	42.00		RCP	260	0.0080		RICHMOND ST		38.40	41.10	47.80	MH	90.0	236.9	****	342.5	9	54 P	$72
786.00		865.0	13	42.00		RCP	310	0.0060		RICHMOND ST		41.30				77.9	236.9	****	342.5	9	60 P	$93
787.00		866.0	14	36.00		RCP	90	0.0200	E	RICHMOND ST			43.10	49.30	MH	94.3	222.3	EEEE	321.5	9	42 P	$20
828.00	871.0		22	18.00		CMP	240	0.1000	E	EL CERRITO HS		106.33				18.0	21.3	E	30.4	9	18	$24
891.00			21	36.00		RCP	40	0.0240	C	POMONA AVE		85.80	86.75			103.3	208.2	****	300.6	9	42 P	$9
894.00			21	36.00		RCP	97	0.0150		RAMONA AVE	ES		98.50	101.90		81.7	208.2	****	300.6	9	48 P	$24

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EL CERRITO STORM DRAIN INFORMATION DATABASE
DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
897.00			22	36.00		RCP	125	0.0140		PK		105.45	107.30			78.9	204.1	****	294.6	9	48 P	$31
104.00	307.0	311.0	11	18.00		RCP	240	0.1000	E	CANYON TRAIL PK	PR					33.2	31.6		45.3	8	18	$31
105.00			11	18.00		RCP	340	0.1000	E	FERN ST	PR					33.2	27.0		38.7	8	18	$44
128.00			11	18.00		RCP	320	0.1000	E	JORDAN AVE	PR					33.2	28.6		41.1	8	18	$42
130.00			11	18.00		RCP	220	0.1000	E	CARQUINEZ AVE	PR					33.2	25.7		36.9	8	18	$29
142.00			1	48.00		RCP	99	0.0050		SCHOOL ST		27.91	28.44			101.6	172.3	***	248.8	8	42 P	$22
143.00			1	48.00		RCP	120	0.0042		POTRERO AVE		28.44	28.86			93.1	172.3	***	248.8	8	48 P	$30
146.00			1	48.00		RCP	108	0.0052		GORDON AVE		29.38	29.95			103.6	172.3	***	248.8	8	42 P	$24
147.00		404.0	1	48.00		RCP	240	0.0052		GORDON AVE		29.95	31.20			103.6	172.3	***	248.8	8	42 P	$54
269.00	522.0		18	48.00		CMP	40	0.0500	E	ARLINGTON BLVD						174.0	28.9		41.5	8	21	$4
270.00			18	48.00		CMP	95	0.0500	E	ARLINGTON BLVD						174.0	28.9		41.5	8	21	$11
271.00		524.0	18	48.00		CMP	95	0.0500	E	ARLINGTON BLVD						174.0	28.9		41.5	8	21	$11
272.00			18	42.00		CMP	50	0.0500	E	ARLINGTON BLVD						121.9	25.5		36.6	8	21	$6
273.00			19	21.00		RCP	115	0.0500	E	SCENIC AVE	PR					35.4	25.5		36.6	8	21	$17
274.00			19	21.00		RCP	130	0.0500	E	SCENIC AVE	PR					35.4	25.5		36.6	8	21	$20
317.00	600.0		8	42.00		RCP	820	0.0167	C	CARLOS AVE		35.00	48.62			130.0	236.7	***	342.4	8	42 P	$185
325.00			9	42.00		RCP	75	0.0100		GLADYS AVE		60.40	61.10			100.6	156.3	***	225.8	8	36 P	$15
326.00			9	42.00		RCP	135	0.0100		GLADYS AVE		61.20	62.54			100.6	156.3	***	225.8	8	36 P	$27
328.00			9	42.00		RCP	80	0.0100		LIBERTY ST		64.42	65.02	70.80	CB	100.6	156.3	***	225.8	8	36 P	$16
340.00	607.0	609.0	9	36.00		RCP	40	0.0200	E	NORVELL ST						94.3	153.9	EEE	222.0	8	36 P	$8
349.00			17	30.00		RCP	275	0.0500	E	POTRERO AVE	PR	183.10				91.7	40.8		58.8	8	24	$47
350.00			17	30.00		RCP	270	0.0500	E	POTRERO AVE	PR					91.7	40.8		58.8	8	24	$46
389.00			18	24.00		RCP	250	0.0500	E	DOUGLAS DR	PR					50.6	30.3		43.3	8	21	$38
418.00			8	24.00		RCP	170	0.0100	C	BART			68.00	70.50	CB	22.6	50.5	****	72.3	8	27 P	$26
437.00			7	4.00	4.00	RCB	80	0.0100	E	SAN PABLO AVE						182.9	350.0	EEE	507.1	8	54 P	$22
438.00		701.0	7	2.50	7.00	RCB	150	0.0135		SAN PABLO AVE				41.60	BM	220.0	350.0	***	507.1	8	48 P	$37
446.00	704.0	707.0	7	2.00	4.00	RCB	150	0.0100	E	MOESER LN			56.10			69.8	126.7	EEE	183.4	8	36 P	$30
461.00			16	33.00		RCP	45	0.0440		SCHMIDT LN		84.10	86.10	90.40	CB	110.9	200.3	***	288.9	8	36 P	$9
466.00		710.0	16	36.00		RCP	310	0.0370		SCHMIDT LN				127.00	NB	128.3	200.3	***	288.9	8	30 P	$51
467.00		711.0	16	36.00		RCP	250	0.0370		SCHMIDT LN				138.20	BM	128.3	195.2	***	281.4	8	30 P	$41
506.00			25	24.00		CMP	90	0.1500	E	ARLINGTON BLVD				700.40	BM	47.5	37.0		52.9	8	18	$9
530.00	715.0		24	27.00		RCP	135	0.0500	E	EARL CT	PR					69.3	27.2		39.0	8	21	$20
559.00		744.0	7	21.00		VCP	30	0.0200	E	KEARNEY ST						22.4	65.7	EEEE	94.4	8	27 P	$5
562.00		746.0	15	7.50	9.00	RCC	50	0.0200	E	BART						24.0	64.0	EEEE	91.9	8	27 P	$8
589.00		765.0	15	24.00		RCP	120	0.0140		WALDO AVE				106.90	NB	26.8	70.4	****	101.3	8	30 P	$20
590.00			15	24.00		RCP	270	0.0150	E	ASHBURY AVE						27.7	67.2	EEEE	96.6	8	30 P	$45
606.00		772.0	15	30.00		CMP	50	0.0500	E	BALRA DR						49.7	29.0		41.7	8	21	$6
623.00		803.0	13	3.00	5.00	2RCB	170	0.0090	C	ADAMS ST		8.00	9.58	13.80	MH	311.6	522.2	***	757.5	8	60 P	$51
630.00	803.0	807.0	13	3.00	5.00	2RCB	260	0.0070	C	CARLSON BLVD						274.8	499.5	***	724.3	8	72 P	$96

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DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
631.00		807.9 E	13	3.00	5.00	2RCB	530	0.0070	C	SAN PABLO AVE						274.8	492.0	***	713.1	8	60 P	$159
637.00		809.0	13	3.00	5.00	RCB	40	0.0100	A	SAN PABLO AVE						164.2	286.3	***	414.8	8	48 P	$10
638.00		810.0	13	3.00	5.00	RCB	200	0.0100	A	SAN PABLO AVE			17.83	23.30	MH	164.2	280.2	***	405.9	8	48 P	$49
727.00			24	24.00		CMP	90	0.1000	E	SHEVLIN DR						38.8	30.3		43.4	8	18	$9
751.00	852.0		23	48.00		CMP	25	0.0500	E	HUBER PK						174.0	35.9		51.5	8	24	$3
756.00		855.0	23	36.00		CMP	50	0.0500	E	TERRACE DR						80.8	36.4		52.1	8	24	$6
759.00		856.0	24	24.00		CMP	80	0.1000	E	CONTRA COSTA DR						38.8	34.0		48.6	8	21	$9
783.00			13	48.00		RCP	65	0.0100		FAIRMOUNT AVE		24.20	25.20			143.6	237.2	***	343.4	8	42 P	$15
784.00		864.0	13	42.00		RCP	300	0.0220	A	FAIRMOUNT AVE						149.2	237.2	***	343.4	8	36 P	$61
784.20			13	42.00		RCP	280	0.0220	A	FAIRMOUNT AVE			38.40			149.2	236.9	***	342.5	8	36 P	$57
794.00		869.0	22	36.00		RCP	50	0.0280	A	CLAYTON ST						111.6	221.0	***	319.3	8	36 P	$10
822.00		878.0	23	30.00		CMP	40	0.1000	E	SEAVIEW DR						70.3	49.6		71.1	8	21	$4
824.00			23	30.00		CMP	60	0.1000	E	MIDCREST WAY						70.3	38.9		55.7	8	21	$7
893.10			21	36.00		RCP	20	0.0300	E	RAMONA AVE						115.5	208.2	EEE	300.6	8	36 P	$4
896.00		904.0	22	36.00		RCP	32	0.0280		CARMEL AVE		104.54	105.45	111.25	CB	111.6	208.2	***	300.6	8	36 P	$6
907.00		908.0	21	24.00		VCP	600	0.0160	C	ALBANY SCH		46.35	56.00			28.6	86.7	****	124.4	8	36 P	$121
908.00		909.0	21	24.00		VCP	520	0.0230	C	BEHRENS AVE		56.00	68.00			34.3	73.9	****	106.0	8	27 P	$78
8.00		104.0	4	24.00		RCP	50	0.0500	E	YUBA AVE						50.6	77.9	EEE	112.1	7	21 P	$6
186.00		422.0	9	27.00		VCP	240	0.0170	A	HILL ST			61.70	68.40	MH	40.4	69.7	***	100.1	7	24 P	$31
321.00			8	48.00		RCP	126	0.0120		KEARNY ST		53.50	55.00			157.4	223.2	**	322.6	7	36 P	$25
327.00			9	42.00		RCP	145	0.0130		GLADYS AVE		62.54	64.42	71.40	MH	114.7	156.3	**	225.8	7	30 P	$24
417.00	640.0		8	24.00		RCP	300	0.0170	C	BART			66.40	69.50	CB	29.5	50.5	***	72.3	7	24 P	$38
419.00		644.0	8	24.00		RCP	145	0.0150	E	BART						27.7	50.5	EEE	72.3	7	24 P	$19
420.00		645.0	8	15.00		RCP	240	0.0150	E	MANILA AVE				76.60	BM	7.9	47.7	EEEE	68.3	7	30 P	$40
421.00			8	15.00		RCP	290	0.0170	E	MANILA AVE				81.50	NB	8.4	39.5	EEEE	56.4	7	27 P	$44
422.00		646.0	8	15.00		RCP	250	0.0280	E	MANILA AVE			84.50	88.60	TC	10.8	39.5	EEEE	56.4	7	24 P	$32
423.00		647.0	16	15.00		RCP	480	0.0400	E	MANILA AVE				110.00	BM	12.9	30.6	EEEE	43.7	7	18 P	$47
441.00		706.9 E	7	24.00		RCP	150	0.0400		MOESER LN			56.10			45.2	84.5	***	122.3	7	24 P	$19
447.00			7	48.00		RCP	20	0.0100	E	MOESER LN						143.6	214.8	EE	310.6	7	42 P	$5
450.00			7	48.00		RCP	500	0.0100	E	MOESER LN			53.70			143.6	214.8	EE	310.6	7	42 P	$113
451.00			7	48.00		RCP	130	0.0100	E	PORTOLA DR						143.6	214.8	EE	310.6	7	42 P	$29
468.00			16	36.00		RCP	140	0.0400		SCHMIDT LN						133.4	188.4	**	271.6	7	27 P	$21
469.00			16	36.00		RCP	100	0.0400		SCHMIDT LN				147.50	BM	133.4	188.4	**	271.6	7	27 P	$15
470.00			16	36.00		RCP	80	0.0400	E	SCHMIDT LN						133.4	188.4	EE	271.6	7	27 P	$12
488.00		722.0	24	30.00		RCP	110	0.0140		DUKE CT		470.00	471.90	479.00	MH	48.5	92.2	***	132.5	7	30 P	$18
564.00		747.0	15	21.00		RCP	130	0.0200	E	BART						22.4	45.5	EEEE	65.3	7	24 P	$17
565.00			15	15.00		RCP	180	0.0200	E	MOESER LN						9.1	45.1	EEEE	64.7	7	27 P	$27
566.00		748.0	15	15.00		RCP	40	0.0200	E	MOESER LN						9.1	45.1	EEEE	64.7	7	27 P	$6
567.00		749.0	15	15.00		RCP	300	0.0300	E	MOESER LN						11.2	40.7	EEEE	58.3	7	24 P	$38

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA		COST
631.00		807.9 E	13	3.00	5.00	2RCB	530	0.0070	C	SAN PABLO AVE						274.8	492.0	***	713.1	8	60	P	$159
637.00		809.0	13	3.00	5.00	RCB	40	0.0100	A	SAN PABLO AVE						164.2	286.3	***	414.8	8	48	P	$10
638.00		810.0	13	3.00	5.00	RCB	200	0.0100	A	SAN PABLO AVE			17.83	23.30	MH	164.2	280.2	***	405.9	8	48	P	$49
727.00			24	24.00		CMP	90	0.1000	E	SHEVLIN DR						38.8	30.3		43.4	8	18		$9
751.00	852.0		23	48.00		CMP	25	0.0500	E	HUBER PK						174.0	35.9		51.5	8	24		$3
756.00		855.0	23	36.00		CMP	50	0.0500	E	TERRACE DR						80.8	36.4		52.1	8	24		$6
759.00		856.0	24	24.00		CMP	80	0.1000	E	CONTRA COSTA DR						38.8	34.0		48.6	8	21		$9
783.00			13	48.00		RCP	65	0.0100		FAIRMOUNT AVE		24.20	25.20			143.6	237.2	***	343.4	8	42	P	$15
784.00		864.0	13	42.00		RCP	300	0.0220	A	FAIRMOUNT AVE						149.2	237.2	***	343.4	8	36	P	$61
784.20			13	42.00		RCP	280	0.0220	A	FAIRMOUNT AVE			38.40			149.2	236.9	***	342.5	8	36	P	$57
794.00		869.0	22	36.00		RCP	50	0.0280	A	CLAYTON ST						111.6	221.0	***	319.3	8	36	P	$10
822.00		878.0	23	30.00		CMP	40	0.1000	E	SEAVIEW DR						70.3	49.6		71.1	8	21		$4
824.00			23	30.00		CMP	60	0.1000	E	MIDCREST WAY						70.3	38.9		55.7	8	21		$7
893.10			21	36.00		RCP	20	0.0300	E	RAMONA AVE						115.5	208.2	EEE	300.6	8	36	P	$4
896.00		904.0	22	36.00		RCP	32	0.0280		CARMEL AVE		104.54	105.45	111.25	CB	111.6	208.2	***	300.6	8	36	P	$6
907.00		908.0	21	24.00		VCP	600	0.0160	C	ALBANY SCH		46.35	56.00			28.6	86.7	****	124.4	8	36	P	$121
908.00		909.0	21	24.00		VCP	520	0.0230	C	BEHRENS AVE		56.00	68.00			34.3	73.9	****	106.0	8	27	P	$78
8.00		104.0	4	24.00		RCP	50	0.0500	E	YUBA AVE						50.6	77.9	EEE	112.1	7	21	P	$6
186.00		422.0	9	27.00		VCP	240	0.0170	A	HILL ST			61.70	68.40	MH	40.4	69.7	***	100.1	7	24	P	$31
321.00			8	48.00		RCP	126	0.0120		KEARNY ST		53.50	55.00			157.4	223.2	**	322.6	7	36	P	$25
327.00			9	42.00		RCP	145	0.0130		GLADYS AVE		62.54	64.42	71.40	MH	114.7	156.3	**	225.8	7	30	P	$24
417.00	640.0		8	24.00		RCP	300	0.0170	C	BART			66.40	69.50	CB	29.5	50.5	***	72.3	7	24	P	$38
419.00		644.0	8	24.00		RCP	145	0.0150	E	BART						27.7	50.5	EEE	72.3	7	24	P	$19
420.00		645.0	8	15.00		RCP	240	0.0150	E	MANILA AVE				76.60	BM	7.9	47.7	EEEE	68.3	7	30	P	$40
421.00			8	15.00		RCP	290	0.0170	E	MANILA AVE				81.50	NB	8.4	39.5	EEEE	56.4	7	27	P	$44
422.00		646.0	8	15.00		RCP	250	0.0280	E	MANILA AVE			84.50	88.60	TC	10.8	39.5	EEEE	56.4	7	24	P	$32
423.00		647.0	16	15.00		RCP	480	0.0400	E	MANILA AVE				110.00	BM	12.9	30.6	EEEE	43.7	7	18	P	$47
441.00		706.9 E	7	24.00		RCP	150	0.0400		MOESER LN			56.10			45.2	84.5	***	122.3	7	24	P	$19
447.00			7	48.00		RCP	20	0.0100	E	MOESER LN						143.6	214.8	EE	310.6	7	42	P	$5
450.00			7	48.00		RCP	500	0.0100	E	MOESER LN			53.70			143.6	214.8	EE	310.6	7	42	P	$113
451.00			7	48.00		RCP	130	0.0100	E	PORTOLA DR						143.6	214.8	EE	310.6	7	42	P	$29
468.00			16	36.00		RCP	140	0.0400		SCHMIDT LN						133.4	188.4	**	271.6	7	27	P	$21
469.00			16	36.00		RCP	100	0.0400		SCHMIDT LN				147.50	BM	133.4	188.4	**	271.6	7	27	P	$15
470.00			16	36.00		RCP	80	0.0400	E	SCHMIDT LN						133.4	188.4	EE	271.6	7	27	P	$12
488.00		722.0	24	30.00		RCP	110	0.0140		DUKE CT		470.00	471.90	479.00	MH	48.5	92.2	***	132.5	7	30	P	$18
564.00		747.0	15	21.00		RCP	130	0.0200	E	BART						22.4	45.5	EEEE	65.3	7	24	P	$17
565.00			15	15.00		RCP	180	0.0200	E	MOESER LN						9.1	45.1	EEEE	64.7	7	27	P	$27
566.00		748.0	15	15.00		RCP	40	0.0200	E	MOESER LN						9.1	45.1	EEEE	64.7	7	27	P	$6
567.00		749.0	15	15.00		RCP	300	0.0300	E	MOESER LN						11.2	40.7	EEEE	58.3	7	24	P	$38

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
568.00		750.0	15	15.00		RCP	200	0.0300	E	MOESER LN						11.2	37.8	EEEE	54.1	7	21 P	$22
569.00			15	15.00		RCP	270	0.0300	E	MOESER LN						11.2	33.4	EEEE	47.7	7	21 P	$30
570.00			15	15.00		RCP	200	0.0550		MOESER LN						15.2	33.4	****	47.7	7	18 P	$20
571.00		751.0	15	15.00		RCP	50	0.0500	E	MOESER LN						14.4	33.4	EEEE	47.7	7	18 P	$5
580.00	701.0	758.0	7	30.00		RCP	220	0.0200	E	WALDO AVE				45.30	NB	58.0	89.3	EEE	128.8	7	24 P	$28
586.00			15	27.00		RCP	125	0.0170		WALDO AVE		72.66	73.51			40.4	72.2	***	104.0	7	27 P	$19
635.00			13	4.00	8.00	RCB	220	0.0020		LASSEN ST		10.19	10.76			198.2	265.0	**	384.0	7	54 P	$61
639.00		811.0	13	24.00		RCP	472	0.0045		SAN PABLO AVE		17.83	19.99	26.80	MH	15.2	37.6	****	54.4	7	30 P	$78
639.20			13	24.00		RCP	150	0.0045		SAN PABLO AVE		19.99	20.67			15.2	33.7	****	48.4	7	27 P	$23
639.30			13	24.00		RCP	650	0.0045		SAN PABLO AVE		20.67	23.59	29.20	BM	15.2	33.7	****	48.4	7	27 P	$98
639.50			14	24.00		RCP	448	0.0045		SAN PABLO AVE		23.59	24.49	29.30	MH	15.2	33.7	****	48.4	7	27 P	$67
640.00		812.9 E	14	24.00		RCP	448	0.0045		SAN PABLO AVE		24.49	26.63	30.40	MH	15.2	33.7	****	48.4	7	27 P	$67
643.00		813.0	14	24.00		VCP	690	0.0040	A	SAN PABLO AVE			25.50	31.00	MH	14.3	33.7	****	48.4	7	27 P	$104
669.00			13	2.50	6.00	RCB	50	0.0100	E	KEARNY ST			19.40	22.10	CB	157.7	227.9	EE	329.3	7	42 P	$11
881.00		899.0	21	3.00	4.00	RCB	380	0.0168	C	HARDING SCH		67.37	73.75	83.75	TC	160.4	228.1	**	329.6	7	36 P	$77
882.00		900.0	21	18.00		RCP	260	0.0153		ASHBURY AVE			81.40	86.32	MH	13.0	34.7	****	49.5	7	24 P	$33
883.00			21	15.00		RCP	70	0.0300	E	FAIRMOUNT AVE		81.40				11.2	26.5	EEEE	37.7	7	18 P	$7
884.00			21	15.00		RCP	660	0.0309		FAIRMOUNT AVE						11.4	26.5	****	37.7	7	18 P	$65
889.00			21	3.00	3.00	RCB	150	0.0300	C	ASHBURY AVE		75.15	79.75			147.1	207.2	**	299.2	7	30 P	$25
894.10			21	36.00		RCP	18	0.0600	C	RAMONA AVE		98.50	99.60	102.80	CB	163.4	208.2	**	300.6	7	24 P	$2
909.00		910.0	21	21.00		VCP	250	0.0430	C	LYNN AVE		68.00	78.80			32.9	60.5	***	86.7	7	21 P	$28
12.00			12	18.00		RCP	180	0.0500	E	YUBA AVE	PR					23.5	16.6		23.8	6	18	$23
14.00		107.0	12	18.00		RCP	190	0.1425		SONOMA AVE	PR		241.50			39.7	14.4		20.6	6	15	$21
15.00			12	18.00		RCP	390	0.0552	E	RAY AVE	PR	241.50		295.20	BM	24.7	11.7		16.8	6	15	$43
21.00		109.0	12	10.00			60	0.0500	E	MIRA VISTA DR						2.7	10.1	EEEE	14.5	6	12 P	$4
25.00			12	12.00		RCP	220	0.0500	E	FRANCISCO WAY	PR			360.00	NB	8.0	5.1		7.3	6	12	$20
27.00			12	12.00		CMP	240	0.0500	E	CARQUINEZ AVE						4.3	2.2		3.1	6	12	$16
28.00		112.0	12	12.00		CMP	25	0.0500	E	TASSAJARA AVE				380.60	BM	4.3	2.2		3.1	6	12	$2
60.00			12	12.00		RCP	330	0.0500	E	LA HONDA AVE	PR					8.0	3.0		4.2	6	12	$30
61.00		217.0 E	12	12.00		RCP	150	0.0500	E	TAMALPAIS AVE	PR					8.0	3.0		4.2	6	12	$14
66.00			11	18.00		RCP	100	0.0500	E	TASSAJARA AVE	PR					23.5	22.9		33.1	6	18	$13
77.00		223.0	11	12.00		RCP	40	0.0500	E	TAMALPAIS AVE						8.0	19.9	EEEE	28.5	6	15 P	$3
79.00		224.0 E	11	12.00		RCP	30	0.0500	E	ARLINGTON BLVD				478.60	TC	8.0	16.8	EEEE	24.1	6	15 P	$2
88.00			11	12.00		RCP	90	0.0500	E	EDWARDS AVE	PR					8.0	5.1		7.2	6	12	$8
93.00	302.0	304.0	2	36.00		RCP	85	0.0100		CONLON AVE		74.40	75.00	81.00	NB	66.7	86.6	**	124.8	6	24 P	$11
115.00			11	12.00		RCP	150	0.2000	E	MIRA VISTA DR	PR					15.9	9.5		13.6	6	12	$14
132.00			11	18.00		RCP	230	0.1000	E	ALVA AVE	PR					33.2	24.2		34.7	6	18	$30
134.00			11	18.00		RCP	240	0.0500	E	CUTTING BLVD	PR			431.80	BM	23.5	20.3		29.2	6	18	$31
136.00			11	18.00		RCP	280	0.0500	E	CUTTING BLVD	PR					23.5	12.3		17.6	6	15	$31

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

EL CERRITO STORM DRAIN INFORMATION DATABASE
DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
137.00		327.0	11	12.00			120	0.0500	E	LAGUNITAS AVE						4.3	12.3	EEEE	17.6	6	12 P	$8
162.50			2	24.00		RCP	170	0.0200	E	KEY BLVD	PR					32.0	5.3		7.5	6	15	$19
173.00		416.0 E	10	15.00		CMP	40	0.0500	E	TAPSCOTT AVE				237.70	NB	7.8	2.6		3.7	6	12	$3
181.00	406.0		1	36.00		RCP	390	0.0100	E	HILL ST						66.7	96.7	EE	139.3	6	27 P	$59
212.00			11	24.00		RCP	60	0.0360		CUTTING BLVD	PR		341.41			42.9	10.8		15.4	6	15	$7
213.00			11	24.00		RCP	140	0.1040	C	TAMALPAIS AVE	PR	341.41	356.18			73.0	10.8		15.4	6	12	$13
215.00			11	24.00		RCP	110	0.0500	E	ARLINGTON BLVD	PR			403.40	NB	50.6	10.8		15.4	6	15	$12
216.00		435.0 E	11	24.00		CMP	40	0.0500	E	ARLINGTON BLVD						27.4	10.8		15.4	6	15	$3
220.00	500.0		8	4.00	4.00	RCB	110	0.0070	A	S 56TH ST		35.00				153.0	175.7	*	254.5	6	27 P	$17
221.00		502.0	8	4.00	4.00	RCB	60	0.0070	A	S 56TH ST						153.0	175.7	*	254.5	6	27 P	$9
223.00	502.0	504.0	8	4.00	4.00	RCB	210	0.0070	A	S 56TH ST			37.80			153.0	170.4	*	246.8	6	24 P	$27
235.00		509.0	9	2.00	3.50	RCB	25	0.0150	A	LEXINGTON AVE			57.43			72.5	98.2	**	142.0	6	24 P	$3
262.00			10	21.00		RCP	70	0.1000	A	HILLSIDE PK						50.1	69.7	**	100.4	6	15 P	$6
263.00		520.0	10	21.00		RCP	70	0.1000	A	HILLSIDE PK						50.1	69.7	**	100.4	6	15 P	$6
268.00		523.0 E	18	18.00		CMP	270	0.0500	E	ARLINGTON BLVD						12.7	7.1		10.2	6	12	$18
281.00		528.0	19	15.00		RCP	30	0.4500		PEBBLE BEACH DR	PR	528.00	539.00	543.90	MH	43.3	14.5		20.8	6	12	$3
282.00			19	12.00		RCP	420	0.1100		MIRA VISTA CC	PR					11.8	8.0		11.5	6	12	$38
283.00			19	12.00		RCP	230	0.0700		MIRA VISTA CC	PR					9.4	8.0		11.5	6	12	$21
284.00			19	12.00		RCP	380	0.1100		MIRA VISTA CC	PR					11.8	8.0		11.5	6	12	$34
286.00		529.0	19	12.00		RCP	160	0.1700		MIRA VISTA CC	PR					14.7	8.0		11.5	6	12	$14
291.00		530.0 E	18	12.00		RCP	160	0.0500	E	ARLINGTON BLVD						8.0	16.5	EEEE	23.7	6	15 P	$13
295.00	531.0	533.0	9	18.00		RCP	650	0.0250	E	BLAKE ST				78.90	NB	16.6	29.1	EEE	41.8	6	18 P	$64
296.00		534.0	9	18.00		RCP	500	0.0250	E	BLAKE ST				92.90	NB	16.6	28.7	EEE	41.2	6	18 P	$49
303.00	535.0	538.0 E	9	12.00		CMP	280	0.0200	E	NORVELL ST						2.7	2.9	.	4.2	6	12	$19
311.00		541.0	9	21.00		RCP	74	0.0120		POTRERO AVE		57.16	58.00	61.50	NB	17.4	31.4	***	44.9	6	21 P	$8
322.00			8	3.00	4.00	RCB	45	0.0230		KEARNY ST		55.50	56.62			187.7	223.2	*	322.6	6	27 P	$7
360.00	617.0		18				50	0.0500	E	POTRERO AVE	PR						16.6		23.9	6	18	$7
361.00		619.0	18				90	0.0500	E	POTRERO AVE	PR						16.6		23.9	6	18	$12
363.00			18	18.00		CMP	130	0.0500	E	JULIAN DR			574.50	580.00	TC	12.7	4.9		7.0	6	12	$9
364.00			18	18.00		CMP	65	0.0600		JULIAN DR		574.50	578.00	583.90	TC	13.9	4.9		7.0	6	12	$4
365.00			18	18.00		CMP	60	0.0760		JULIAN DR		578.00	579.00			15.7	4.9		7.0	6	12	$4
366.00			18	18.00		CMP	70	0.0760		JULIAN DR		579.00	593.50			15.7	4.9		7.0	6	12	$5
367.00			18	18.00		CMP	75	0.2130		MADERA CIR		593.50	609.50			26.3	4.9		7.0	6	12	$5
368.00			18	18.00		CMP	45	0.3560		MADERA CIR		609.50	628.50			34.0	4.9		7.0	6	12	$3
369.00			18	18.00		CMP	60	0.3850		MADERA CIR		628.50	644.20	651.60	MH	35.3	4.9		7.0	6	12	$4
374.00			18	18.00		RCP	90	0.0870		MADERA CIR	PR	678.50	679.80			31.0	4.9		7.0	6	12	$8
375.00			18	18.00		RCP	20	0.0150	C	MADERA CIR	PR	679.80	680.10			12.9	4.9		7.0	6	15	$2
376.00		620.0 E	18	18.00		RCP	140	0.0500	E	ARLINGTON BLVD	PR					23.5	4.9		7.0	6	12	$13
392.00		629.0	18	24.00		CMP	20	0.0500	E	MADERA CIR			596.00			27.4	20.6		29.3	6	18	$2

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

EL CERRITO STORM DRAIN INFORMATION DATABASE
DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
395.00	629.0	631.0	18	21.00		RCP	118	0.0500	E	MADERA CIR	PR			642.90	MH	35.4	15.4		22.0	6	18	$15
402.00		635.0	E 17	12.00		RCP	240	0.0600	E	KENT DR	PR			675.40	NB	8.7	8.1		11.6	6	12	$22
405.00			17	24.00		CMP	60	0.0500	E	SCOTT ST						27.4	17.7		25.4	6	18	$6
408.00			17	24.00		CMP	30	0.0500	E	NAVELLIER ST						27.4	17.7		25.4	6	18	$3
409.00		636.0	E 17	24.00		RCP	100	0.0500	E	NAVELLIER ST	PR					50.6	17.7		25.4	6	18	$13
444.00			7	24.00		CMP	240	0.0100	E	SAN PABLO AVE				57.90	BM	12.3	12.3		17.6	6	21	$27
445.00		706.0	E 7	24.00		CMP	50	0.0100	E	PORTOLA DR						12.3	12.3		17.6	6	21	$6
473.00		713.0	16	36.00		RCP	475	0.0500	E	SCHMIDT LN						149.1	170.8	E	246.0	6	18 P	$47
489.00			24	18.00		RCP	200	0.0500	E	DUKE CT	PR					23.5	12.6		18.0	6	15	$22
494.00		723.0	25	18.00		CMP	120	0.0500	E	KING DR						12.7	12.6		18.0	6	15	$10
518.00		731.0	25	18.00		RCP	35	0.0500	E	ARLINGTON BLVD						23.5	42.1	EEE	60.4	6	18 P	$3
522.00			25	21.00		RCP	150	0.0500	E	VILLA NUEVA DR	PR					35.4	22.4		32.0	6	18	$20
523.00			25	24.00		RCP	380	0.0500	E	VILLA NUEVA DR	PR					50.6	22.4		32.0	6	18	$49
534.00			24	30.00		CMP	70	0.0500	E	BURNS CT			541.30			49.7	24.2		34.8	6	21	$8
538.00		738.0	24	15.00		VCP	310	0.2000	E	KING DR	PR					28.9	16.7		24.0	6	15	$34
540.00			24	15.00		RCP	280	0.0500	E	CONTRA COSTA DR	PR					14.4	7.9		11.4	6	12	$25
542.00	714.0	740.0	E 24	12.00		CMP	460	0.0500	E	MOESER LN						4.3	1.6		2.3	6	12	$31
573.00	746.0		15	21.00		VCP	180	0.0200	E	LIBERTY ST	PR					22.4	19.9		28.5	6	21	$27
575.00		753.0	15	21.00		RCP	230	0.0200	E	LIBERTY ST	PR					22.4	17.4		24.8	6	21	$35
576.00		754.0	15	21.00		RCP	290	0.0200	E	ELM ST	PR					22.4	14.5		20.8	6	18	$38
577.00		755.0	15	21.00		RCP	230	0.0200	E	RICHMOND ST	PR					22.4	12.7		18.1	6	18	$30
578.00		756.0	15	21.00		RCP	250	0.0200	E	EVERETT ST	PR					22.4	8.3		11.8	6	15	$28
579.00		757.0	E 15	21.00		RCP	130	0.0200	E	NORVELL ST	PR					22.4	5.5		7.8	6	15	$14
581.00		759.0	15	30.00		RCP	280	0.0200	E	WALDO AVE				52.20	NB	58.0	84.9	EE	122.4	6	24 P	$36
582.00		760.0	15	30.00		RCP	180	0.0200	E	WALDO AVE						58.0	82.7	EE	119.3	6	24 P	$23
583.00		761.0	15	30.00		RCP	130	0.0200	E	WALDO AVE						58.0	81.1	EE	116.8	6	24 P	$17
585.00		763.0	15	27.00		RCP	290	0.0300		WALDO AVE			72.66	76.60	NB	53.6	75.0	**	108.0	6	21 P	$32
588.00			15	24.00		RCP	270	0.0500		WALDO AVE		83.12	94.60			50.6	70.4	**	101.3	6	18 P	$26
609.00		774.0	24	30.00		CMP	40	0.0500	E	GALVIN DR						49.7	12.7		18.2	6	15	$3
612.00		775.0	24	30.00		CMP	45	0.0440		SEAVIEW DR		339.70	335.20	341.60	CB	46.6	8.9		12.7	6	15	$4
613.00			24	24.00		CMP	170	0.0500	E	SEAVIEW DR		335.20				27.4	4.3		6.1	6	12	$12
632.00	802.0		13	3.25	6.50	RCB	190	0.0070		ADAMS ST		8.00	9.44			213.1	265.0	*	384.0	6	36 P	$38
642.00			13	27.00		VCP	780	0.0040	A	SAN PABLO AVE						19.6	33.7	***	48.4	6	24 P	$100
660.00	820.0		14	21.00		CMP	4	0.0190	A	ELM ST		55.10				11.8	11.7		16.7	6	18	
667.00		826.0	E 15				260	0.0200	E	EVERETT ST	PR						4.0		5.6	6	15	$29
671.00		828.0	13	3.00	6.00	RCB	35	0.0085	A	LEXINGTON AVE			22.00			189.7	227.9	*	329.3	6	36 P	$7
679.00			14	40.00	40.00	RCB	60	0.0200	E	BART						159.1	194.3	E	280.6	6	27 P	$9
740.00	846.0		24	24.00		CMP	30	0.0500	E	KING DR						27.4	11.0		15.6	6	15	$2
744.00		851.0	E 24	24.00		CMP	100	0.0500	E	SHEVLIN DR						27.4	10.9		15.6	6	15	$8

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

EL CERRITO STORM DRAIN INFORMATION DATABASE
DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
754.00		854.0	E 24	30.00		CMP	80	0.0500	E	SHELVIN DR						49.7	1.5		2.1	6	12	$5
761.00		857.0	24	30.00		RCP	50	0.1000	E	BAY TREE LN	PR		564.00			129.7	24.4		34.9	6	18	$7
764.00		859.0	24	12.00		RCP	430	0.1000	E	GELSTON PL	PR					11.3	9.3		13.2	6	12	$39
772.00	834.0	861.0	14	15.00		RCP	130	0.0200	E	LINCOLN AVE				62.10	BM	9.1	20.0	EEEE	28.6	6	18 P	$13
774.00			14	15.00			135	0.0200	E	NORVELL AVE						5.0	12.1	EEEE	17.3	6	15 P	$11
776.00			14	15.00			130	0.0200	E	ALBEMARLE ST	ES					5.0	12.1	EEEE	17.3	6	15 P	$11
777.00			14	15.00			90	0.0200	E	ALBEMARLE ST						5.0	12.1	EEEE	17.3	6	15 P	$7
778.00		862.0	14	15.00			50	0.0200	E	ALBEMARLE ST						5.0	12.1	EEEE	17.3	6	15 P	$4
797.00		870.0	22	42.00		RCP	80	0.0320		ASHBURY AVE		85.90	88.50			180.0	221.7	*	320.1	6	27 P	$12
810.00		876.0	23	30.00		CMP	50	0.1000	E	SEAVIEW DR						70.3	11.7		16.7	6	15	$4
811.00			23	12.00		RCP	70	0.1000	E	SEAVIEW DR	PR					11.3	8.2		11.7	6	12	$6
813.00			23				18	0.1000	E	SEAVIEW DR	PR						8.2		11.7	6	12	$2
815.00			23	15.00		RCP	170	0.1000	E	TERRACE DR	PR					20.4	8.2		11.7	6	12	$15
834.00			22	36.00		CMP	70	0.1000	E	ERROL DR						114.3	7.0		9.9	6	12	$5
836.00			22	30.00		CMP	100	0.1000	E	ERROL DR						70.3	7.0		9.9	6	12	$7
840.00	870.0	883.8	22	36.00		RCP	600	0.0120		EL CERRITO HS		88.50	90.10			73.1	93.8	**	135.4	6	24 P	$77
863.00			22	18.00		CMP	260	0.0250	E	CENTRAL AVE			72.40	74.80		9.0	3.6		5.2	6	12	$18
864.00		894.0	22	18.00		CMP	290	0.0320	C	CENTRAL AVE		72.40	81.65	87.20	BM	10.2	3.6		5.2	6	12	$20
888.00	899.0		21	3.00	4.00	RCB	60	0.0230	C	ASHBURY AVE		73.75	75.15			187.7	207.2	*	299.2	6	21 P	$7
898.00			22	36.00		RCP	40	0.0750	C	COLUSA AVE		107.30	110.29	120.14	MH	182.7	204.1	*	294.6	6	18 P	$4
910.00		911.0	21	21.00		RCP	144	0.0260		LYNN AVE			86.00			25.6	43.6	***	62.4	6	21 P	$16
63.00			11	15.00		RCP	25	0.0500	E	TASSAJARA PARK						14.4	24.8	EEE	35.8	5	15 P	$2
64.00		219.0	11	15.00		RCP	25	0.0500	E	TASSAJARA AVE						14.4	24.8	EEE	35.8	5	15 P	$2
75.00	218.0	222.0	11	15.00		RCP	280	0.0500	E	TASSAJARA PARK						14.4	22.8	EEE	32.7	5	15 P	$23
81.00		225.0	3	12.00		RCP	20	0.0500	E	POINSETT AVE						8.0	14.7	EEE	21.0	5	12 P	$1
177.00		417.0	10	18.00		RCP	100	0.0200	E	CUTTING BLVD		58.30				14.9	22.6	EEE	32.4	5	15 P	$8
187.00			9	30.00		RCP	120	0.0180	C	LIBERTY ST		61.70	63.90	68.70	MH	55.0	65.8	*	94.5	5	18 P	$12
292.00	508.0	531.0	9	21.00		RCP	40	0.0200	E	BART				60.50	NB	22.4	31.1	EE	44.7	5	15 P	$3
301.00			17	12.00		RCP	60	0.0500	E	NAVELLIER ST						8.0	13.8	EEE	19.7	5	12 P	$4
302.00		537.0	E 17	12.00		RCP	70	0.0500	E	NAVELLIER ST						8.0	13.8	EEE	19.7	5	12 P	$5
309.00			9	21.00		RCP	250	0.0200	E	POTRERO AVE						22.4	31.4	EE	44.9	5	15 P	$21
312.00		542.0	9	18.00		RCP	300	0.0200	E	POTRERO AVE				68.50	NB	14.9	22.7	EEE	32.5	5	15 P	$25
382.00		623.0	17	27.00		VCP	40	0.0500	E	NAVELLIER ST						69.3	77.5	E	111.3	5	15 P	$3
410.00	603.0	638.0	8	48.00		RCP	572	0.0020		BART			60.67			64.2	76.1	*	109.6	5	27 P	$86
517.00	727.0		25	18.00		RCP	100	0.1000	E	ARLINGTON BLVD				700.40	NB	33.2	42.1	EE	60.4	5	12 P	$7
520.00	731.0		25	18.00		RCP	260	0.0500	E	ARLINGTON BLVD				721.80	NB	23.5	34.7	EE	49.6	5	15 P	$21
521.00		733.0	25	18.00		RCP	180	0.0500	E	VILLA NUEVA DR						23.5	34.7	EE	49.6	5	15 P	$15
536.00		737.0	24	15.00		VCP	25	0.0500	E	KING DR						14.4	24.2	EEE	34.8	5	15 P	$2
544.00	709.0	741.0	16	24.00		RCP	100	0.0065		SCHMIDT LN						18.2	25.3	**	36.2	5	18 P	$10

FLAG CODE: E - ESTIMATED SLOPE, * - OTHER SLOPE FLOW GREATER THAN CAPACITY BY : . < 10%, E 10 TO 25%, EE 25 TO 50%, EEE 50 TO 100%, EEEE > 100%

DRAINS WITH DEFICIENCIES, SORT BY TOTAL POINTS

DRAIN NO.	D/S NODE	U/S NODE	MAP NO.	HT / DIAM.	WIDTH	TYPE	LENGTH	SLOPE	TY	STREET	R/W	D/S INVERT	U/S INVERT	U/S GROUND	TY	CAPACITY	10-YR FLOW	FLAG	100-YR FLOW	PTS	RDIA	COST
627.00		804.0	13	21.00		RCP	206	0.0040		CARLSON BLVD		11.45	12.63	16.50	MH	10.0	18.9	***	27.3	5	21 P	$23
628.00		805.0	13	21.00		RCP	320	0.0040		CARLSON BLVD		12.63	13.92	17.70	MH	10.0	15.5	***	22.3	5	18 P	$31
629.00		806.0 E	13	18.00		RCP	310	0.0040		CARLSON BLVD		13.92	15.50	19.40	TC	6.6	11.7	***	16.9	5	18 P	$30
666.00		825.0	15	12.00		RCP	30	0.0200	E	EVERETT ST		67.50	68.10	71.00	TC	5.0	7.6	EEE	10.8	5	12 P	$2
839.00	870.0	883.7 E	22	24.00		VCP	600	0.0200		EL CERRITO HS		88.50				32.0	40.2	**	58.0	5	15 P	$49
855.00		889.0	22	10.00		VCP	120	0.0800	E	SUSAN AVE						6.2	11.1	EEE	15.8	5	12 P	$8
17.00			12	12.00		RCP	100	0.0500	E	TULARE AVE						8.0	10.1	EE	14.5	4	12 P	$7
62.00	213.0	218.0	11	21.00		RCP	300	0.0500	E	TASSAJARA PARK						35.4	43.9	E	63.5	4	15 P	$25
310.00			9	21.00		RCP	100	0.0280		POTRERO AVE			56.91	63.30	MH	26.5	31.4	*	44.9	4	12 P	$7
425.00		648.0	16	12.00		RCP	220	0.0500	E	MANILA AVE				148.60	BM	8.0	11.8	EE	16.8	4	12 P	$15
484.00		720.0	25	12.00		RCP	60	0.0500	E	BREWSTER DR						8.0	11.2	EE	16.0	4	12 P	$4
646.00		814.9 E	14	24.00		RCP	40	0.0130	A	KEARNEY ST			32.05			25.8	29.8	*	42.7	4	12 P	$3
672.00		829.0	13	21.00		RCP	250	0.0090		LEXINGTON AVE		22.00	24.40	27.50	NB	15.0	20.5	**	29.6	4	15 P	$21
773.00			14	15.00		RCP	260	0.0200	E	LINCOLN AVE				67.90	BM	9.1	12.1	EE	17.3	4	12 P	$18
909.20			21	24.00		RCP	112	0.0266		LYNN AVE		78.80				36.9	43.6	*	62.4	4	15 P	$9
911.00		912.0	21	21.00		RCP	240	0.0400		LYNN AVE			96.00			31.7	35.2	*	50.4	4	12 P	$16
26.00		111.0	12	12.00			20	0.0500	E	CARQUINEZ AVE						4.3	5.1	E	7.3	3	12 P	$1
176.00			10	18.00		RCP	30	0.0330	C	CUTTING BLVD		57.30	58.30			19.1	22.6	*	32.4	3	12 P	$2
179.00			10	12.00		VCP	200	0.0200	E	CUTTING BLVD						5.0	5.6	E	8.0	3	12 P	$14
278.00			19	15.00		RCP	190	0.0500	E	PEBBLE BEACH DR						14.4	17.1	E	24.5	3	12 P	$13
279.00		527.0	19	15.00		RCP	30	0.0500	E	PEBBLE BEACH DR			525.90	529.90	TC	14.4	17.1	E	24.5	3	12 P	$2
297.00		535.0	9	18.00		RCP	280	0.0200	E	NORVELL ST						14.9	16.7	E	24.0	3	12 P	$19
298.00		536.0	9	18.00		RCP	300	0.0200	E	NORVELL ST						14.9	17.7	E	25.3	3	12 P	$20
313.00		543.0	9	18.00		RCP	230	0.0200	E	POTRERO AVE				75.10	NB	14.9	18.0	E	25.8	3	12 P	$16
399.00		633.0 E	18	12.00		RCP	60	0.0900	E	DEVONSHIRE DR			674.52	689.00	MH	10.7	11.9	E	16.9	3	12 P	$4
537.00			24	15.00		VCP	60	0.0500	E	KING DR						14.4	16.7	E	24.0	3	12 P	$4
600.00		769.0	16	15.00		RCP	50	0.0500	E	AVIS DR						14.4	17.2	E	24.5	3	12 P	$3
648.00		815.0	14	24.00		RCP	362	0.0050		KEARNEY AVE		30.24	32.05			16.0	19.8	*	28.5	3	15 P	$30

APPENDIX D

RESIDENT QUESTIONAIRES

EL CERRITO STORM DRAINAGE MASTER PLAN
RESIDENT QUESTIONAIRES

In order to obtain additional information about historic flooding problem areas and occurrences, a number of questionaires were sent to some residents of the city, soliciting information they might have about drainage problems.

Areas of the city selected for solicitation of information were based on the documented areas of flooding that occurred during the December 1969 storm. A portion of the residents in these areas were mailed survey questionaires. A sample copy of the survey questionaire sent is shown at the end of this appendix.

A total of 281 survey questionaires were sent out. Of these, 89 responses were received. Most of the responses indicated no experience of flooding problems. Knowledge of historic flooding problems was indicated in 17 of the responses.

A summary of the information on flooding problems obtained from the survey questionaire is contained in Table D-1.

TABLE D-1
SUMMARY OF RESPONSES FROM CITY STORM DRAIN SURVEY

Address	Years at Location	Flood Problem	Potential Property Damage	Time of Occurrence	Comments
2540 Tamalpais	11	No	Yes	March 1991	
3408 Belmont Ave.	17	Wet garage floor	Yes	1982 or 83	High water 6" below front door, garage 2' lower than house.
1210 Scott St.	40	No	Yes	5 years ago	Water ponded 12" under house.
6510 Donal	15	Water damage to lower apartments		Feb. 1979 and Feb. 1982	During 1982 flood, water hip deep near culvert, 6"-8" in apartments.
749 Liberty St.	2 1/2	No	Yes	Feb. 1992	Potential ponding if drain at 749 Liberty were blocked.
5722 Lassen	31+	No	Yes	In the 1960's, before streets widened	Water over curb to second front step.
737 Liberty	28	Yes		Dec. 1969	Three feet deep in street, one foot of water in garage at 737-739 Liberty.
10012 San Pablo Ave	since 1940	Yes		10 years ago	At San Pablo and Fairmount before storm drain was put in.
2535 Arlington Ave.	41	Yes		1951 or 1952, Feb. or Mar.	Flow of water from golf course before storm drain put in. Drain has overflowed during heavy rains and entered garage next door.
1429 Scott St.	45	Yes		1989	CMP drain collapsed, causing flooding through property.
1716 Liberty St.	20	No	Yes	Feb. 1981	Overflowed onto sidewalk across street.

2541 Carquinez Ave.	16	Yes		8 years ago +-	New home's foundations on Alvarado Pl. pierced drain., water 2' deep at Barrett & Carquinez.
207 Pomona	1	No	Yes	Jan 1992	
1205 Rivera St.	29	No	Yes	10 years ago	8" of rain in 24 hours.
7343 Schmidt Lane	39	Yes		Feb. 12, 15, & 19, 1992, and all previous years	Flooding in yard.
1215 Everett St.	42	Yes, at neighbors		Early 1950's	Ponding occurred in 1300 block of Everett, over gutters and lawns.
423 Lexington Ave.	21 1/2	Yes		Dec. 1969	Ponding occurred downstream from Central Ave., water 12" deep by garage, 100 feet from street.

Community Development Department
Engineering Division
(510) 215-4382

SURVEY

INTRODUCTION: The City of El Cerrito Engineering Division is evaluating the City storm drain system to determine:

1. Where sewer pipes need repair or replacement
2. Where sewer pipes need to be enlarged
3. Areas in the City subject to localized flooding
4. To what extent localized flooding occurs

This evaluation is the first step in what may become a proactive maintenance/rehabilitation program.

We desire to collect as much information about the storm drain system as possible. We feel that you, our residents of El Cerrito, can provide us with important information about the adequacy of our storm drains. To assist in our data collection we have prepared a number of questions which we request your response. Some personal information is requested so that we may perform follow-up interviews as our findings dictate. If you are a renter and can answer the following questions, please do so.

1. Name:_____

2. Address:_____
   El Cerrito, CA 94530

3. Telephone:___(510)_____

4. How many years have you lived at this location? _____

5. Have you experienced a flooding problem to the extent that caused property damage to your belongings? Yes No

6. If no, did excessive rainfall runoff ever alarm you about the potential for property damage? Yes No

7. If yes, when did this problem last occur? (One year, 5 years, 15 years)_____

8. Do you know exactly when? If yes, provide the month and year. _____

9. How may consecutive days of rainy weather occurred before the flooding problem arose? (1,2,4, a few, several) _____

(over)

10. If you experienced flooding, do you recall

A. Where ponding occurred?

_____

_____

_____

B. How deep did the pond(s) get? _____

C. How long did it take for the pond(s) to evaporate? _____

AA. Which locations did not flood

_____

_____

_____

BB. Was water moving at the location which flooded? YES NO

CC. If yes to BB, was water moving, FAST MEDIUM SLOW

DD. Was the water flowing in the gutters? YES NO

EE. If NO, describe where the water was flowing?

_____

FF. If yes to BB, how deep was the water at its deepest point?

_____

GG. If yes to BB, how wide was the water stream? _____

11. Was mud a factor in causing or worsening your flooding experience? YES NO

Your answers will help us better define those areas where flooding occurs and may enable the development of remedial action plans to correct the problems. Thank you for your time.

Sincerely:

Todd Teachout

Todd Teachout
City Engineer

APPENDIX E

DRAINAGE IMPROVEMENT PROJECTS

EL CERRITO STORM DRAINAGE MASTER PLAN
DRAINAGE IMPROVEMENT PROJECTS

The following is a brief discussion of some of the drainage improvement projects recommended for the first phase of the Drainage Master Plan improvement program. The location of these projects is shown in Exhibit E of the Master Plan Report, and are identified by project identification number on that exhibit.

Poinsett Ave. (project 2)

The existing 24-inch CMP drain in this area has low capacity, and several segments are located on private property. The extent of the CMP portion of the drain is not clear from existing maps, and needs to be confirmed. The area from Carquinez to Edwards was reported as an area of flooding during the 1969 storm (area 1 in Table 1), and may have been caused by the low capacity of this drain.

In the downstream area near Ludwig Ave., rerouting of the drain to public right of way would remove flow from an open channel area in the backyards between Poinsett Ave. and Rosalind Ave., and would require a short section in the City of Richmond to be installed. Inspection and rehabilitation or replacement of the existing drain is recommended to be considered as an alternative in this area.

In the upstream area, rerouting of the drain to Rosalind Ave. between Tulare Avenue and Edwards Avenue appears to be feasible, although some open channel areas would have flows removed.

Barrett Avenue (project 3)

This project would combine two existing branch drain lines that join at Tassajara Park, one that originates at Arlington Blvd. north of Barrett Ave., and the other starting at Arlington Blvd. south of Barrett Ave. Both lines carry flow that originates on the Mira Vista Country Club, have low capacity in relation to the estimated flows, and have sections that cross private property. The area from north of Barrett Ave. across to Tassajara Ave. was reported as an area of flooding during the 1969 storm (area 2 in Table 2).

In the area south of Barrett Avenue, the drainage from Mira Vista Country Club is carried by a 6-inch pipe installed on the property at 2540 Arlington Blvd. This size of this drain is small, but should not be the responsibility of the City. During large storms, water from this pipe discharges into the street at high velocity, and can cross Arlington Blvd. at this location.

Navellier Street (projects 17, 18 and 19)

The existing CMP drains in this area have low capacity and are located on private property. Flooding during the 1969 storm has been described in this area (area 12 in Table 2). In addition, runoff from the area of Hillside Park upstream of this area can carry debris and sediment that can clog the existing inlets. The 10-inch drain east of Navellier Street is probably undersized, its location is uncertain, and it may be partly blocked. The entrance to the 27 / 30-inch drain at Hillside Park is equipped with a debris barrier, but at the time of the Master Plan field review, a large amount of sediment and debris had collected at this loaction, bending the debris barrier bars and threatening to block the inlet.

Rerouting of the drain between Scott Street and Lawrence Street (project 17) would probably be difficult, so the alternative of obtaining an easement and replacing the existing drain should be considered at this location. The flow through the existing 10-inch drain would be difficult to reroute, so a drainage easement with new drain and debris basin should be considered (project 18). The existing 24-inch CMP drain carrying flow from Navellier Street and Donal Avenue can probably be rerouted through Donal Avenue and Lawrence Street.

Donal Avenue and Elm Street to Everett Street (project 20)

The two existing 18-inch drains at the end of Donal Avenue have low capacity and the entrance is at street level instead of at drop inlet. Drainage problems during many storms have been experienced at this location.

This project would consist of obtaining a drainage easement through the apartment building property at the end of Donal Avenue, and the installation of a new storm drain on Donal Avenue to Everett Street. The existing apartment building structures would not be affected. Drains on Everett and Richmond Street would connect the existing inlets on these streets to the Donal Avenue drain.

San Pablo Avenue, Moeser Lane south (project 21)

This 48-inch CMP drain has low capacity and is in poor condition. During the Master Plan field review, a cavity one foot below the drain invert level was discovered in this pipe at the corner of San Pablo Avenue and Moeser Lane where flow from a 24-inch drain drops into the pipe. Upstream of this location, shopping carts were discovered in the storm drain at two locations where the pipe size decreases. One was on Moeser Lane upstream of the 24-inch and box culvert drain split, and the other was discovered at Portola Drive upstream of the 48-inch drain. These apparently were dumped into the channel at the BART tracks, and have been carried downstream. Bars at the entrance to the drain at

the BART entrance are recommended in order to keep large objects out of the drain.

The recommended improvement for the San Pablo Avenue drain is a new drain in the same general location. Since San Pablo Avenue is designated as a State Highway, funds for replacement may be obtainable from CalTrans.

Schmidt Lane (project 22, 23, 24, and 25)

The existing drains along Schmidt Lane carry runoff from a large area in the hills to the north of Moeser Lane, and most of the drains have low capacity. Overflows along Schmidt Lane are frequent, with water flowing all the way to San Pablo Avenue on occasion. There are considerable differences in the capacities of different drain segments, with some estimated to have a capacity of only 30 % of the 10-year flow, and other segments having adequate capacity. For the Drainage Master Plan program, it is recommended that the sections with the lowest capacity be upgraded to the 10-year flow capacity. This would approximately double the existing capacity of the overall drainage system in this area.

Project 22 would reroute flow in existing 33 and 36-inch pipes that are located on private property and have low capacity, and replace them with drains on Schmidt Lane and next to BART.

Project 23 would replace an existing section of 36-inch CMP drain from Everett St. to west of Richmond St. This drain has much lower capacity than the upstream section, and is an area where overflows probably occur. An area flooded by the 1969 storm (area 15 in Table 2) was probably caused by this drain segment.

Project 24 would replace a short section of 36-inch CMP drain located at Navellier St. This section is estimated to have much lower capacity than the upstream section. In addition, this section contained a major debris blockage when inspected during the Master Plan field review. This is probably the cause of recent overflows at this location. A six inch weir in the bottom of this drain segment, probably the location of a utility crossing conflict, further reduces the capacity of this drain segment.

Project 25 would consist of the improvement of a 30-inch CMP drain which goes up a steep slope in Hillside Park southeast of the city recycling center. The entrance capacity of this culvert is estimated to be about 50 cfs, one third of the estimated 10-year flow. It is possible that a better designed inlet at this location could provide additional flow capacity. The watershed area at this location contributes considerable natural debris. While there is a debris trap at this

location, accumulations have in the past blocked downstream drains. During February 1992, overflows occurred at this location, due either to inadequate capacity and/or debris accumulation.

Richmond Street to Clayton Avenue (project 54)

The drains in this section were constructed in a variety of materials, and many sections are in poor condition. A video inspection of this drain is available.

Rerouting of flows to Central Avenue appears to be a possible alternative for correction of these conditions.

Fairmount Avenue (project 60)

A number of drains located in the area south of Fairmount Avenue between BART and Colusa Avenue are located on private property, have inadequate capacity, and are CMP drains that are known to be in deteriorated condition. The city has partially rehabilitated one section of these drains. Rerouting this flow to a drain estimated to be a 48-inch or equivalent in Fairmount Avenue would solve these problems. This project is the largest single project included in the recommended construction program.
The flow in these drains originates from the largest single drainage area in the City, carrying most of the flow from the Kensington area, and with a flow greater than Cerrito Creek itself, located farther south. Flow upstream of El Cerrito is carried in 48-inch and 54-inch drains at a steep slope through Sunset View Cemetery, while the drains in El Cerrito are approximately a 36-inch drain. Some flooding in this area occurred during the 1969 storm (area 22 in Table 2), although it was apparently limited to the area of the park at Colusa Ave. and Carmel Ave. Larger flows could cause considerable flooding in this area, as water would flow to the south and west with no direct street route providing a floodway all the way west.

An existing 30-inch drain line located in Fairmount Avenue was installed by EBMUD as a drain line from the San Pablo filter plant located on Colusa Avenue. This line originally carried drain water to a storm drain junction box located at Fairmount Avenue and Richmond St. Around 1977, the line was converted to a sludge disposal line, draining to a sanitary sewer located at Fairmount Ave. and Richmond St., and the original outlet of this line was plugged. Other drain water from the filter plant that does not contain solids, including surface runoff from the plant, now enters the city storm drain at Colusa Ave. At the present time, a small continuous flow, representing leakage from the EBMUD raw water tunnel, as well as occasional flushing of the sedimentation basins, enters this storm drain. The San Pablo filter plant currently serves only as a backup facility for EBMUD, and the sludge disposal line is not used. If the

TABLE 2 FLOODED AREAS DURING DECEMBER, 1969, FLOOD	
1	Barrett Avenue south to Rosalind Avenue, from Carquinez Avenue to Edwards Avenue -- House flooded at 6002 Barrett, SE corner at Tulare Street
2	Arlington Boulevard north of Barrett Avenue, to Barrett Avenue and Tamalpais Avenue to Tassajara Avenue, south of Barrett Avenue
3	West of I-80 freeway, west to City line, Ernest Avenue to Cypress Avenue
4	North side of I-80 freeway, Gill Avenue to Hill Street
5	Hill Street and area south of Hill Street, Elm Street to I-80 freeway
6	North of Kenilworth to Glen Mawr Avenue, between Cutting Boulevard and Hudson Street
7	Arlington Boulevard south of Cutting Boulevard and west of Scenic Boulevard below Harvard Street
8	BART west to Kearney and San Pablo Avenue, from Blake Street to Donal Avenue, and Donal Avenue from Liberty Street to BART -- Apartments flooded at 1343 Liberty Street, SW corner at Donal Avenue
9	North of Blake Street from BART east to Wesley Avenue
10	East side of Ganges Avenue below Hillside Park, from Fairview Drive and Glen Mawr Avenue
11	Area near Mound Street
12	Navellier Street to Lawrence Street from Gladys Avenue to Donal Avenue
13	Navellier Street to Scott Street north of Manila Street
14	Glenwood Way, off Richmond Street between Schmidt Lane and Moeser Lane
15	North side of Schmidt Lane between Norvell Street and Everett Street
16	Arlington Boulevard at Brewster Drive, near Arlington Park
17	North side of Waldo Avenue between Lexington Avenue and BART
18	South side of Stockton Avenue between BART and Norvell Street
19	Central Avenue from BART to Lexington Avenue between Central Avenue and Fairmount Avenue, from Liberty Street to San Pablo Avenue, and east of San Pablo Avenue between Fairmount Avenue and Cerrito Creek
20	Susan Avenue from Colusa Avenue to Bonnie Drive
21	Coronado Street at Tahoe Place, near BART
22	San Carlos Avenue to Carmel Avenue, near Colusa Avenue
23	Cerrito Creek to Central Avenue between Belmont Avenue and Yosemite Avenue -- Houses flooded on Belmont Avenue (No. 3218, 3220, 3224, 3226, 3230, and 3235 apartments), and Yosemite (No. 3419, 3471)

Reference: Soil Conservation Service Flood Insurance Study, November, 1971.