



CITY OF
Fremont
STANDARD
DETAILS

FOR IMPROVEMENTS
WITHIN PUBLIC RIGHT OF WAY

APPROVED BY CITY COUNCIL
RESOLUTION NO. 2006-31
APRIL 9, 1985
MARCH 1994 (AMENDED)
APRIL 11, 2006 (AMENDED)
DECEMBER 13, 2011 (AMENDED)
SEPTEMBER 18, 2012 (AMENDED)
DATE LAST REVISED: FEBRUARY 11, 2013

CITY OF FREMONT
39550 LIBERTY STREET
FREMONT, CALIFORNIA 94538
(510) 494-4700

STANDARD DETAILS - INDEX

<u>TITLE</u>	<u>DWG NO.</u>
MAP SYMBOLS	SD-1
STREET GEOMETRICS	SD-2
TYPE "A" CURB, GUTTER, AND SIDEWALK	SD-3
TYPE "B" CURB, GUTTER, AND SIDEWALK	SD-4
TYPE "C" CURB, GUTTER, AND SIDEWALK	SD-5
TYPE "D" CURB, GUTTER, AND SIDEWALK	SD-6
MISCELLANEOUS CURB AND GUTTER DETAILS	SD-7
SCORE MARKS TYPICAL SPACING	SD-8
CURB, GUTTER AND SIDEWALK REPAIR METHODS	SD-9
TYPE "A" DRIVEWAY APPROACH - RESIDENTIAL	SD-10A
TYPE "A" DRIVEWAY APPROACH - RESIDENTIAL RETROFIT ONLY	SD-10B
TYPE "B" DRIVEWAY APPROACH - COMMERCIAL/INDUSTRIAL	SD-11
TYPE "D" DRIVEWAY APPROACH CASE 1 - RESIDENTIAL	SD-12A
TYPE "D" DRIVEWAY APPROACH CASE 2 - RESIDENTIAL	SD-12B
TYPE "E" DRIVEWAY APPROACH - 10' RIGHT-OF-WAY	SD-13A
TYPE "E" DRIVEWAY APPROACH - 13' RIGHT-OF-WAY	SD-13B
SURVEY MONUMENT	SD-14
NOT USED	SD-15
CONCRETE BUS PAD	SD-16
TYPE "A" STREET BARRICADE	SD-17
TYPE "A" FENCE WITH GATE	SD-18
TYPE "B" FENCE	SD-19
TYPE "B" FENCE GATES	SD-20
STORM DRAIN AND SEWER MAINTENANCE HOLE	SD-21
CURB AND FIELD INLET	SD-22
STREET NAME SIGN, TRAFFIC SIGN AND POST DETAILS	SD-23
ELECTROLIER DETAIL	SD-24
CITEA ELECTROLIER	SD-25
UTILITY TRENCH	SD-26
TIE-IN PAVEMENT	SD-27
LONGITUDINAL TRENCH TRANSVERSE TRENCH	SD-28
COLD PLANE	SD-29
TRENCH BACKFILL AND COMPACTION REQUIREMENTS	SD-30
ROCKWHEEL TRENCH	SD-31
BACKFILL AND AC REPLACEMENT FOR UTILITY POTHOLES/WINDOWS	SD-32
THRU CURB DRAIN - COMMERCIAL/INDUSTRIAL	SD-33
FIRE HYDRANT	SD-34
COMBINED FOOT TRAIL AND BICYCLE PATH	SD-35
FOOT AND EQUESTRIAN TRAIL	SD-36
NOT USED	SD-37

STANDARD DETAILS - INDEX

<u>LANDSCAPE DETAILS</u>	<u>DWG NO.</u>
TREE PLANTING AND STAKING	LSD-1
TREE PLANTING WITH TREE GRATE	LSD-2
SHRUB AND GROUNDCOVER PLANTING	LSD-3
SHRUB AND GROUNDCOVER LAYOUT	LSD-4
STREET TREE CLEARANCES	LSD-5
TREE CLEARANCES	LSD-6
MEDIAN COBBLE PAVING	LSD-7
MAINTENANCE BAND	LSD-8
TREE PROTECTION FENCING	LSD-9
TEMPORARY TRUNK WRAP	LSD-10
NOT USED	LSD-11
TREE AND SHRUB PLANTING ON SLOPE	LSD-12
TREE PLANTING GUIDE (LIST)	LSD-13
IRRIGATION MATERIALS	LSD-14
IRRIGATION CONTROLLER CABINET WITH CALSENSE CONTROLLER	LSD-15
BACKFLOW PREVENTOR UNIT	LSD-16
BACKFLOW PREVENTOR UNIT CAGE	LSD-17
IRRIGATION TRENCH	LSD-18
QUICK COUPLING VALVE IN BOX	LSD-19
IRRIGATION WIRE SPLICE	LSD-20
IRRIGATION ROTOR OR POP-UP	LSD-21
IRRIGATION GATE VALVE	LSD-22
REMOTE CONTROL VALVE WITH GATE VALVE	LSD-23
MASTER VALVE AND FLOW SENSOR	LSD-24
PRESSURE REDUCTION VALVE	LSD-25
IRRIGATION WYE STRAINER	LSD-26
LANDMARK TREE PLAQUE	LSD-27
LANDMARK TREE RAILING	LSD-28
STORMWATER TREETWELL	LSD-29
STORMWATER PLANTER	LSD-30
STORMWATER TRASH CAPTURE INLET	LSD-31
 <u>TRAFFIC DETAILS</u>	
STREET NAME SIGN - MAST ARM MOUNTED	TSD-1
STREET NAME SIGN - POLE MOUNTED	TSD-2
COMMUNICATIONS PULL BOX (FIBER OPTIC SPLICE CLOSURE)	TSD-3
COMMUNICATIONS PULL BOX (NO. 6)	TSD-4
SPEED LUMP	TSD-5
CCTV DOME CAMERA MOUNTING	TSD-6

EXISTING	NEW	
		CURB INLET
		FIELD INLET
		MAINTENANCE HOLE
		VALVE
		METER
		WATER METER
		FIRE HYDRANT
		MONUMENT
		POWER, TELEPHONE, GUY POLE, OR JOINT USE POLE - AS NOTED.
		ANCHOR
		STORM DRAIN
		SANITARY SEWER
		WATER
		GAS
		ELECTRICAL DUCT
		FIBER OPTIC DUCT
		INTERCONNECT DUCT
		TELEPHONE DUCT
		FENCE
		ELECTROLIER - SINGLE ARM
		ELECTROLIER - DOUBLE ARM
		STREET SIGN

			<h1>CITY OF FREMONT</h1> <h2>STANDARD DETAILS</h2> <h3>MAP SYMBOLS</h3>			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
					 CITY ENGINEER		
NO.	REVISED	DATE			DWG NO.	1 of 2	
REVISIONS			FILE NO.	SCALE	DRAWN	CHECKED	DATE
			SD-01-06.DWG	NONE	DC	KC	12/05/05

EXISTING

NEW



JOINT TRENCH



MAINLINE TRENCH



SERVICE TRENCH

1

1

13" x 24" PG&E SUBSURFACE ENCLOSURE

2

2

17" x 30" PG&E SECONDARY SUBSURFACE ENCLOSURE

3

3

24" x 36" PG&E SUBSURFACE ENCLOSURE

4

4

30" x 48" PG&E SUBSURFACE ENCLOSURE

5

5

3'0" x 5'0" PG&E SUBSURFACE ENCLOSURE

7

7

4'6" x 8'6" PG&E PRIMARY SUBSURFACE ENCLOSURE

9

9

36" x 60" PG&E SUBSURFACE ENCLOSURE



3'0" x 5'0" x 4'6" SUBSURFACE TRANSFORMER ENCLOSURE



PADMOUNTED TRANSFORMER



PADMOUNTED FUSED SWITCH



GAS TIE-IN HOLE



TELEPHONE SPLICE BOX



C.A.T.V. SPLICE BOX



METER PEDESTAL



IRRIGATION CONTROLLER



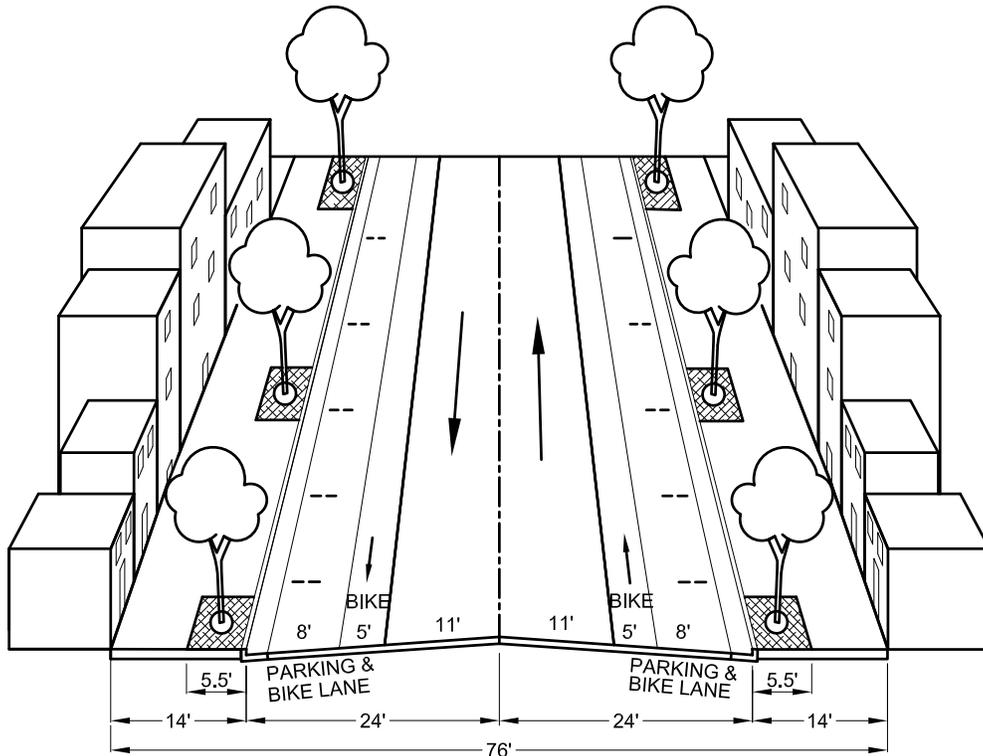
TREE

			<h1>CITY OF FREMONT</h1> <h2>STANDARD DETAILS</h2> <h3>PG&E SYMBOLS</h3>			DATE APPROVED BY CITY COUNCIL 04/11/06			
						RESOLUTION NO. 2006-31			
			 CITY ENGINEER						
NO.	REVISED	DATE	FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
REVISIONS			SD-01-05.DWG	NONE	DC	KC	12/05/05	SD-1	2 of 2

STANDARD NOTES FOR THE STREET GEOMETRICS

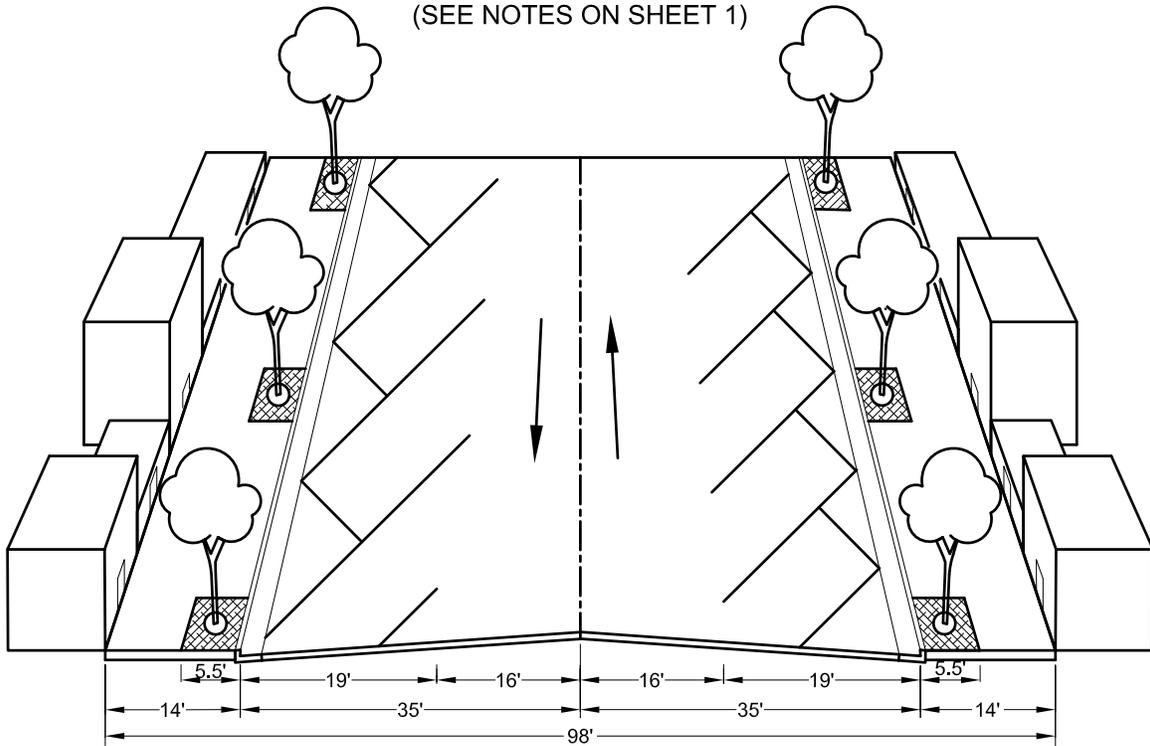
1. IN GENERAL, TRAVEL LANES SHALL BE 12' WIDE. DEPENDENT ON THE LAND USE, TRAFFIC VOLUMES, AND SPEED LIMIT, 11' WIDE TRAVEL LANES AND 10' WIDE LEFT TURN LANES MAY BE USED, SUBJECT TO APPROVAL BY THE CITY ENGINEER.
2. IN LOCATIONS WHERE "NO PARKING" IS DESIGNATED, THE PARKING LANE MAY BE REMOVED. IN NO CASES SHALL THE DISTANCE FROM FACE OF CURB TO FACE OF CURB BE LESS THAN 22'.
3. ADDITIONAL RIGHT-OF-WAY MAY BE NEEDED FOR BIKE ROUTES OR LANES PER THE BICYCLE AND PEDESTRIAN MASTER PLAN AND GENERAL PLAN. BIKE LANES TYPICALLY SHALL BE A MINIMUM OF 5' WIDE DEPENDING ON THE TYPE AND SPEED OF THE STREET.
4. PARKWAY STRIPS AND TREE WELLS MAY BE INCREASED IN SIZE FOR STORM WATER TREATMENT PURPOSES.
5. SIDEWALK WIDTHS FOR URBAN STREETS MAY VARY WITH A 14' MINIMUM WIDTH.
6. STREET WIDTHS MAY VARY IF BUILDING HEIGHTS ARE GREATER THAN 30'.
7. STANDARD DETAIL SD-2, SHEETS 9 THROUGH 14, ARE APPLICABLE TO STREETS WITHIN THE DOWNTOWN. REFER TO THE "DOWNTOWN COMMUNITY PLAN AND DESIGN GUIDELINES" AND THE FREMONT GENERAL PLAN FOR MORE INFORMATION. DOWNTOWN STREETS APPROVED BY CITY COUNCIL ON SEPTEMBER 18, 2012 BY RESOLUTION 2012-52.
8. STANDARD DETAIL SD-2, SHEETS 16 THROUGH 19, ARE APPLICABLE TO STREETS WITHIN THE WARM SPRINGS / SOUTH FREMONT AREA. REFER TO THE "WARM SPRINGS / SOUTH FREMONT COMMUNITY PLAN" AND THE FREMONT GENERAL PLAN FOR MORE INFORMATION. THE WARM SPRINGS / SOUTH FREMONT STREET SECTIONS APPROVED BY CITY COUNCIL ON JULY 22, 2014 BY RESOLUTION 2014-43.

			CITY OF FREMONT STANDARD DETAILS <u>STREET GEOMETRICS</u>				DATE APPROVED BY CITY COUNCIL	
							09/18/12	
			RESOLUTION NO. 2014-43		 CITY ENGINEER			
WSP	WARM SPRINGS COMMUNITY PLAN	7/14						
WSP	DOWNTOWN STREETS	9/12						
APPR	REVISED	DATE						
REVISIONS								
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.			
SD-02-12.DWG	NONE	DC	PD	7/22/14	SD-2	1 of 19		



URBAN STREET WITH PARALLEL PARKING

(SEE NOTES ON SHEET 1)



URBAN STREET WITH 45° DIAGONAL PARKING

(SEE NOTES ON SHEET 1)

APPR	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS

STREET GEOMETRICS

DATE APPROVED BY CITY COUNCIL

04/11/06

RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

FILE NO.
SD-02-12.DWG

SCALE
NONE

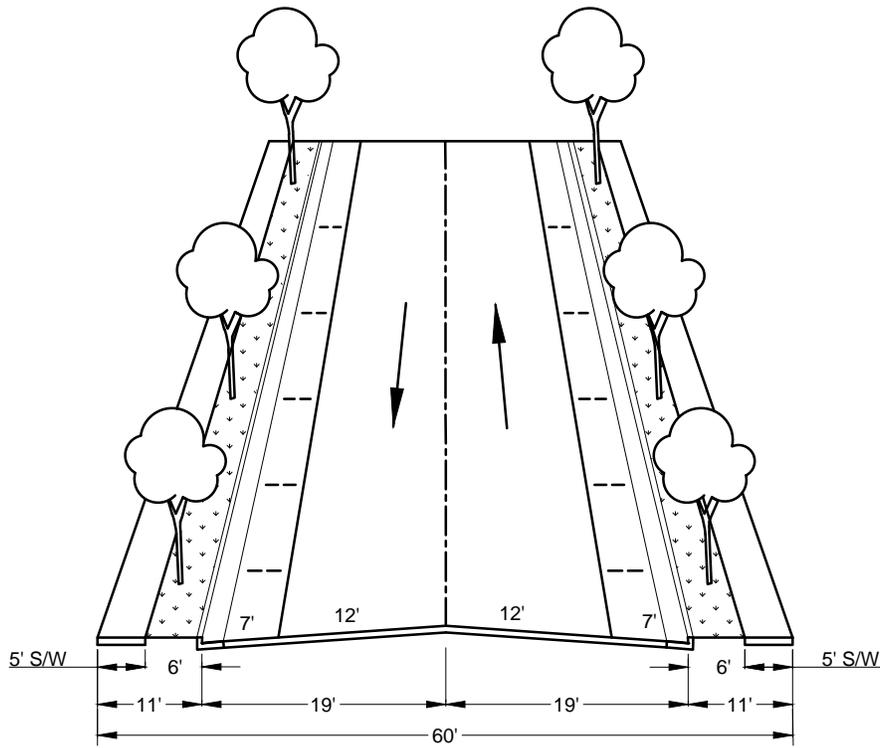
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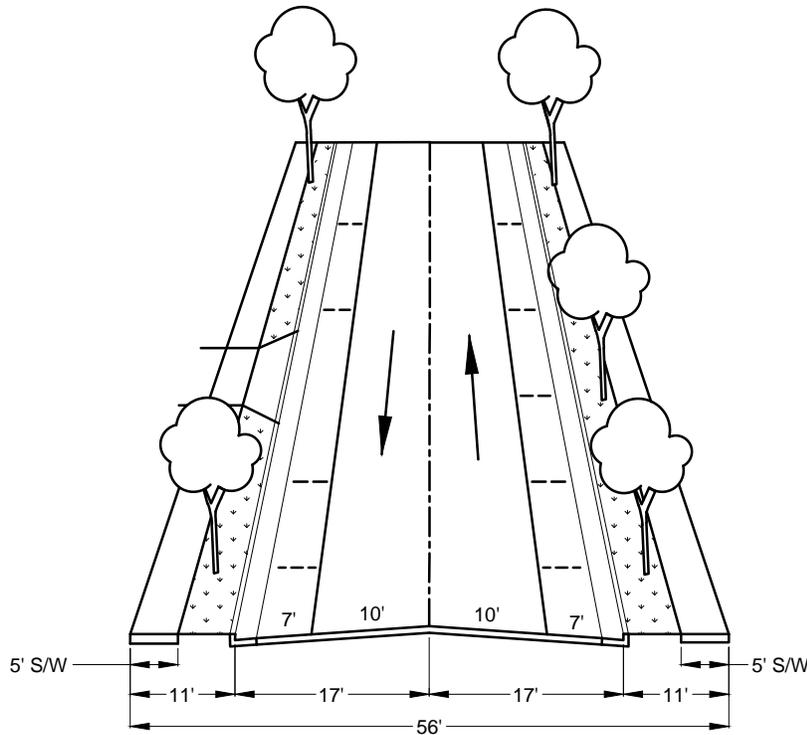
DATE
1/03/13

DWG NO.
SD-2

2 of 19



RESIDENTIAL COLLECTOR STREET
150 UNITS OR MORE



MINOR RESIDENTIAL STREET
21-150 UNITS

CITY OF FREMONT
STANDARD DETAILS
STREET GEOMETRICS

DATE APPROVED BY CITY COUNCIL

04/11/06

RESOLUTION NO.

2006-31

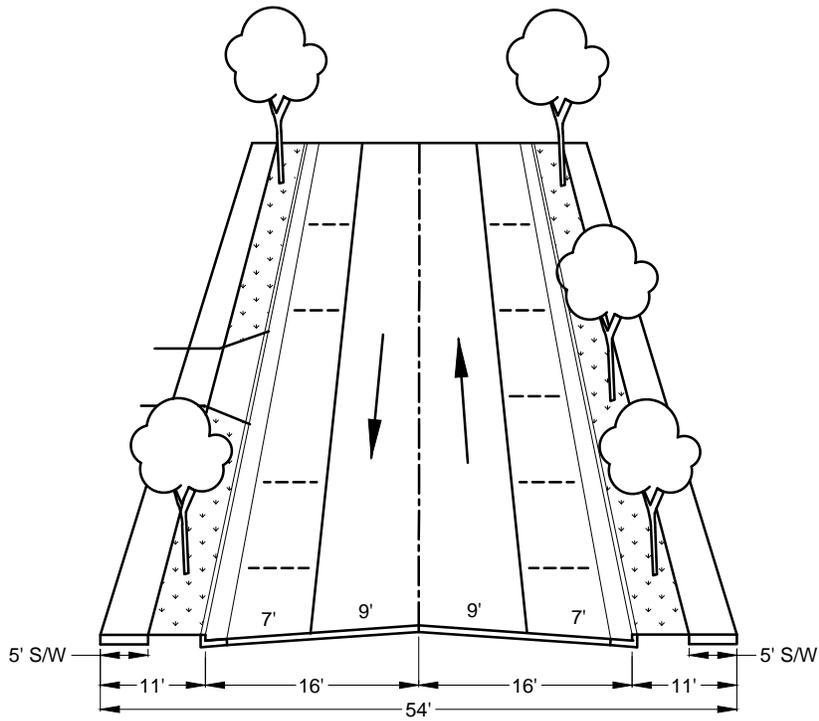
Norm Hughes

CITY ENGINEER

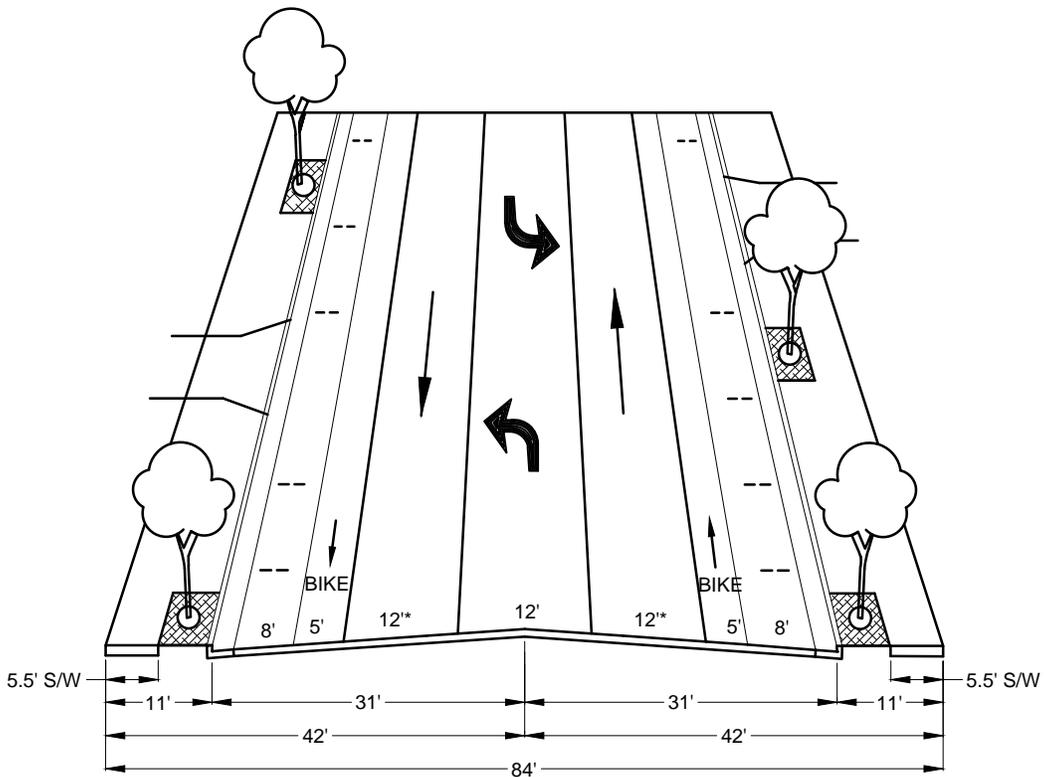
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FILE NO. SD-02-12.DWG	SCALE NONE	DRAWN DC	CHECKED AR	DATE 1/03/13	DWG NO. SD-2	3 of 19
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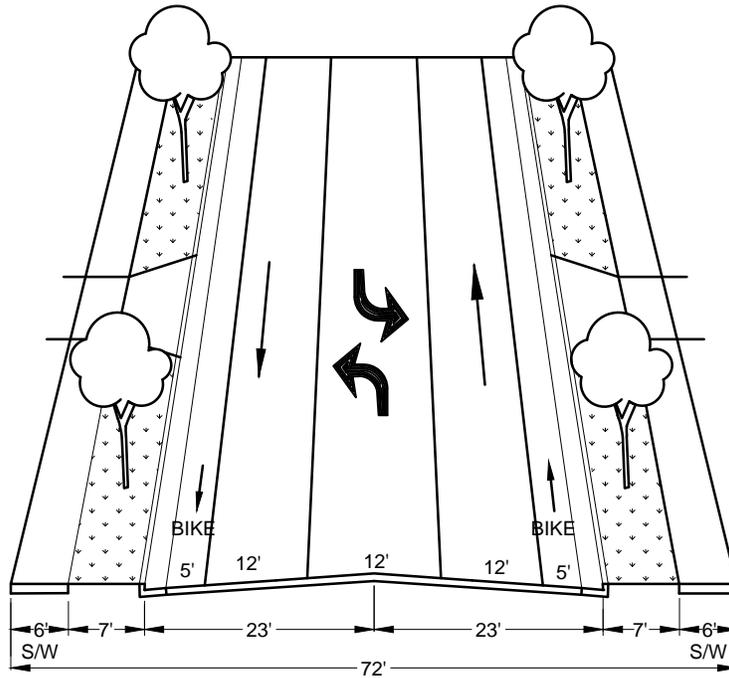
RESIDENTIAL CUL-DE-SAC STREET
0-20 UNITS



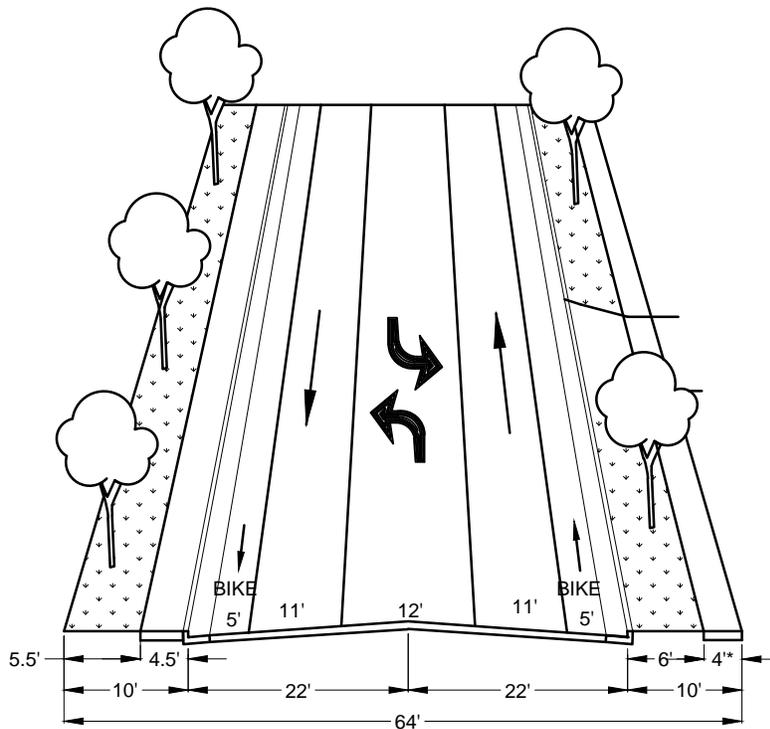
SUBURBAN STREET

*NUMBER OF LANES WILL VARY ON TRAFFIC COUNTS.

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL	
						04/11/06	
			STREET GEOMETRICS			RESOLUTION NO. 2006-31	
						<i>Norm Hughes</i>	
APPR	REVISED	DATE				CITY ENGINEER	
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
SD-02-12.DWG	NONE	DC	AR	1/03/13	SD-2	4 of 19	



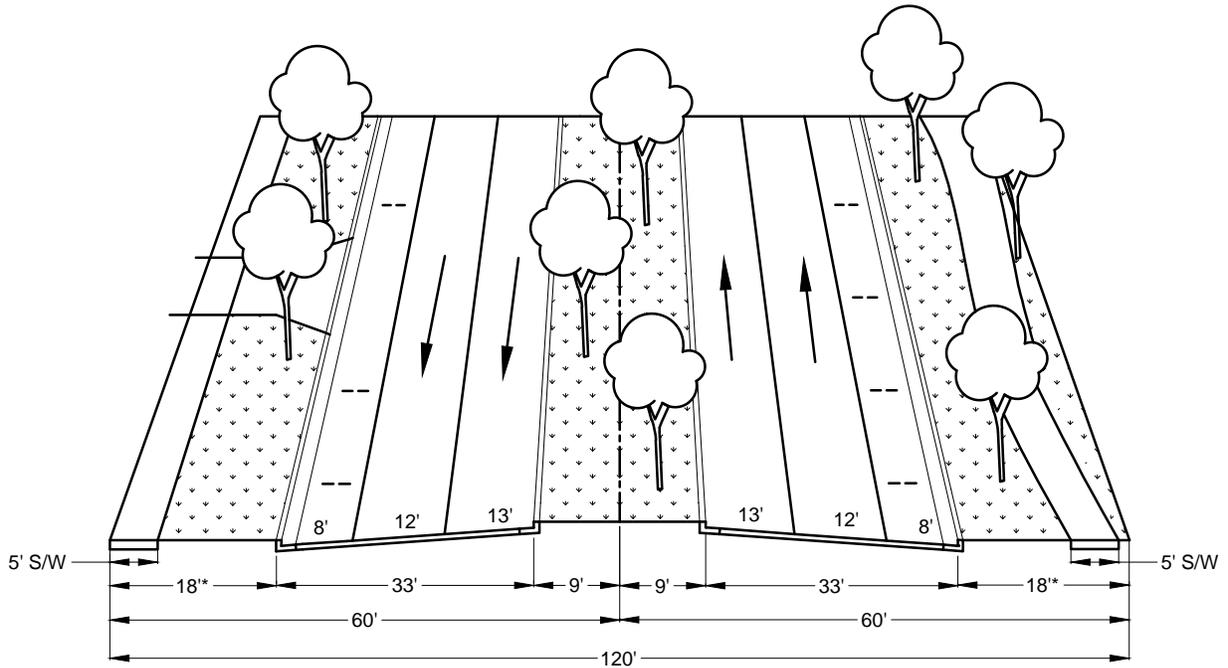
COMMERCIAL / INDUSTRIAL STREET



RETROFIT - EXISTING STREET WIDTH FOR MINOR INDUSTRIAL

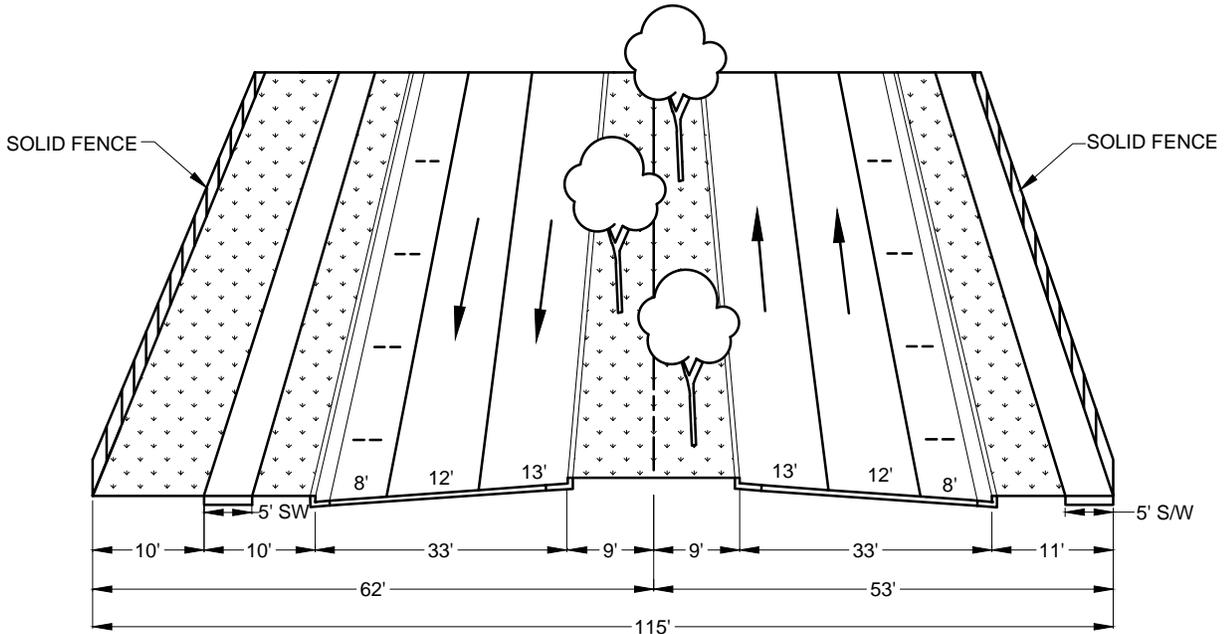
*SIDEWALK WITH 5' x 5' LANDING EVERY 200'

			CITY OF FREMONT STANDARD DETAILS <u>STREET GEOMETRICS</u>				DATE APPROVED BY CITY COUNCIL	
							04/11/06	
							RESOLUTION NO. 2006-31	
							 CITY ENGINEER	
APPR	REVISED	DATE						
REVISIONS								
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.			
SD-02-12.DWG	NONE	DC	AR	1/03/13	SD-2	5 of 19		



PARKWAY

* 19' WIDE SIDEWALK AND LANDSCAPE FOR 6-LANE PARKWAY



4-LANES WITH BACK-UP LOTS

**CITY OF FREMONT
STANDARD DETAILS**

STREET GEOMETRICS

DATE APPROVED BY CITY COUNCIL

04/11/06

RESOLUTION NO.

2006-31

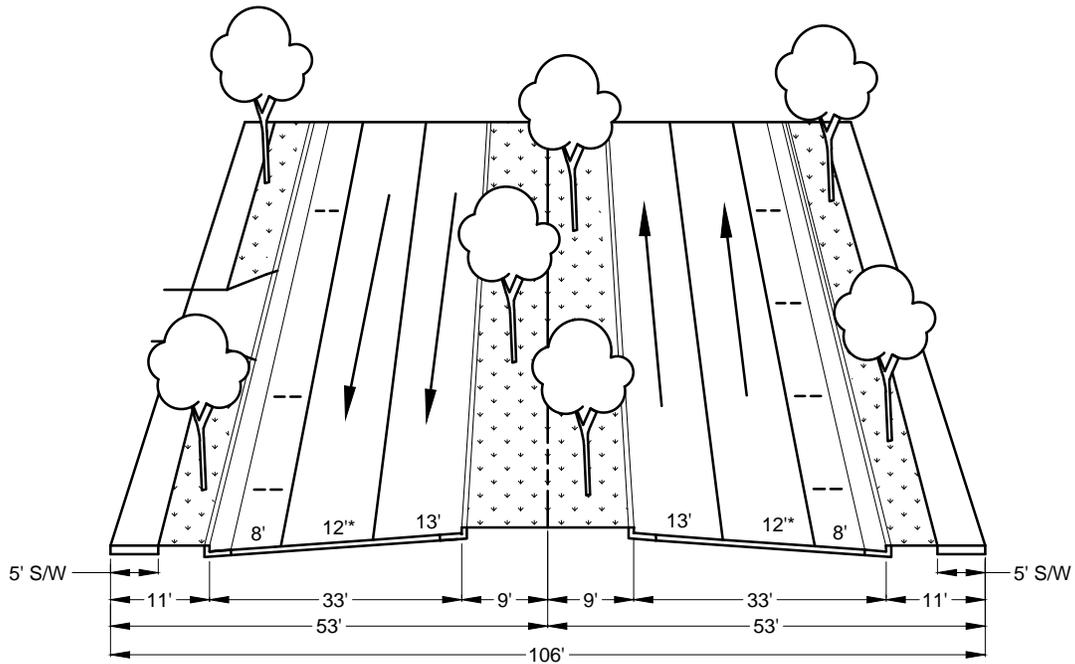
Norm Hughes

CITY ENGINEER

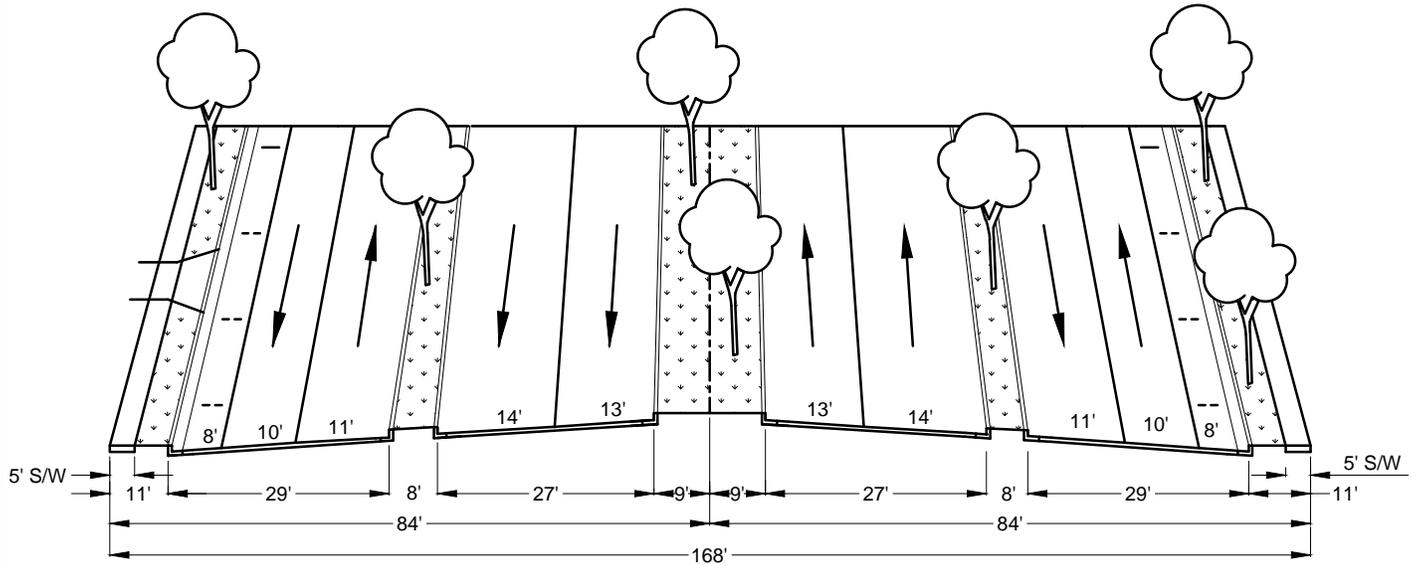
APPR	REVISED	DATE

REVISIONS

FILE NO. SD-02-12.DWG	SCALE NONE	DRAWN DC	CHECKED AR	DATE 1/03/13	DWG NO. SD-2	6 of 19
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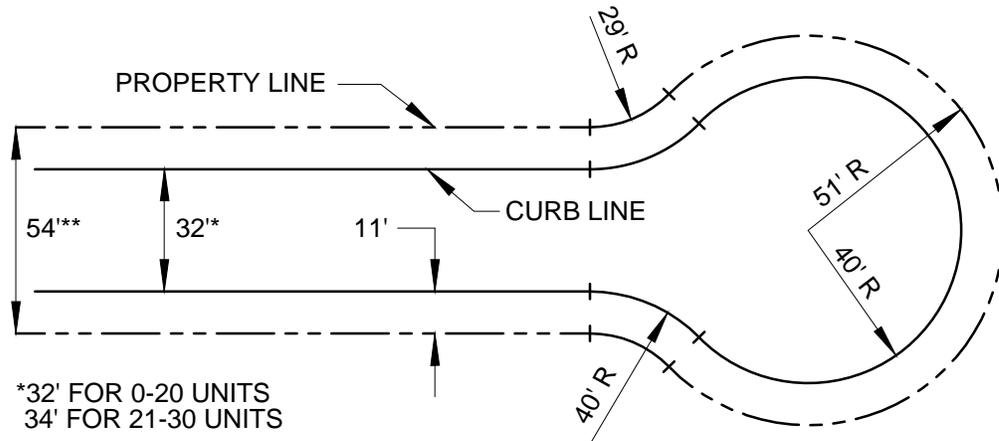


4-LANES WITH DIRECT ACCESS
 *14' WIDTH IF NO PARKING IS ALLOWED
 (EXAMPLE: 6 LANES/NO PARKING = 118' R/W)



4-LANES WITH FRONTAGE ROAD

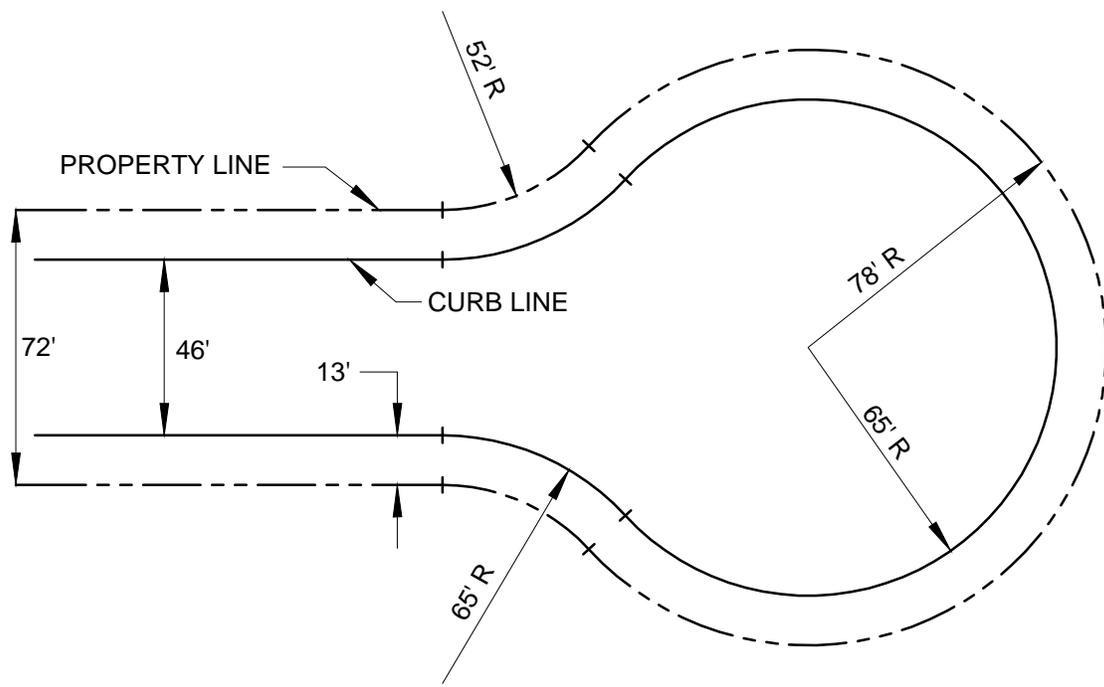
			CITY OF FREMONT STANDARD DETAILS <u>STREET GEOMETRICS</u>				DATE APPROVED BY CITY COUNCIL	
							04/11/06	
			<i>Norm Hughes</i> CITY ENGINEER					
APPR	REVISED	DATE						
REVISIONS								
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.			
SD-02-12.DWG	NONE	DC	AR	1/03/13	SD-2	7 of 19		



*32' FOR 0-20 UNITS
 34' FOR 21-30 UNITS

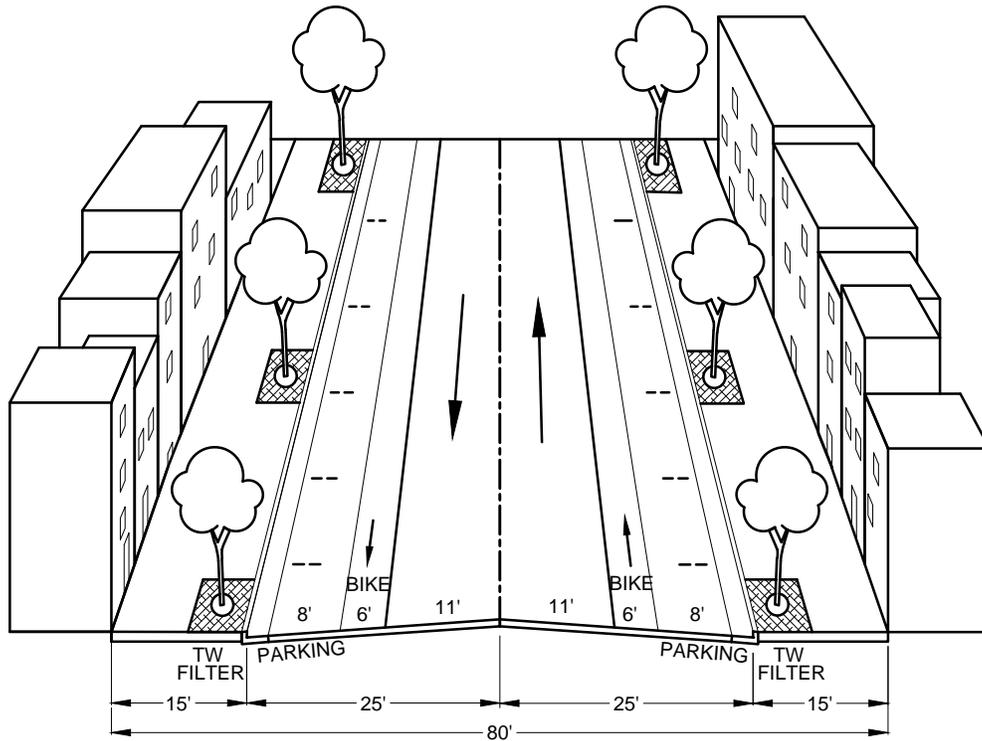
**54' FOR 0-20 UNITS
 56' FOR 21-30 UNITS

RESIDENTIAL CUL-DE-SAC

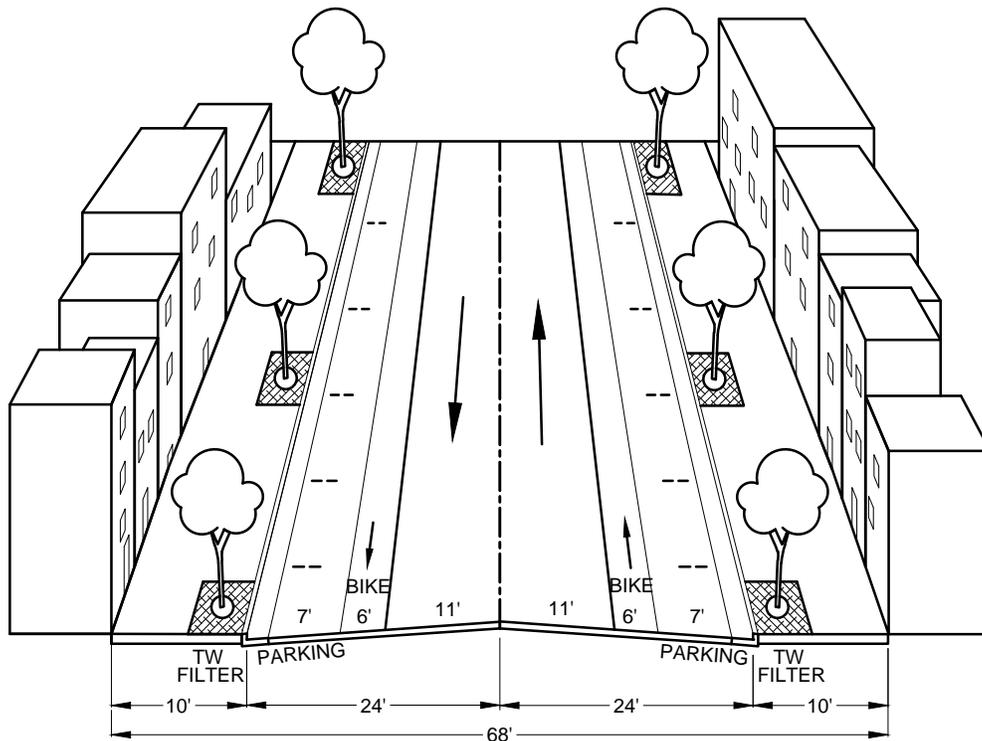


COMMERCIAL / INDUSTRIAL CUL-DE-SAC

			CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL		
						STANDARD DETAILS		04/11/06
			STREET GEOMETRICS			RESOLUTION NO.		
						CITY ENGINEER		2006-31
APPR	REVISED	DATE	<i>Norm Hughes</i>					
REVISIONS							CITY ENGINEER	
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.			
SD-02-12.DWG	NONE	DC	AR	1/03/13	SD-2	8 of 19		



BEACON AVENUE



CALIFORNIA STREET

CITY OF FREMONT
STANDARD DETAILS

STREET GEOMETRICS

DATE APPROVED BY CITY COUNCIL

09/18/12

RESOLUTION NO.

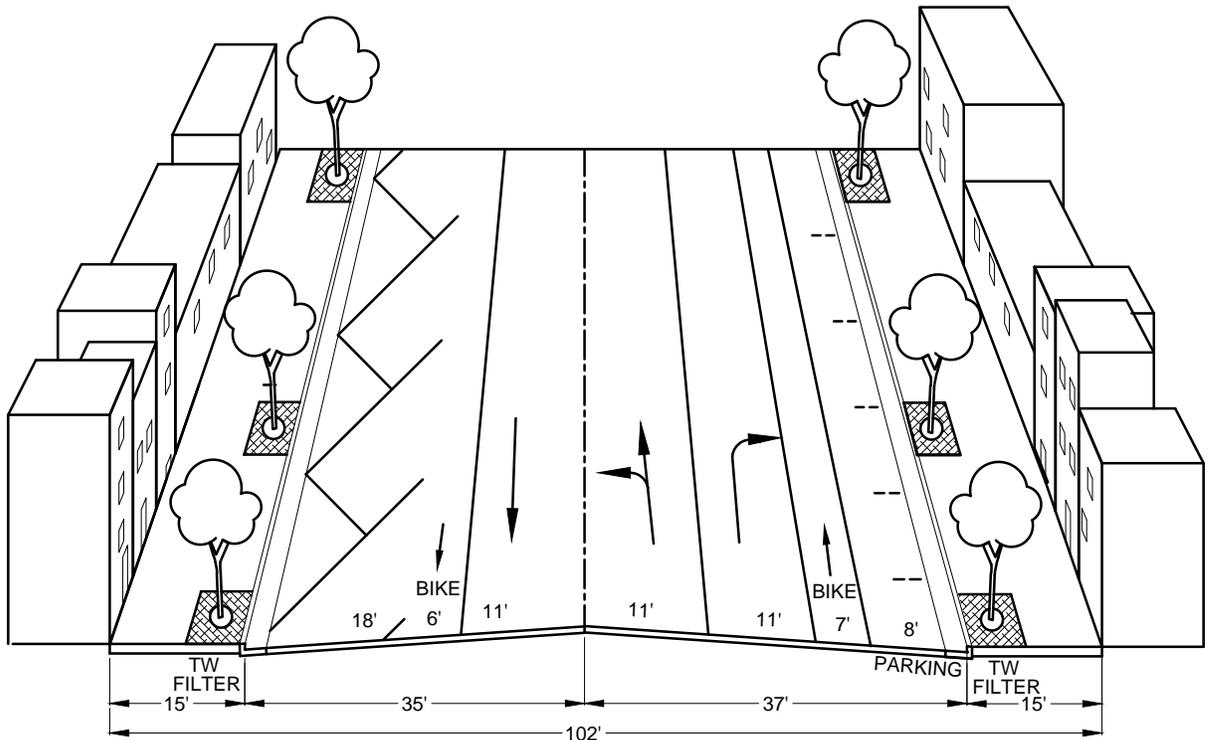
2012-52

APP	DOWNTOWN STREETS	9/12
APPR	REVISED	DATE
REVISIONS		

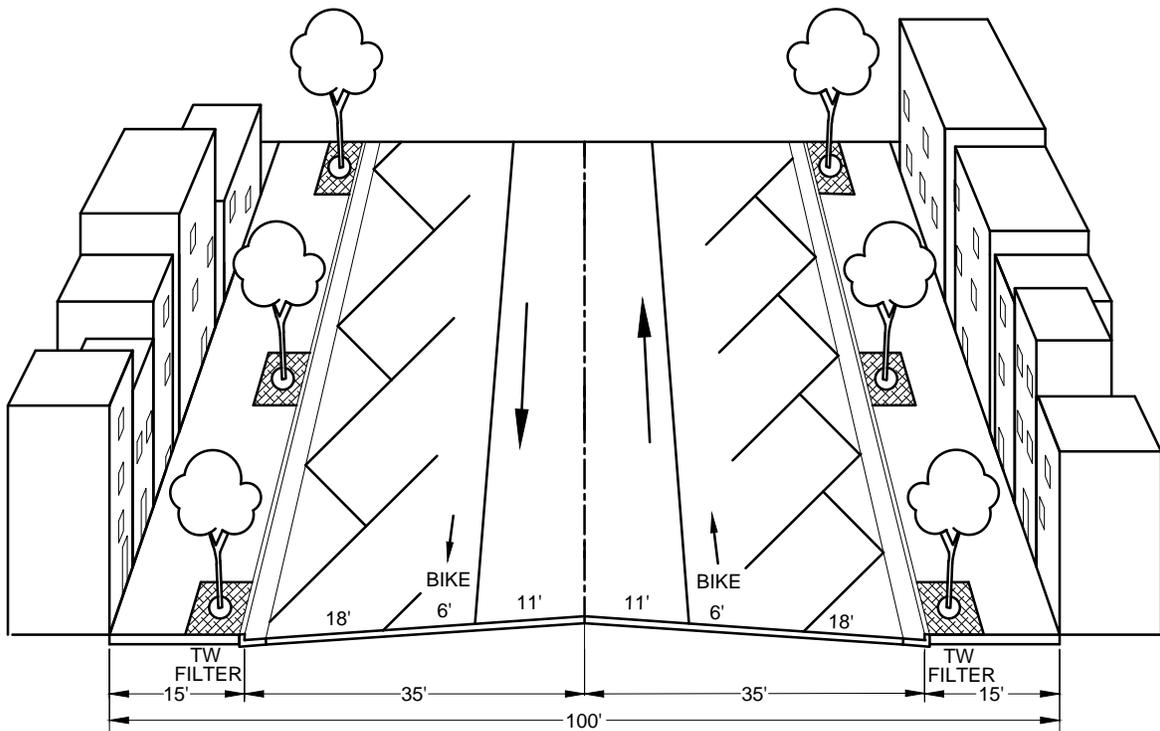
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FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
SD-02-12.DWG	NONE	DC	AR	1/03/13	SD-2	9 of 19



CAPITOL AVENUE
(Paseo Padre Parkway to A Street)



CAPITOL AVENUE
(A Street to State Street)

CITY OF FREMONT
STANDARD DETAILS

STREET GEOMETRICS

DATE APPROVED BY CITY COUNCIL

07/22/14

RESOLUTION NO.

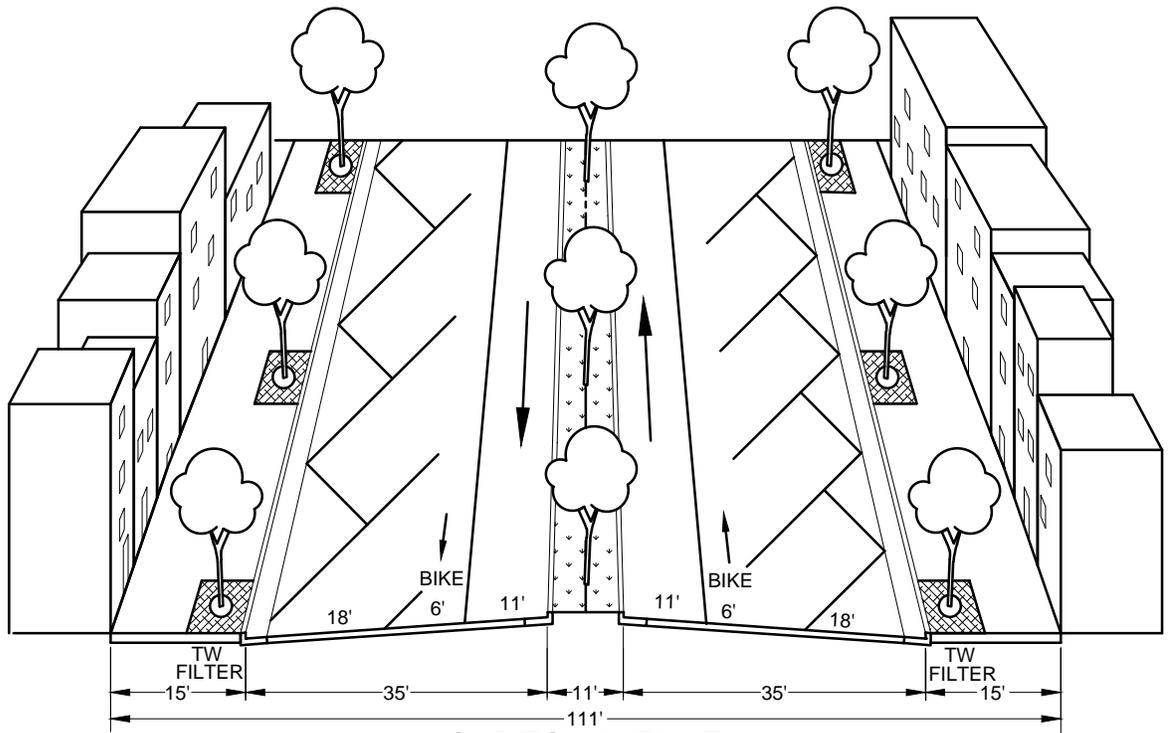
2014-44

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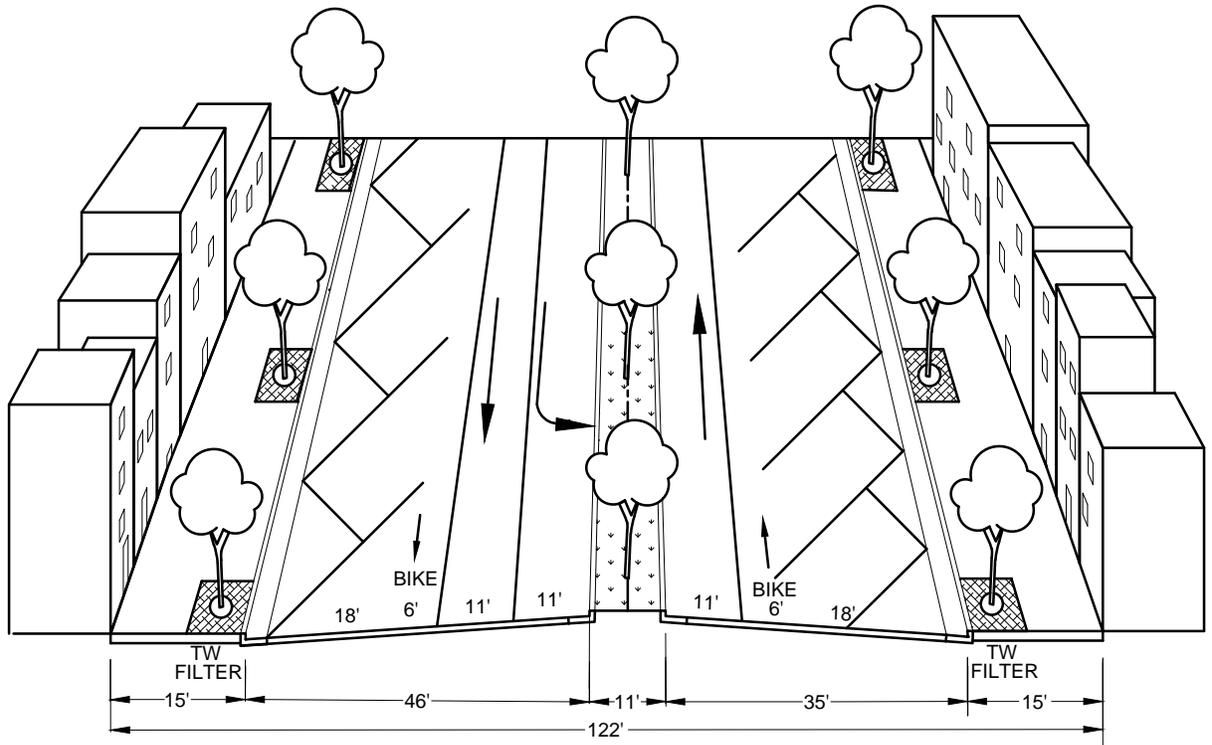
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APPR	REVISED	DATE
MM	UPDATES TO DOWNTOWN STREETS	7/14
MM	DOWNTOWN STREETS	9/12
REVISIONS		

FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
SD-02-12.DWG	NONE	DC	PD	7/22/14	SD-2	10 of 19



CAPITOL AVENUE
(State Street to C Street)



CAPITOL AVENUE
(C Street to Fremont Boulevard)

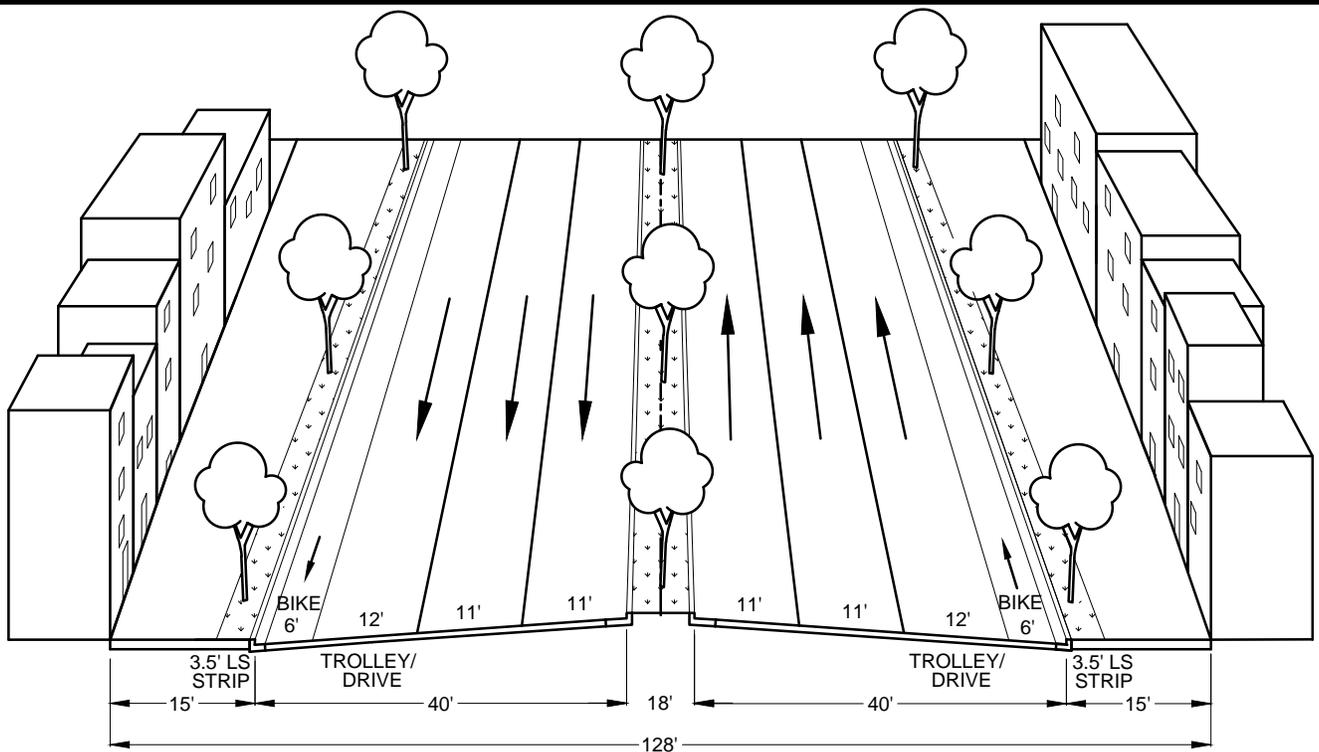
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MM	DOWNTOWN STREETS	9/12
APPR	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
STREET GEOMETRICS

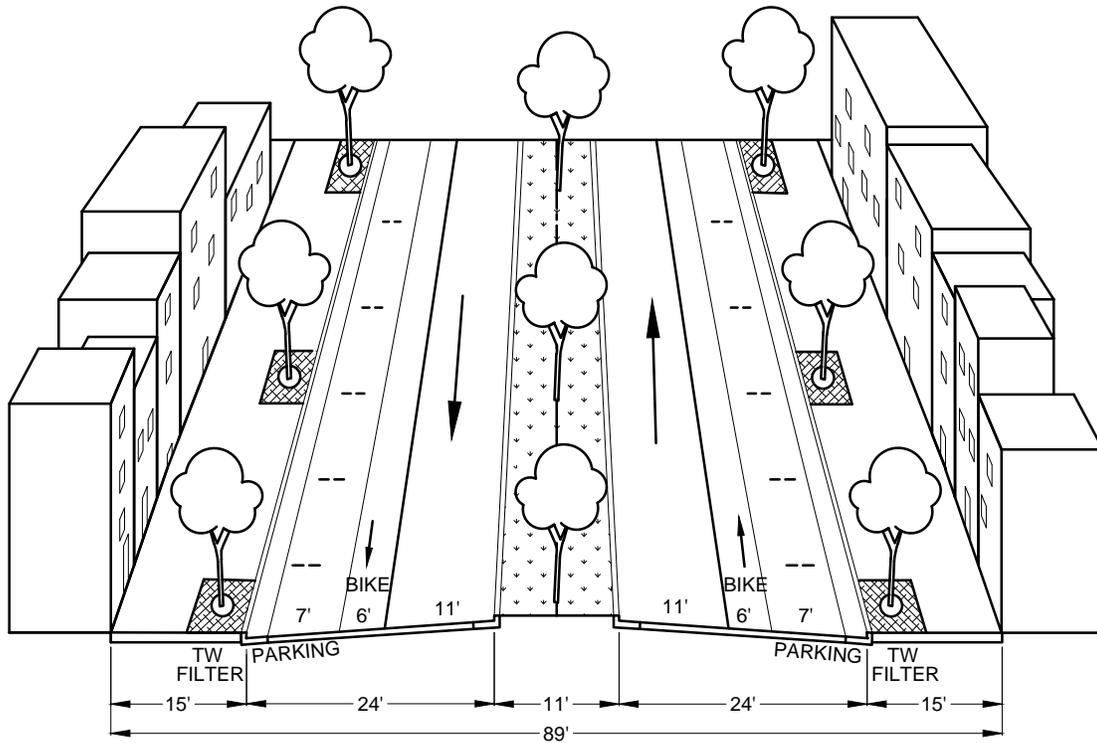
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07/22/14
RESOLUTION NO. 2014-44

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FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
SD-02-12.DWG	NONE	DC	PD	7/22/14	SD-2	11 of 19



FREMONT BOULEVARD
(Mowry Avenue to Walnut Avenue)



HASTINGS STREET
(Mowry Avenue to Capitol Avenue)

CITY OF FREMONT
STANDARD DETAILS

STREET GEOMETRICS

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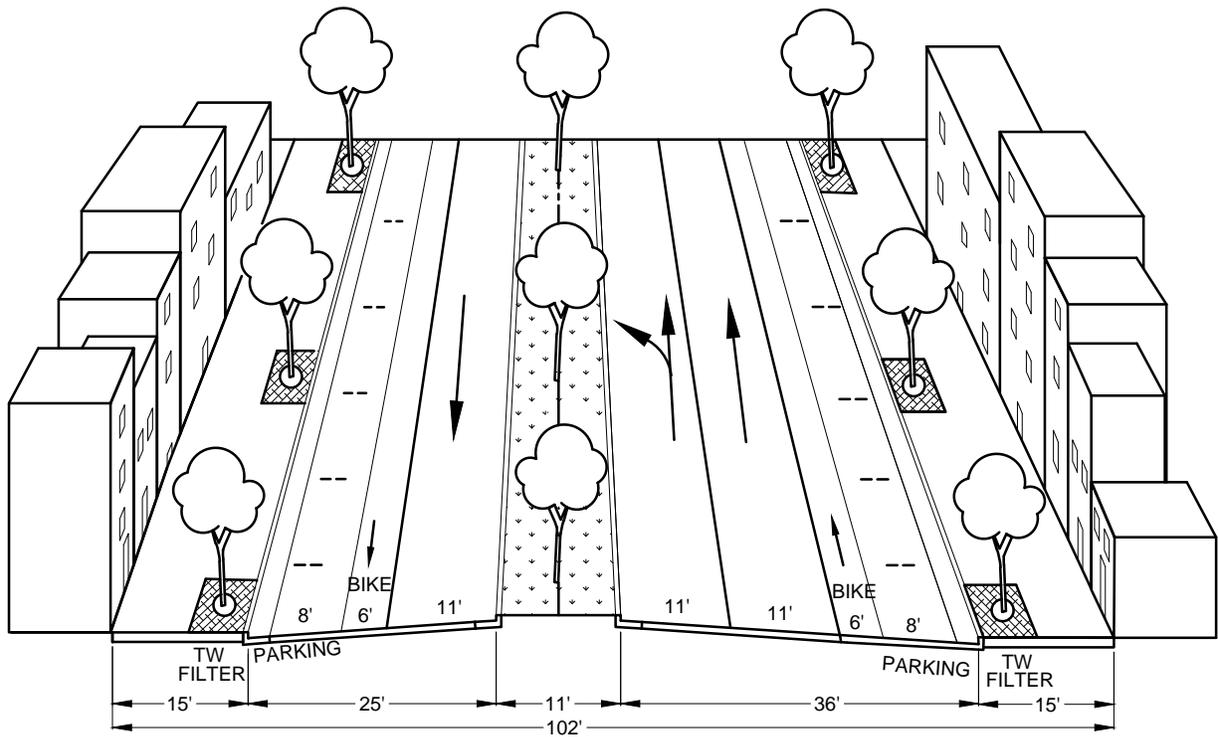
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SD-2

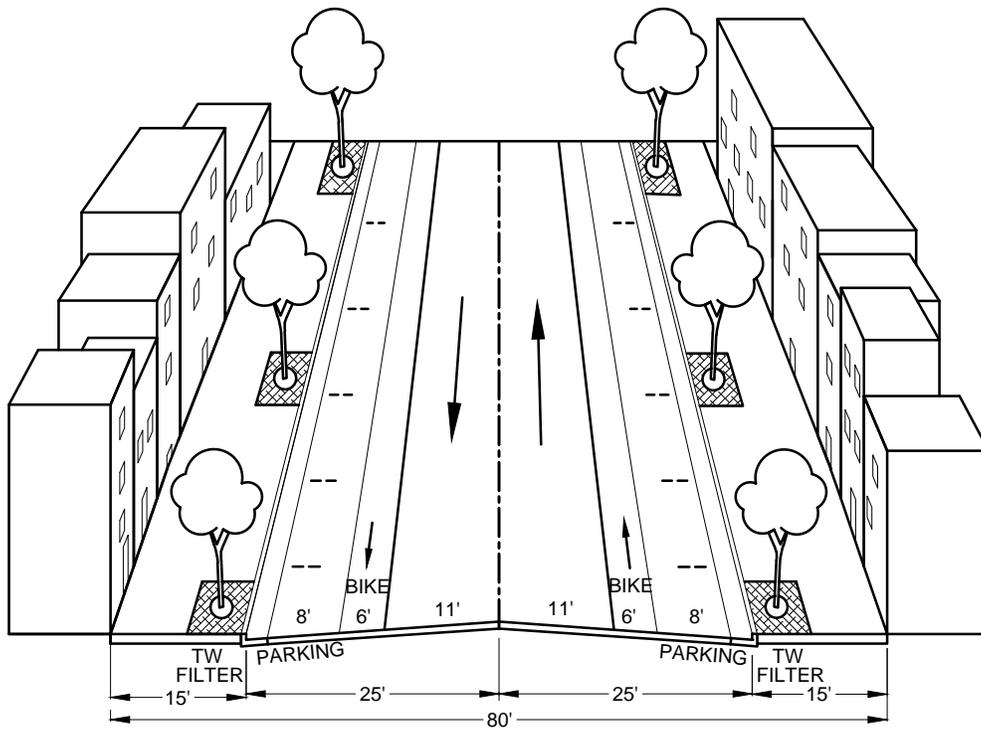
12 of 19

APP	DOWNTOWN STREETS	9/12
APPR	REVISED	DATE
REVISIONS		

FILE NO.	SCALE	DRAWN	CHECKED	DATE
SD-02-12.DWG	NONE	DC	AR	1/03/13



LIBERTY STREET
(Beacon Avenue to Walnut Avenue)



LIBERTY STREET
(Capitol Avenue to Beacon Avenue)

CITY OF FREMONT
STANDARD DETAILS

STREET GEOMETRICS

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09/18/12

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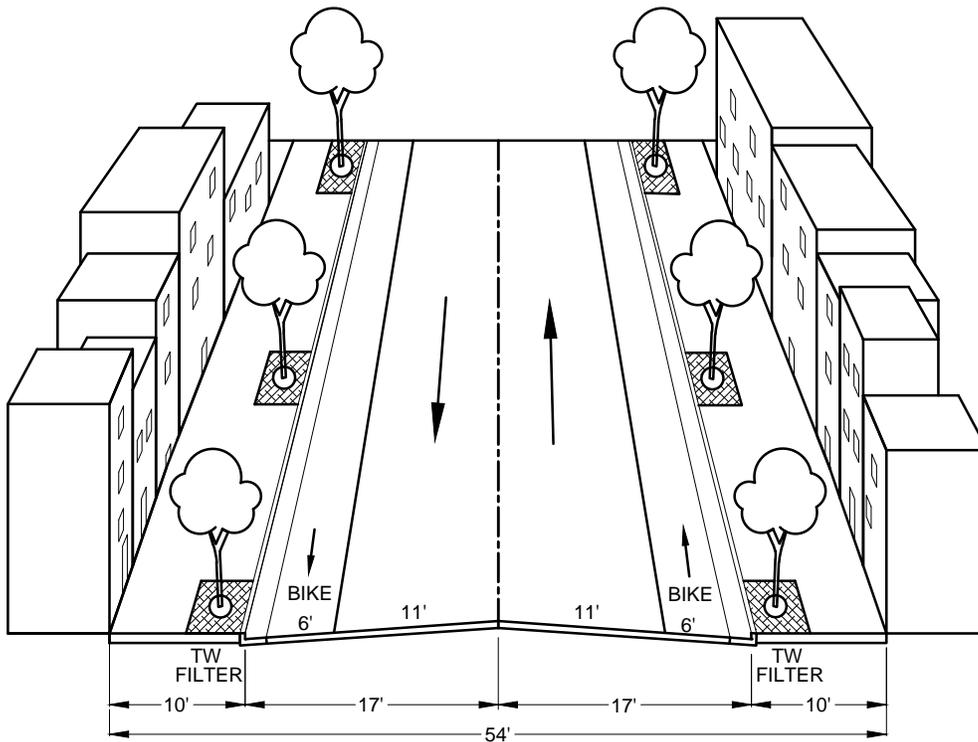
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APPR	REVISED	DATE
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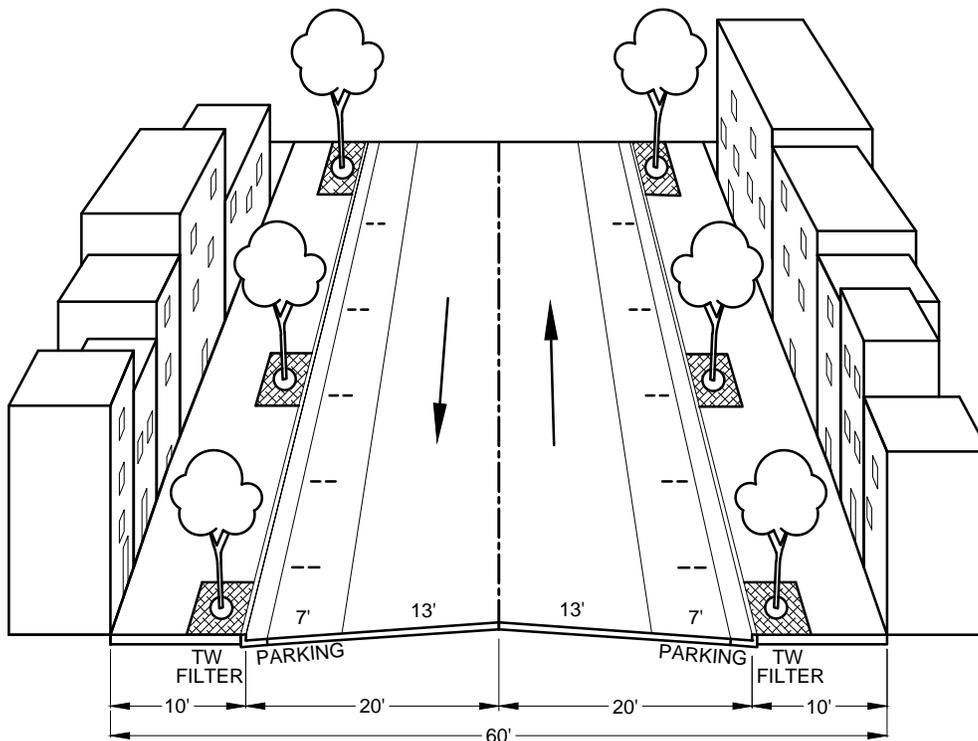
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FILE NO. SD-02-12.DWG	SCALE NONE	DRAWN DC	CHECKED AR	DATE 1/03/13	DWG NO. SD-2	13 of 19
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NEW MIDDLE ROAD



NORTH-SOUTH STREET

CITY OF FREMONT
STANDARD DETAILS

STREET GEOMETRICS

DATE APPROVED BY CITY COUNCIL

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RESOLUTION NO.

2012-52

Norm Hughes

CITY ENGINEER

DWG NO.

SD-2

14 of 19

APP	DOWNTOWN STREETS	9/12
APP	REVISED	DATE
REVISIONS		

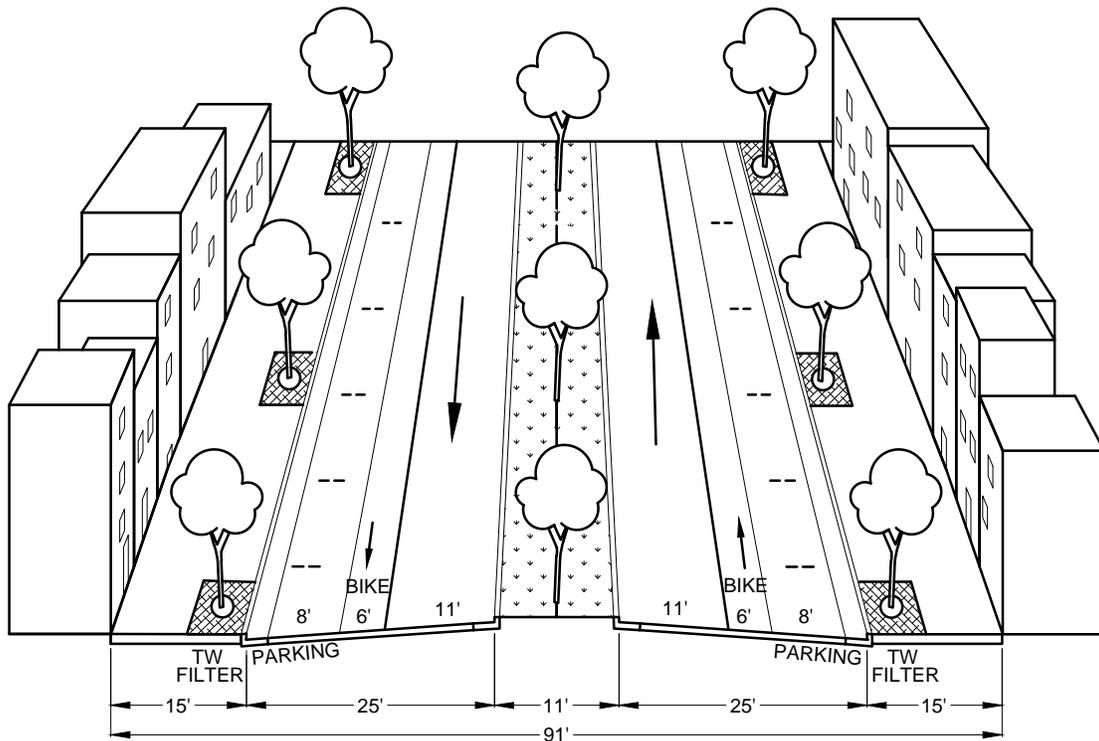
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SD-02-12.DWG

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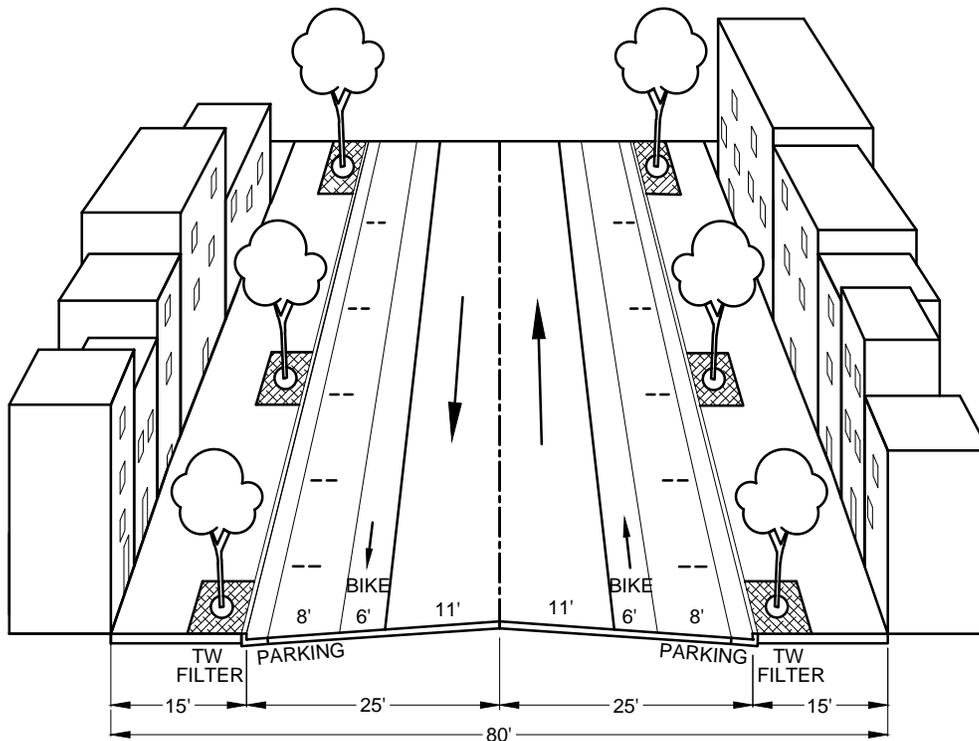
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AR

DATE
1/03/13



STATE STREET
(Mowry Avenue to Capitol Avenue)



STATE STREET
(Capitol Avenue to Beacon Avenue)

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RESOLUTION NO.

2012-52

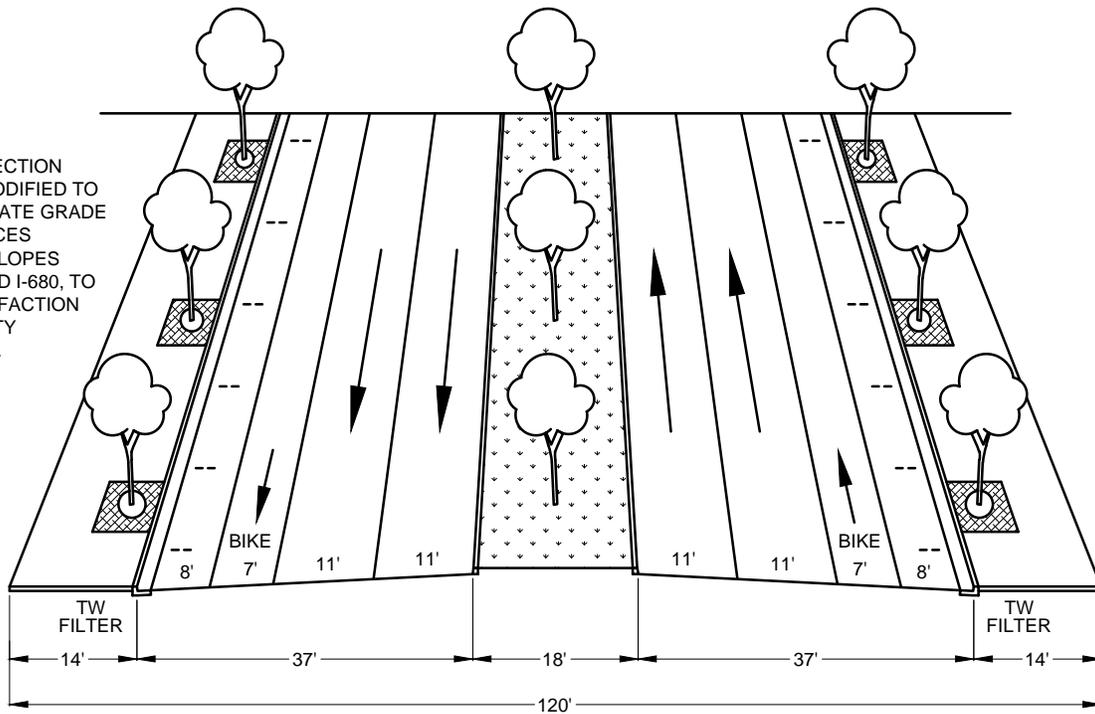
APP	DOWNTOWN STREETS	9/12
APP	REVISED	DATE
REVISIONS		

Norm Hughes

CITY ENGINEER

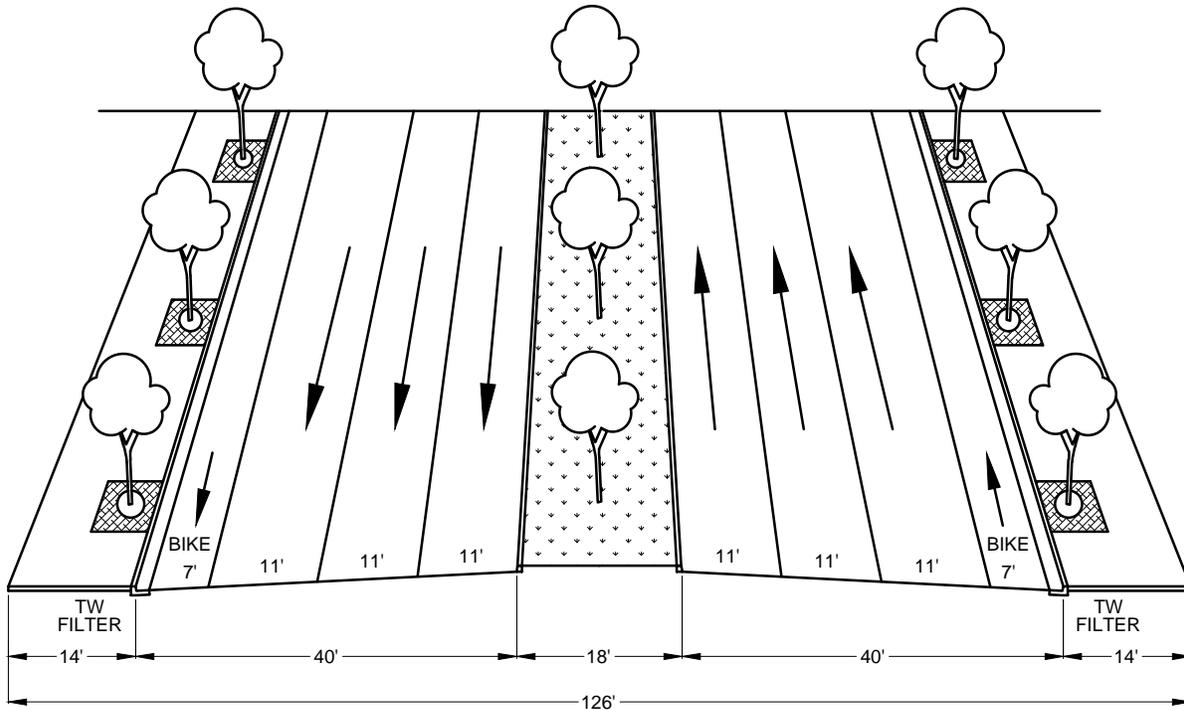
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SD-02-12.DWG	NONE	DC	AR	1/03/13	SD-2	15 of 19

* STREET SECTION MAY BE MODIFIED TO ACCOMMODATE GRADE DIFFERENCES BETWEEN LOPES COURT AND I-680, TO THE SATISFACTION OF THE CITY ENGINEER.



SOUTH GRIMMER BOULEVARD *

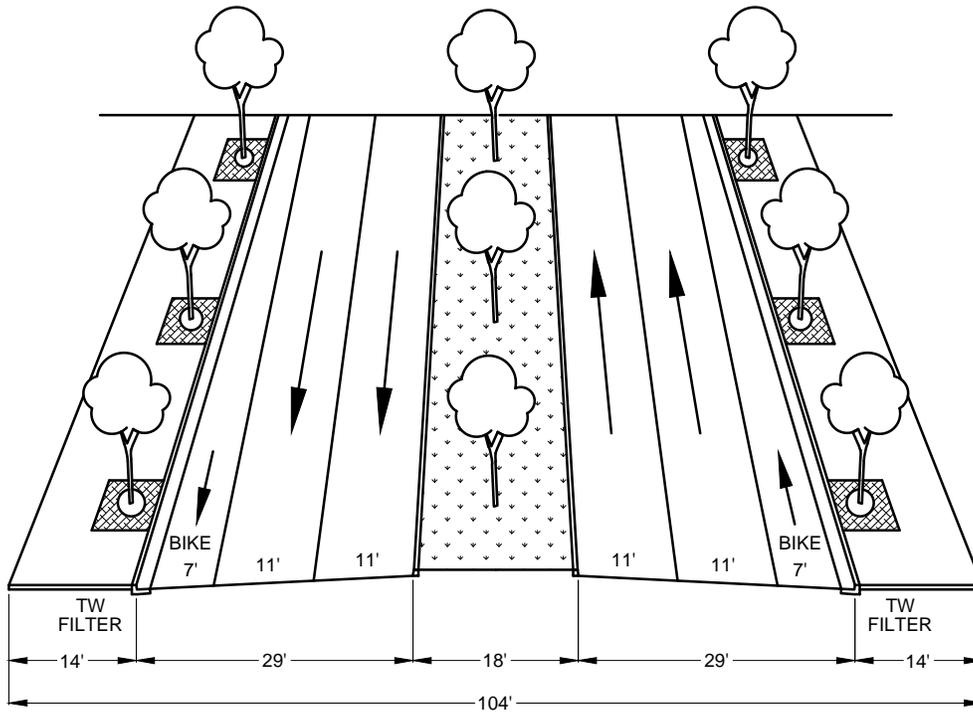
(West Boundary of the Warm Springs Innovation District to 1/2 Block East of Warm Springs Boulevard / Osgood Road)



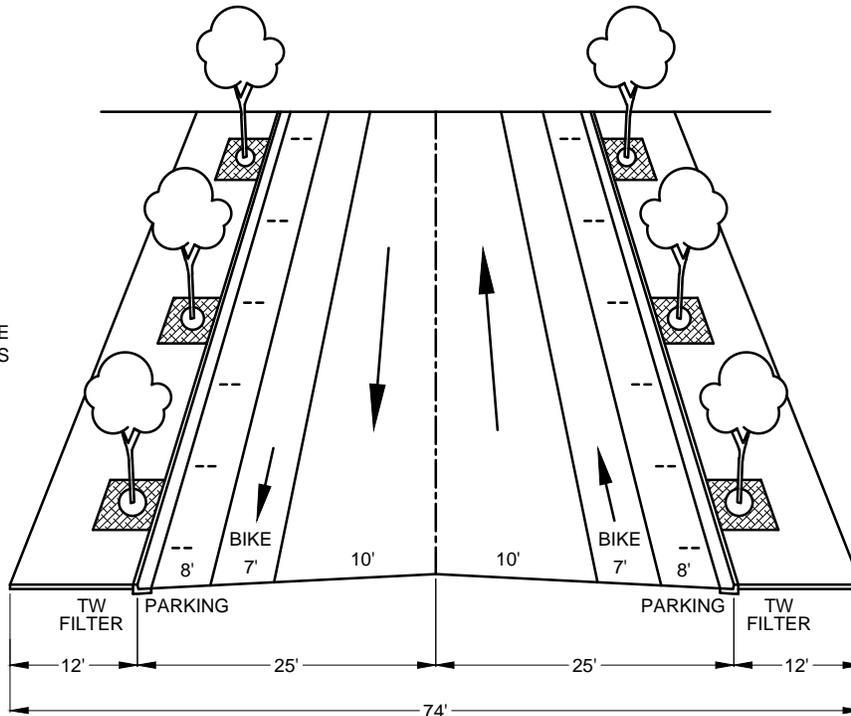
FREMONT BOULEVARD

(Old Warm Springs Boulevard to Eastside of I-880 Freeway)

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL							
						07/22/14							
			STREET GEOMETRICS			RESOLUTION NO. 2014-43							
						<i>Norm Hughes</i>							
<table border="1"> <tr> <td>APP</td> <td>WARM SPRINGS COMMUNITY PLAN</td> <td>7/14</td> </tr> <tr> <td>APPR</td> <td>REVISED</td> <td>DATE</td> </tr> </table>			APP	WARM SPRINGS COMMUNITY PLAN	7/14	APPR	REVISED	DATE				CITY ENGINEER	
APP	WARM SPRINGS COMMUNITY PLAN	7/14											
APPR	REVISED	DATE											
REVISIONS													
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.								
SD-02-12.DWG	NONE	JA	PD	7/22/14	SD-2	16 of 19							



WARM SPRINGS BOULEVARD / OSGOOD ROAD
(Skyway Court to Mission Boulevard)



* 2' OF THE REQUIRED SETBACK (FROM THE PUBLIC RIGHT-OF-WAY) SHALL BE A HARDSCAPE SIDEWALK CONTIGUOUS TO, AND OF THE SAME MATERIAL AND GRADE, AS THE PUBLIC SIDEWALK.

INNOVATION WAY *

CITY OF FREMONT
STANDARD DETAILS
STREET GEOMETRICS

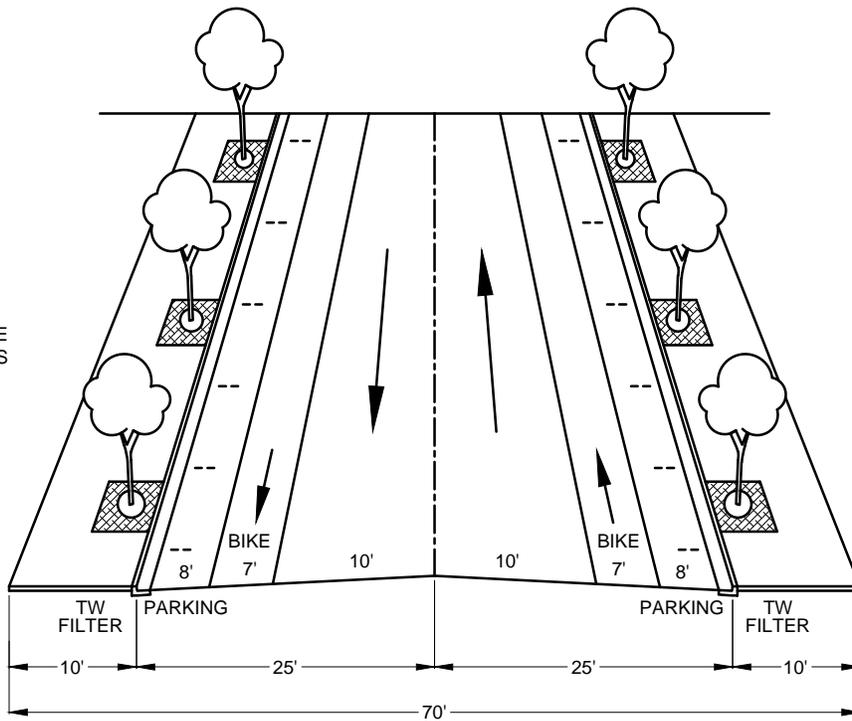
DATE APPROVED BY CITY COUNCIL
07/22/14
RESOLUTION NO. 2014-43

Norm Hughes
CITY ENGINEER

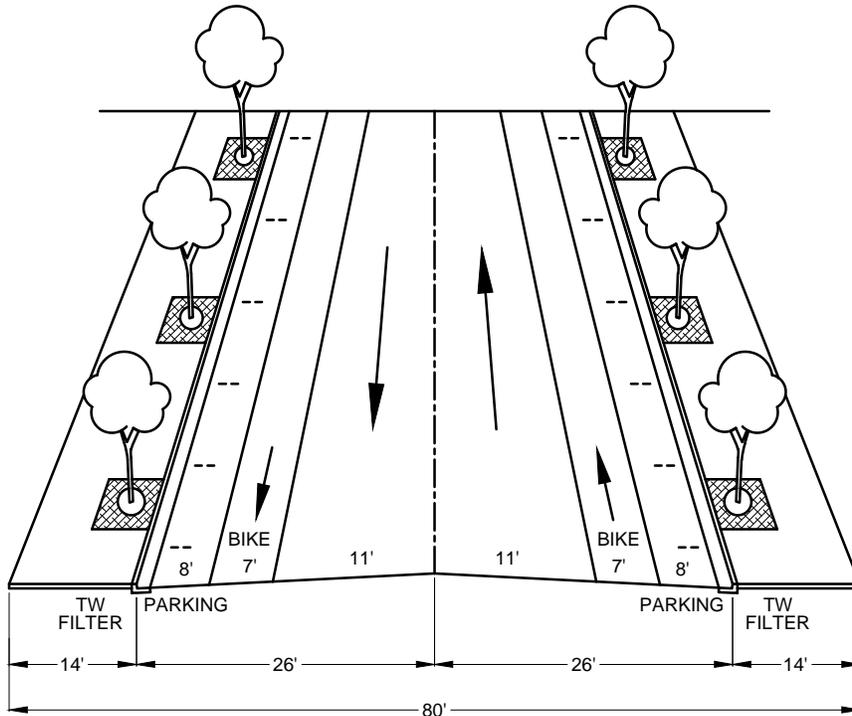
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APPR	REVISED	DATE
REVISIONS		

FILE NO. SD-02-12.DWG	SCALE NONE	DRAWN JA	CHECKED PD	DATE 7/22/14	DWG NO. SD-2	17 of 19
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* 2' OF THE REQUIRED SETBACK (FROM THE PUBLIC RIGHT-OF-WAY) SHALL BE A HARDSCAPE SIDEWALK CONTIGUOUS TO, AND OF THE SAME MATERIAL AND GRADE, AS THE PUBLIC SIDEWALK.

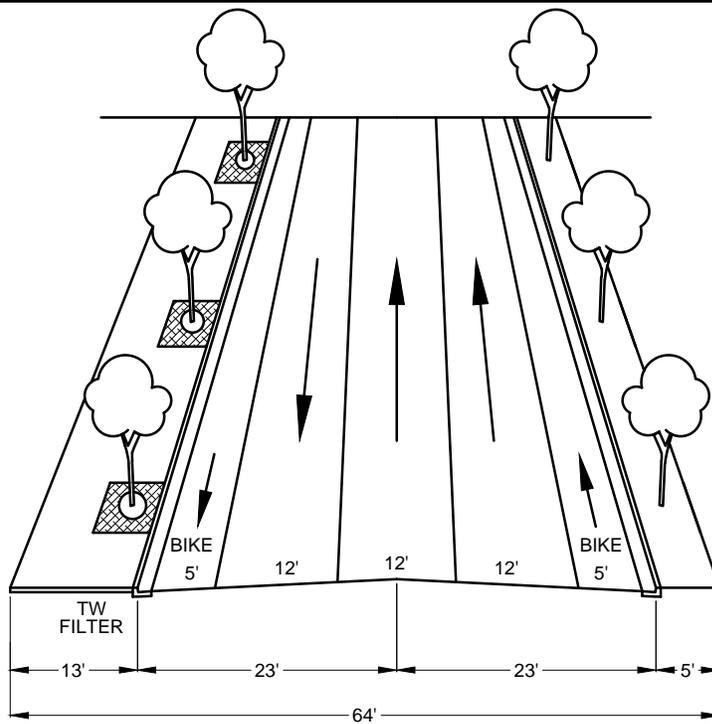


NORTH / SOUTH STREET *
(South of South Grimmer Boulevard)

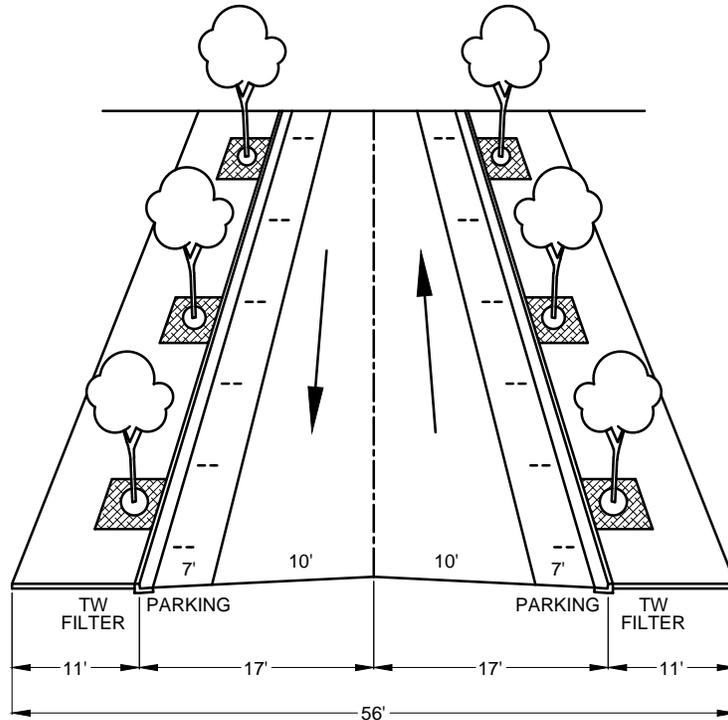


OLD WARM SPRINGS BOULEVARD / LOPES COURT

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 07/22/14							
						RESOLUTION NO. 2014-43							
<table border="1"> <tr> <td>APP</td> <td>WARM SPRINGS COMMUNITY PLAN</td> <td>7/14</td> </tr> <tr> <td>APPR</td> <td>REVISED</td> <td>DATE</td> </tr> </table>			APP	WARM SPRINGS COMMUNITY PLAN	7/14	APPR	REVISED	DATE	<u>STREET GEOMETRICS</u>			<i>Norm Hughes</i> CITY ENGINEER	
APP	WARM SPRINGS COMMUNITY PLAN	7/14											
APPR	REVISED	DATE											
REVISIONS													
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.								
SD-02-12.DWG	NONE	JA	PD	7/22/14	SD-2	18 of 19							



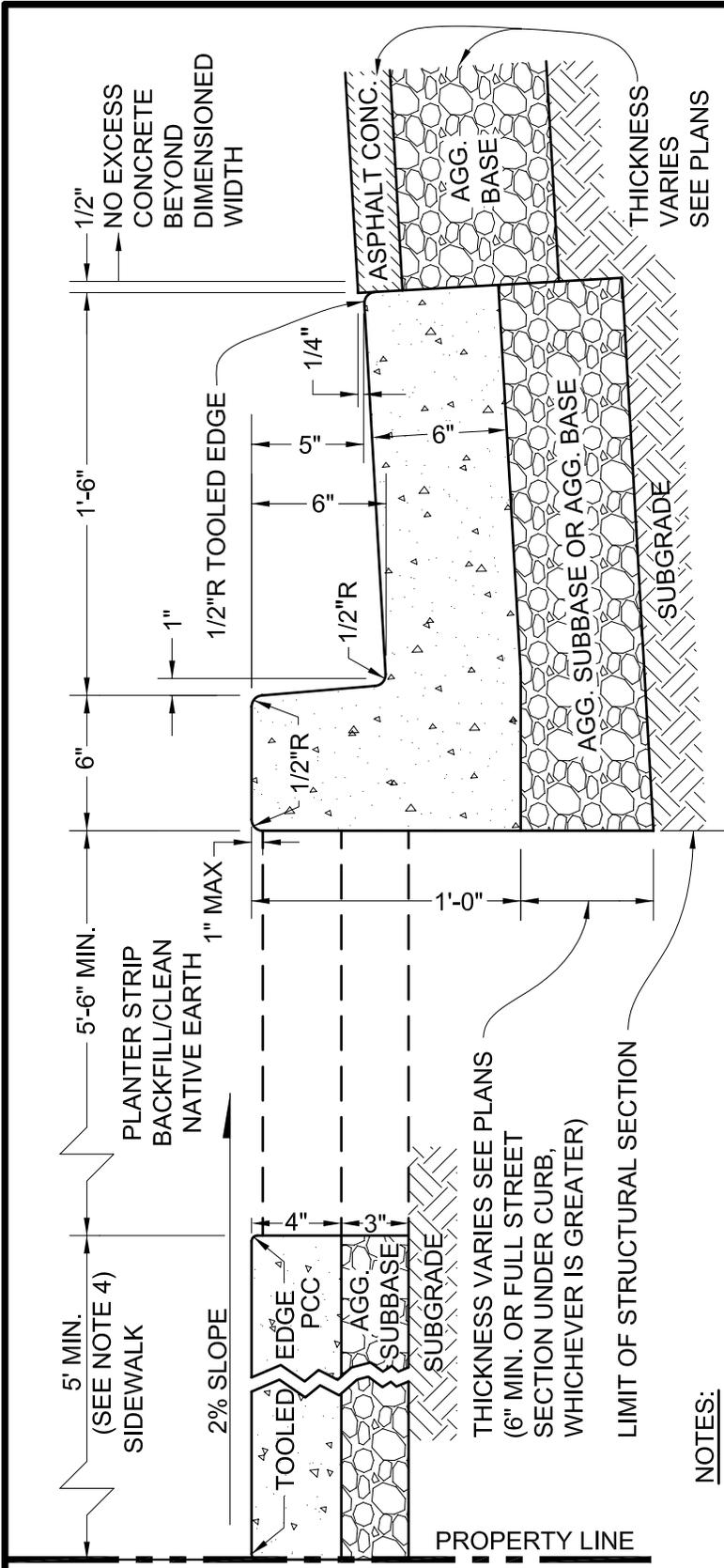
KATO ROAD
(Flood Control Channel to Mission Boulevard)



LOCAL STREET *
(Warm Springs Innovation District)

* LANE WIDTH MAY HAVE TO BE INCREASED TO ACCOMODATE FIRE DEPARTMENT'S REQUIREMENTS FOR BUILDINGS THAT ARE 30' OR TALLER.

			CITY OF FREMONT				DATE APPROVED BY CITY COUNCIL							
			STANDARD DETAILS				07/22/14							
			STREET GEOMETRICS				RESOLUTION NO. 2014-43							
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APP	WARM SPRINGS COMMUNITY PLAN	7/14												
APPR	REVISED	DATE												
REVISIONS														
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SD-02-12.DWG	NONE	JA	PD	7/22/14	SD-2	19 of 19								

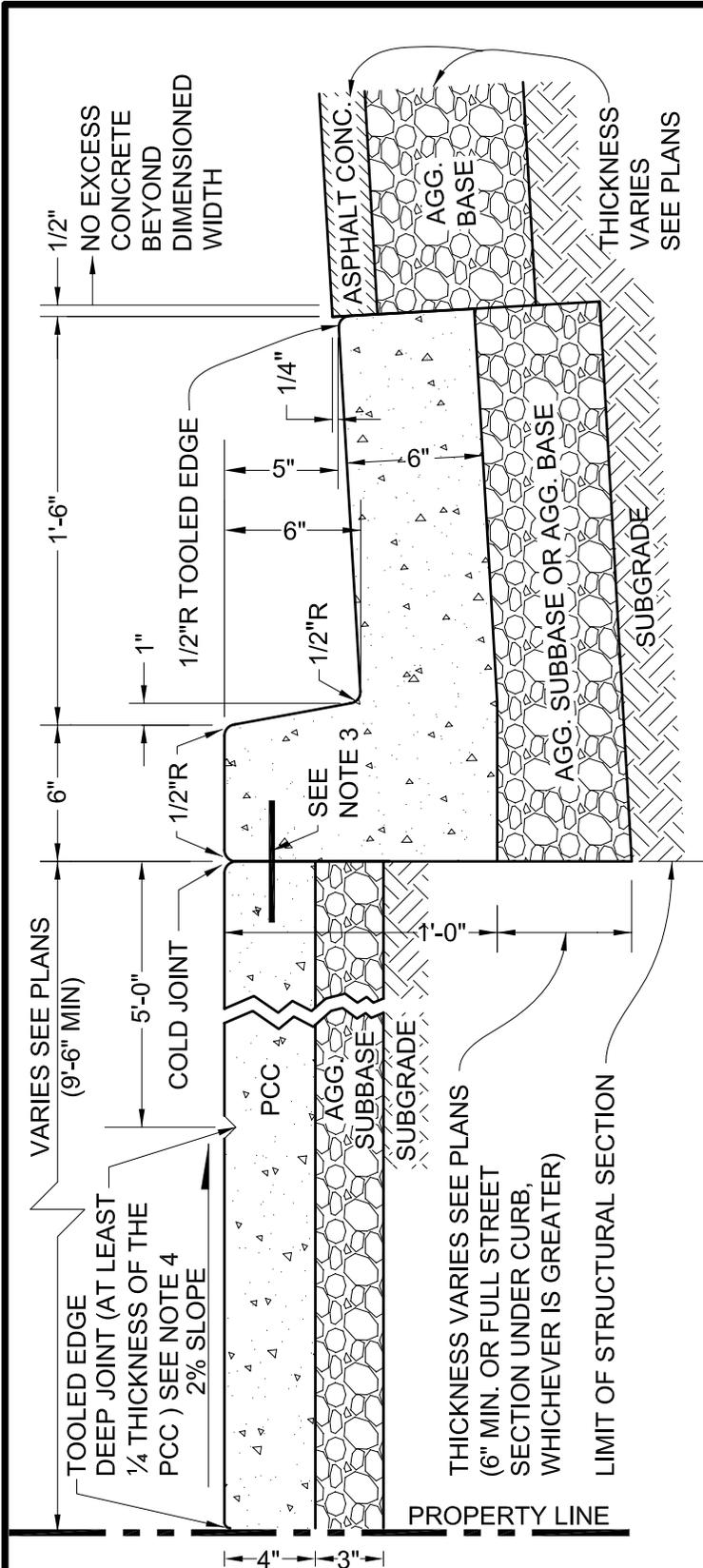


THICKNESS VARIES SEE PLANS
 THICKNESS VARIES SEE PLANS
 THICKNESS VARIES SEE PLANS

NOTES:

1. TREE PLANTING IN PLANTER STRIP SUBJECT TO APPROVAL OF CITY ENGINEER. CONSTRUCTION IN PLANTER STRIP SUBJECT TO ENCROACHMENT PERMIT FROM THE ENGINEERING DIVISION.
2. IN COMMERCIAL ZONES PLANTER POCKETS MAY BE REQUIRED IN LIEU OF CONTINUOUS PLANTING STRIP AS DETERMINED BY THE CITY ENGINEER.
3. SURFACE OF WALKS, CURBS, CURB FACES, AND GUTTERS SHALL BE TRUE AND STRAIGHT, OF UNIFORM WIDTH, AND FREE OF IRREGULARITIES. THE SURFACES SHALL NOT VARY MORE THAN 0.01 FOOT FROM THE EDGE OF A 10-FOOT LONG STRAIGHTEDGE.
4. IF THE FACE OF CURB TO PROPERTY LINE IS 10', SIDEWALK SHALL BE 4'-6" AND PLANTER STRIP 5'-0". FOR SIDEWALKS LESS THAN 5 FEET WIDTH, LANDINGS (5 FEET X 5 FEET) SHALL BE PROVIDED AT 200-FOOT INTERVALS. LOCATIONS SHALL BE SHOWN ON THE PLANS.
5. COMPACT AGGREGATE SUBBASE AND AGGREGATE BASE IN THE STREET AND UNDER THE CURB TO 95% RELATIVE COMPACTION (MIN). COMPACT AGGREGATE SUBBASE AND/OR AGGREGATE BASE UNDER THE SIDEWALK TO 90% RELATIVE COMPACTION (MIN). COMPACT ALL SUBGRADE TO 90% RELATIVE COMPACTION (MIN).
6. CONCRETE SHALL BE 6 SACK.

<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h3 style="margin: 0;">TYPE "A" CURB, GUTTER AND SIDEWALK</h3>			DATE APPROVED BY CITY COUNCIL 04/11/06				
			RESOLUTION NO. 2006-31				
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <i>Ham Hughes</i> CITY ENGINEER </div>			<div style="border: 1px solid black; padding: 5px; display: inline-block;"> DWG NO. SD-3 1 of 1 </div>				
NO.	REVISED	DATE	DRAWN	CHECKED	DATE	FILE NO.	SCALE
REVISIONS			DC	KC	03/14/06	SD-03-06.DWG	1 1/2" = 1'-0"



NOTES:

1. IN COMMERCIAL ZONES PLANTER POCKETS AND/OR TREE WELLS MAY BE REQUIRED IN LIEU OF CONTINUOUS PLANTER STRIP AS DETERMINED BY THE CITY ENGINEER. CONSTRUCTION IN PLANTER POCKETS AND/OR TREE WELLS SUBJECT TO ENCROACHMENT PERMIT FROM THE ENGINEERING DIVISION.
2. SURFACE OF WALKS, CURBS, CURB FACES, AND GUTTERS SHALL BE TRUE AND STRAIGHT, OF UNIFORM WIDTH, AND FREE OF IRREGULARITIES. THE SURFACES SHALL NOT VARY MORE THAN 0.01 FOOT FROM THE EDGE OF A 10-FOOT LONG STRAIGHTEDGE.
3. CURB AND SIDEWALK SHALL NOT BE PLACED IN MONOLITHIC POUR. USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" CENTERS. EPOXY IF DRILLED.
4. FOR SIDEWALKS 10 FEET OR WIDER, DEEP JOINTS SHALL LINE UP WITH THE PLANTER POCKETS OR TREE WELLS.
5. COMPACT AGGREGATE SUBBASE AND AGGREGATE BASE IN THE STREET AND UNDER THE CURB TO 95% RELATIVE COMPACTION (MIN). COMPACT AGGREGATE SUBBASE AND/OR AGGREGATE BASE UNDER THE SIDEWALK TO 90% RELATIVE COMPACTION (MIN). COMPACT ALL SUBGRADE TO 90% RELATIVE COMPACTION (MIN).
6. CONCRETE SHALL BE 6 SACK.

NO.	REVISED	DATE
REVISIONS		
FILE NO.	SCALE	DRAWN
SD-04-06.DWG	1 1/2" = 1'-0"	DC
CHECKED	DATE	DWG NO.
KC	03/14/06	SD-4

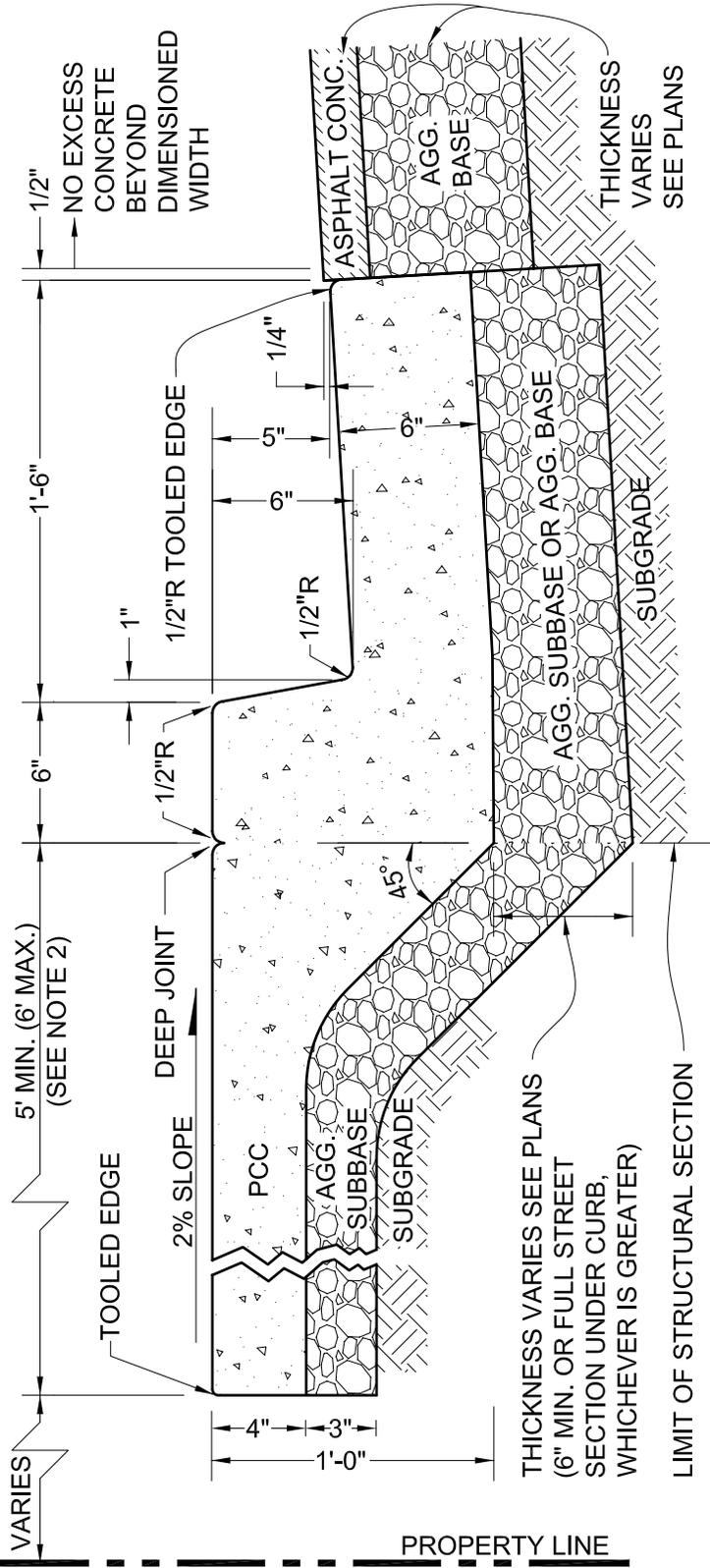
CITY OF FREMONT

STANDARD DETAILS

TYPE "B" CURB, GUTTER

AND SIDEWALK

DATE APPROVED BY CITY COUNCIL 04/11/06	
RESOLUTION NO. 2006-31	
<i>Ham Hughes</i>	
CITY ENGINEER	
DWG NO.	1 of 1



NOTES:

1. SURFACE OF WALKS, CURBS, CURB FACES, AND GUTTERS SHALL BE TRUE AND STRAIGHT, OF UNIFORM WIDTH, AND FREE OF IRREGULARITIES. THE SURFACES SHALL NOT VARY MORE THAN 0.01 FOOT FROM THE EDGE OF A 10-FOOT LONG STRAIGHTEDGE.
2. FOR CERTAIN CIRCUMSTANCES WHEN SIDEWALK IS LESS THAN 5 FEET WIDE, LANDINGS (5 FEET X 5 FEET) SHALL BE PROVIDED AT 200-FOOT INTERVALS. LOCATIONS SHALL BE SHOWN ON THE PLANS.
3. COMPACT AGGREGATE SUBBASE AND AGGREGATE BASE IN THE STREET AND UNDER THE CURB TO 95% RELATIVE COMPACTION (MIN). COMPACT AGGREGATE SUBBASE AND/OR AGGREGATE BASE UNDER THE SIDEWALK TO 90% RELATIVE COMPACTION (MIN). COMPACT ALL SUBGRADE TO 90% RELATIVE COMPACTION (MIN).
4. CONCRETE SHALL BE 6 SACK.

CITY OF FREMONT
STANDARD DETAILS
TYPE "C" MONOLITHIC CURB,
GUTTER, AND SIDEWALK

DATE APPROVED BY CITY COUNCIL
 04/11/06

RESOLUTION NO. 2006-31

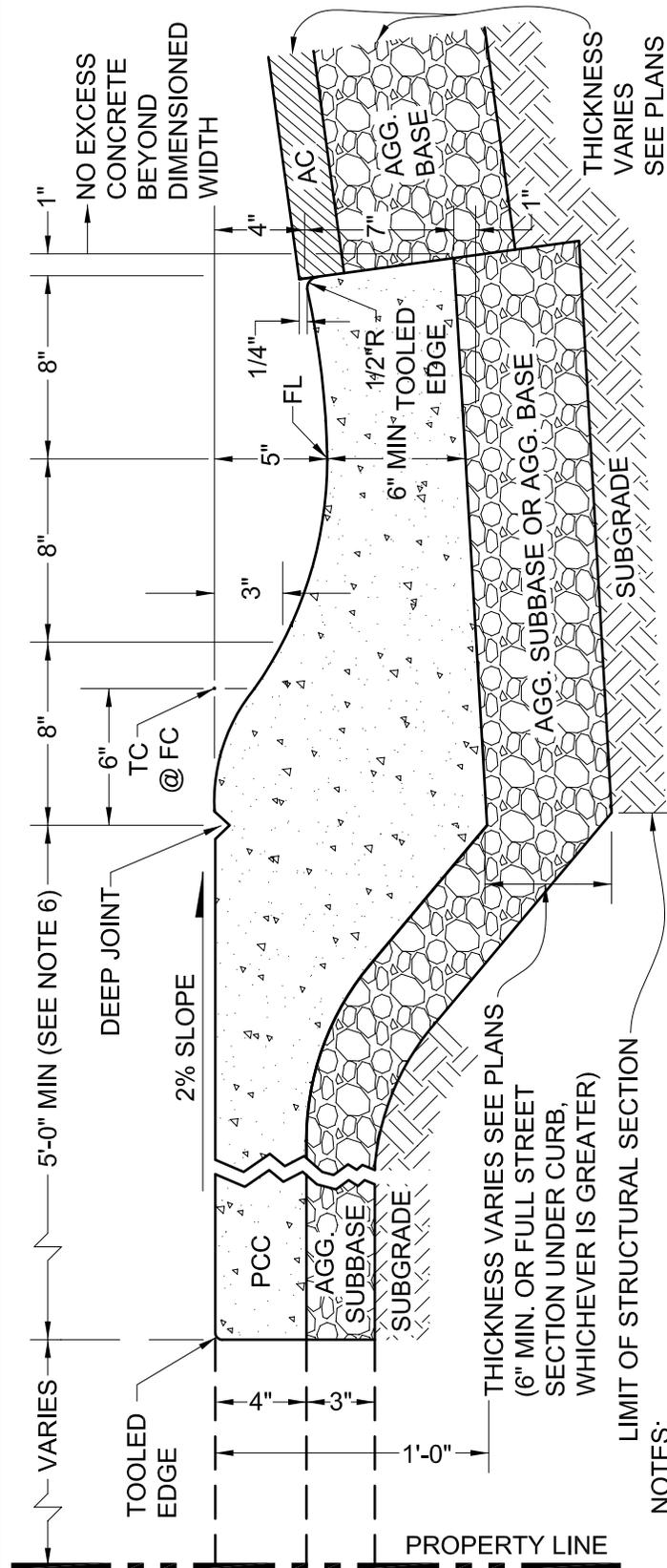
Ham Hughes

CITY ENGINEER

NO.	REVISED	DATE

REVISIONS

FILE NO. SD-05-06.DWG	SCALE 1 1/2" = 1'-0"	DRAWN DC	CHECKED KC	DATE 03/14/06	DWG NO. SD-5	1 of 1
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NOTES:
 1. THIS DETAIL IS TO BE USED ONLY WHERE ROLLED CURB EXISTS.

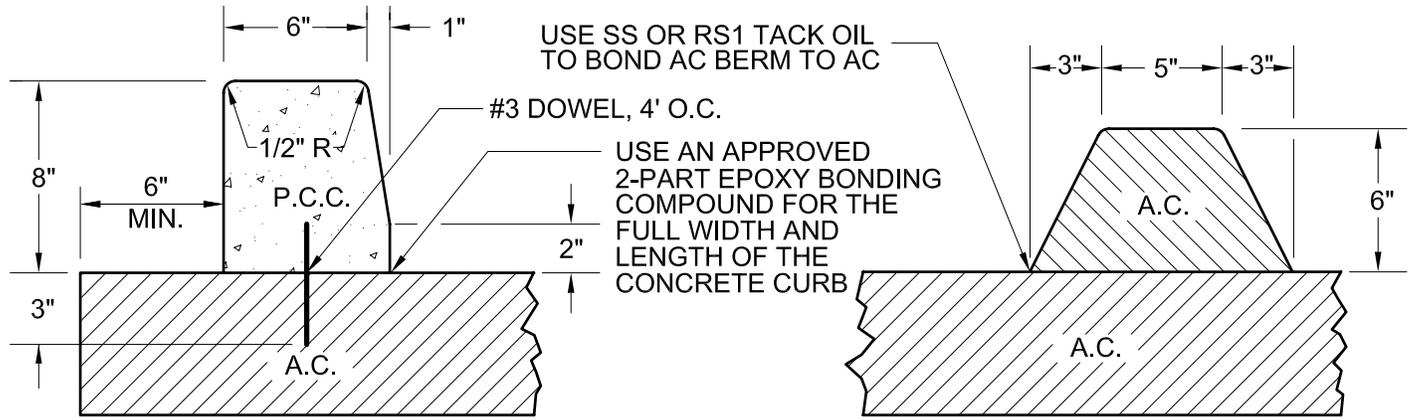
2. IN COMMERCIAL ZONES PLANTER POCKETS MAY BE REQUIRED IN LIEU OF CONTINUOUS PLANTING STRIP AS DETERMINED BY THE CITY ENGINEER.
3. SURFACE OF WALKS, CURBS, CURB FACES, AND GUTTERS SHALL BE TRUE AND STRAIGHT, OF UNIFORM WIDTH, AND FREE OF IRREGULARITIES. THE SURFACES SHALL NOT VARY MORE THAN 0.01 FOOT FROM THE EDGE OF A 10-FOOT LONG STRAIGHTEDGE.
4. TREE PLANTING IN PLANTER STRIP SUBJECT TO APPROVAL OF CITY ENGINEER. CONSTRUCTION IN PLANTER STRIP SUBJECT TO ENCROACHMENT PERMIT FROM THE ENGINEERING DIVISION.
6. FOR SIDEWALKS LESS THAN 5 FEET WIDTH, LANDINGS (5 FEET X 5 FEET) SHALL BE PROVIDED AT 200-FOOT INTERVALS. LOCATIONS SHALL BE SHOWN ON PLANS.
7. COMPACT AGGREGATE SUBBASE AND AGGREGATE BASE IN THE STREET AND UNDER THE CURB TO 95% RELATIVE COMPACTION (MIN). COMPACT AGGREGATE SUBBASE AND/OR AGGREGATE BASE UNDER THE SIDEWALK TO 90% RELATIVE COMPACTION (MIN). COMPACT ALL SUBGRADE TO 90% RELATIVE COMPACTION (MIN).
8. CONCRETE SHALL BE 6 SACK.

NO.	REVISED	DATE
REVISIONS		
FILE NO.	SCALE	DRAWN
SD-06-06.DWG	1 1/2" = 1'-0"	DC

CITY OF FREMONT
 STANDARD DETAILS
 TYPE "D" CURB, GUTTER
 AND SIDEWALK

DATE APPROVED BY CITY COUNCIL 04/11/06
RESOLUTION NO. 2006-31
<i>Ham Hughes</i>
CITY ENGINEER
DWG NO. SD-6
2 of 2

CHECKED KC	DATE 03/14/06
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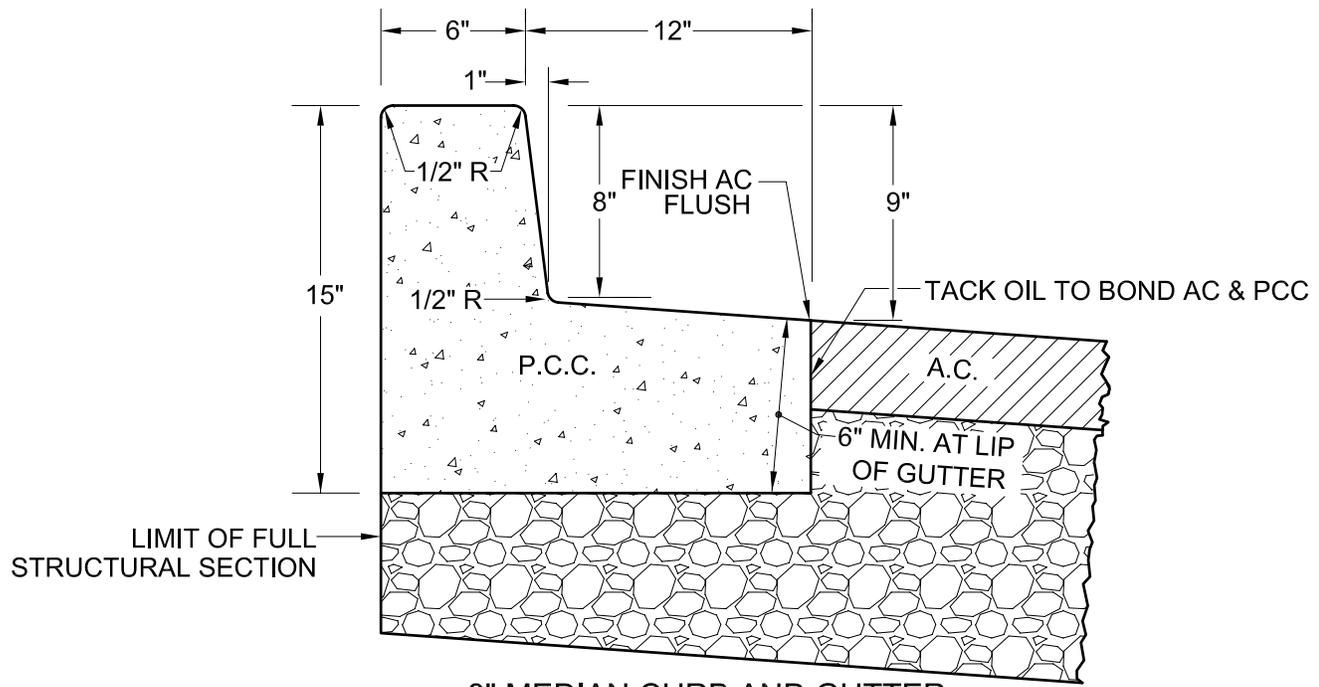


8" MEDIAN EXTRUDED CURB

6" EXTRUDED A.C. BERM

PLACE 6" #3 DOWELS (3" EMBEDDED INTO THE AC) 4' ON CENTER PRIOR TO EXTRUDING CURB

DOWELS MUST BE A TIGHT FIT OR EPOXIED INTO THE DOWEL HOLE



8" MEDIAN CURB AND GUTTER

CITY OF FREMONT
STANDARD DETAILS
MISCELLANEOUS
CURB AND GUTTER DETAILS

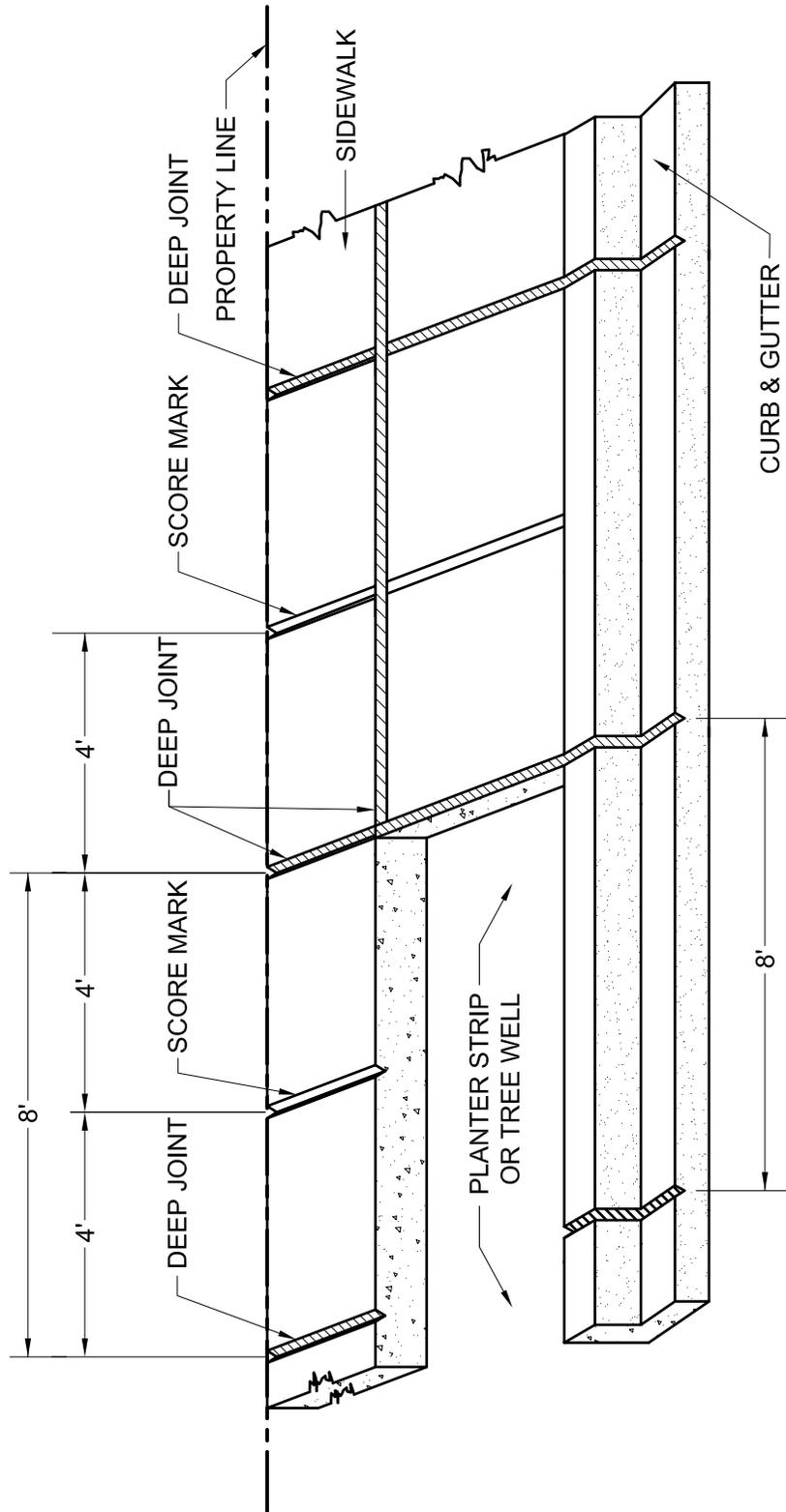
DATE APPROVED BY CITY COUNCIL
 04/11/06

RESOLUTION NO. 2006-31

Nam Hughes
 CITY ENGINEER

NO.	REVISED	DATE
REVISIONS		

FILE NO. SD-07-06.DWG	SCALE 1 1/2" = 1'-0"	DRAWN DC	CHECKED KC	DATE 03/14/06	DWG NO. SD-7	1 of 1
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DEEP JOINT: DEPTH EQUAL TO 1/4 OR MORE SLAB THICKNESS.
 FINISH WIDTH AT THE TOP TO BE 1/2" MAXIMUM.
 SCORE MARK: 4' TYPICAL SPACING

CITY OF FREMONT
 STANDARD DETAILS
SCORE MARKS
TYPICAL SPACING

DATE APPROVED BY CITY COUNCIL
 04/11/06

RESOLUTION NO. 2006-31

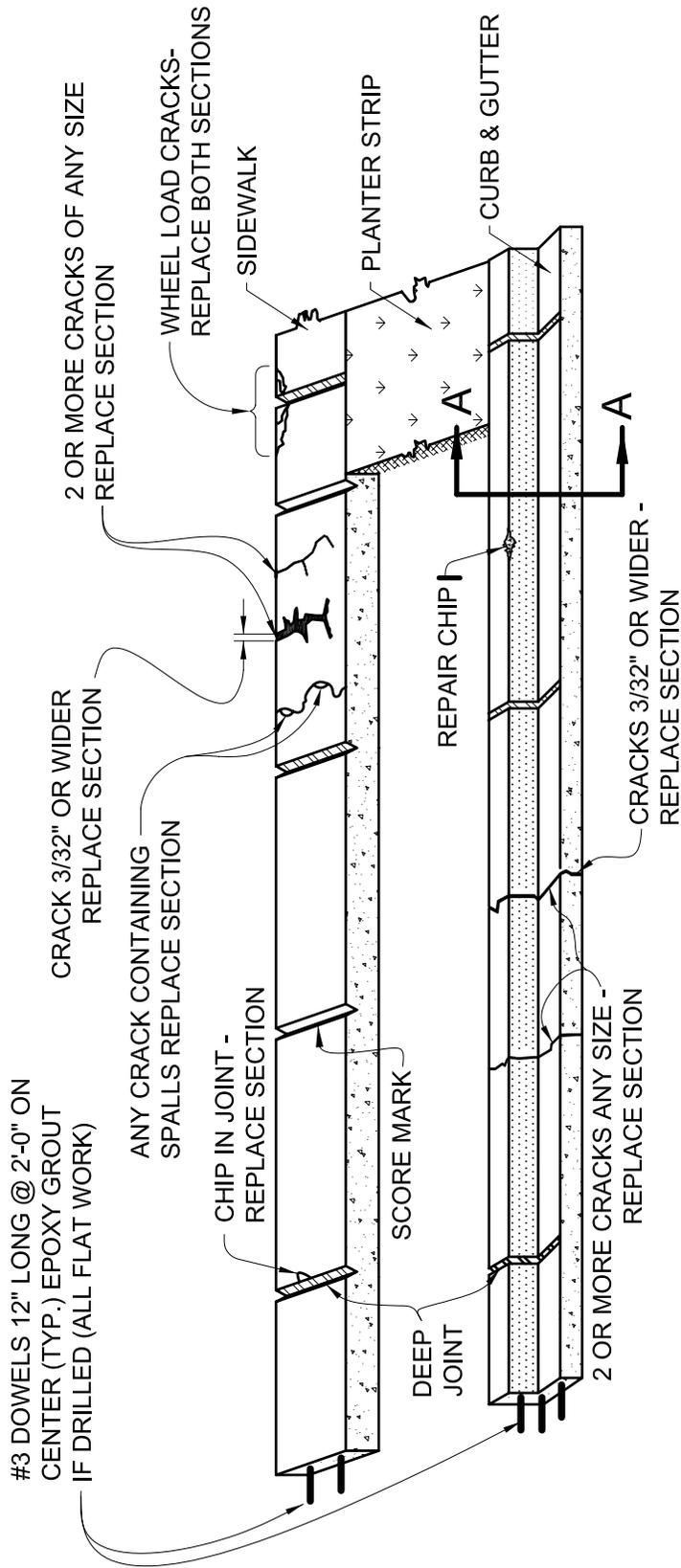
Ham Hughes

CITY ENGINEER

NO.	REVISED	DATE

REVISIONS

FILE NO. SD-08-06.DWG	SCALE NONE	DRAWN DC	CHECKED KC	DATE 12/20/05	DWG NO. SD-8	1 of 1
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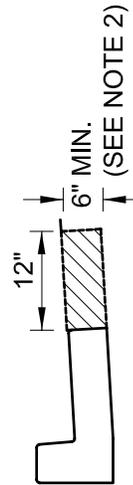


NOTES:

1. 3 OR MORE CHIPS IN 8' LENGTH OF CURB - REPLACE SECTION.
2. ANY CHIP OVER 6" IN ANY DIMENSION - REPLACE SECTION.
3. VERTICAL DISPLACEMENT OF 1/4" OR MORE - REPLACE SECTION.
4. SKIN PATCHING OF FLATWORK WILL NOT BE PERMITTED.
5. REMOVE AND REPLACE ALL UNDERMINED CONCRETE AS DIRECTED BY CITY ENGINEER.

NOTES:

1. PRESERVE AC (STRAIGHT EDGE).
2. REMOVE AND REPLACE 6" MINIMUM THICK AC DEEP LIFT PATCH OR MATCH EXISTING, WHICHEVER IS GREATER.



SECTION A-A
N.T.S.

NO.	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
CURB, GUTTER & SIDEWALK
REPAIR METHODS

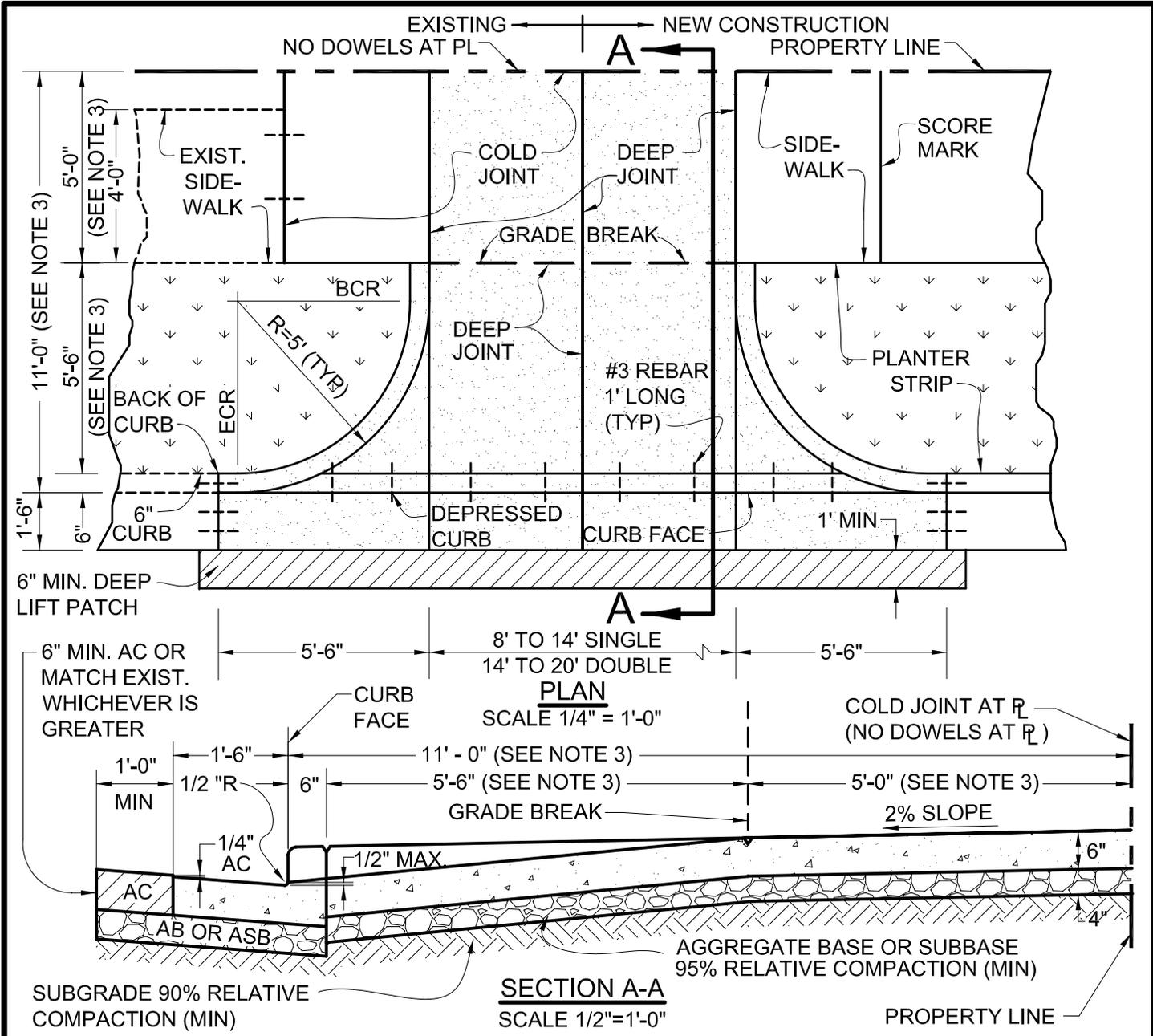
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DATE APPROVED BY CITY COUNCIL 04/11/06	
RESOLUTION NO. 2006-31	
<i>Ham Hughes</i>	
CITY ENGINEER	
DWG NO. SD-9	1 of 2

CONCRETE REPAIR METHODS

1. CONCRETE CURBS AND WALKS WHICH ARE DEFECTIVE FROM CRACKING, DISPLACEMENT, SPALLING, OR EXCESSIVE SURFACE CHECKING SHALL BE REPAIRED BY REMOVING AND REPLACING THE DEFECTIVE PORTIONS.
2. SURFACE CHIPS IN CURBS MAY BE REPAIRED BY AN EPOXY METHOD WHICH RESULTS IN A HARD SURFACED, NEAT PERMANENT REPAIR. SURFACE TEXTURE AND COLOR MUST MATCH ADJACENT CONCRETE. EPOXY ADHESIVE SHALL BE AN APPROVED TWO-PART EPOXY BONDING COMPOUND. SURFACES SHALL BE THOROUGHLY CLEANED PRIOR TO APPLICATION OF EPOXY. MORTAR SHALL HAVE CURING COMPOUND APPLIED. SURFACE PATCHING OF SIDEWALK WILL NOT BE ALLOWED.
3. WHEN DEFECTIVE PORTIONS OF CURBS OR WALKS ARE REMOVED, THEY SHALL BE REMOVED IN SEGMENTS BETWEEN SCORE MARKS AND/OR DEEP JOINTS. REPLACEMENT CONCRETE SHALL BE FORMED AND FINISHED TO THE SAME STANDARDS REQUIRED FOR NEW WORK. THE EDGE OF EXISTING ASPHALT PAVING WILL NOT BE USED AS A CURB FORM UNLESS APPROVED BY THE ENGINEER. WHEN CONCRETE BEING REPLACED IS NOT POURED MONOLITHIC, #3 REBAR 12" LONG SHALL BE PLACED AT 2'-0" ON CENTER A MINIMUM OF 3" INTO EXISTING CONCRETE. EPOXY GROUT IF DRILLED.
4. THE DEFECTIVE PORTIONS OF DRIVEWAY APPROACHES SHALL BE REMOVED BY SAWING OUT ALONG SCORES OR JOINTS AND REPLACING.
5. CRACKING OF CURBS, WALKS AND DRIVEWAY APRONS WILL REQUIRE REMOVAL AND REPLACEMENT WHEN THE FOLLOWING SITUATIONS OCCUR:
 - A. WHEN AN INDIVIDUAL CRACK IS 3/32" WIDE OR WIDER (THE APPROXIMATE WIDTH OF A NEW 5 CENT PIECE);
 - B. WHEN TWO OR MORE CRACKS OF ANY WIDTH OCCUR BETWEEN SCORES AND/OR EXPANSION JOINTS.
 - C. WHEN THREE OR MORE CHIPS OCCUR IN AN 8' LENGTH OF CURB.
 - D. ANY CHIP IN SIDEWALK.
6. USE #3 REBAR, 12" LONG, TO DOWEL NEW CONCRETE TO EXISTING CONCRETE.
7. DO NOT DOWEL PRIVATE IMPROVEMENTS TO PUBLIC IMPROVEMENTS.
8. WHEN REPLACING CURB AND GUTTER, A 12" WIDE, 6" MIN. THICK A.C. DEEP LIFT PATCH (OR MATCH EXISTING AC, WHICHEVER IS GREATER) IS REQUIRED.
9. ALL CONCRETE SHALL BE 6-SACK WITH 1-LB/CY OF LAMP BLACK (3" MAX SLUMP) PER CITY SPECIFICATIONS UNLESS COLOR OTHERWISE NOTED ON THE PLANS.

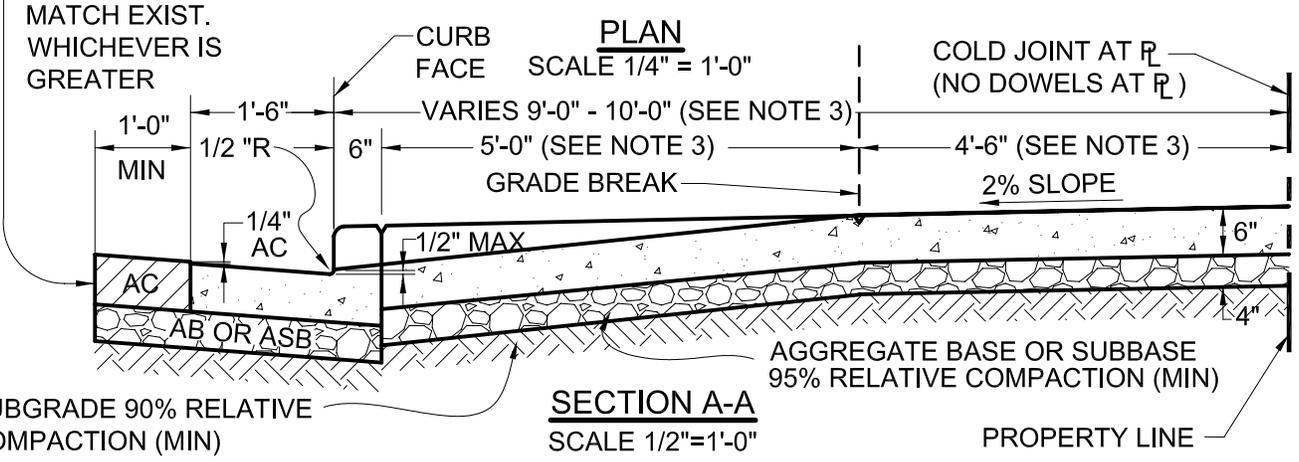
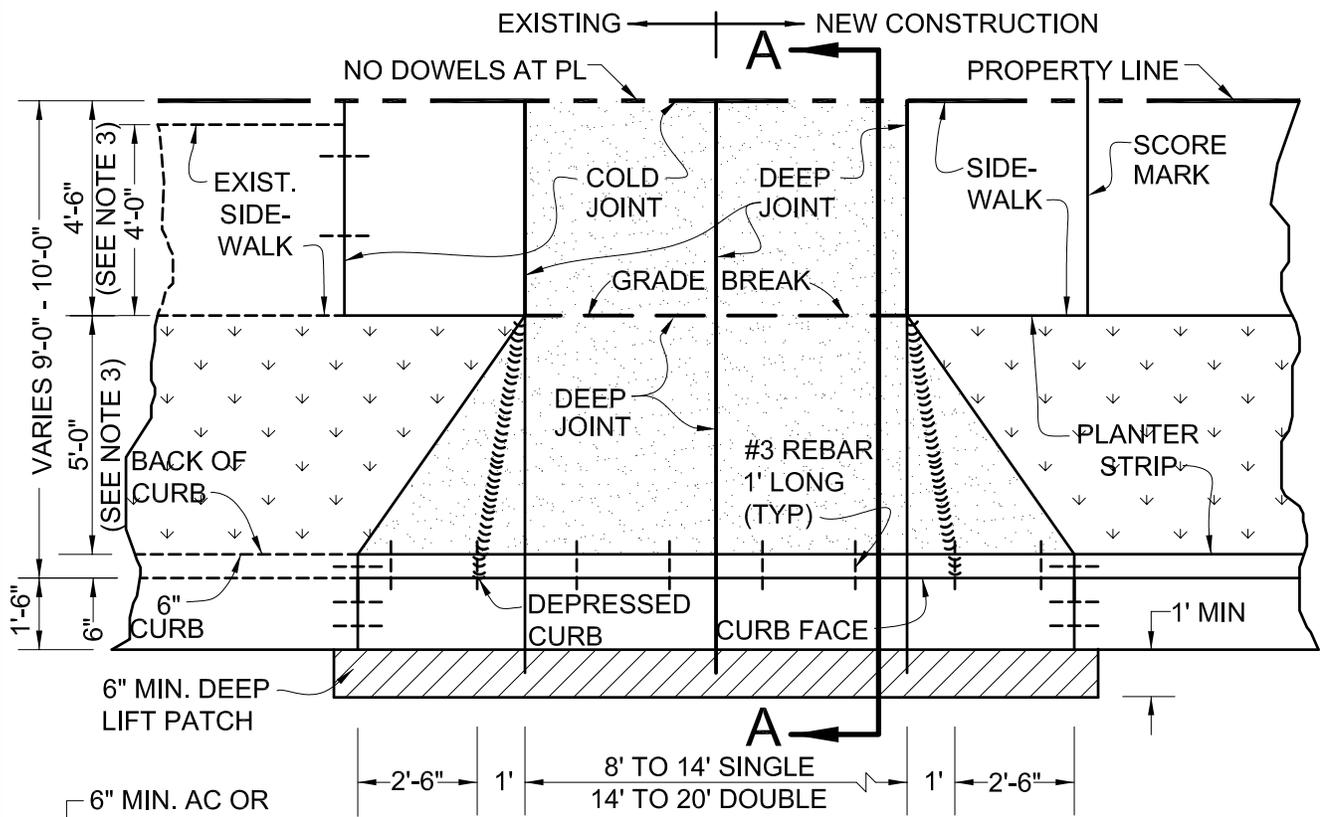
			CITY OF FREMONT STANDARD DETAILS <u>CURB, GUTTER & SIDEWALK</u> <u>REPAIR METHODS</u>			DATE APPROVED BY CITY COUNCIL 04/11/06
						RESOLUTION NO. 2006-31
						 CITY ENGINEER
NO.	REVISED	DATE				
REVISIONS						
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
SD-09-06.DWG	NONE	DC	KC	03/14/06	SD-9	2 of 2



NOTES:

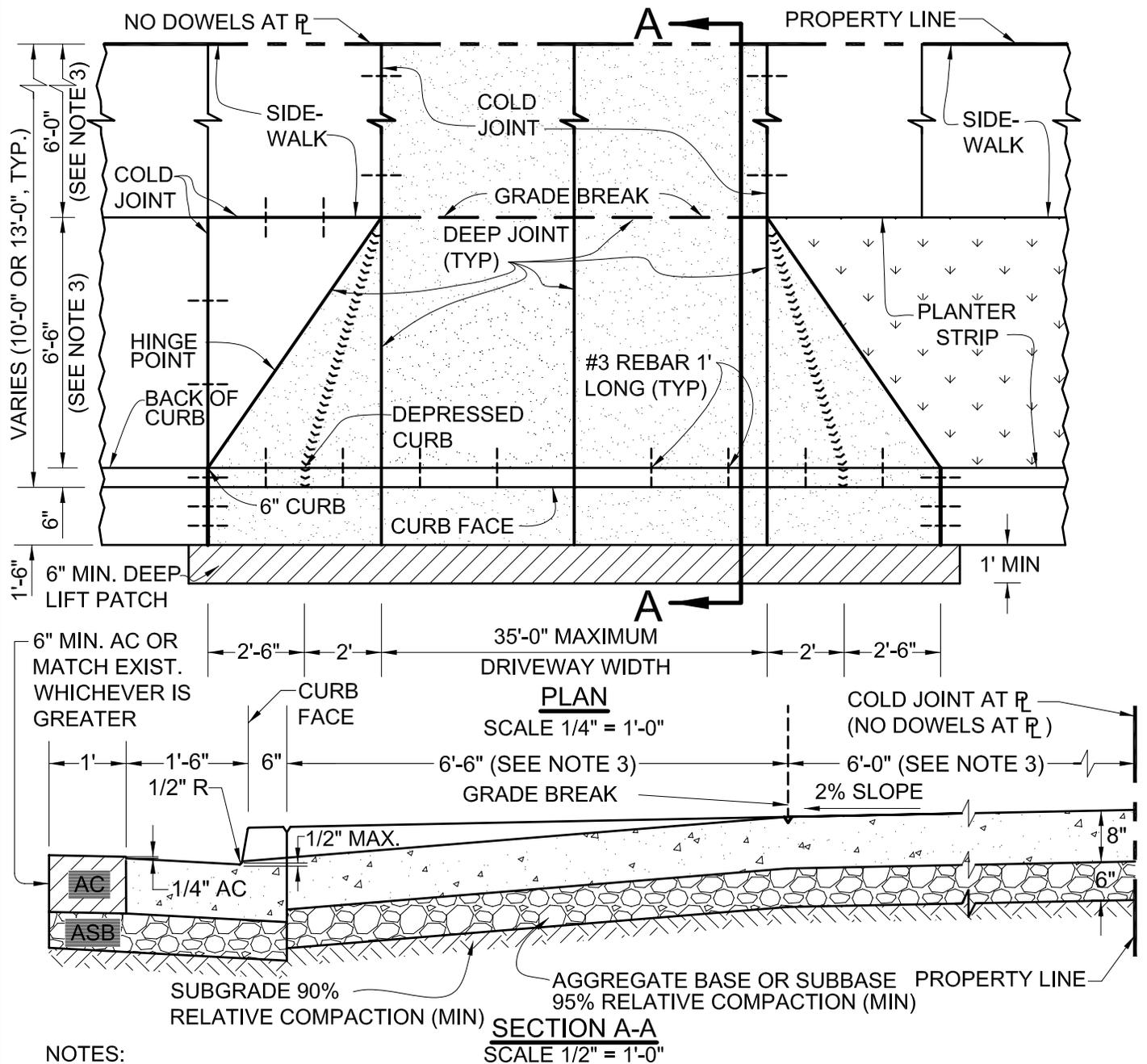
1. TREES AND HARDSCAPE IN PLANTER STRIP SUBJECT TO APPROVAL OF THE CITY ENGINEER. CONSTRUCTION IN PLANTER STRIP SUBJECT TO ENCROACHMENT PERMIT FROM ENGINEERING DIVISION.
2. FOR CURB AND SIDEWALK SCORING SEE SD-8. CONCRETE SHALL BE 6-SACK.
3. WHEN FACE OF CURB TO PROPERTY LINE EQUALS 10', SIDEWALK SHALL BE 4'-6" AND PLANTER STRIP SHALL BE 5'-0".
4. IF DRIVEWAY AND CURBS ARE NOT PLACED IN MONOLITHIC POUR USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY IF DRILLED.
5. LIMITS OF THE REMOVAL OF EXISTING CURB, GUTTER, SIDEWALK AND ASPHALT SHALL BE DETERMINED IN THE FIELD BY THE CITY INSPECTOR.

			CITY OF FREMONT STANDARD DETAILS TYPE "A" DRIVEWAY APPROACH <u>RESIDENTIAL</u>			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
NO. REVISED DATE						 CITY ENGINEER	
REVISIONS						DWG NO. 1 of 1	
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	1 of 1	
SD-10A-06.DWG	AS SHOWN	DC	KC	04/11/06	SD-10A	1 of 1	



- NOTES:**
- TREES AND HARDSCAPE IN PLANTER STRIP SUBJECT TO APPROVAL OF THE CITY ENGINEER. CONSTRUCTION IN PLANTER STRIP SUBJECT TO ENCROACHMENT PERMIT FROM ENGINEERING DIVISION.
 - FOR CURB AND SIDEWALK SCORING SEE SD-8. CONCRETE SHALL BE 6-SACK.
 - WHEN FACE OF CURB TO PROPERTY LINE EQUALS 10', SIDEWALK SHALL BE 4'-6" AND PLANTER STRIP SHALL BE 5'-0'.
 - IF DRIVEWAY AND CURBS ARE NOT PLACED IN MONOLITHIC POUR USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY IF DRILLED.
 - LIMITS OF THE REMOVAL OF EXISTING CURB, GUTTER, SIDEWALK AND ASPHALT SHALL BE DETERMINED IN THE FIELD BY THE CITY INSPECTOR.

<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h3 style="margin: 0;">TYPE "A" DRIVEWAY APPROACH</h3> <h3 style="margin: 0;">RESIDENTIAL - RETROFIT ONLY</h3>			DATE APPROVED BY CITY COUNCIL 04/11/06		
			RESOLUTION NO. 2006-31		
NO.	REVISED	DATE	CITY ENGINEER		
REVISIONS			DWG NO.		
FILE NO.	SCALE	DRAWN	CHECKED	DATE	1 of 1
SD-10B-06.DWG	AS SHOWN	DC	KC	04/11/06	SD-10B



NOTES:

1. TREES AND HARDSCAPE IN PLANTER STRIP SUBJECT TO APPROVAL OF THE CITY ENGINEER. CONSTRUCTION IN PLANTER STRIP SUBJECT TO ENCROACHMENT PERMIT FROM ENGINEERING DIVISION.
2. FOR CURB AND SIDEWALK SCORING SEE SD-8. CONCRETE SHALL BE 6-SACK.
3. WHEN FACE OF CURB TO PROPERTY LINE EQUALS 10', SIDEWALK SHALL BE 4'-6" AND PLANTER STRIP SHALL BE 5'-0".
4. IF DRIVEWAY AND CURBS ARE NOT PLACED IN MONOLITHIC POUR USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY IF DRILLED.
5. LIMITS OF THE REMOVAL OF EXISTING CURB, GUTTER, SIDEWALK AND ASPHALT SHALL BE DETERMINED IN THE FIELD BY THE CITY INSPECTOR.

NO.	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
TYPE "B" DRIVEWAY APPROACH
COMMERCIAL/INDUSTRIAL

DATE APPROVED BY CITY COUNCIL
 04/11/06

RESOLUTION NO. 2006-31

Nam Hughes

CITY ENGINEER

FILE NO.
 SD-11-06.DWG

SCALE
 1/4" = 1'-0"

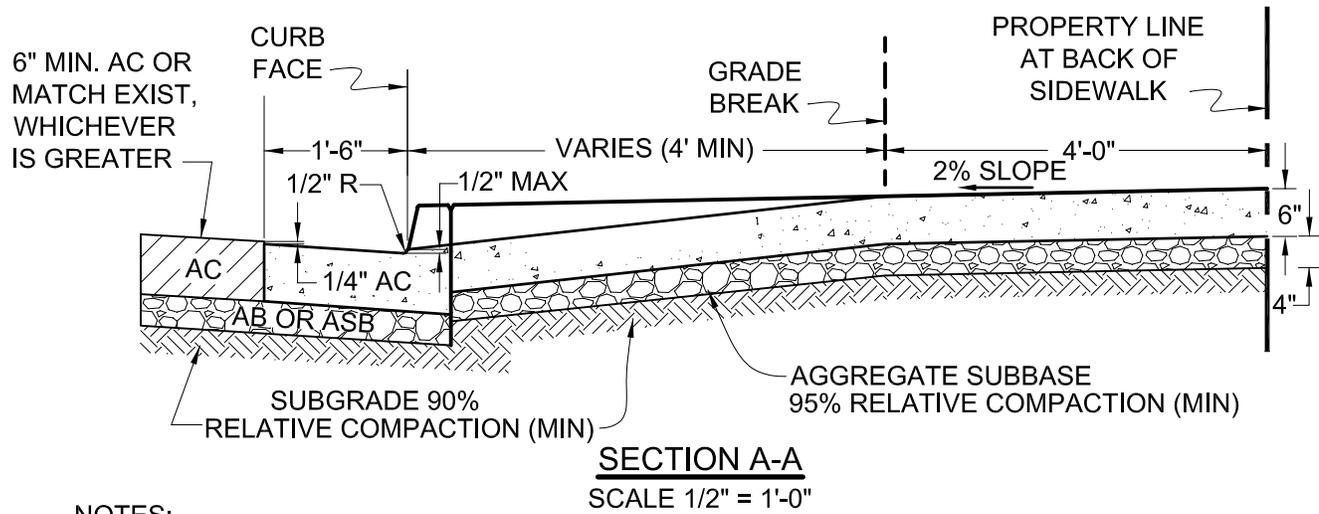
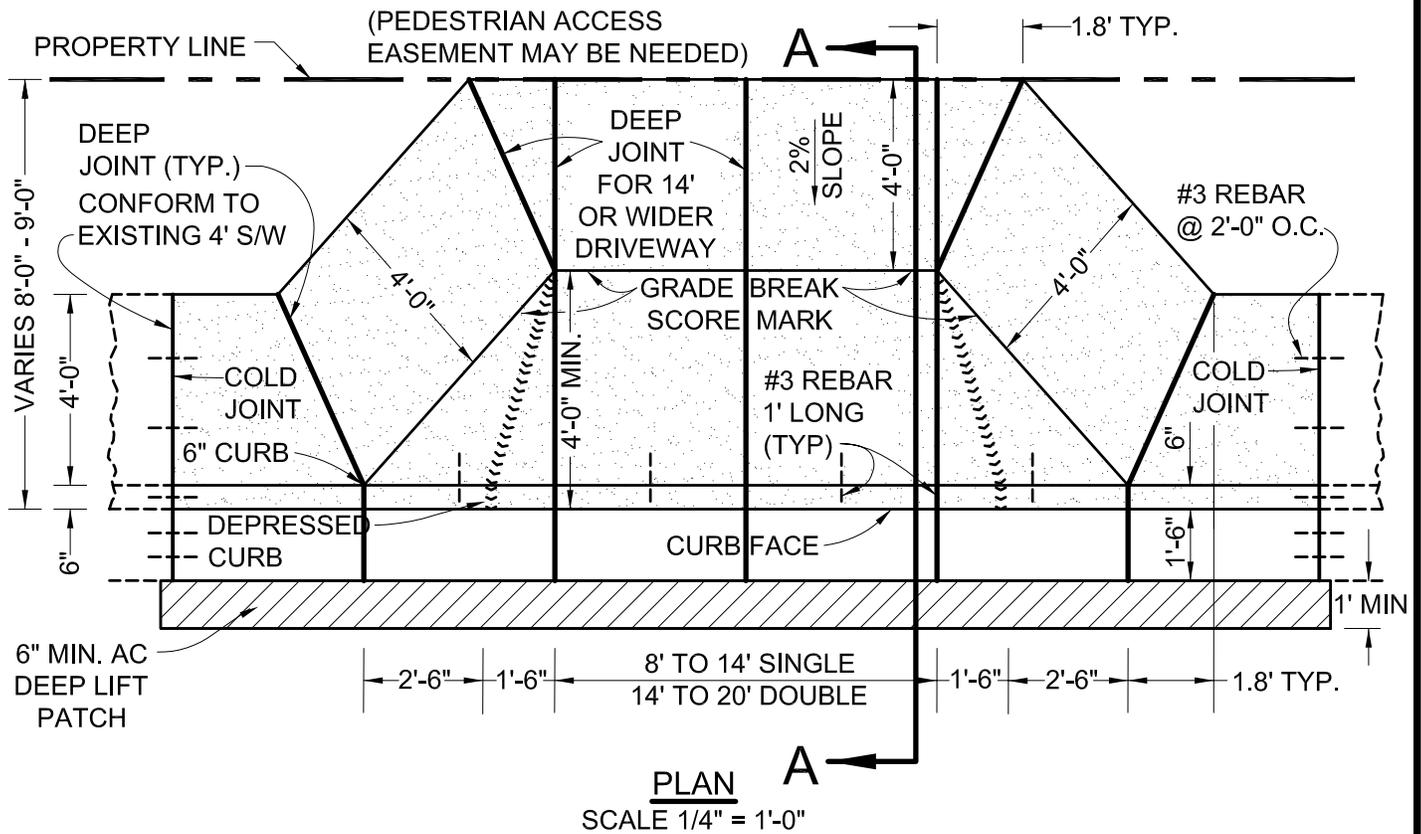
DRAWN
 DC

CHECKED
 KC

DATE
 03/14/06

DWG NO.
 SD-11

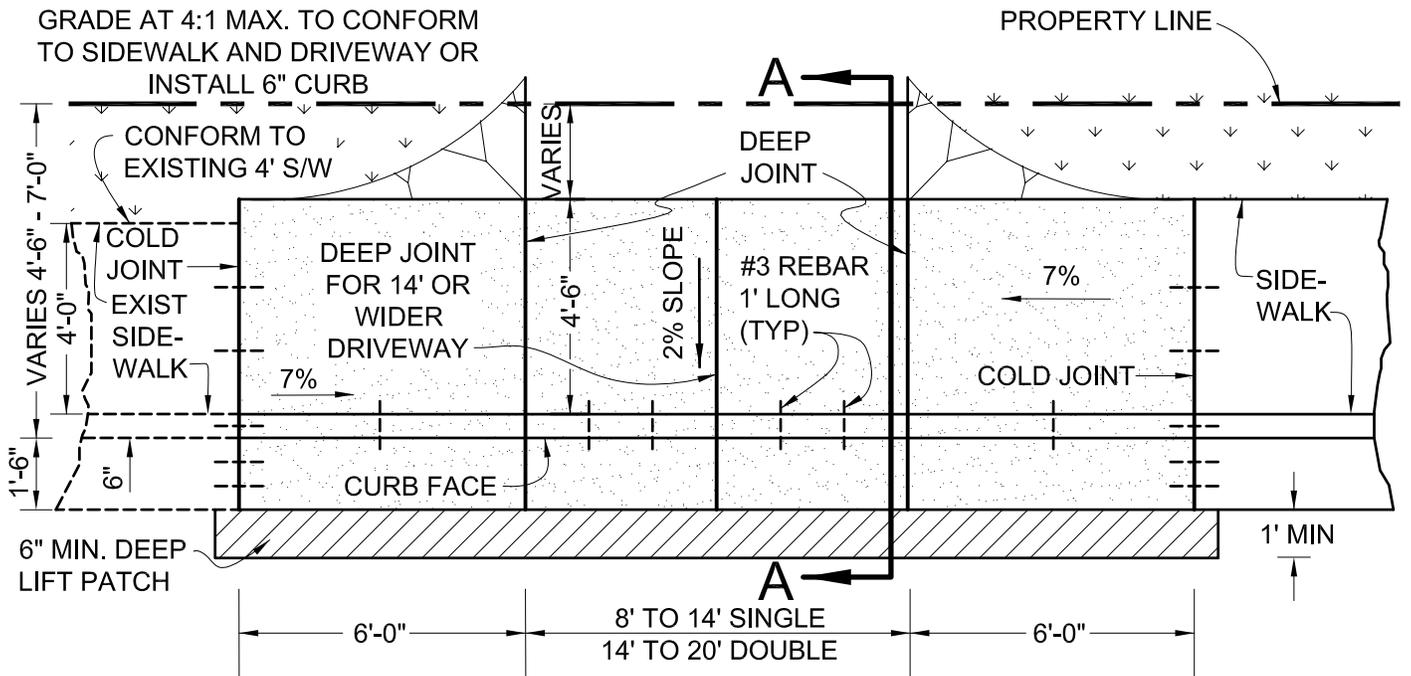
1 of 1



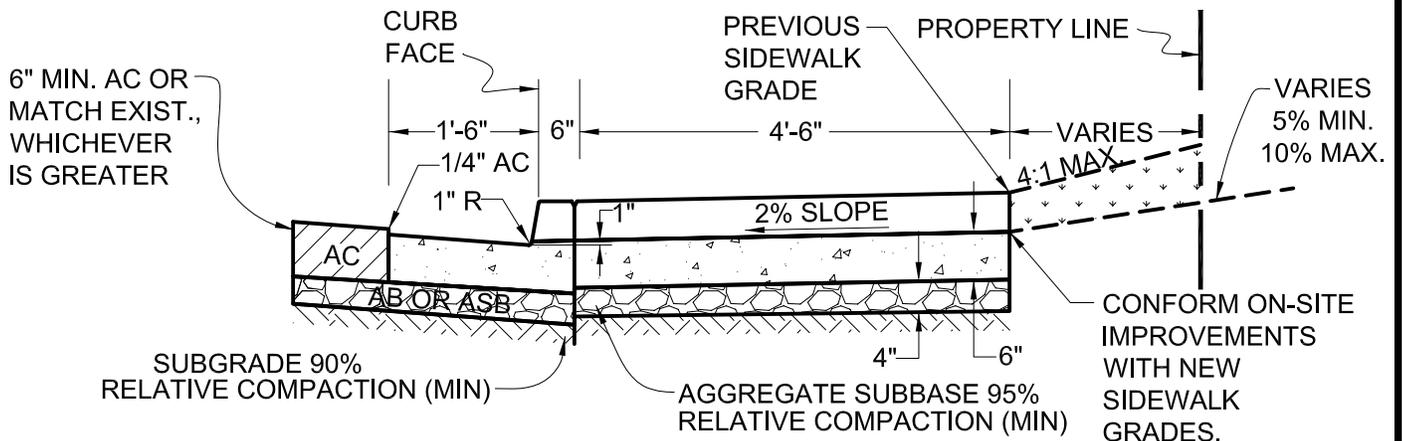
NOTES:

1. PLANTING IN THE RIGHT-OF-WAY IS SUBJECT TO APPROVAL OF THE CITY ENGINEER AND IS SUBJECT TO ENCROACHMENT PERMIT FROM THE ENGINEERING DIVISION.
2. FOR CURB AND SIDEWALK SCORING SEE SD-8. CONCRETE SHALL BE 6-SACK.
3. IF DRIVEWAY AND CURBS ARE NOT PLACED IN MONOLITHIC POUR, USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY IF DRILLED.
4. LIMITS OF THE REMOVAL OF EXISTING CURB, GUTTER, SIDEWALK AND ASPHALT SHALL BE DETERMINED IN THE FIELD BY THE CITY INSPECTOR.

			CITY OF FREMONT STANDARD DETAILS TYPE "D" DRIVEWAY APPROACH CASE 1 - RESIDENTIAL			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
NO. REVISED DATE						<i>Ham Hughes</i> CITY ENGINEER	
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	1 of 1	
SD-12A-06.DWG	AS SHOWN	DC	KC	04/11/06	SD-12A		



PLAN
SCALE 1/4" = 1'-0"

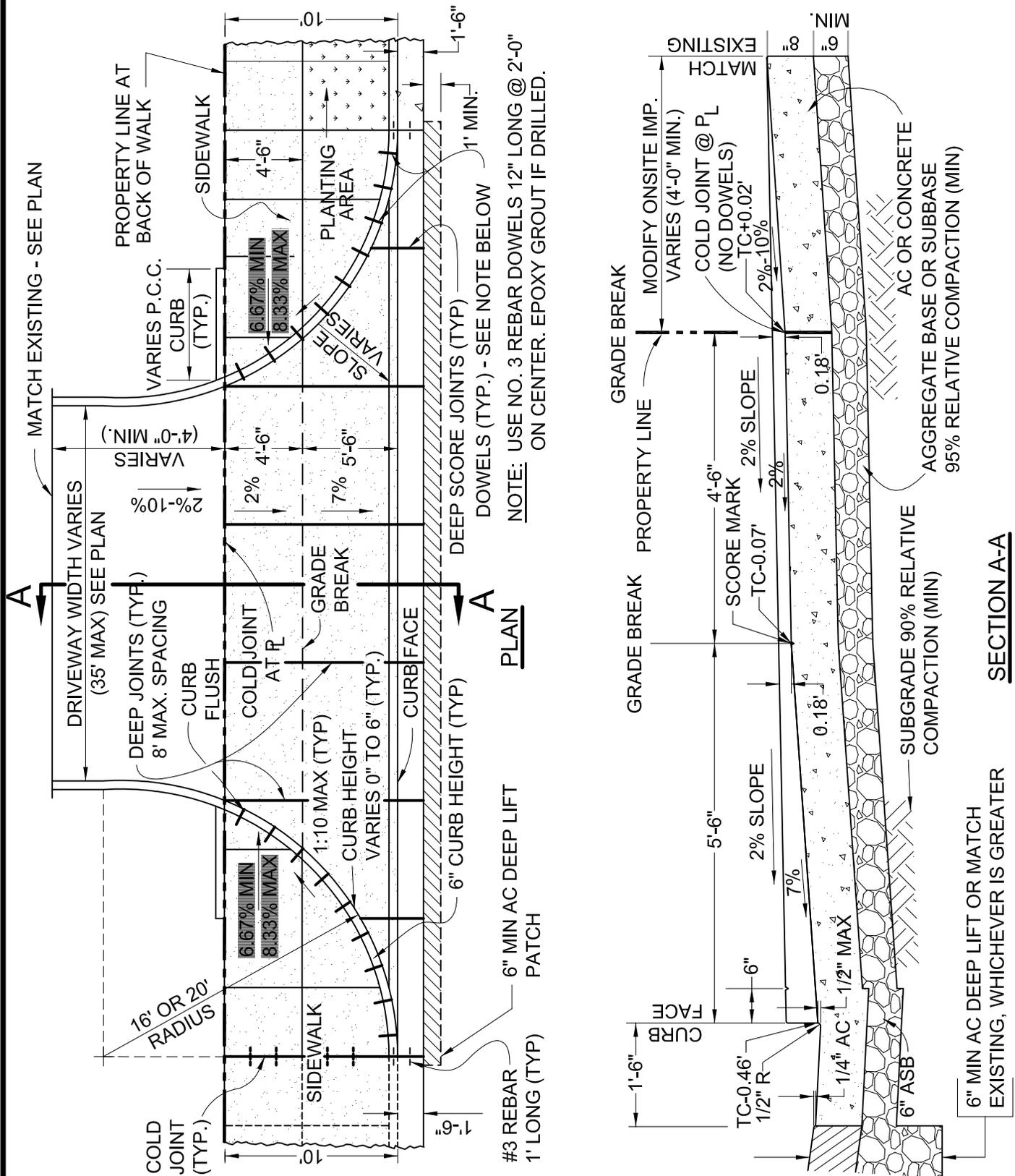


SECTION A-A
SCALE 1/2" = 1'-0"

NOTES:

1. DETAIL TO BE USED FOR UPHILL LOTS AND WHERE RIGHT-OF-WAY IS LESS THAN 8' ONLY.
2. PLANTING IN THE RIGHT-OF-WAY IS SUBJECT TO APPROVAL OF THE CITY ENGINEER AND IS SUBJECT TO ENCROACHMENT PERMIT FROM ENGINEERING DIVISION.
3. FOR CURB AND SIDEWALK SCORING SEE SD-8. CONCRETE SHALL BE 6-SACK.
4. IF DRIVEWAYS AND CURBS ARE NOT PLACED IN MONOLITHIC POUR USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY IF DRILLED.
5. LIMITS OF THE REMOVAL OF EXISTING CURB, GUTTER, SIDEWALK AND ASPHALT SHALL BE DETERMINED IN THE FIELD BY THE CITY INSPECTOR.

			CITY OF FREMONT STANDARD DETAILS TYPE "D" DRIVEWAY APPROACH CASE 2 - RESIDENTIAL			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
NO. REVISED DATE						<i>Ham Hughes</i> CITY ENGINEER	
REVISIONS						DWG NO. SD-12B	
FILE NO.	SCALE	DRAWN	CHECKED	DATE			
SD-12B-06.DWG	AS SHOWN	DC	KC	03/14/06			



NOTE: USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY GROUT IF DRILLED.

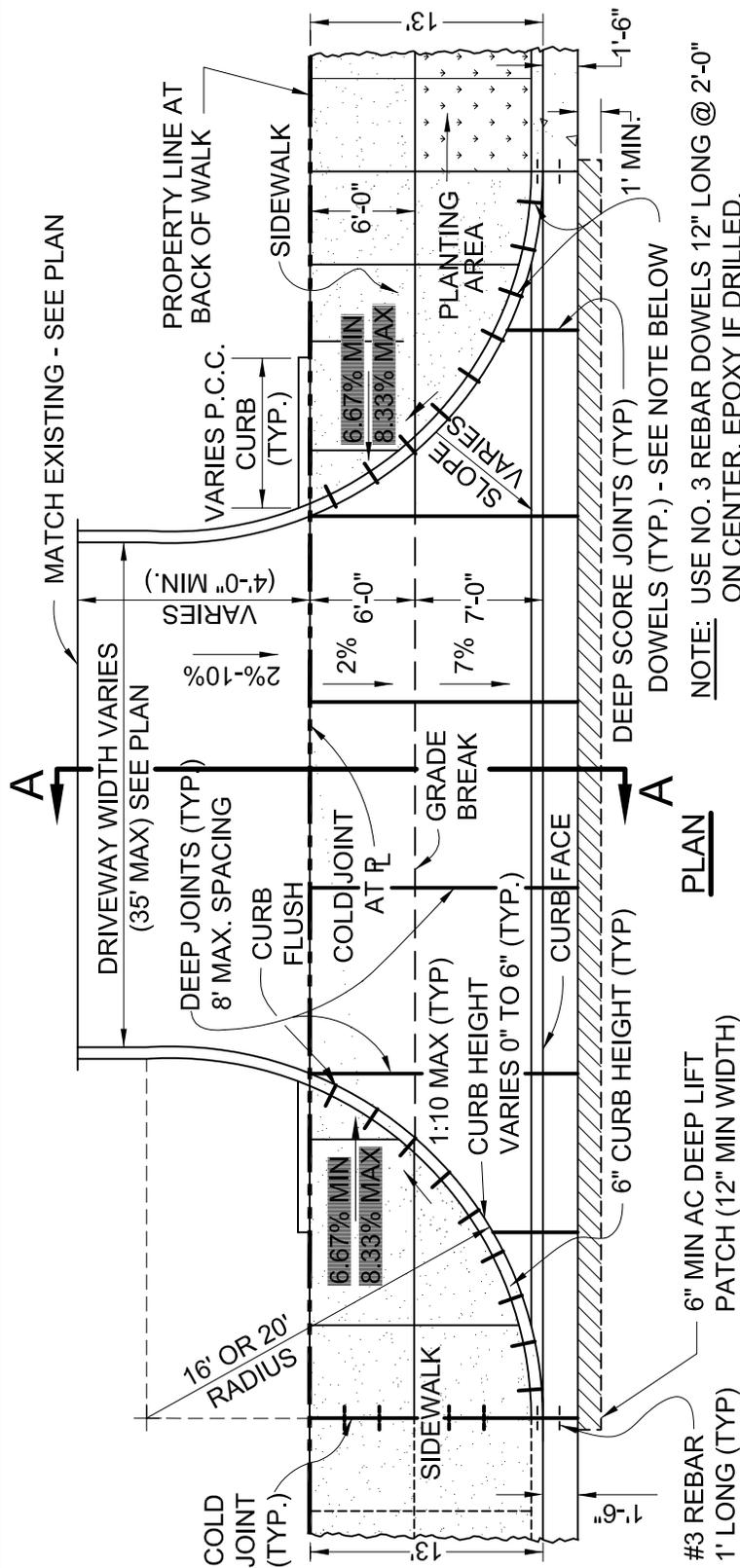
SECTION A-A

CITY OF FREMONT
 STANDARD DETAILS
 TYPE "E" DRIVEWAY APPROACH
 10' RIGHT-OF-WAY

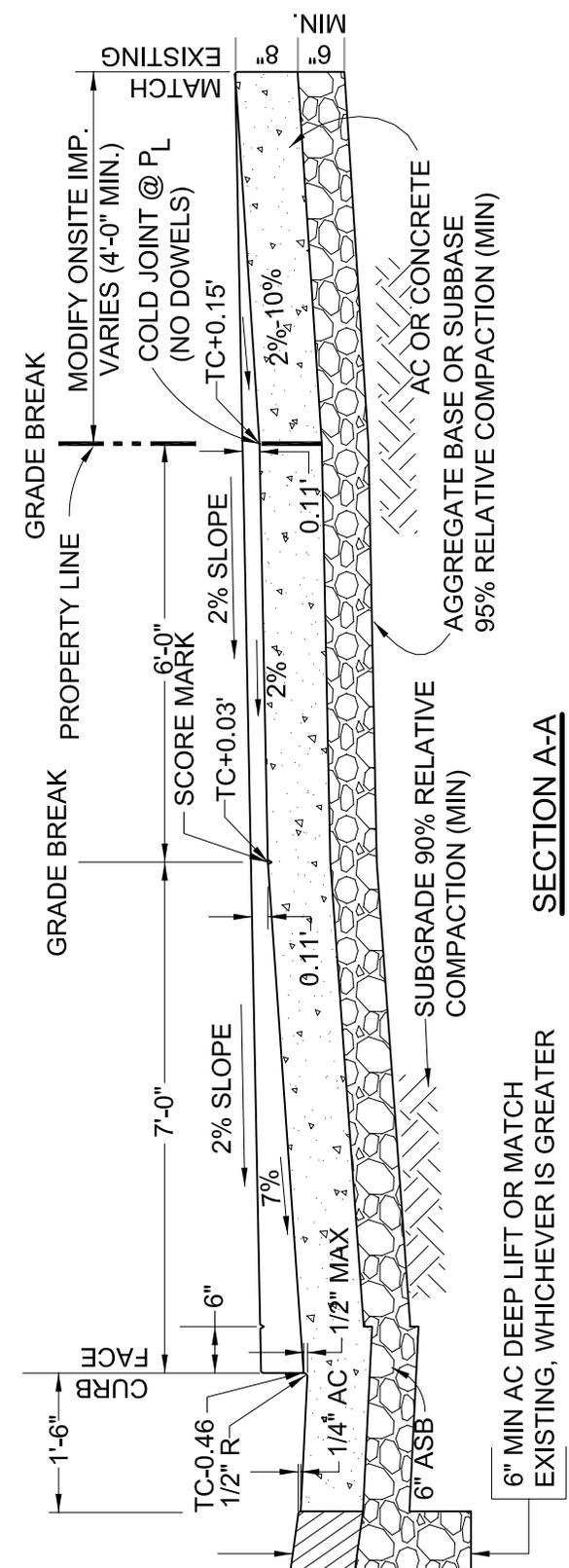
DATE APPROVED BY CITY COUNCIL
 04/11/06
 RESOLUTION NO. 2006-31
Ham Hughes
 CITY ENGINEER

NO.	REVISED	DATE
REVISIONS		

FILE NO. SD-13B-06.DWG	SCALE NONE	DRAWN DC	CHECKED KC	DATE 03/14/06	DWG NO. SD-13A	1 of 1
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NOTE: USE NO. 3 REBAR DOWELS 12" LONG @ 2'-0" ON CENTER. EPOXY IF DRILLED.



NO.	REVISED	DATE
REVISIONS		

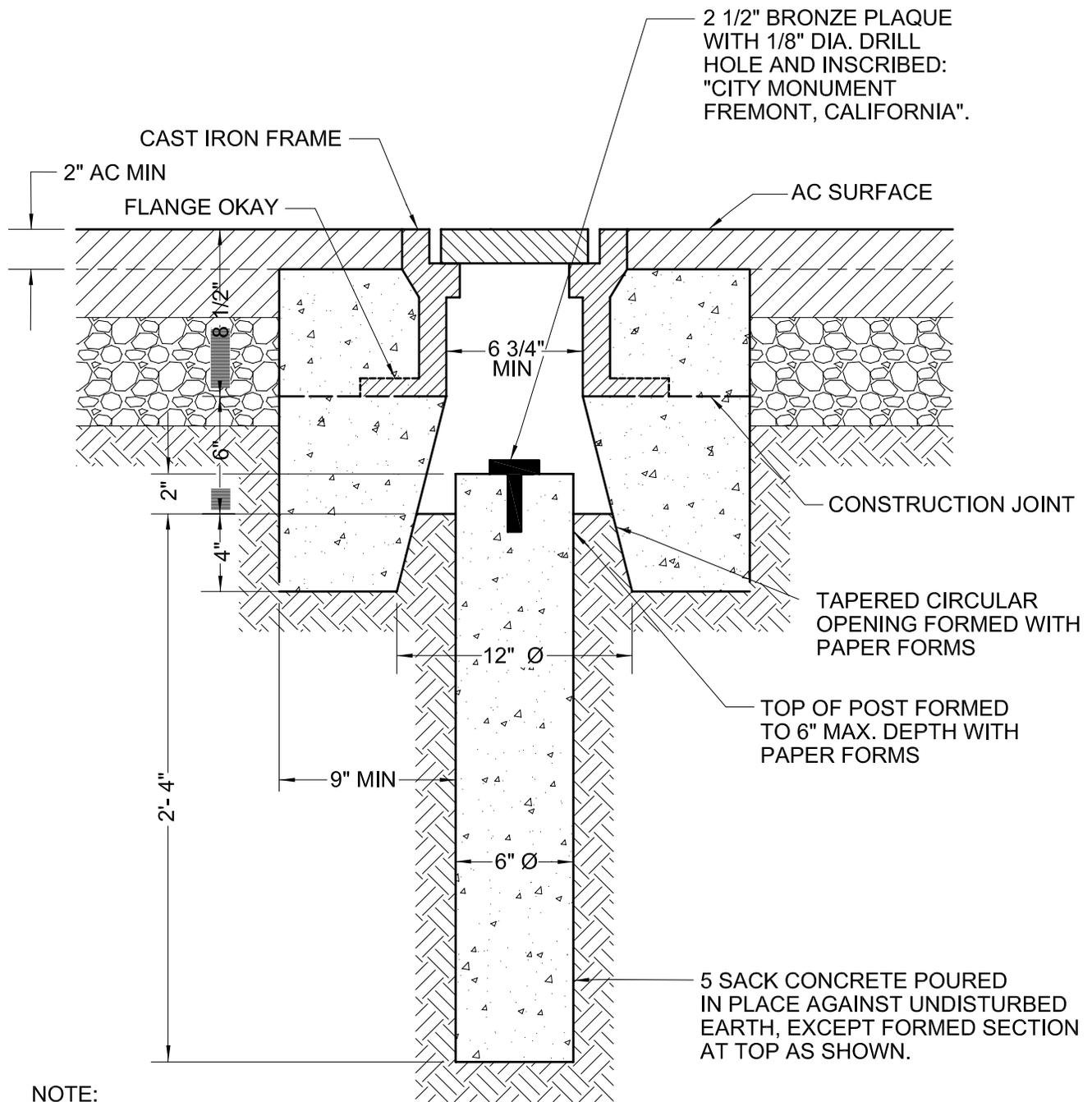
CITY OF FREMONT
 STANDARD DETAILS
 TYPE "E" DRIVEWAY APPROACH
 13' RIGHT-OF-WAY

FILE NO. SD-13A-06.DWG	SCALE NONE
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DRAWN DC	CHECKED KC
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DATE 03/14/06

DATE APPROVED BY CITY COUNCIL 04/11/06	
RESOLUTION NO. 2006-31	
<i>Ham Hughes</i>	
CITY ENGINEER	
DWG NO. SD-13B	1 of 1

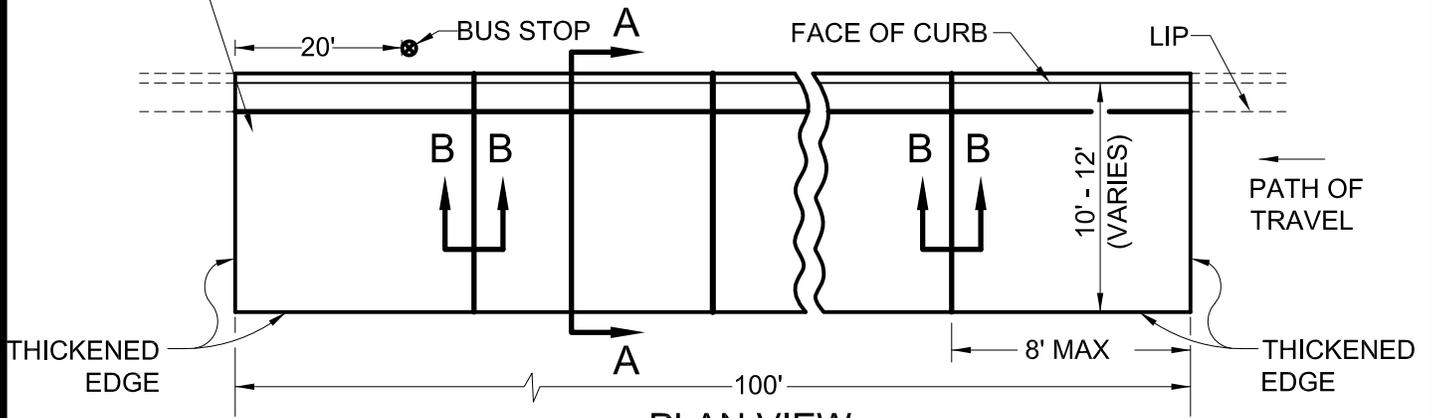


NOTE:

MONUMENT FRAMES AND COVERS SHALL BE MATCH-MARKED IN PAIRS. EACH COVER SHALL BE GROUND OR OTHERWISE FINISHED TO FIT IN ITS FRAME WITHOUT ROCKING. AT THE OPTION OF THE CONTRACTOR, MONUMENT FRAMES AND COVERS SHALL BE FORNI "IRON SIDES" TYPE 80-60-03; PHOENIX, TYPE P-2001, MONROE, D & L FOUNDRY AND SUPPLY, OR APPROVED EQUAL.

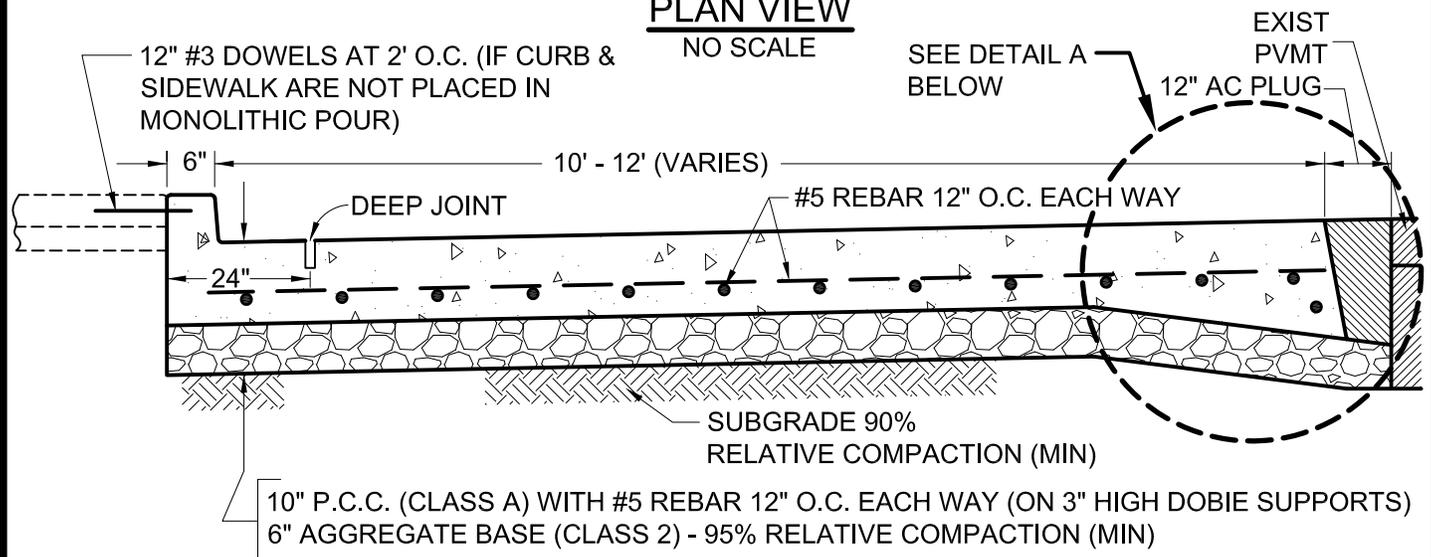
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						RESOLUTION NO. 2006-31	
						 CITY ENGINEER	
NO.	REVISED	DATE	DRAWN	CHECKED	DATE	DWG NO.	
REVISIONS			DC	KC	03/14/06	SD-14	1 of 1
FILE NO.	SCALE						
SD-14-06.DWG	1 1/2" = 1'-0"						

SAWCUT AND EXCAVATE EXISTING PAVEMENT, INCLUDING CURB & GUTTER. REPLACE WITH P.C.C. PAVEMENT SECTION AND MONOLITHIC CURB



PLAN VIEW

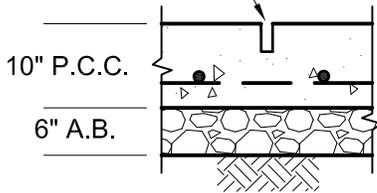
NO SCALE



SECTION A-A

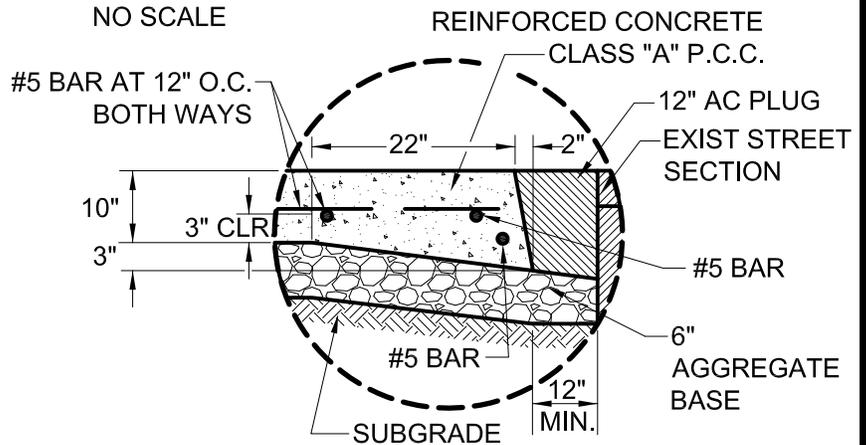
NO SCALE

DEEP JOINT - DEPTH EQUALS TO 1/3 OF SLAB THICKNESS



SECTION B-B

DEEP JOINT



DETAIL A

NO SCALE

NOTE: FOR SPECIFICATIONS, REFER TO SHEET 2 OF 2

CITY OF FREMONT
STANDARD DETAILS

CONCRETE BUS PAD

DATE APPROVED BY CITY COUNCIL
04/11/06

RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

MM	Multiple Changes	1/13
APPR	REVISED	DATE
REVISIONS		

FILE NO. SD-16-06.DWG	SCALE NONE	DRAWN DC	CHECKED AR	DATE 03/14/06	DWG NO. SD-16	1 of 2
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BUS STOP PAVEMENT SPECIFICATIONS

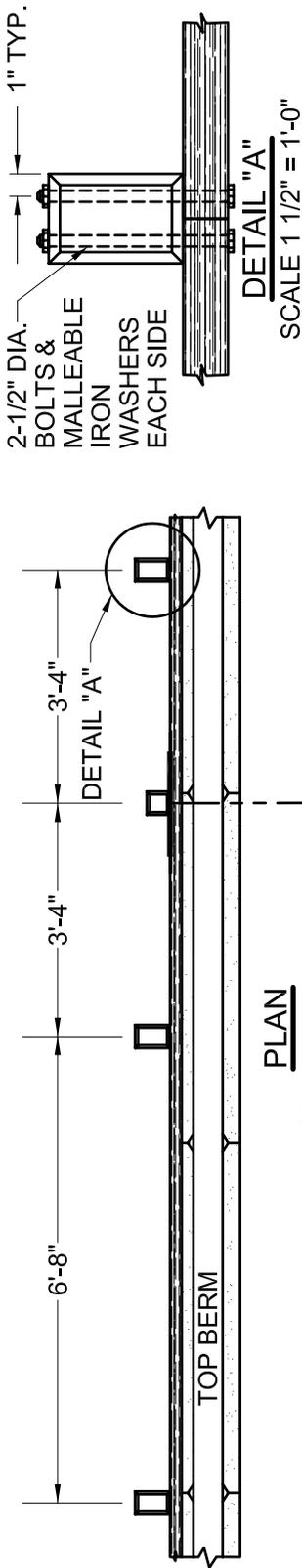
1. WHERE A PORTION OF THE EXISTING SURFACING IS TO BE REMOVED, THE OUTLINE OF THE AREA TO BE REMOVED SHALL BE CUT ON A NEAT LINE WITH A POWER DRIVEN SAW BEFORE REMOVING THE SURFACING. DEPTH OF CUT MUST BE DEEP ENOUGH TO PREVENT DAMAGE TO ANY PORTION OF THE SURFACING THAT IS TO REMAIN IN PLACE. SURFACING AND BASE SHALL BE REMOVED WITHOUT DAMAGE TO SURFACING THAT IS TO REMAIN IN PLACE.
2. CURBS AND CONCRETE BUS PAD SHALL CONFORM TO THE PROVISIONS IN SECTION 73, "CONCRETE CURBS AND SIDEWALKS," OF THE CALTRANS STANDARD SPECIFICATIONS.
3. PORTLAND CEMENT CONCRETE SHALL CONFORM TO THE PROVISIONS IN SECTION 90, "CONCRETE," OF THE 2006 CALTRANS STANDARD SPECIFICATIONS. CONCRETE SHALL BE DARKENED WITH ONE POUND OF LAMP BLACK PER CUBIC YARD AND HAVE A MAXIMUM OF 3" SLUMP.
4. FOR CONSTRUCTION OF NEW BUS PADS ON STREETS NOT OPEN TO THE PUBLIC:
CONCRETE SHALL REACH 4,000 PSI WITHIN 28-DAYS. NO TRAFFIC OR CONTRACTOR'S EQUIPMENT WILL BE PERMITTED ON THE PAVEMENT BEFORE A PERIOD OF TEN (10) CALENDAR DAYS HAS ELAPSED.

FOR CONSTRUCTION OF BUS PADS ON STREETS OPEN TO THE PUBLIC:
CONCRETE SHALL REACH 4,000 PSI WITHIN 48 HOURS, AND 7,000 PSI WITHIN 28 DAYS. NO TRAFFIC OR CONTRACTOR'S EQUIPMENT WILL BE PERMITTED ON THE PAVEMENT BEFORE A PERIOD OF 48-HOURS HAS ELAPSED AFTER THE CONCRETE HAS BEEN PLACED.

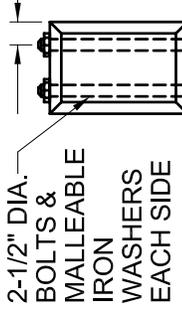
ALL CONCRETE WORK SHALL BE WATER TESTED IN THE PRESENCE OF THE INSPECTOR BEFORE FINAL FINISHING.

5. THE CONTRACTOR SHALL USE THE CURING COMPOUND METHOD FOR CURING CONCRETE. THE CURING COMPOUND SHALL BE CURING COMPOUND (6) AS SPECIFIED IN SECTION 90-1.03B(3), "CURING COMPOUND METHOD," OF THE 2006 CALTRANS STANDARD SPECIFICATIONS. THE CURING COMPOUND SHALL BE APPLIED IN A MANNER THAT WILL PROVIDE A COMPLETE COATING OF ALL EXPOSED FACES OF THE CONCRETE SURFACE.
6. WHERE THE CURB IS REMOVED, THE ENTIRE SECTION OF THE CURB BETWEEN SCORE MARKS SHALL BE REMOVED AND REPLACED. HORIZONTAL DOWELS FOR PROPOSED CURB AND GUTTER TO BE TIED INTO EXISTING CURB AND GUTTER SHALL BE #3 GRADE 60 STEEL REINFORCING BARS. HORIZONTAL DOWELS SHALL BE 12 INCHES LONG AND EPOXIED IN HOLES DRILLED INTO THE EXISTING CONCRETE. DOWELS SHALL BE PLACED PRIOR TO PLACEMENT OF NEW ADJACENT CONCRETE.
7. EPOXY SHALL CONFORM TO THE PROVISIONS IN SECTION 95, "EPOXY," OF THE 2006 CALTRANS STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL PREPARE THE PAVEMENT SURFACE PRIOR TO APPLICATION ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

			CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06	
			STANDARD DETAILS			RESOLUTION NO. 2006-31	
MM	Multiple Changes	1/13	<u>CONCRETE BUS PAD</u>				
APPR	REVISED	DATE	<u>CONCRETE BUS PAD</u>			CITY ENGINEER	
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
SD-16-06.DWG	NONE	DC	AR	03/14/06	SD-16	2 of 2	



DETAIL "A"
SCALE 1 1/2" = 1'-0"



PLAN
SCALE 3/8" = 1'-0"

4"x4"x8'-0" S4S
(SEE SD-23)

TYPE "N-1" (RED) MARKER
USE OM4-1, OM4-2, OM4-3
FOR END OF ROADWAY

(RED) REFLECTORS CENTERED
BETWEEN POSTS, TYP.

4"x6"x5'-4" S4S

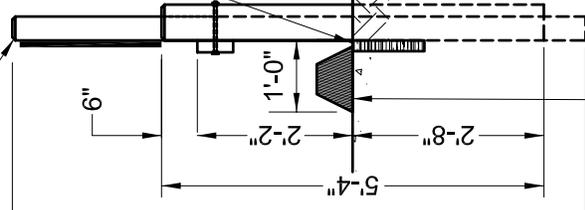
2"x6"x20'-0" S4S

AC BERM

AC PAVEMENT

APPROX. ϕ OF STREET

CHAMFER 1/2" (TYP.)



END VIEW

CONSTRUCT AC BERM AT END
OF STUB STREET AS DIRECTED
BY CITY ENGINEER (SEE SD-7)

FRONT ELEVATION
SCALE 3/8" = 1'-0"

MATERIALS

RAILS: DOUGLAS FIR, DENSE NO. 1
STRESS GRADE OR BETTER.

POSTS: PRESSURE TREATED DOUGLAS
FIR, DENSE NO. 1 STRESS GRADE
OR BETTER; OR DENSE STRUCTURAL
GRADE REDWOOD.

PAINTING

ONE COAT OF WOOD PRIMER, STATE
SPECIFICATION TT-P-001984.
ONE COAT OF FAST DRYING FINISH
PAINT FOR WOOD, STATE
SPECIFICATION TT-P-96 D.

PVMT WIDTH	NO. OF SPANS
32'	5
36'	6
40'	6

CITY OF FREMONT
STANDARD DETAILS

TYPE "A" STREET BARRICADE

DATE APPROVED BY CITY COUNCIL
04/11/06

RESOLUTION NO. 2006-31

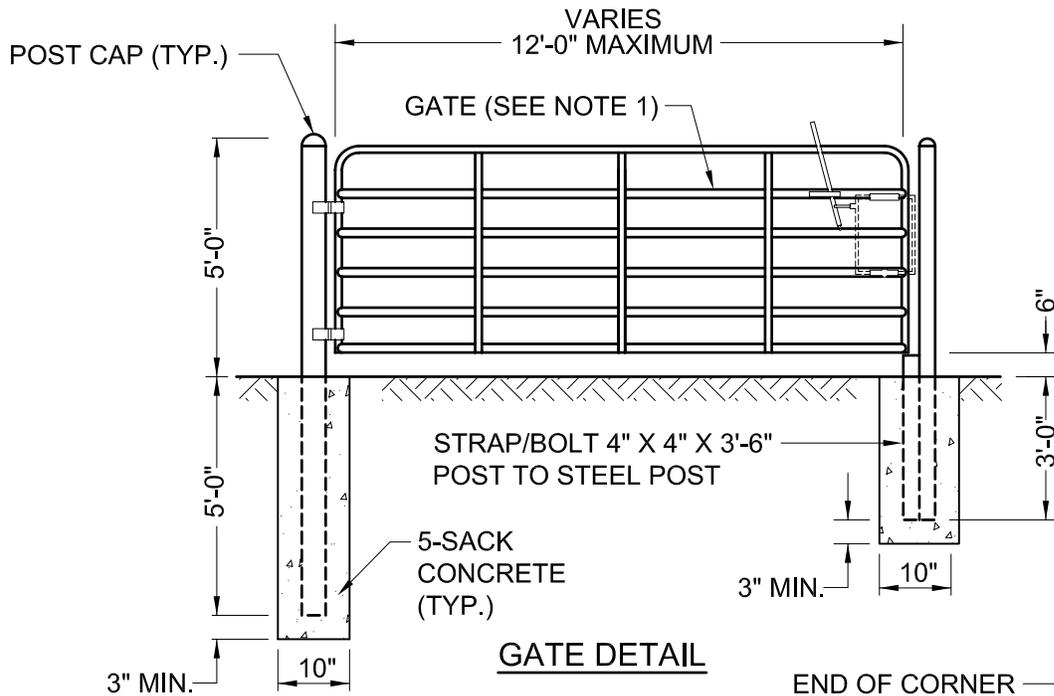
Ham Hughes

CITY ENGINEER

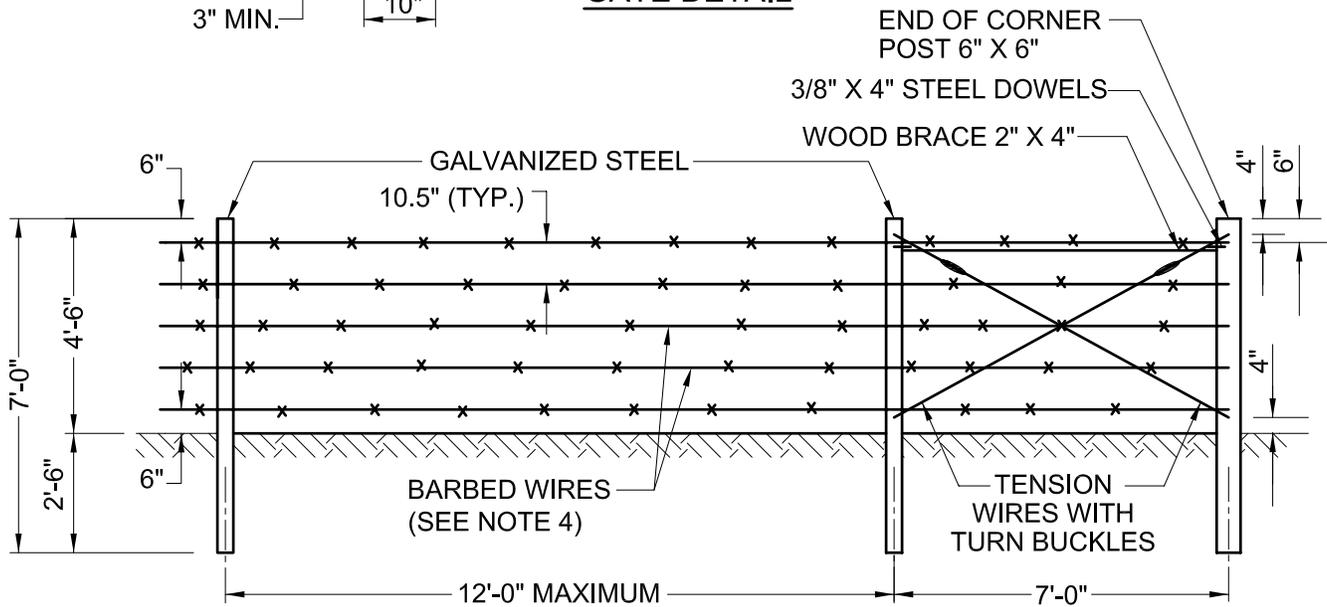
NO.	REVISED	DATE
REVISIONS		

FILE NO.	SCALE	DRAWN	CHECKED	DATE
SD-17-06.DWG	AS SHOWN	DC	KC	12/16/05

DWG NO.	1 of 1
SD-17	



GATE DETAIL



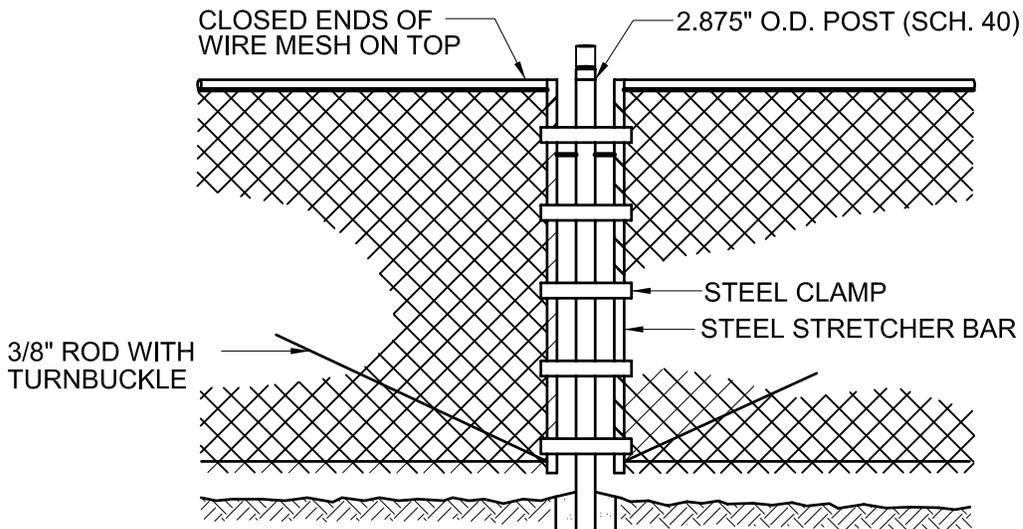
FENCE DETAIL

END BAY
(SEE NOTE 2)

NOTES:

1. FOR ADDITIONAL DETAILS ON THE GATE, REFER TO EAST BAY REGIONAL PARK DISTRICT DETAILS (FARM VEHICLE GATE).
2. USE END BAY AT TIE IN WITH EXISTING FENCES AND AT ANGLE POINTS IN RIGHT-OF-WAY AND AT GATES.
3. USE GALVANIZED STEEL FOR THE POSTS.
4. FOR BARBED WIRES, USE 2 STRANDS OF 12 1/2 GA. WIRE TWISTED WITH 2 POINT 14 GA. BARBS SPACED 5" APART.

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 04/11/06							
						RESOLUTION NO. 2006-31							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">NO.</th> <th style="width: 40%;">REVISED</th> <th style="width: 50%;">DATE</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">REVISIONS</td> </tr> </tbody> </table>			NO.	REVISED	DATE	REVISIONS			TYPE "A" FENCE WITH GATE			<i>Ham Hughes</i>	
			NO.	REVISED	DATE								
REVISIONS													
CITY ENGINEER													
FILE NO. SD-18-06.DWG	SCALE 1/4" = 1'-0"	DRAWN DC	CHECKED KC	DATE 03/08/06	DWG NO. SD-18	1 of 1							

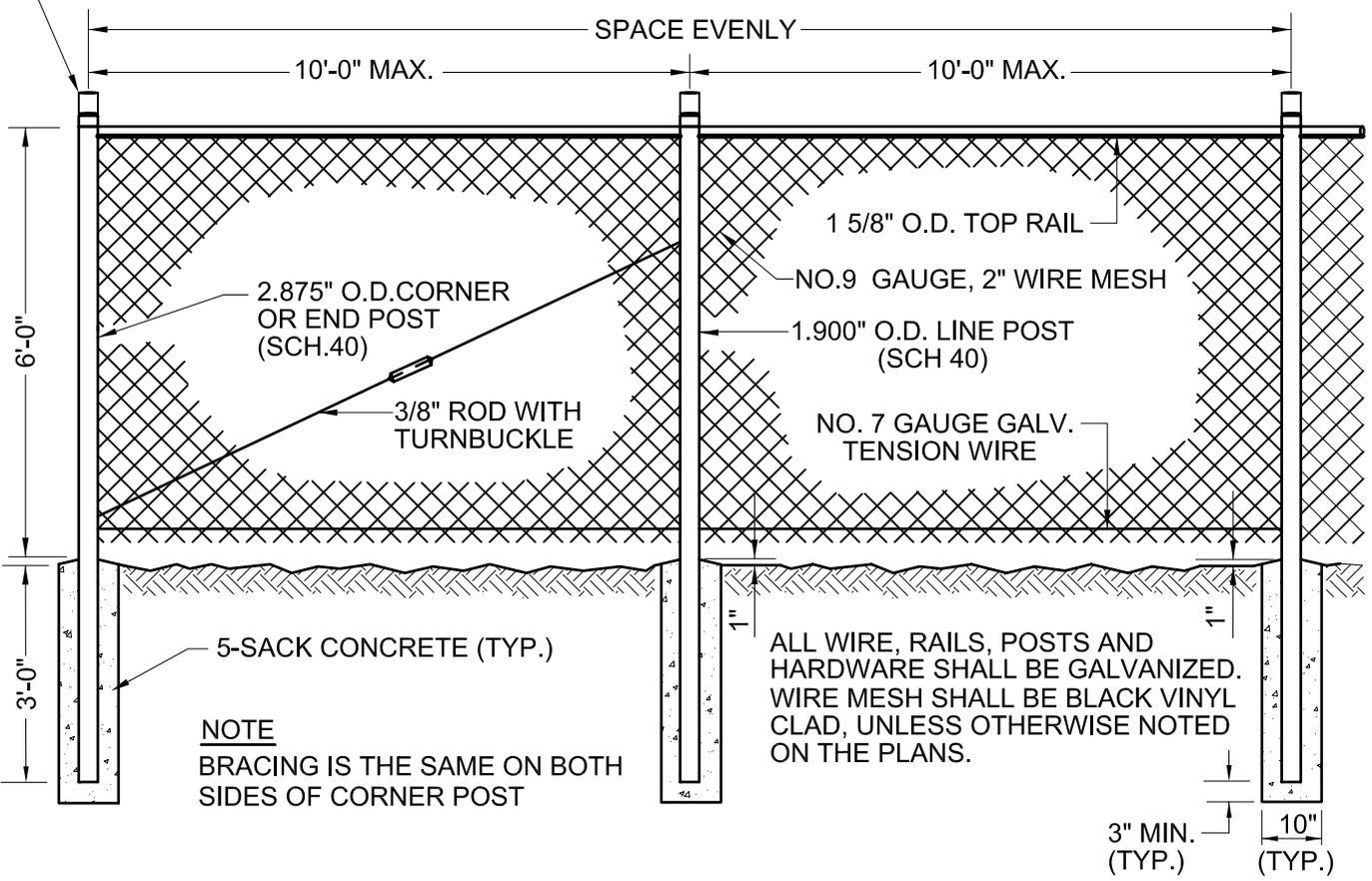


NOTE

IF FENCES ARE INSTALLED IN THE PROXIMITY OF TRANSMISSION LINES, VERIFY GROUNDING REQUIREMENTS WITH PG&E

BRACED LINE PULL POST
(1000' INTERVALS ON TANGENT)

POST CAPS (TYP.)



NOTE

BRACING IS THE SAME ON BOTH SIDES OF CORNER POST

ALL WIRE, RAILS, POSTS AND HARDWARE SHALL BE GALVANIZED. WIRE MESH SHALL BE BLACK VINYL CLAD, UNLESS OTHERWISE NOTED ON THE PLANS.

3" MIN. (TYP.)
10" (TYP.)

CITY OF FREMONT
STANDARD DETAILS

TYPE "B" FENCE

DATE APPROVED BY CITY COUNCIL
04/11/06

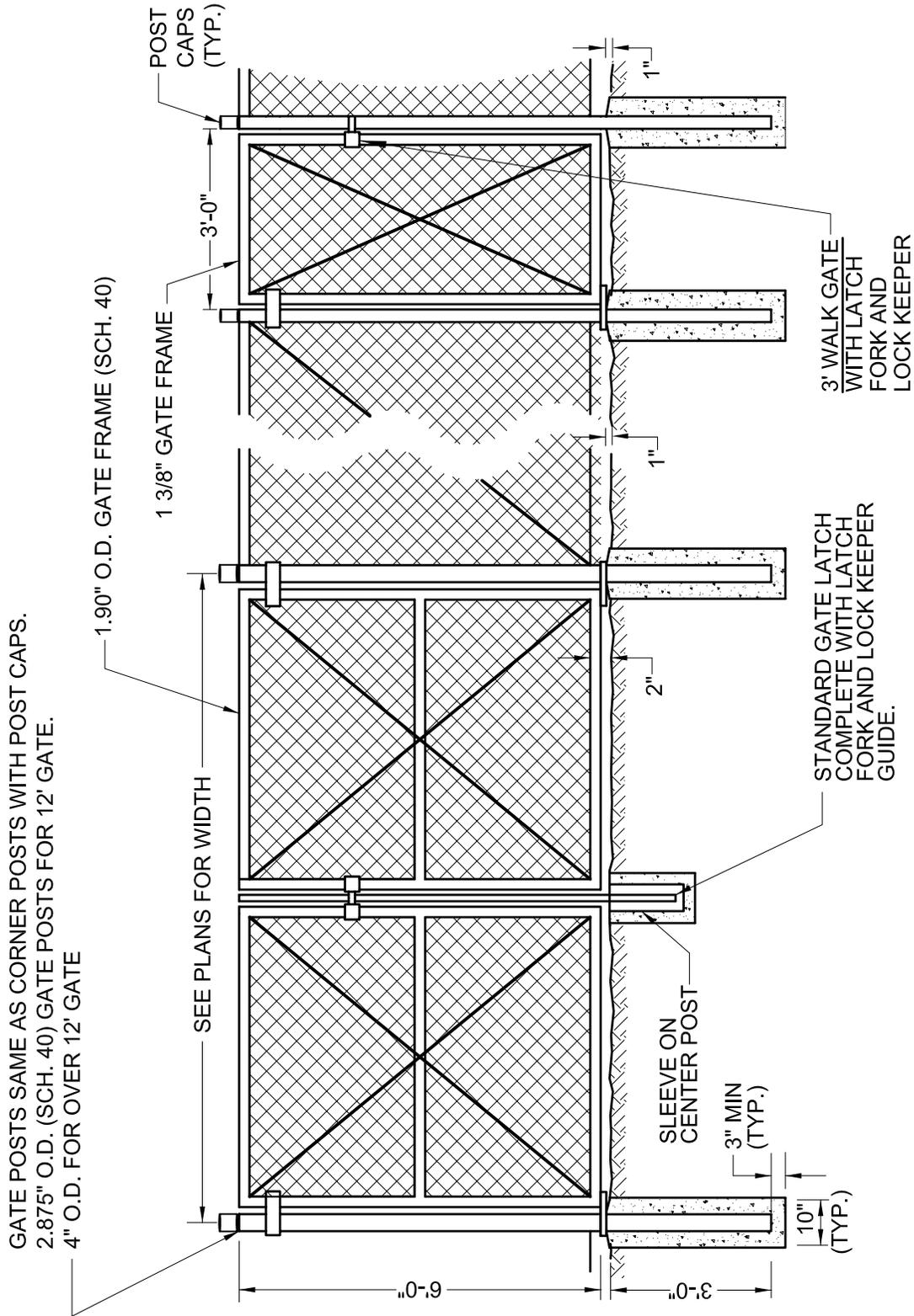
RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

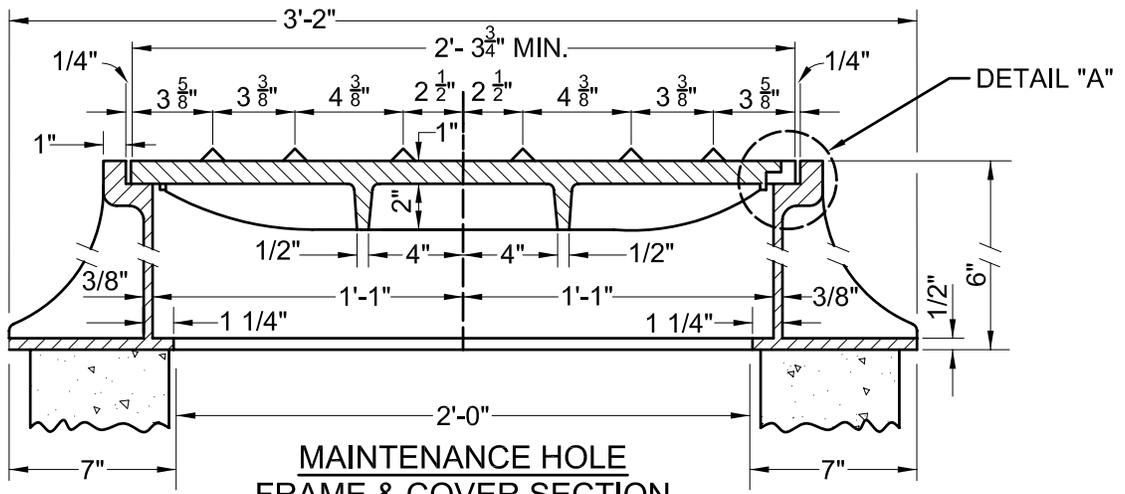
NO.	REVISED	DATE
REVISIONS		

FILE NO. SD-19-06.DWG	SCALE 3/8" = 1'-0"	DRAWN DC	CHECKED KC	DATE 03/08/06	DWG NO. SD-19	1 of 1
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- NOTES:**
1. ALL GATES 3' WIDE AND WIDER SHALL HAVE STANDARD FOOT LATCH TO LOCK GATE OPEN.
 2. ALL WIRES, RAIL, POSTS, AND HARDWARE SHALL BE GALVANIZED.
 3. WIRE MESH SHALL BE BLACK VINYL CLAD, UNLESS OTHERWISE NOTED ON THE PLANS.

			<p align="center">CITY OF FREMONT STANDARD DETAILS</p> <p align="center">TYPE "B" FENCE GATES</p>			DATE APPROVED BY CITY COUNCIL 04/11/06							
						RESOLUTION NO. 2006-31							
<table border="1"> <tr> <td>NO.</td> <td>REVISED</td> <td>DATE</td> </tr> <tr> <td colspan="3">REVISIONS</td> </tr> </table>			NO.	REVISED	DATE	REVISIONS						 CITY ENGINEER	
NO.	REVISED	DATE											
REVISIONS													
FILE NO. SD-20-06.DWG	SCALE 3/8" = 1'-0"	DRAWN DC	CHECKED KC	DATE 03/14/06	DWG NO. SD-20	1 of 1							

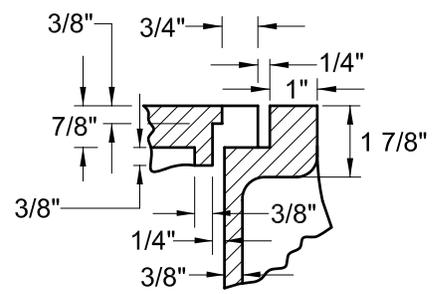


**MAINTENANCE HOLE
FRAME & COVER SECTION**

SCALE: 1 1/2" = 1'-0"

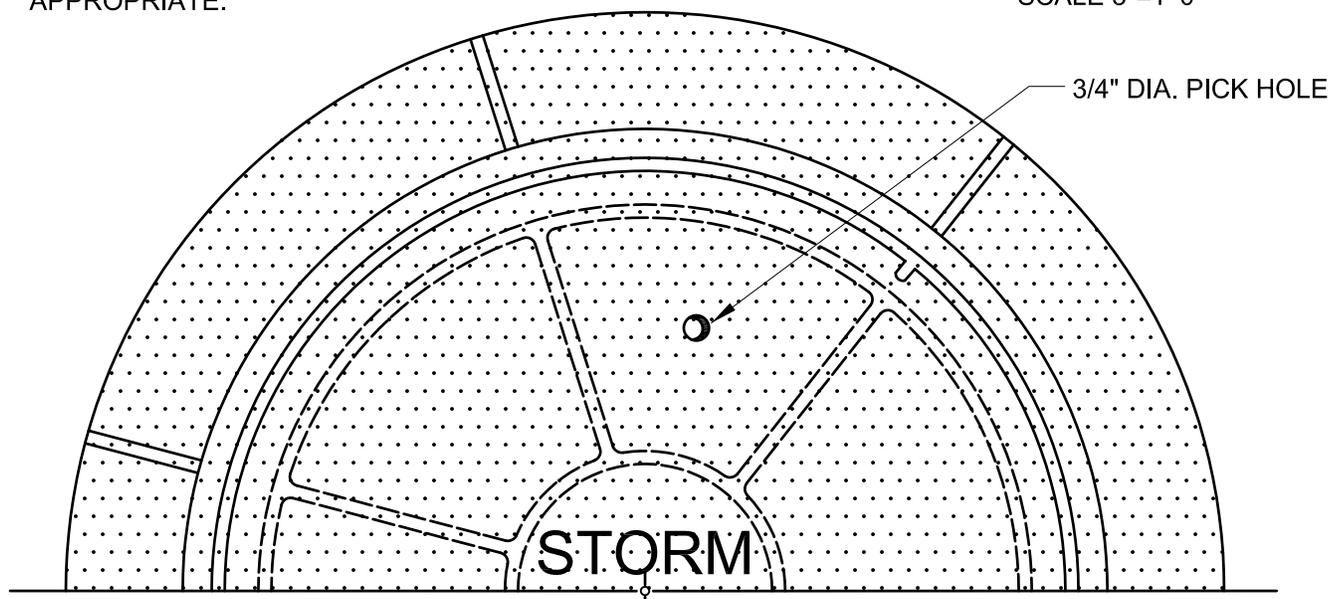
NOTES:

1. MAINTENANCE HOLE FRAMES AND COVERS SHALL BE MATCH-MARKED IN PAIRS. EACH COVER SHALL BE GROUND OR OTHERWISE FINISHED TO FIT IN ITS FRAME WITHOUT ROCKING.
2. AT THE OPTION OF THE CONTRACTOR, MAINTENANCE HOLE FRAMES AND COVERS MAY BE PHOENIX MODEL P-1090 (25-11/32" DIA.) OR MONROE CASTING (25-5/16" DIA.)
3. COVER SHALL BE LABELLED "STORM" OR "SEWER" AS APPROPRIATE.



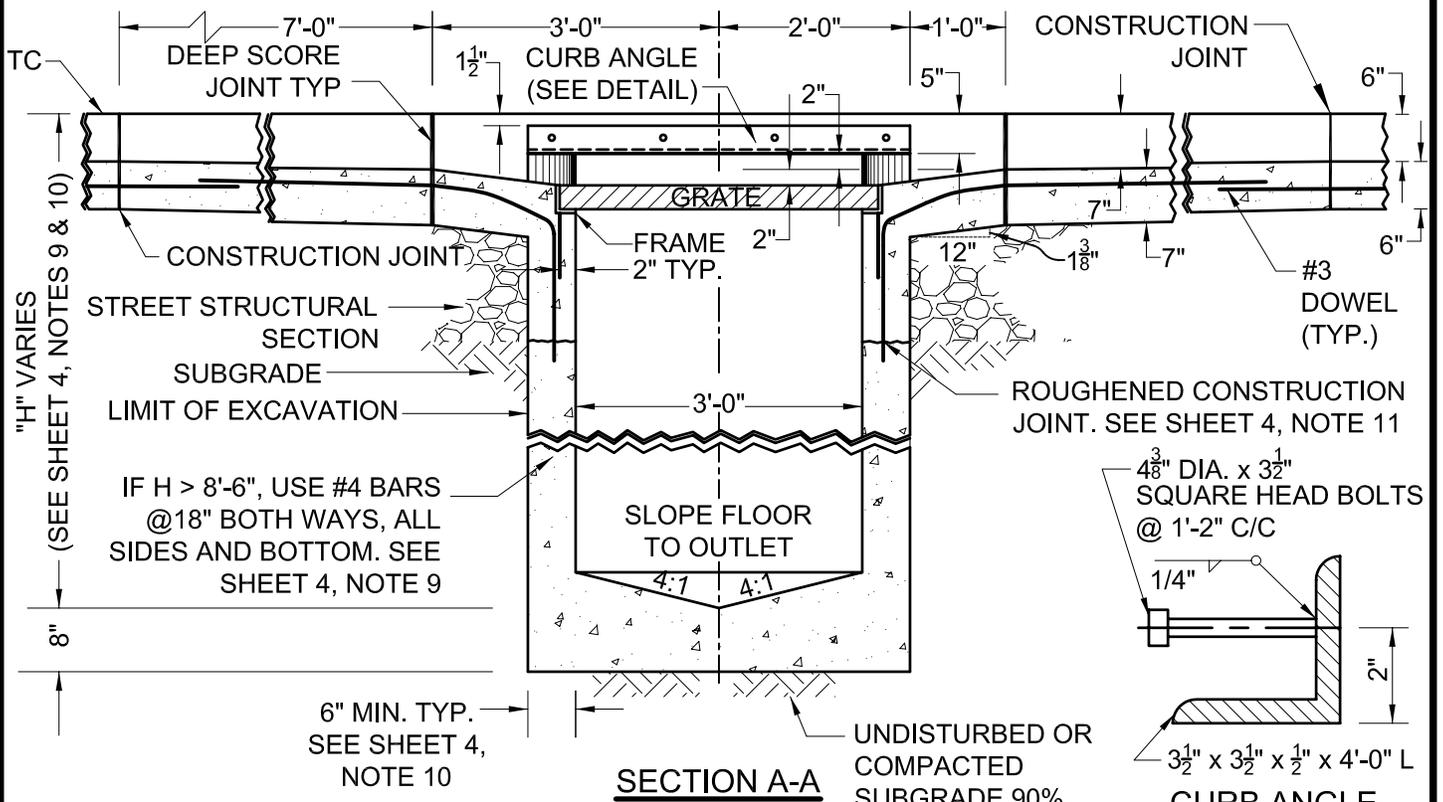
**DETAIL "A"
LIFTING HOLE**

SCALE 3"=1'-0"



**HALF PLAN OF TOP
NOT TO SCALE**

			CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL			
						04/11/06			
			STANDARD DETAILS			RESOLUTION NO. 2006-31			
STORM DRAIN AND SEWER MAINTENANCE HOLE						<i>Ham Hughes</i>			
						CITY ENGINEER			
NO.	REVISED	DATE	FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
REVISIONS			SD-21-06.DWG	AS SHOWN	DC	KC	03/14/06	SD-21	2 of 2

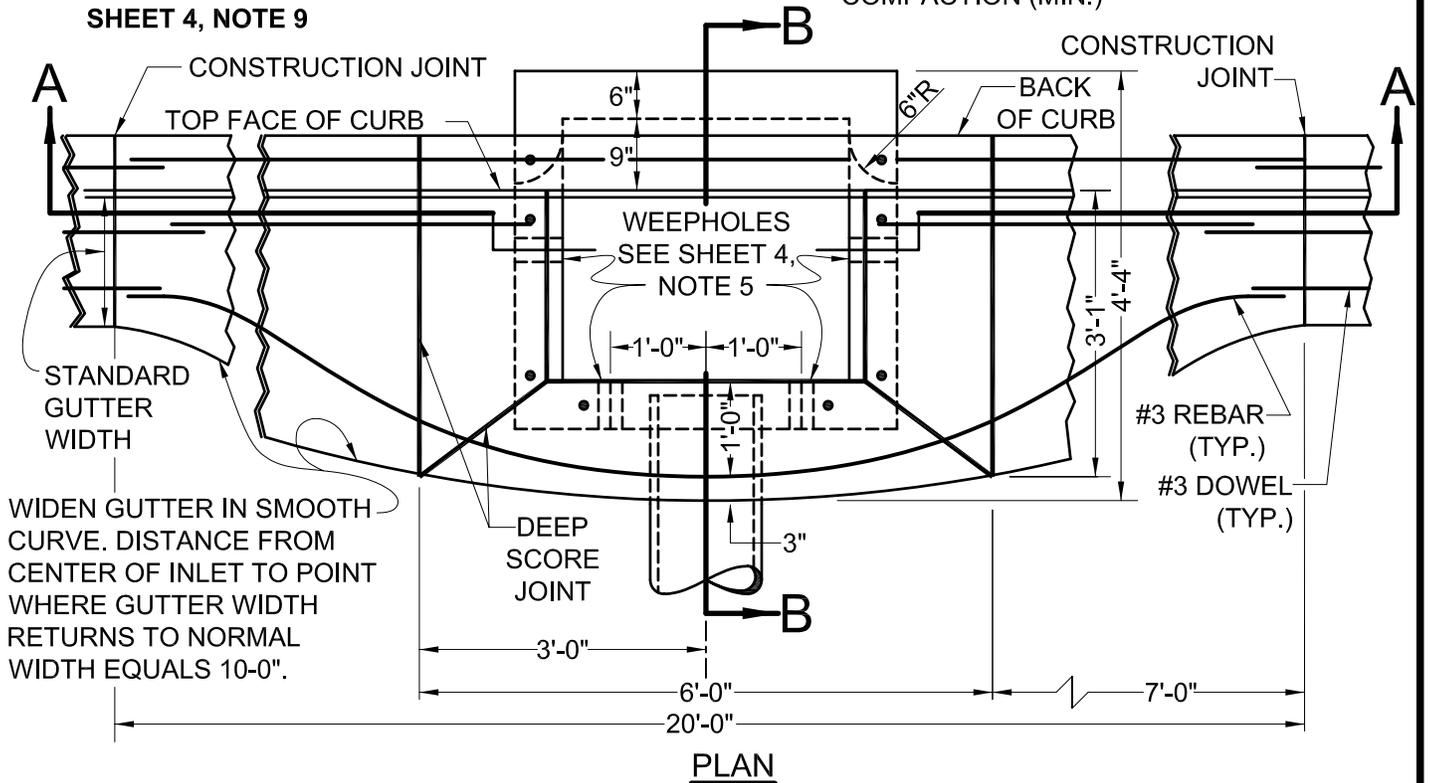


SECTION A-A

FOR REINFORCING REQUIREMENTS SEE SHEET 4, NOTE 9

UNDISTURBED OR COMPACTED SUBGRADE 90% RELATIVE COMPACTION (MIN.)

CURB ANGLE
SCALE 3" = 1'-0"



PLAN

CITY OF FREMONT
STANDARD DETAILS
STORM DRAIN INLET

DATE APPROVED BY CITY COUNCIL
04/11/06

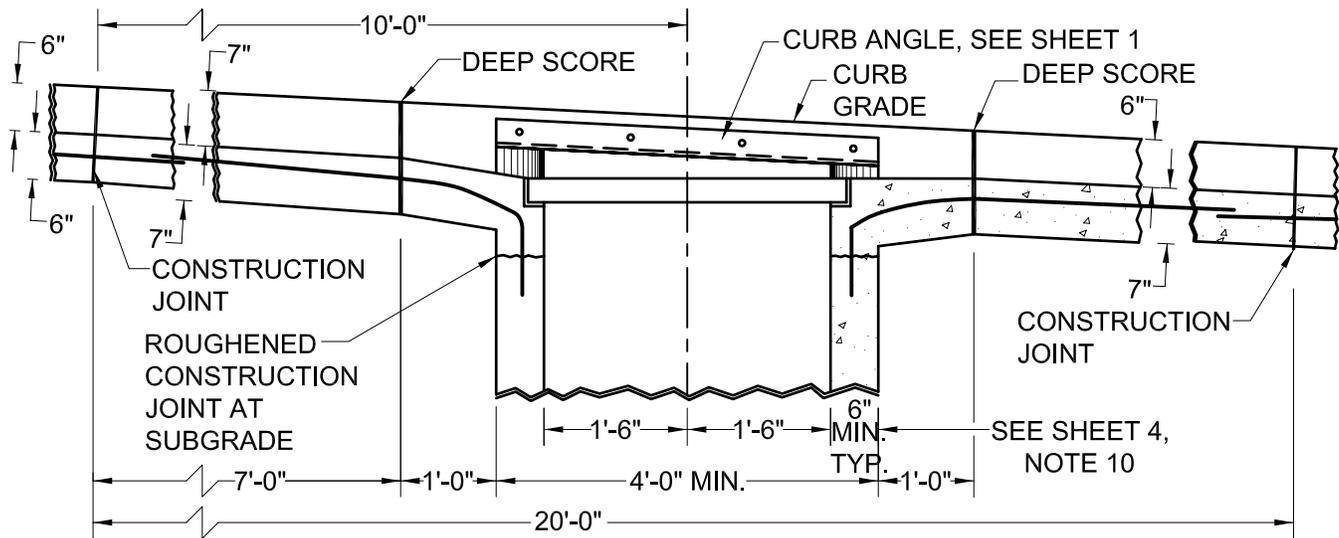
RESOLUTION NO. 2006-31

Ham Hughes

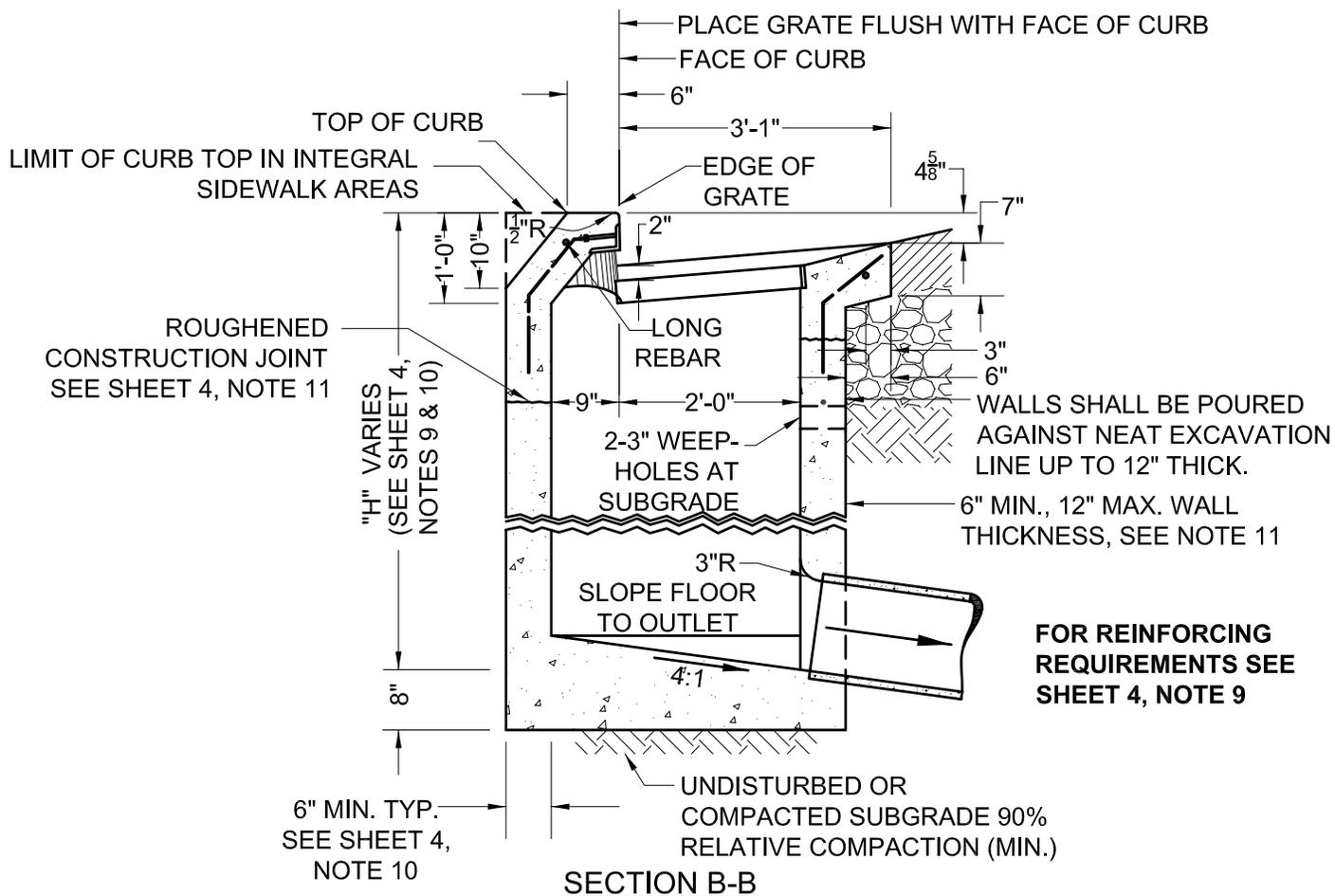
CITY ENGINEER

NO.	REVISED	DATE
REVISIONS		

FILE NO. SD-22-06.DWG	SCALE 1/2" = 1'-0"	DRAWN DC	CHECKED KC	DATE 03/14/06	DWG NO. SD-22	1 of 4
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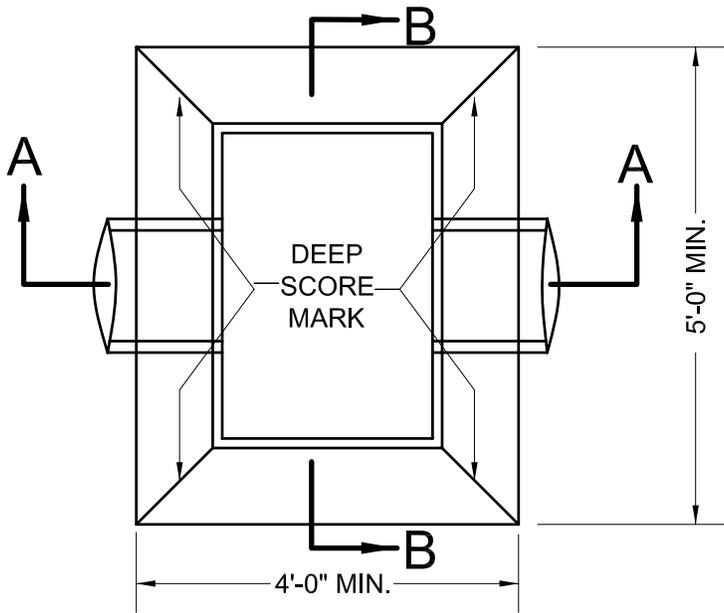


**POSITION OF FRAME AND GRATE
FOR CURB GRADES 5% OR STEEPER**



SECTION B-B

<table border="1"> <tr> <td>NO.</td> <td>REVISED</td> <td>DATE</td> </tr> <tr> <td colspan="3">REVISIONS</td> </tr> </table>			NO.	REVISED	DATE	REVISIONS			CITY OF FREMONT STANDARD DETAILS STORM DRAIN INLET			DATE APPROVED BY CITY COUNCIL 04/11/06	
			NO.	REVISED	DATE								
			REVISIONS										
RESOLUTION NO. 2006-31													
FILE NO. SD-22-06.DWG			SCALE 1/2" = 1'-0"	DRAWN DC	CHECKED KC	DATE 03/14/06	CITY ENGINEER <i>Ham Hughes</i>	DWG NO. SD-22	2 of 4				



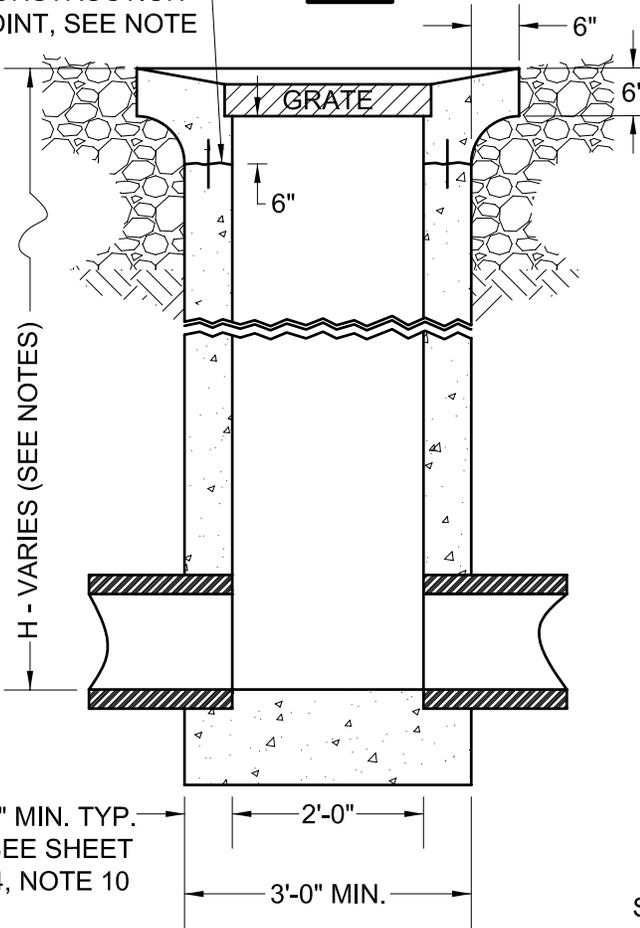
NOTES:
 CAST-IN-PLACE ONLY.

FOR GRATE AND FRAME, SEE SHEET 4, NOTE 3.

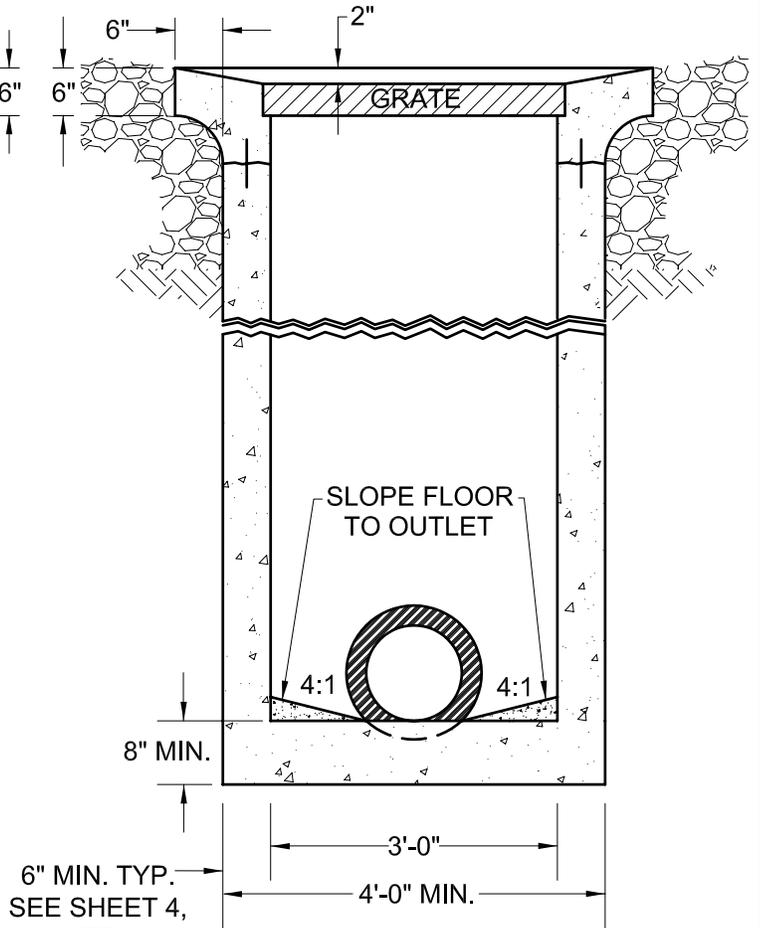
FOR REINFORCING AND WALL THICKNESS SEE SHEET 4, NOTES 9 & 10

PLAN

CONSTRUCTION JOINT, SEE NOTE



SECTION A-A



SECTION B-B

CITY OF FREMONT
 STANDARD DETAILS

FIELD INLET

DATE APPROVED BY CITY COUNCIL
 04/11/06

RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

NO.	REVISED	DATE

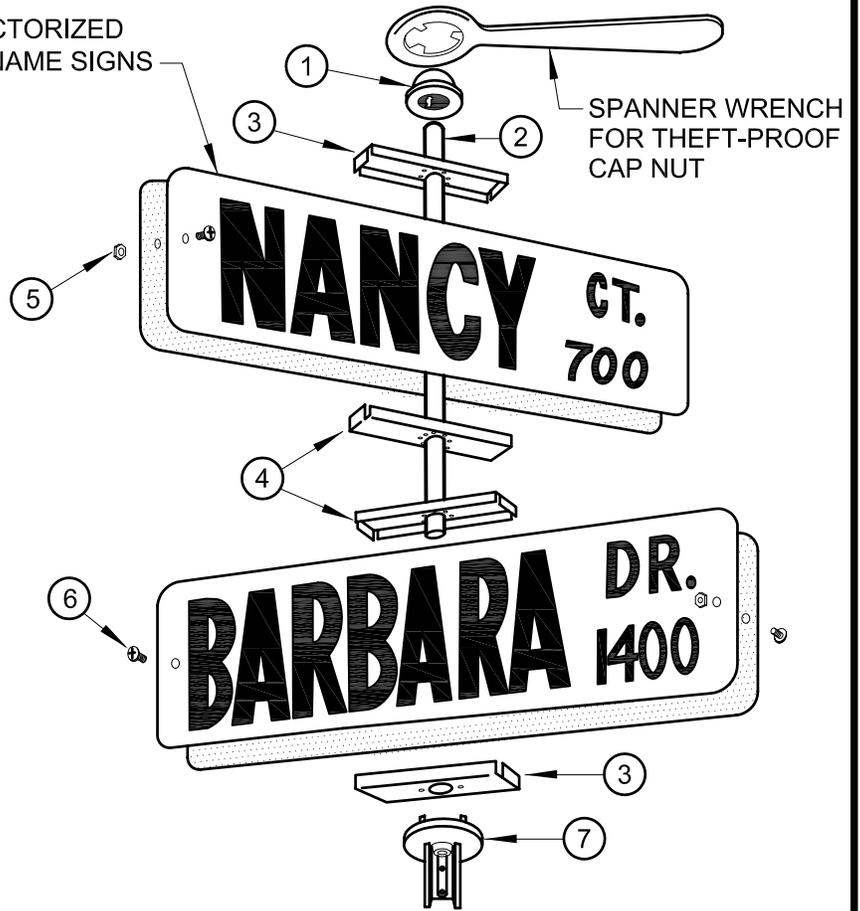
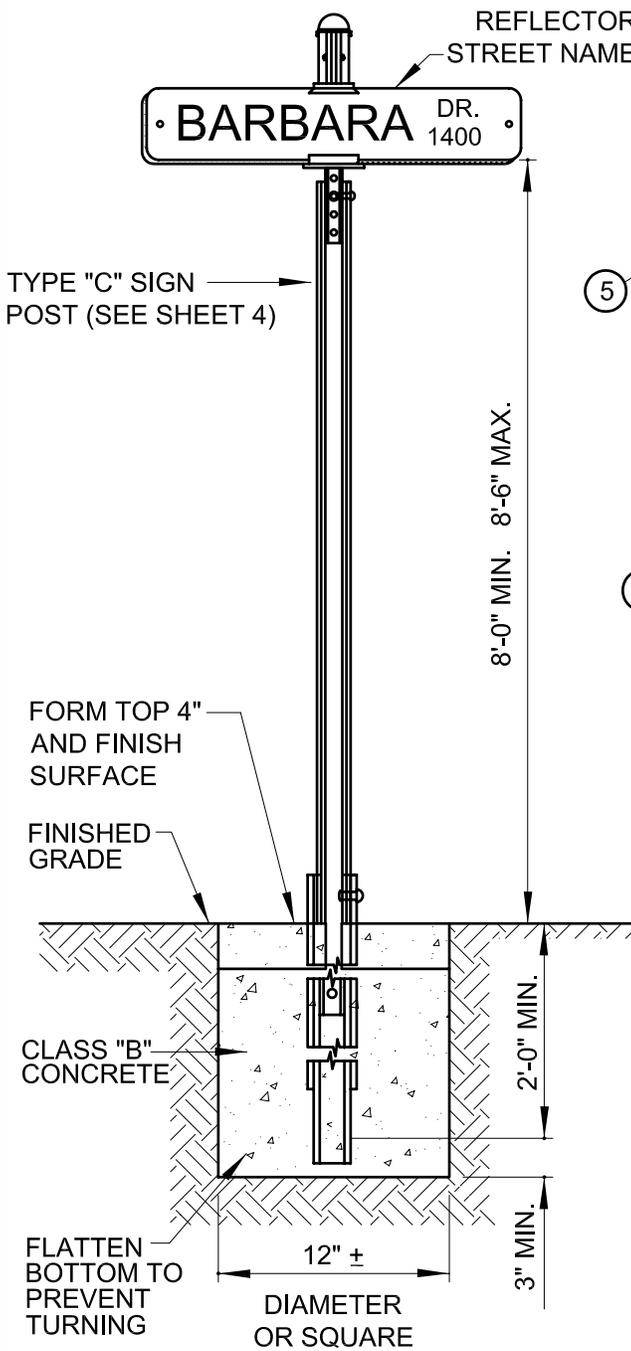
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FILE NO. SD-22-06.DWG	SCALE 1/2" = 1'-0"	DRAWN DC	CHECKED KC	DATE 03/14/06	DWG NO. SD-22	3 of 4
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STORM DRAIN INLET NOTES

1. ALL INLETS TO BE CAST-IN-PLACE ONLY.
2. ALL METAL SHALL BE STRUCTURAL GRADE STEEL OR BETTER AND SHALL BE GALVANIZED AFTER FABRICATION. AFTER INSTALLATION ABRADED SURFACES SHALL BE CLEANED FREE OF RUST AND OIL AND NEATLY SOLDERED OVER WITH 50-50 SOLDER.
3. GRATING AND FRAMES ARE TO BE ASSEMBLED AND MADE TO FIT BEFORE DELIVERY TO JOB SITE. THE REQUIRED GRATE IS TYPE 600-13 AS DESIGNATED BY CAL TRANS STANDARD DETAIL D77A AND D77B.
4. ALL CONCRETE SHALL BE 6-SACK CONCRETE.
5. TWO 3" WEEPHOLES TO BE PLACED AT ALL THE WALLS OF THE STORM DRAIN INLET AT THE STREET SUBGRADE ELEVATION (OR UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER).
6. POSITION OF PIPE LEAVING INLET TO BE AS INDICATED ON THE PLANS AND INLET FLOOR TO SLOPE TO END OF PIPE. WHERE TWO OR MORE PIPES ENTER AN INLET, THE FLOOR SHALL HAVE A CHANNEL CONNECTING THE PIPE.
7. MINIMUM CLEAR SPACING BETWEEN SURFACES OF CONCRETE AND REINFORCING STEEL TO BE 2" EXCEPT 3" WHERE CONCRETE IS PLACED AGAINST EARTH.
8. NO CONSTRUCTION JOINTS TO BE PLACED OTHER THAN WHERE SHOWN ON THE PLANS, EXCEPT WITH APPROVAL OF THE CITY ENGINEER.
9. WALL REINFORCING NOT REQUIRED WHEN H=8'-6" OR LESS AND THE UNSUPPORTED WIDTH OR LENGTH = 7' OR LESS. WALLS EXCEEDING THESE LIMITS SHALL BE REINFORCED WITH NO.4 BARS @ 18" CENTERS PLACED 2" (SECTION A-A ON SHEET 1) CLEAR TO INSIDE OF BOX. A MINIMUM OF 3 VERTICAL BARS PER WALL SHALL BE INSTALLED. "H" IS DIFFERENCE IN ELEVATION BETWEEN OUTLET PIPE INVERT AND TOP OF CURB.
10. WALL THICKNESS "T" SHALL BE "T" = 6" MIN. FOR "H" TO 8'-6", "T" = 8" FOR "H" = 8'-7" TO 20'; T = 12" MAX IN ANY CASE.
11. CONSTRUCTION JOINTS AT SUBGRADE SHALL BE REINFORCED WITH TWO, 24" LONG NO. 4 BARS AND EXTEND 6" MINIMUM BELOW SUBGRADE.
12. STENCIL "NO DUMPING DRAINS TO BAY" ON ALL DRAIN INLETS IN ACCORDANCE WITH THE CITY'S SPECIFICATIONS. THE STENCIL AND APPLICATION SPECIFICATIONS CAN BE PURCHASED AT THE CITY'S ENGINEERING COUNTER.
13. ALL CURB INLET BOXES MUST BE POURED NEAT UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.
14. IN THE EVENT OF OVEREXCAVATION, CURB INLET OUTER WALL SHALL BE FORMED AND THE RESULTING VOID BETWEEN THE FORM AND EXCAVATION SHALL BE BACK-FILLED WITH CLASS II AB, COMPACTED TO 90%. THE RESULTING VOID SHALL BE A MINIMUM OF 12" WIDE TO FACILITATE PROPER COMPACTION.

			<h1 style="margin: 0;">CITY OF FREMONT</h1> <h2 style="margin: 0;">STANDARD DETAILS</h2> <h3 style="margin: 0;"><u>INLET NOTES</u></h3>				DATE APPROVED BY CITY COUNCIL 04/11/06
							RESOLUTION NO. 2006-31
							 CITY ENGINEER
NO.	REVISED	DATE					
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
SD-22-06.DWG	NONE	DC	KC	03/14/06	SD-22	4 of 4	



FOUR PLATE ASSEMBLY

LIST OF PARTS

- ① — 1/2" CAP NUT ZINC ALLOY
- ② — CENTER ROD FOUR PLATE 19 1/2"
- ③ — 6" FEMALE SEPARATOR ALUMINUM
- ④ — 6" MALE SEPARATOR ALUMINUM
- ⑤ — ALUMINUM PLATE NUT NO. 8 HEX. OR RIVITS
- ⑥ — ALUMINUM PLATE BOLT NO. 8 X 1/2" PHILLIPS HEAD
- ⑦ — STREET NAME SIGN ADAPTER

NOTE

SIGN LOCATION TO BE DETERMINED BY THE CITY ENGINEER. NAME PLATES AND MOUNTING ASSEMBLIES TO MEET THE REQUIREMENTS OF THE CITY ENGINEER.

NO.	REVISED	DATE
REVISIONS		

CITY OF FREMONT

STANDARD DETAILS

STREET NAME SIGN

AND POST DETAILS

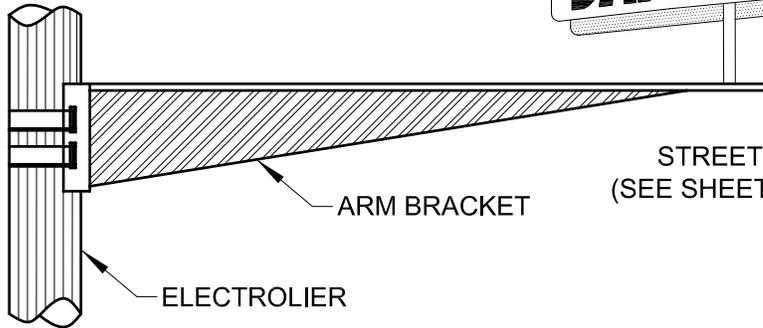
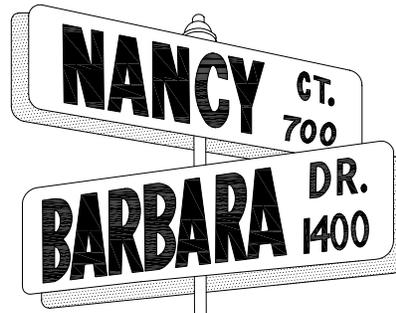
DATE APPROVED BY CITY COUNCIL
04/11/06

RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
SD-26-05.DWG	NONE	DC	KC	03/14/06	SD-23	1 of 3

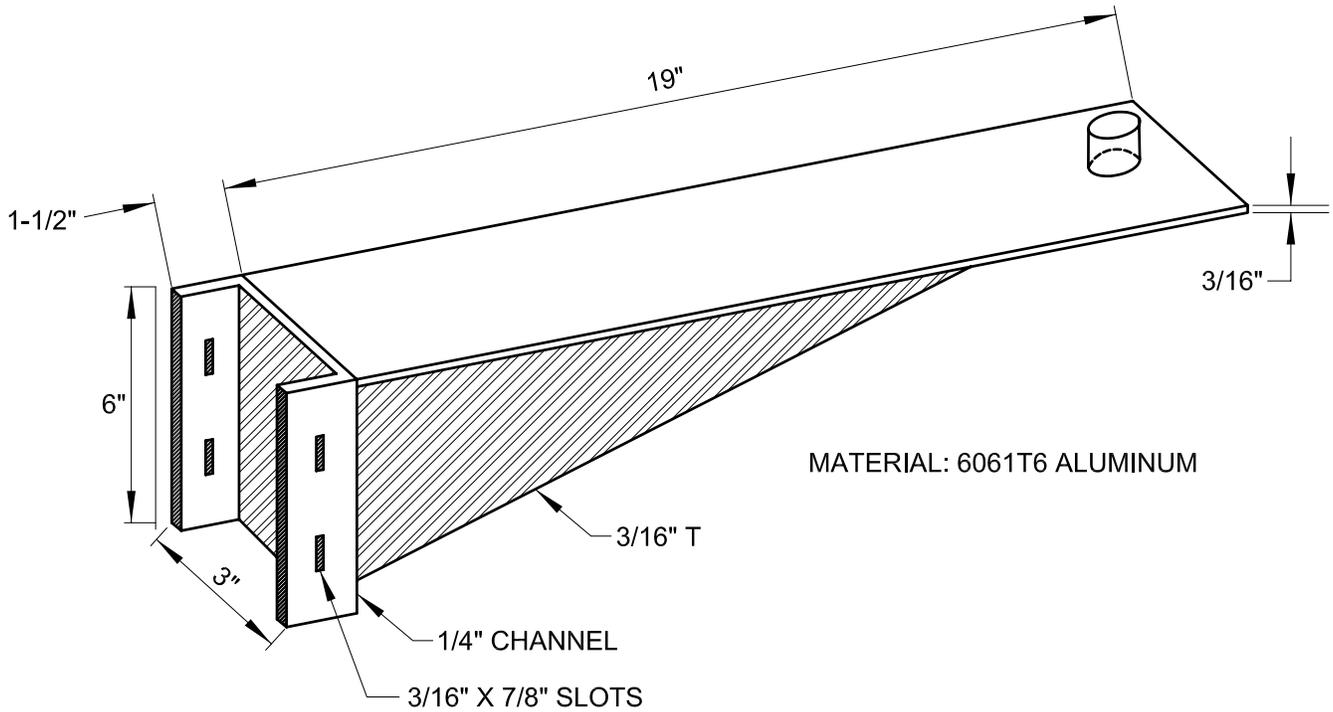


STREET NAME SIGNS
(SEE SHEET 1 FOR DETAILS)

ARM BRACKET

ELECTROLIER

ASSEMBLED BRACKET



MATERIAL: 6061T6 ALUMINUM

3/16" T

1/4" CHANNEL

3/16" X 7/8" SLOTS

ARM BRACKET FOR ELECTROLIER

NO.	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
STREET NAME SIGN
AND POST DETAILS

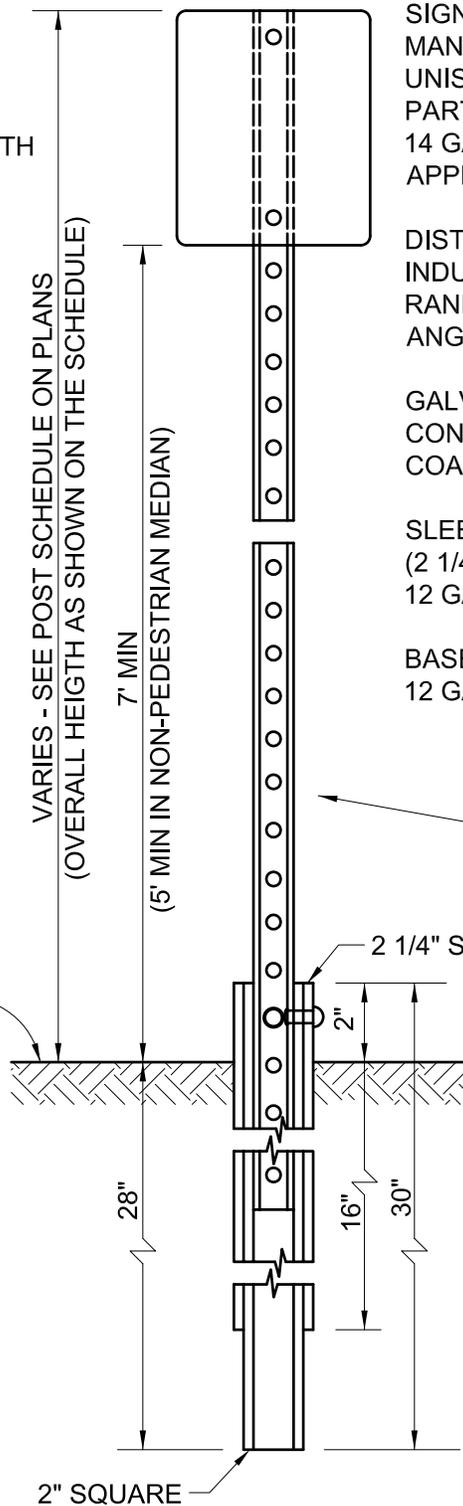
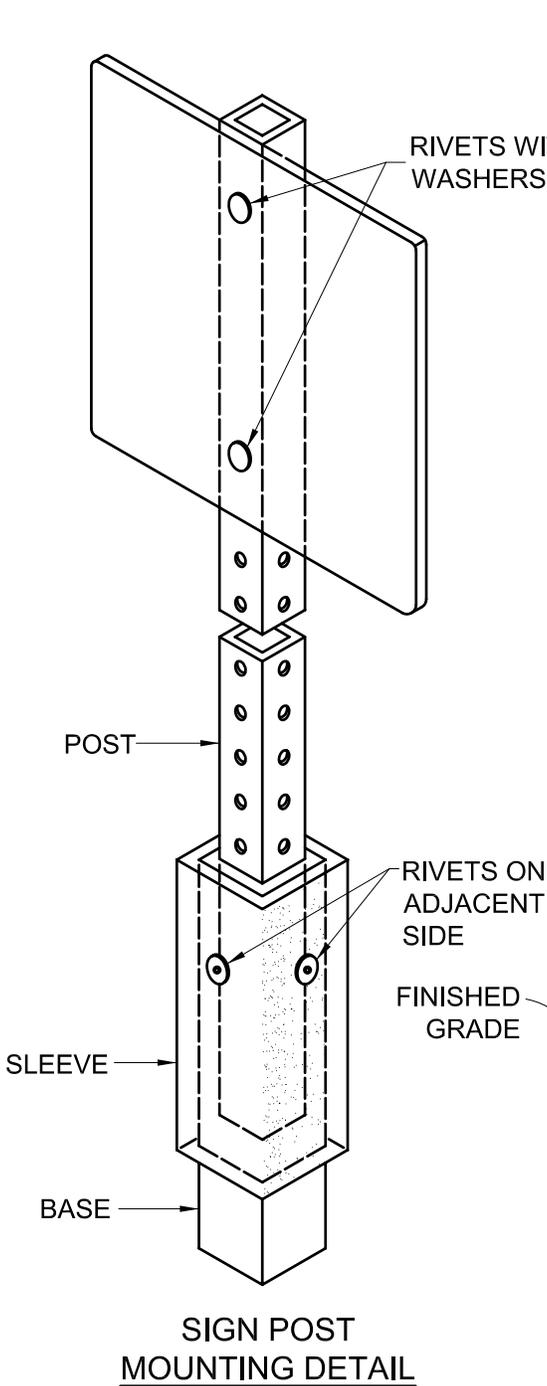
DATE APPROVED BY CITY COUNCIL
04/11/06

RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

FILE NO. SD-26-05.DWG	SCALE NONE	DRAWN DC	CHECKED KC	DATE 03/14/06	DWG NO. SD-23	2 of 3
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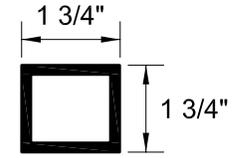
SIGN POST SHALL BE MANUFACTURED BY UNISTRUT CORPORATION. PART NO. 16D12 (1 3/4 X 1 3/4) 14 GA. GALV. POST OR APPROVED EQUAL

DISTRIBUTION BY ZUMAR INDUSTRIES, INC. 6371 RANDOLPH STREET, LOS ANGELES, CA 90040.

GALVANIZED FINISH TO CONFORM TO ASTM A525 G90 COATING.

SLEEVE SHALL BE A653 (2 1/4" X 2 1/4" X 18") 12 GA. GALV. STEEL.

BASE SHALL BE (2" X 2" X 30") 12 GA. GALV. STEEL.



WEIGHT = 1.45 LB/FT

2 1/4" SQUARE

POST SHALL BE PRODUCED FROM HIGH STRENGTH RAIL STEEL ACCORDING TO ASTM A715, GRADE 60.

CITY OF FREMONT
STANDARD DETAILS
TRAFFIC SIGN POST

DATE APPROVED BY CITY COUNCIL
04/11/06

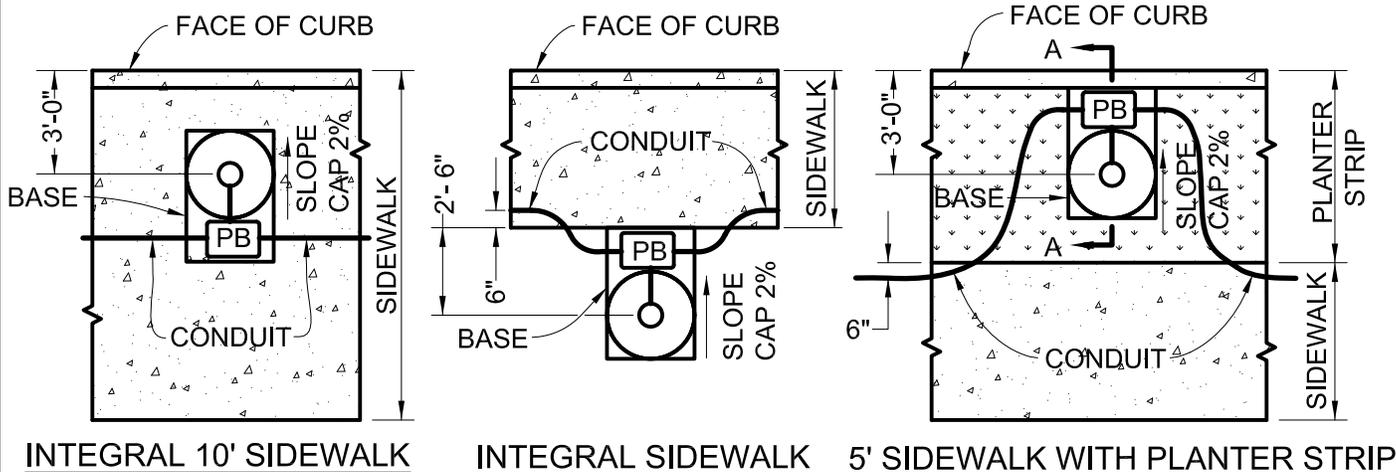
RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

NO.	REVISED	DATE
REVISIONS		

FILE NO. SD-26-05.DWG	SCALE NONE	DRAWN DC	CHECKED KC	DATE 03/08/06	DWG NO. SD-23	3 of 3
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CONNECT GROUND ROD TO GROUNDING STUD & CONDUIT GROUND CLIPS INSIDE OF POLE. COIL 2' MIN. OF EXCESS GROUNDWIRE INSIDE OF POLE

ANCHOR BOLTS, NUTS & WASHERS TO BE HOT DIPPED GALVANIZED

DRY PACK AFTER LEVELING POLE

CONSTRUCTION JOINT
5-SACK CONCRETE
FOUR 1"Ø X 3' LONG ANCHOR RODS WITH 4" RIGHT ANGLE BEND OR AS SPECIFIED BY MANUFACTURER. (DOUBLE NUTS ON WASHERS)

TAPERED ELECTROLIER POLE
HAND HOLE
BASE COVER

SLOPE THE CONCRETE CAP 2% FROM THE TOP OF CURB TO PROVIDE DRAINAGE TOWARDS THE STREET UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER. CAP TO BE 6-SACK CONCRETE.

1" CONDUIT (SEE NOTE 2, SHEET 4)
18" MINIMUM DEPTH UNDER SIDEWALK
24" MINIMUM DEPTH IN PLANTER STRIP

5/8" X 10'-0" COPPERWELD GROUND ROD OR 15'-0" #6 BARE COPPER GROUND WIRE COIL. SECURE TO ELECTROLIER GROUND CLIP. WIRE COIL COVERED BY 2" OF SOIL PRIOR TO POURING CONCRETE.

REMOVE ALL LOOSE MATERIAL PRIOR TO PLACING THE GROUND WIRE AND 2" OF SOIL.

	BOLT SIZE (MIN)
30' SINGLE	1-0" x 3-0'
30' DOUBLE	1-1/4" x 3-1/2'
35' SINGLE	1-1/4" x 3-0'
35' DOUBLE	1-1/4" x 3-1/2'

SECTION A-A

CITY OF FREMONT

STANDARD DETAILS

ELECTROLIER BASE

DATE APPROVED BY CITY COUNCIL
04/11/06
RESOLUTION NO. 2006-31

Norm Hughes

CITY ENGINEER

APPR	REVISED	DATE
REVISIONS		

FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
SD-24-06.DWG	NONE	DC	AR	03/14/06	SD-24	1 of 7

ROUND, TAPERED OR ELLIPTICAL ARM - 6' LONG
OR 12' LONG (AT MAJOR THROUGHFARE) SPUN
ALUMINUM OR GALVANIZED STEEL (MATCH POLE)

PHOTOELECTRIC CONTROL
WITH TYPE IV PEU

FOR LEDS: WATTAGE STICKER PER ANSI
STANDARD C136.15 (IDENTIFYING THE
FIXTURE TECHNOLOGY)
IF HIGH PRESSURE SODIUM VAPOR IS
APPROVED USE WATTAGE STICKER PER
CALTRANS SPEC.

LUMINAIRE:

FOR LIGHT EMITTING DIODE (LED) LUMINAIRE SEE
PROJECT SPECIFICATIONS OR APPROVED EQUAL.
IF HIGH PRESSURE SODIUM VAPOR HEAD IS
APPROVED, USE 120V / 240V MULTI-TAP LUMINAIRE,
INTEGRAL MAG. -REG. BALLAST, ASA / IES TYPE III,
CLEAR LAMPS OR APPROVED EQUAL.

SPUN ALUMINUM OR GALVANIZED
STEEL ELECTROLIER POLE. FOR TYPE
AND SIZE SEE TABLE ON SD-24, SHEET 3.

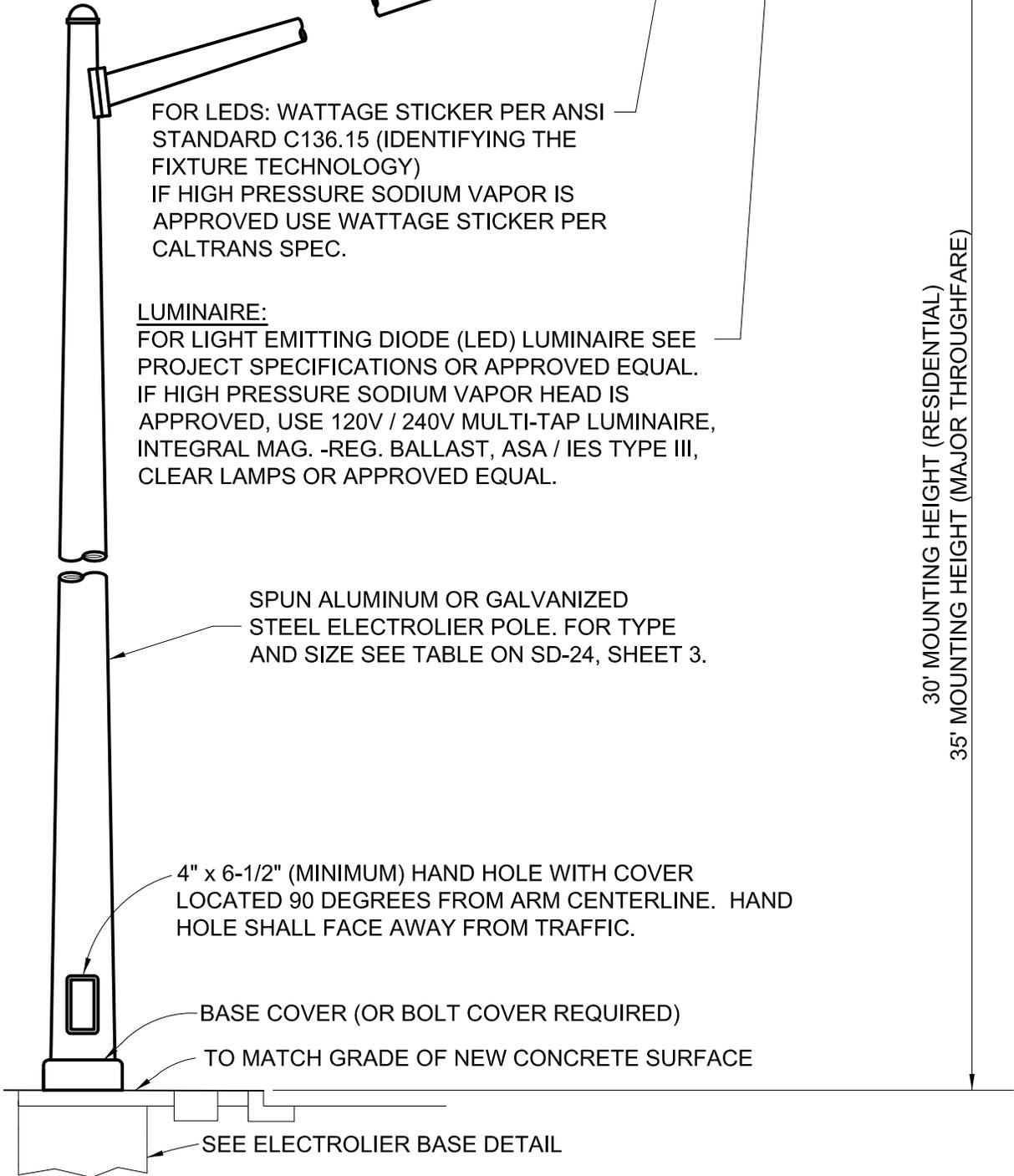
4" x 6-1/2" (MINIMUM) HAND HOLE WITH COVER
LOCATED 90 DEGREES FROM ARM CENTERLINE. HAND
HOLE SHALL FACE AWAY FROM TRAFFIC.

BASE COVER (OR BOLT COVER REQUIRED)

TO MATCH GRADE OF NEW CONCRETE SURFACE

SEE ELECTROLIER BASE DETAIL

30' MOUNTING HEIGHT (RESIDENTIAL)
35' MOUNTING HEIGHT (MAJOR THROUGHFARE)



CITY OF FREMONT
STANDARD DETAILS

ELECTROLIER
ALUMINUM OR STEEL

DATE APPROVED BY CITY COUNCIL
04/11/06

RESOLUTION NO. 2006-31

Norm Hughes

CITY ENGINEER

MM	Multiple Changes	1/13
APPR	REVISED	DATE
REVISIONS		

FILE NO. SD-24-06.DWG	SCALE NONE	DRAWN DC	CHECKED AR	DATE 03/14/06	DWG NO. SD-24	2 of 7
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ELECTROLIER TYPE (OR APPROVED EQUAL)

Mounting Height	ALUMINIUM		GALVANIZED STEEL	
	Single 6' Arms	Double 6' Arms	Single 6' Arms	Double 6' Arms
30'-0"	HAPCO RTA30D8B4M16	HAPCO RTA30D8B4M26	VALMONT DS32-R750A286-6S	VALMONT DS32-R750A286-6D
		PFAFF AND KENDALL RTA8M30AAS26	AMERON PL-286	AMERON PL-286D
35'-0"	HAPCO RTA35F8B4M16	HAPCO RTA35F8B4M26	VALMONT DS32-R800A336-6S	VALMONT DS32-R800A336-6D
			AMERON PL-336	AMERON PL-336D

NOTE: FOR MORE INFORMATION REFER TO CITY OF FREMONT STANDARD SPECIFICATIONS SECTION 32 STREET LIGHTING SYSTEM.

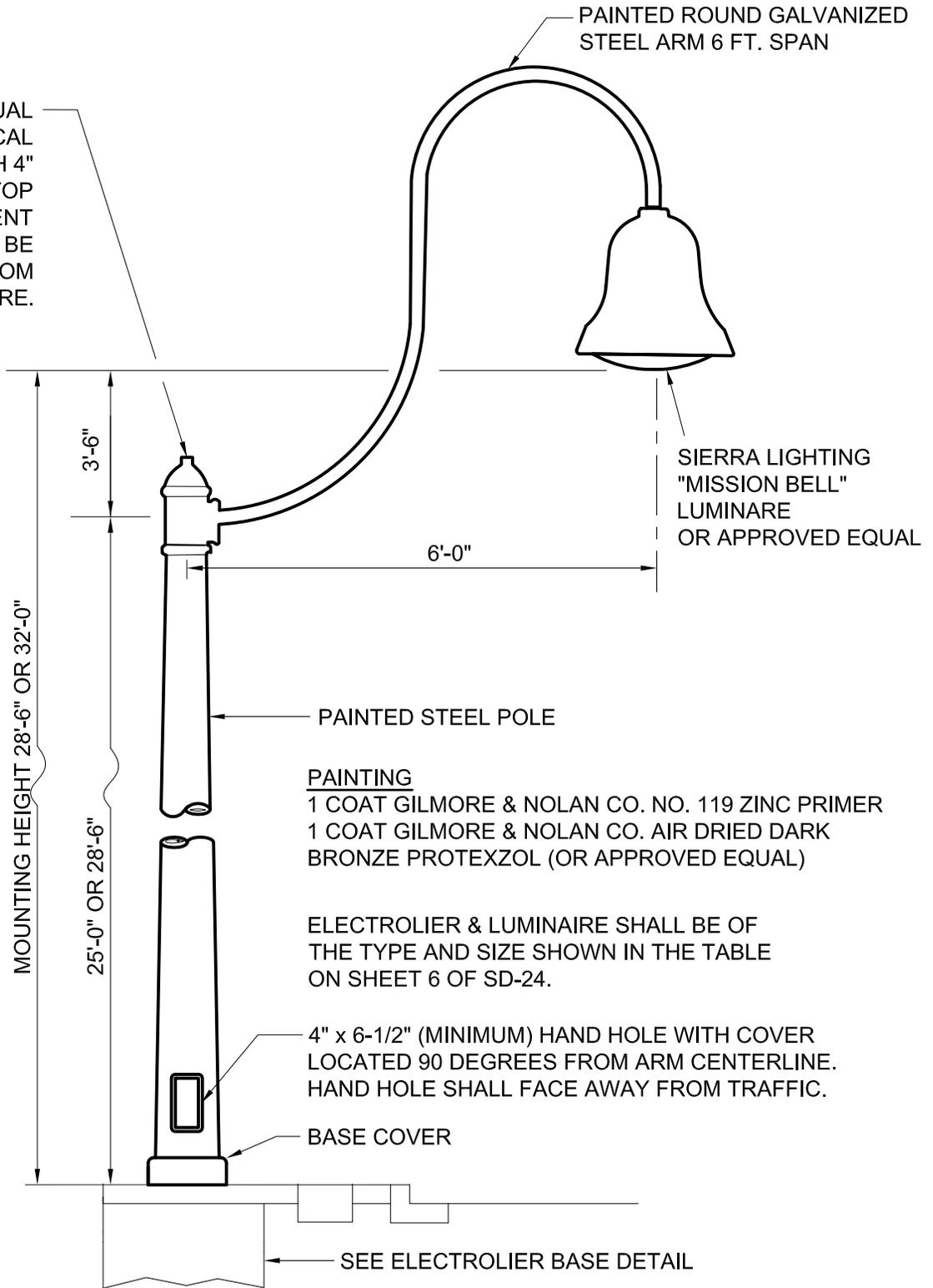
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						RESOLUTION NO. 2006-31							
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APPR	REVISED	DATE											
FILE NO. SD-24-06.DWG	SCALE NONE	DRAWN DC	CHECKED AR	DATE 03/14/06	DWG NO. SD-24	3 of 7							

ELECTROLIER NOTES

1. ALL UNDERGROUND WIRING SHALL BE IN APPROVED CONDUIT. THE UNDERGROUND CONDUIT AND ALL METAL PARTS SHALL BE CONTINUOUSLY BONDED AND GROUNDED.
2. MINIMUM CONDUIT SHALL BE TYPE II, PVC OR ABS UL LISTED SUITABLE FOR DIRECT BURIAL. MINIMUM CONDUIT SIZE SHALL BE 1" BETWEEN THE POLE AND THE PULL BOX FOR AWG NO. 8 AND 1 1/2" MIN. FOR AWG NO. 6 AND LARGER. ALL CONDUIT ENDS SHALL BE PLUGGED WITH DUCT SEALING COMPOUND.
3. MINIMUM RADIUS OF CONDUIT BENDS SHALL BE 18 INCHES. ALL CONDUIT BENDS AND/OR OFFSETS SHALL BE ACCOMPLISHED WITH FACTORY FORMED SECTIONS.
4. ALL PLASTIC CONDUIT STUBS INTO BASE SHALL BE COMPLETED BY A 90° RIGID METALLIC OR PLASTIC CONDUIT ELL, AND EXTENSION AS REQUIRED.
5. PULL BOXES SHALL BE CHRISTY N-9 (OR APPROVED EQUAL). COVERS SHALL HAVE CAST BRASS HOLD-DOWN LUGS, AND SHALL BE INSCRIBED "STREET LIGHTING." A PULL BOX SHALL BE INSTALLED AT EACH ELECTROLIER.
6. PULL BOXES SHALL BE NOT MORE THAN 250 FEET APART ON LONG RUNS.
7. WHERE PULL BOXES ARE SUBJECT TO TRAFFIC LOADS, THEY SHALL BE SET ON A CONCRETE FOOTING AND THE COVER SHALL BE CAST IRON OR STEEL OF SUFFICIENT STRENGTH TO WITHSTAND THE TRAFFIC LOAD. (H20 LOADING)
8. RISERS INSTALLED ON UTILITY-OWNED POLES SHALL CONFORM TO SPECIFICATIONS SUPPLIED BY THE UTILITY COMPANY. ELECTRIC SERVICE POINT SHALL BE APPROVED BY PACIFIC GAS & ELECTRIC COMPANY.
9. CONDUCTOR SHALL BE UL LISTED AWG NO. 8 OR LARGER WITH 7 STRAND SOFT COPPER TYPE THW, THHN, XHHW, OR RHW WITH A MINIMUM OF 3/64 OF AN INCH INSULATION. HOWEVER, WIRES IN THE POLE SHALL BE MINIMUM #14.
10. NO MECHANICAL MEANS SHALL BE USED TO PULL WIRES SMALLER THAN NO. 1 AWG.
11. ALL SPLICES FOR GREATER THAN AWG NO. 10 SHALL BE IN PULL BOXES AND HAVE APPROVED SOLDERLESS CONNECTORS OF PROPER SIZE.
12. A FIBERGLASS OR POLYPROPYLENE PULL ROPE SHALL BE LEFT IN ALL EMPTY CONDUITS.
13. CONTRACTOR TO MEET PG&E REQUIREMENTS FOR CONDUIT AND CONDUCTORS BETWEEN THE PG&E AND CITY PULL BOXES.
14. FUSES SHALL BE LOCATED IN THE PULL BOX ADJACENT TO EACH ELECTROLIER. CONTRACTOR SHALL PROVIDE ADDITIONAL PULL BOX, PG&E SERVICE BOX, AND FUSE HOLDERS AND FUSES. IF PG&E SECONDARY BOX IS WITHIN 6' OF THE ELECTROLIER, THE ADDITIONAL PULL BOX IS NOT NEEDED.
15. POLE NUMBERS SHALL BE PLACED ON ALL ELECTROLIERS 10' TO 12' ABOVE GRADE. NUMBERS TO BE AS SPECIFIED IN SECTION 32 "STREET LIGHTING SYSTEM," OF THE CITY OF FREMONT STANDARD SPECIFICATIONS.
16. PULL BOXES SHALL BE PLACED AT ALL ANGLE POINTS IN CONDUIT RUNS.
17. ALL STREET LIGHT CONDUIT CROSSINGS SHALL BE 90° TO THE CENTERLINE.
18. STREET LIGHT DESIGN FOR MORE THAN 4 LIGHTS SHALL BE STAMPED, SIGNED AND DATED BY A ELECTRICAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA.
19. BOLT EXTENDERS MAY ONLY BE USED TO RAISE AN EXISTING, UNDAMAGED POLE AND BASE TO GRADE. STRUCTURAL CALCULATIONS AND/OR CERTIFICATION FROM THE MANUFACTURER IS NEEDED FOR THE PROPOSED BOLT EXTENDER.
20. WHEN OVERHEAD WIRES EXIST WHERE A NEW LIGHT POLE IS TO BE INSTALLED THE CLEARANCE REQUIREMENTS SHALL COMPLY WITH MIN. CLEARANCE REQUIREMENTS FROM PG&E. THE CLEARANCE REQUIREMENTS FOR PRIMARY LINES AND SECONDARY LINES ARE A MIN. 10FT AND 3FT RESPECTIVELY OR MIN. AS REQUIRED BY PG&E.

			CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06	
			STANDARD DETAILS			RESOLUTION NO. 2006-31	
MM	Multiple Changes	1/13	<u>ELECTROLIER NOTES</u>				
APPR	REVISED	DATE				CITY ENGINEER	
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
SD-24-06.DWG	NONE	DC	AR	03/08/06	SD-24	4 of 7	

MOUNTED INDIVIDUAL PHOTO ELECTRICAL CONTROL WITH 4" EXTENSION ON TOP OF POLE. ORIENT PHOTOCELL TO BE PLACED AWAY FROM LUMINAIRE.



PAINTING

1 COAT GILMORE & NOLAN CO. NO. 119 ZINC PRIMER
 1 COAT GILMORE & NOLAN CO. AIR DRIED DARK BRONZE PROTEXZOL (OR APPROVED EQUAL)

ELECTROLIER & LUMINAIRE SHALL BE OF THE TYPE AND SIZE SHOWN IN THE TABLE ON SHEET 6 OF SD-24.

4" x 6-1/2" (MINIMUM) HAND HOLE WITH COVER LOCATED 90 DEGREES FROM ARM CENTERLINE. HAND HOLE SHALL FACE AWAY FROM TRAFFIC.

BASE COVER

SEE ELECTROLIER BASE DETAIL

CITY OF FREMONT
 STANDARD DETAILS

ELECTROLIER
MISSION BELL

DATE APPROVED BY CITY COUNCIL
 04/11/06

RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

<i>MM</i>	Multiple Changes	1/13
APPR	REVISED	DATE
REVISIONS		

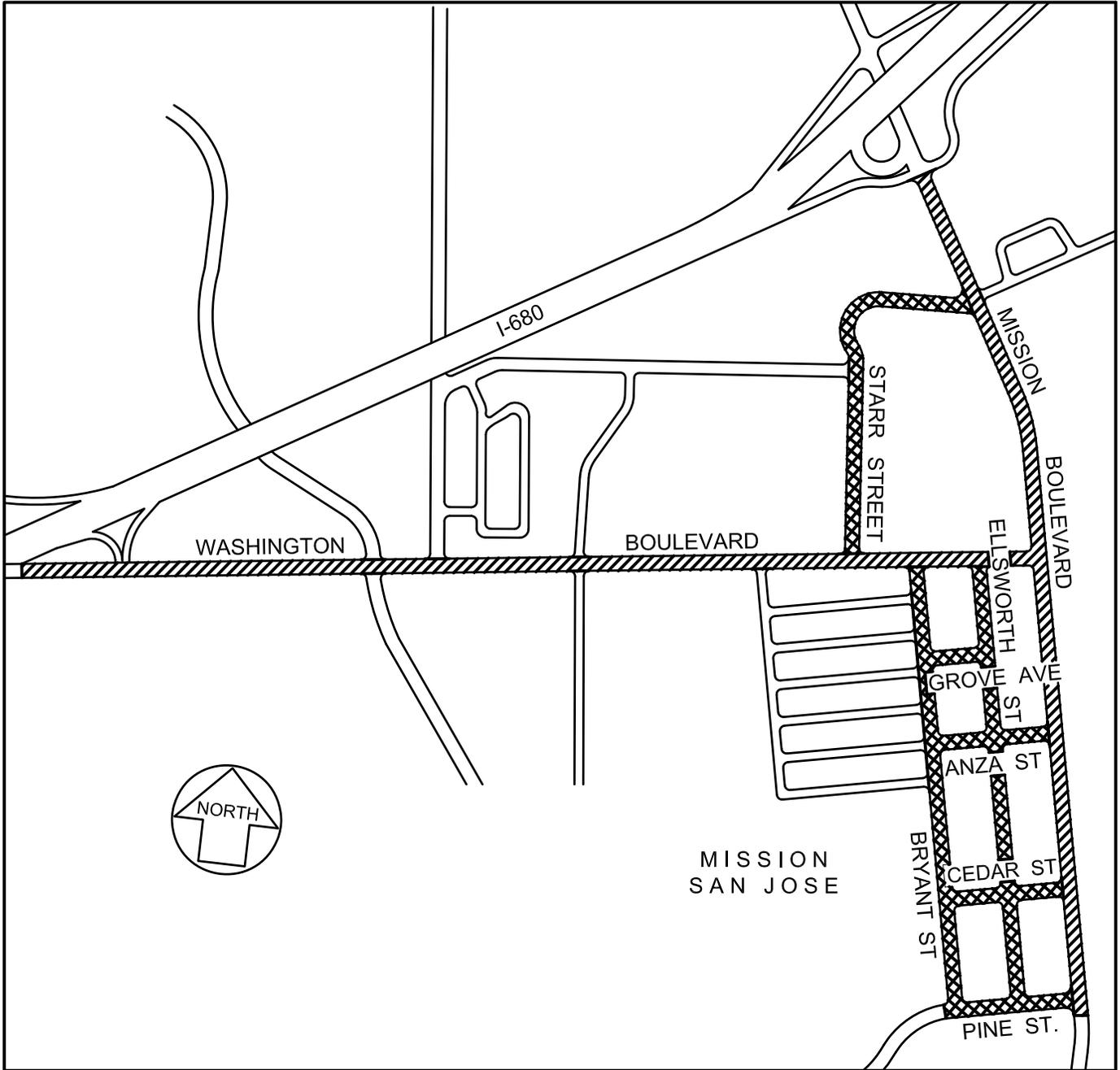
FILE NO. SD-24-06.DWG	SCALE NONE	DRAWN DC	CHECKED AR	DATE 03/14/06	DWG NO. SD-24	5 of 7
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MOUNTING HEIGHT	ELECTROLIER		LUMINAIRE
	SINGLE 6' ARM	DOUBLE 6' ARM	
28'-6"	UNION METALS DESIGN FB-MB #FB-7250-MB6 (OR APPROVED EQUAL)	UNION METALS DESIGN FB-MB #FB-7250-MMB6 (OR APPROVED EQUAL)	SIERRA LIGHTING CAT. NO. MB-100-MH-120-MBZ (OR APPROVED EQUAL)
32'-0"	UNION METALS DESIGN FB-MB #FB-7286-MB6 (OR APPROVED EQUAL)	UNION METALS DESIGN FB-MB #FB-7286-MMB6 (OR APPROVED EQUAL)	SIERRA LIGHTING CAT. NO. MB-100-MH-120-MBZ (OR APPROVED EQUAL)

REFER TO SHEET 4 FOR CONSTRUCTION NOTES.

REFER TO SHEET 7 FOR LIMITS OF INSTALLATION.

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
			ELECTROLIER AND LUMINAIRE TABLE - MISSION BELL			 CITY ENGINEER	
MM Multiple Changes APPR REVISED DATE		1/13					
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
SD-24-06.DWG	NONE	DC	AR	03/14/06	SD-24	6 of 7	



LEGEND



32'-0" MOUNTING HEIGHT "MISSION BELL" ELECTROLIER



28'-6" MOUNTING HEIGHT "MISSION BELL" ELECTROLIER

<i>MM</i>	Multiple Changes	1/13
APPR	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
ELECTROLIER LIMITS
AND INSTALLATION
MISSION BELL

DATE APPROVED BY CITY COUNCIL
 04/11/06

RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

FILE NO. SD-24-06.DWG	SCALE NONE	DRAWN DC	CHECKED AR	DATE 12/16/05	DWG NO. SD-24	7 of 7
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PERCH PREVENTION DEVICE
(BIRD-FLITE OR EQUIVALENT)

6'-0"

150 WATT H.P.S. 120V BALLAST WITH P.E.C.
& LAMP, LUMEC-SCHREDER CAT. NO.
CTM-150HPS-MN3-120-PH8-SC-LTS225E
(FIXTURE) - NO APPROVED EQUAL

LUMEC-SCHREDER CAT. NO.
ATR35-COL6-1A-SC-LTS225E (0.250
WALL THICKNESS AND FACTORY
INSTALLED VIBRATION DAMPERS,
ALUMINUM POLE & ARM WITH
CUSTOM COLOR GLOSS STEEL GRAY
AS SPECIFIED BY THE PAINTING
SPECIFICATION HEREON), NO
APPROVED EQUAL

35'-0"

32'-6"

NOTE:

ALL CITEA LUMINAIRES HAVE WATTAGE
INDICATORS INSTALLED ON THE
BOTTOM OF THE FIXTURE PER
CALTRANS SPEC.

PAINTING SPECIFICATIONS: CARDINAL
INDUSTRIAL FINISHES COLOR CODE
T028-GR02 POLYESTER T.G.I.Z. GLOSS
STEEL GRAY.

4" x 6-1/2" (MINIMUM)
HAND HOLE WITH COVER
LOCATED 90 DEGREES
FROM ARM CENTERLINE.
HAND HOLE SHALL FACE
AWAY FROM TRAFFIC.

SEE ELECTROLIER
BASE DETAIL SD-24

CITY OF FREMONT
STANDARD DETAILS
PACIFIC COMMONS
CITEA ELECTROLIER

DATE APPROVED BY CITY COUNCIL
04/11/06

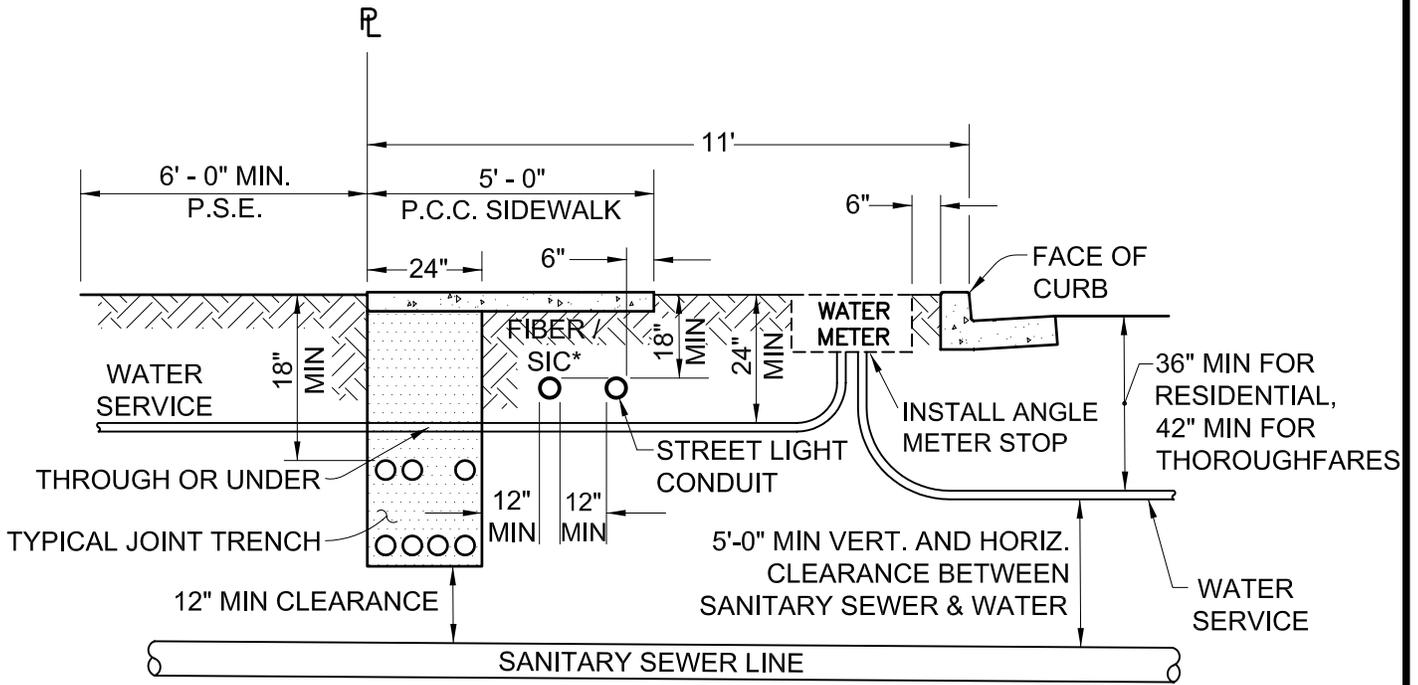
RESOLUTION NO. 2006-31

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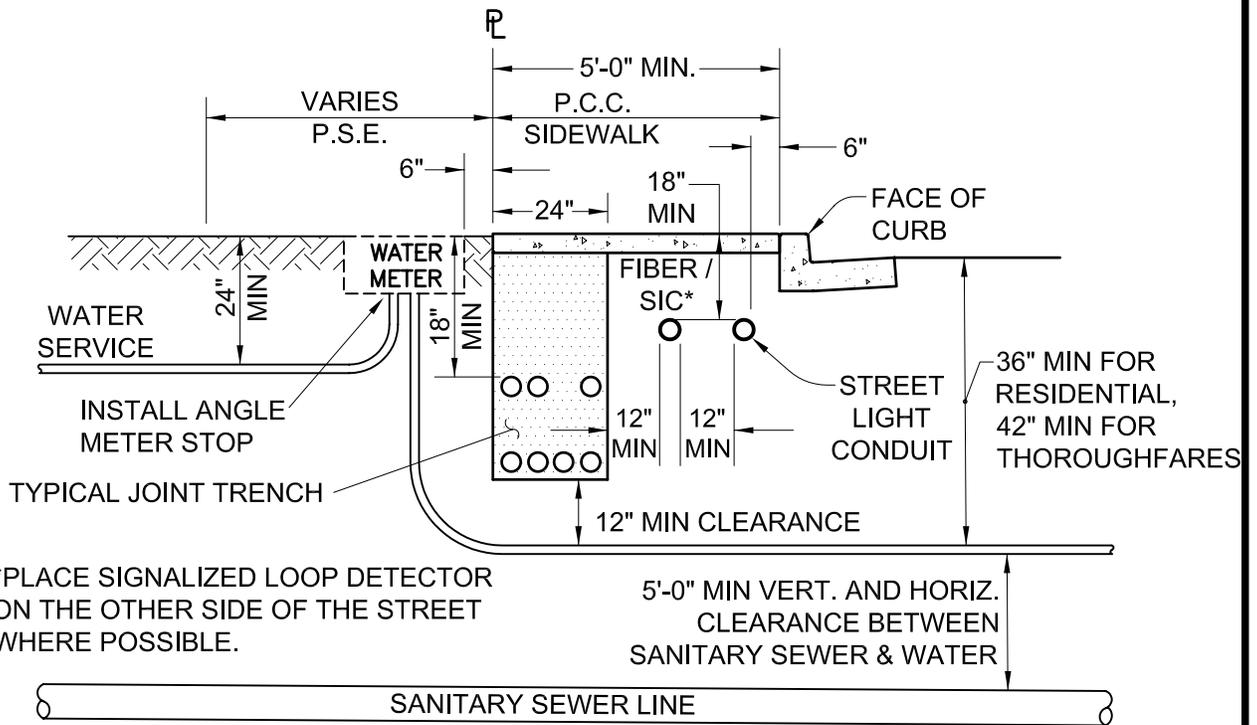
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MM	Multiple Changes	1/13
APPR	REVISED	DATE
REVISIONS		

FILE NO. SD-25-06.DWG	SCALE NONE	DRAWN DC	CHECKED AR	DATE 03/14/06	DWG NO. SD-25	1 of 1
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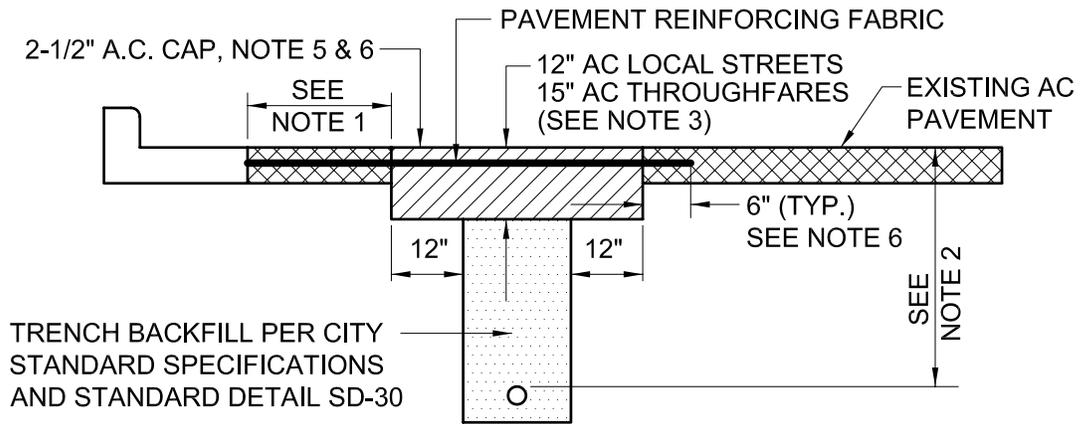
JOINT TRENCH DETAIL FOR SIDEWALK W/ PLANTER AREA



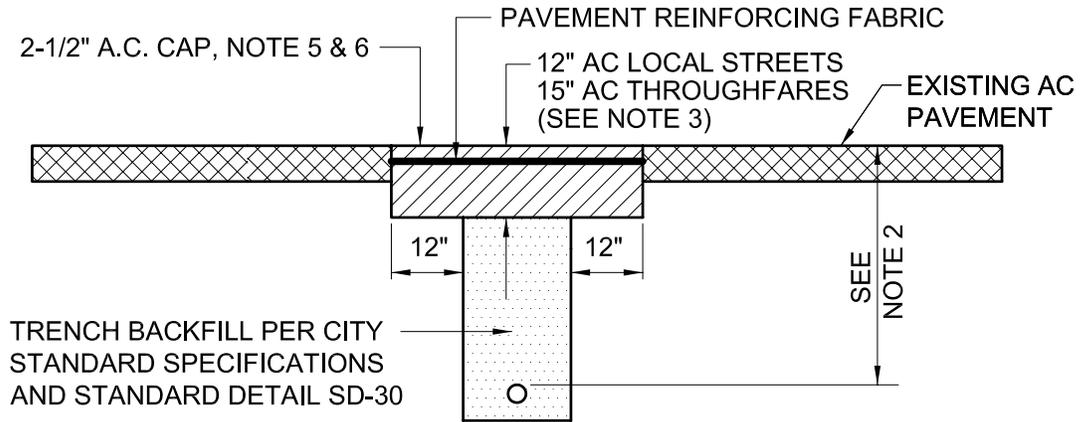
*PLACE SIGNALIZED LOOP DETECTOR ON THE OTHER SIDE OF THE STREET WHERE POSSIBLE.

JOINT TRENCH DETAIL FOR MONOLITHIC SIDEWALK

			CITY OF FREMONT STANDARD DETAILS UTILITY TRENCH			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
NO. REVISED DATE						 CITY ENGINEER	
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
SD-26-06.DWG	NONE	WPM	KC	03/08/06	SD-26	1 of 1	



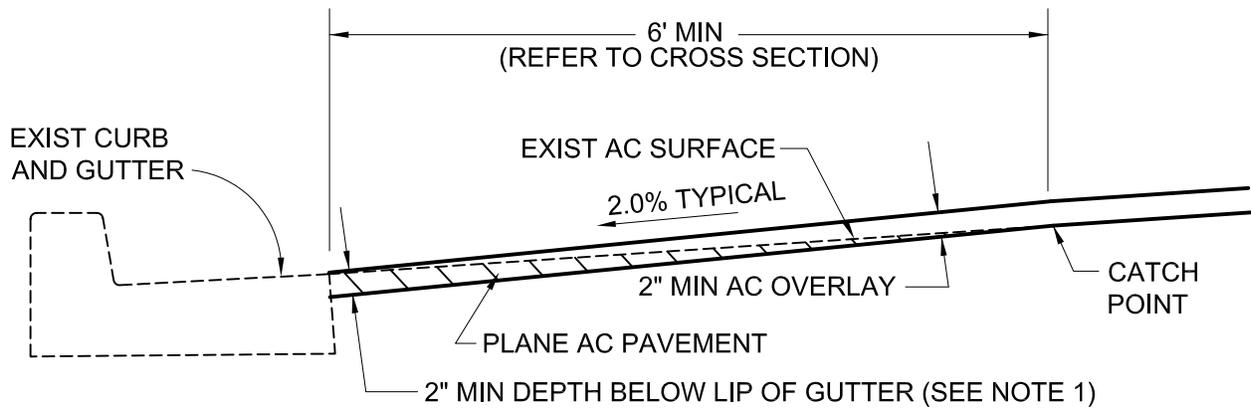
LONGITUDINAL TRENCH ONLY



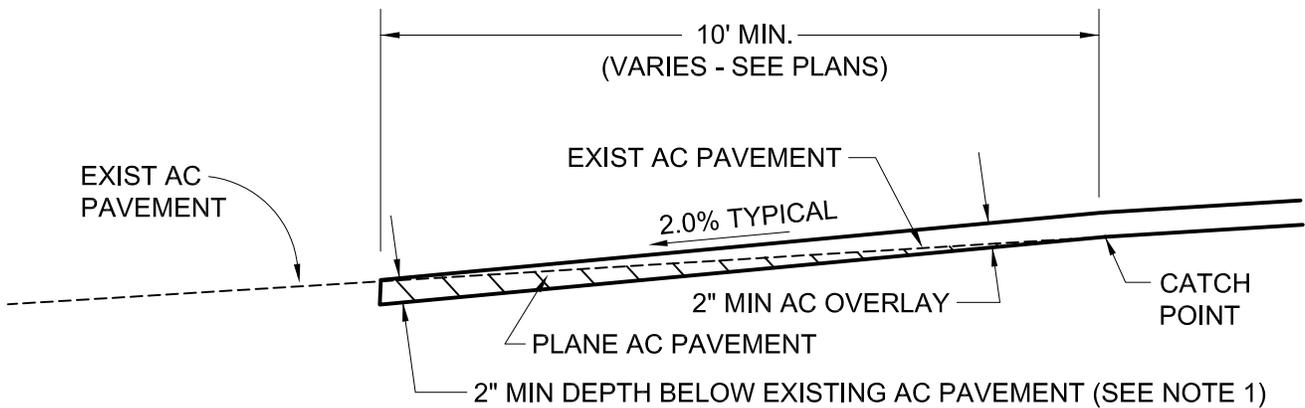
LONGITUDINAL AND TRANSVERSE TRENCH

1. WHEN DISTANCE BETWEEN TRENCH AND LIP OF GUTTER IS 3' OR LESS, ASPHALT PAVING SHALL BE REPLACED TO LIP OF GUTTER.
2. MINIMUM COVER TO FINISHED GRADE SHALL BE 36" FOR LOCAL STREETS AND 42" FOR THOROUGHFARE STREETS.
3. IF STREET HAS BEEN OVERLAYED WITH FABRIC, SPECIAL MEASURES, AS DIRECTED BY THE CITY ENGINEER, SHALL BE TAKEN TO INSURE INTEGRITY OF FABRIC.
4. ALL ASPHALT PAVING JOINTS SHALL BE SEALED WITH RS-1 AND HOT FINES OR SAND FOR MOISTURE SEAL AND APPEARANCE.
5. GRIND EXISTING PAVEMENT TO A DEPTH OF 2-1/2" AND EXTEND A.C. OVERLAY AND REINFORCING FABRIC TO THE NEAREST CURB OR AS DESIGNATED BY THE CITY ENGINEER.
6. GRIND EXISTING PAVEMENT AND EXTEND A.C. OVERLAY 6" BEYOND DEEP LIFT A.C. BOTH SIDES OR AS DESIGNATED BY THE CITY ENGINEER.
7. PRIOR TO PLACING PAVEMENT REINFORCING FABRIC, FILL IN GROOVES LEFT BY AC GRINDING MACHINE WITH 1/2" LEVELING COURSE OF ASPHALT.

<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h3 style="margin: 0;"><u>LONGITUDINAL TRENCH</u></h3> <h3 style="margin: 0;"><u>TRANSVERSE TRENCH</u></h3>			DATE APPROVED BY CITY COUNCIL 04/11/06			
			RESOLUTION NO. 2006-31			
			CITY ENGINEER			
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
SD-28-06.DWG	NONE	WPM	KC	03/08/06	SD-28	1 of 1



PLANNED PAVEMENT AT CURB AND GUTTER
NO SCALE

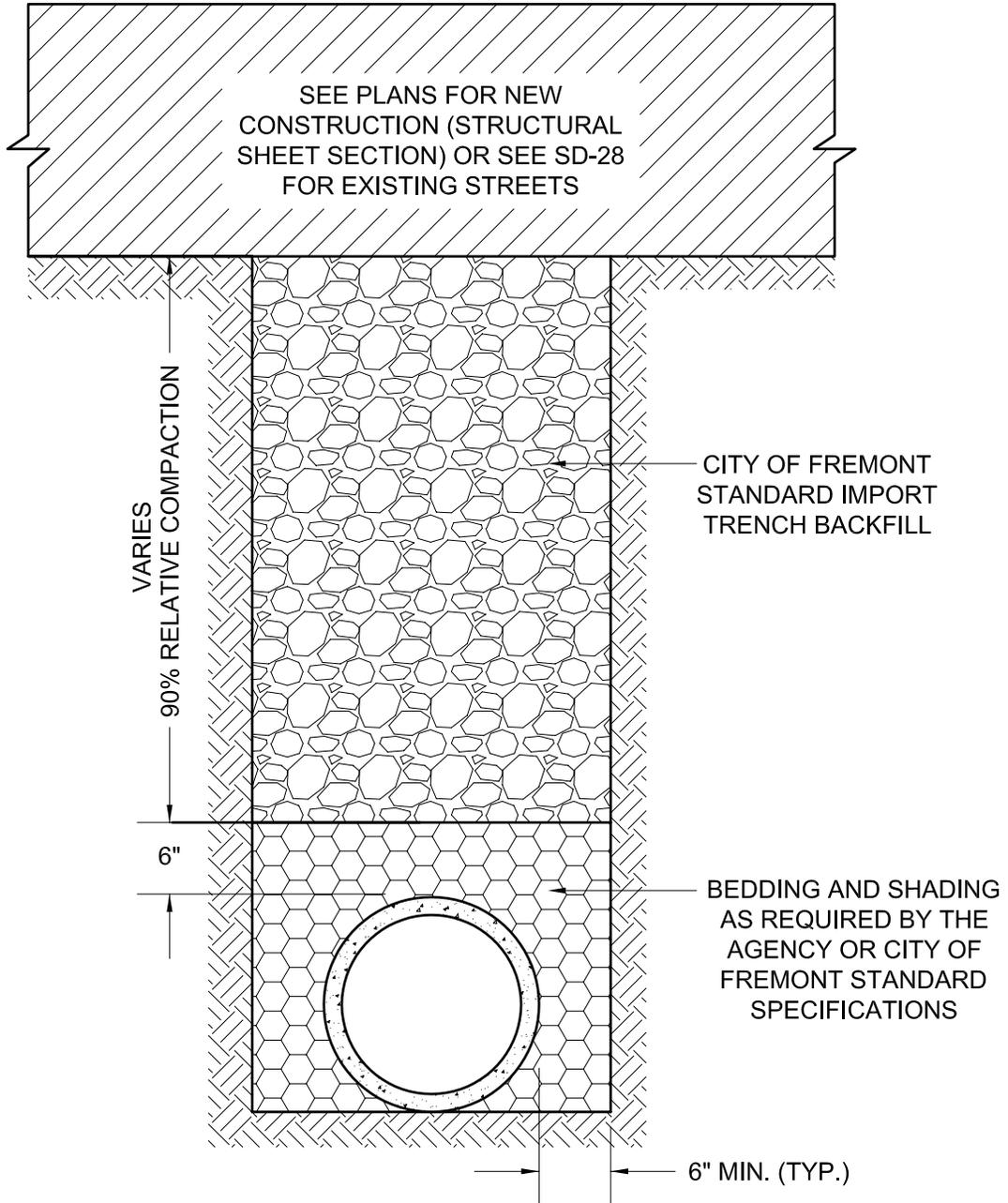


PLANNED PAVEMENT AT LONGITUDINAL & TRANSVERSE ROADWAY CONFORM
NO SCALE

NOTES:

1. IF USING PAVEMENT REINFORCING FABRIC, GRIND 2-1/2" MIN DEPTH BELOW LIP OF GUTTER OR BELOW EXISTING AC PAVEMENT.
2. PRIOR TO PLACING PAVEMENT REINFORCING FABRIC, FILL IN GROVES LEFT BY AC GRINDING MACHINE WITH 1/2" LEVELING COURSE OF ASPHALT.

<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h3 style="margin: 0;"><u>COLD PLANE</u></h3>			DATE APPROVED BY CITY COUNCIL			
			04/11/06			
			RESOLUTION NO. 2006-31			
CITY ENGINEER						
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
SD-29-06.DWG	NONE	WPM	KC	03/14/06	SD-29	1 of 1



NO.	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
TRENCH BACKFILL AND
COMPACTION REQUIREMENTS

DATE APPROVED BY CITY COUNCIL
 04/11/06

RESOLUTION NO. 2006-31

Ham Hughes
 CITY ENGINEER

FILE NO.
 SD-30-06.DWG

SCALE
 NONE

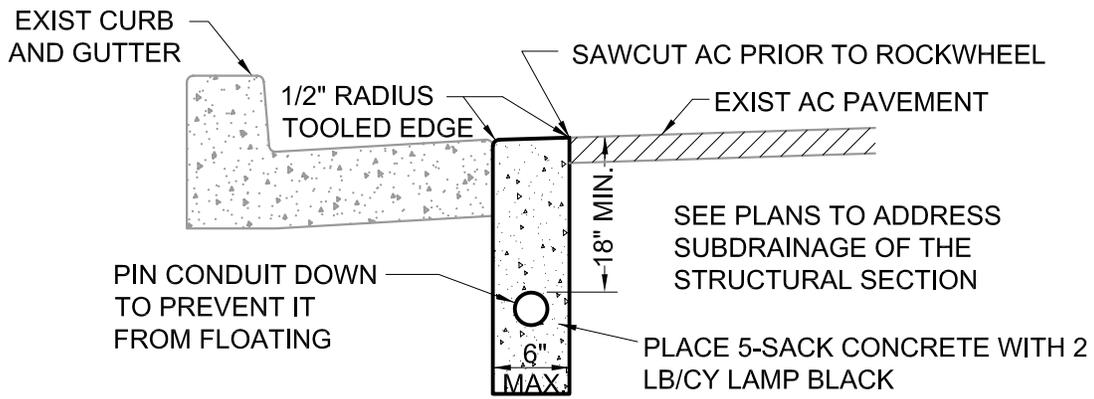
DRAWN
 WPM

CHECKED
 KC

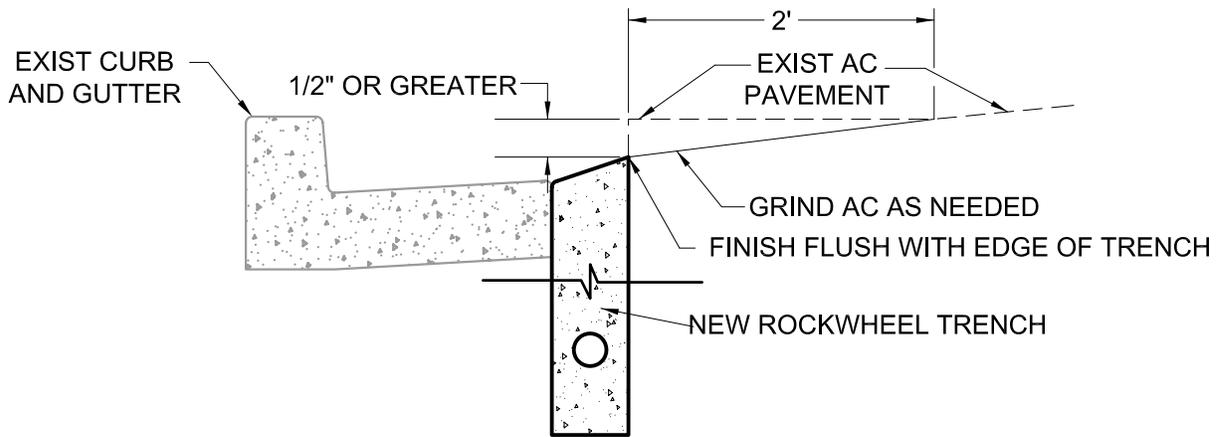
DATE
 03/08/06

DWG NO.
 SD-30

1 of 1

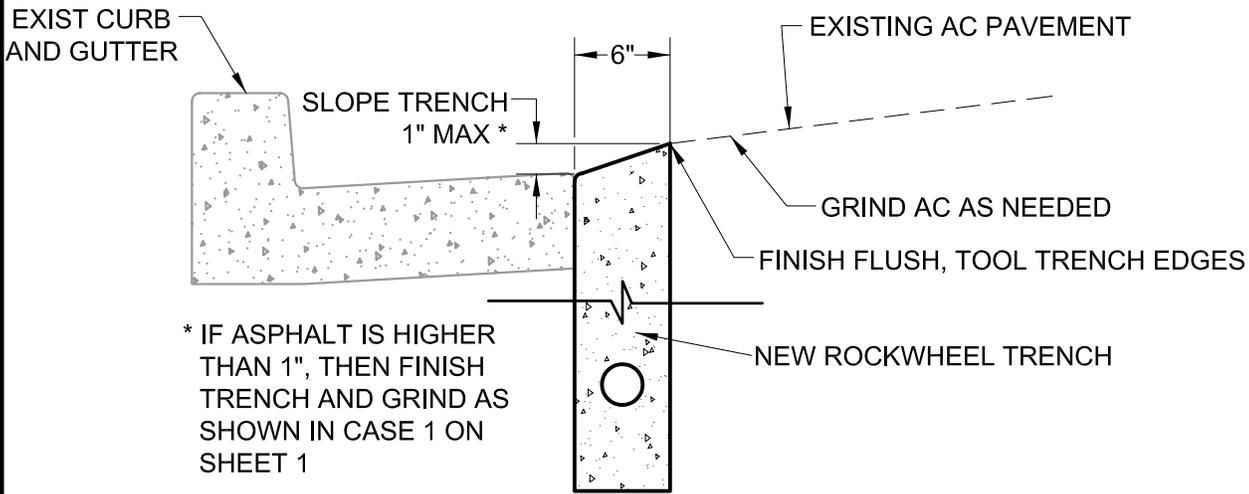


ROCKWHEEL TRENCH - CASE 1



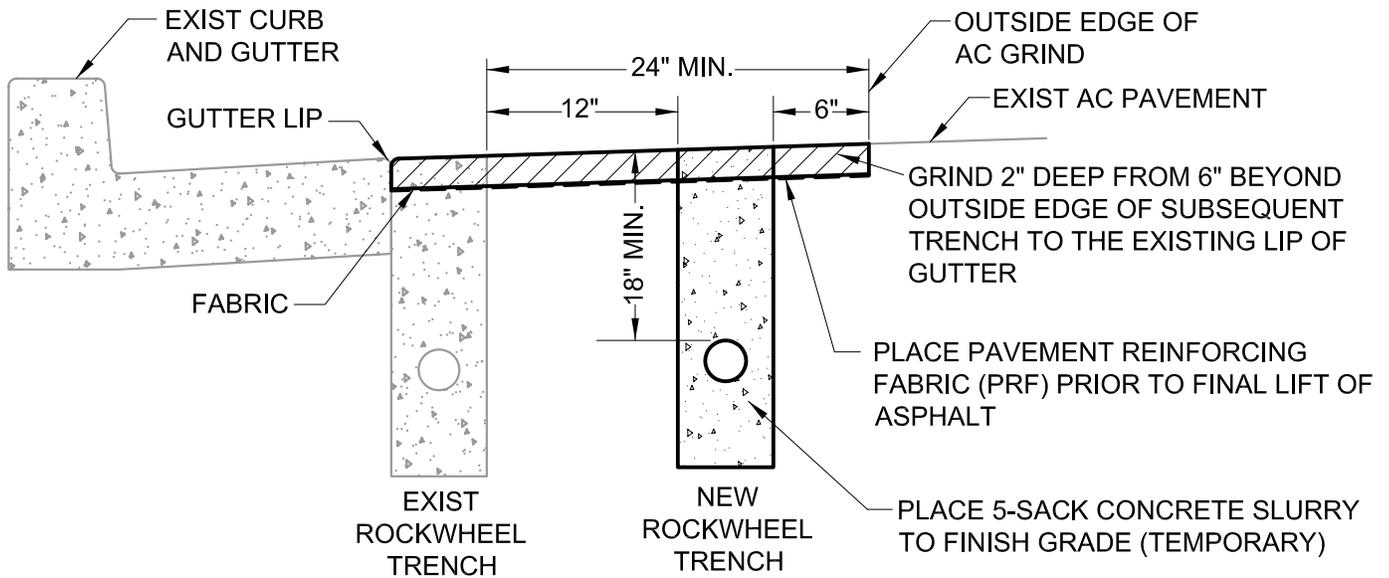
ROCKWHEEL TRENCH ADJACENT TO HIGH ASPHALT - CASE 2
(TRENCHES INSTALLED PRIOR TO 08/03/95)

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 04/11/06			
						RESOLUTION NO. 2006-31			
			<u>ROCKWHEEL TRENCH</u>			<i>Ham Hughes</i>			
						CITY ENGINEER			
NO.	REVISED	DATE	FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
REVISIONS			SD-31-06.DWG	NONE	WPM	KC	03/09/06	SD-31	1 of 2



* IF ASPHALT IS HIGHER THAN 1", THEN FINISH TRENCH AND GRIND AS SHOWN IN CASE 1 ON SHEET 1

ROCKWHEEL TRENCH ADJACENT TO HIGH ASPHALT
CASE "A1"

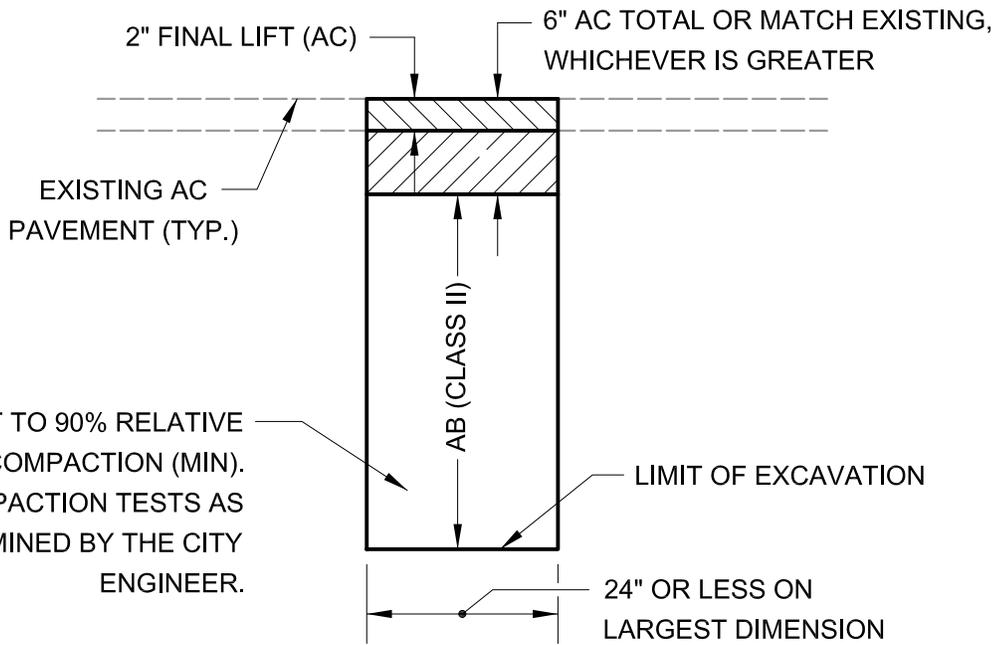


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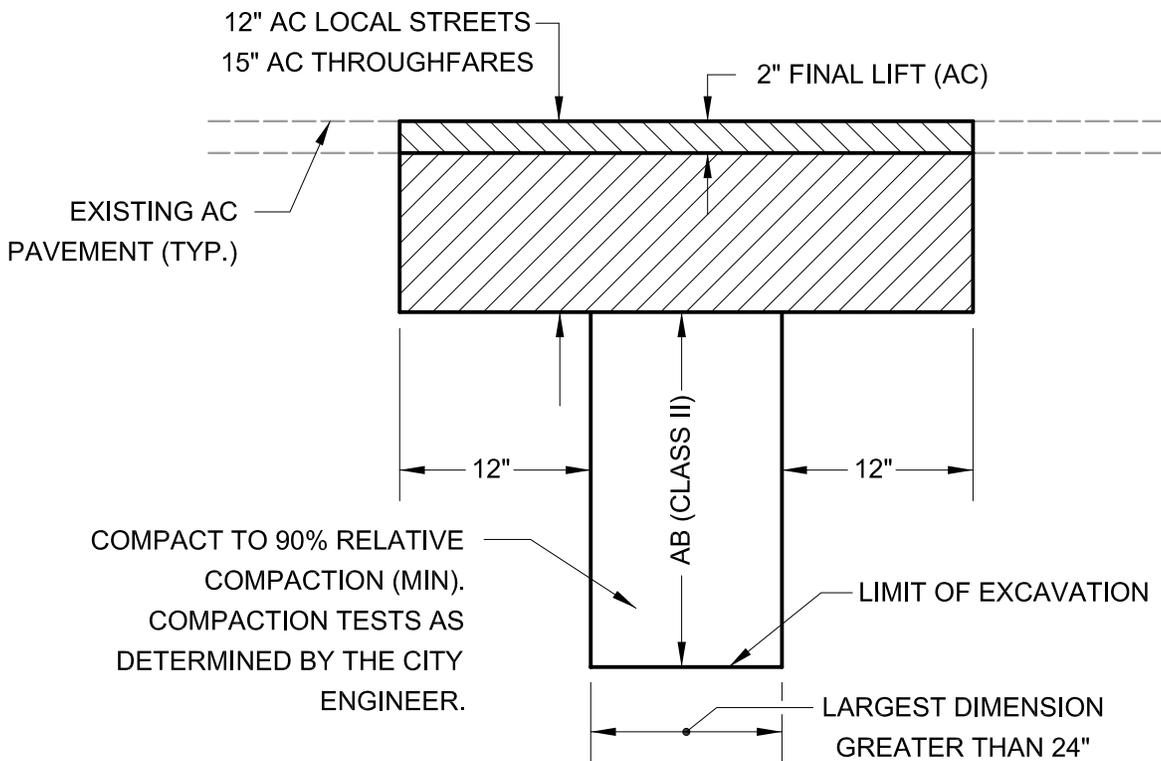
TRENCHES IN THIS CONFIGURATION GREATER THAN 4 FEET WIDE OR 200 FEET LONG WILL BE PAVED WITH A SPREADER BOX OR PAVING MACHINE

ROCKWHEEL TRENCH
(NEW CONSTRUCTION)

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 04/11/06			
						RESOLUTION NO. 2006-31			
			<u>ROCKWHEEL TRENCH</u>			 CITY ENGINEER			
NO.	REVISED	DATE							
REVISIONS			FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
			SD-X13.DWG	NONE	WPM	KC	03/14/06	SD-31	2 of 2

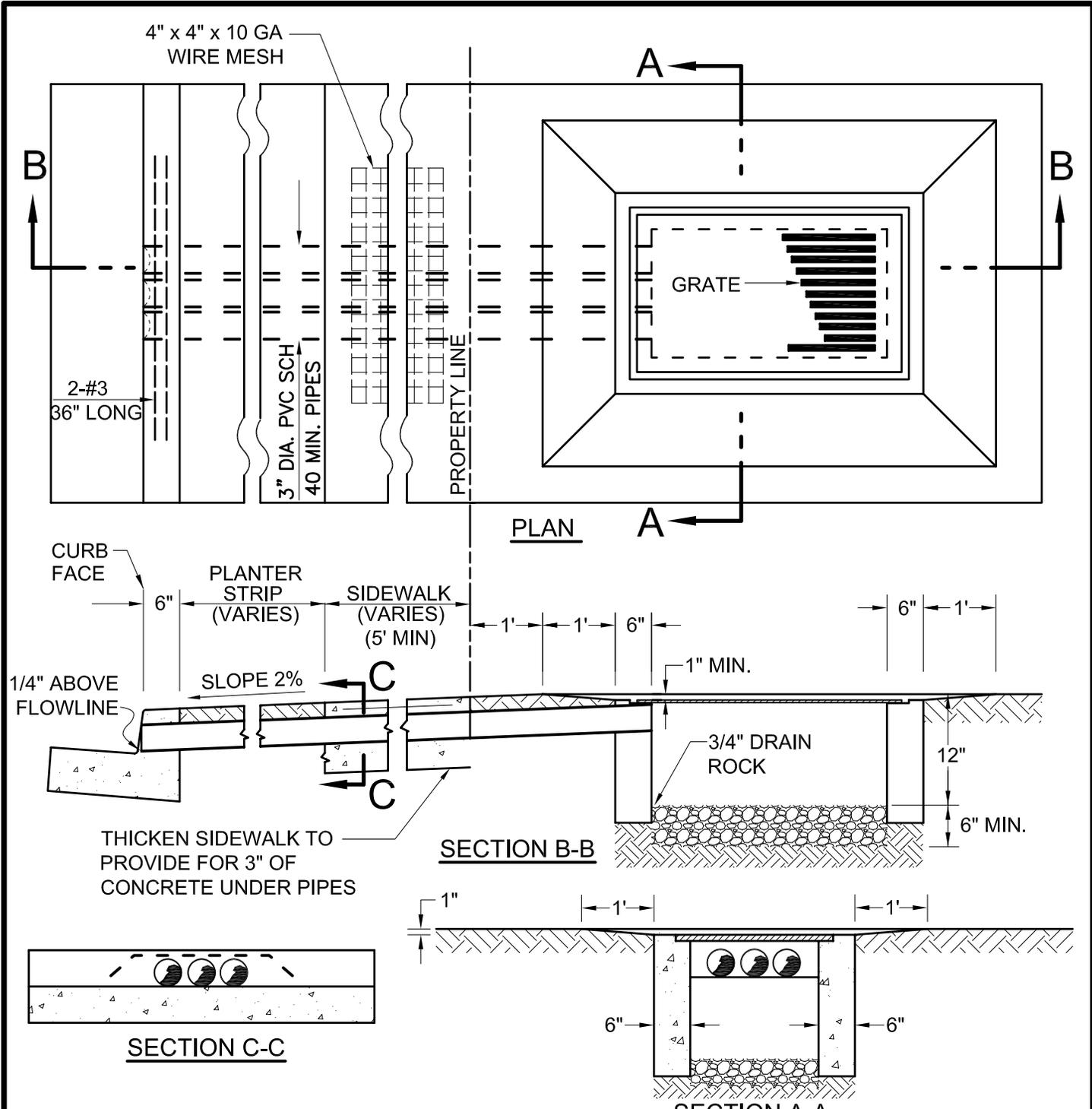


CASE "A"



CASE "B"

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 04/11/06			
						RESOLUTION NO. 2006-31			
			BACKFILL & AC REPLACEMENT FOR UTILITY POTHOLES / WINDOWS			<i>Ham Hughes</i>			
						CITY ENGINEER			
NO.	REVISED	DATE	FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
REVISIONS			SD-32-06.DWG	NONE	WPM	KC	03/14/06	SD-32	1 of 1

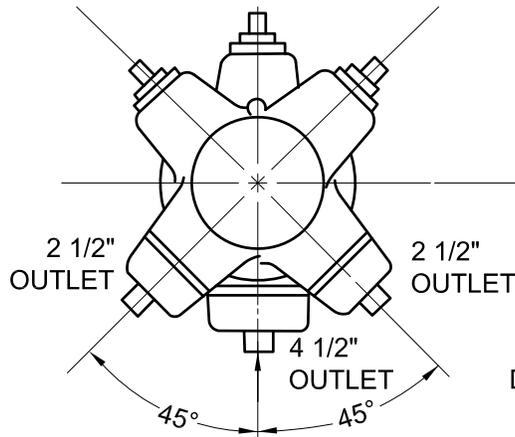


NOTES:

1. INLET GRATE AND FRAME SHALL BE OF SIZE, TYPE AND TRAFFIC LOADING AS SHOWN ON THE PLANS.
2. AN ENCROACHMENT PERMIT IS REQUIRED FOR WORK IN THE PUBLIC RIGHT OF WAY.
3. THE NUMBER OF PIPES DISCHARGING THRU THE CURB SHALL BE AS SHOWN ON THE PLANS.
4. INLET GRATE & FRAME SHALL BE LOCATED IN LANDSCAPE AREAS TO THE MAXIMUM EXTENT PRACTICABLE.

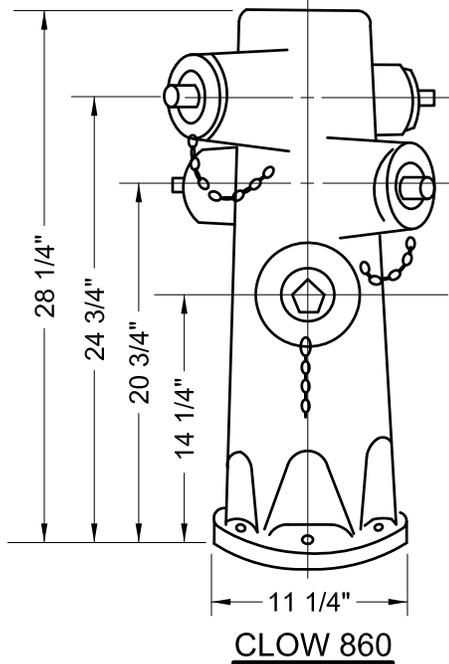
			<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h3 style="margin: 0;">THRU CURB DRAIN</h3> <h3 style="margin: 0;">COMMERCIAL/INDUSTRIAL</h3>			DATE APPROVED BY CITY COUNCIL	
						04/11/06	
						RESOLUTION NO. 2006-31	
						CITY ENGINEER	
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
SD-33-06.DWG	1/2" = 1'-0"	DC	KC	03/14/06	SD-33	1 of 1	

NO.	REVISED	DATE
REVISIONS		



SEE ACWD STANDARD
DETAILS FOR LOCATION
& INSTALLATION

FACE OF CURB



- NOTE**
1. HYDRANTS SHALL BE THE EAST BAY CALIFORNIA FIRE HYDRANT MANUFACTURED UNDER LICENSE WITH THE EAST BAY MUNICIPAL UTILITY DISTRICT AS MANUFACTURED BY CLOW OR APPROVED EQUAL.
 2. HYDRANT SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT ACWD SPECIFICATIONS AND STANDARD DRAWINGS.
 3. HYDRANTS SHALL BE PAINTED KEL-GUARD ENAMEL SAFETY YELLOW NO. 1700-63 MANUFACTURED BY KELLY-MOORE PAINT CO. OR APPROVED EQUAL.
 4. BLUE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED INLINE WITH THE HYDRANT IN THE PAVEMENT ACCORDING TO LATEST MUTCD.

CITY OF FREMONT
STANDARD DETAILS

FIRE HYDRANT

DATE APPROVED BY CITY COUNCIL
04/11/06

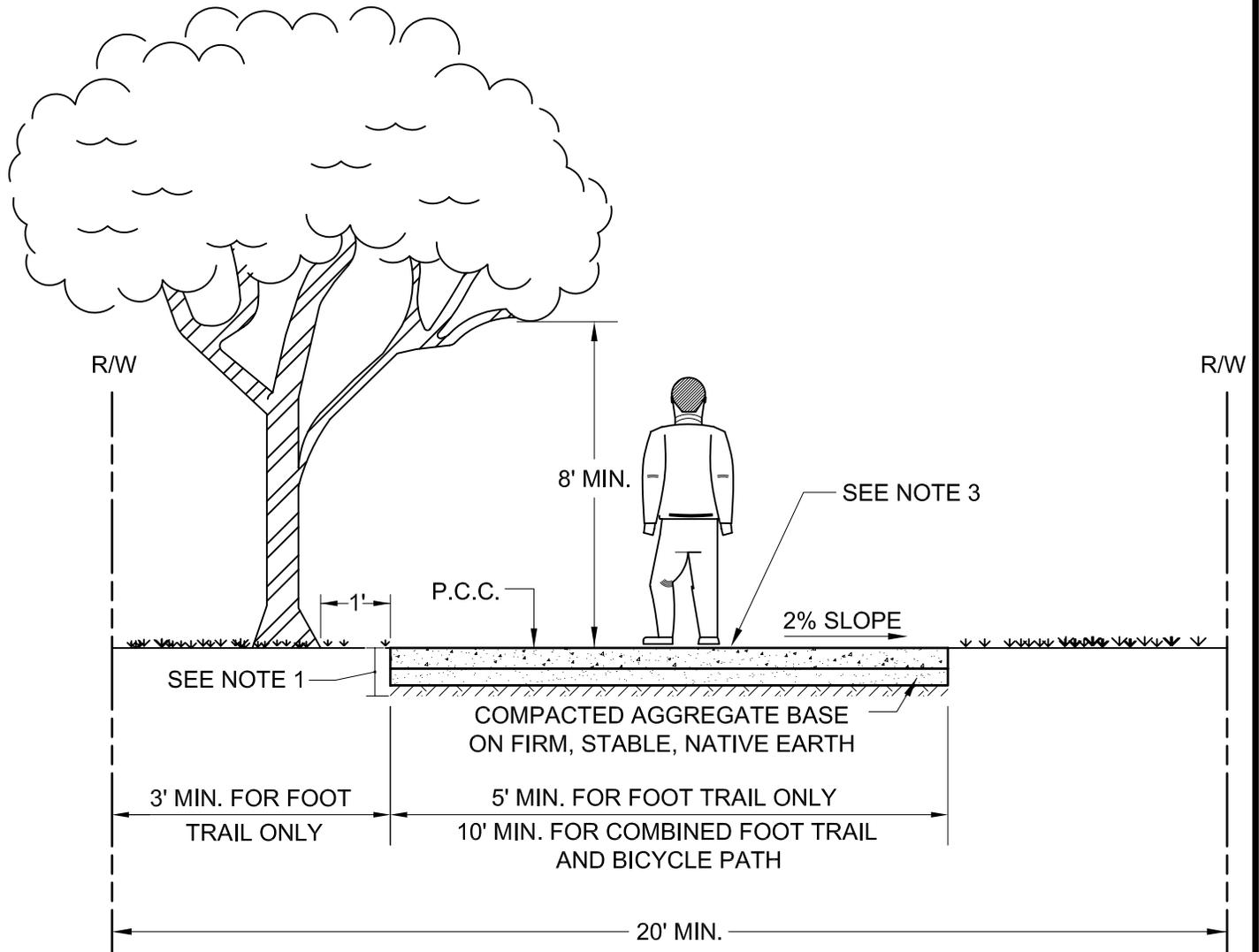
RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

<i>MM</i>	Multiple Changes	1/13
APPR	REVISED	DATE
REVISIONS		

FILE NO. SD-34-06.DWG	SCALE NONE	DRAWN DC	CHECKED AR	DATE 05/21/07	DWG NO. SD-34	1 of 1
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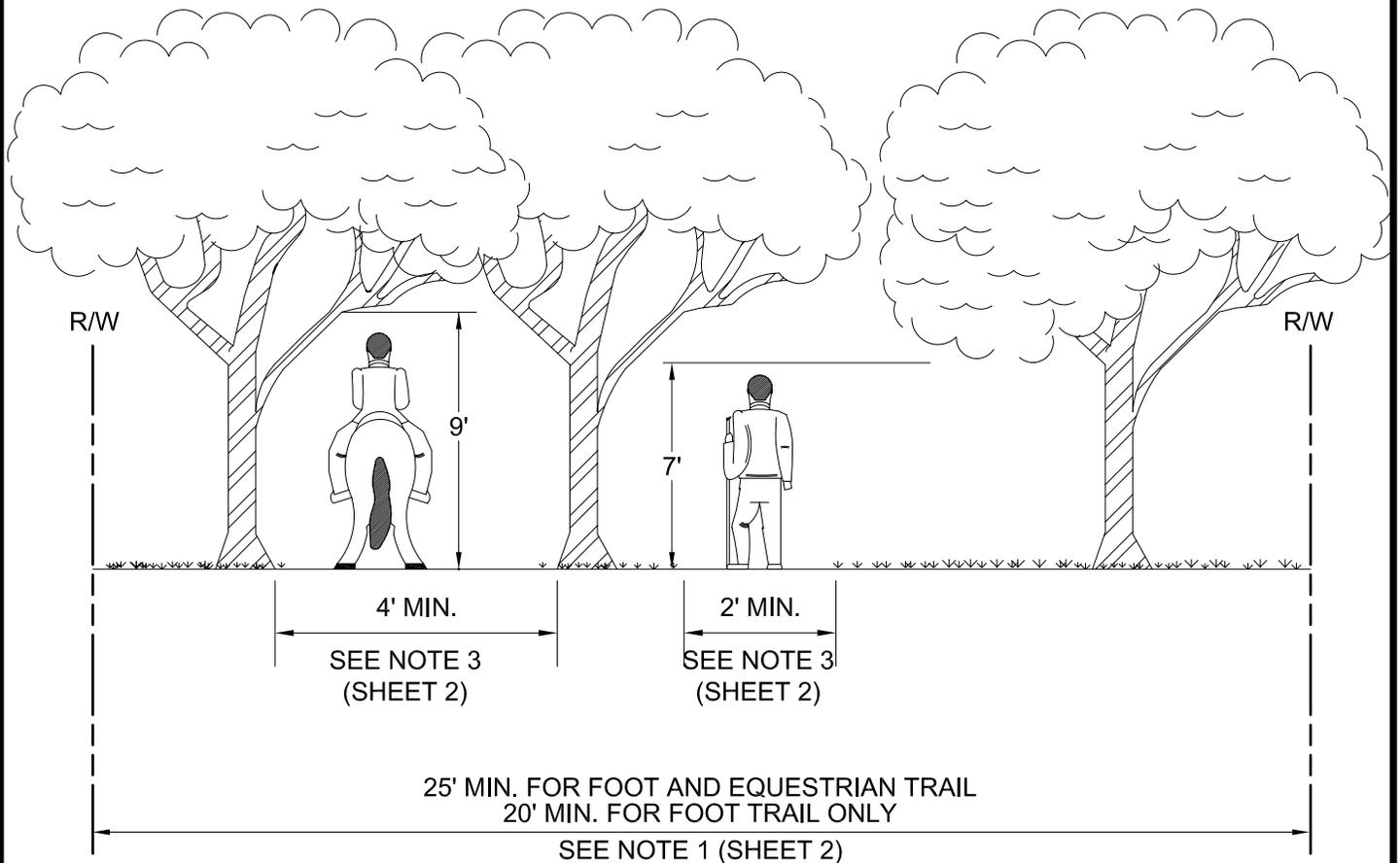


COMBINED FOOT TRAIL & BICYCLE PATH

NOTES:

1. REFER TO CALTRANS CLASS I BIKE / PEDESTRAIN FACILITY FOR DESIGN CRITERIA.
2. A 20 FOOT RIGHT-OF-WAY IS TO BE CONSIDERED AN ABSOLUTE MINIMUM AND SHALL BE INCREASED WHERE POSSIBLE TO TAKE ADVANTAGE OF NATURAL FEATURES, TO PROVIDE REST AREAS AND HORIZONTAL RELIEF.
3. FOOT TRAIL OR BICYCLE PATH SHALL BE CLASS "A" 6 SACK MIX PORTLAND CEMENT CONCRETE, 3/4 INCH MAXIMUM AGGREGATE WITH WASHED SURFACE.
4. STANDARD CITY STREET TREES SHALL BE PROVIDED AT AN AVERAGE SPACING OF 25 FEET ON EACHSIDE OF THE FOOT TRAIL & BICYCLE PATH.

			CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL							
						04/11/06							
			STANDARD DETAILS			RESOLUTION NO. 2006-31							
						 CITY ENGINEER							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">NO.</th> <th style="width: 40%;">REVISED</th> <th style="width: 50%;">DATE</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">REVISIONS</td> </tr> </tbody> </table>			NO.	REVISED	DATE	REVISIONS			<u>COMBINED FOOT TRAIL</u>			DWG NO.	
NO.	REVISED	DATE											
REVISIONS													
			<u>AND BICYCLE PATH</u>										
FILE NO.	SCALE	DRAWN				CHECKED	DATE	SD-35		1 of 1			
SD-35-06.DWG	NONE	DC	KC	03/14/06									



FOOT & EQUESTRIAN TRAIL

			<p>CITY OF FREMONT STANDARD DETAILS</p>			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
			<p><u>FOOT AND EQUESTRIAN TRAIL</u></p>			 CITY ENGINEER	
NO.	REVISED	DATE				REVISIONS	
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
SD-36-05.DWG	NONE	DC	KC	03/09/06	SD-36	1 of 2	

NOTES:

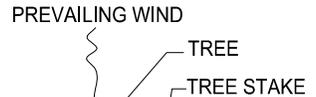
1. A 25 FOOT RIGHT-OF-WAY IS TO BE CONSIDERED AN ABSOLUTE MINIMUM FOR A FOOT AND EQUESTRIAN TRAIL AND A 20 FOOT RIGHT-OF-WAY IS TO BE CONSIDERED AN ABSOLUTE MINIMUM FOR A FOOT TRAIL ONLY AND SHALL BE INCREASED WHERE POSSIBLE TO TAKE ADVANTAGE OF NATURAL FEATURES, TO PROVIDE REST AREAS, AND TO ADD HORIZONTAL RELIEF.
2. EXCEPT FOR SPECIAL SITUATIONS WHERE A GREATER LONGITUDINAL GRADE RATE IS SPECIFICALLY APPROVED BY THE CITY ENGINEER, THE FOLLOWING MAXIMUM RATES OF GRADE SHALL APPLY:

<u>LENGTH OF GRADE</u>	<u>MAXIMUM GRADE RATE</u>
500 FEET OR LONGER	7%
200 FEET TO 499 FEET	10%
LESS THAN 200 FEET	15%

3. THE MINIMUM TRAIL TREADS SHOWN ABOVE SHALL BE INCREASED TO 8 FEET WHERE THE TRAIL TREAD IS TO BE USED AS A FIRE ROAD OR MAINTENANCE ROAD.
4. ALIGNMENT OF TRAIL TREADS SHALL BE LOCATED TO CAUSE MINIMUM DISRUPTION TO EXISTING TERRAIN.
5. TRAIL TREADS SHALL BE SEPARATED WHERE POSSIBLE BUT A COMBINED TREAD OF 6 FEET MAY BE APPROVED BY THE CITY ENGINEER WHEN NATURAL FEATURES PRECLUDE THE SEPARATION OF THE TWO TREADS.
6. ONLY MINOR GRADING NECESSARY FOR SAFETY OR DRAINAGE PURPOSES SHALL BE APPROVED.
7. TRAIL TREADS SHALL BE CLEARED OF ALL ROCKS, STUMPS, AND ROOTS WHICH WOULD INTERFERE WITH THE SAFE PASSAGE OF TRAIL USERS.
8. TIMBER BRIDGES, DESIGNED TO BLEND WITH THE ENVIRONMENT, SHALL BE PROVIDED OVER WATER COURSES CROSSED BY THE TRAIL. BRIDGES SHALL BE DESIGNED TO CARRY VEHICLE LOADINGS WHEN THE TRAIL ALSO SERVES AS A FIRE TRAIL OR MAINTENANCE ROAD.
9. STILES OR SELF CLOSING GATES, WHICH CAN BE OPENED BY EITHER A MOUNTED EQUESTRIAN OR A PEDESTRIAN, SHALL BE PROVIDED AT ALL TRAIL CROSSINGS OF FENCE LINES.

			CITY OF FREMONT STANDARD DETAILS <u>FOOT AND EQUESTRIAN TRAIL</u>			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
						 CITY ENGINEER	
NO.	REVISED	DATE					
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
SD-36-06.DWG	NONE	DC	KC	03/09/06	SD-36	2 of 2	

STAKING AND TYPING TREE:



WONDER TREE TIE
Ph. (800)910-2810

WONDER TREE-TIE MODEL# W14-46, W24-84 OR APPROVED EQUAL. SECURE EXPOSED WIRE ENDS TO OUTSIDE OF STAKE - POUND WIRE ENDS INTO STAKE. ALLOW 3 INCHES OF MOVEMENT OF TREE IN ALL DIRECTIONS.

LODGE POLE PINE TREE STAKES (DO NOT PIERCE ROOT BALL):
2 INCH DIA. - 24" BOX & UNDER,
3 INCH DIA. - 36" BOX & UP

MULCH AND WATER BASIN:

BARK MULCH: 3 INCH DEPTH, KEEP CLEAR FROM TRUNK OF TREE

FINISH GRADE

4 INCH TALL EARTH BERM FOR WATER BASIN:

- 3' DIA. FOR 15-GAL.
- 4' DIA. = 24" BOX
- 5' DIA. = 36" BOX & LARGER

PLANTING HOLE:

BACK FILL MIX (TOP 12 INCHES ONLY): 70% PULVERIZED NATIVE SOIL, 30% COMPOST

FERTILIZER: BEST PAKS (21 GRAM, 20-10-5): 15 GAL. - 9 PAKS, 24" BOX - 25 PAKS, 36" BOX - 30 PAKS

PLANTING HOLE, PULVERIZED NATIVE SOIL BELOW 12-INCHES FROM FINISH GRADE; SCARIFY WALLS

SET ROOT BALL FIRMLY ON UNDISTURBED OR WATER SETTLED NATIVE SOIL. TOP OF ROOT BALL 1 INCH ABOVE FINISH GRADE.

NOTES:

1. KEEP TURF AND PLANTS OUTSIDE CIRCULAR EARTH BERM / WATER BASIN.
2. STREET TREES (TREES WITHIN CITY RIGHT-OF-WAY) SHALL BE:
15 GALLON SIZE FOR SINGLE FAMILY RESIDENCE PERMIT REPLACEMENT TREE
24 INCH BOX SIZE FOR ALL OTHER TREES

TOP OF STAKE
6 INCHES BELOW HEAD

IRRIGATION AND TUBE NOT REQUIRED FOR PERMITTED REPLACEMENT TREES

DEEP WATERING TUBE: 4 INCH PERF. PVC PIPE WITH OPEN GRATE CAP; FILL WITH DRAIN ROCK

1/2 GPM IRRIGATION BUBBLER, OFFSET FROM TREE AS DIMENSIONED WHEN REQUIRED

STAKE HEIGHT: AS REQUIRED FOR TREE HEIGHT

STAKE DEPTH: 3 FEET

DEPTH OF ROOT BALL
+6" (15 GAL)
+12" (24" & 36")

PLANT HOLE DIAMETERS:

- 15 GAL: 3'-6"
- 24" BOX: 4'-6"
- 36" BOX: 6'-0"

WATERING B HAND:

WATER TWICE WEEKLY DURING THE GROWING SEASON. APPLY 7 1/2 TO 10 GALLONS DURING EACH WATERING. FILL WATER BASIN SLOWLY TO ALLOW WATER TO SOAK INTO SOIL.

**CITY OF FREMONT
STANDARD DETAILS**

**CITY STANDARD
TREE PLANTING & STAKING**

DATE APPROVED BY CITY COUNCIL
12/13/11

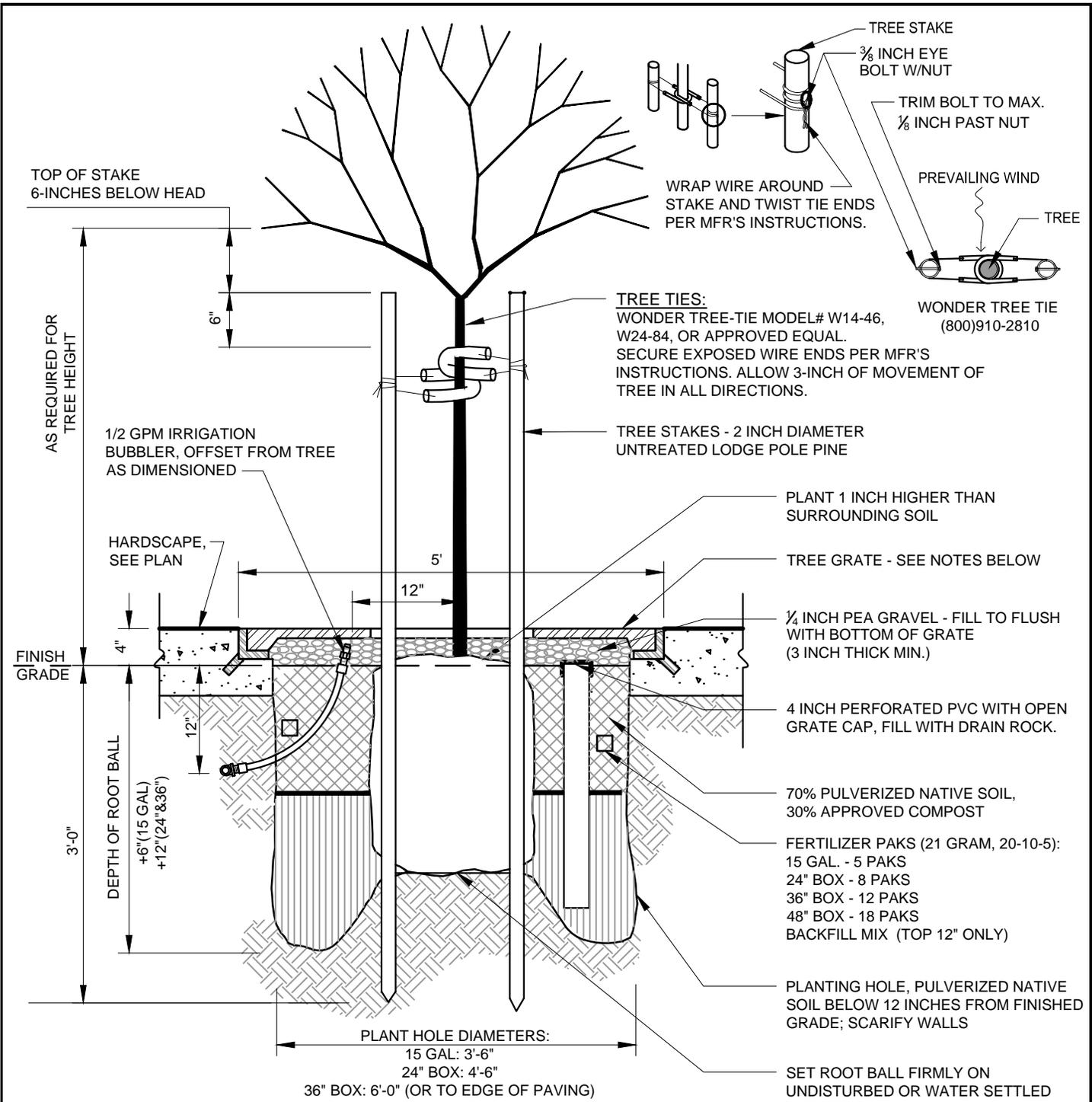
RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

	Council Revision	12/13/11
	General Revision	02/08/10
APPR	REVISED	DATE
REVISIONS		

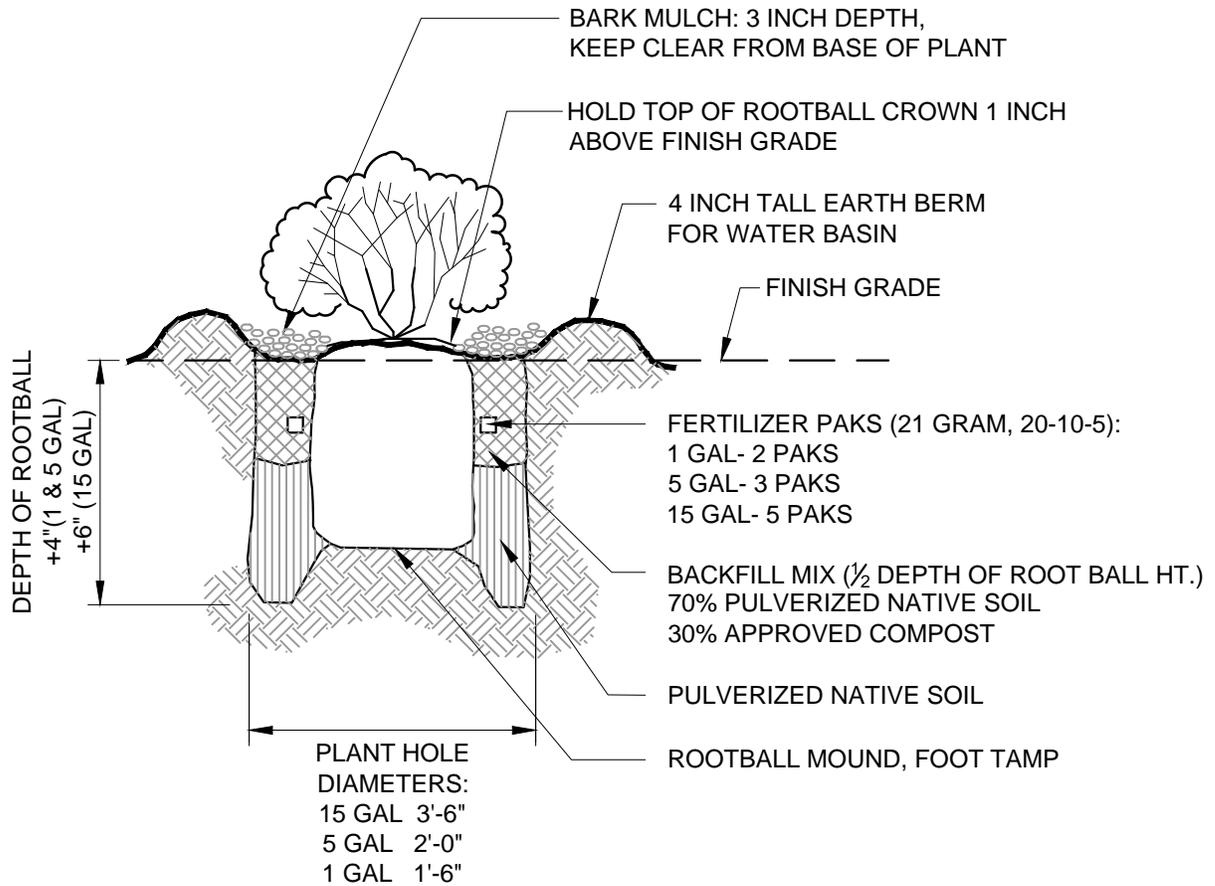
FILE NO. LSD-1.DWG	SCALE 3/4" = 1'-0"	DRAWN PM/MM	CHECKED RER	DATE DEC. 2011	DWG NO. LSD - 1	1 of 1
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PLANTING NOTES:

1. TREE GRATE TO BE FIVE (5) FOOT SQUARE, MAKE AND MODEL TO BE: NEENAH, R-8707, OR APPROVED EQUAL.
2. TREE GRATE TO BE UNFINISHED.
3. REFER TO DETAIL LSD-1 FOR MORE INFORMATION.
4. STREET TREES (TREES WITHIN RIGHT-OF-WAY) SHALL BE 24 INCH BOX SIZE, MINIMUM.

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 04/11/06			
						RESOLUTION NO. 2006-31			
			CITY STANDARD TREE PLANTING WITH TREE GRATE			<i>Nam Hughes</i>			
						CITY ENGINEER			
APPR	REVISED	DATE	FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
REVISIONS			LSD-2.DWG	3/4" = 1'-0"	PM/MM	RER	NOV. 2005	LSD-2	1 of 1

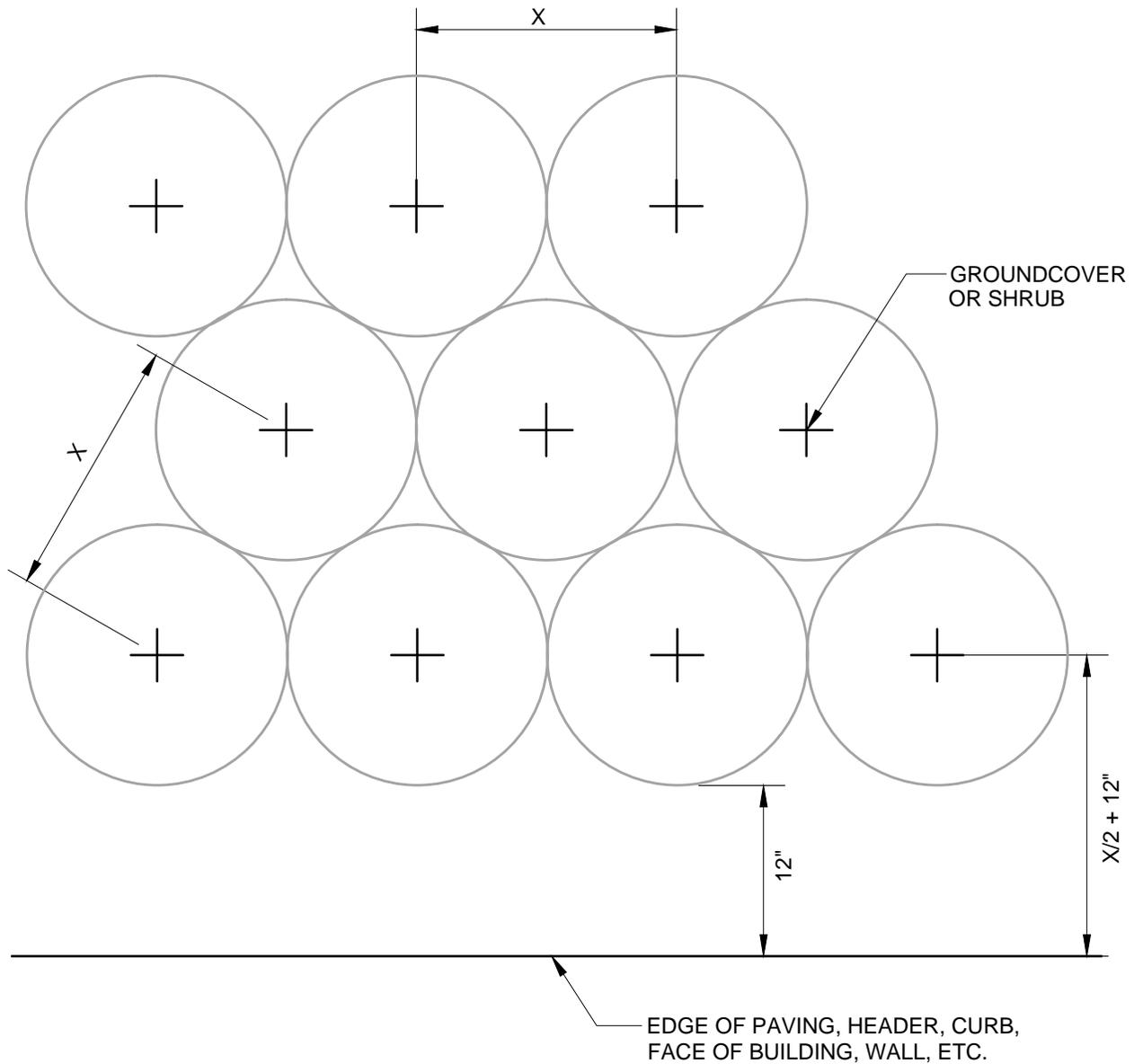


APPR	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
CITY STANDARD
SHRUB AND GROUNDCOVER
PLANTING

DATE APPROVED BY CITY COUNCIL 04/11/06
RESOLUTION NO. 2006-31
<i>Nam Hughes</i>
CITY ENGINEER

FILE NO. LSD-3.DWG	SCALE 3/4" = 1'-0"	DRAWN PM/MM/AK	CHECKED RER	DATE NOV. 2005	DWG NO. LSD-3	1 of 1
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NOTE:

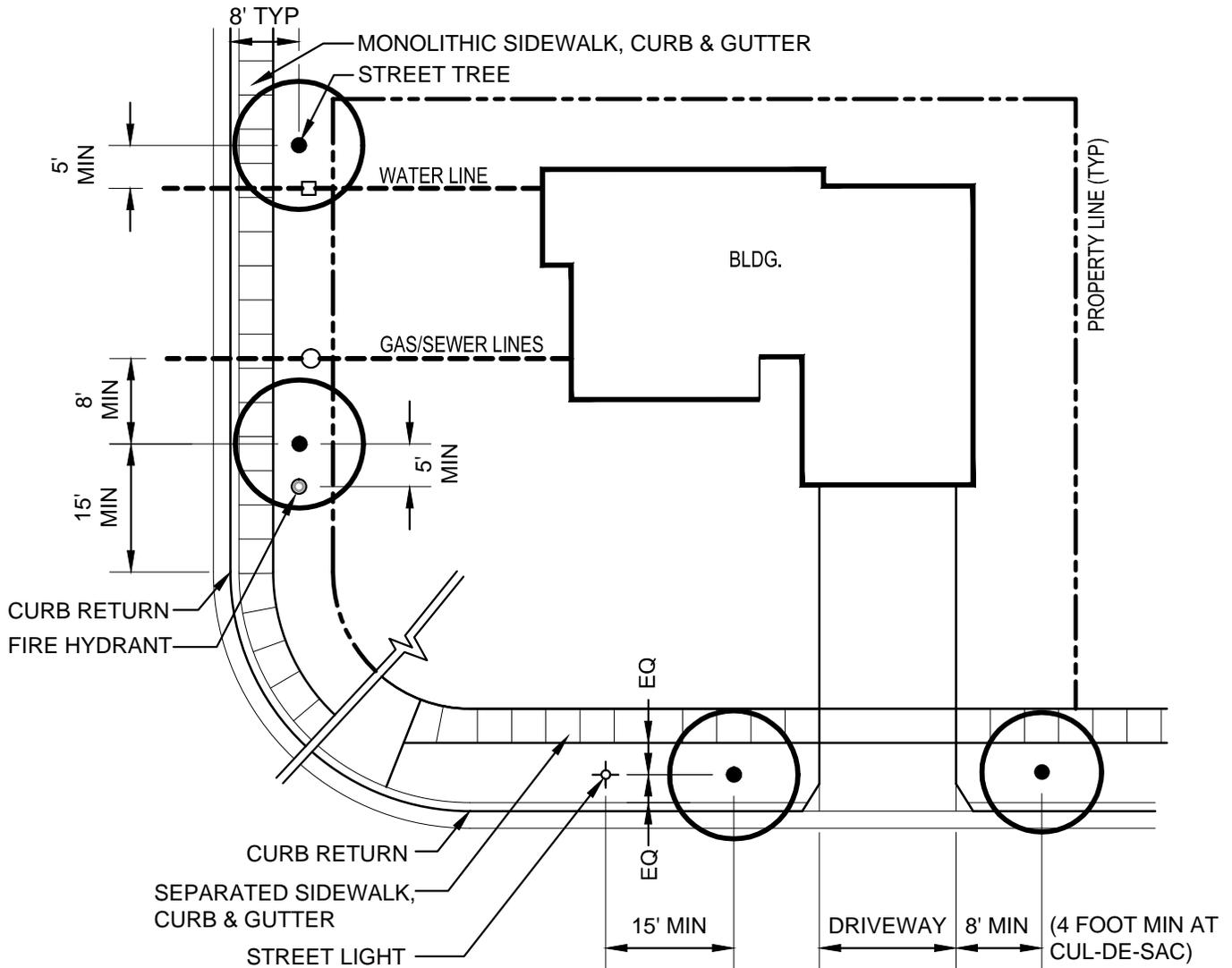
1. 'X' IS GROUNDCOVER AND SHRUB SPACING PER THE LANDSCAPE PLAN, PLANT LIST, AND LEGEND.
2. KEEP MULCH CLEAR OF PLANT BASE (SEE LSD-3 & LSD-12)

<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h3 style="margin: 0;">CITY STANDARD</h3> <h2 style="margin: 0;">SHRUB AND GROUNDCOVER</h2> <h2 style="margin: 0;">PLANTING LAYOUT</h2>			DATE APPROVED BY CITY COUNCIL 12/13/11			
			RESOLUTION NO. 2006-31			
			CITY ENGINEER			
FILE NO. LSD-4.DWG	SCALE 1" = 1'-0"	DRAWN PM/MM	CHECKED RER	DATE DEC. 2011	DWG NO. LSD-4	1 of 1

Council Revision	12/13/11	
General Revision	03/17/11	
APPR	REVISED	DATE
REVISIONS		

MINIMUM STREET TREE CLEARANCES

1. STREET TREES SHALL BE LOCATED 8 FEET (MIN) FROM SANITARY SEWER, GAS, AND STORMWATER LINES.
2. STREET TREES SHALL BE LOCATED 5 FEET (MIN) FROM WATER, TELEPHONE AND ELECTRICAL LINES.
3. STREET TREES SHALL BE LOCATED 5 FEET (MIN) FROM FIRE HYDRANTS.
4. STREET TREES SHALL BE LOCATED 15 FEET (MIN) FROM STREET LIGHTS.
5. STREET TREES SHALL BE LOCATED 8 FEET (MIN) FROM DRIVEWAYS AND 4 FEET (MIN) AT CUL-DE-SAC.
6. STREET TREES SHALL BE GENERALLY 35 FEET ON CENTER.
7. STREET TREES SHALL BE LOCATED 15 FEET (MIN) FROM CURB RETURNS.
8. MINIMUM ONE TREE PER LOT REQUIRED, AND TWO PER CORNER LOT.
9. IF LOT WIDTH EXCEEDS 60 FEET AT THE STREET, ONE TREE IS REQUIRED EVERY 35 FEET OF STREET, EXCLUDING LENGTH OF CURB RETURN.



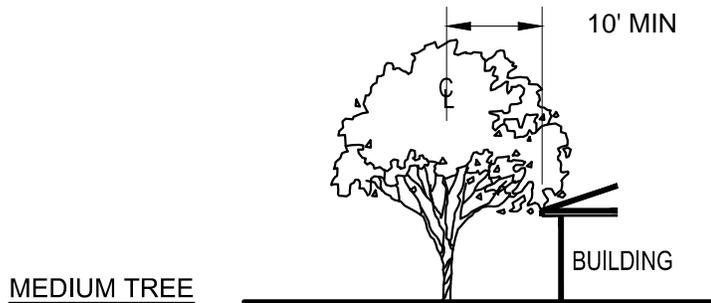
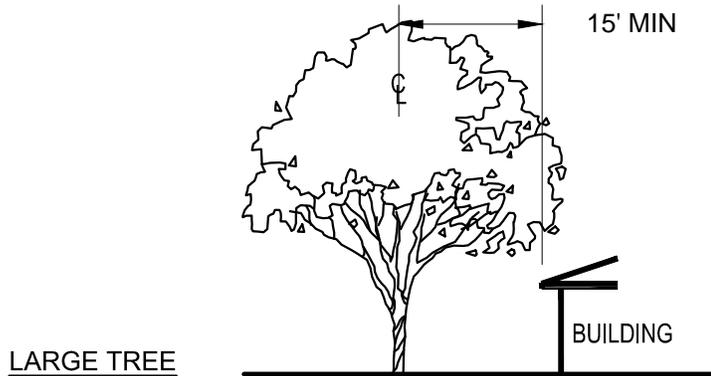
NOTE:
CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL

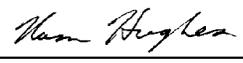
			<p>CITY OF FREMONT STANDARD DETAILS <u>CITY STANDARD</u> STREET TREE CLEARANCES</p>			DATE APPROVED BY CITY COUNCIL 04/11/06							
						RESOLUTION NO. 2006-31							
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			APPR	REVISED	DATE								
REVISIONS													
FILE NO. LSD-05.DWG	SCALE 1" = 20'-0"	DRAWN PM/MM	CHECKED RER	DATE OCT. 2005	DWG NO. LSD-5	1 of 1							

MINIMUM TREE CLEARANCES FROM BUILDINGS

BRANCHES FROM MATURE TREES MAY NOT OVERHANG BUILDINGS AND ROOFS. ADEQUATE SPACE TO PLANT TREES ADJACENT TO BUILDINGS OR OTHER BUILT FEATURES MUST BE PROVIDED IN THE FOLLOWING MINIMUM WAYS:

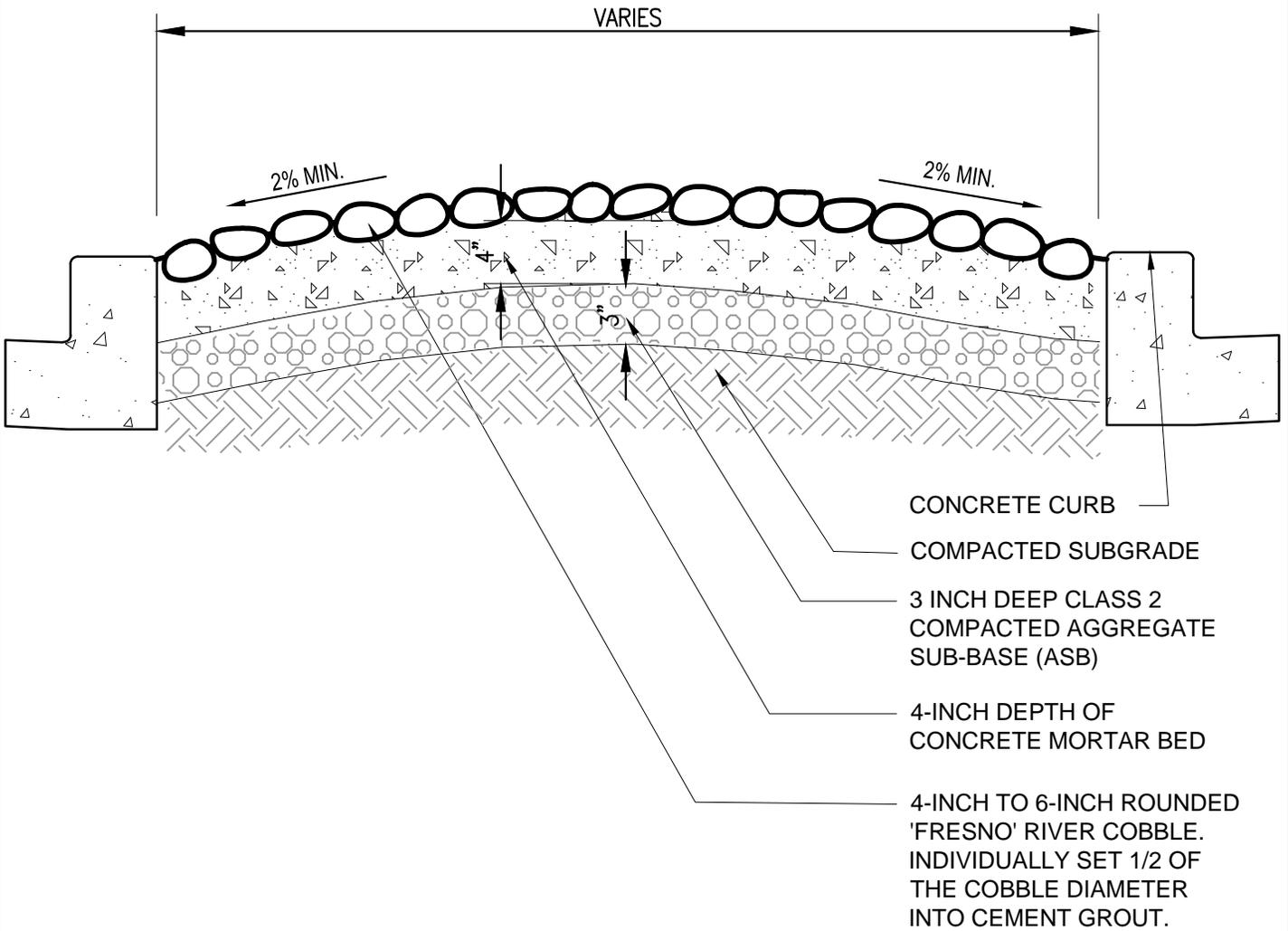
1. SMALL TREES (TO 15 FEET TALL AT MATURITY) NO CLOSER THAN 6 FEET FROM BUILDING OR 2 FEET* FROM PAVING, CURBS, OR WALLS WITH A MINIMUM PLANTING AREA 5 FEET WIDE.
 2. MEDIUM TREES (TO 35 FEET TALL AT MATURITY) NO CLOSER THAN 10 FEET FROM BUILDING OR 3 FEET* FROM PAVING, CURBS, OR WALLS WITH A MINIMUM PLANTING AREA 6 FEET WIDE.
 3. LARGE TREES (ABOVE 35 FEET TALL AT MATURITY) NO CLOSER THAN 15 FEET FROM BUILDING OR 3 FEET* FROM PAVING, CURBS, OR WALLS WITH A MINIMUM PLANTING AREA 6 FEET WIDE, PREFERABLY 8 FEET WIDE.
 4. WHEN ROOF EAVES OR BUILDING PROJECTIONS EXTEND BEYOND FACE OF BUILDING, CLEARANCE SHALL BE MEASURED FROM EDGE OF PROJECTION TO CENTERLINE OF TREE.
 5. UPPER STORY OVERHANGS AND BUILDING FEATURES MAY NOT EXTEND WITHIN MINIMUM CLEARANCE EXCEPT FOR MINOR ROOF EAVES.
- * REFER TO CITY STANDARD DETAIL LSD-05 FOR REQUIRED SPACING FROM UTILITIES.



			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
			CITY STANDARD <u>TREE CLEARANCES</u>			 CITY ENGINEER	
APPR	REVISED	DATE				REVISIONS	
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
LSD-6.DWG	1"=20'-0"	MQ/MM	RER	NOV. 2005	LSD-6	1 of 1	

NOTES:

1. CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL.
2. CROWN TO BE ROUNDED WITH NO SHARP GRADE BREAKS.
3. MINIMIZE VISIBLE EXPOSED GROUT AT COBBLE JOINTS.
4. SURFACE OF COBBLE FIELD TO BE SMOOTH AND FLAT TO GRADE WITHOUT VARIATION IN HEIGHT OF INDIVIDUAL COBBLES.
5. COBBLES WITH BREAKS OR FRACTURES ARE NOT ALLOWED.
6. ROCK SHALL BE 'SATURATED SURFACE MOIST' (SSM) PRIOR TO PLACEMENT.
7. CONCRETE MORTAR BED SHALL HAVE A CEMENT RATIO PER CUBIC YARD OF CONCRETE OF NOT LESS THAN 564 POUNDS; SLUMP MAX. OF 3"; AGGREGATE SIZE 1/4" MAXIMUM.
8. INTEGRAL COLOR ADMIXTURE: CHROMIX, ADOBE TAN, #C-21 BY L.M. SCOFIELD.

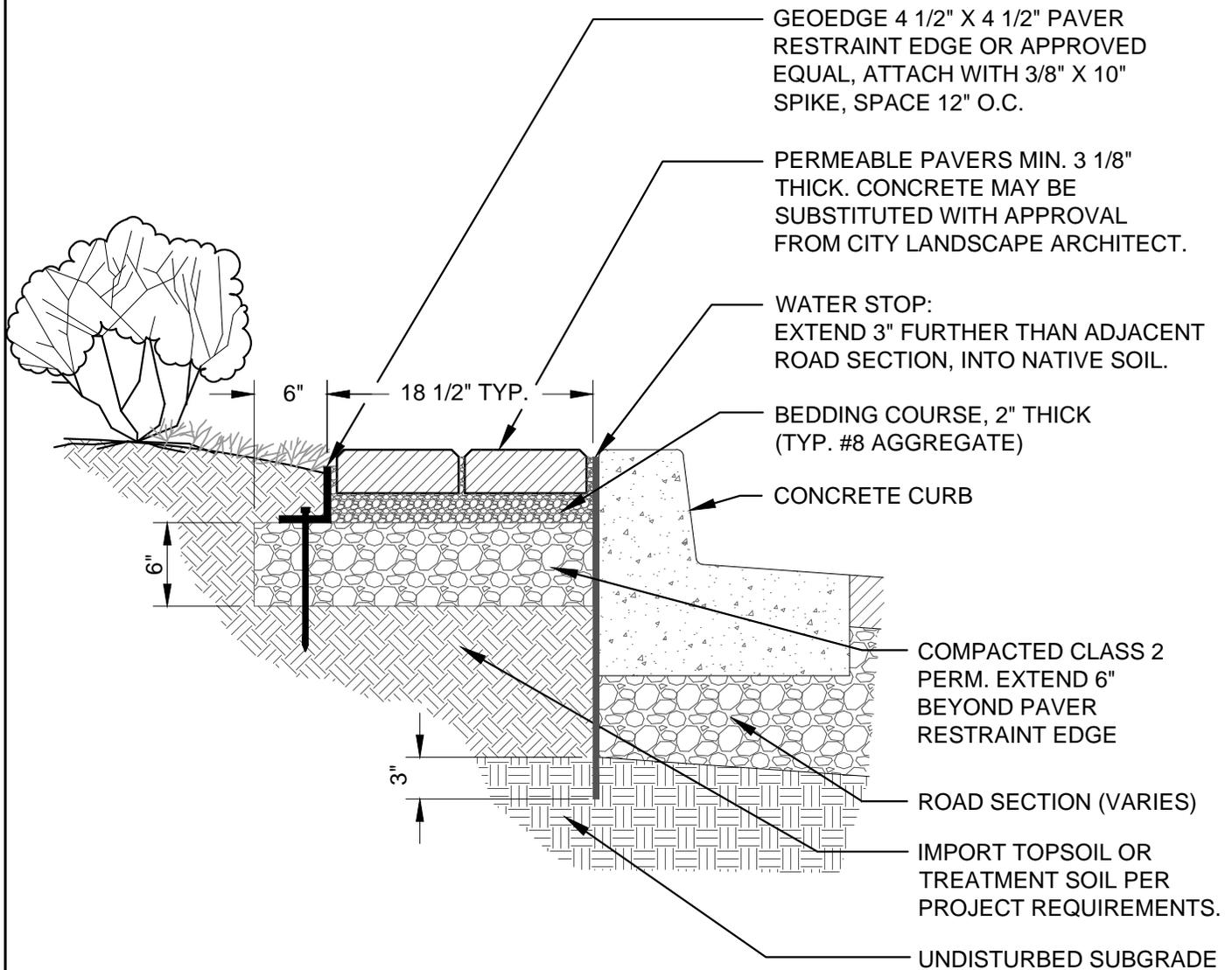


APPR	REVISED	DATE
REVISIONS		

CITY OF FREMONT
 STANDARD DETAILS
CITY STANDARD
MEDIAN PAVING COBBLE

DATE APPROVED BY CITY COUNCIL 04/11/06
RESOLUTION NO. 2006-31
<i>Ham Hughes</i>
CITY ENGINEER

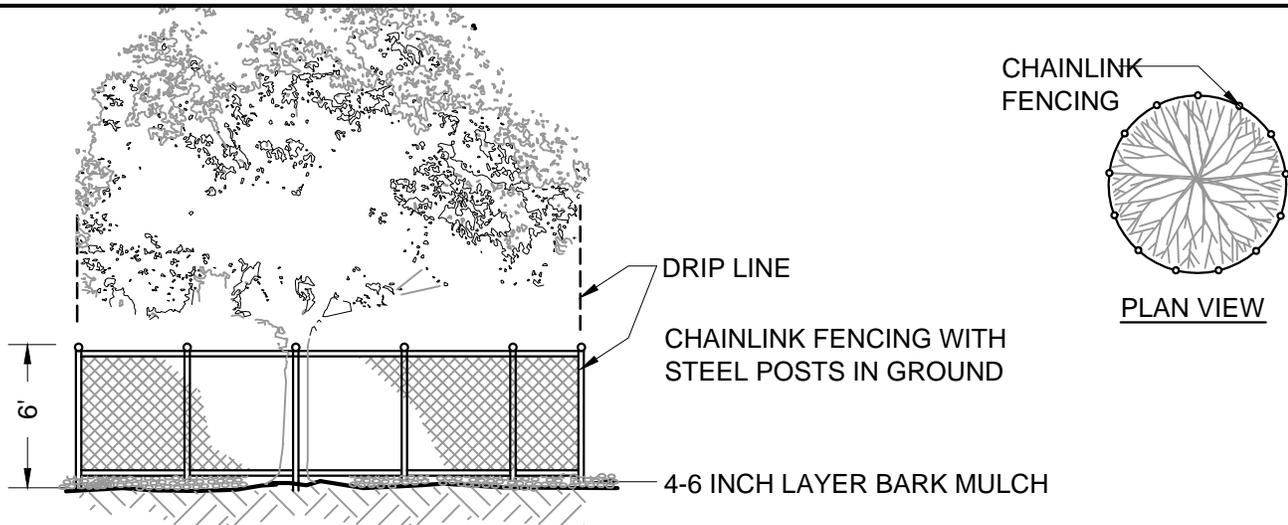
FILE NO. LSD-7.DWG	SCALE 1" = 1'-0"	DRAWN PM/MM	CHECKED RER	DATE NOV. 2005	DWG NO. LSD-7	1 of 1
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NOTES:

1. ON MEDIANS LESS THAN 14 FEET WIDE, REPLACE MAINTENANCE BAND WITH 18 INCH MINIMUM WIDTH PLANTING OF WALKABLE GROUNDCOVER.
2. IF CONCRETE, INSTALL DEEP JOINTS TO MATCH CURB & GUTTER DEEP JOINTS. SEE ENGINEERING STANDARD DETAIL 8 FOR DEFINITION OF DEEP JOINT.
3. FOR PAVERS WITHIN THE DRIPLINE OF AN EXISTING TREE, HAND EXCAVATE ALL AREAS. 6" CLASS 2 PERM LAYER MAY BE REDUCED OR ELIMINATED IF NECESSARY. SEE LSD-9 FOR TREE PRESERVATION NOTES.
4. PAVERS TO BE: 6 X 9 X 3 1/8 CALSTONE PERMEABLE PAVING UNITS, COLOR: RUSTIC YELLOW STONE, UNLESS APPROVED BY THE CITY LANDSCAPE ARCHITECT.

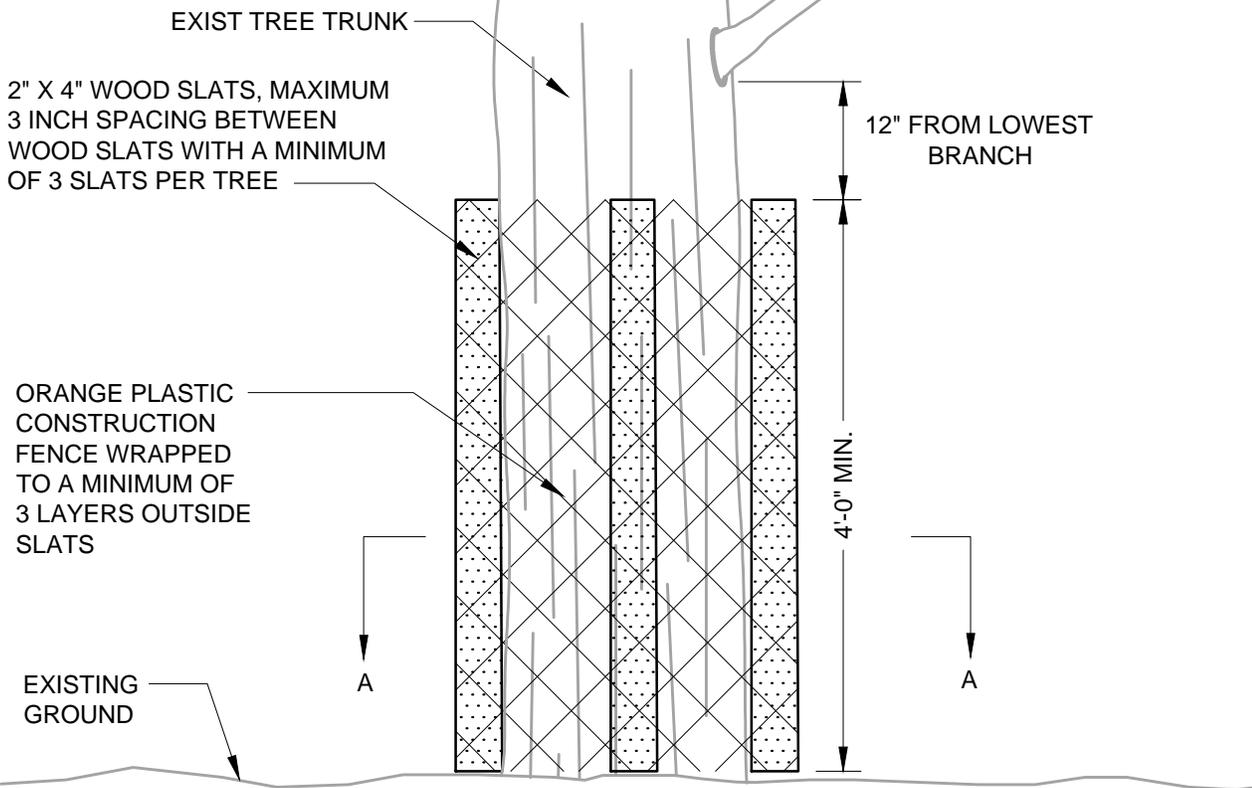
			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 12/13/11										
						RESOLUTION NO. 2006-31										
<table border="1"> <tr> <td><i>[Signature]</i></td> <td>General Revision</td> <td>09/05/12</td> </tr> <tr> <td></td> <td>Council Revision</td> <td>12/13/11</td> </tr> <tr> <td>APPR</td> <td>REVISED</td> <td>DATE</td> </tr> </table>			<i>[Signature]</i>	General Revision	09/05/12		Council Revision	12/13/11	APPR	REVISED	DATE	CITY STANDARD MAINTENANCE BAND			<i>[Signature]</i> CITY ENGINEER	
<i>[Signature]</i>	General Revision	09/05/12														
	Council Revision	12/13/11														
APPR	REVISED	DATE														
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.											
LSD-8.DWG	1" = 1'-0"	PM/MM	RER	DEC. 2011	LSD-8	1 of 1										



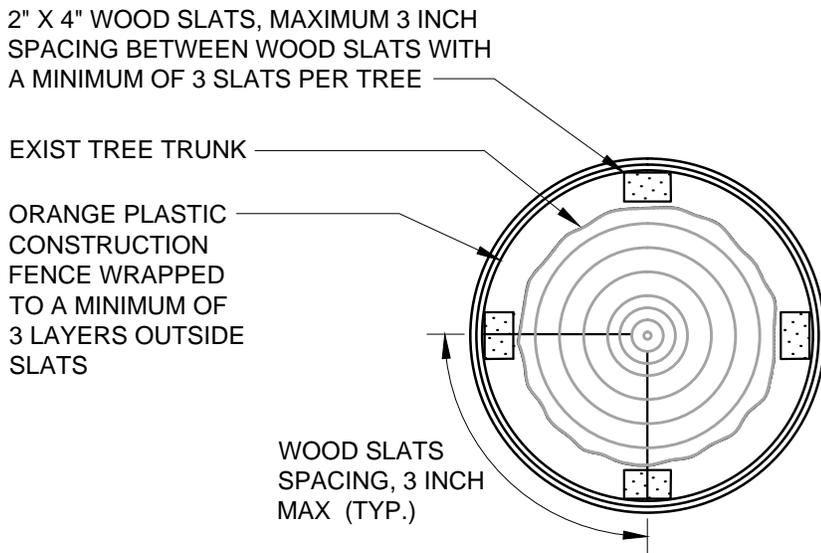
TREE PROTECTION NOTES

1. CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL.
2. TREE PROTECTION MEASURES MUST BE IN PLACE BEFORE CONSTRUCTION, DEMOLITION AND/OR GRADING ACTIVITIES COMMENCE. CITY OF FREMONT WILL STOP CONSTRUCTION IF TREE PROTECTION MEASURES ARE NOT IN PLACE AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
3. TREES CALLED OUT FOR PRESERVATION SHALL BE FENCED AT THE DRIPLINE. FENCING MAY OCCUR AT THE COMBINED DRIPLINES OF GROVES OF TREES. PLACE 4-6 INCH BARK MULCH BENEATH DRIPLINES OF TREES TO BE PRESERVED. KEEP BARK 2-3 FEET FROM TREE TRUNK.
4. FENCING SHALL BE 6 FEET TALL CHAIN LINK FENCING WITH STEEL POSTS EMBEDDED IN THE GROUND.
5. NO GRADING SHALL OCCUR WITHIN THE DRIPLINES/FENCED AREA OF EXISTING TREES.
6. NO CONSTRUCTION MATERIALS OR CONSTRUCTION VEHICLES MAY BE STORED WITHIN THE DRIPLINES/FENCED AREA OF EXISTING TREES.
7. CONSTRUCTION VEHICLES OR MACHINERY MAY NOT PASS BETWEEN TWO OR MORE EXISTING TREES IDENTIFIED FOR PRESERVATION IF THEIR CANOPIES ARE WITHIN 10 FEET OF TOUCHING. ADDITIONAL FENCING MAY BE REQUIRED BY THE CITY AS NEEDED.
8. THE CONTRACTOR IS REQUIRED TO HAVE AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), APPROVED BY THE CITY, ON SITE IF SITE CONSTRUCTION EFFORTS REQUIRE REMOVAL OF EXISTING ROOTS OR BRANCH PRUNING. ROOTS APPROVED FOR CUTTING MUST BE CUT CLEANLY WITH A SAW. RIPPING OR SHREADING ROOTS SUBJECT TO FINE/PENALTY.
9. UNAUTHORIZED TREE REMOVAL IS SUBJECT TO REPLACEMENT EQUAL TO THE APPRAISED VALUE OF THE TREE LOST PER FMC 4-5108.
10. THE CONTRACTOR IS REQUIRED TO WATER, FERTILIZE AND ATTEND TO OTHER MAINTENANCE NEEDS OF EXISTING TREES TO MAINTAIN HEALTHY GROWTH THROUGHOUT THE CONSTRUCTION PERIOD. AN EARTH BERM MEASURING MINIMUM 6 FEET IN DIAMETER, AND 6 INCHES IN HEIGHT SHALL BE CONSTRUCTED AT THE BASE OF EACH TREE TO FUNCTION AS A TEMPORARY WATERING BASIN DURING THE CONSTRUCTION PERIOD. TREES SHALL BE WATERED ACCORDING TO WEATHER AND TREE SPECIES REQUIREMENTS.
11. IF TREES ARE BEING RELOCATED: RELOCATION OF EXISTING TREES SHALL OCCUR UNDER THE OBSERVATION AND DIRECTION OF A CERTIFIED ARBORIST APPROVED BY THE CITY OF FREMONT.
12. TRUNK WRAP PROTECTION SHALL OCCUR FOR TREES SITUATED IN SMALL TREE WELLS OR SIDEWALK PLANTERS. THIS FORM OF PROTECTION WILL BE ALLOWED BY APPROVAL FROM SENIOR LANDSCAPE ARCHITECT ONLY. REFER TO LSD-10.

			<p>CITY OF FREMONT STANDARD DETAILS <u>CITY STANDARD</u> TREE PROTECTION FENCING</p>			DATE APPROVED BY CITY COUNCIL 12/13/11	
						RESOLUTION NO. 2006-31	
						 CITY ENGINEER	
		Council Revision 12/13/11					
APPR	REVISED	DATE					
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
LSD-9.DWG	1/8" = 1'-0"	PM/MM	RER	DEC. 2011	LSD-9	1 of 1	



ELEVATION



SECTION A-A

NOTE:

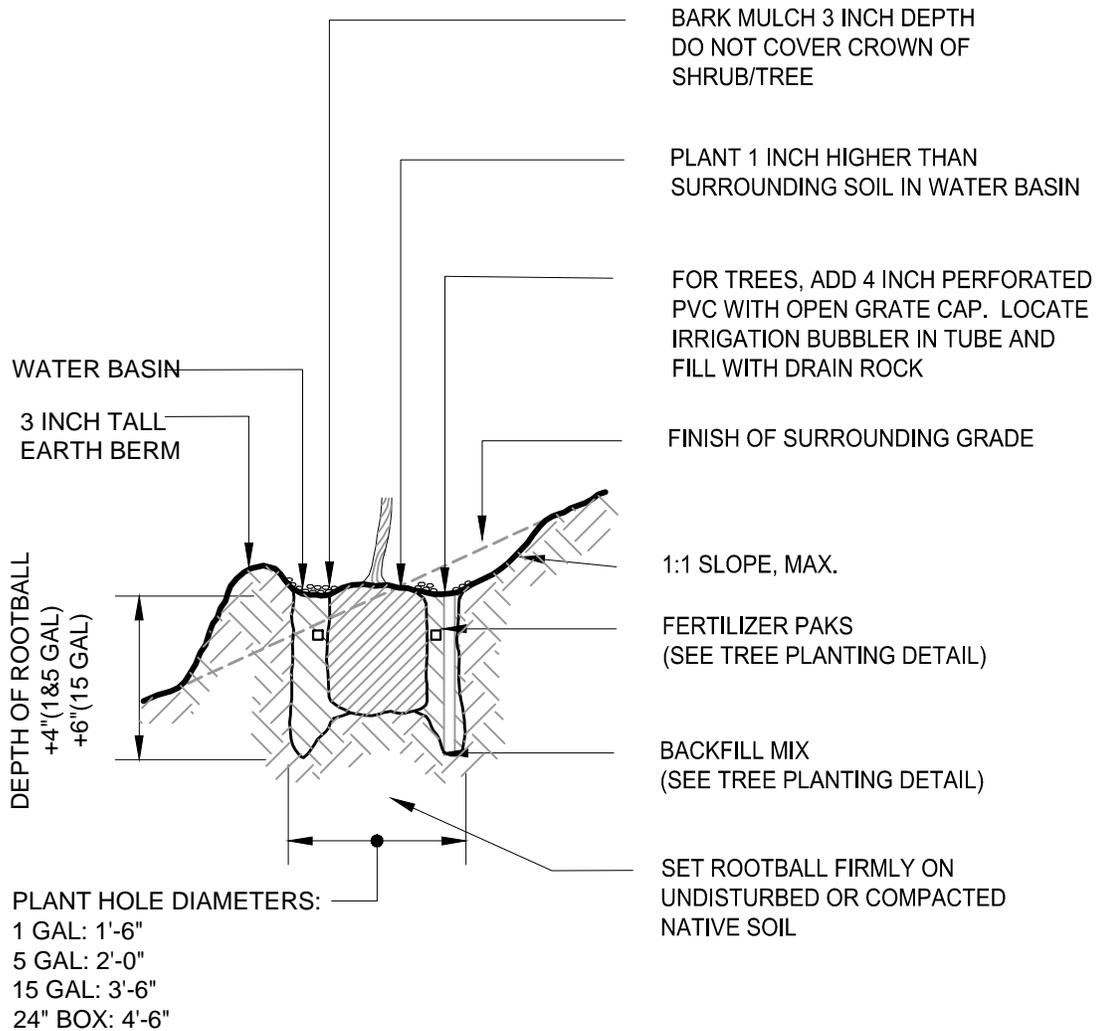
1. WRAP ORANGE PLASTIC CONSTRUCTION FENCE ON TOP OF WOOD SLATS WITH AN OVERLAP OF 12 INCHES AND TIE WITH WIRE. SEE SECTION BELOW.
2. TEMPORARY TRUNK WRAP PROTECTION WILL BE ALLOWED ONLY BY APPROVAL FROM THE SENIOR LANDSCAPE ARCHITECT
3. DAMAGE TO BRANCHES & ROOTS SUBJECT TO FINE UP TO APPRAISED VALUE OF THE TREE, PER CITY TREE PRESERVATION ORDINANCE (FMC 4-5100).
4. REFER TO LSD-9 FOR ADDITIONAL TREE PROTECTION REQUIREMENTS APPLICABLE TO THIS DETAIL.
5. TRUNK WRAP SHALL BE IN PLACE NO MORE THAN 5 WORKING DAYS BEFORE WORK ADJACENT TO TREE, AND REMOVED NO MORE THAN 5 WORKING DAYS AFTER WORK ADJACENT TO THE TREE, UNLESS OTHERWISE APPROVED BY THE CITY.

	Council Revision	12/13/11
APPR	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
CITY STANDARD
TEMPORARY TRUNK WRAP
PROTECTION

DATE APPROVED BY CITY COUNCIL	12/13/11
RESOLUTION NO.	2006-31
<i>Sam Hughes</i>	
CITY ENGINEER	

FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
LSD-10.DWG	3/4"=1'-0"	PN/MM	RER	DEC. 2011	LSD-10	1 of 1



NOTES:

1. KEEP TURF AND PLANTS OUTSIDE THE EARTH BERM/WATER BASIN
2. SEE TREE PLANTING DETAIL FOR STAKING INFO.
3. THIS DETAIL TO BE REFERENCED, PER CITY STANDARD DETAIL LSD-11, FOR TREE PLANTING IN A VEGETATED BIOSWALE.

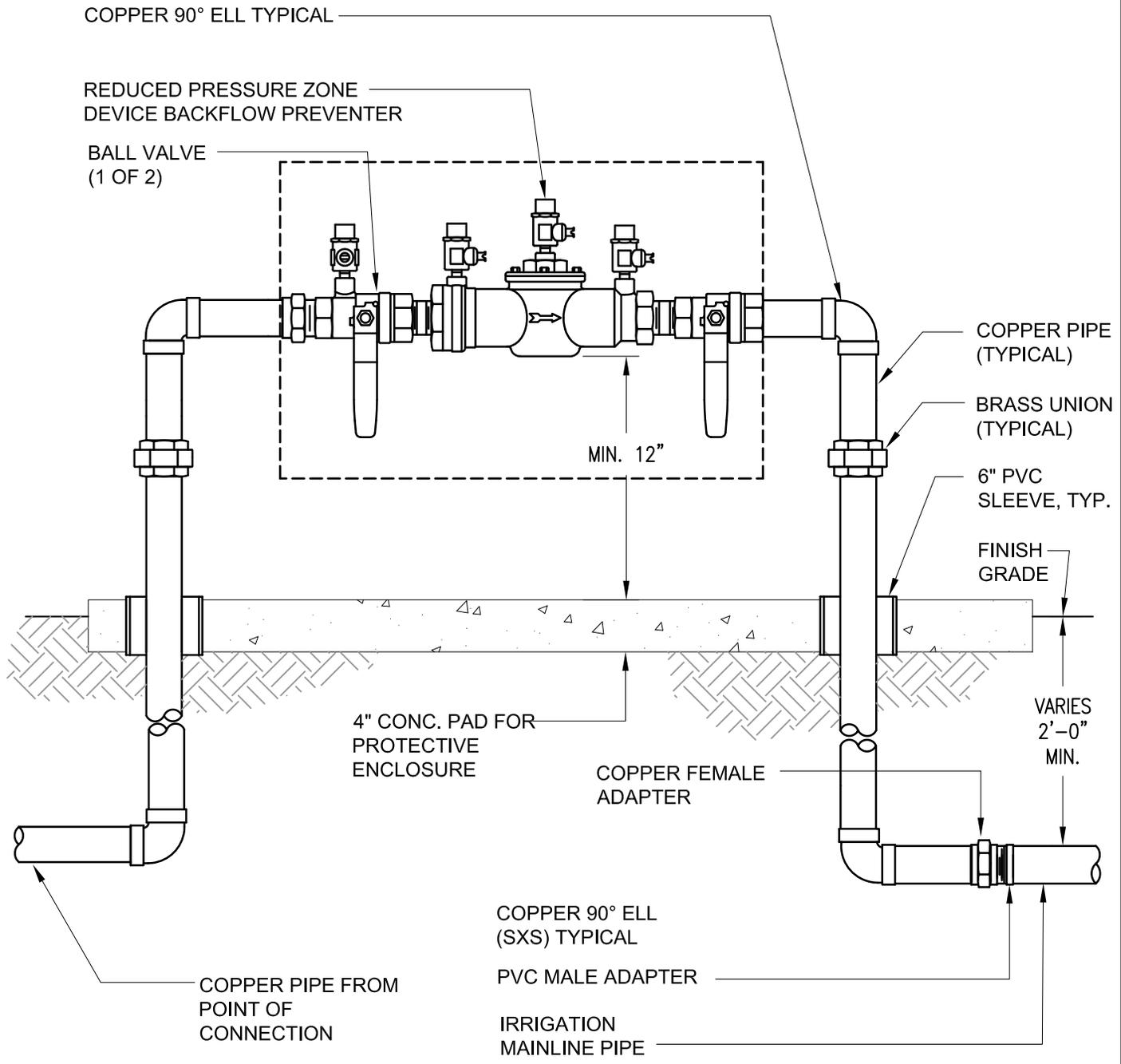
			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 12/13/11			
						RESOLUTION NO. 2006-31			
			CITY STANDARD TREE AND SHRUB PLANTING AT SLOPE			<i>Sam Hughes</i>			
						CITY ENGINEER			
REVISIONS			FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
APPR	REVIS	DATE	LSD-12.DWG	1/4" = 1'-0"	AK/MM/PM	RER	NOV. 2005	LSD-12	1 of 1

Botanical Name: Common Name	TREE CHARACTERISTICS										ENVIRONMENTAL TOLERANCES			PLANTING SPACE REQ'S				
	TYPE	SHAPE	HEIGHT	SPREAD	GROWTH	ROOTING	LEAF SIZE	SHADE	FALL COLOR	FLOWER	DEBRIS	USEFUL LIFE	SOIL			WATER USE		
													Fast	Large Vigorous	Deep	Root Suckers	Large	Small
Acacia melanoxylo: Black Acacia	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Acacia salicina: Black Acacia	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Acer palmatum: Japanese Maple	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Acer rubrum: Scarlet Red Maple	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Aesculus californica: California Buckeye	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Aesculus x carnea: Red Horse Chestnut	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Albizia julibrissin: Silk Tree	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Alnus cordata: Italian Alder	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Arbutus 'Marina': Strawberry Tree	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Betula pendula: European White Birch	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Brachycton populicus: Bottle Tree	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Casuarina stricta: Beefwood	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Cedrus deodard: Deodar Cedar	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Celtis sinensis: Chinese Hackberry	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Cercis canadensis: Eastern Redbud	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Cinnamomum camphora	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Crataegus phaenopynum: Washington Thorn	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Eriobotrya deflexa: Bronze Loquat	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Eucalyptus camaldulensis: River Red Gum	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Eucalyptus kucoxylo: White Ironbark	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Eucalyptus meliodora	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Eucalyptus rudis: Desert Gum	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Fraxinus americana: 'Autumn Purple'	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Fraxinus velutina 'Re Grande': Fan Tex Ash	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Geijera parviflora: Australian Willow	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Ginkgo biloba: Maidenhair Tree	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Jacaranda minosifolia: Jacaranda	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Lagerstroemia cultivars: Crepe Myrtle	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Laurus nobilis 'Sarotoga': Grecian Laurel	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Magnolia grandiflora: Southern Magnolia	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Magnolia soulangeana: Southern Magnolia	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Melaleuca ericifolia: Heath Melaleuca	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Melaleuca linariifolia: Flaxbark Paperbark	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Melaleuca quinquenervia: Cajuput Tree	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Melaleuca stylphoides: Melaleuca	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Morus alba: Fruitless Mulberry	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Olea europaea 'Svan Hill': Fruitless Olive	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Pinus canariensis: Canary Island Pine	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Pinus pinca: Italian Stone Pine	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Pistacia chinensis: Pistache	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Platanus acerifolia 'Columbia': Sycamore	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Platanus acerifolia 'Bloodgood'	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Prunus cerasifera: Purple Leaf Plum	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Pyrus calleryana 'Aristocrat': Flowering Pear	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Pyrus calleryana 'Chanticleer': Flowering Pear	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Pyrus calleryana 'Red Sprite': Flowering Pear	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Quercus agrifolia: Coast Live Oak	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Quercus coccinea: Scarlet Oak	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Quercus flex: Holly Oak	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Quercus lobata: Valley Oak	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Quercus rubra: Red Oak	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Rhus lancea: African Sumac	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Robinia ambigua 'Idaho Locust'	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Schinus molle: California Pepper Tree	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Sequoia sempervirens: Coast Redwood	Evergreen	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Sapum schiferum: Chinese Tallow	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Sophora japonica 'Reigan': Japanese Pagoda	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Zelkova serrata: Japanese Zelkova	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	
Tristania laurina: Swamp Myrtle	Deciduous	Columnar	1-5 (medium)	0-20	Slow	Moderate	Fast <td>Large Vigorous</td> <td>Deep</td> <td>Root Suckers</td> <td>Large</td> <td>Small</td> <td>Dense</td> <td>Filtered</td> <td>Yes</td> <td>No</td> <td>10+</td>	Large Vigorous	Deep	Root Suckers	Large	Small	Dense	Filtered	Yes	No	10+	

Note: The following trees are not recommended: Fraxinus oxycarpa (Raywood Ash), Liquidambar styraciflua (Sweet Gum), Populus spp. (Poplar Tree)

TREE CHOICES ARE NOT LIMITED TO THIS LIST. THIS LIST IS ONLY A GUIDE.

<p align="center">CITY OF FREMONT STANDARD DETAILS</p> <p align="center">CITY STANDARD</p> <p align="center">TREE PLANTING GUIDE LIST</p>			DATE APPROVED BY CITY COUNCIL 12/13/11	
			RESOLUTION NO. 2006-31	
<p>APPR Council Revision 12/13/11</p> <p>REVISIONS REVISED DATE</p>			<p align="center"><i>Nam Hughes</i></p> <p>CITY ENGINEER</p>	
FILE NO.	SCALE	DRAWN		
LSD-13.DWG	NONE	MM	RER	DEC. 2011
			DWG NO.	1 of 1
			LSD-13	



NOTES:

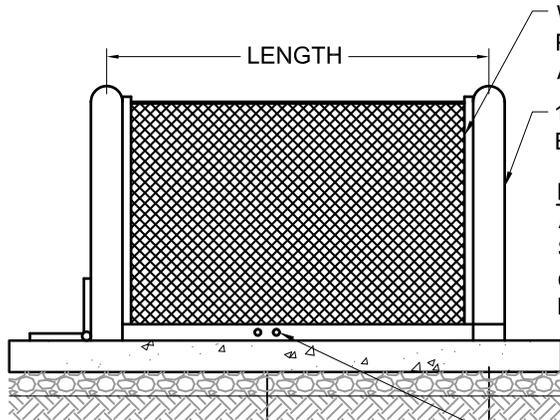
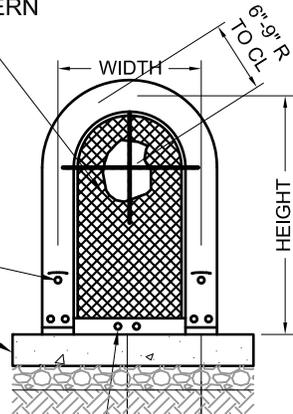
1. INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.
2. INSTALL FREEZE PROTECTION JACKET AND CAGE. SEE CITY STANDARD DETAIL LSD-17 FOR CAGE DETAIL.
3. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS

<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3>			DATE APPROVED BY CITY COUNCIL 12/13/11		
			RESOLUTION NO. 2006-31		
<h2 style="margin: 0;">CITY STANDARD IRRIGATION BACKFLOW PREVENTER UNIT</h2>					
CITY ENGINEER					
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.
LSD-16.DWG	1" = 1'-0"	PM/MM	RER	NOV. 2005	LSD-16
					16 of 27

1/2-INCH NO. 13 FLATTED
DIAMOND PATTERN
STEEL MESH

WELD 4-INCH
STL. HINGES (2)
ON GS-3 AND
GS-4

4-INCH
CONCRETE
PAD



WELD MESH TO
PIPE, ANGLE IRON
AND STEEL STRAP

1-1/4" STD. WT. A-53
E.W. BLK. STL. PIPE

NOTE:
ALL WELDED AREAS
SHALL BE A MINIMUM
OF 1/4 INCH BEAD
EVERY 4 INCHES

- DRILL 2 HOLES AS NOTED
- GS-1 EACH END
 - GS-2 EACH END
 - GS-3 ONE END ONLY
OPPOSITE HINGED END
 - GS-3.5 SAME AS GS-2H
 - GS-4 SAME AS GS-2H

- GS-1 - 12"
- GS-2 - 16"
- GS-3 - 4"
- GS-4 - 4"

DRILL 2 - 5/16 INCH
HOLES EACH SIDE.
BRACKETS CAN BE
LOCATED ON
SIDES OR ENDS
AND SECURED
WITH TAMPER
PROOF BOLTS

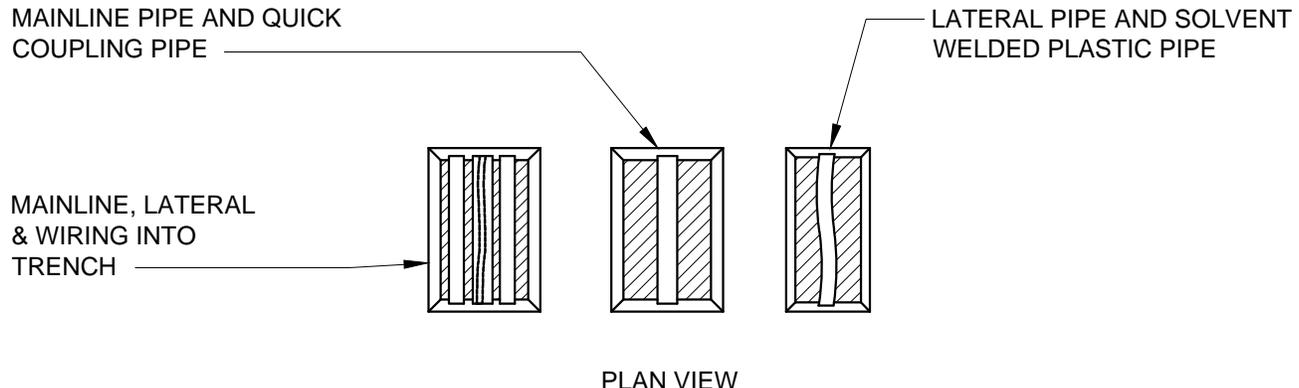
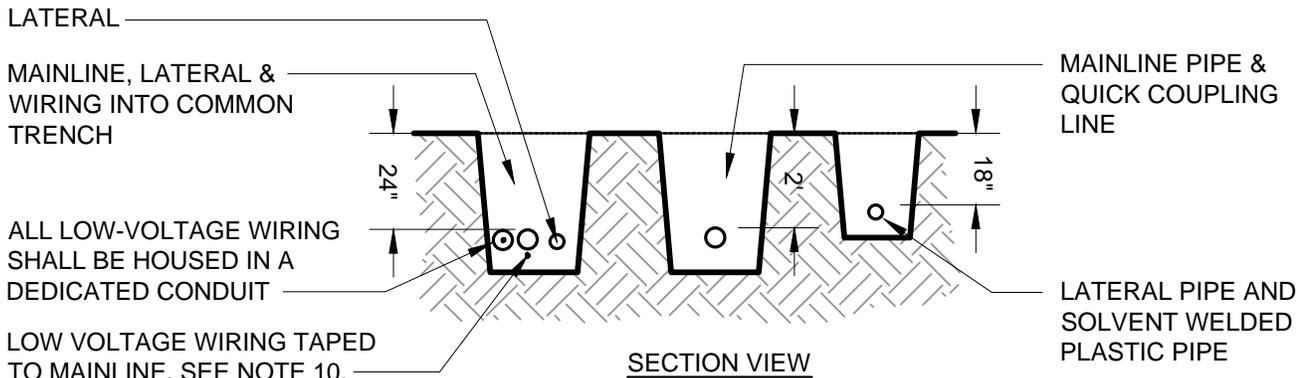
STD. SIZES	CENTERLINE DIMENSIONS		WEIGHT
GS-.5	12"W x 18"H x 12"L	LIFT OFF UNIT	35
GS-1	12"W x 24"H x 24"L	LIFT OFF UNIT	40
GS-2	12"W x 24"H x 32"L	LIFT OFF UNIT	45
GS-3	12"W x 24"H x 42"L	HINGED UNIT	51
GS-4	18"W x 30"H x 48"L	HINGED UNIT	67

NOTE:
GS = POWDER-COATED STEEL GUARDSHACK OR APPROVED EQUAL

NOTES:

1. AFTER ALL WELDING, ENTIRE UNIT SHALL BE PROCESSED WITH IRON PHOSPHATE PRE-TREATMENT. ELECTROSTATIC APPLICATION OF POWDER SHALL BE FUSION BONDED. POWDERCOAT COLOR SHALL BE BLACK.
2. ALL BOLTS FOR HINGES AND HASPS SHALL BE ZINC-PLATED TAMPER PROOF, EXCEPTION - USE SS HARDWARE FOR SS UNITS.
SS = STAINLESS STEEL
3. REFER TO SPECIFICATIONS FOR MODEL NUMBER
4. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS

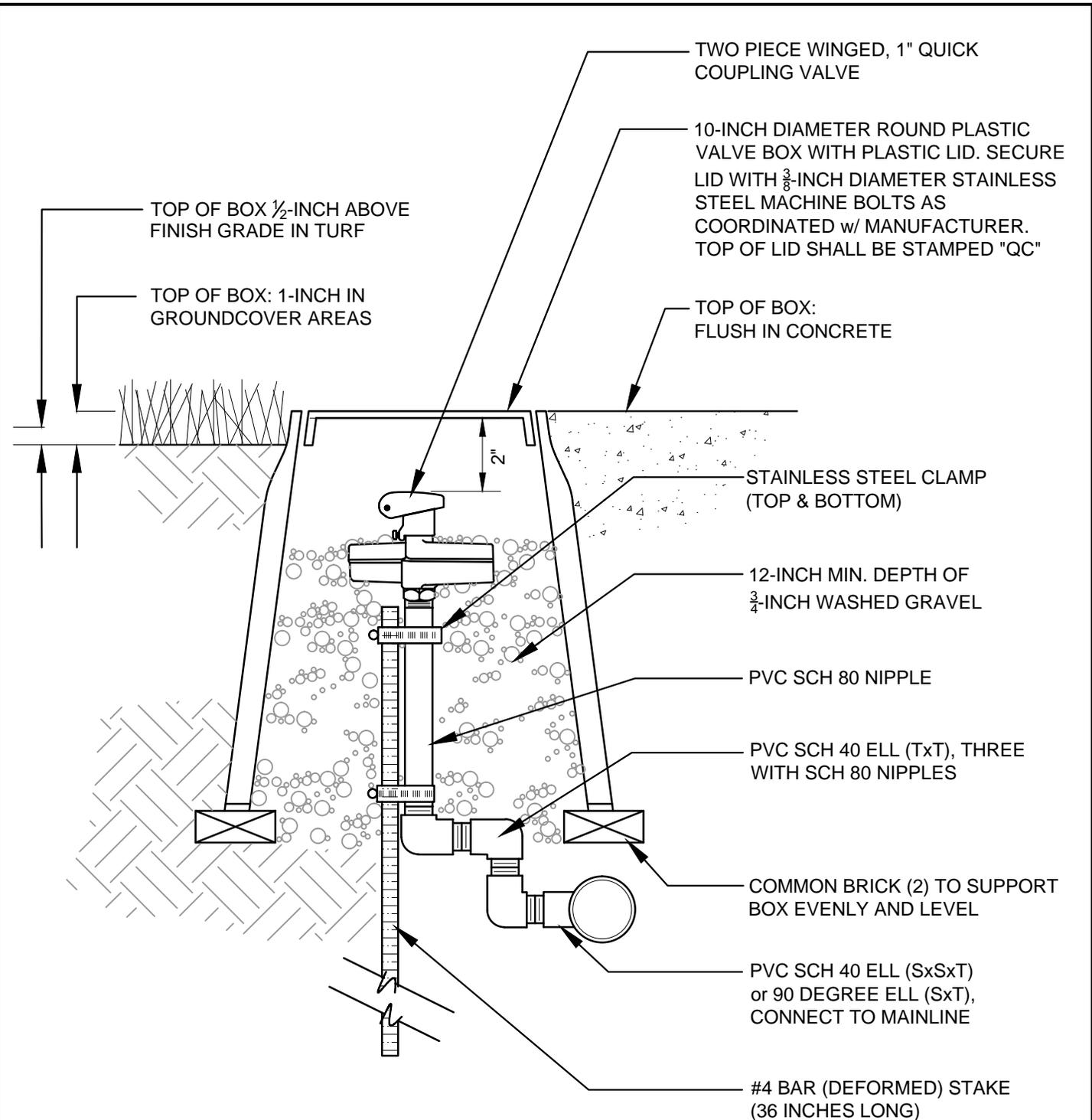
<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h3 style="margin: 0;">CITY STANDARD</h3> <h2 style="margin: 0;">BACKFLOW PREVENTER</h2> <h2 style="margin: 0;">UNIT ENCLOSURE</h2>			DATE APPROVED BY CITY COUNCIL 12/13/11			
			RESOLUTION NO. 2006-31			
			CITY ENGINEER			
APPR	REVISED	DATE				
REVISIONS						
FILE NO. LSD-17.DWG	SCALE 1/2" = 1'-0"	DRAWN AK/MM/PN	CHECKED RER	DATE NOV. 2005	DWG NO. LSD-17	1 of 1



NOTES:

1. SLEEVE BELOW ALL HARDSCAPE ELEMENTS WITH CLASS 315 PVC TWICE THE DIAMETER OF THE PIPE OR WIRE CONDUIT WITHIN; BURIAL DEPTH FOR SLEEVES BELOW FINISHED GRADE ARE AS FOLLOWS:
 42 INCH MINIMUM UNDER THOROUGHFARE AND STREETS
 24 INCH MINIMUM UNDER PLANTER AREA
 24 INCH MINIMUM UNDER PARKING LOT
 18 INCH MINIMUM UNDER SIDEWALK
 36 INCH MINIMUM UNDER TRAFFIC CIRCLES (RESIDENTIAL AREAS)
2. ALL SLEEVE BELOW HARDSCAPE SHALL EXTEND 24 INCHES BEYOND HARD SURFACE EDGES.
3. FOR PIPE AND WIRE BURIAL DEPTHS, SEE SPECIFICATIONS, MAINLINE SHALL HAVE MINIMUM COVER OF 24 INCHES, LATERAL SHALL HAVE MINIMUM COVER OF 18 INCHES.
4. SCH 40 PVC FOR MAINLINE 2 INCHES OR SMALLER.
5. CLASS 315 PVC FOR MAINLINE 2 1/2 INCHES AND LARGER.
6. CLASS 200 PVC FOR 2 INCH LATERAL LINES AND SMALLER.
7. SCH 40 PVC FOR QUICK COUPLING LINE 1 INCH MIN. TO 2 INCH MAXIMUM
8. TRENCH BACKFILL SHALL BE NATIVE MATERIAL, COMPACT TO 90% MINIMUM, RELATIVE COMPACTION UNLESS UNDER CONCRETE OR ASPHALT. USE TRENCH BACKFILL PER CITY SPECIFICATION 11A AND 11B UNDER CONCRETE OR ASPHALT.
9. REFER TO DETAIL LSD-14 FOR IRRIGATION MATERIALS LIST.
10. IF APPROVED IN WRITING FROM THE CITY'S LANDSCAPE ARCHITECT, CONTROL WIRE MAY BE INSTALLED WITHOUT CONDUIT. INSTEAD, RUN WIRING BENEATH MAINLINE. TAPE AND BUNDLE AT 10 FOOT INTERVALS. TIE A 24 INCH LOOP IN ALL WIRING AT CHANGES OF DIRECTION OF 30 INCHES OR GREATER. UNTIE AFTER ALL CONNECTIONS HAVE BEEN MADE.

<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h3 style="margin: 0;">CITY STANDARD</h3> <h3 style="margin: 0;">IRRIGATION TRENCH</h3>			DATE APPROVED BY CITY COUNCIL 12/13/11								
			RESOLUTION NO. 2006-31								
			CITY ENGINEER								
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.						
LSD-18.DWG	1/4" = 1'-0"	AK/MM/PM	RER	DEC. 2011	LSD-18						
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APPR	REVISION	DATE									
	Council Revision	12/13/11									

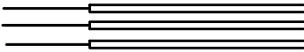


NOTE:

1. CONTRACTOR SHALL PROVIDE:
 - (2) VALVE KEYS
 - (2) SWIVEL HOSE-ELLS
2. ALL BOXES SHALL BE OFFSET 12-INCHES FROM ANY SIDEWALK, CURB &/or HEADER

			<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h3 style="margin: 0;">CITY STANDARD IRRIGATION</h3> <h3 style="margin: 0;">QUICK COUPLING VALVE IN BOX</h3>			DATE APPROVED BY CITY COUNCIL 12/13/11												
						RESOLUTION NO. 2006-31												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Council Revision</td> <td style="width: 33%;">12/13/11</td> <td style="width: 33%;"></td> </tr> <tr> <td>General Revision</td> <td>06/07/10</td> <td></td> </tr> <tr> <td>APPR</td> <td>REVISED</td> <td>DATE</td> </tr> <tr> <td colspan="3" style="text-align: center;">REVISIONS</td> </tr> </table>			Council Revision	12/13/11		General Revision	06/07/10		APPR	REVISED	DATE	REVISIONS			<p style="margin: 0;">CITY ENGINEER</p>			
Council Revision	12/13/11																	
General Revision	06/07/10																	
APPR	REVISED	DATE																
REVISIONS																		
FILE NO. LSD-19.DWG	SCALE 3" = 1'-0"	DRAWN AK/MM/PM	CHECKED RER	DATE DEC. 2011	DWG NO. LSD-19	1 of 1												

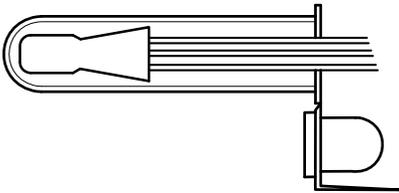
STEP 1: STRIP WIRES ½ INCH FROM ENDS.



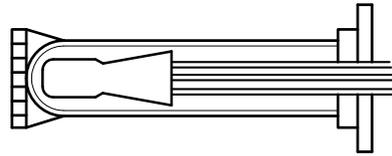
STEP 2: APPLY SCOTCHLOK Y SPRING CONNECTOR IN A CLOCKWISE DIRECTION.



STEP 3: INSERT SPLICE FILLED TO BOTTOM OF GEL-FILLED TUBE, CHECK TO MAKE SURE CONNECTOR HAS BEEN PUSHED PAST LOCKING FINGERS AND IS SEATED AT BOTTOM OF TUBE.



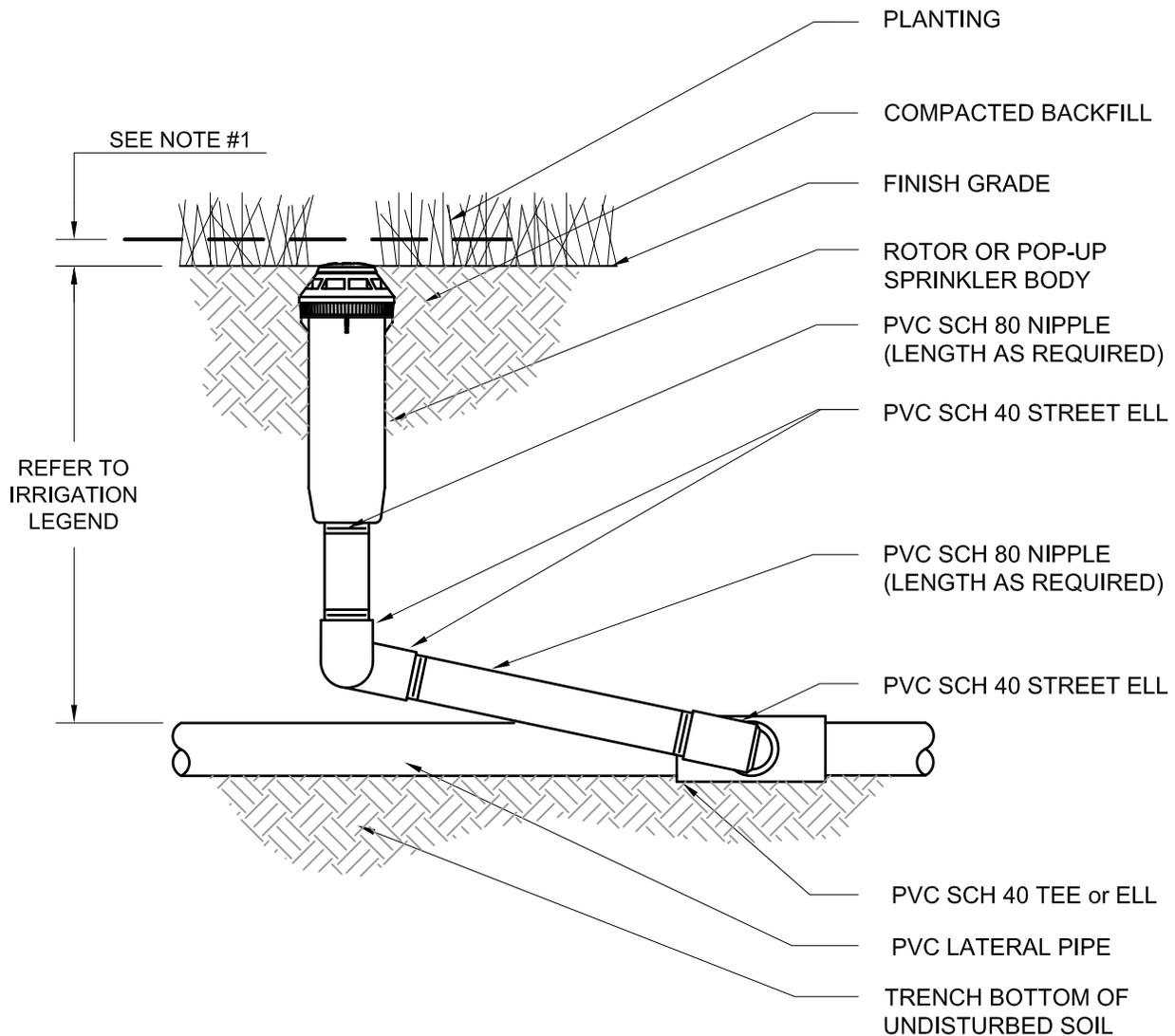
STEP 4: POSITION WIRES IN WIRE CHANNELS AND CLOSE INSULATOR TUBE COVER.



NOTE:

1. MAXIMUM WIRE SIZES PER CONNECTOR ARE 3-#14'S OR 2-#12'S
2. REFER TO CITY STANDARD DETAIL LSD-14 FOR MATERIALS

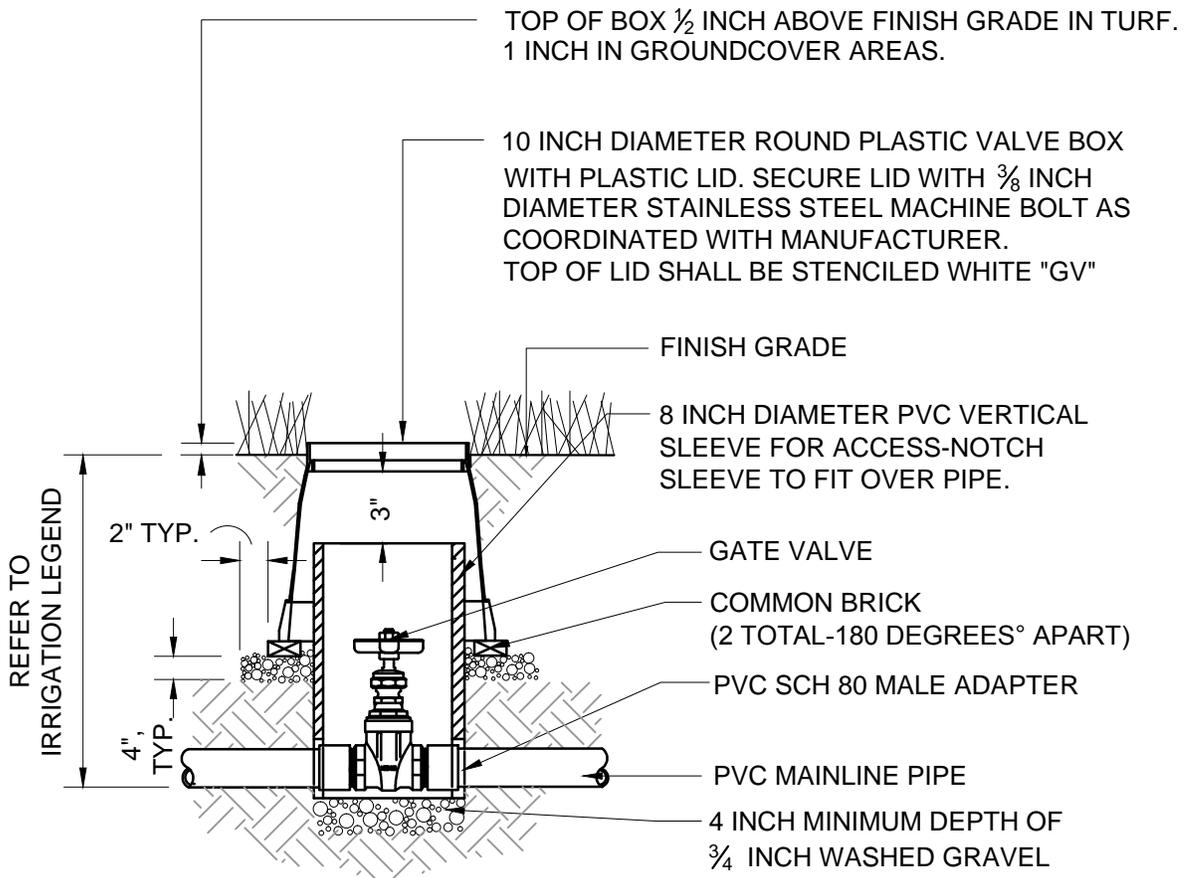
			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 12/13/11	
						RESOLUTION NO. 2006-31	
			<u>CITY STANDARD</u> IRRIGATION WIRE SPLICE			 CITY ENGINEER	
APPR	REVISED	DATE				REVISIONS	
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
LSD-20.DWG	NONE	AK/MM/PM	RER	NOV. 2005	LSD-20	1 of 1	



NOTE:

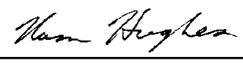
1. INSTALL TOP OF POP-UP SPRINKLER 1 INCH ABOVE FINISHED GRADE IN SHRUB AREAS AND FLUSH WITH GRADE IN TURF AREAS.
2. ROTORS SHALL BE INSTALLED FLUSH IN TURF AREAS.
3. REFER TO CITY STANDARD DETAIL LSD-14 FOR MATERIALS
4. INSTALL A MINIMUM OF 9" FROM EDGE OF PAVEMENT IN SHRUB AREAS AND 2" IN TURF AREAS.

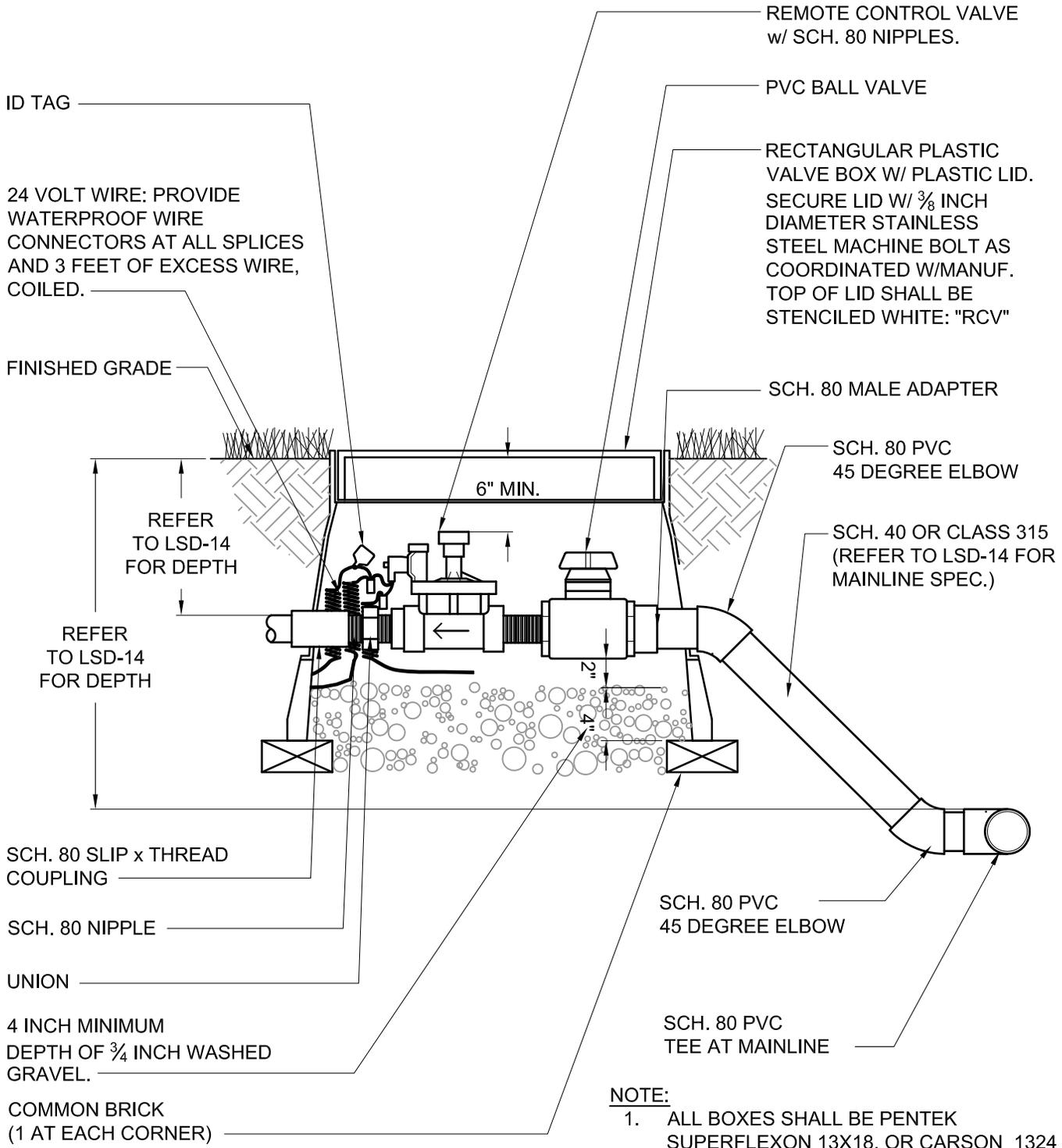
<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h4 style="margin: 0;">CITY STANDARD</h4> <h4 style="margin: 0;">IRRIGATION ROTOR OR POP-UP</h4>			DATE APPROVED BY CITY COUNCIL 12/13/11				
			RESOLUTION NO. 2006-31				
			CITY ENGINEER				
APPR	REVISED	DATE	DRAWN	CHECKED	DATE	DWG NO.	1 of 1
REVISIONS			AK/MM/PM	RER	NOV. 2005	LSD-21	
FILE NO.	SCALE			DRAWN	CHECKED	DATE	DWG NO.
LSD-21.DWG	NONE			AK/MM/PM	RER	NOV. 2005	LSD-21



NOTE:

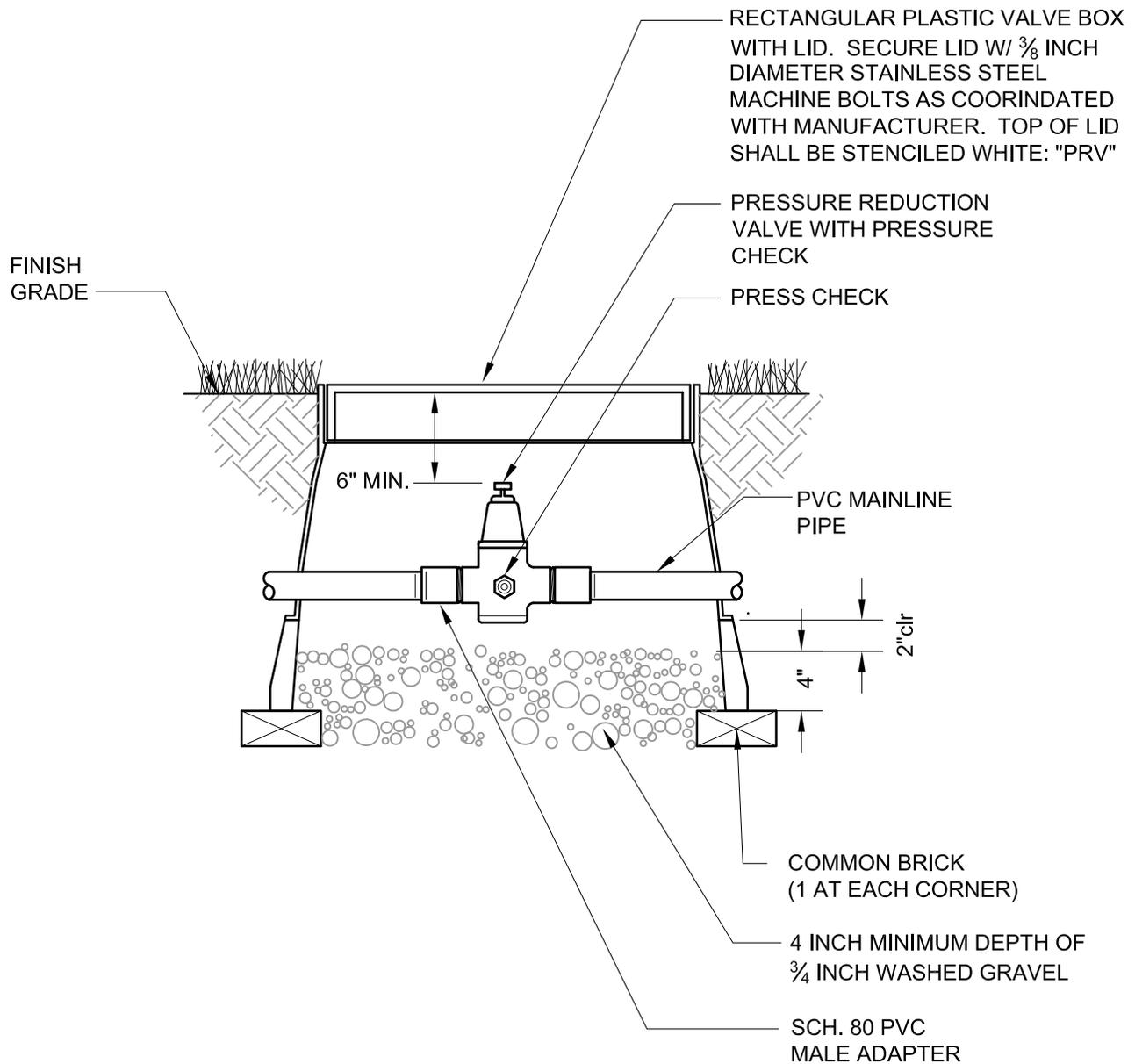
1. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
			CITY STANDARD IRRIGATION GATE VALVE			 CITY ENGINEER	
APPR	REVISED	DATE				REVISIONS	
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
LSD-22.DWG	1-1/2" = 1'-0"	AK/MM/PM	RER	NOV. 2005	LSD-22	1 of 1	



- NOTE:**
1. ALL BOXES SHALL BE PENTEK SUPERFLEXON 13X18, OR CARSON 1324 OR APPROVED EQUAL.
 2. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS.

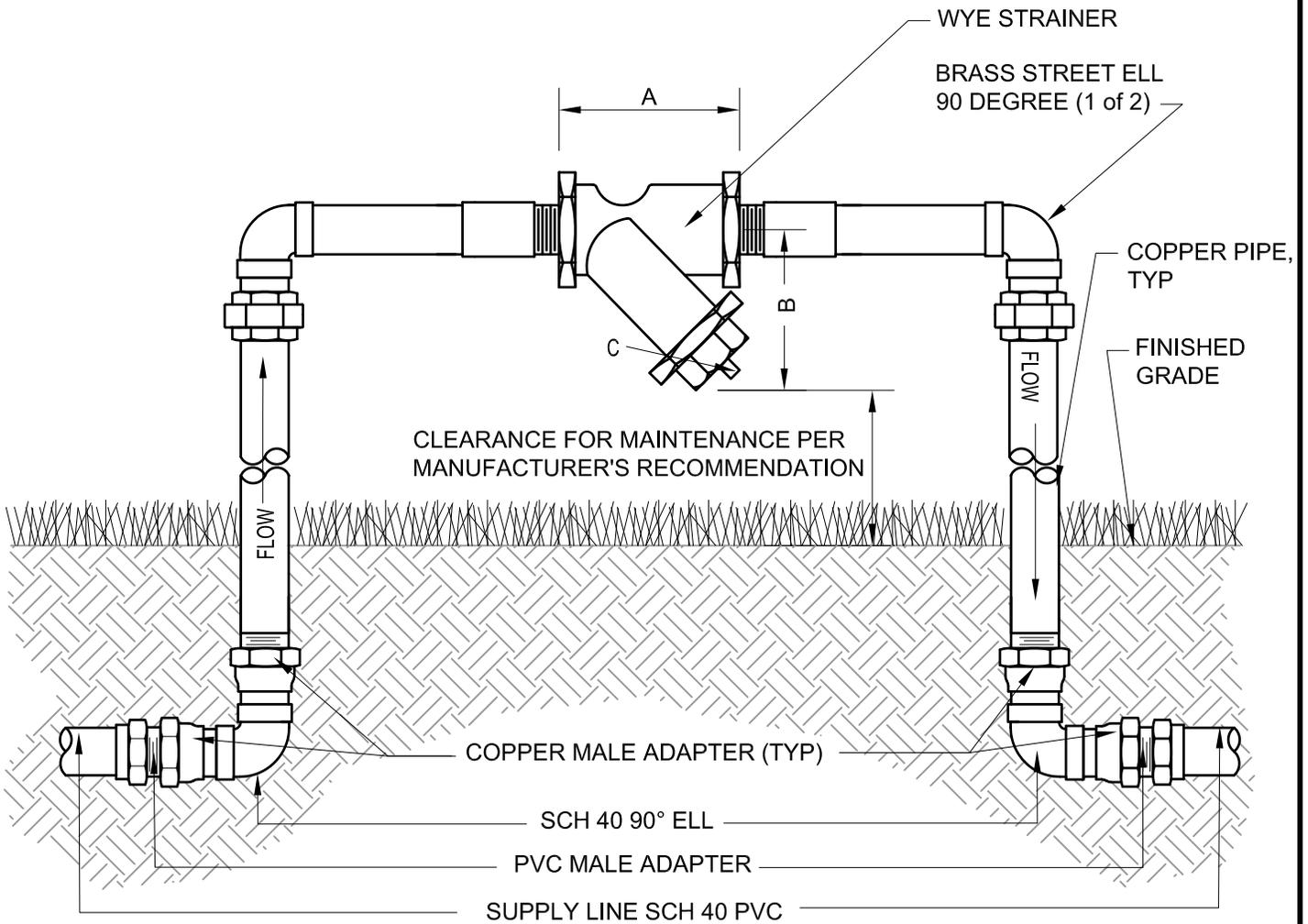
			CITY OF FREMONT STANDARD DETAILS CITY STANDARD IRRIGATION REMOTE CONTROL VALVE W/ GATE VALVE			DATE APPROVED BY CITY COUNCIL 12/13/11	
						RESOLUTION NO. 2006-31	
						 CITY ENGINEER	
APPR	REVISED	DATE				REVISIONS	
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
LSD-23.DWG	1" = 1'-0"	AK/MM/PM	RER	NOV. 2005	LSD-23	1 of 1	



NOTES:

1. PRESSURE REDUCING VALVE BODY SHALL BE IRON; SEAT SHALL BE STAINLESS STEEL; INTEGRAL STRAINER SHALL BE STAINLESS STEEL; STEM SHALL BE BRASS; AND, DISK SHALL BE BRASS.
2. ALL BOXES SHALL BE PENTEK SUPERFLEXON 13X18, CARSON 1324 OR APPROVED EQUAL.
3. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS

			<p>CITY OF FREMONT STANDARD DETAILS CITY STANDARD <u>IRRIGATION PRESSURE</u> <u>REDUCTION VALVE</u></p>			<p>DATE APPROVED BY CITY COUNCIL 12/13/11</p> <p>RESOLUTION NO. 2006-31</p> <p style="text-align: center;"><i>Nam Hughes</i></p> <p>CITY ENGINEER</p>
APPR	REVISED	DATE	REVISIONS			
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
LSD-25.DWG	1" = 1'-0"	AK/MM/PM	RER	NOV. 2005	LSD-25	1 of 1

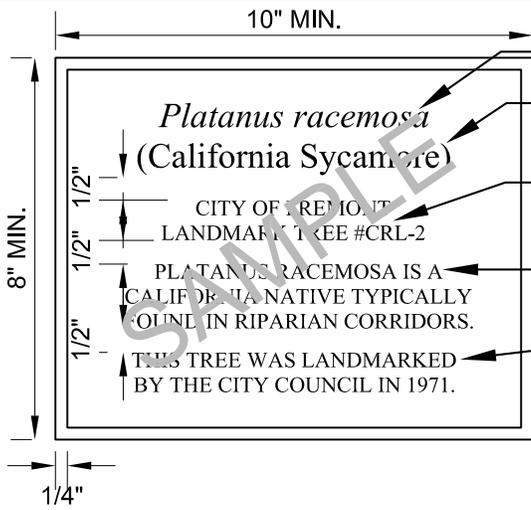


Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	2 3/4"	3"	3 3/4"	4 7/16"	4 15/16"	6 7/8"
B	2 1/4"	2 9/16"	2 3/4"	3 5/8"	3 7/8"	5 1/8"
C	1/4"	3/8"	3/8"	3/4"	3/4"	1"
Wt	.75	1.38	2.13	3.13	4.5	7

NOTES:

1. BODY AND CAP SHALL BE BRONZE ASTM B62; SCREEN SHALL BE 20 MESH STAINLESS STEEL; GASKET SHALL BE NON-ASBESTOS; ENDS SHALL BE THREADED ANSI/ASME B1.20.1
2. WORKING PRESSURE SHALL BE NON-SHOCK, 200 PSI @ 150 DEGREES
3. REFER TO CITY STANDARD DETAIL LSD-14 FOR ALL MATERIALS

<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h3 style="margin: 0;">CITY STANDARD</h3> <h3 style="margin: 0;">IRRIGATION WYE STRAINER</h3>			DATE APPROVED BY CITY COUNCIL 12/13/11			
			RESOLUTION NO. 2006-31			
			CITY ENGINEER			
APPR	REVISED	DATE	REVISIONS			
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
LSD-26.DWG	1" = 1'-0"	AK/MM/PM	RER	NOV. 2005	LSD-26	1 of 1



SCIENTIFIC NAME OF TREE, 1/2" LETTERS, ITALICIZED

COMMON NAME OF TREE IN PARENTHESES, 1/2" LETTERS

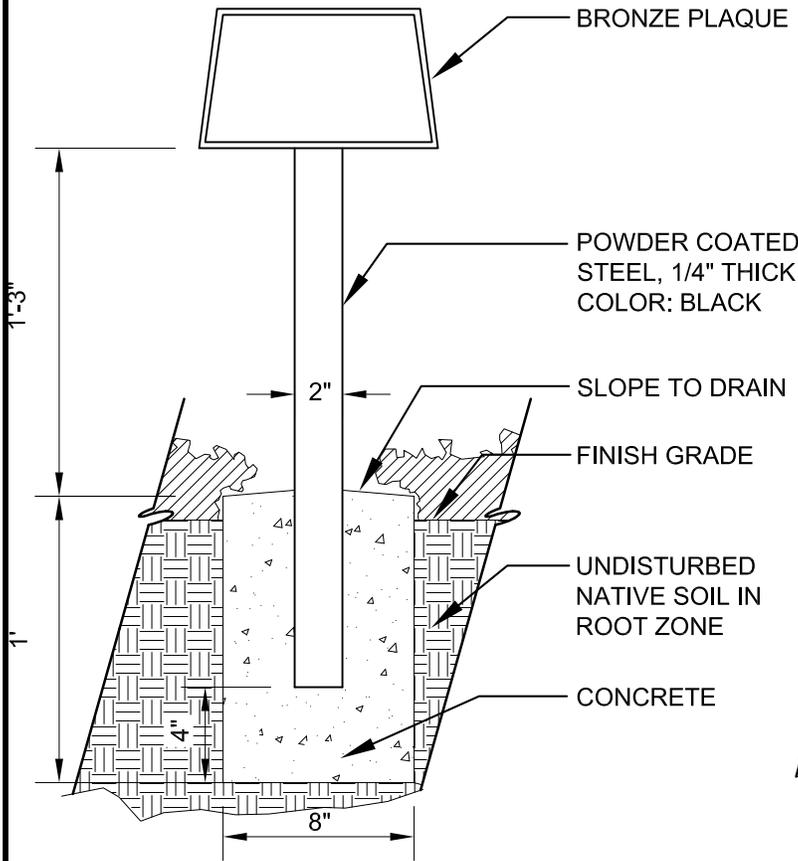
CITY OF FREMONT LANDMARK TREE NUMBER, 5/16" LETTERS, CAPITALIZED

TREE DESCRIPTION, 5/16" LETTERS, CAPITALIZED. DESCRIPTION TO BE APPROVED BY CITY LANDSCAPE ARCHITECT

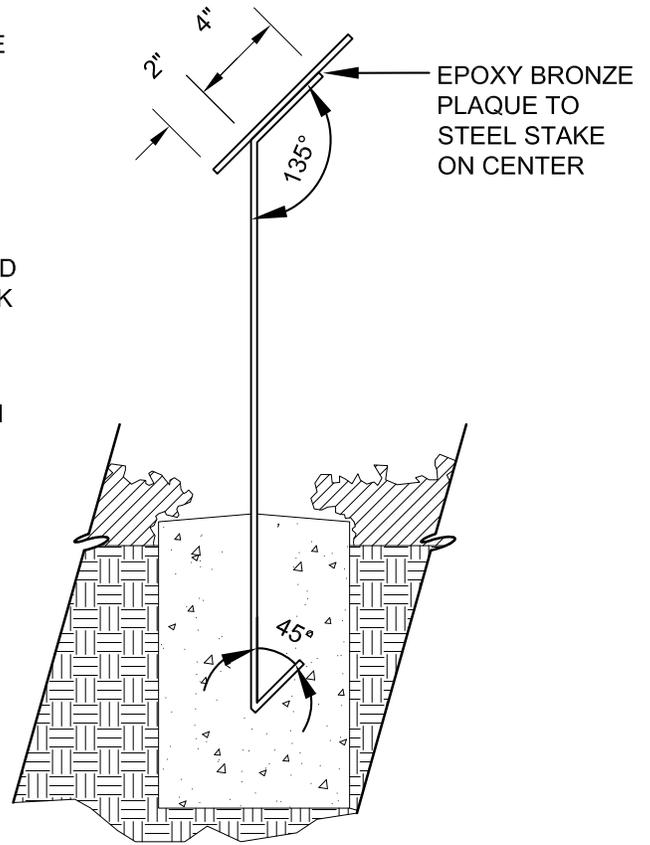
STANDARD TEXT, 5/16" LETTERS, CAPITALIZED

- NOTES:**
1. ALL TEXT TO BE TIMES NEW ROMAN, CENTERED ON PLAQUE.
 2. BACKGROUND COLOR SHALL BE DARK OXIDE (DARK BROWN).
 3. BACKGROUND TEXTURE SHALL BE LEATHERETTE.
 4. BORDER SHALL BE SINGLE LINE WITH NO BEVEL.
 5. LETTER AND WORD SPACING AS SHOWN.
 6. SIZE OF PLAQUE MAY VARY ACCORDING TO VARYING WIDTH OF SPECIES NAME.
 7. ANY DEVIATIONS SHALL BE APPROVED BY THE CITY LANDSCAPE ARCHITECT PRIOR TO FABRICATION.

BRONZE PLAQUE
SCALE: 3"=1'-0"



FRONT VIEW
SCALE: 1 1/2"=1'-0"



SIDE VIEW
SCALE: 1 1/2"=1'-0"

CITY OF FREMONT
STANDARD DETAILS
CITY STANDARD
LANDMARK TREE PLAQUE

DATE APPROVED BY CITY COUNCIL
12/13/11

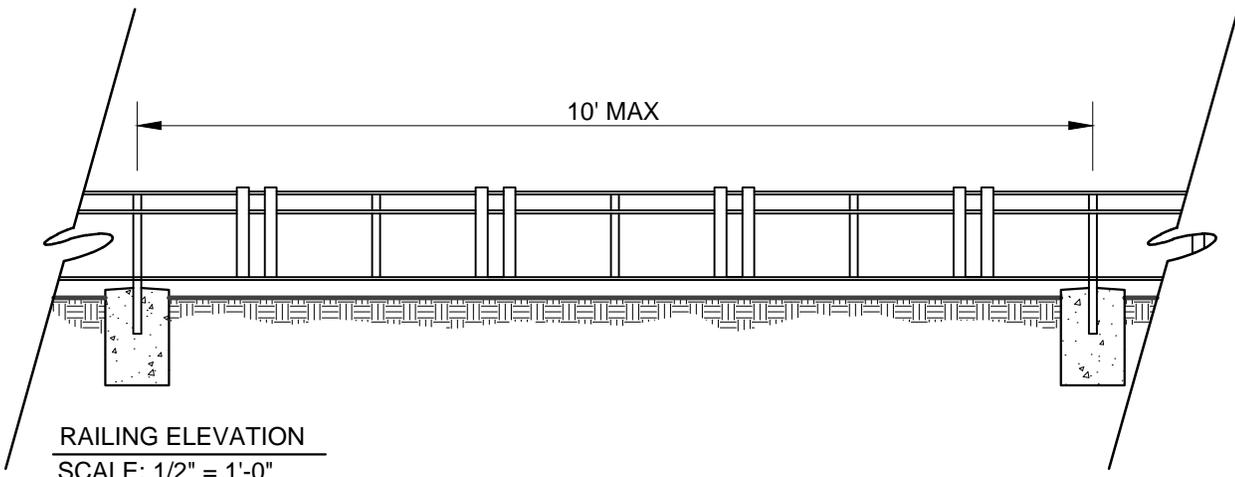
RESOLUTION NO. 2006-31

Ham Hughes

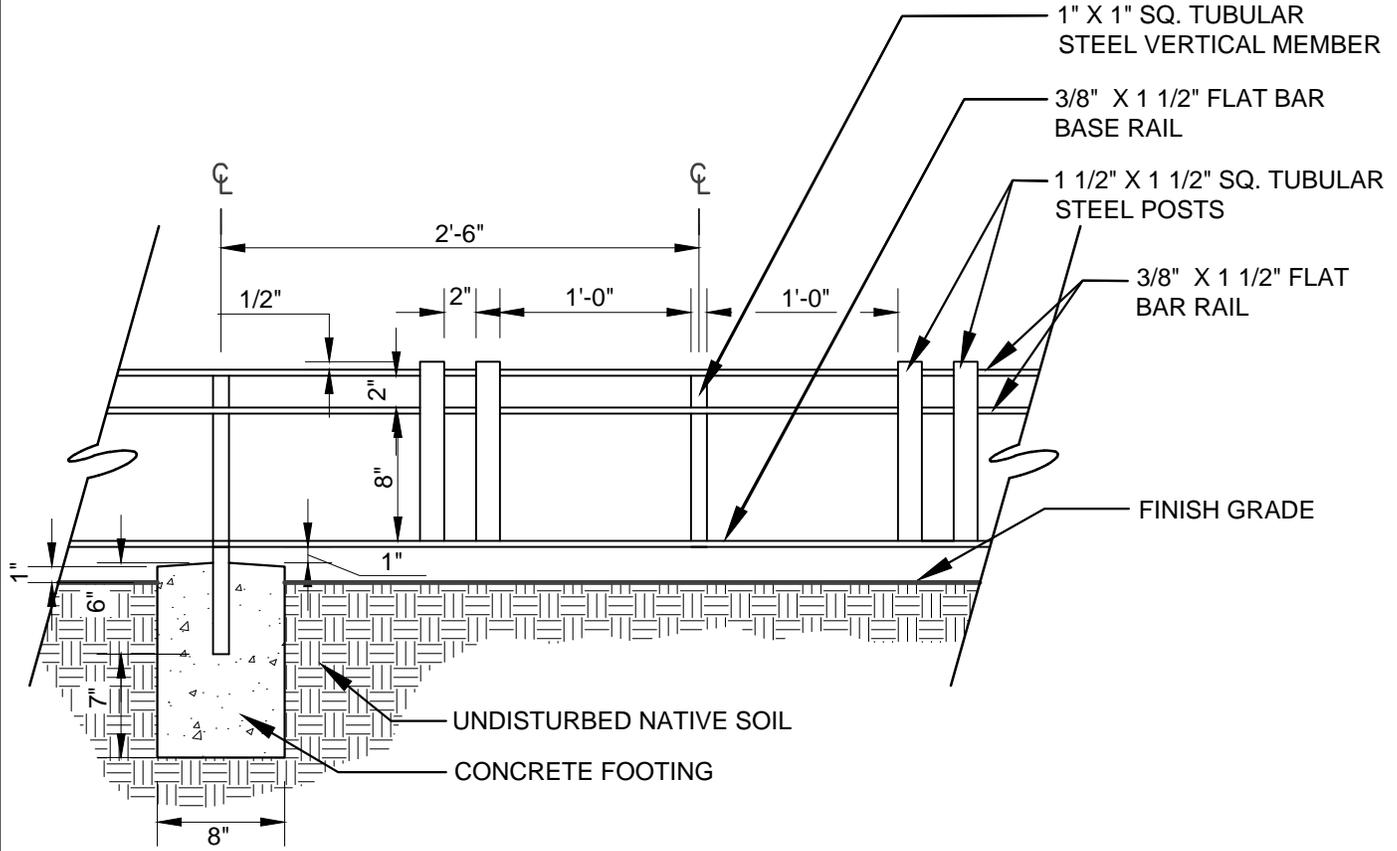
CITY ENGINEER

	Council Revision	12/13/11
APPR	REVISED	DATE
REVISIONS		

FILE NO. LSD-27.DWG	SCALE AS SHOWN	DRAWN TB	CHECKED RER	DATE DEC. 2011	DWG NO. LSD-27	1 OF 1
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RAILING ELEVATION
SCALE: 1/2" = 1'-0"



LOW METAL RAILING
SCALE: 1" = 1'-0"

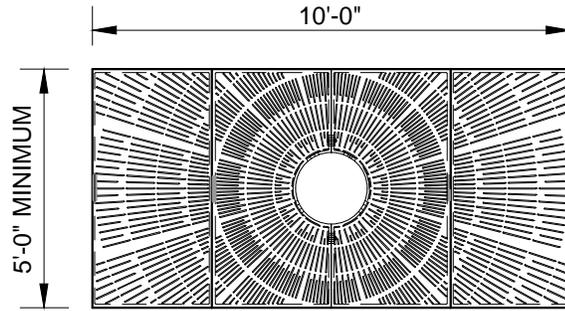
NOTE:
ALL MEMBERS SOLID STEEL RAILING AND TUBULAR STEEL

	Council Revision	12/13/11
APPR	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
CITY STANDARD
LANDMARK TREE RAILING

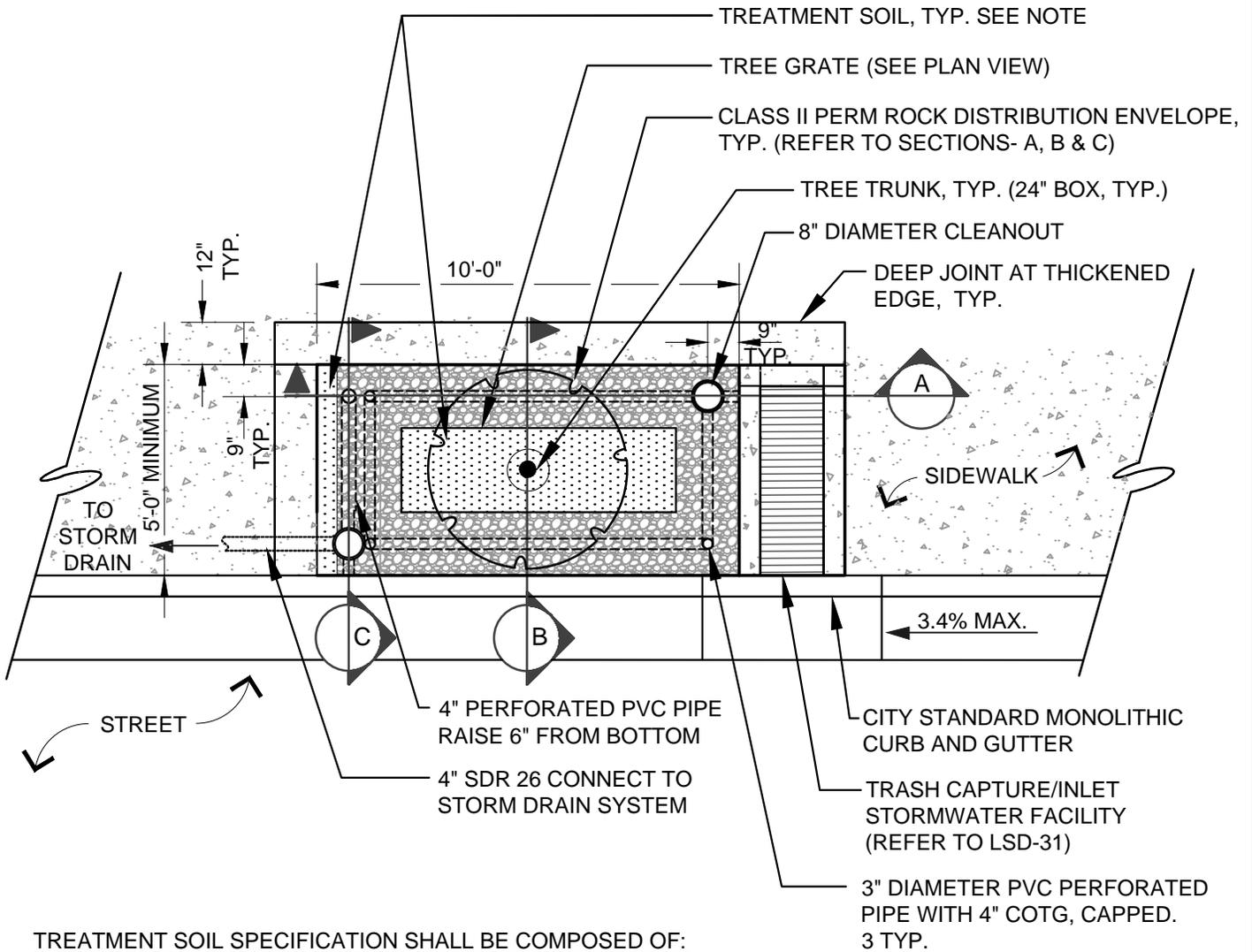
DATE APPROVED BY CITY COUNCIL
12/13/11
RESOLUTION NO. 2006-31
Ham Hughes
CITY ENGINEER

FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
LSD-28.DWG	VARIES	TB	RER	DEC. 2011	LSD - 28	1 of 1



NOTE:
NEENAH TREE GRATE (WITH
EXTENSIONS) PER LSD-2 OR
APPROVED EQUAL

PLAN VIEW - TREE GRATE



TREATMENT SOIL SPECIFICATION SHALL BE COMPOSED OF:
60% ASTM C-33 SAND
30% USCC STA CERTIFIED COMPOST
10% SMALL WOOD CHIPS

	Council Revision	12/13/11
APPR	REVISED	DATE
REVISIONS		

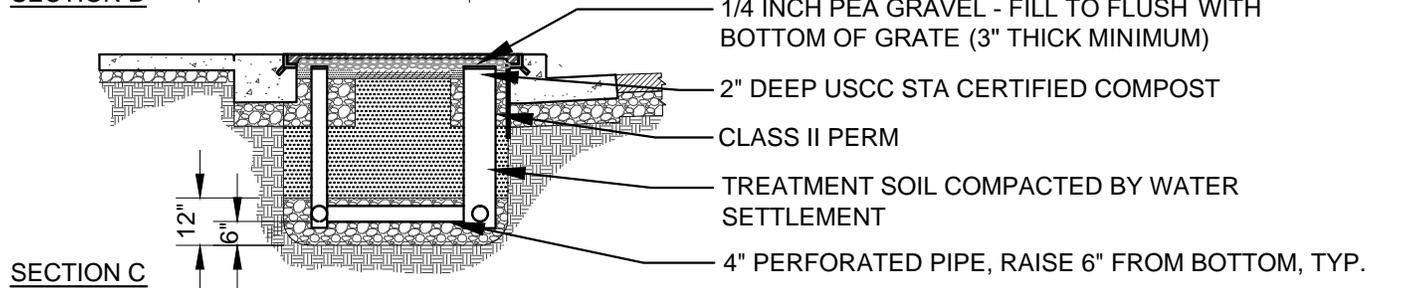
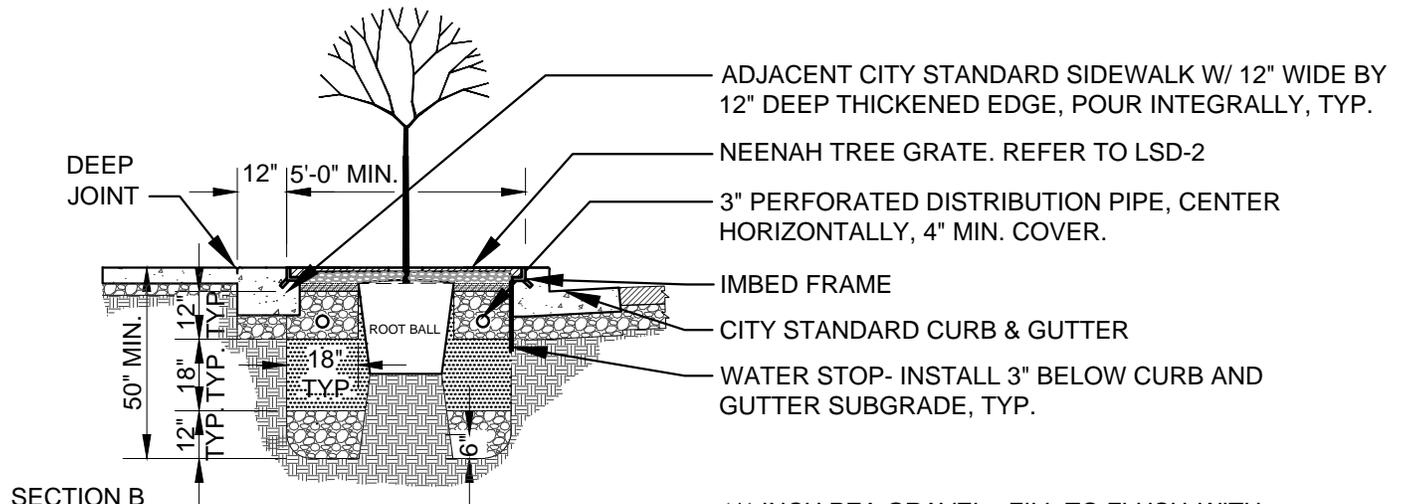
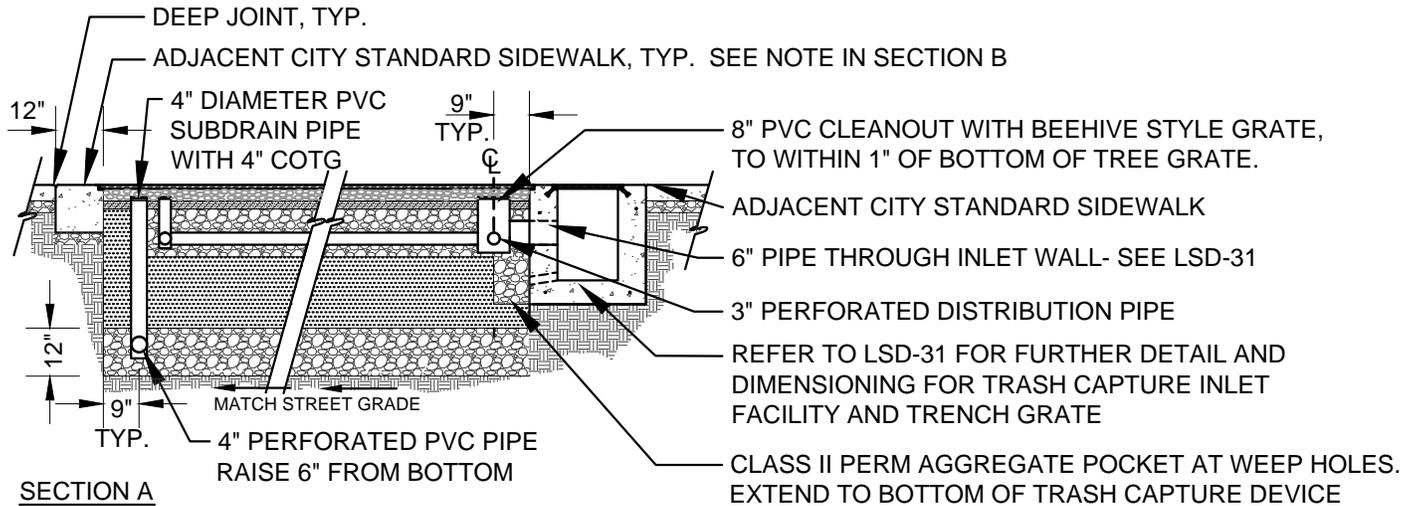
CITY OF FREMONT
STANDARD DETAILS
CITY STANDARD
STORMWATER TREETWELL
PLAN VIEW

DATE APPROVED BY CITY COUNCIL 12/13/11	
RESOLUTION NO. 2006-31	
<i>Ham Hughes</i>	
CITY ENGINEER	

FILE NO. LSD-29.DWG	SCALE 1/4" = 1'-0"	DRAWN EL/TB/CC	CHECKED RER	DATE DEC. 2011	DWG NO. LSD-29	1 OF 2
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SIZING INFORMATION:

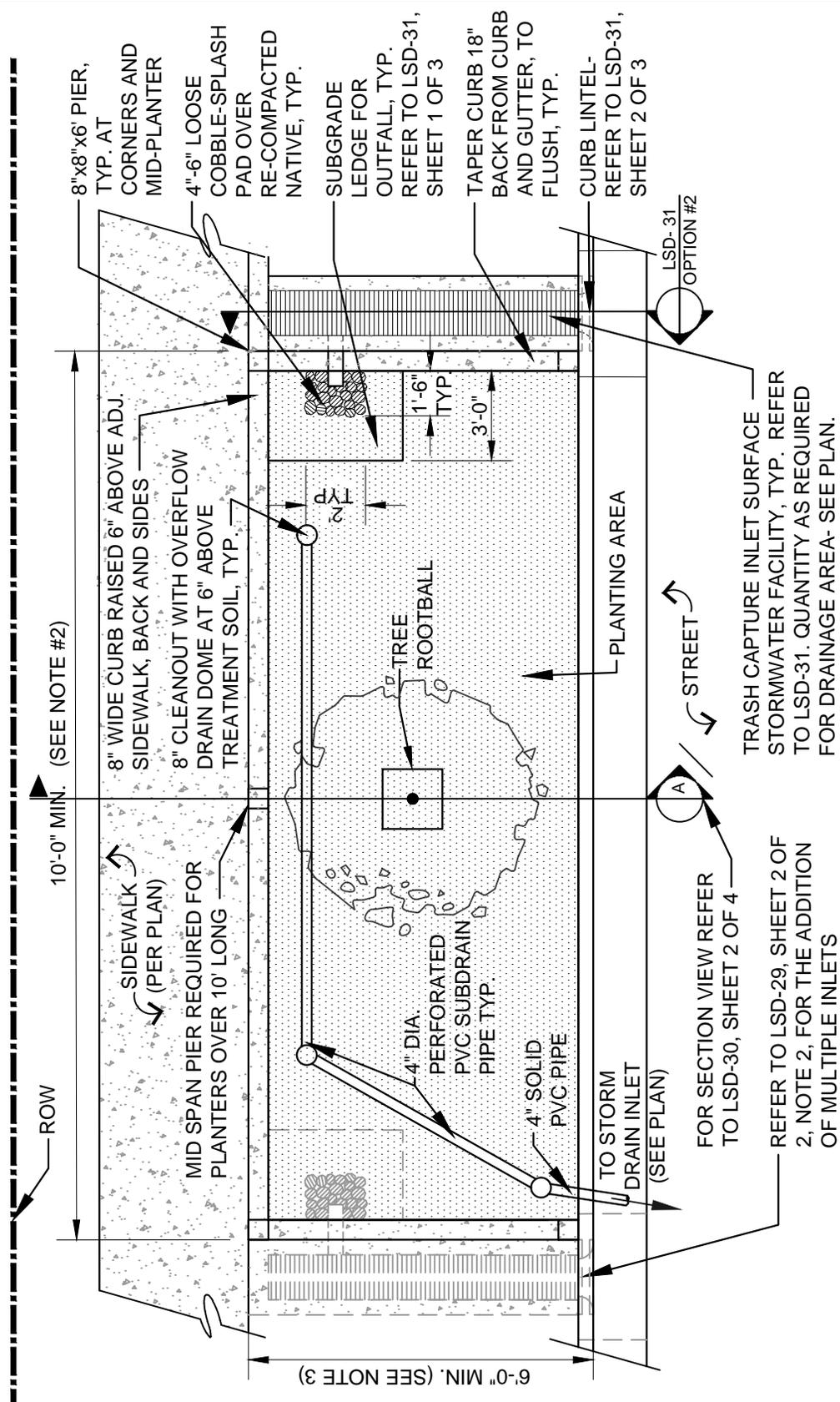
1. THE MAXIMUM ALLOWABLE DRAINAGE AREA FOR THIS TREETWELL AS SHOWN (10' x 5') SHALL BE 1,250 SQ. FT. TREETWELL HAS BEEN SIZED USING THE COMBINED FLOW AND VOLUME METHODOLOGY AS DETAILED IN THE ACCWP C.3 STORMWATER TECHNICAL MANUAL. ANY DEVIATION FROM THIS SIZE (10' x 5') WOULD REQUIRE FLOW-VOLUME CALCULATIONS. SUBSURFACE TREETWELL TREATMENT DEVICES WILL NOT BE ACCEPTED USING SIMPLIFIED SIZING CRITERIA OF 4%.
2. THE CURB INLET OPENING OF 15" AS SHOWN IS SUFFICIENT TO CAPTURE 100% OF THE TREATMENT RUNOFF FROM THE MAXIMUM DRAINAGE AREA (1,250 SQ.FT. OF IMPERVIOUS AREA) PERTINENT TO THIS TREETWELL SIZE. THE LENGTH OF CURB OPENING REQUIRED FOR 100% CAPTURE IS DEPENDENT ON THE GUTTER SLOPE (FOR TREETWELLS INSTALLED AT GRADE). STREETS GREATER THAN 3.4% SHALL REQUIRE LONGER OR MULTIPLE CURB OPENINGS BASED ON INLET CAPTURE CALCULATIONS.
3. FOR ADDITIONAL PLANTING AND IRRIGATION REFER TO LSD-2 REQUIREMENTS. TREES MUST BE IRRIGATED.



			CITY OF FREMONT STANDARD DETAILS CITY STANDARD STORMWATER TREETWELL SECTIONS			DATE APPROVED BY CITY COUNCIL 12/13/11	
						RESOLUTION NO. 2006-31	
Council Revision 12/13/11			 CITY ENGINEER				
APPR	REVISED	DATE					
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
LSD-29.DWG	1/4=1'-0"	MAM/TB/CC	RER	DEC. 2011	LSD-29	2 OF 2	

SIZING INFORMATION:

- A. SIZE TREEWELL FILTER TO EQUAL 4% OF THE DRAINAGE AREA ENTERING PLANTER. REFER TO ACCWP C.3 STORMWATER TECHNICAL MANUAL.
- B. FOR ADDITIONAL PLANTING AND IRRIGATION REFER TO LSD-2 REQUIREMENTS. TREES MUST BE IRRIGATED.



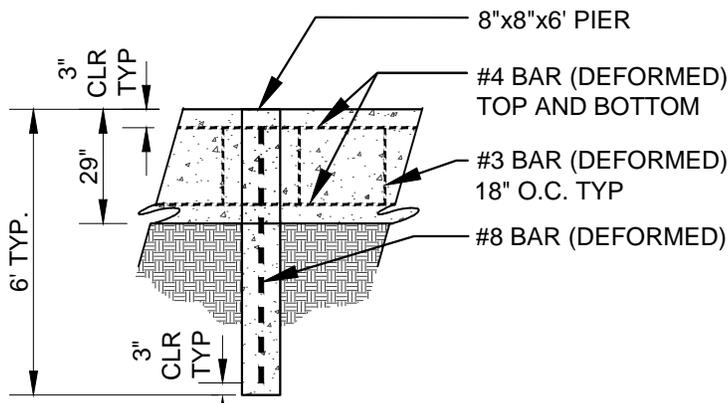
- NOTES:**
1. USE NDS DOME ATRIUM GRATE FOR OVERFLOW DRAINS, OR APPROVED EQUAL. COLOR: BLACK
 2. DIMENSIONS VARY DEPENDING ON SIZE OF DRAINAGE AREA, BUT NOT LESS THAN 5'-0" BY 10'-0"
 3. SEE SHEET 3 OF 4 FOR ALTERNATE MONOLITHIC SIDEWALK DESIGN

APPR	Council Revision	12/13/11
	REVISED	DATE
REVISIONS		
FILE NO.	SCALE	DRAWN
LSD-30.DWG	3/16" = 1'-0"	MM

CITY OF FREMONT
STANDARD DETAILS
CITY STANDARD
STORMWATER PLANTER
PLAN VIEW

DATE APPROVED BY CITY COUNCIL 12/13/11	
RESOLUTION NO. 2006-31	
<i>Ham Hughes</i>	
CITY ENGINEER	
DWG NO.	1 OF 4
LSD-30	

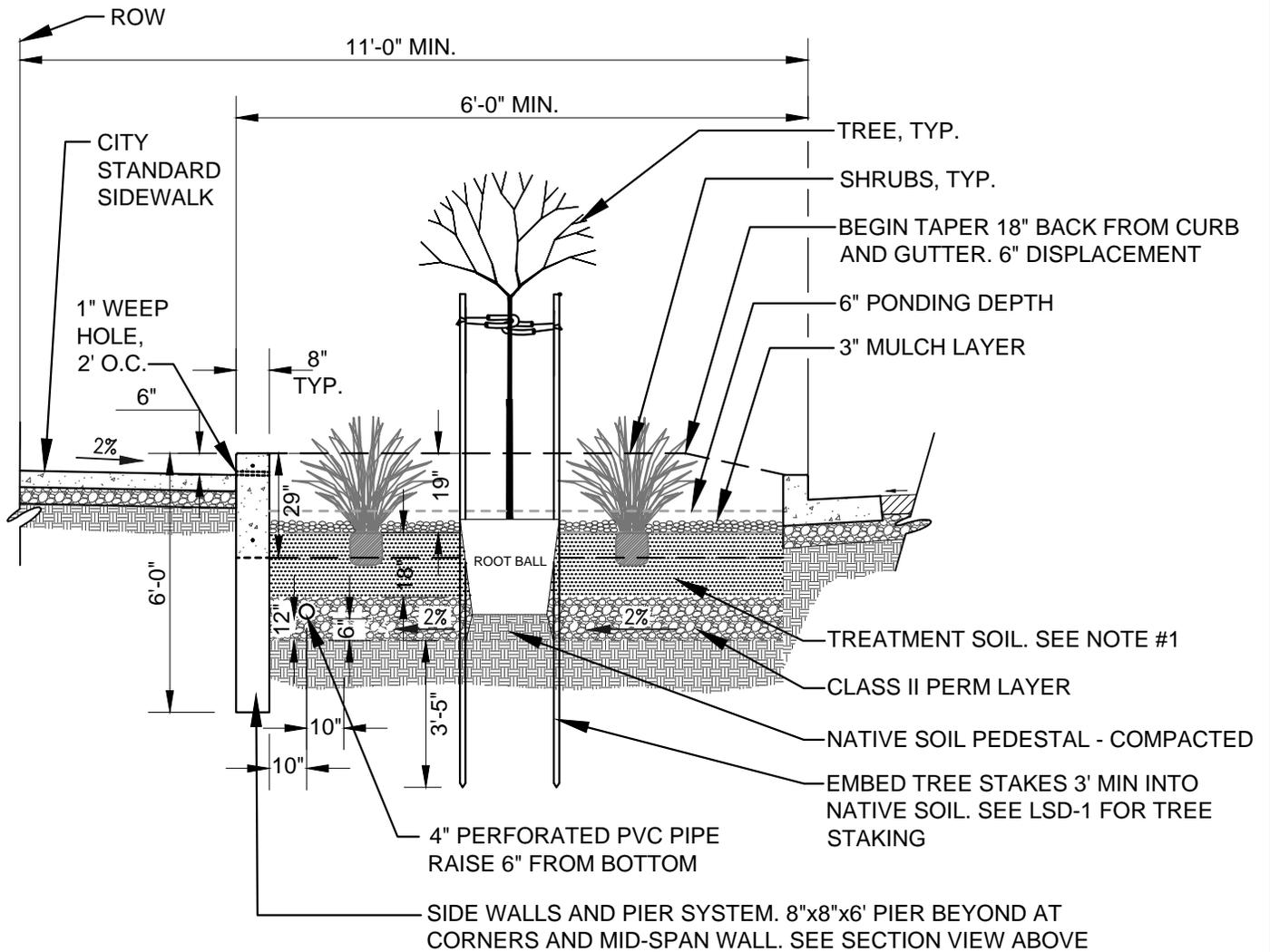
CHECKED	DATE
RER	DEC. 2011



SECTION VIEW
8" SIDE WALLS AND PIER INTERFACE

NOTES:

1. TREATMENT SOIL SHALL BE COMPOSED OF:
60% ASTM C-33 SAND
30% USCC STA CERTIFIED COMPOST
10% SMALL WOOD CHIPS
2. CONTRACTOR MUST SUBMIT TEST RESULTS FROM COMPOST FACILITY.
3. PLANTS MUST BE IRRIGATED.



SECTION A

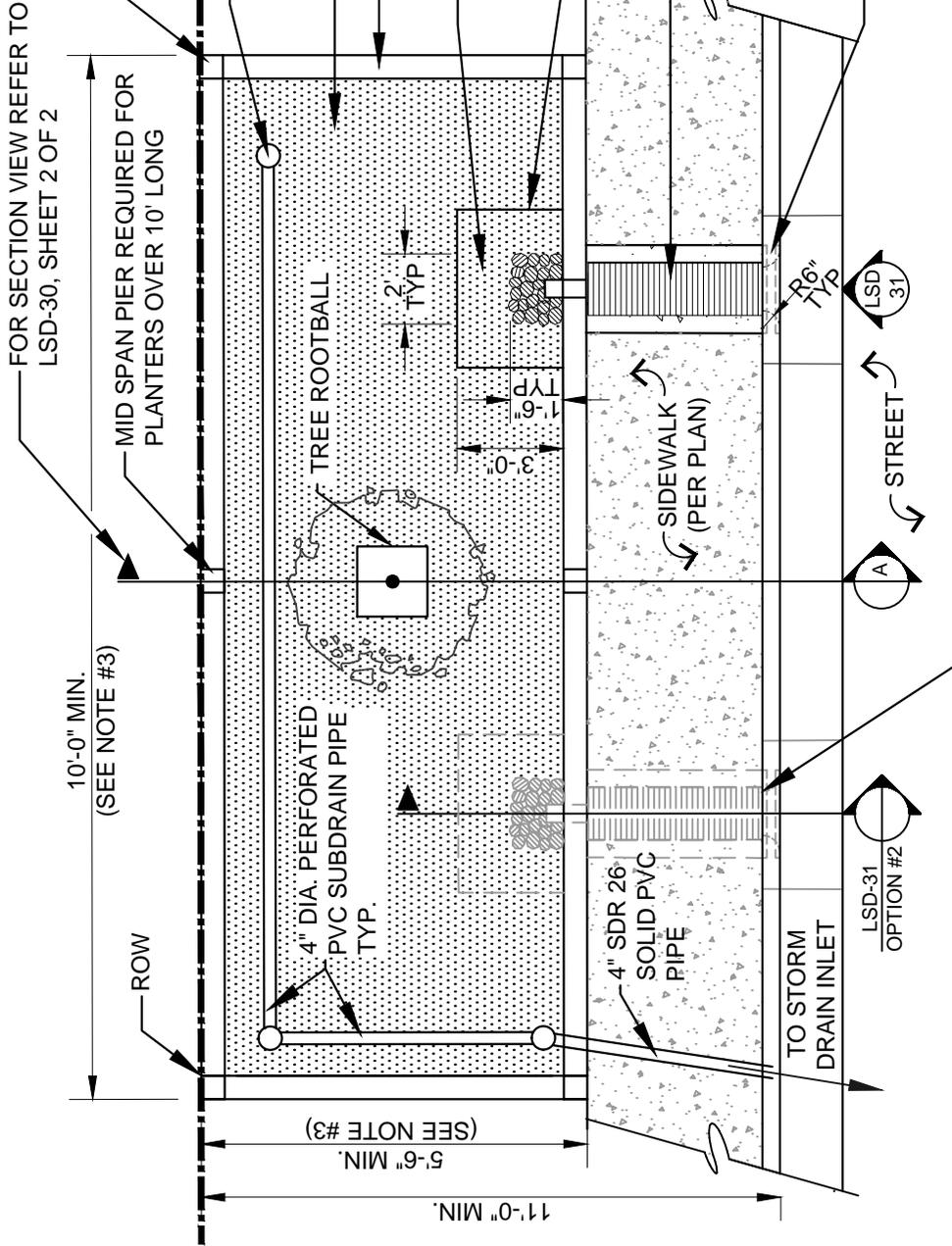
	Council Revision	12/13/11
APPR	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
CITY STANDARD
STORMWATER PLANTER
SECTIONS

DATE APPROVED BY CITY COUNCIL 12/13/11
RESOLUTION NO. 2006-31
<i>Ham Hughes</i>
CITY ENGINEER

FILE NO. LSD-30.DWG	SCALE N.T.S.	DRAWN MM/CC	CHECKED RER	DATE DEC. 2011	DWG NO. LSD-30	2 OF 4
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SIZING INFORMATION:
 A. SIZE TREEWELL FILTER TO EQUAL 4% OF THE DRAINAGE AREA ENTERING PLANTER. REFER TO ACCWP C.3 STORMWATER TECHNICAL MANUAL.
 B. FOR ADDITIONAL PLANTING AND IRRIGATION REFER TO LSD-2 REQUIREMENTS. TREES MUST BE IRRIGATED.



NOTES:
 1. USE NDS DOME ATRIUM GRATE FOR OVERFLOW DRAINS, OR APPROVED EQUAL. COLOR: BLACK
 2. DIMENSIONS VARY DEPENDING ON SIZE OF DRAINAGE AREA, 5'-0" BY 10'-0" MIN.
 3. THIS IS AN ALTERNATE DESIGN FROM THE RESIDENTIAL STANDARD AND IS FOR RETROFIT OR MONOLITHIC SITUATIONS ONLY, AS APPROVED BY THE CITY ENGINEER.

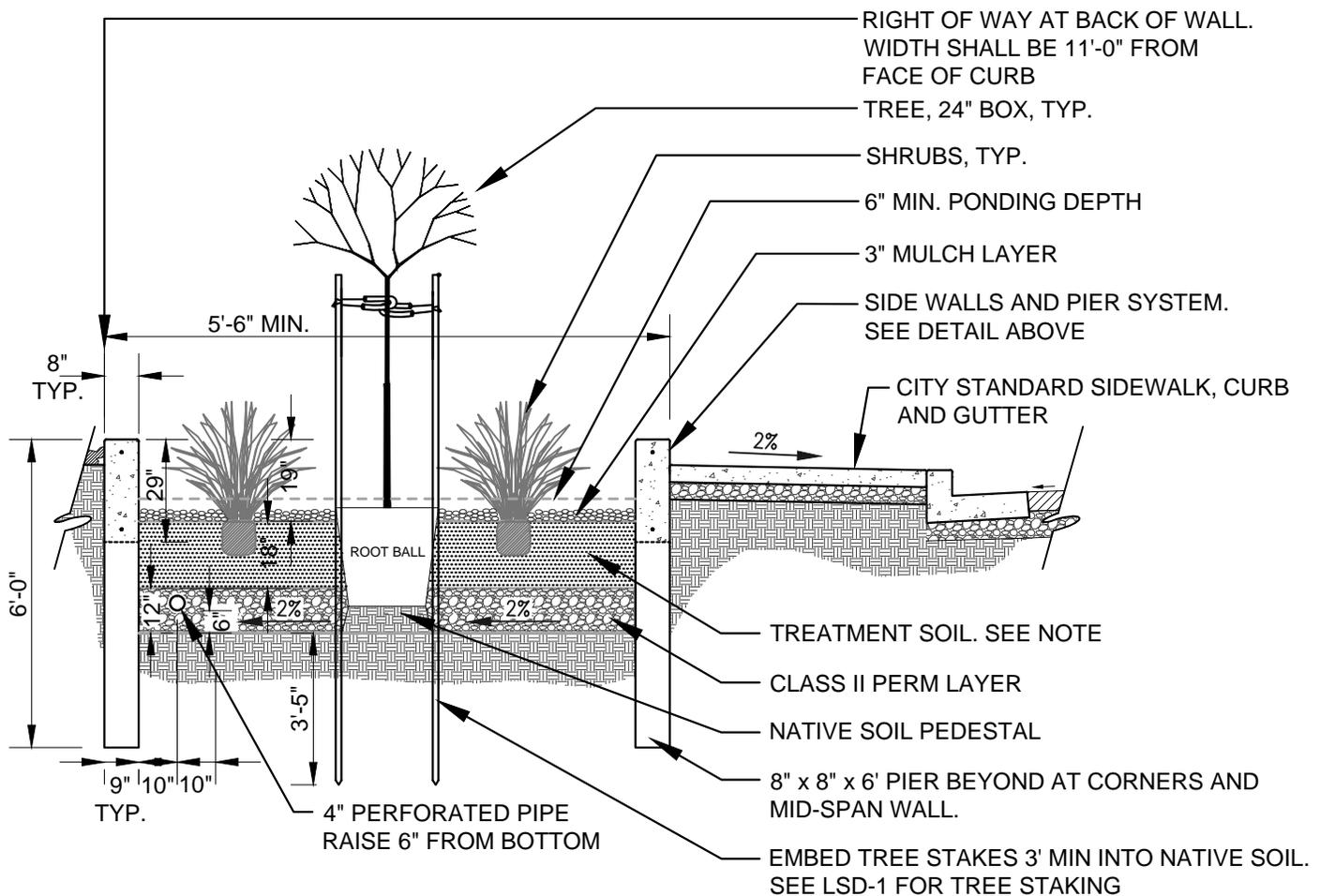
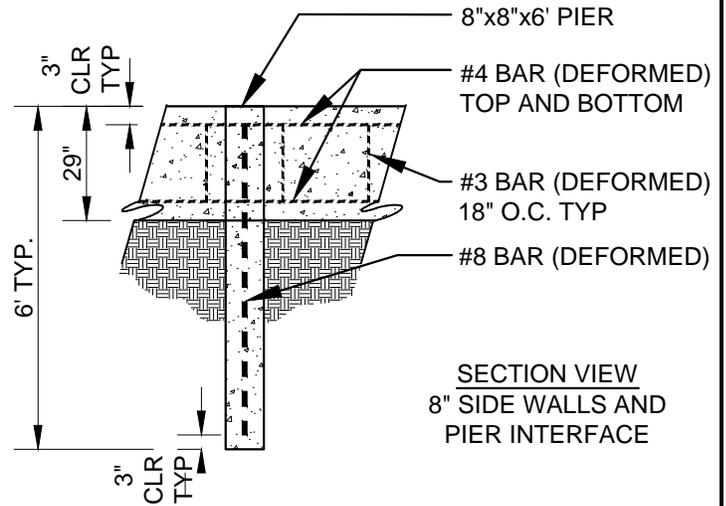
APPR	Council Revision	12/13/11
REVISIONS	REVISED	DATE
FILE NO.	SCALE	DRAWN
LSD-30.DWG	3/16" = 1'-0"	MM/TB/CC

CITY OF FREMONT
 STANDARD DETAILS
 CITY STANDARD
STORMWATER PLANTER
 PLAN VIEW - ALTERNATE

DATE APPROVED BY CITY COUNCIL	12/13/11
RESOLUTION NO.	2006-31
CITY ENGINEER	<i>Ham Hughes</i>
DWG NO.	LSD-30
	3 OF 4

NOTES:

1. TREATMENT SOIL SHALL BE COMPOSED OF:
 60% ASTM C-33 SAND
 30% USCC STA CERTIFIED COMPOST (SEE NOTE 2)
 10% SMALL WOOD CHIPS
2. CONTRACTOR SHALL SUBMIT TEST RESULTS FROM COMPOST FACILITY.
3. PLANTS MUST BE IRRIGATED.
4. THIS IS AN ALTERNATE DESIGN FROM THE RESIDENTIAL STANDARD AND IS FOR RETROFIT OR MONOLITHIC SITUATIONS ONLY, AS APPROVED BY THE CITY ENGINEER.

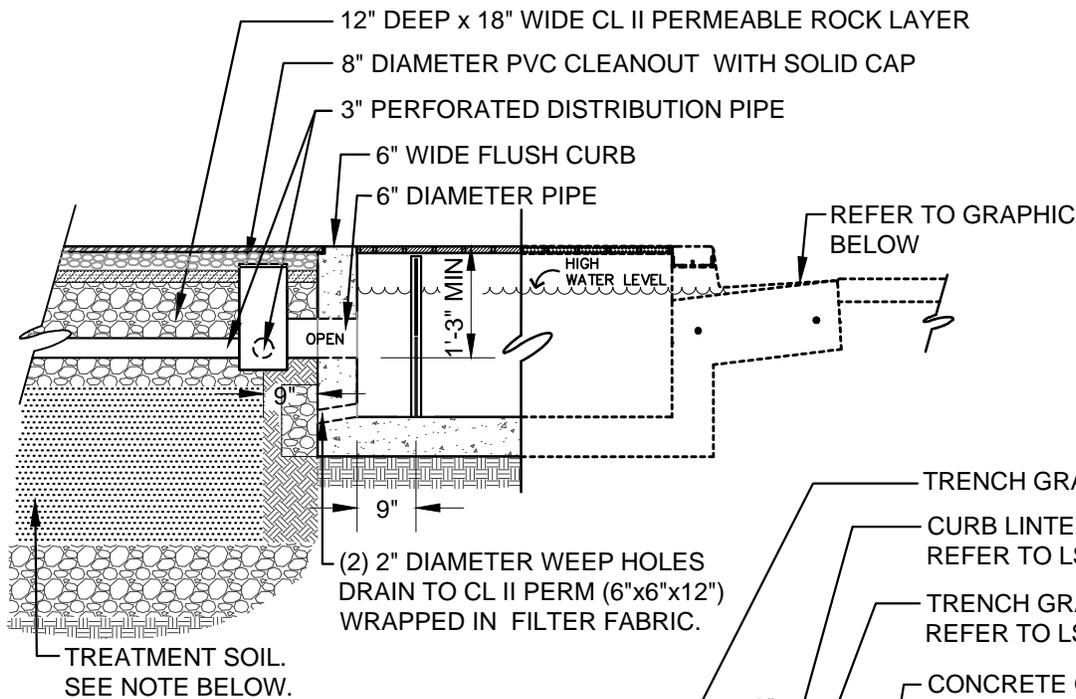


	Council Revision	12/13/11
APPR	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
CITY STANDARD
STORMWATER PLANTER
SECTIONS-ALTERNATE

DATE APPROVED BY CITY COUNCIL 12/13/11
RESOLUTION NO. 2006-31
<i>Ham Hughes</i>
CITY ENGINEER

FILE NO. LSD-30.DWG	SCALE N.T.S.	DRAWN PN/TB/CC	CHECKED RER	DATE DEC. 2011	DWG NO. LSD-30	4 OF 4
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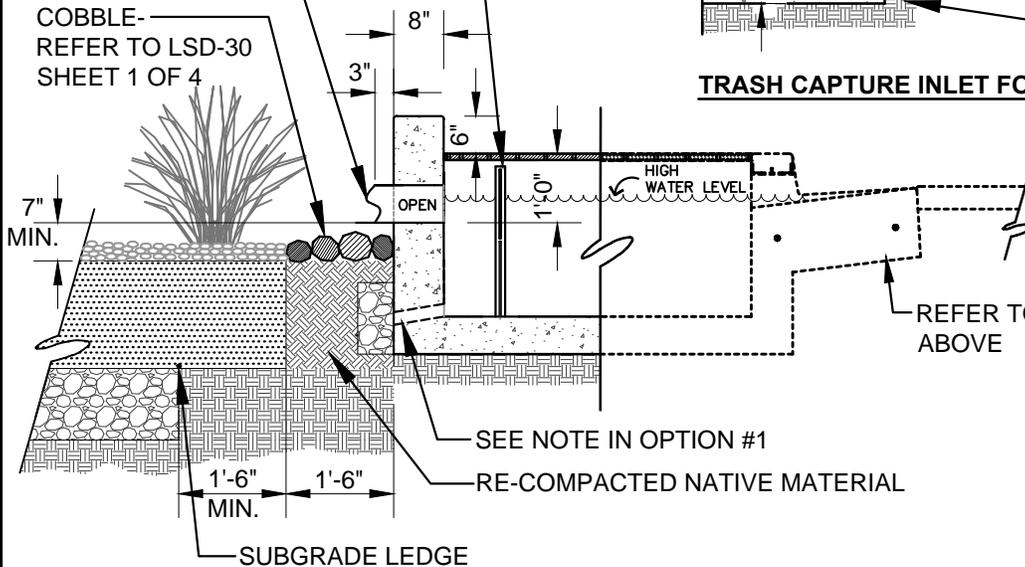


SUBSURFACE STORMWATER FACILITY
OPTION #1

LOUVERED PANEL-
 REFER TO LSD 31, SHEET 3 OF 3

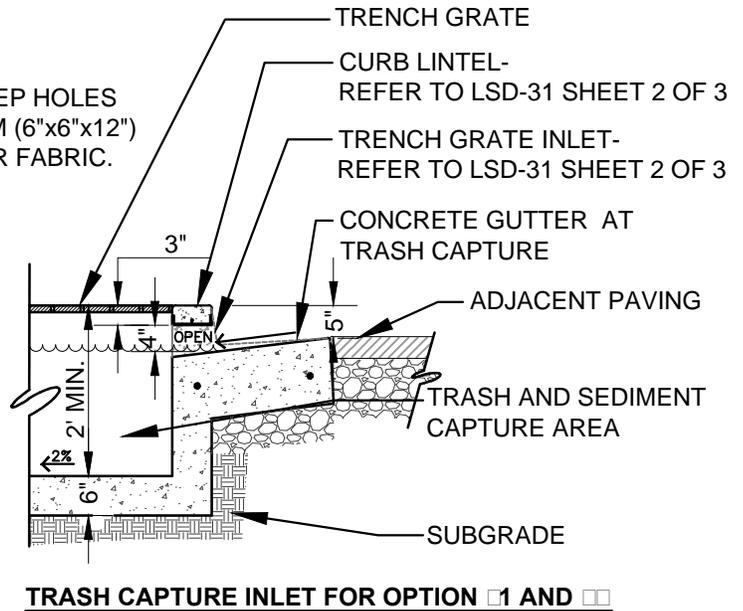
6" DIAMETER
 SCH. 40 PVC.

COBBLE-
 REFER TO LSD-30
 SHEET 1 OF 4



SURFACE STORMWATER FACILITY
OPTION #2

TREATMENT SOIL SPECIFICATION SHALL BE COMPOSED OF :
 60% ASTM C-33 SAND
 30% USCC STA CERTIFIED COMPOST
 10% SMALL WOOD CHIPS



CITY OF FREMONT
STANDARD DETAILS
CITY STANDARD
STORMWATER TRASH
CAPTURE INLET

DATE APPROVED BY CITY COUNCIL
 12/13/11

RESOLUTION NO. 2006-31

Ham Hughes

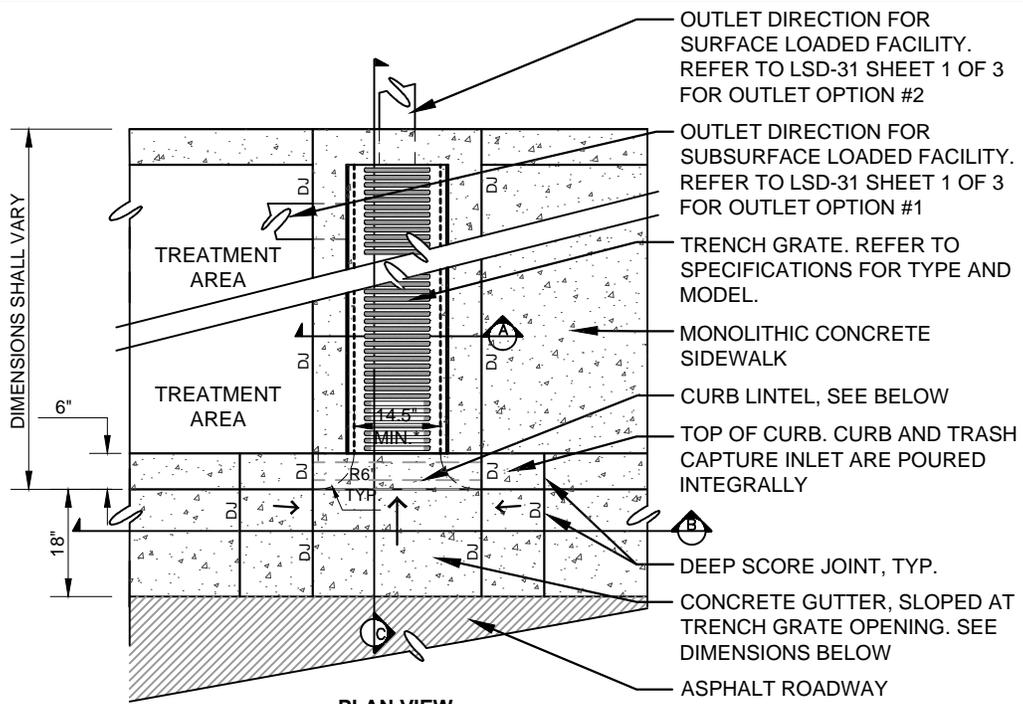
CITY ENGINEER

	Council Revision	12/13/11
APPR	REVISED	DATE
REVISIONS		

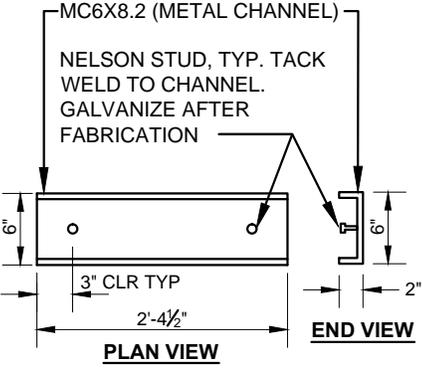
FILE NO. LSD-31.DWG	SCALE 1/2" = 1'-0"	DRAWN TB/CC	CHECKED RER	DATE NOV. 2011	DWG NO. LSD-31	1 OF 3
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NOTES:

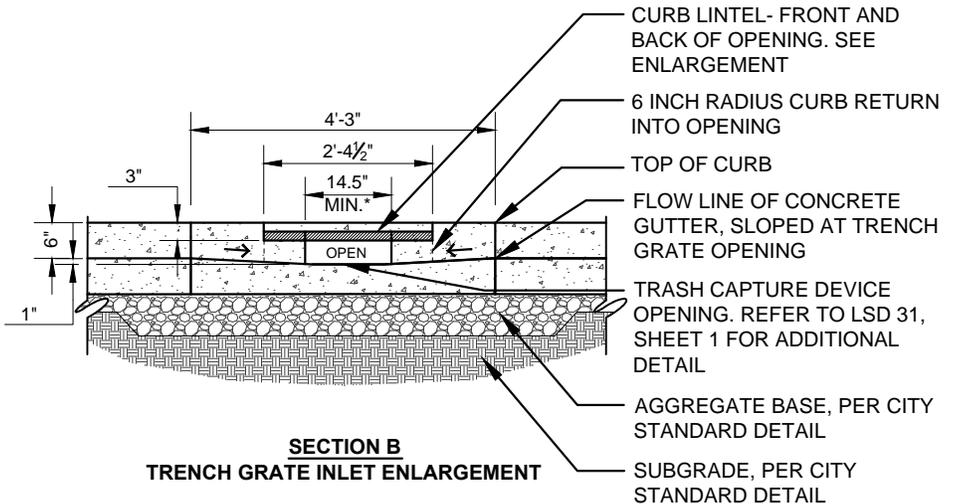
- * REFER TO PLANS FOR MINIMUM OPENING WIDTH. VARIABILITY OF MINIMUM OPENING WIDTH IS SUBJECT TO REQUIREMENTS OF DRAINAGE AREA. REFER TO NOTES 1 AND 2 ON LSD-29, SHEET 2 OF 2.
- DURING CONSTRUCTION RAIN EVENTS, TRASH CAPTURE DEVICE OPENING SHALL BE PROTECTED TO PREVENT WATER ENTRY UNTIL DEVICE IS APPROVED FOR USE BY PROJECT LANDSCAPE ARCHITECT.
- REFER TO LSD 31, SHEET 1 OF 3 FOR WEEP HOLES QUANTITY AND DETAIL



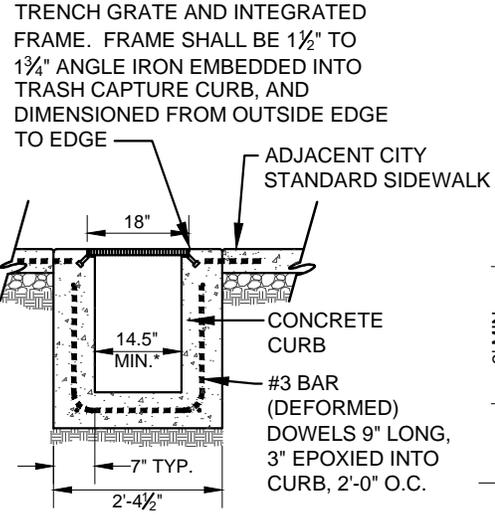
**PLAN VIEW
TRASH CAPTURE INLET AND GRATE**



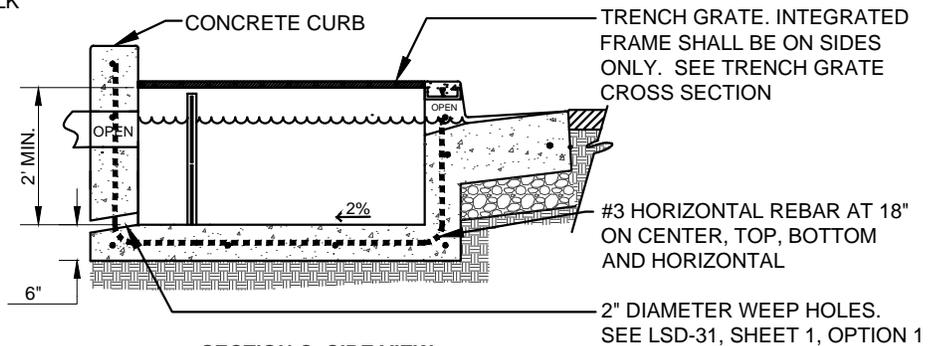
**CURB LINTEL ENLARGEMENT
SCALE: 3/4" = 1'-0"**



**SECTION B
TRENCH GRATE INLET ENLARGEMENT**



**SECTION A
TRENCH GRATE AND CURB CONNECTION**



**SECTION C- SIDE VIEW
SURFACE LOADED TRASH CAPTURE INLET**

APPR	REVISION	DATE
	Council Revision	12/13/11
REVISIONS		

**CITY OF FREMONT
STANDARD DETAILS
CITY STANDARD
STORMWATER TRASH
CAPTURE INLET**

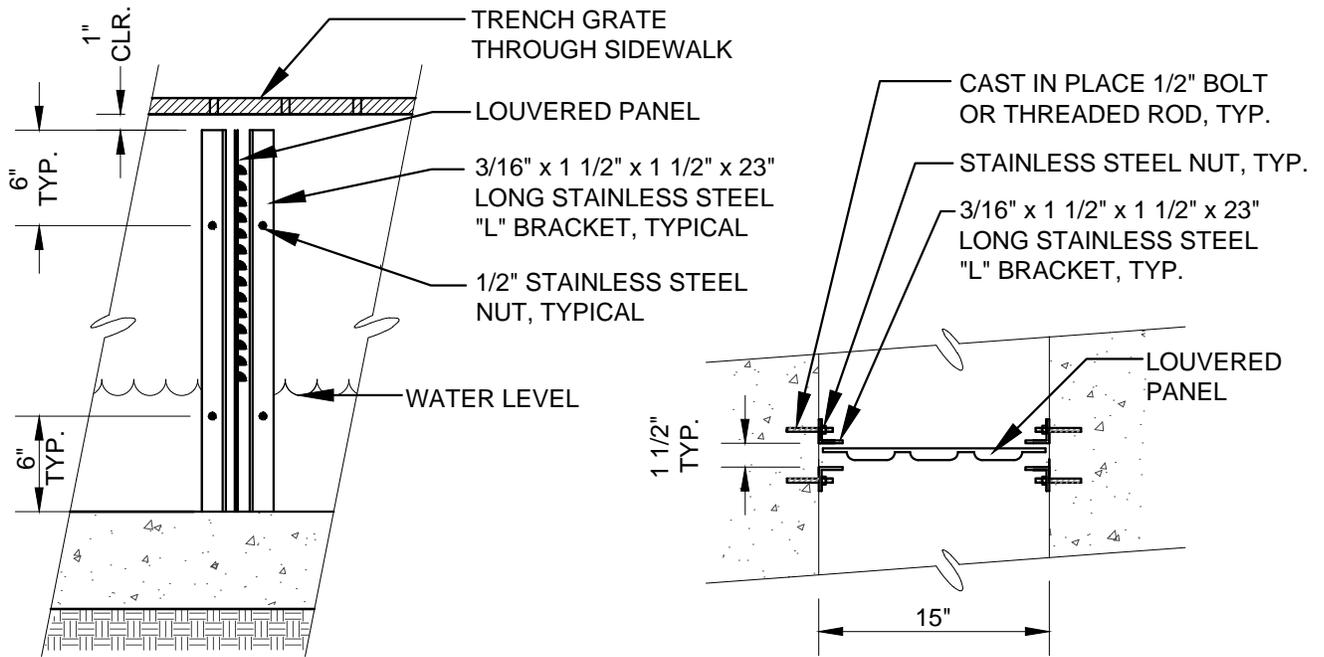
DATE APPROVED BY CITY COUNCIL
12/13/11

RESOLUTION NO. 2006-31

Ham Hughes

CITY ENGINEER

FILE NO. LSD-31.DWG	SCALE 3/8" = 1'-0"	DRAWN PN/TB/CC	CHECKED RER	DATE DEC. 2011	DWG NO. LSD-31	2 OF 3
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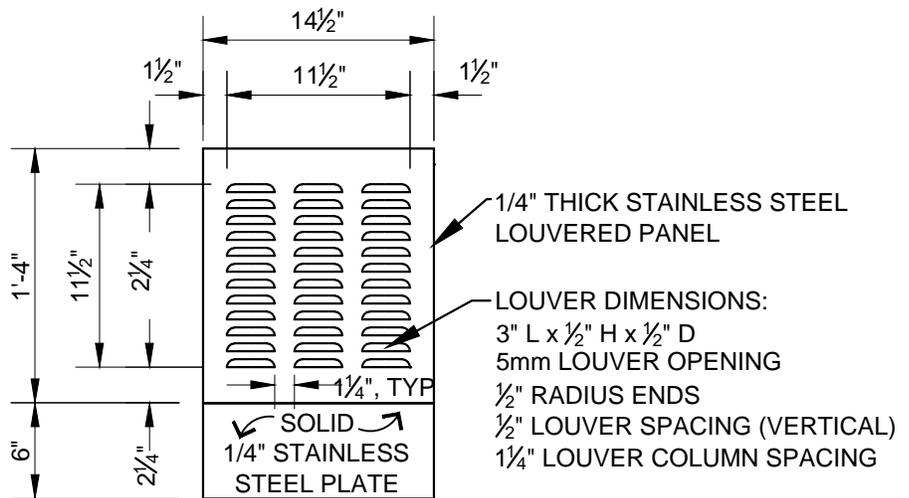


SIDE VIEW
N.T.S.

PLAN VIEW OF INLET CHANNEL

ACCEPTABLE LOUVERED PLATE AND BRACKET SUPPLIER, OR APPROVED EQUAL:

ROSCOE MOSS COMPANY
TYPE 304 STAINLESS STEEL
4360 WORTH STREET
LOS ANGELES, CA 90063
WWW.ROSCOEMOSS.COM

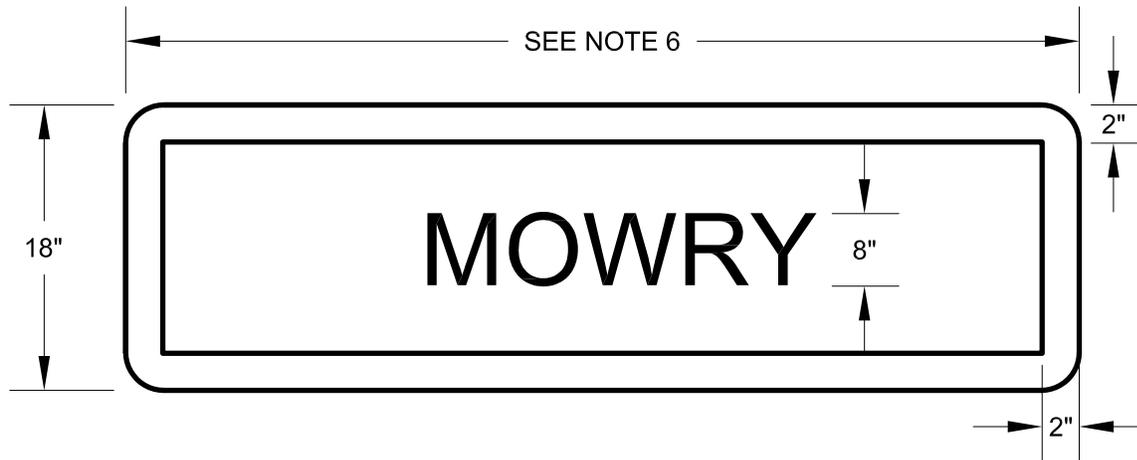


FRONT VIEW

NOTE:

- LOUVERED PANEL MINIMUM DIMENSION: 22"H x 14 1/2"W x 1/4". PANEL SIZES SHALL VARY DEPENDING UPON FACILITY REQUIREMENTS.
- FIELD VERIFY AND MAINTAIN 1" CLEAR FROM BOTTOM OF TRENCH GRATE.

			CITY OF FREMONT STANDARD DETAILS CITY STANDARD STORMWATER TRASH CAPTURE INLET			DATE APPROVED BY CITY COUNCIL 12/13/11	
						RESOLUTION NO. 2006-31	
Council Revision 12/13/11						<i>Ham Hughes</i> CITY ENGINEER	
APPR	REVISED	DATE					
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
LSD-31.DWG	1" = 1'-0"	MAM/CC	RER/MM	NOV. 2011	LSD-31	3 OF 3	



NOTES:

1. SIGN SHALL BE DOUBLE FACED USING 8 INCH, SERIES D, ALL CAPS LETTERS.
2. SIGN SHALL BE A D3-1 PLATE WITH 2 INCH WHITE RETROREFLECTIVE BORDER AND WHITE RETROREFLECTIVE LETTERING ON GREEN, RETROREFLECTIVE BACKGROUND (TYPE IX RETROREFLECTIVE SHEETING) CONSTRUCTED USING 0.08 INCH GAUGE METAL PLATE.
3. MAST ARM MOUNTED STREET NAME SIGNS SHALL BE INSTALLED WITH OVERHEAD MAST ARM ADJUSTABLE SWING SIGN BRACKETS (HAWKINS MIOJ-OCB25CAL).
4. FOR SIGNS 7' AND WIDER, THE SIGN SHALL BE INSTALLED WITH A 1 1/4 INCH BY 1 1/4 INCH ALUMINUM ANGLED CHANNEL ALONG THE FULL WIDTH OF THE SIGN. THE CHANNEL SHALL BE INSTALLED ON THE BACKSIDE OF THE SIGN ALONG THE TOP.
5. REFER TO CALTRANS STANDARD PLAN FOR MOUNTING DETAILS AND PLACEMENT. THE SIGN BRACKET SHALL BE DOUBLE STRAPPED TO THE MAST ARM WITH HEAVY DUTY STAINLESS STEEL STRAPS.
6. ACTUAL SIGN WIDTH SHALL BE SIZED ACCORDING TO THE SPECIFIC STREET NAME. THE MINIMUM SIGN WIDTH SHALL BE 4 FEET.

			CITY OF FREMONT			DATE APPROVED BY CITY COUNCIL 04/11/06	
			STANDARD DETAILS			RESOLUTION NO. 2006-31	
			<u>STREET NAME SIGN</u>			<i>Ham Hughes</i>	
			<u>MAST ARM MOUNTED</u>			CITY ENGINEER	
NO.	REVISED	DATE	REVISIONS				
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
TSD-1.dwg	NOT TO SCALE	SLM	EPE	12/2005	TSD-1	1 of 1	

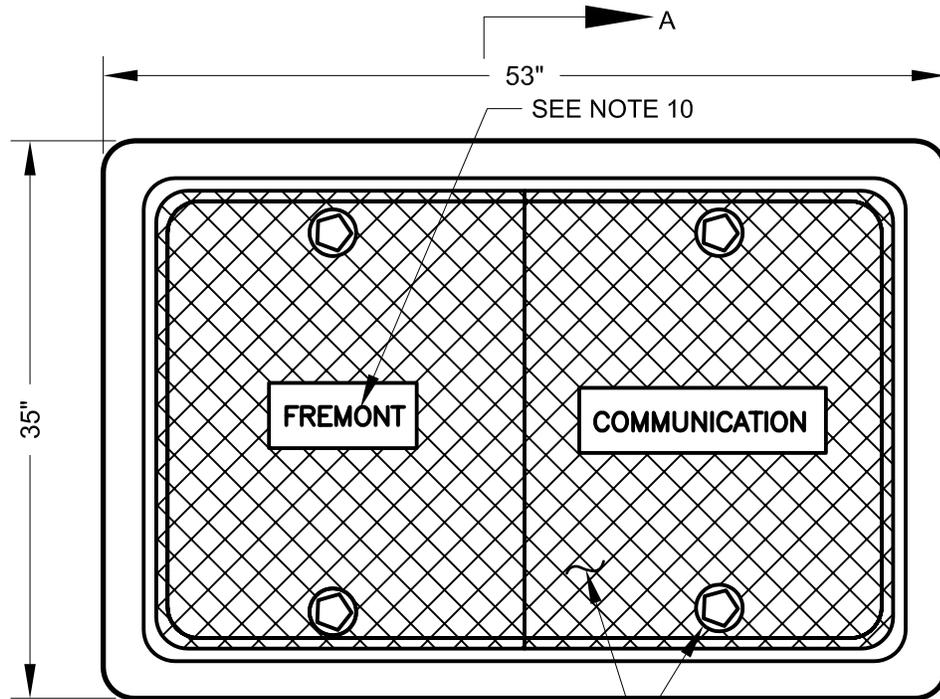


NOTES:

1. SIGN SHALL BE SINGLE FACED USING 8 INCH, SERIES D, ALL CAPS LETTERS.
2. SIGN SHALL BE A D3-1 PLATE WITH 2 INCH WHITE RETROREFLECTIVE BORDER AND WHITE RETROREFLECTIVE LETTERING ON GREEN, RETROREFLECTIVE BACKGROUND (TYPE IX RETROREFLECTIVE SHEETING) CONSTRUCTED USING 0.08 INCH GAUGE METAL PLATE.
3. SIGN SHALL BE INSTALLED WITH TWO (2) 1 $\frac{1}{4}$ INCH BY 1 $\frac{1}{4}$ INCH BY $\frac{1}{8}$ INCH ALUMINUM ALLOY CHANNEL 6063-T5 ALONG THE FULL LENGTH OF THE SIGN. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
4. FABRICATE FOR ELECTROLIER/SIGNAL POLE MOUNTING. INSTALL WITH BACK BRACE AND SPECIAL BRACKET PER CALTRANS STANDARD PLAN.
5. ACTUAL SIGN WIDTH SHALL BE SIZED ACCORDING TO THE SPECIFIC STREET NAME. THE MINIMUM SIGN WIDTH SHALL BE 4 FEET.

<h2 style="margin: 0;">CITY OF FREMONT</h2> <p style="margin: 0;">STANDARD DETAILS</p> <p style="margin: 0;"><u>STREET NAME SIGN</u></p> <p style="margin: 0;"><u>POLE MOUNTED</u></p>			DATE APPROVED BY CITY COUNCIL			
			04/11/06			
			RESOLUTION NO. 2006-31			
			 CITY ENGINEER			
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
TSD-2.dwg	NOT TO SCALE	SLM	EPE	12/2005	TSD-2	1 of 1

PLAN VIEW



53" SEE NOTE 10

35"

FREMONT

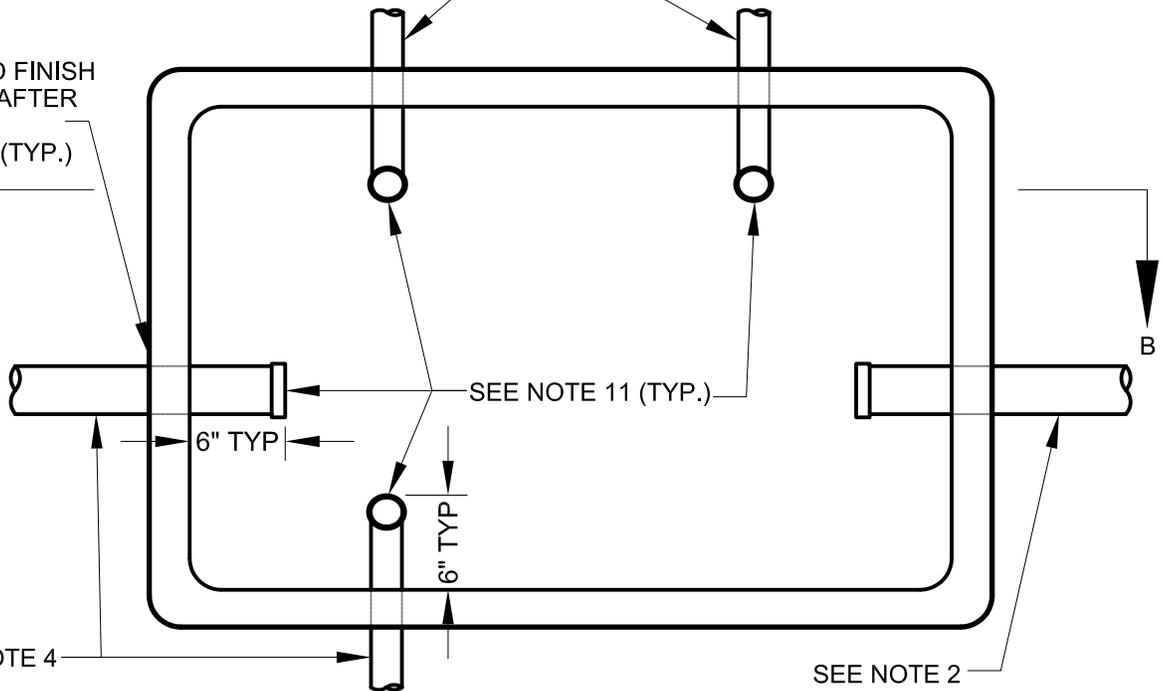
COMMUNICATION

2 PIECE STEEL CHECKER PLATE LID WITH HOLD DOWN BOLTS (TYP.)

SEE NOTE 4

GROUT AND FINISH OPENINGS AFTER CONDUIT IS INSTALLED (TYP.)

PLAN VIEW



B

B

6" TYP

6" TYP

SEE NOTE 11 (TYP.)

SEE NOTE 4

SEE NOTE 2

CITY OF FREMONT
STANDARD DETAILS

COMMUNICATIONS PULL BOX
(FIBER OPTIC SPLICE CLOSURE)

DATE APPROVED BY CITY COUNCIL
04/11/06

RESOLUTION NO. 2006-31

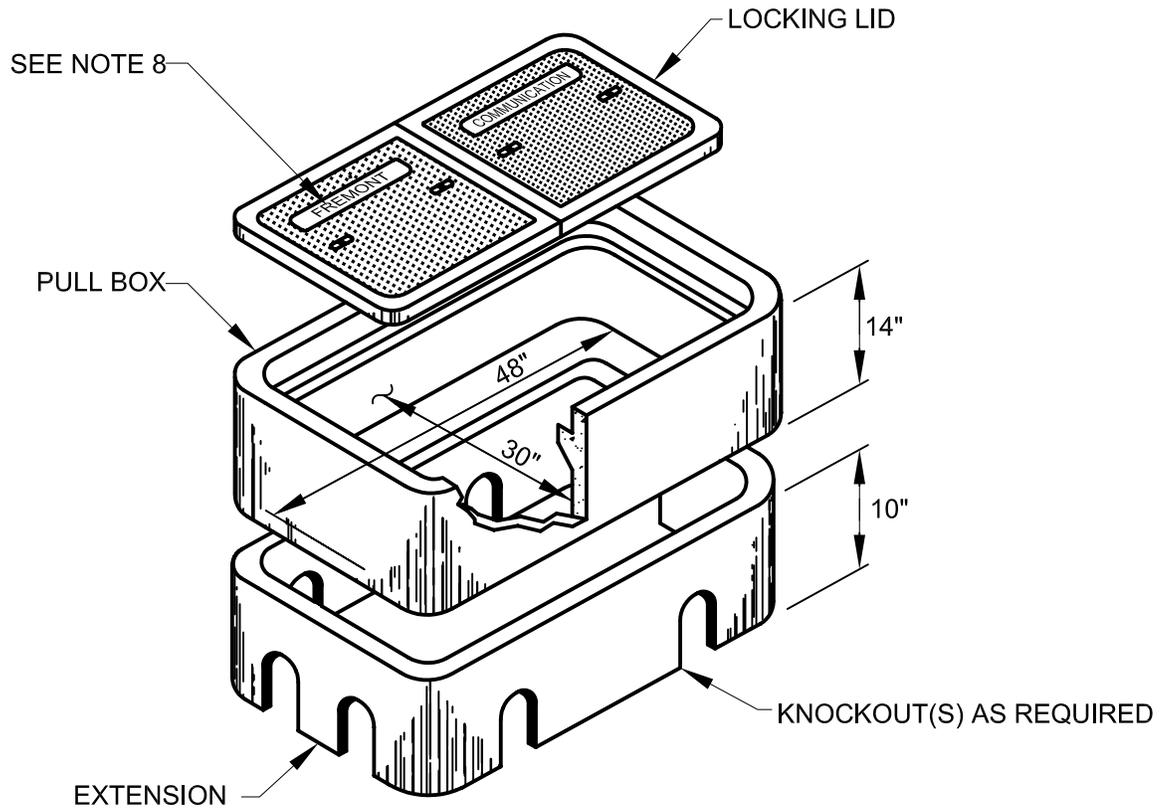
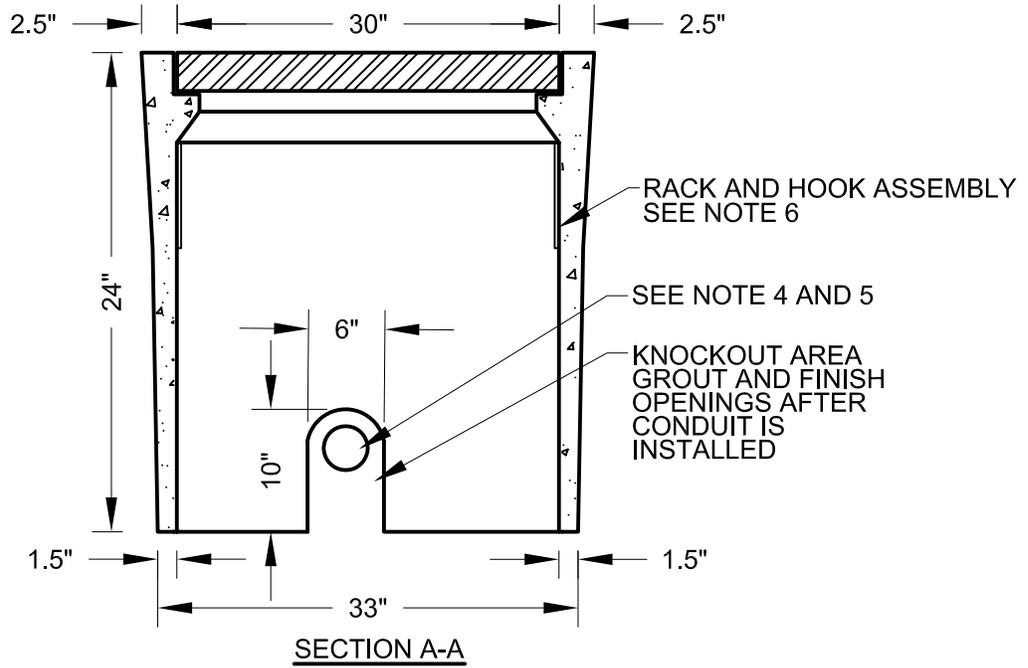
Ham Hughes

CITY ENGINEER

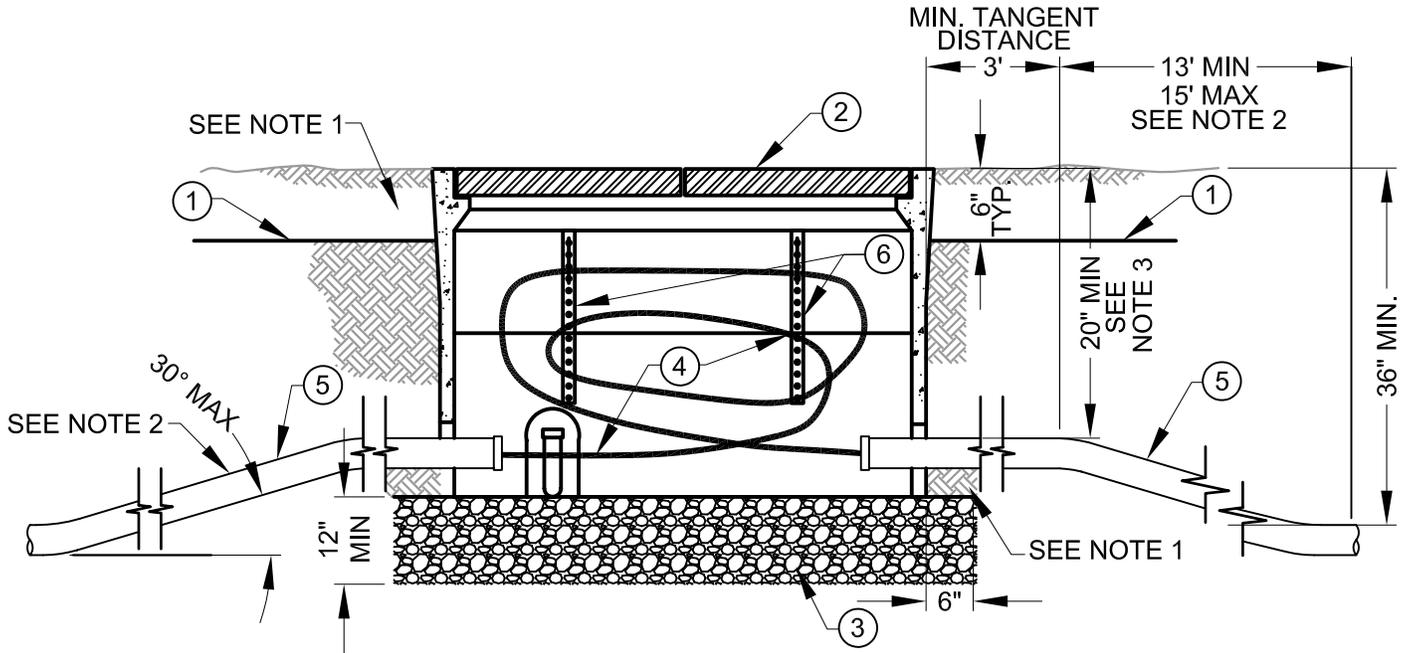
NO.	REVISED	DATE

REVISIONS

FILE NO. TSD-3.dwg	SCALE NOT TO SCALE	DRAWN SLM	CHECKED EPE	DATE 12/2005	DWG NO. TSD-3	1 of 4
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			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 04/11/06				
						RESOLUTION NO. 2006-31				
			COMMUNICATIONS PULL BOX (FIBER OPTIC SPLICE CLOSURE)			 CITY ENGINEER				
NO. REVISED DATE REVISIONS						FILE NO. TSD-3.dwg		SCALE NOT TO SCALE	DRAWN SLM	CHECKED EPE



SECTION B-B

ITEM	DESCRIPTION
①	WARNING TAPE (IF OPEN TRENCH)
②	F/O PULL BOX WITH LID & EXTENSION
③	BEDDING MATERIAL
④	COMMUNICATION CABLE
⑤	CONDUIT (SEE PLANS FOR SIZE AND QUANTITY)
⑥	RACK & HOOK ASSEMBLY (SEE NOTE 6)

NO.	REVISED	DATE
REVISIONS		

CITY OF FREMONT
STANDARD DETAILS
COMMUNICATIONS PULL BOX
(FIBER OPTIC SPLICE CLOSURE)

DATE APPROVED BY CITY COUNCIL
 04/11/06

RESOLUTION NO. 2006-31

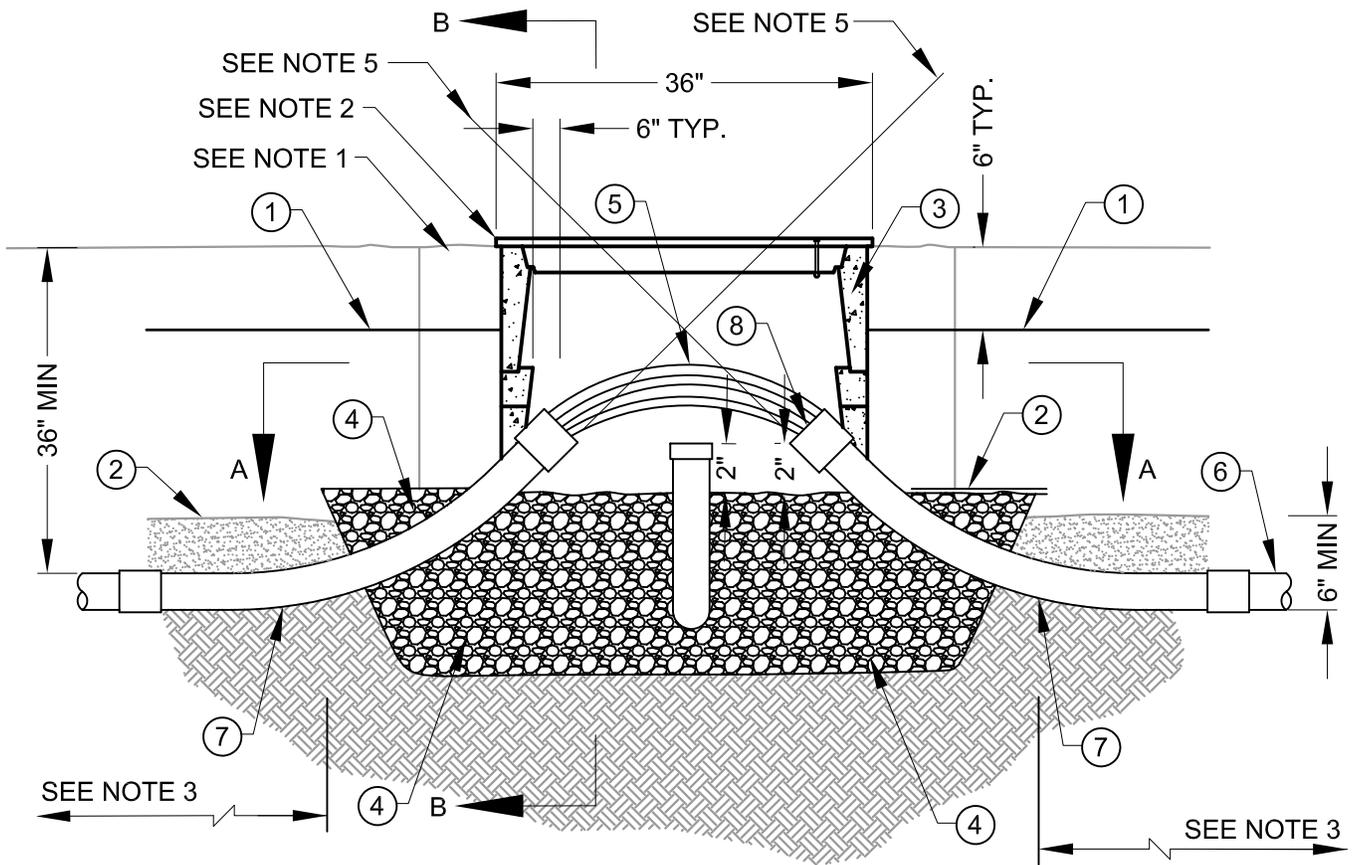
Ham Hughes
 CITY ENGINEER

FILE NO. TSD-3.dwg	SCALE NOT TO SCALE	DRAWN SLM	CHECKED EPE	DATE 12/2005	DWG NO. TSD-3	3 of 4
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COMMUNICATIONS PULL BOX (FIBER OPTIC SPLICE CLOSURE) NOTES:

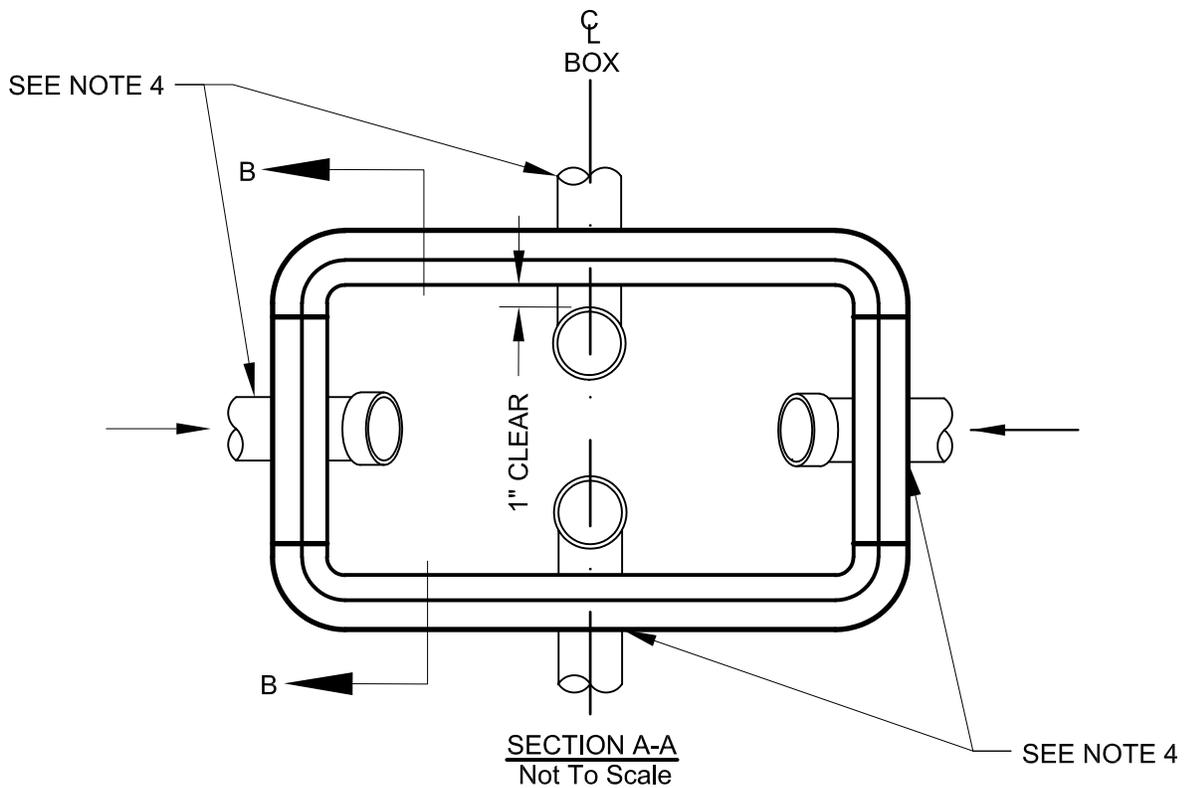
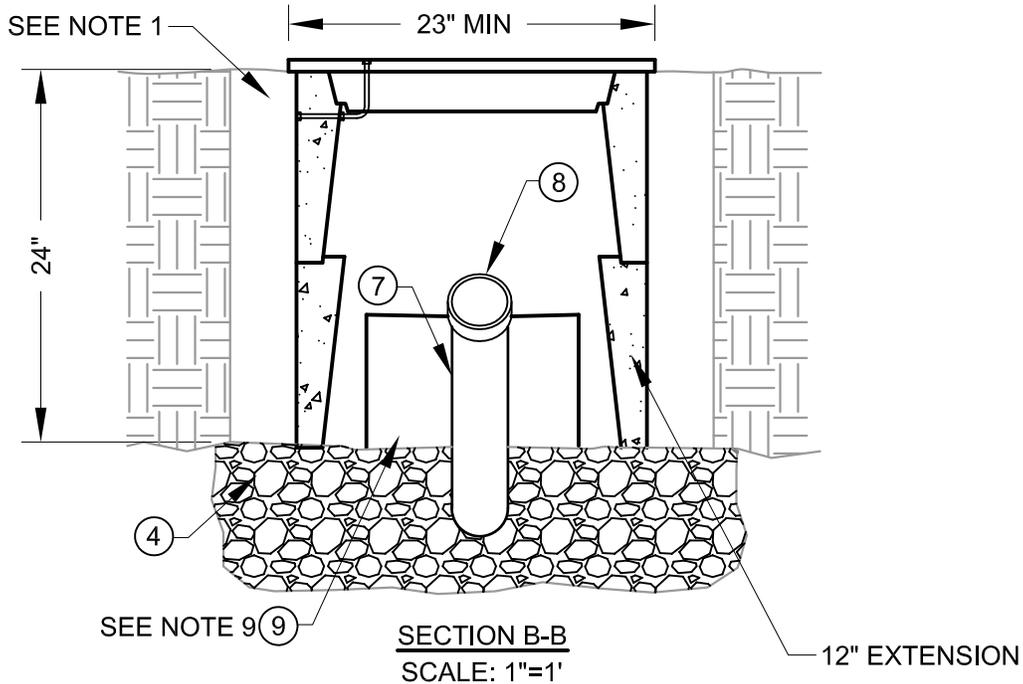
1. BACKFILL ACCORDING TO CALTRANS STANDARD PLANS AND SPECS.
2. CONDUIT(S) FROM THE TYPICAL TRENCH SECTION SHOULD NOT DEFLECT BY MORE THAN 1 FOOT PER 10 FEET FROM THE ALIGNMENT PRECEDING OR FOLLOWING PULL BOX ENTRANCE/EXIT.
3. TOP OF CONDUITS ENTERING THROUGH SIDE OF PULL BOX SHALL BE LOCATED AT LEAST 20 INCHES BELOW EXISTING FINISHED GROUND.
4. SEE PROJECT PLAN SHEETS FOR NUMBER AND SIZE OF CONDUIT.
5. IF MORE THAN 3 CONDUITS ARE REQUIRED, KNOCKOUT SHALL BE WIDENED $\frac{1}{4}$ INCH MORE THAN THE ADDITIONAL CONDUIT WIDTH.
6. ALL PULL BOXES SHALL BE FURNISHED WITH TWO RACKS & HOOKS INSTALLED ON EACH OF THE TWO LONG SIDES.
7. CONDUITS SHALL ENTER THROUGH KNOCKOUTS.
8. PULL BOX AND STEEL COVER SHALL SUPPORT AASHTO H20-44 TRUCK LOADING.
9. LOCKING MECHANISM SHALL BE PROVIDED FOR COVER. FOUR $\frac{3}{4}$ INCH PENTA HEAD BOLTS AT 90° SHALL BE USED. ONE $\frac{3}{4}$ INCH PENTA HEAD SOCKET AND RATCHET SHALL BE PROVIDED WITH EVERY 10 PULL BOXES.
10. "FREMONT COMMUNICATION" SHALL BE THE TITLE INTEGRATED IN THE LID.
11. ALL CONDUITS SHALL HAVE BELL ENDS.
12. INSTALL CONDUIT PLUGS ON EACH CONDUIT ENTERING THE PULL BOX, IF NOT USED.
13. FURNISH AND INSTALL CAPS OR DUCT PLUGS FOR ALL UNUSED CONDUIT.
14. PULL BOX HEIGHT ABOVE FINISHED GRADE SHALL PERMIT 2 INCH OF SURFACE LANDSCAPING, IF APPLICABLE, TO MATCH EXISTING CONDITIONS.
15. WHEN A NEW PULL BOX IS INSTALLED TO REPLACE A SMALLER EXISTING PULL BOX, MODIFY EXISTING CONDUITS TO CONFORM WITH INSTALLATION DETAILS SHOWN ON THIS SHEET UNLESS OTHERWISE APPROVED BY THE ENGINEER.

			<p>CITY OF FREMONT STANDARD DETAILS</p> <p>COMMUNICATIONS PULL BOX (FIBER OPTIC SPLICE CLOSURE)</p>				<p>DATE APPROVED BY CITY COUNCIL 04/11/06</p> <p>RESOLUTION NO. 2006-31</p>	
			<p>COMMUNICATIONS PULL BOX (FIBER OPTIC SPLICE CLOSURE)</p>				 CITY ENGINEER	
			<p>REVISIONS</p>					
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.			
TSD-3.dwg	NOT TO SCALE	SLM	EPE	12/2005	TSD-3	4 of 4	4 of 4	



ITEM	DESCRIPTION
①	WARNING TAPE (IF OPEN TRENCH)
②	30 LB FELT PAPER
③	NO. 6 PULL BOX WITH EXTENSION WITH EXCEPTIONS AS DRAWN
④	BEDDING MATERIAL
⑤	COMMUNICATION CABLE
⑥	CONDUIT (SEE PLANS FOR SIZE AND QUANTITY)
⑦	45 DEGREE PVC ELBOW, 36" RADIUS
⑧	CONDUIT BELL END (TYPICAL)
⑨	KNOCK OUT 8" X 12"

<h2 style="margin: 0;">CITY OF FREMONT</h2> <h3 style="margin: 0;">STANDARD DETAILS</h3> <h3 style="margin: 0;">COMMUNICATIONS PULL BOX</h3> <p style="margin: 0;"><u>(No. 6)</u></p>			DATE APPROVED BY CITY COUNCIL 04/11/06				
			RESOLUTION NO. 2006-31				
			CITY ENGINEER				
NO.	REVISED	DATE	DRAWN	CHECKED	DATE	DWG NO.	
REVISIONS			SLM	EPE	12/2005	TSD-4	1 of 3
FILE NO. TSD-4.dwg		SCALE NOT TO SCALE					

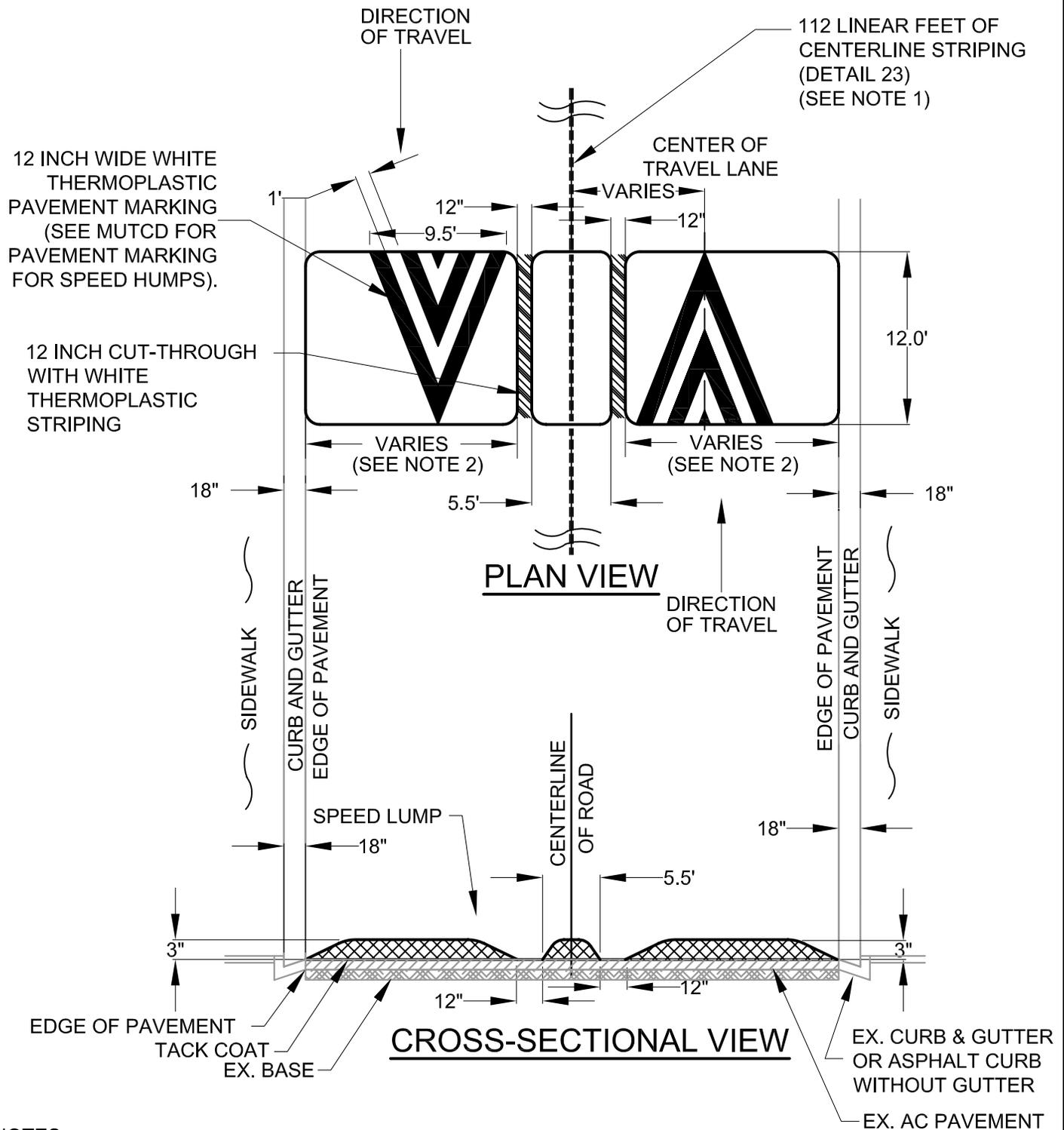


			CITY OF FREMONT STANDARD DETAILS COMMUNICATIONS PULL BOX (No. 6)			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
NO. REVISED DATE REVISIONS						 CITY ENGINEER	
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
TSD-4.dwg	AS SHOWN	SLM	EPE	12/2005	TSD-4	2 of 3	

COMMUNICATIONS PULL BOX (No. 6) DETAIL NOTES:

1. BACKFILL ACCORDING TO CALTRANS STANDARD PLANS AND SPECS.
2. IF BOX IS PLACED IN TRAFFIC, DRIVEWAY AREAS OR PLANTER STRIP, THE BOX SHALL BE RATED FOR H2O LOADING AND STEEL COVER SHALL BE USED.
3. CONDUIT FROM THE TYPICAL TRENCH SECTION SHOULD NOT DEFLECT BY MORE THAN 1 FOOT PER 10 FEET FROM THE ALIGNMENT PRECEDING OR FOLLOWING THE PULL BOX.
4. SEE PLAN SHEETS FOR NUMBER AND SIZE OF CONDUIT. IF MORE THAN 3 CONDUITS ARE REQUIRED, KNOCKOUT SHALL BE WIDENED $\frac{1}{2}$ INCH MORE THAN THE ADDITIONAL CONDUIT WIDTH.
5. BOTTOM OF CONDUIT CENTERLINE SHALL BE ALIGNED TO EXIT TOP OF PULL BOX TO FACILITATE CABLE PULLING.
6. "FREMONT COMMUNICATION" SHALL BE THE TITLE INTEGRATED IN THE LID.
7. USE FELT PAPER TO BLOCK OPENING BETWEEN CONDUITS.
8. PULL BOX HEIGHT ABOVE FINISHED GRADE SHALL PERMIT 2 INCH OF SURFACE LANDSCAPING, IF APPLICABLE, TO MATCH EXISTING CONDITIONS.
9. WHEN A NEW PULL BOX IS INSTALLED TO REPLACE A SMALLER EXISTING PULL BOX, THE CONTRACTOR SHALL MODIFY EXISTING CONDUITS TO CONFORM WITH INSTALLATION DETAILS SHOWN ON THIS SHEET UNLESS OTHERWISE APPROVED BY THE ENGINEER.

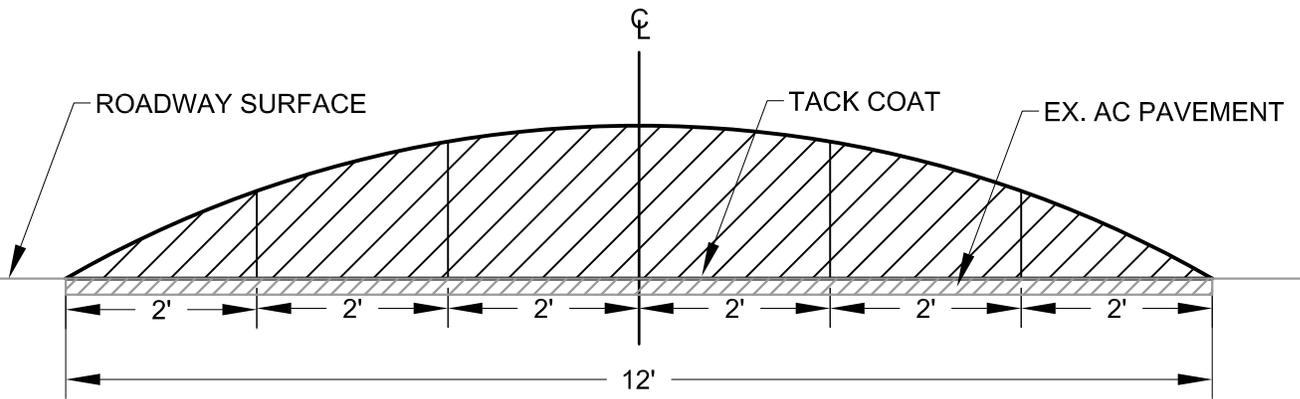
			<p>CITY OF FREMONT STANDARD DETAILS</p> <p><u>COMMUNICATIONS PULL BOX</u> <u>(No. 6)</u></p>			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
						 CITY ENGINEER	
NO.	REVISED	DATE					
REVISIONS							
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.		
TSD-4.dwg	NOT TO SCALE	SLM	EPE	12/2005	TSD-4	3 of 3	



NOTES:

1. 50' OF CENTERLINE STRIPING ON EACH SIDE OF THE SPEED LUMP AND 12' ON TOP OF THE SPEED LUMP.
2. AVERAGE WIDTH OF STREET IS 37' EXCLUDING THE CURB AND GUTTER.

<h1 style="margin: 0;">CITY OF FREMONT</h1> <h2 style="margin: 0;">STANDARD DETAILS</h2> <h3 style="margin: 0; text-decoration: underline;">SPEED LUMP</h3>			DATE APPROVED BY CITY COUNCIL		
			04/11/06		
			RESOLUTION NO. 2006-31		
REVISIONS			CITY ENGINEER		
FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.
TSD-5.dwg	NOT TO SCALE	SLM	EPE	12/2005	TSD-5
					1 of 2



HEIGHT BEFORE COMPACTION	2 ¹ / ₈ "	3 ³ / ₈ "	3 ³ / ₄ "	3 ³ / ₈ "	2 ¹ / ₈ "
HEIGHT AFTER COMPACTION	1 ⁵ / ₈ "	2 ⁵ / ₈ "	3"	2 ⁵ / ₈ "	1 ⁵ / ₈ "

TYPICAL PROFILE



SIGN ADJACENT TO SPEED LUMP
W17-1

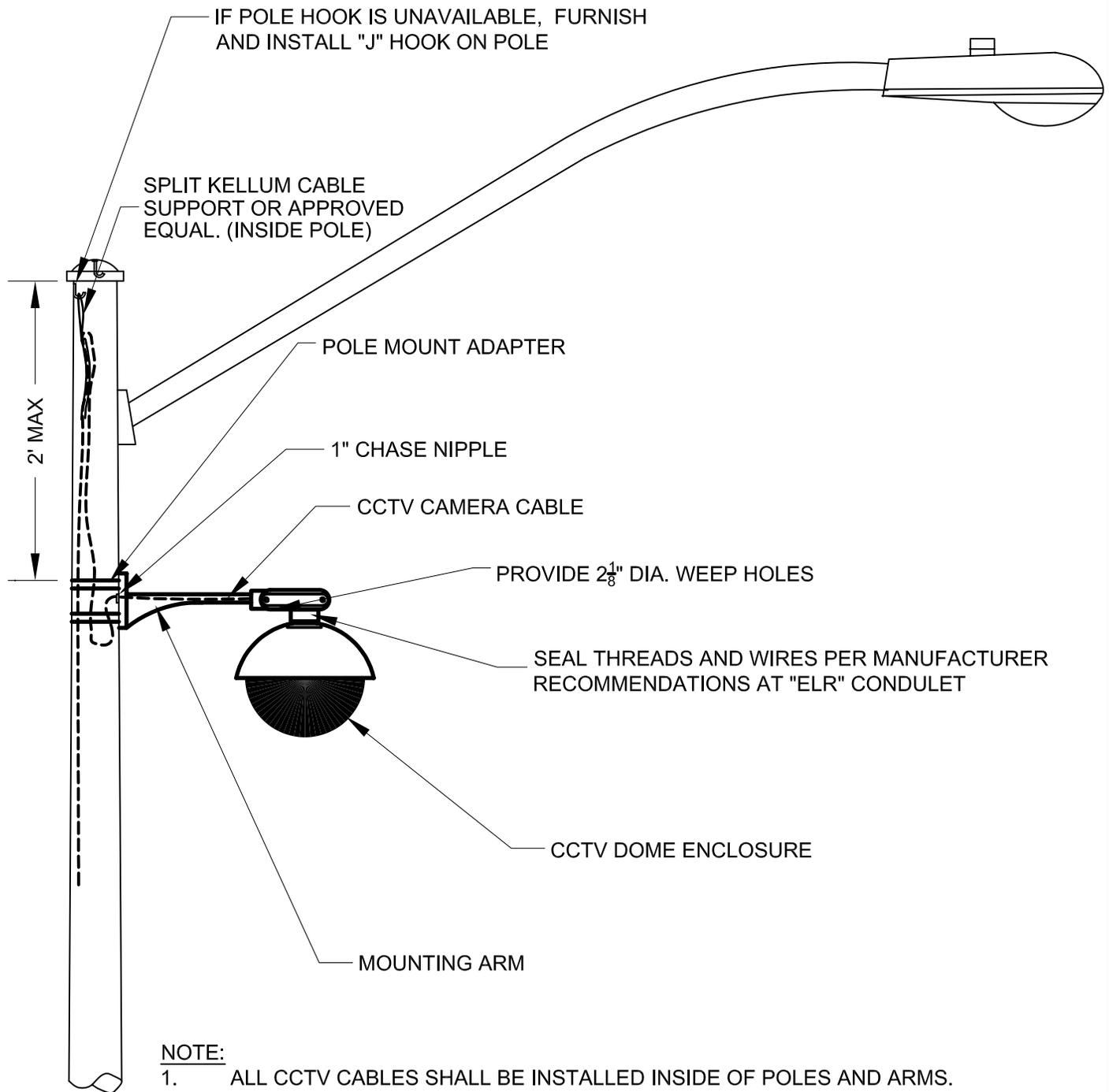


ADVANCED WARNING SIGN
W17-1 AND W16-9P

NOTE:

1. SEE THE CITY OF FREMONT STANDARD DETAILS FOR THE INSTALLATION OF SIGN POSTS.
2. SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND MUTCD CALIFORNIA SUPPLEMENT FOR SIGN DETAILS.

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL 04/11/06	
						RESOLUTION NO. 2006-31	
			<u>SPEED LUMP</u>			 CITY ENGINEER	
NO. REVISED DATE REVISIONS						DWG NO. TSD-5	
FILE NO. TSD-5.dwg		SCALE NOT TO SCALE		DRAWN SLM	CHECKED EPE	DATE 12/2005	



NOTE:

1. ALL CCTV CABLES SHALL BE INSTALLED INSIDE OF POLES AND ARMS.

			CITY OF FREMONT STANDARD DETAILS			DATE APPROVED BY CITY COUNCIL			
						04/11/06			
			CCTV DOME CAMERA MOUNTING			RESOLUTION NO. 2006-31			
						 CITY ENGINEER			
NO.	REVISED	DATE	FILE NO.	SCALE	DRAWN	CHECKED	DATE	DWG NO.	
REVISIONS			TSD-6.DWG	NOT TO SCALE	SLM	EPE	12/2005	TSD-6	1 of 1