

CITY OF LAKE ELSINORE STANDARD PLANS

2009 EDITION

2010

Bob Brady City Manager
Ken Seumalo City Engineer

FORWARD

This first edition approved in 2009, of the City of Lake Elsinore Standard Plans marked the culmination of years of effort by City staff working in cooperation with organizations such as the Southern California Edison Company, the Gas Company, GTE California, and Elsinore Valley Municipal Water District, as well as private members of the construction industry.

This first edition maintains a "living" document of the City of Lake Elsinore Standard Plans.

These standard plans answer the need for uniform design standards, and will benefit both the general public and private contracting industry by eliminating conflicts and confusion, lowering construction costs, and encouraging more competitive bidding by private contractors.

Mayor

Ken Seumalo Director of Public Works

ADOPTED BY RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKE ELSINORE

City of Lake Elsinore • 130 S. Main Street, Lake Elsinore, CA 92530 • (951) 674-3124

CITY OF LAKE ELSINORE
IMPROVEMENT STANDARDS

These Improvement Standards Have Been Adopted By Lake Elsinore City Council For Public And Private Use. These Standards Are Intended To Provide Uniform Development Throughout the City, Whether Work Is Undertaken by The City or Private Development.



Ken A. Seumalo P.E.
Director of Public Works

CITY OF LAKE ELSINORE STANDARD PLANS

**STANDARD PLAN
NUMBERS**

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STANDARD PLANS**

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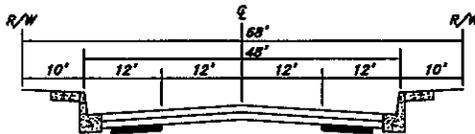
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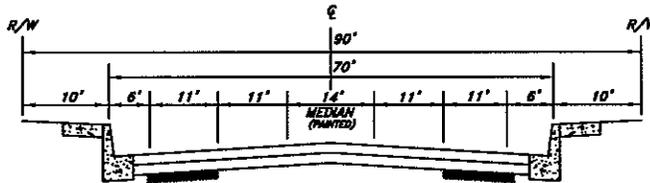
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CITY OF LAKE ELSINORE
STANDARD PLANS

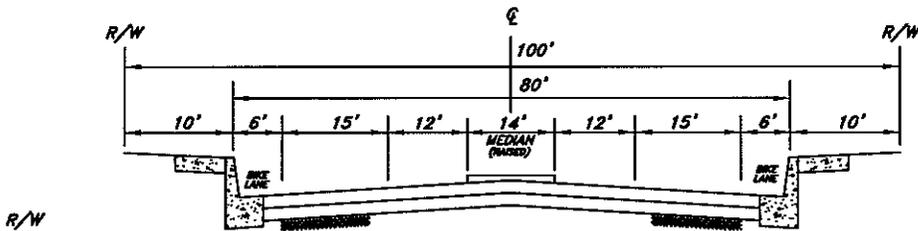
SECTION 1:
Street Sections



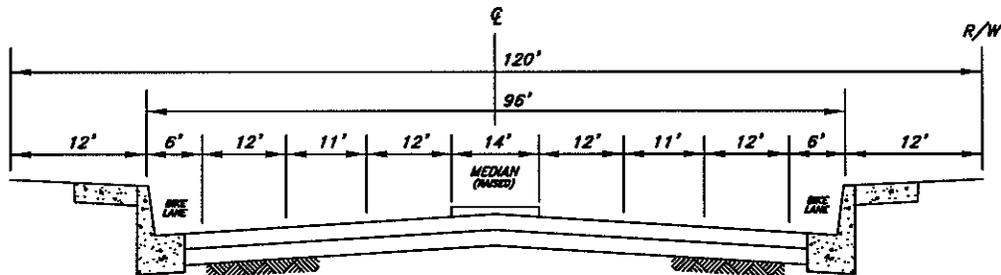
COLLECTOR HIGHWAY
(2-LANE)



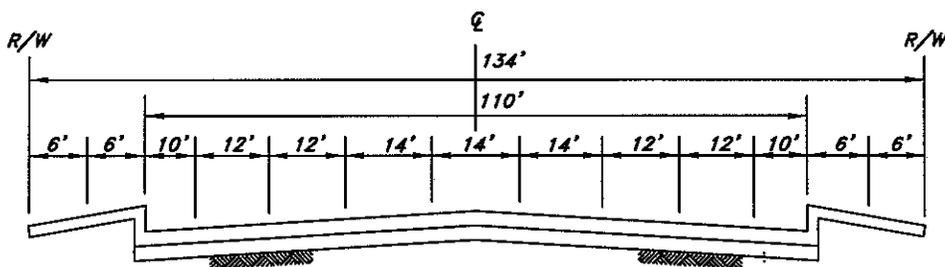
SECONDARY HIGHWAY
(4-LANE)



MAJOR HIGHWAY
(4-LANE)



URBAN ARTERIAL HIGHWAY
(6-LANE)



URBAN ARTERIAL-STATE HIGHWAY
(6-LANE)

CITY OF LAKE ELSINORE

CIRCULATION ELEMENT ROADWAY CROSS-SECTIONS

REVISION		ENGINEERING	DATE 01/09
DATE	APPROVED		
		APPROVED BY	
		<i>Ken A. Sandoz</i>	08/31/2009
		CITY ENGINEER	DATE

CITY OF LAKE ELSINORE
PREPARED BY PUBLIC WORKS

STREET CROSS SECTIONS

NO. 100C

ROAD TYPE

		MINOR LOCAL	LOCAL	COLLECTOR	SECONDARY ARTERIAL	MAJOR ARTERIAL	URBAN ARTERIAL	URBAN ARTERIAL (SR-74)	EXPRESSWAY
<i>R/W</i>		50	60	68	90	100	120	134	142
<i>SURFACED WIDTH CURB TO CURB</i>		36	40	48	70	80	96	110	110
<i>MINIMUM RADII HORIZONTAL</i>	<i>FLAT (0-4%)</i>	300	300	850	1600	2000	2000	2000	2000
	<i>ROLLING (4-9%)</i>	300	300	550	1000	1600	1600	1600	1600
	<i>MOUNTAINOUS (9-15%)</i>	150	150	300	550	1000	1000	-	-
<i>MAXIMUM GRADE %</i>	<i>FLAT</i>	4	4	4	3	3	3	3	3
	<i>ROLLING</i>	9	9	8	6	6	6	6	6
	<i>MOUNTAINOUS</i>	12	12	12	9	9	9	-	-
<i>DESIGN SPEED (MPH)</i>	<i>FLAT</i>	30	45	45	55	60	60	60	60
	<i>ROLLING</i>	30	30	35	48	55	55	55	55
	<i>MOUNTAINOUS</i>	20	25	30	35	48	48	-	-
<i>INTERSECTION INTERVALS</i>		200	200	200	330	660	1320	1320	1,25280

1. DIRECT RESIDENTIAL ACCESS RESTRICTED.
2. DIRECT ACCESS RESTRICTED.

NOTES:

- 1.) MINIMUM GRADE = 1.0%.
- 2.) ANY DEVIATION FROM APPROVED STD. WILL REQUIRE APPROVAL OF THE CITY ENGINEER..
- 3.) PART WIDTH STREETS SHALL HAVE A MINIMUM OF ONE-HALF WIDTH RIGHT-OF WAY PLUS AN ADDITIONAL FIFTEEN (15) FEET. ADDITIONAL RIGHT-OF-WAY MAY BE REQUIRED DUE TO A.C. PAVING REQUIREMENTS AS ESTABLISHED BY CITY ENGINEER.

<i>REVISION</i>		ENGINEERING	DATE 01/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
		 CITY ENGINEER		ROADWAY DESIGN REQUIREMENTS	
		08/31/2009 DATE		NO. 100B	

STREET CLASSIFICATION AND X-SECTION DESIGN STANDARDS

STREET CLASS	ROW* CURB TO CURB	TYPICAL SECTION (BIKE LANE & OR PARKING, TRAVEL LANES & MEDIAN) (FT)	PARKWAY WIDTH (FT.)	THRU LANES	DESIGN CAPACITY (A.D.T.)	MIN. TRAFFIC ¹ INDEX	MIN. A.C. THICKNESS (in)	MIN. A.B. THICKNESS (in)
URBAN ARTERIAL SR-74 (CENTRAL AVENUE) MEDIAN	134/110 (RAISED MEDIAN)	10 12 12 14 14 14 12 12 10	12	6+	50,000-60,000	10	5 1/2"	12"
URBAN ARTERIAL	120/96 (RAISED MEDIAN)	6 12 11 12 14 12 11 12 6	12	6	50,000-60,000	9	5 1/2"	6"
MAJOR ARTERIAL	100/80	6 15 12 14 12 15 6	10	4	32,000-40,000	8.5	5 1/2"	6"
SECONDARY ARTERIAL	90/70	6 11 11 14 11 11 6	10	4	20,000-32,000	8	5"	6"
COLLECTOR	68/48	12 12 12 12	10	2	10,000-15,000	5-7	4"	4"
LOCAL	60/40	8 12 12 8	10	2	N/A	5	3 1/2"	4"

* INTERSECTION WIDENING WHERE REQUIRED MAY INCREASE WIDTH VALUES
 + LEFT TURN LANES OR POCKETS WITHOUT ELIMINATING PARKING.
 1 STREETS DESIGNATED AS TRUCK ROUTES MAY REQUIRE A TI OF 10 OR MORE.

NOTES:
 MOST ARTERIAL STREETS REQUIRE BIKE LANES PER GENERAL PLAN. PARKING IS NOT USUALLY ACCOMMODATED ON ANY ARTERIAL STREETS
 PARKING MAY BE ELIMINATED AT INTERSECTIONS TO ACCOMMODATE TURN POCKETS.
 ALL OF THE ABOVE LANE WIDTHS SHALL BE USED TO DESIGN STRIPING PLANS UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

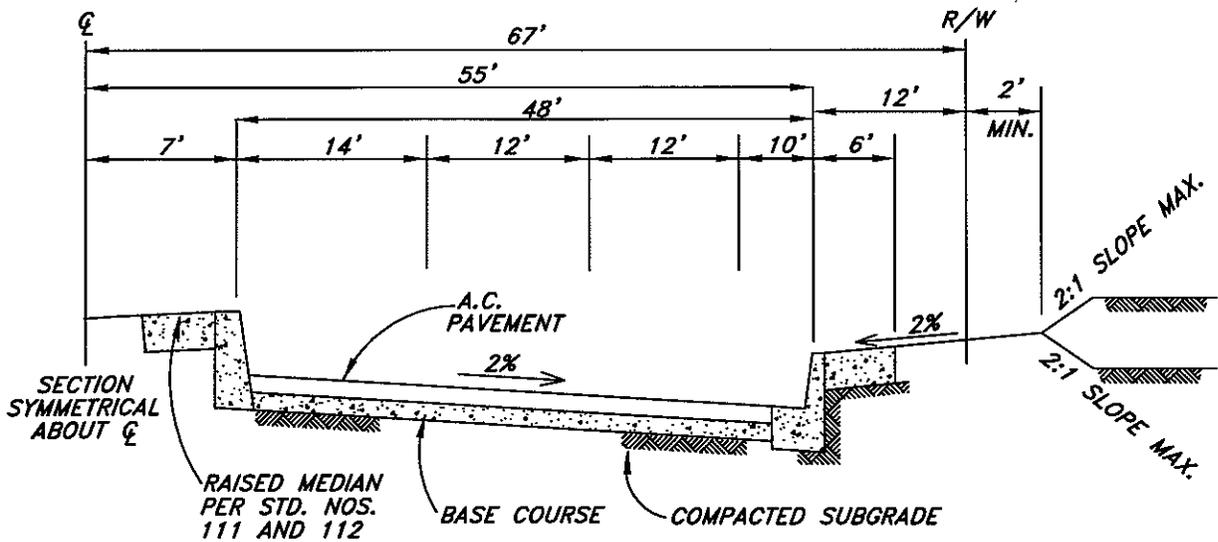
REVISION
DATE APPROVED

PUBLIC WORKS
APPROVED BY
DATE 01/09

for A. Standaert
CITY ENGINEER
DATE 08/31/2009

CITY OF LAKE ELSINORE
 PREPARED BY PUBLIC WORKS
 STREET CLASSIFICATION
 AND X-SECTION
 DESIGN STANDARDS

NO.
1004

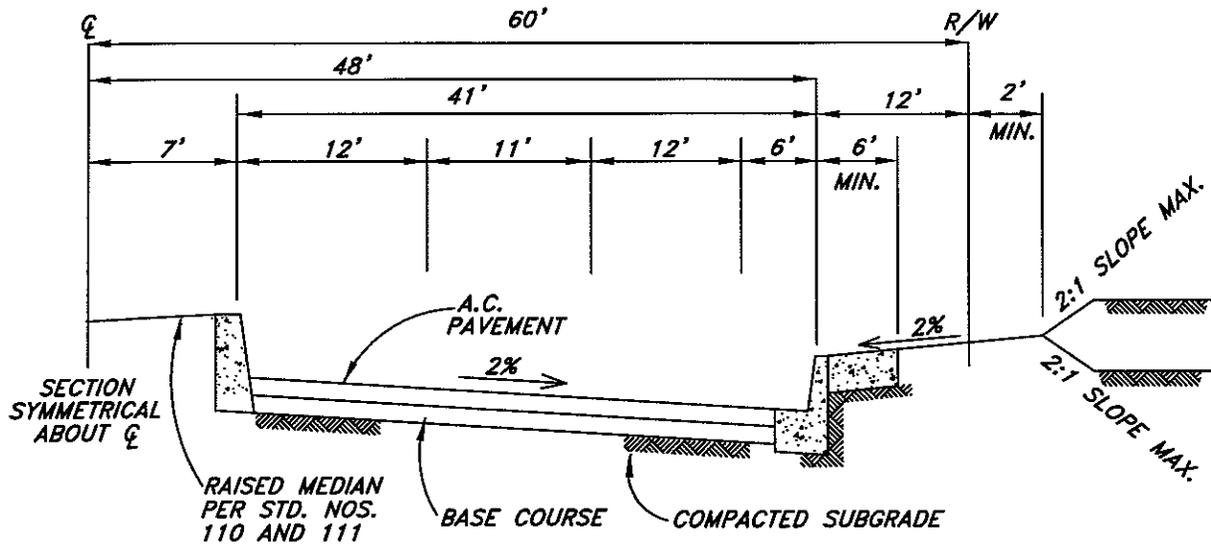


TYPICAL 1/2 WIDTH SECTION

NOTES:

- 1.) ADDITIONAL RIGHT OF WAY MAY BE REQUIRED WHEN AN ARTERIAL HIGHWAY COINCIDES WITH AN ADOPTED ROUTE FOR AN ADDITIONAL PUBLIC FACILITY (I.E., PEDESTRIAN, BICYCLE, OR EQUESTRIAN TRAIL)
- 2.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R-VALUE TESTING PER CALTRANS DESIGN METHOD WITH RECOMMENDED SAFETY FACTOR.
MIN. 5 1/2" AC/12"AB.
- 3.) STREETS SHALL BE CONSTRUCTED TO CENTERLINE PLUS 21' INCLUDING MEDIAN
- 4.) REFER TO THE GENRAL PLAN FOR BIKE LANE REQUIREMENTS
- 5.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

REVISION		ENGINEERING	DATE 01/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		6 LANE URBAN ARTERIAL/ STATE HIGHWAY	
		 CITY ENGINEER			
			08/21/2009		
			DATE		



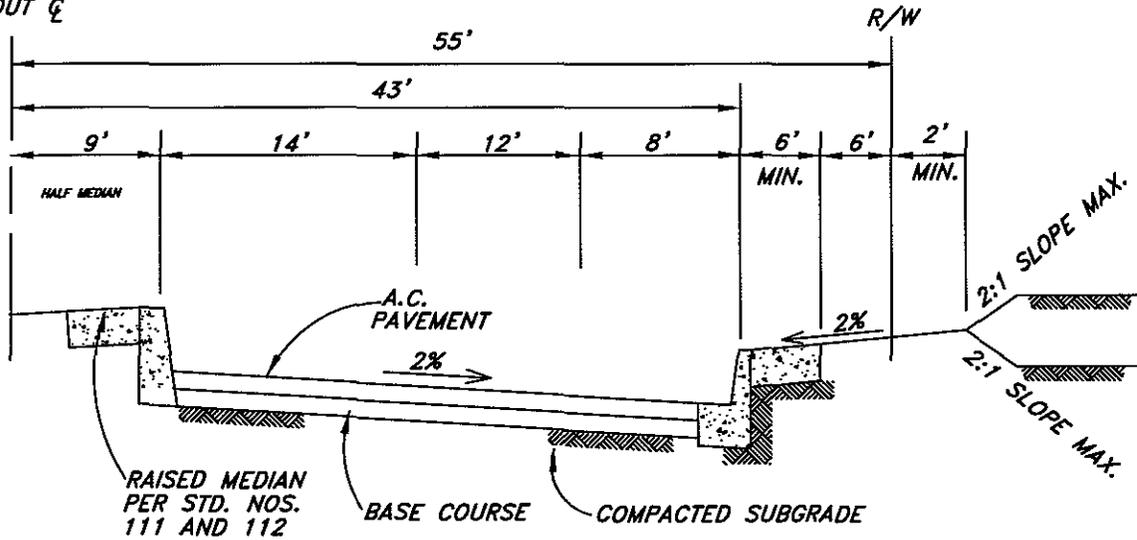
TYPICAL SECTION

NOTES:

- 1.) ADDITIONAL RIGHT OF WAY MAY BE REQUIRED WHEN AN ARTERIAL HIGHWAY COINCIDES WITH AN ADOPTED ROUTE FOR AN ADDITIONAL PUBLIC FACILITY (I.E., PEDESTRIAN, BICYCLE, OR EQUESTRIAN TRAIL), OR FOR A SCENIC HIGHWAY.
- 2.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R-VALUE TESTING PER CALTRANS DESIGN METHOD WITH RECOMMENDED SAFETY FACTOR. SEE STD. PLAN NO. 100
- 3.) MIN. T.I.=9.
- 4.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 19' INCLUDING FULL MEDIAN.
- 5.) REFER TO GENERAL PLAN FOR ANY BIKE LANE REQUIREMENTS
- 6.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

REVISION		ENGINEERING	DATE 01/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		URBAN ARTERIAL 6-LANE	NO. 102
		08/31/2009 DATE			

SECTION
SYMMETRICAL
ABOUT ϕ

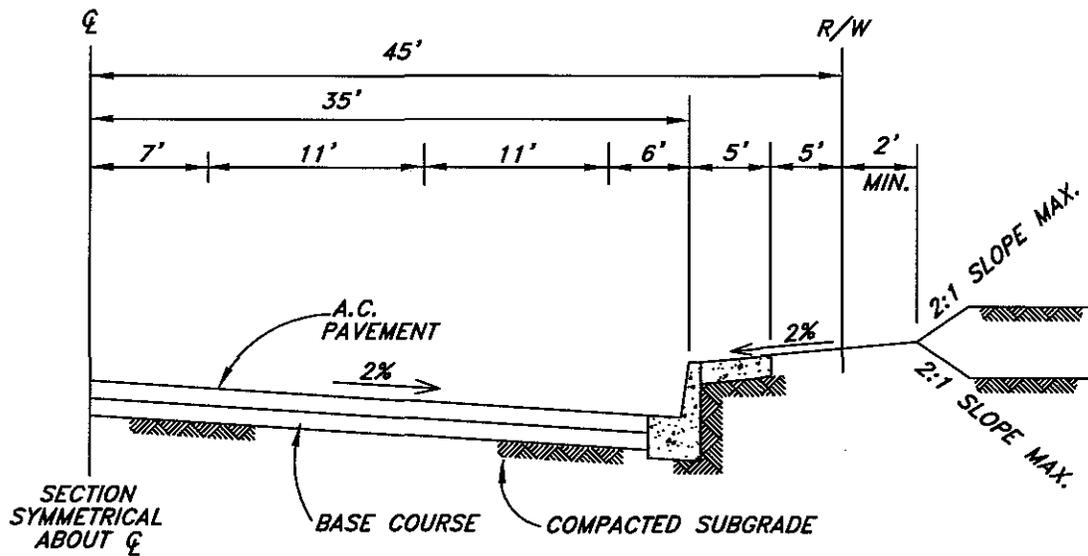


TYPICAL SECTION

NOTES:

- 1.) ADDITIONAL RIGHT OF WAY MAY BE REQUIRED WHEN AN ARTERIAL HIGHWAY COINCIDES WITH AN ADOPTED ROUTE FOR AN ADDITIONAL PUBLIC FACILITY (I.E., PEDESTRIAN, BICYCLE, OR EQUESTRIAN TRAIL), OR FOR A SCENIC HIGHWAY.
- 2.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R-VALUE TESTING PER CALTRANS DESIGN METHOD WITH RECOMMENDED SAFETY FACTOR. MINIMUM STRUCTURAL SECTION .45' AC/ 1.00' AB.
- 3.) MIN. T.I. = 10.
- 4.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 21' WIDTH MEDIAN.
- 5.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

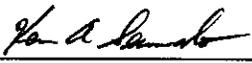
REVISION		ENGINEERING	DATE 01/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		DIVIDED ARTERIAL	
		 CITY ENGINEER			
		DATE 02/31/2009		NO. 103	

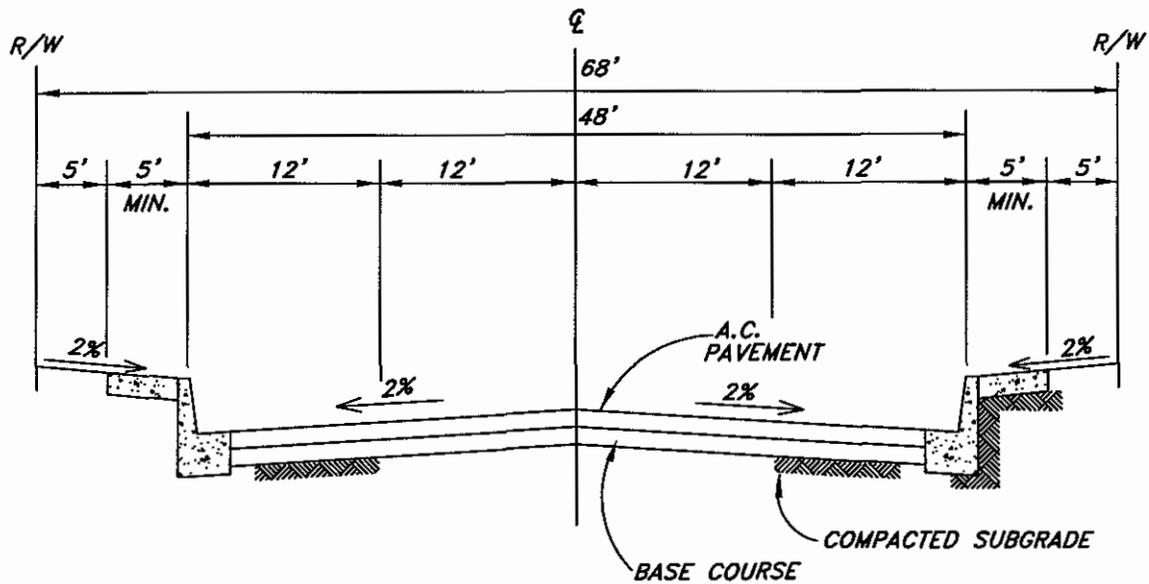


TYPICAL 1/2 WIDTH SECTION

NOTES:

- 1.) ADDITIONAL RIGHT OF WAY MAY BE REQUIRED WHEN AN ARTERIAL HIGHWAY COINCIDES WITH AN ADOPTED ROUTE FOR AN ADDITIONAL PUBLIC FACILITY
- 2.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R-VALUE TESTING PER CALTRANS DESIGN METHOD WITH RECOMMENDED SAFETY FACTOR. SEE STD DWG 100
- 3.) MIN. T.I.=8
- 4.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 19'.
- 5.) REFER TO GENERAL PLAN FOR BIKE LANE REQUIREMENTS
- 5.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

REVISION		ENGINEERING	DATE 01/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		SECONDARY ARTERIAL (4 LANE)	
		 CITY ENGINEER			
		DATE 02/01/2009			

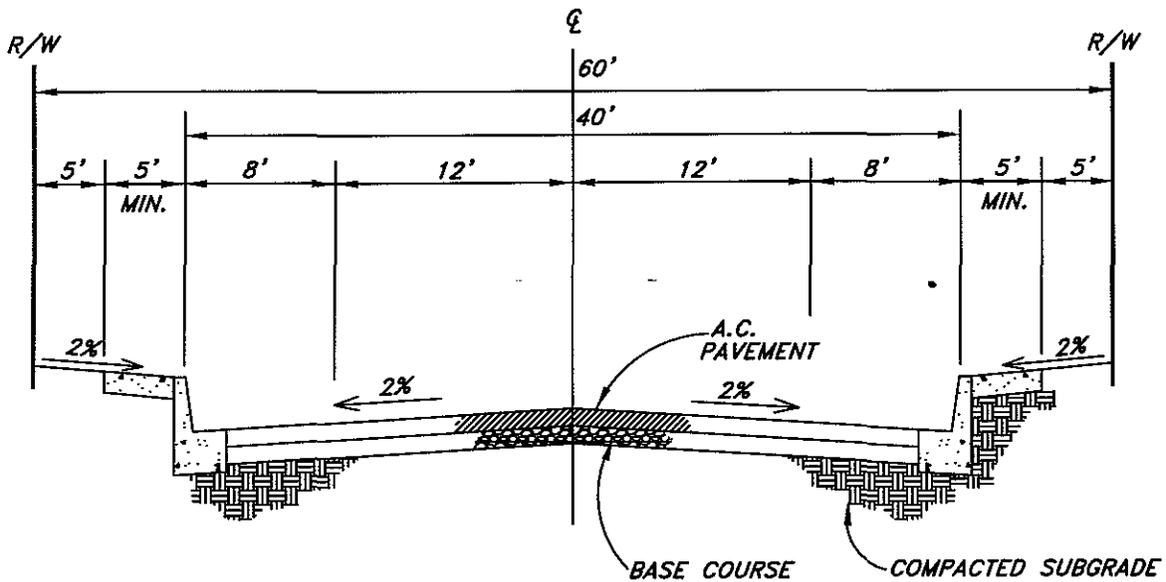


TYPICAL SECTION

NOTES:

- 1.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R VALUE TESTING PER CALTRANS DESIGN METHOD WITH RECOMMENDED SAFETY FACTOR, MIN. .4" AC/ 6" AB.
- 2.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R-VALUE TESTING PER CALTRANS DESIGN METHOD WITH RECOMMENDED SAFETY FACTOR. SEE STD DWG 100
- 3.) MIN. T.I.= 7.
- 4.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 12'.
- 5.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

REVISION		ENGINEERING	DATE 01/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		COLLECTOR	
		 CITY ENGINEER			
		DATE 08/31/2009		NO. 105	

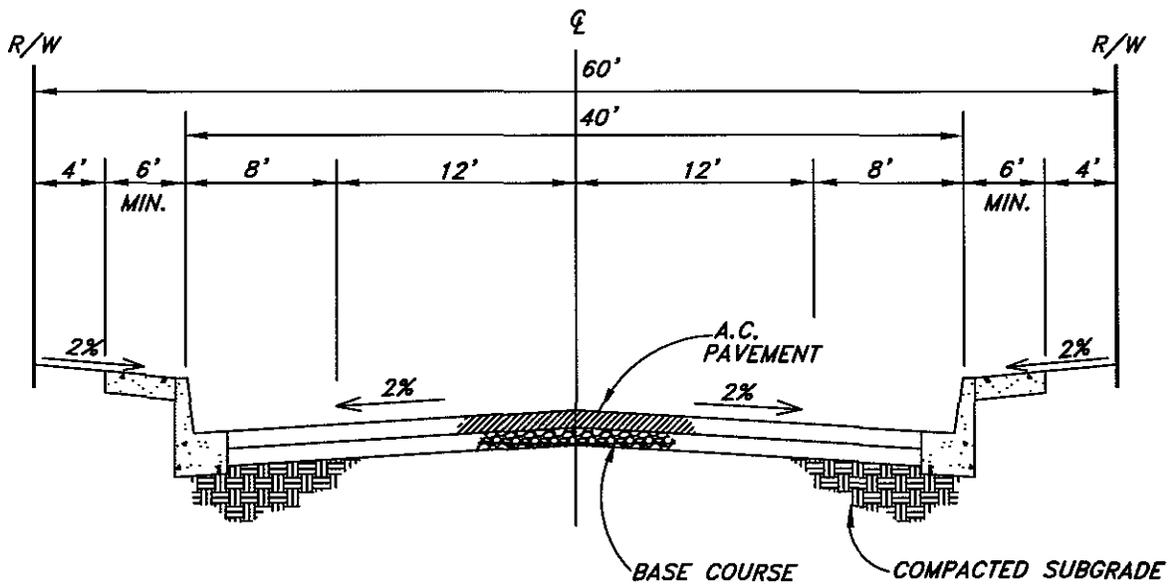


TYPICAL SECTION

NOTES:

- 1.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R VALUE TESTING PER CALTRANS DESIGN METHOD WITH RECOMMENDED SAFETY FACTOR, MIN 1/2" AC/6"AB.
- 2.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R-VALUE TESTING PER CALTRANS DESIGN METHOD WITH RECOMMENDED SAFETY FACTOR. SEE STD DWG 100
- 3.) MIN. T.I.=6.
- 4.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 12'.
- 5.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

REVISION		ENGINEERING		DATE 07/09		CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY					
		 CITY ENGINEER		08/31/2009 DATE		LOCAL STREET	
						(Non-Circulation Road)	

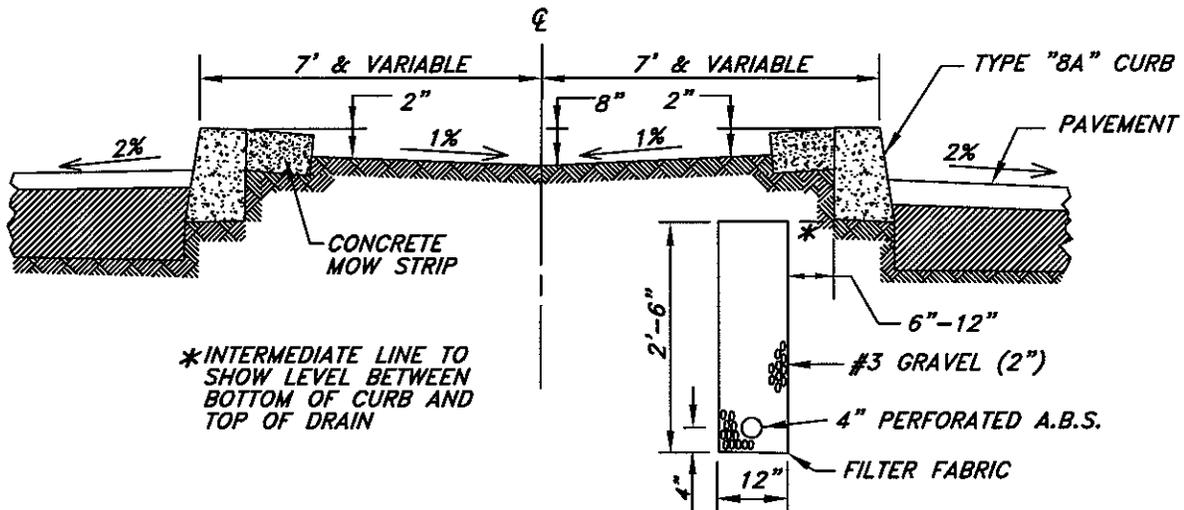


TYPICAL SECTION

NOTES:

- 1) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R VALUE TESTING PER CALTRANS DESIGN METHOD WITH RECOMMENDED SAFETY FACTOR, MIN. .33' AC/.50' AB.
- 2) MIN. T.I. = 6.
- 3) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 12'.
- 4.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		GENERAL LOCAL STREET	
			DATE		



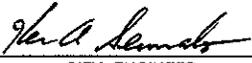
*INTERMEDIATE LINE TO SHOW LEVEL BETWEEN BOTTOM OF CURB AND TOP OF DRAIN

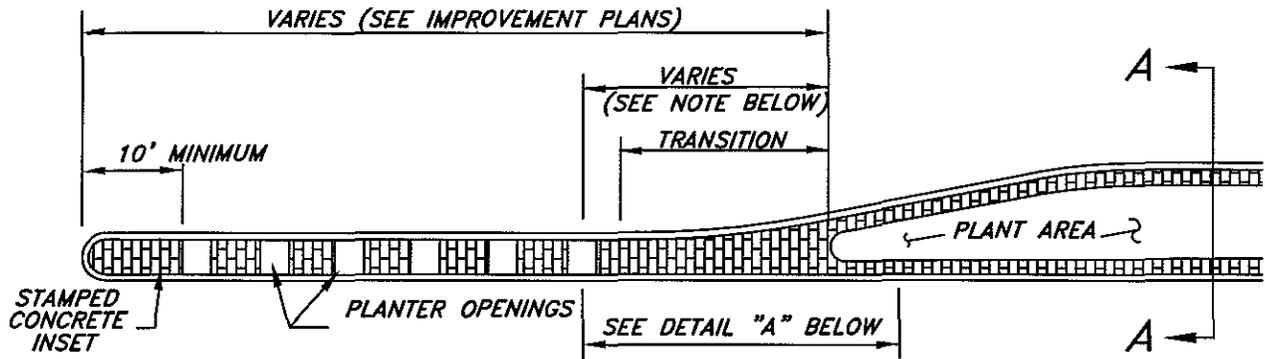
DRAINAGE STRUCTURE

TYPICAL BOTH SIDES OF ℄ - SUBJECT TO APPROVAL BY CITY ENGINEER

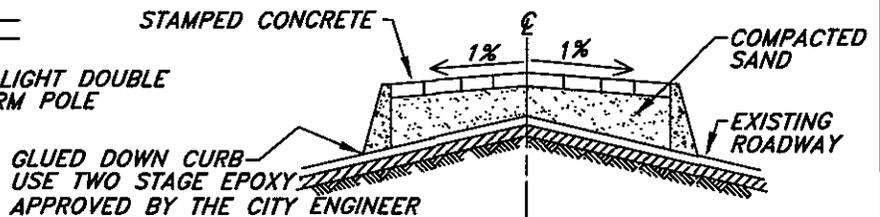
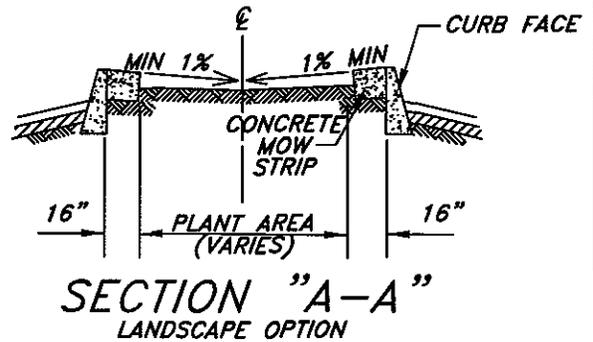
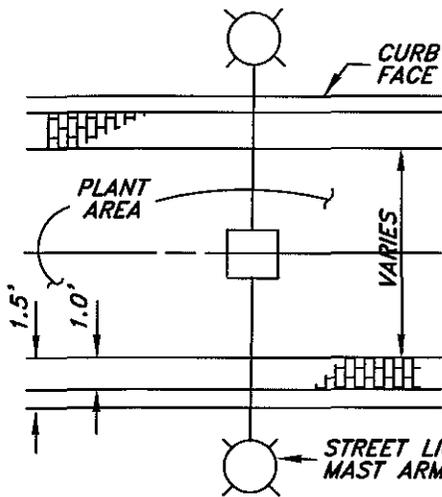
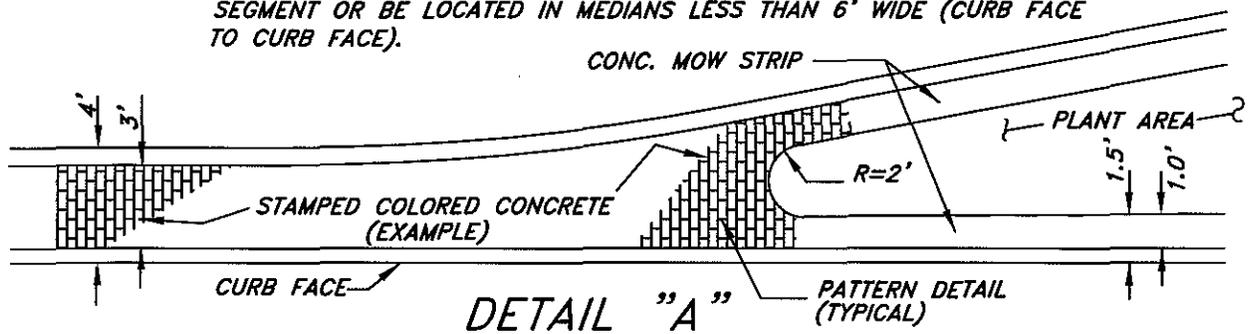
NOTES:

- 1.) SEE STD. DWG. No. 203 FOR TYPE "8A" CURB.
- 2.) MEDIAN DRAINAGE STRUCTURES SHALL BE PROVIDED TO PREVENT ANY WATER FROM OVERFLOWING CURBS.
- 3.) MEDIAN DRAINAGE STRUCTURES AND UNDERDRAINS SHALL DRAIN TO A POINT OF DISPOSAL MEETING APPROVAL OF THE CITY.
- 4.) PLACEMENT OF PLANTS SHALL NOT OBSTRUCT THE FLOW OF WATER TO THE EXTENT THAT IT WILL OVERFLOW CURBS OR OBSTRUCT SIGHT DISTANCE.
- 5.) MEDIAN AREAS LESS THAN 6' IN WIDTH SHALL BE PAVED WITH 12" PATTERN STAMPED COLORED CONCRETE. THE MINIMUM 3" THICK CONCRETE MOW STRIP SHALL HAVE A BRICK 4"X8" PATTERN, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- 6.) ALL LANDSCAPE AND IRRIGATION PLANS SHALL COMPLY WITH THE CITY'S DEVELOPMENT CODE AND LANDSCAPE DEVELOPMENT GUIDELINES AND SPECIFICATIONS, AND ANY APPLICABLE SPECIFIC PLAN DESIGN MANUAL, OR CONDITIONS OF APPROVAL.
- 7.) ALL LANDSCAPE, IRRIGATION, AND DRAINAGE PLANS AND DEVICES SHALL BE APPROVED BY THE CITY PRIOR TO INSTALLATION.
- 8.) THE LANDSCAPE PLAN SHALL MINIMIZE RUNOFF TO THE PAVEMENT, MINIMIZE MAINTENANCE, PROMOTE WATER CONSERVATION AND ASSURE DESIGN CONTINUITY OF THE PROPOSED PROJECT WITH EXISTING MEDIANS ON THE STREET. THE LANDSCAPE PLAN SO PREPARED SHALL CONSIST OF AREAS OF CREATIVE HARDSCAPE AND PLANTING, WITH NO MORE THAN 25% HARDSCAPE. WHERE IRRIGATION IS PROPOSED, DRIP IRRIGATION SYSTEMS ARE REQUIRED, WHERE APPLICABLE, AND PLANT MATERIALS SHALL BE APPROPRIATE TO THE PROPOSED SYSTEM. THE LANDSCAPE PLAN SHALL BE SUBJECT TO FINAL APPROVAL BY THE CITY ENGINEER. THE CITY ENGINEER MAY APPROVE VARIATIONS IN THESE STANDARDS IF STRICT APPLICATION OF THE PERCENTAGE PROVES INFEASIBLE.
- 9.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		PREPARED BY PUBLIC WORKS	
		 CITY ENGINEER		LANDSCAPED MEDIAN	
		DATE 08/31/2009			



NOTE: THE NUMBER OF PLANTER OPENINGS WILL VARY BY LENGTH OF LEFT TURN POCKET. NO PLANTER OPENINGS SHALL EXTEND INTO THE TRANSITION SEGMENT OR BE LOCATED IN MEDIANS LESS THAN 6' WIDE (CURB FACE TO CURB FACE).



NOTE:

SEE GENERAL NOTES: STAMPED CONCRETE (STANDARD NO. 224.) AND TYPE D-1 CURB (STANDARD NO. 204)

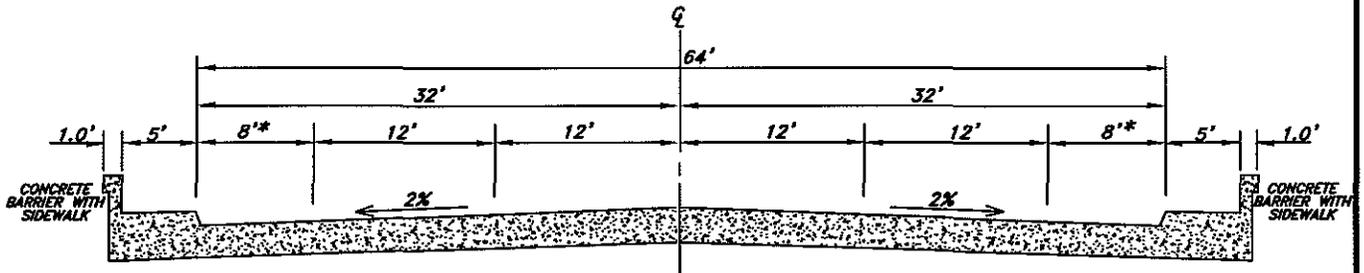
SECTION "A-A"
GLUED DOWN OPTION

REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		<i>Her A Samala</i>	08/31/2009
		CITY ENGINEER	DATE

CITY OF LAKE ELSINORE
PREPARED BY PUBLIC WORKS

MEDIAN HARDSCAPE

NO.
111



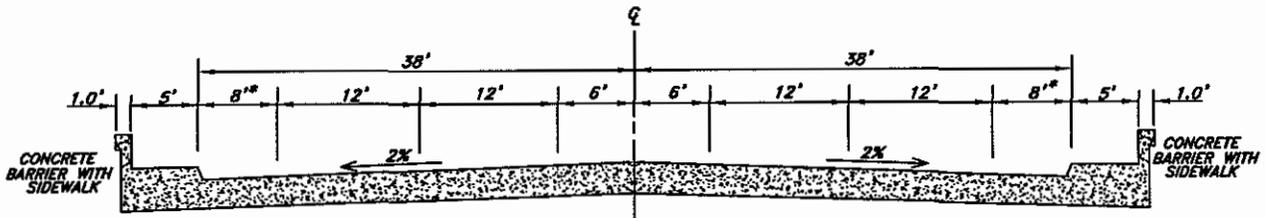
*SUBJECT TO REVISION BY THE CITY ENGINEER

TYPICAL SECTION

NOTES:

- 1.) BRIDGE TYPE TO BE APPROVED BY CITY ENGINEER.
- 2.) RAISED SIDEWALK TO BE PROVIDED WHEN REQUIRED BY THE CITY ENGINEER. IF NOT REQUIRED, NON-SIDEWALK CONCRETE BARRIER SHALL BE USED.
- 3.) CONCRETE BARRIER SHALL BE TO CALTRANS STANDARDS OR AS APPROVED BY CITY ENGINEER.
- 4.) ULTIMATE TYPICAL BRIDGE SECTIONS TO BE CONSISTENT WITH THE APPROACH ROAD SECTION AS APPROVED BY THE CITY ENGINEER.
- 5.) CURBED MEDIAN TO BE USED ONLY WHEN APPROACHING HIGHWAY HAS A RAISED MEDIAN WIDTH ALSO. MEDIAN WIDTH MAY VARY WITH RAISED CURB
- 6.) CONCRETE BARRIER SHALL BE CALTRANS STANDARDS OR AS APPROVED BY THE CITY ENGINEER
- 7.) EXTERIOR DESIGN SHALL BE REVIEWED AND APPROVED BY THE COMMUNITY DEVELOPMENT DIRECTOR
- 8.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		MINOR ARTERIAL BRIDGE	
		<i>Ken A. Semels</i>	08/31/2009		
		CITY ENGINEER	DATE		



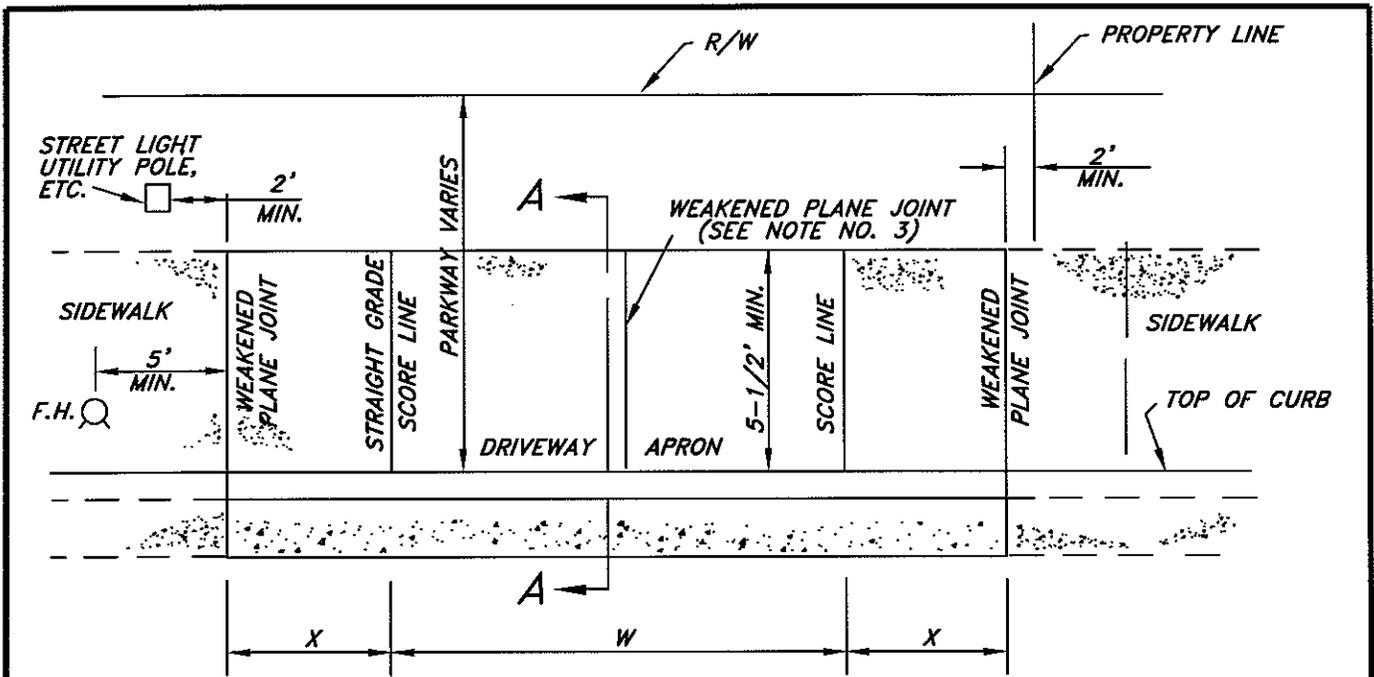
*SUBJECT TO REVISION BY THE CITY ENGINEER

TYPICAL SECTION

NOTES:

- 1.) BRIDGE TYPE TO BE APPROVED BY CITY ENGINEER.
- 2.) RAISED SIDEWALK TO BE PROVIDED WHEN REQUIRED BY THE CITY ENGINEER. IF NOT REQUIRED, NON-SIDEWALK CONCRETE BARRIER SHALL BE USED.
- 3.) CONCRETE BARRIER SHALL BE TO CALTRANS STANDARDS OR AS APPROVED BY CITY ENGINEER.
- 4.) ULTIMATE TYPICAL BRIDGE SECTIONS TO BE CONSISTENT WITH THE APPROACH ROAD SECTION AS APPROVED BY THE CITY ENGINEER.
- 5.) EXTERIOR DESIGN SHALL BE REVIEWED AND APPROVED BY THE COMMUNITY DEVELOPMENT DIRECTOR
- 6.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

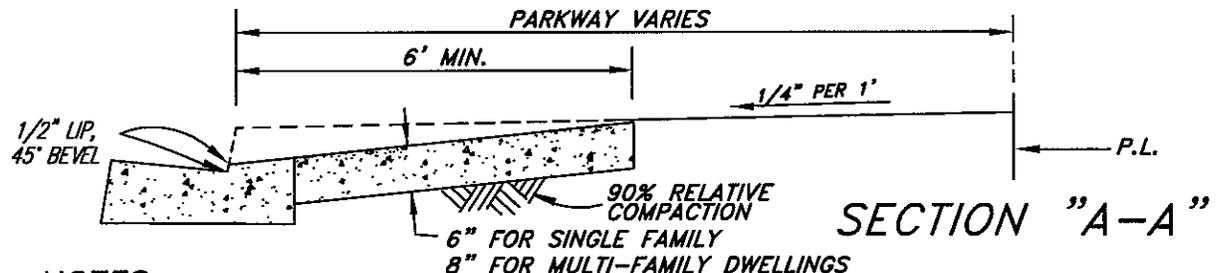
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		ARTERIAL BRIDGE	
		 CITY ENGINEER			
		DATE		NO.	
		08/31/2009		116	



PLAN

X	6" C.F.	8" C.F.	OVER 8" C.F.
	6'	8'	Ø8.33%

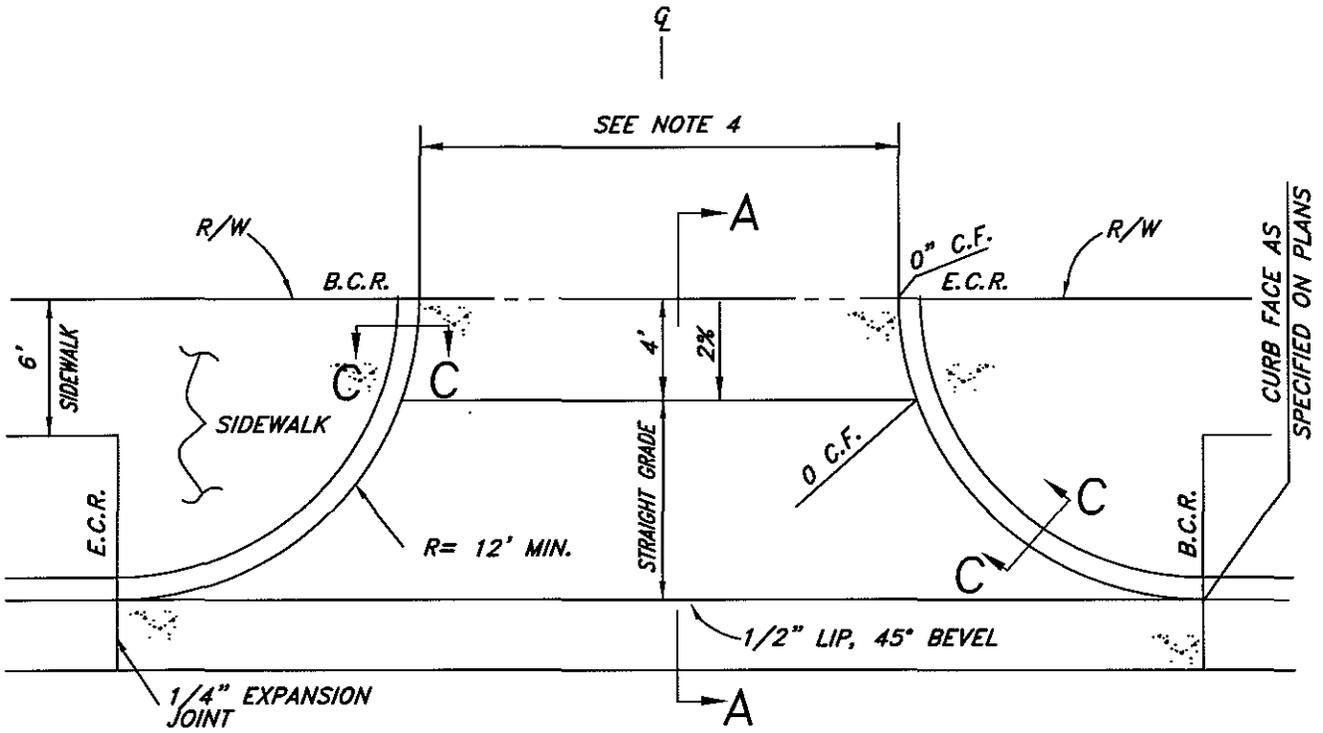
W	MIN.	MAX.
	12'	30'



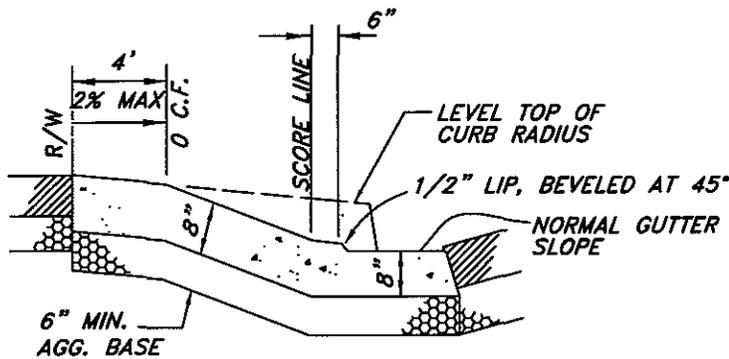
NOTES:

- 1.) ALL CONCRETE SHALL BE CLASS 520-C-2500, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXISTING P.C.C. TO BE REMOVED SHALL BE SAWCUT AT THE JOINTS.
- 3.) DRIVEWAYS WITH WIDTHS BETWEEN 14' AND 20' SHALL HAVE 1 WEAKENED PLANE AT JOINT AT 1/2W. DRIVEWAYS WIDER THAN 20' SHALL HAVE WEAKENED PLANE JOINTS NOT TO EXCEED 7' ON CENTER.
- 4.) FOR NEW DRIVEWAY APPROACHES ON EXISTING STREETS, A 12" WIDTH OF ASPHALT CONCRETE SHALL BE REMOVED AND REPLACED TO PCC GUTTER DEPTH.
- 5.) DRIVEWAYS FOR CORNER LOTS SHALL BE LOCATED ADJACENT TO THE PROPERTY LINE AWAY FROM THE INTERSECTION.
- 6.) WIDTH DIMENSION SHALL MATCH WIDTH OF GARAGE(S) OPENING UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- 7.) 14% MAX. GRADE BREAK BETWEEN DRIVEWAY AND APPROACH IS ACCECTABLE.
- 8.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

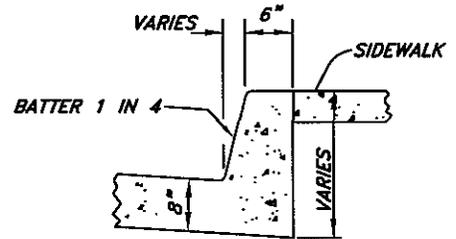
REVISION		ENGINEERING	DATE 07/09	<h2 style="margin: 0;">CITY OF LAKE ELSINORE</h2> <p style="margin: 0; font-size: small;">PREPARED BY PUBLIC WORKS</p>	<h3 style="margin: 0;">RESIDENTIAL DRIVEWAY APPROACH</h3>	NO. 117
DATE	APPROVED	APPROVED BY				
				08/31/2009		
		CITY ENGINEER		DATE		



PLAN VIEW



SECTION A-A



SECTION C-C

B.C.R. BEGINING CURB RADIUS
 E.C.R. END CURB RADIUS
 C.F. CURB FACE

NOTES:

- 1.) TYPE 1 APPROACH MAY BE USED WHEN SIDEWALK IS ADJACENT TO PROPERTY LINE.
- 2.) WEAKENED PLANE JOINT REQUIRED AT CENTERLINE OF APPROACH.
- 3.) CONCRETE SHALL BE CLASS 520-C-2500, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 4.) MINIMUM WIDTH SHALL BE 24', MAXIMUM WIDTH SHALL BE 40'
- 5.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

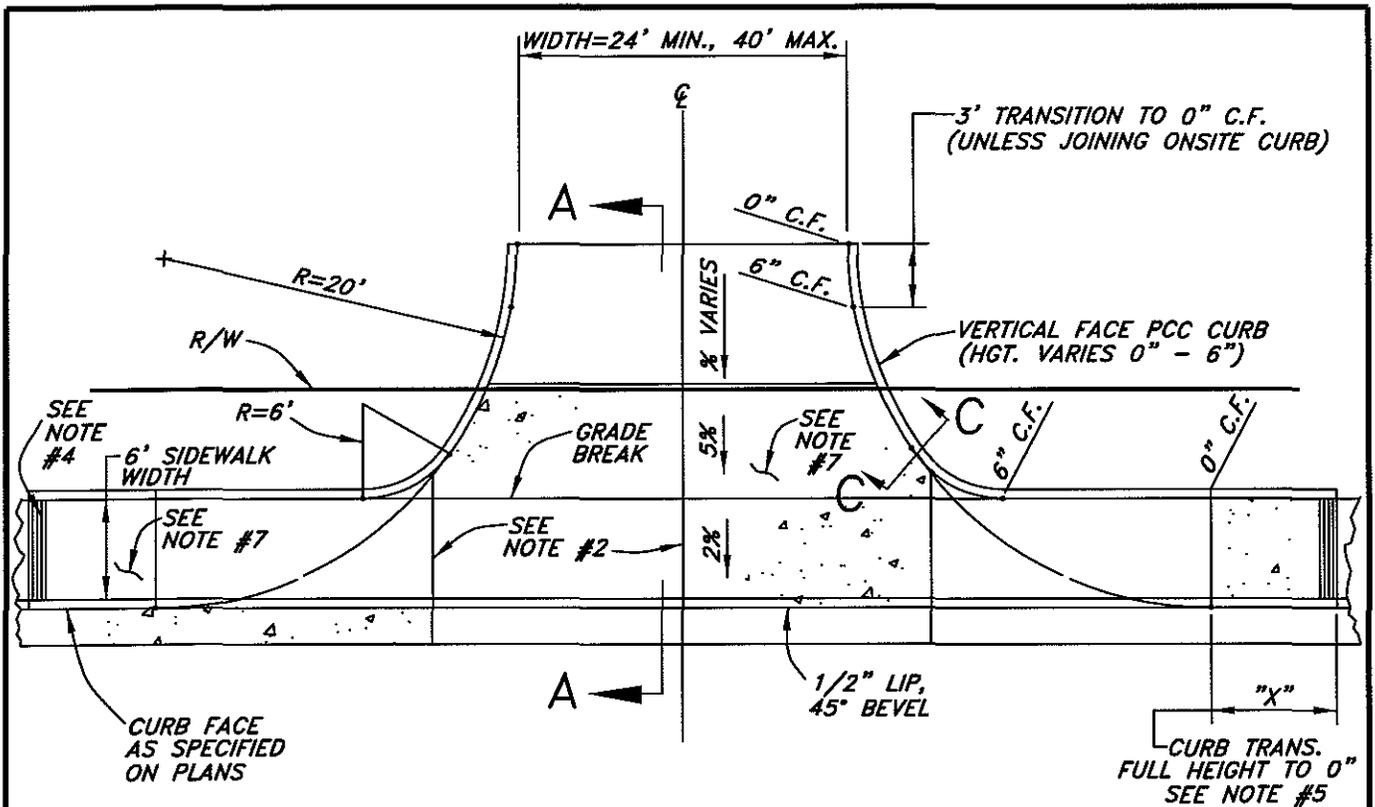
REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		<i>Ken A. ...</i>	08/31/2009
		CITY ENGINEER	DATE

CITY OF LAKE ELSINORE

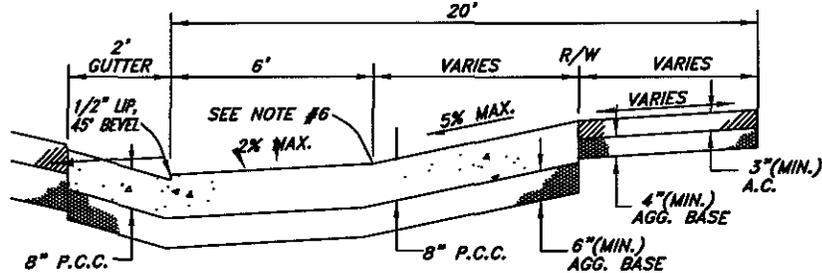
PREPARED BY PUBLIC WORKS

COMMERCIAL DRIVEWAY
 APPROACH: TYPE 1

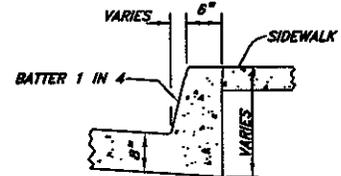
NO.
 118A



SECTION "A-A"



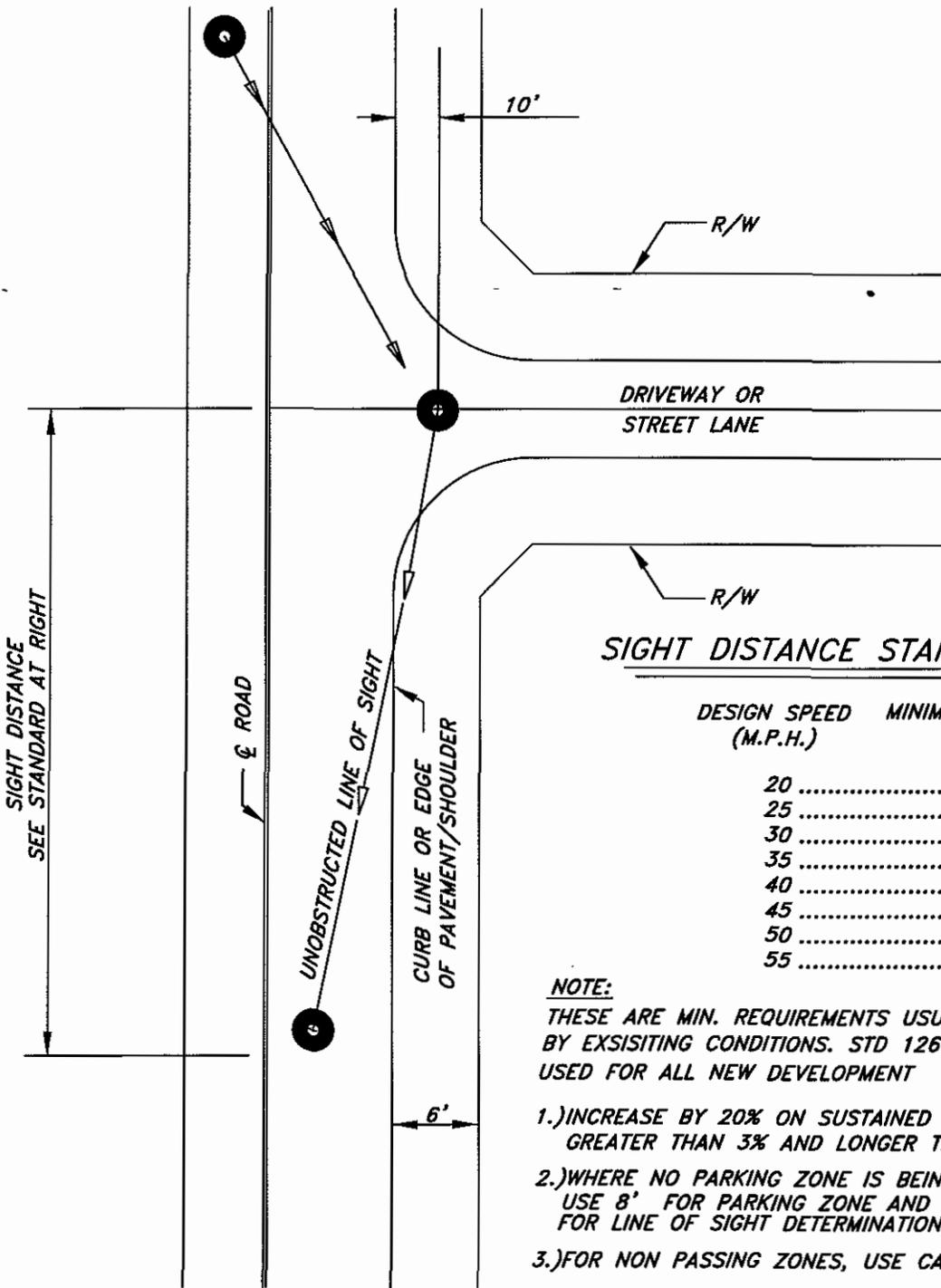
SECTION "C-C"



NOTES:

1. TYPE II APPROACH SHALL BE USED WHEN SIDEWALK IS ADJACENT TO CURB.
2. WEAKENED PLANE JOINT REQUIRED AT CENTERLINE OF APPROACH, AND AT 1/2 Δ
3. CONCRETE SHALL BE CLASS 560-C-3250, CURED WITH WHITE PIGMENTED CURING COMPOUND.
4. TOP OF SIDEWALK RAMP SHALL HAVE 12" WIDE BORDER WITH GROOVES 1/4" DEEP, WITH 1/8" RADIUS, AND SPACED AT 3/4" O.C.
5. X SHALL HAVE A MAXIMUM SLOPE OF 1:12 (8.33%), AND A MINIMUM SLOPE OF 1:15 (6.67%).
6. MAXIMUM GRADE BREAK SHALL BE 3%.
7. RAMP SURFACE SHALL BE SLIP-RESISTANT AND SHALL BE OF CONTRASTING FINISH FROM ADJACENT SIDEWALK (MEDIUM BROOM FINISH OR EQUIVALENT).
8. ALL ACCESS RAMPS SHALL BE CONSTRUCTED TO THE MOST CURRENT REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS/CALIFORNIA CODE OF REGULATIONS TITLE 24-ACCESSIBILITY REGULATIONS. ADJUSTMENTS SHALL BE MADE IN THE FIELD TO ACHIEVE RAMP CONDITIONS.
9. STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE APPROVED	APPROVED BY			
	<i>[Signature]</i>	08/31/2009	COMMERCIAL DRIVEWAY	NO. 118B
	CITY ENGINEER	DATE	APPROACH: TYPE II	



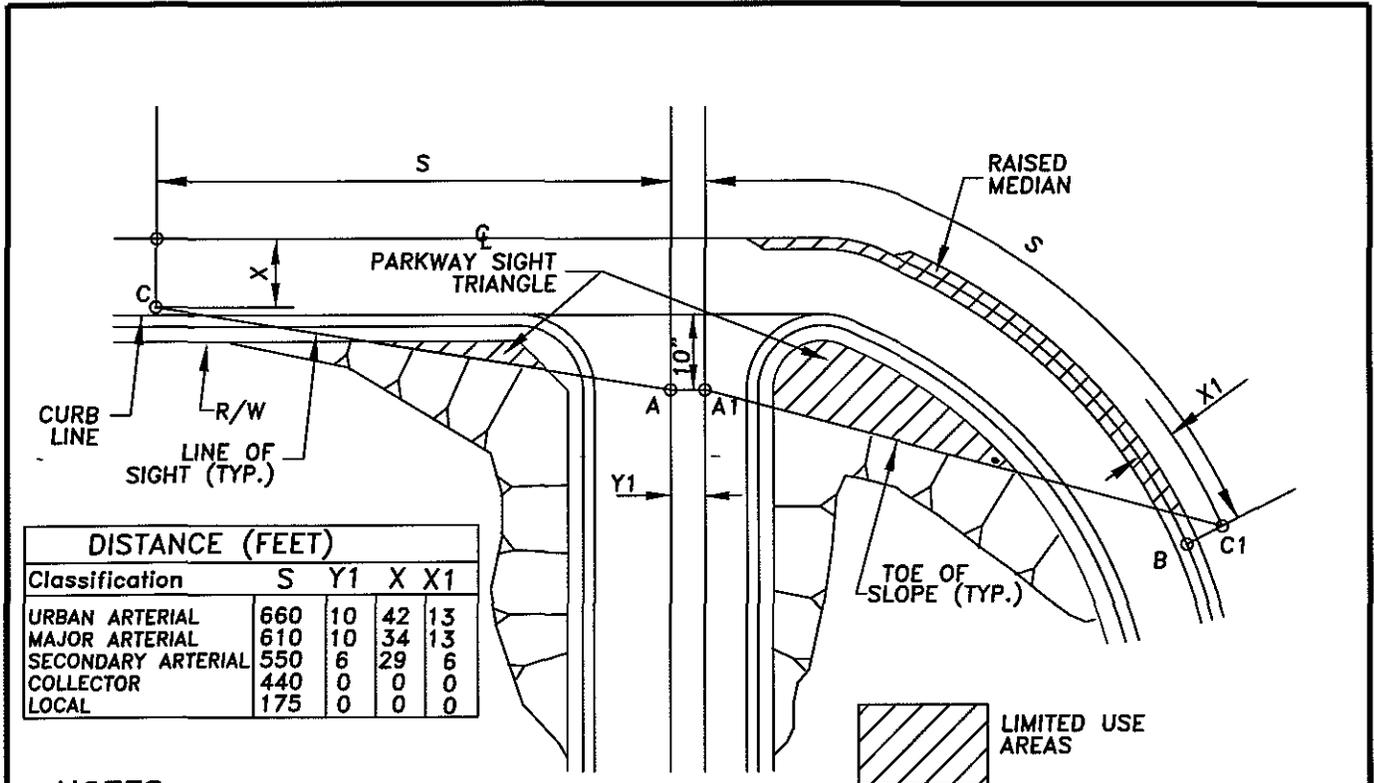
SIGHT DISTANCE STANDARDS

DESIGN SPEED (M.P.H.)	MINIMUM STOPPING (FT.)
20	125
25	150
30	200
35	250
40	300
45	360
50	430
55	500

NOTE:

- THESE ARE MIN. REQUIREMENTS USUALLY DICTATED BY EXSISTING CONDITIONS. STD 126 SHALL BE USED FOR ALL NEW DEVELOPMENT
- 1.) INCREASE BY 20% ON SUSTAINED DOWN GRADE GREATER THAN 3% AND LONGER THAN 1 MILE
 - 2.) WHERE NO PARKING ZONE IS BEING DETERMINED USE 8' FOR PARKING ZONE AND THEN APPLY 6' FOR LINE OF SIGHT DETERMINATION
 - 3.) FOR NON PASSING ZONES, USE CALTRANS STANDARD.

<table border="1"> <thead> <tr> <th>REVISION</th> <th>DATE</th> <th>APPROVED</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		REVISION	DATE	APPROVED													<p>ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p><i>Ken A. Lemels</i> 08/31/2009 CITY ENGINEER DATE</p>	<p>CITY OF LAKE ELSINORE</p> <p>PREPARED BY PUBLIC WORKS</p>	<p>MINIMUM SIGHT DISTANCE REQUIREMENT</p> <p>NO. 125</p>
REVISION	DATE	APPROVED																	



DISTANCE (FEET)				
Classification	S	Y1	X	X1
URBAN ARTERIAL	660	10	42	13
MAJOR ARTERIAL	610	10	34	13
SECONDARY ARTERIAL	550	6	29	6
COLLECTOR	440	0	0	0
LOCAL	175	0	0	0

NOTES:

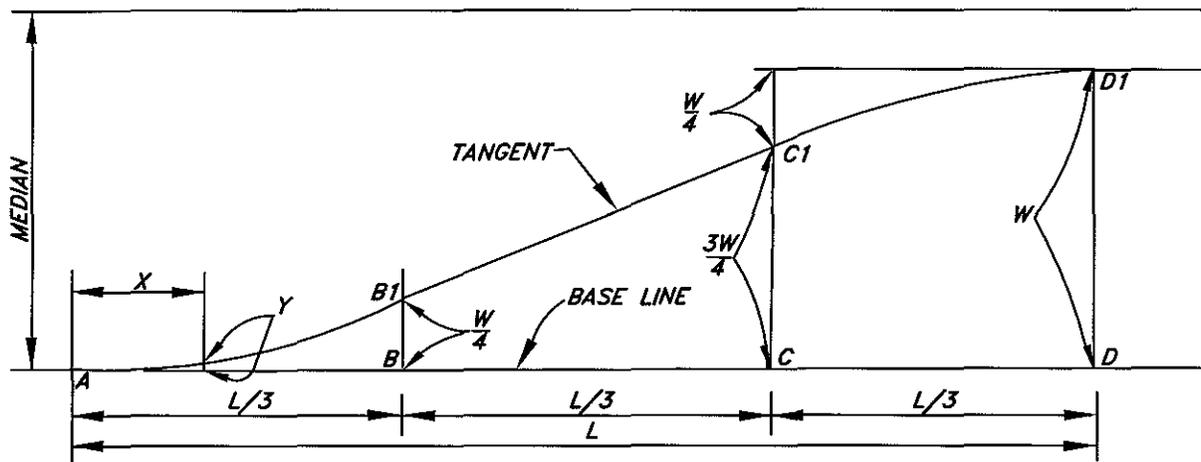
1. This standard shall be used for all new development.
2. The limited use area is determined by the graphical method using the appropriate distances given in the above table. It shall be used for the purpose of prohibiting or clearing obstructions in order to maintain adequate sight distance at intersections.
3. The line of sight shall be shown at intersections on all landscaping plans, grading plans, and tentative tract plans where safe sight distance is questionable. In cases where an intersection is located on a vertical curve, a profile of the sight line may be required.
4. Walls or any obstructions that could restrict the view within the limited use area shall not be permitted.
5. The toe of the slope shall not encroach into the limited use area.
6. The limited use area shall be as near level as possible yet maintain proper drainage.
7. Plants and shrubs shall be of the type that will grow no higher than 30 inches above the ground within the limited use area.
8. No trees shall be allowed within the Parkway Sight Triangle.
9. Points A and A1 are the locations of a driver's line of sight while in a vehicle at an intersection 10 feet back from the projection of the curb line. The distance Y1 is the distance measured from the centerline of the road to the far right through traffic lane. The distance Y1 is equal to zero for T-intersections.
10. The distance S represents the safe stopping distance measured along the centerline of the road.
11. Points C and C1 are the locations (centerline of the travel lanes) where the driver of a vehicle, traveling at a given speed, has the minimum stopping sight distance required to bring the vehicle to a safe stop.

REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED	APPROVED BY	
		 CITY ENGINEER	
			08/31/2009 DATE

CITY OF LAKE ELSINORE
 PREPARED BY PUBLIC WORKS

**SIGHT DISTANCE
 DETAIL**

NO.
126



$$Y = 2.25W \left(\frac{X}{L}\right)^2$$

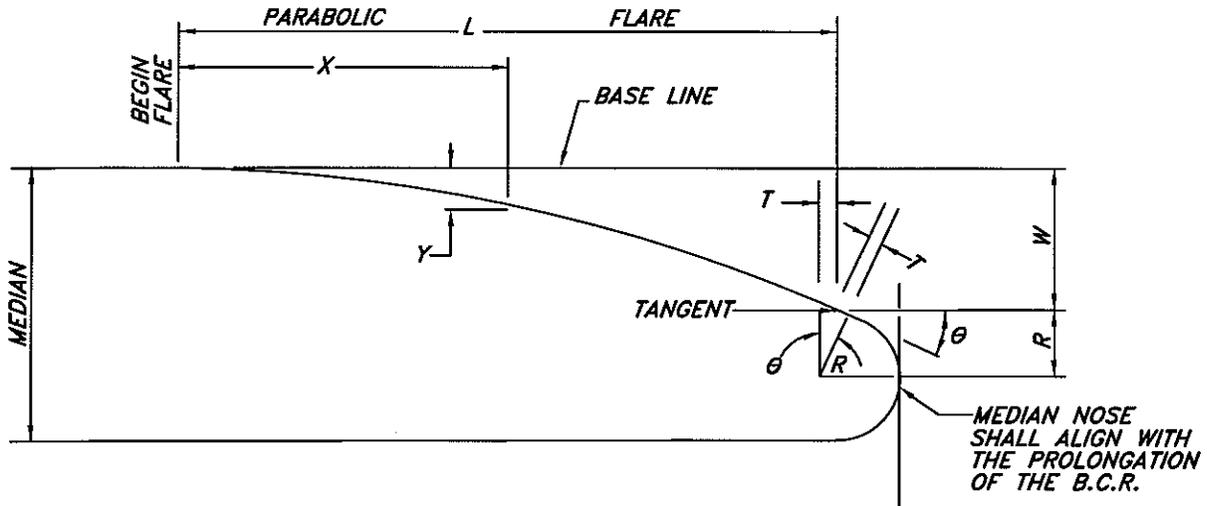
L=LENGTH OF TAPER
 W=MAXIMUM OFFSET DISTANCE
 X=DISTANCE ALONG BASELINE
 Y=OFFSET FROM BASELINE

L	DISTANCE X												
	60'	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'	55'	60'
72'	6'	12'	18'	24'	30'	36'	42'	48'	54'	60'	66'	72'	
90'	7.5'	15'	22.5'	30'	37.5'	45'	52.5'	60'	67.5'	75'	82.5'	90'	
W	OFFSET Y												
	10'	0.16'	0.62'	1.41'	2.50'	3.75'	5.00'	6.25'	7.50'	8.59'	9.38'	9.84'	10.00'
	11'	0.17'	0.69'	1.55'	2.75'	4.13'	5.50'	6.88'	8.25'	9.45'	10.31'	10.83'	11.00'
	12'	0.19'	0.75'	1.69'	3.00'	4.50'	6.00'	7.50'	9.00'	10.31'	11.25'	11.81'	12.00'

NOTE:

- 1.) TO DETERMINE OFFSET DISTANCE FOR ANY LENGTH OF TAPER USE THE FORMULA $Y=2.25W\left(\frac{X}{L}\right)^2$ FOR THE PORTIONS A-B1 AND C1-D1 WHICH ARE PARABOLIC CURVES. THE PORTION B1-C1 IS A TANGENT. WHEN THE BASE LINE IS CURVED, THE OFFSETS ARE APPLIED TO THE CURVED BASE LINE, AND B1-C1 IS NO LONGER A TANGENT.

REVISION		ENGINEERING		DATE 07/09	CITY OF LAKE ELSINORE			
DATE	APPROVED	APPROVED BY						PREPARED BY PUBLIC WORKS
		 CITY ENGINEER			08/31/2009	DATE		MEDIAN TAPER NO. 127



$$Y = W \left(\frac{X}{L} \right)^2$$

L=LENGTH OF FLARE IN FEET
 W=MAXIMUM OFFSET DISTANCE IN FEET
 X=DISTANCE ALONG BASELINE IN FEET
 Y=OFFSET FROM BASELINE IN FEET

$$\tan \theta = \frac{2W}{L}$$

$$T = R \tan \frac{\theta}{2}$$

T=TANGENT
 R=RADIUS OF NOSE IN FEET

OFFSET Y

L \ X	10'	15'	20'	25'	30'	40'	45'	50'	60'	70'	75'	80'	90'	100'
-------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------

FOR W/L=1:5

25'	0.80'	1.80'	3.20'	5.00'										
50'	0.40'	0.90'	1.60'	2.50'	3.60'	6.40'	8.10'	10.00'						

FOR W/L=1:10

50'	0.20'	0.45'	0.80'	1.25'	1.80'	3.20'	4.05'	5.00'						
100'	0.10'	0.23'	0.40'	0.63'	0.90'	1.60'	2.03'	2.50'	3.60'	4.90'	5.63'	6.40'	8.10'	10.00'

FOR W/L=1:15

45'	0.15'	0.33'	0.59'	0.93'	1.33'	2.37'	3.00'							
75'	0.09'	0.20'	0.36'	0.56'	0.80'	1.42'	1.80'	2.22'	3.20'	4.36'	5.00'			
90'	0.07'	0.17'	0.30'	0.46'	0.67'	1.19'	1.50'	1.85'	2.67'	3.63'	4.17'	4.74'	6.00'	

NOTE:

1.) IF STATION OF RADIUS POINT IS NOT GIVEN ON PLAN, TANGENT "T" MAY BE IGNORED.

REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		<i>Handwritten Signature</i>	08/31/2009
		CITY ENGINEER	DATE

CITY OF LAKE ELSINORE

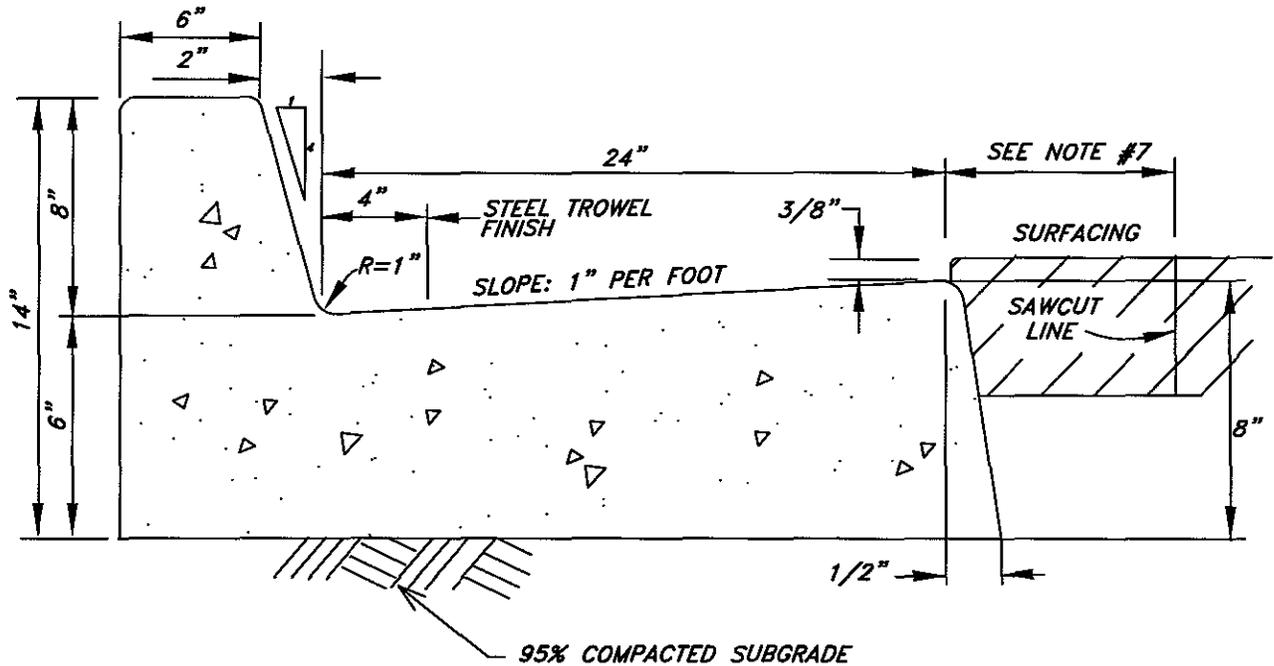
PREPARED BY PUBLIC WORKS

MEDIAN FLARE

NO.
128

CITY OF LAKE ELSINORE
STANDARD PLANS

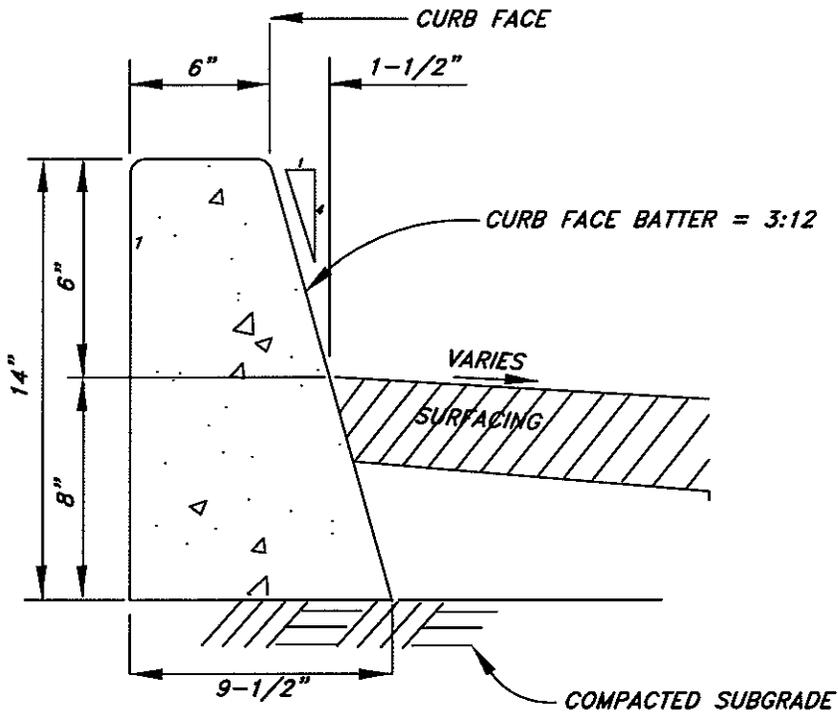
SECTION 2:
Curbs, Gutters,
and Sidewalks



NOTES:

- 1.) CONCRETE SHALL BE CLASS 520-C-2500 P.C.C.; CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXPOSED CORNERS SHALL BE FINISHED WITH 1/2" RADIUS.
- 3.) FINISH SHALL BE FINE BROOM.
- 4.) EXISTING P.C.C. SHALL BE SAWCUT AT WEAKENED PLANE JOINT PRIOR TO REMOVAL.
- 5.) CURBS SHALL HAVE WEAKENED PLANE JOINTS AT 10' INTERVALS; NO SCORELINES ALLOWED.
- 6.) WHEN CURB AND GUTTER IS PLACED BY AN EXTRUSION MACHINE, FINISHING WORK SHALL PROVIDE AN ACCEPTABLE FINISH AND WEAKENED PLANE JOINTS MAY BE SAWCUT.
- 7.) A MINIMUM 1' WIDE A.C. PAVEMENT REPAIR PATCH IS REQUIRED WHEN CURB AND GUTTER IS PLACED ADJACENT TO EXISTING A.C. PAVEMENT.
- 8.) MIN. PERMISSIBLE GRADE 1.0 % UNLESS APPROVED BY CITY ENGINEER
- 9.) SLOPE TOP OF CURB 1/4" PER FOOT TOWARD STREET

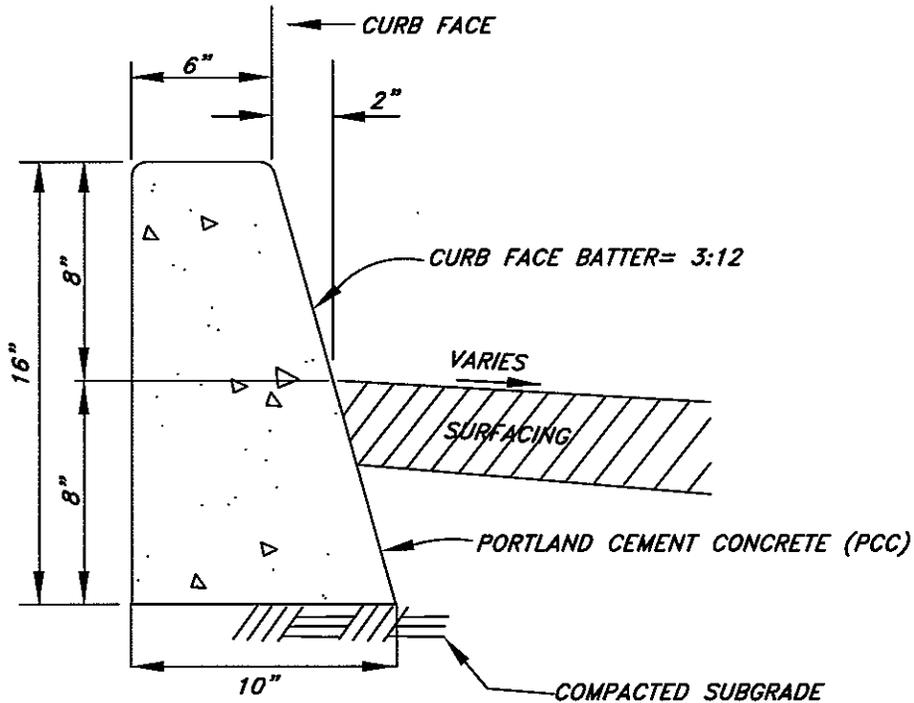
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		TYPE 8 INTEGRAL CURB AND GUTTER	NO. 201
			09/31/2009 DATE		



NOTES:

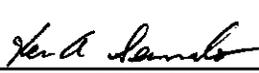
- 1.) CONCRETE SHALL BE CLASS 560-C-3250 P.C.C., CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXPOSED CORNERS SHALL BE FINISHED WITH 1/2" RADIUS.
- 3.) FINISH SHALL BE FINE BROOM.
- 4.) EXISTING P.C.C. SHALL BE SAWCUT AT JOINT PRIOR TO REMOVAL.
- 5.) CURBS SHALL HAVE EXPANSION JOINTS AT B.C.R. AND E.C.R. AND WEAKENED PLANE JOINTS AT 10' INTERVALS ONLY.
- 6.) WHEN CURB AND GUTTER IS PLACED BY AN EXTRUSION MACHINE, FINISHING WORK SHALL PROVIDE AN ACCEPTABLE FINISH AND WEAKENED PLANE JOINTS MAY BE SAWCUT.
- 7.) SLOPE TOP OF CURB 1/4" PER FOOT TOWARD STREET

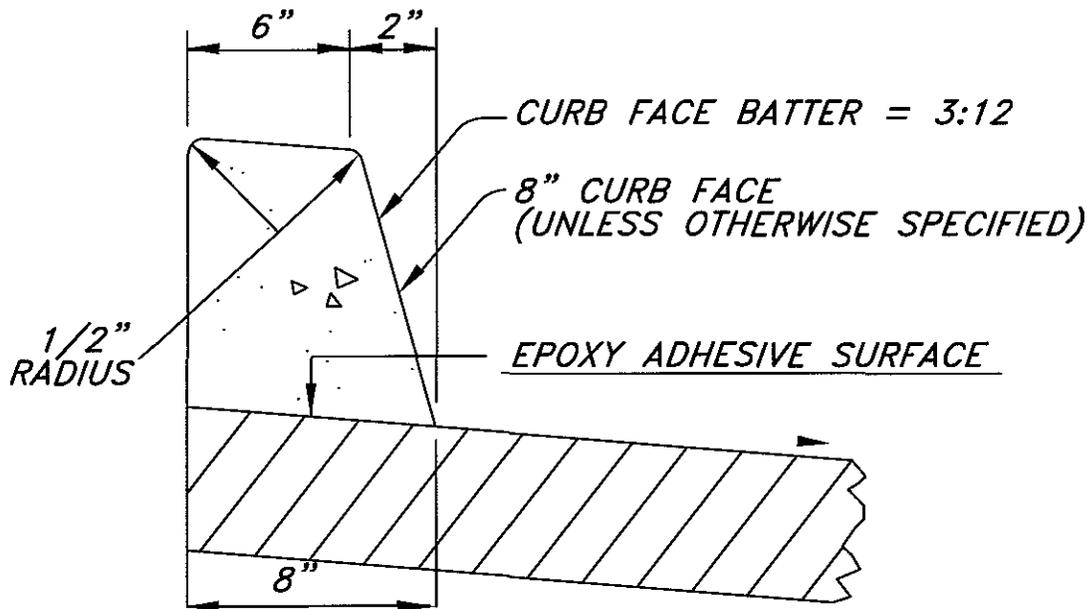
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		TYPE 6A CURB	
		 CITY ENGINEER			
		DATE 08/31/2009		NO. 202	



NOTES:

- 1.) CONCRETE SHALL BE CLASS 520-C-2500 P.C.C., CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXPOSED CORNERS SHALL BE FINISHED WITH 1/2" RADIUS.
- 3.) FINISH SHALL BE FINE BROOM.
- 4.) EXISTING P.C.C. SHALL BE SAWCUT AT SCORELINE PRIOR TO REMOVAL.
- 5.) CURBS SHALL HAVE EXPANSION JOINTS AT B.C.R. AND E.C.R. AND WEAKENED PLANE JOINTS AT 10' INTERVALS ONLY.
- 6.) WHEN CURB AND GUTTER IS PLACED BY AN EXTRUSION MACHINE, FINISHING WORK SHALL PROVIDE AN ACCEPTABLE FINISH AND WEAKENED PLANE JOINTS MAY BE SAWCUT.
- 7.) SLOPE TOP OF CURB 1/4" PER FOOT TOWARD STREET

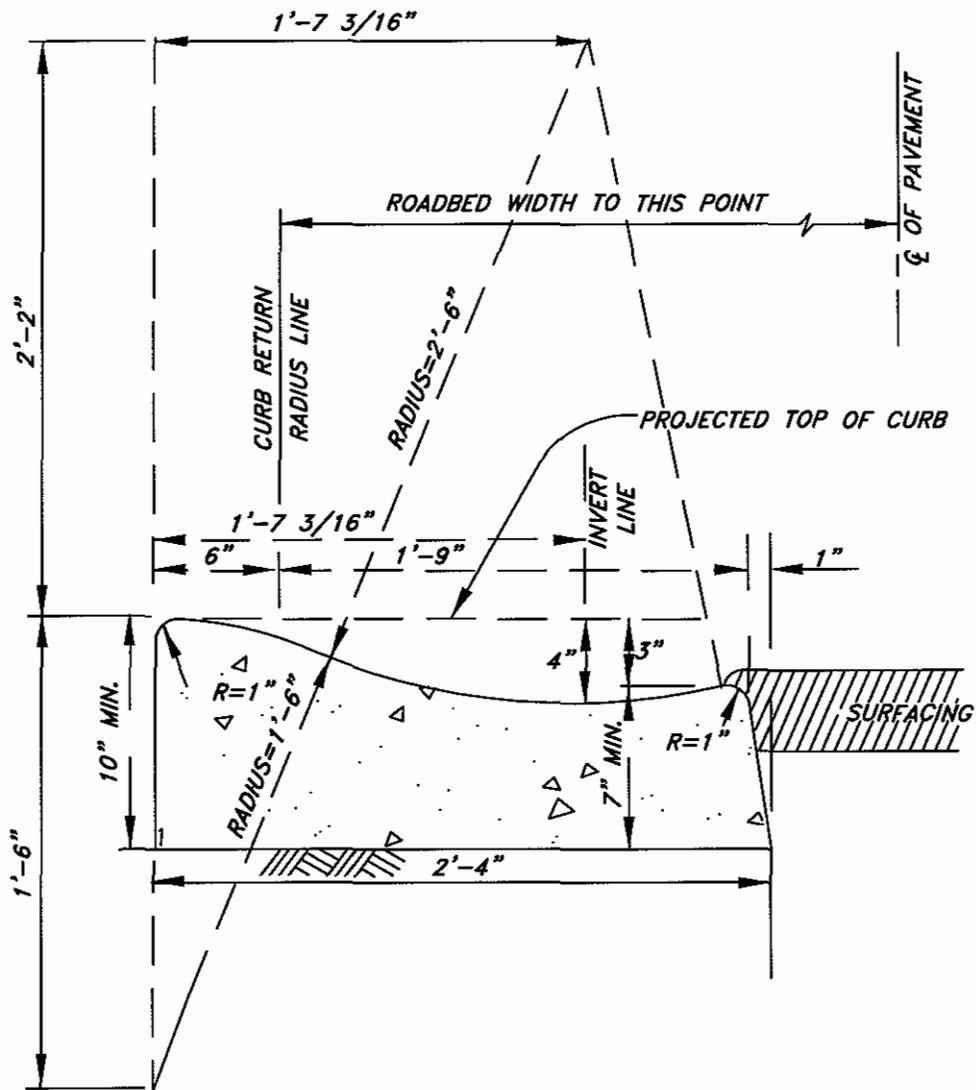
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		PREPARED BY PUBLIC WORKS	
		 CITY ENGINEER		TYPE 8A CURB	
		08/31/2009 DATE		NO. 203	



NOTES:

- 1.) CONCRETE SHALL BE CLASS 560-C-3250 P.C.C., CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXPOSED CORNERS SHALL BE FINISHED WITH 1/2" RADIUS.
- 3.) FINISH SHALL BE FINE BROOM.
- 4.) EXISTING P.C.C. SHALL BE SAWCUT AT SCORELINE PRIOR TO REMOVAL.
- 5.) CURBS SHALL HAVE EXPANSION JOINTS AT B.C.R. AND E.C.R. AND WEAKENED PLANE JOINTS AT 10' INTERVALS ONLY.
- 6.) WHEN CURB AND GUTTER IS PLACED BY AN EXTRUSION MACHINE, FINISHING WORK SHALL PROVIDE AN ACCEPTABLE FINISH AND WEAKENED PLANE JOINTS MAY BE SAWCUT.
- 7.) SLOPE TOP OF CURB 1/4" PER FOOT TOWARD STREET

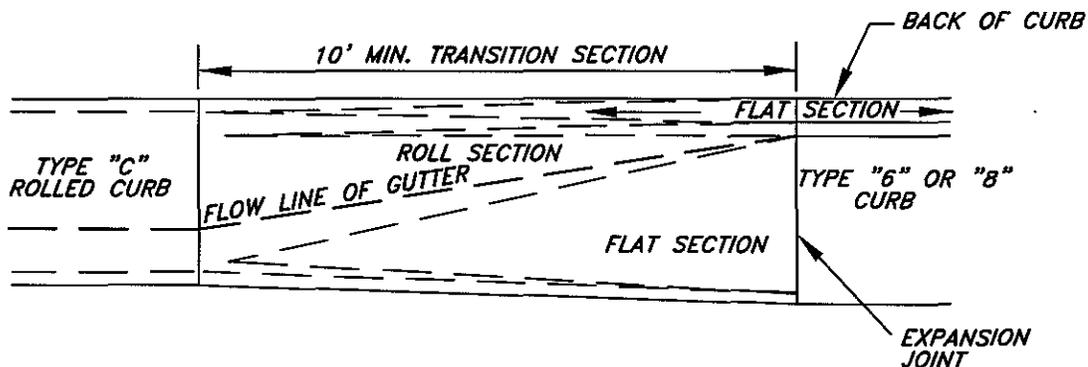
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		TYPE D-1 CURB	NO. 204
		08/31/2009 DATE			



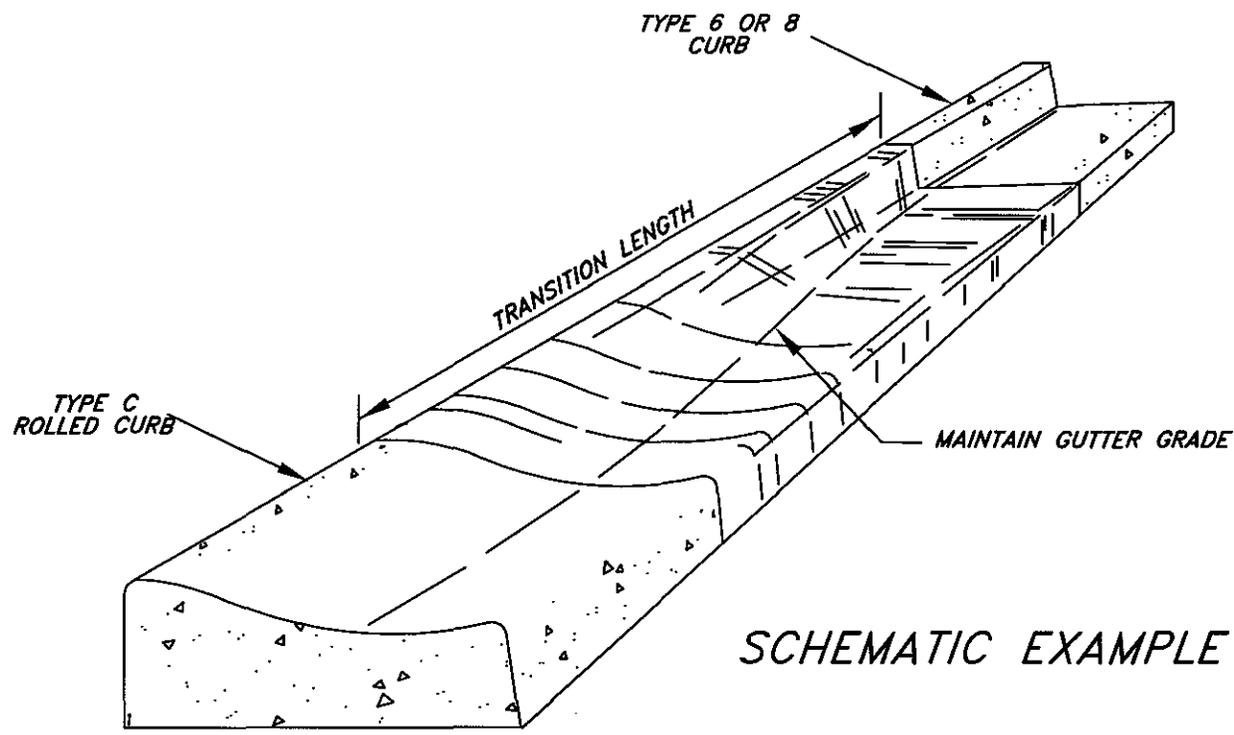
NOTES:

- 1.) CONCRETE SHALL BE CLASS 520-C-2500 P.C.C.; CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXPOSED CORNERS SHALL BE FINISHED WITH 1/2" RADIUS.
- 3.) FINISH SHALL BE FINE BROOM.
- 4.) EXISTING P.C.C. SHALL BE SAWCUT AT SCORELINE PRIOR TO REMOVAL.
- 5.) CURBS SHALL HAVE EXPANSION JOINTS AT 60' INTERVALS, AND WEAKENED PLANE JOINTS AT 10' INTERVALS ONLY; NO SCORELINES ALLOWED.
- 6.) WHEN CURB AND GUTTER IS PLACED BY AN EXTRUSION MACHINE, FINISHING WORK SHALL PROVIDE AN ACCEPTABLE FINISH AND WEAKENED PLANE JOINTS MAY BE SAWCUT.
- 7.) MAY ONLY BE USED WITH THE APPROVAL OF THE CITY ENGINEER.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009	NO. 205
				DATE	
				TYPE C ROLLED CURB	



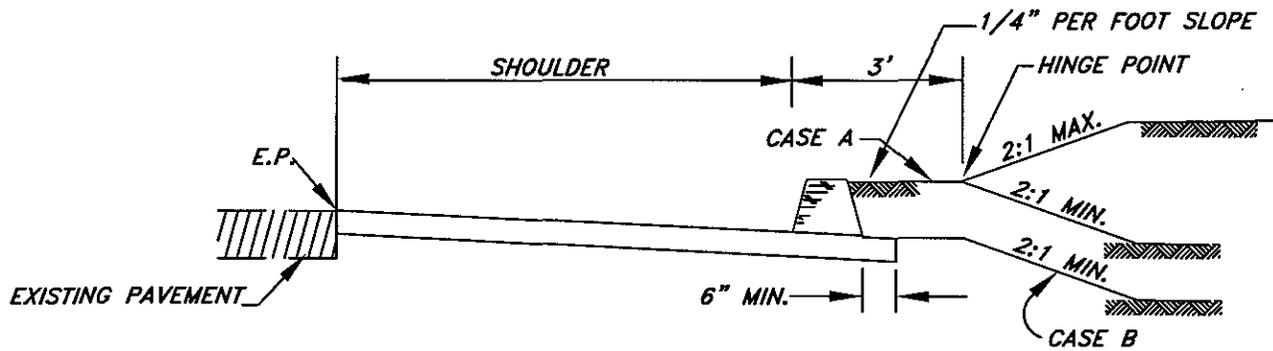
PLAN



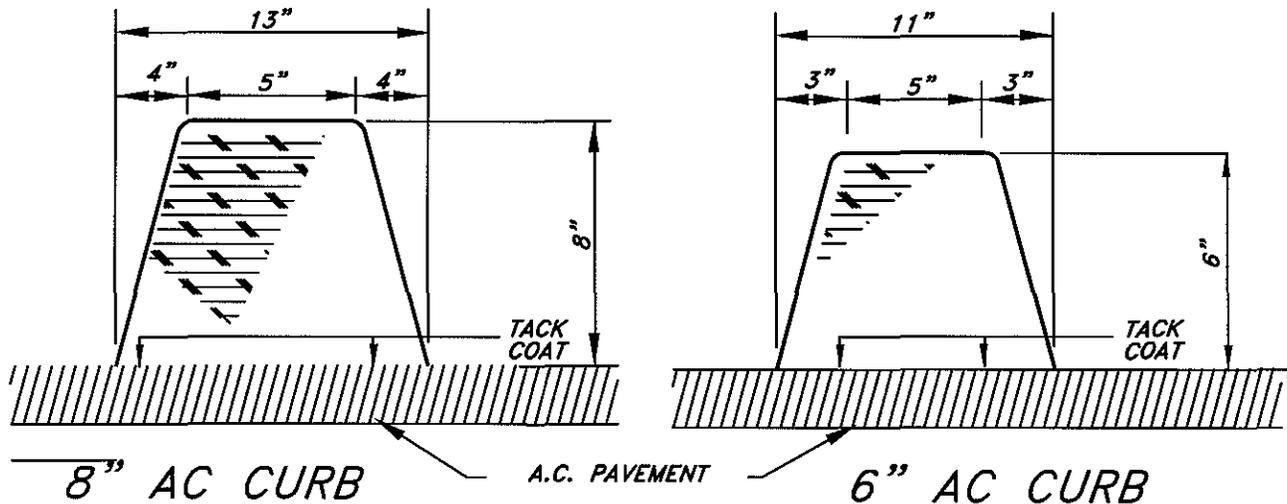
SCHEMATIC EXAMPLE

NOTE:
 TO BE USED ONLY WHEN ROLLED CURB HAS BEEN APPROVED FOR USE BY THE CITY ENGINEER PRIOR TO DESIGN.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009 DATE	NO. 206
		CURB TRANSITION			



PAVED SHOULDER WITH AC DIKE



NOTES:

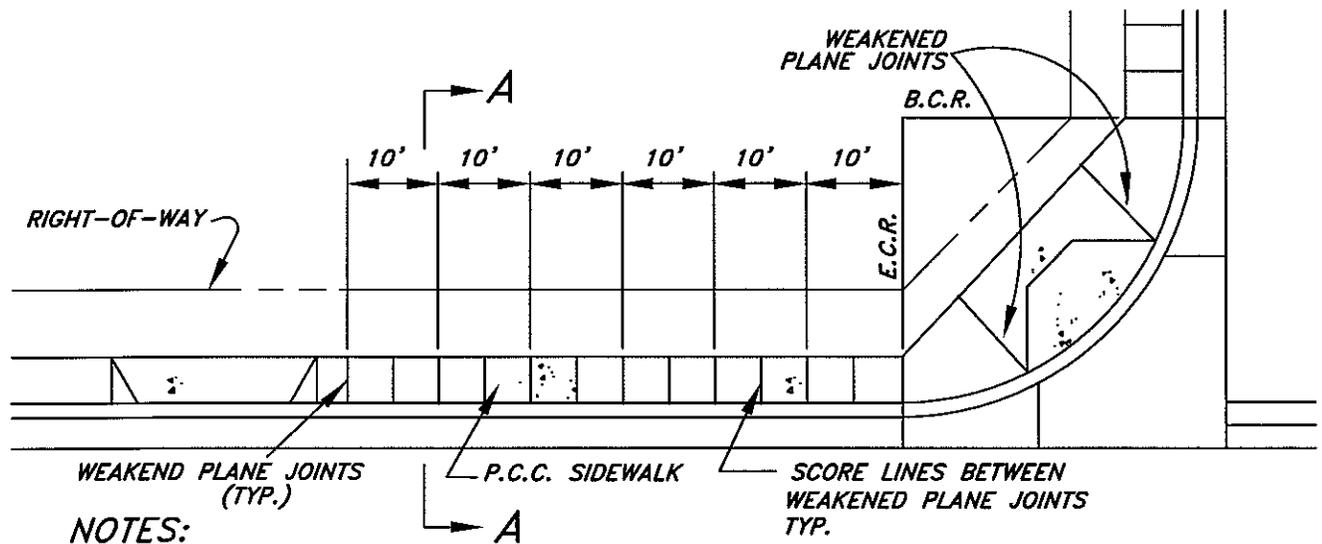
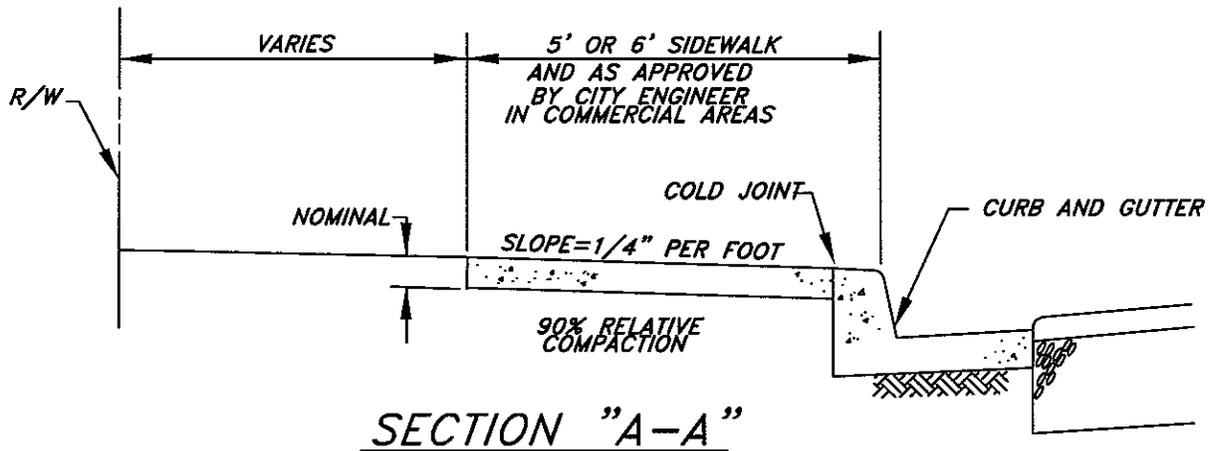
- 1.) THE ASPHALT CONCRETE MIXTURE SHALL BE TYPE III D-AR 8000 WITH A MINIMUM ASPHALT BINDER OF 5.8 PERCENT.
- 2.) PRIOR TO PLACEMENT, A TACK COAT SHALL BE APPLIED TO THE EXISTING SURFACE. TACK COAT SHALL BE AR1000 AT AN APPROXIMATE RATE OF 0.05 GALLON PER SQUARE YARD OR GRADE SS-1h EMULSIFIED ASPHALT AT AN APPROXIMATE RATE OF 0.05 TO 0.10 GALLON PER SQUARE YARD.
- 3.) THE TEMPERATURE OF THE MIX AT THE TIME OF PLACEMENT SHALL NOT BE LESS THAN 250° F OR MORE THAN 285° F.
- 4.) ALL EXTRUDERS AND SHOES SHALL BE APPROVED BY THE ENGINEER.
- 5.) USE CASE A BACKFILL UNLESS NOTED OTHERWISE
- 6.) A.C. CURB IS TO BE PLACED ON A MIN. OF 2" OF A.C. ROAD SURFACING, EXTENDING THROUGHOUT THE WIDTH OF A CURB.

REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED	APPROVED BY	
		 CITY ENGINEER	
		08/31/2009 DATE	

CITY OF LAKE ELSINORE
 PREPARED BY PUBLIC WORKS

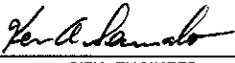
ASPHALT CONCRETE CURB

NO.
207



NOTES:

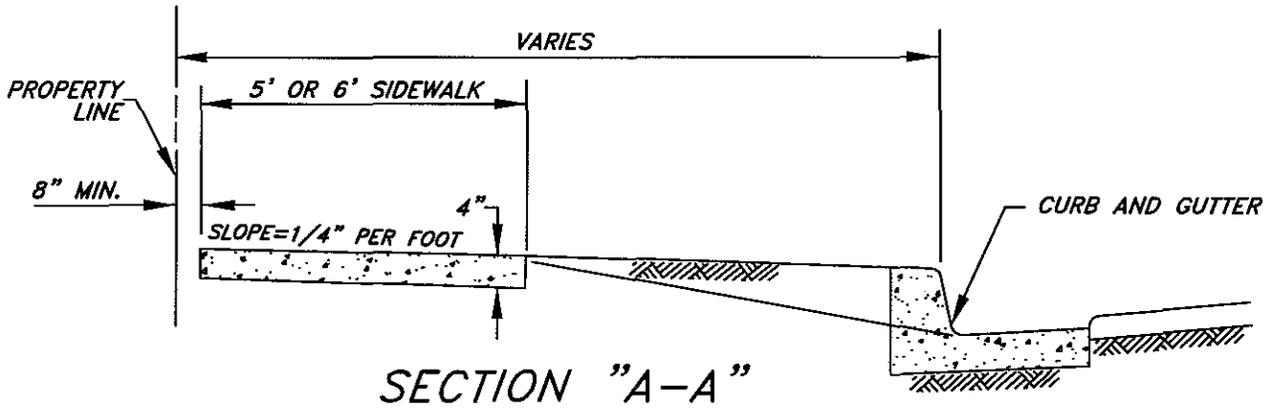
- 1.) THICKNESS OF SIDEWALK SHALL BE 4" EXCEPT IN DRIVEWAY APRONS, WHERE 6" IS REQUIRED FOR SINGLE FAMILY RESIDENTIAL DRIVEWAYS, AND 8" IS REQUIRED FOR ALL OTHERS.
- 2.) SIDEWALK SHALL HAVE 1-1/2" DEEP WEAKENED PLANE JOINTS AT INTERVALS SHOWN HEREON. JOINTS SHALL HAVE EDGES WITH 1/8" RADII.
- 3.) CONCRETE SHALL BE CLASS 520-C-2500, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 4.) 18" MOISTURE PENETRATION REQUIRED PRIOR TO PLACING CONCRETE IN SIDEWALK AREA (NON-EXPANSIVE SOIL AS DETERMINED BY SOILS TEST ARE EXEMPT AND REQUIRE ONLY SURFACE WETTING.)
- 5.) SIDEWALKS SHALL BE FORMED IN SUCH A MANNER AS TO MAINTAIN 48" MINIMUM OF UNOBSTRUCTED PEDESTRIAN WAY AT ALL LOCATIONS, INCLUDING BUT NOT LIMITED TO ELECTROLIERS, POWER POLES, AND FIRE HYDRANTS.

REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED	APPROVED BY	
		 CITY ENGINEER	
		08/31/2009 DATE	

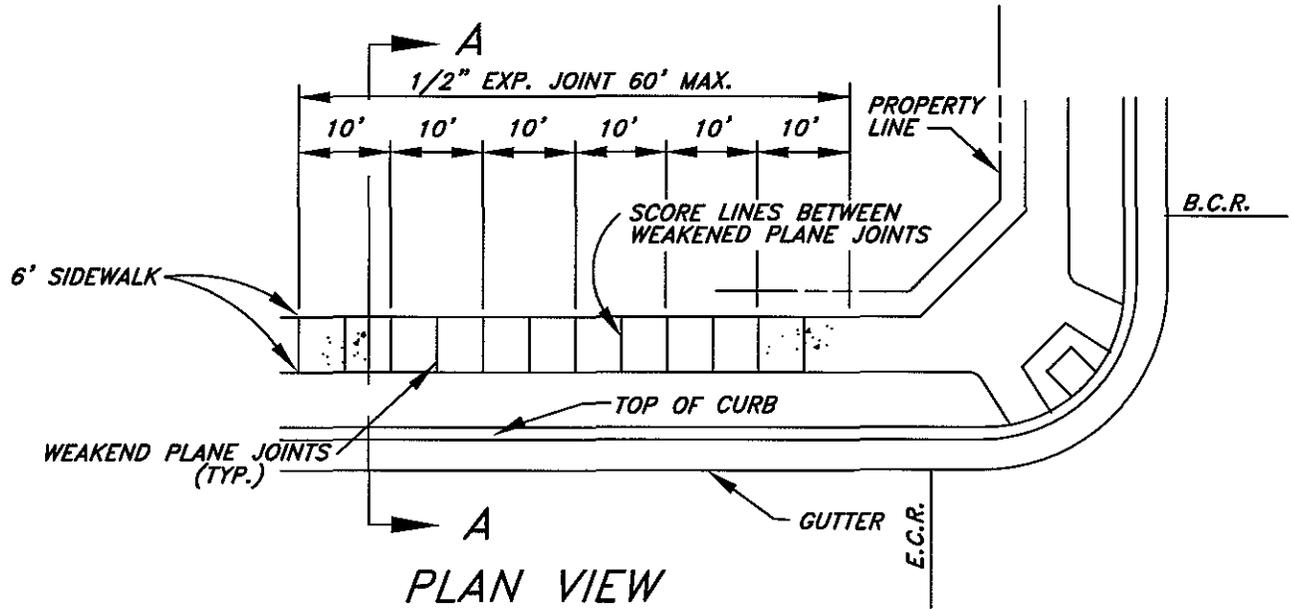
CITY OF LAKE ELSINORE
PREPARED BY PUBLIC WORKS

CONTINGUOUS SIDEWALK

NO.
210



SECTION "A-A"

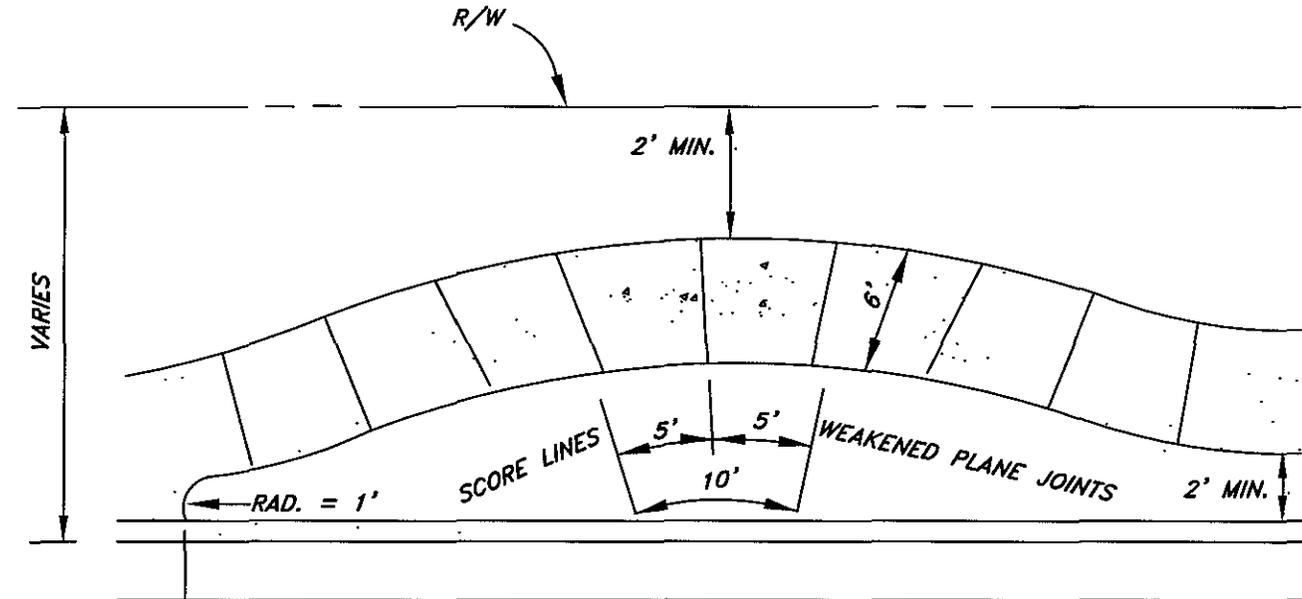


PLAN VIEW

NOTES:

1. THICKNESS OF SIDEWALK SHALL BE 4" EXCEPT IN DRIVEWAY APRONS WHERE 6" IS REQUIRED FOR RESIDENTIAL DRIVEWAYS AND 8" IS REQUIRED FOR COMMERCIAL DRIVEWAYS.
2. SIDEWALK SHALL HAVE 1/2" PREMOLDED EXPANSION JOINTS AND 1-1/2" DEEP WEAKENED PLANE JOINTS AT INTERVALS SHOWN HEREON. JOINTS SHALL HAVE EDGES WITH 1/8" RADII.
3. CONCRETE SHALL BE CLASS 520-C-3250, CURE WITH WHITE PIGMENTED CURING COMPOUND.
4. 18" MOISTURE PENETRATION REQUIRED PRIOR TO PLACING CONCRETE IN SIDEWALK AREA (NON-EXPANSIVE SOIL AS DETERMINED BY SOILS TEST ARE EXEMPT AND REQUIRE ONLY SURFACE WETTING.)
5. PARKWAY FROM CURB TO PROPERTY LINE TO BE BROUGHT TO GRADE BY CONTRACTOR BEFORE FINAL APPROVAL.
6. SIDEWALKS SHALL BE FORMED IN SUCH A MANNER AS TO MAINTAIN 48" MINIMUM OF UNOBSTRUCTED PEDESTRIAN WAY AT ALL LOCATIONS, INCLUDING BUT NOT LIMITED TO ELECTROLIERS, POWER POLES, AND FIRE HYDRANTS.

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
	<i>Ken A. Samuels</i>	08/31/2009	NON-CONTINGUOUS SIDEWALK	
	CITY ENGINEER	DATE	NO. 211	

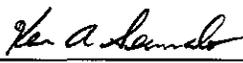


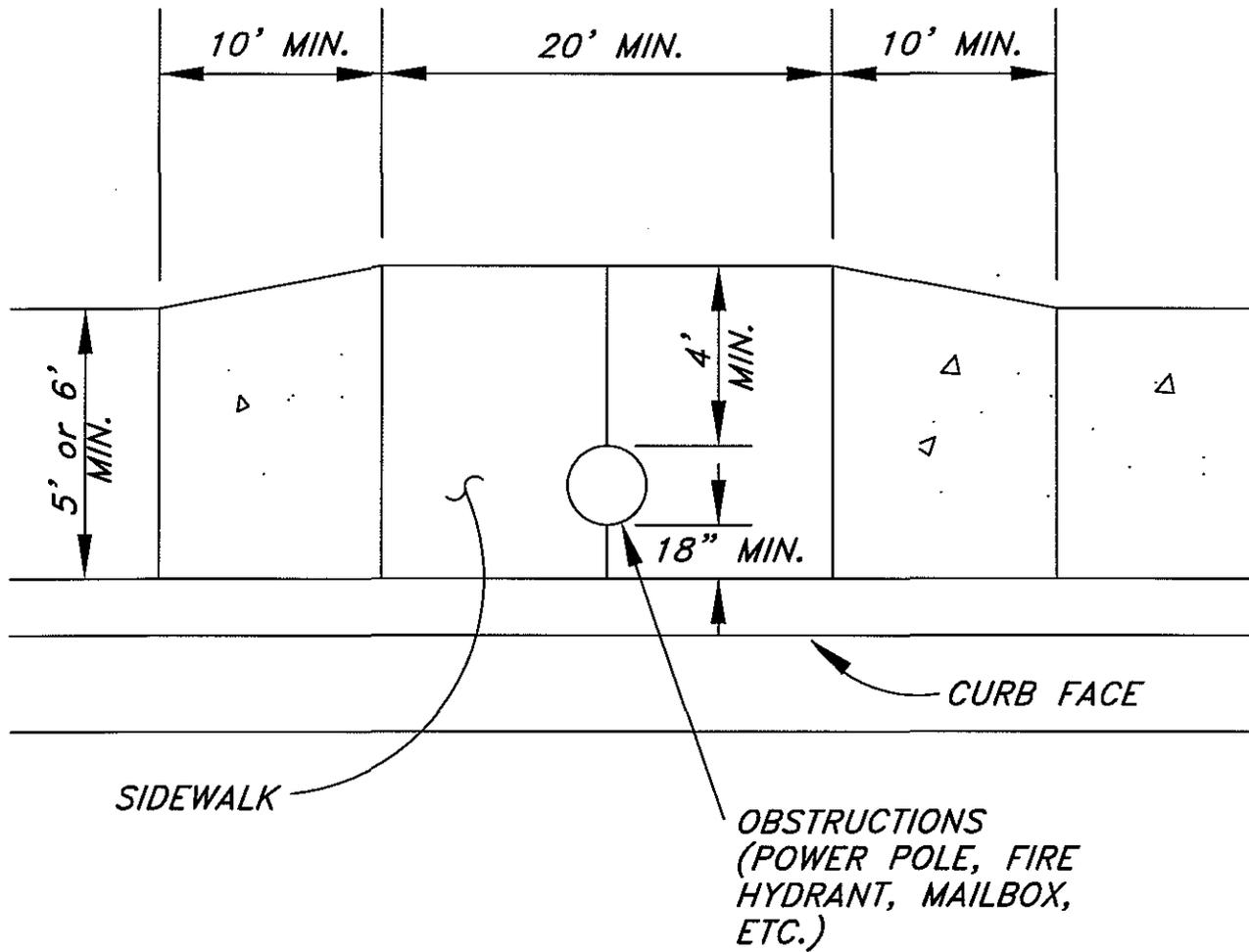
20' MAX.
ADJACENT
TO CURB
WHERE
REQUIRED

**SIDEWALK SHALL MEANDER AS DETERMINED
BY THE CITY ENGINEER**

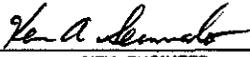
NOTES:

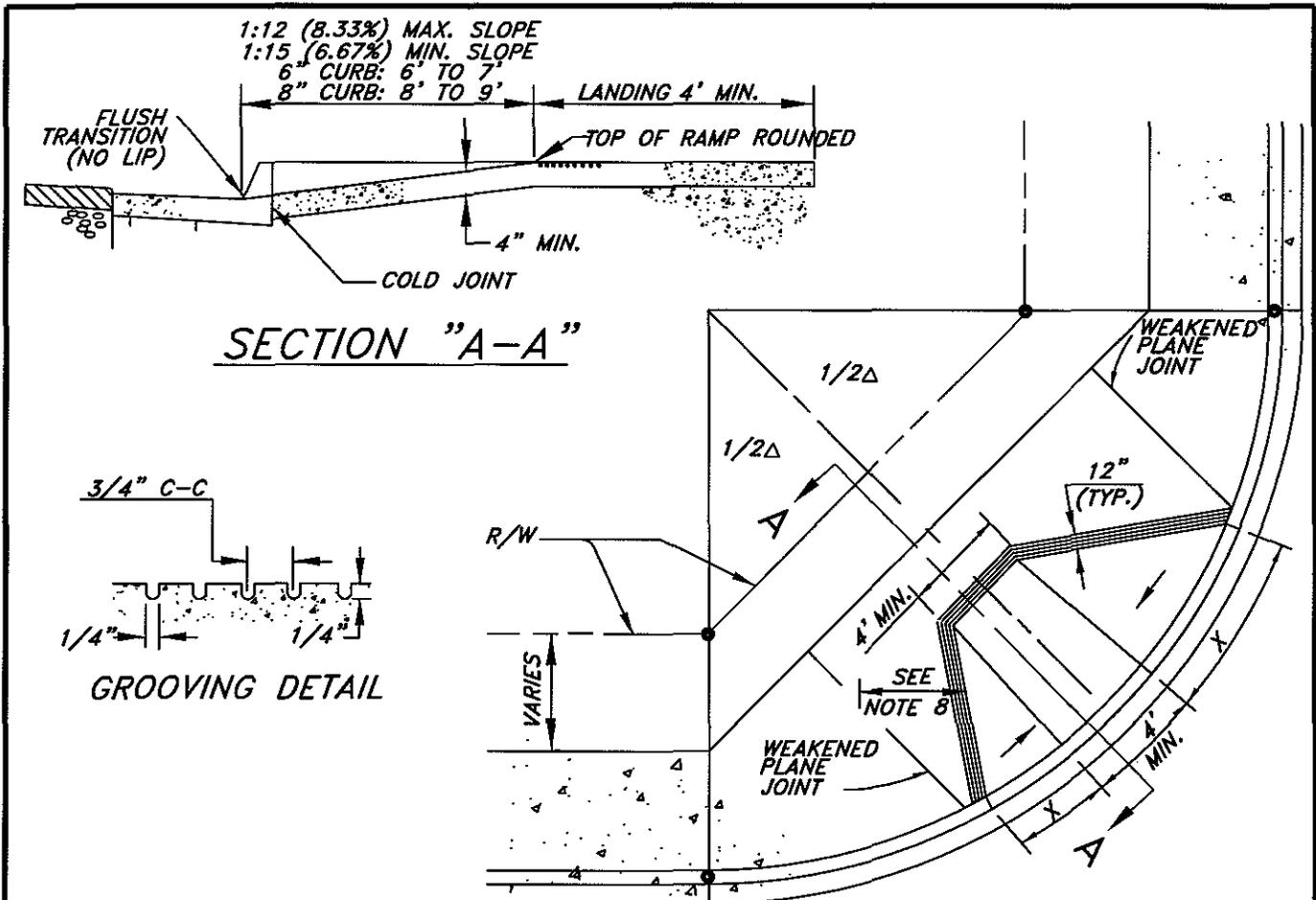
1. THICKNESS OF SIDEWALK SHALL BE 4" EXCEPT IN DRIVEWAY APRONS WHERE 6" IS REQUIRED FOR RESIDENTIAL DRIVEWAYS AND 8" IS REQUIRED FOR COMMERCIAL DRIVEWAYS.
2. SIDEWALK SHALL HAVE 1/2" PREMOLDED EXPANSION JOINTS AND 1-1/2" DEEP WEAKENED PLANE JOINTS AT INTERVALS SHOWN HEREON. JOINTS SHALL HAVE EDGES WITH 1/8" RADII.
3. CONCRETE SHALL BE CLASS 520-C-2500, CURED WITH WHITE PIGMENT CURING COMPOUND
4. 18" MOISTURE PENETRATION REQUIRED PRIOR TO PLACING CONCRETE IN SIDEWALK AREA (NON-EXPANSIVE SOIL AS DETERMINED BY SOILS TEST ARE EXEMPT AND REQUIRE ONLY SURFACE WETTING.)
5. PARKWAY FROM CURB TO PROPERTY LINE TO BE BROUGHT TO GRADE BY CONTRACTOR BEFORE FINAL APPROVAL.
6. SIDEWALKS SHALL BE FORMED IN SUCH A MANNER AS TO MAINTAIN 48" MINIMUM OF UNOBSTRUCTED PEDESTRIAN WAY AT ALL LOCATIONS, INCLUDING BUT NOT LIMITED TO ELECTROLIERS, POWER POLES, AND FIRE HYDRANTS.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009	MEANDERING SIDEWALK NO. 212
				DATE	



SIDEWALK SHALL BE WIDENED TO MINIMUM 5' OR 6' CLEARANCE FOR A MINIMUM LENGTH OF 10'.

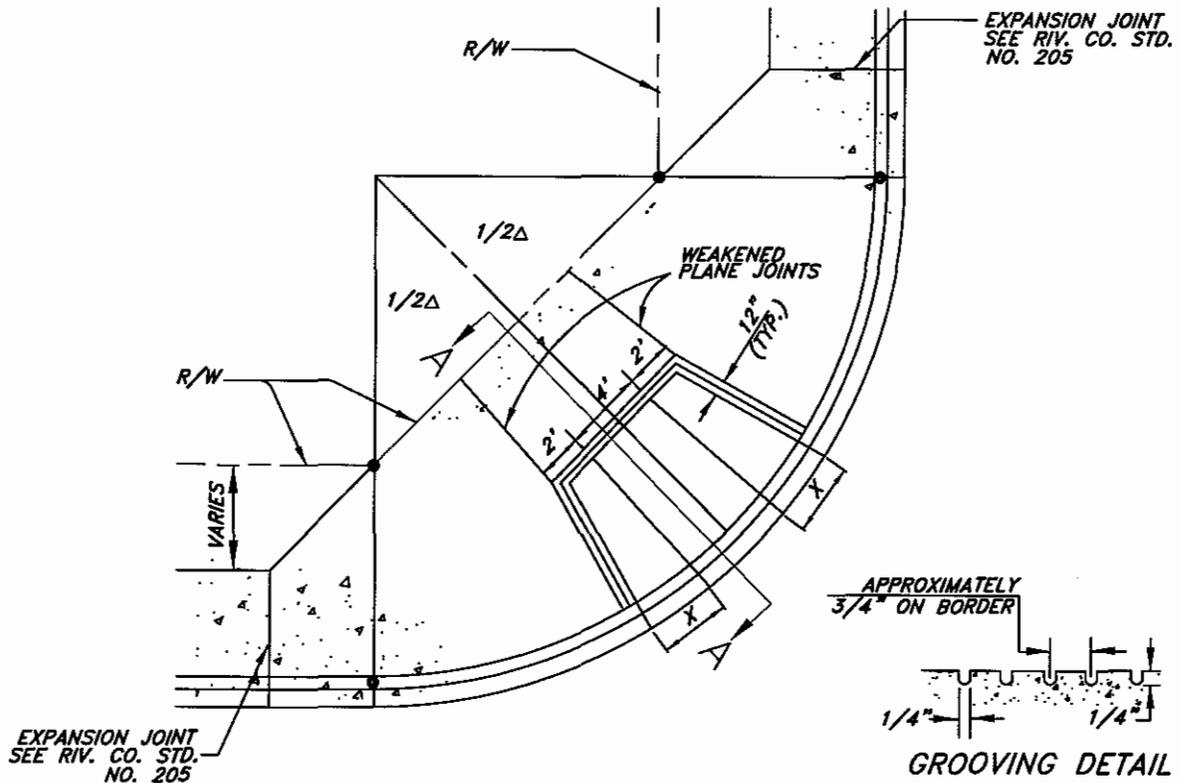
REVISION DATE APPROVED		ENGINEERING DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
APPROVED BY  CITY ENGINEER		DATE 08/31/2009		



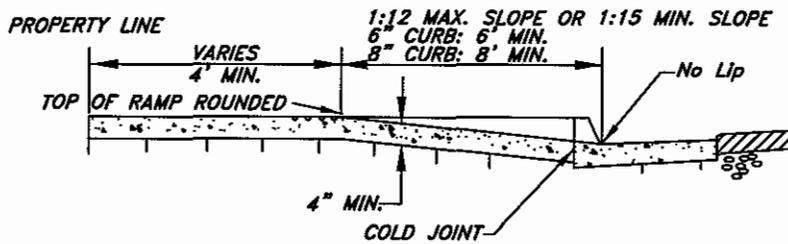
NOTES:

- 1.) ALL ACCESS RAMPS SHALL BE CONSTRUCTED TO THE MOST CURRENT REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS/CALIFORNIA CODE OF REGULATIONS TITLE 24-ACCESSIBILITY REGULATIONS. ADJUSTMENTS SHALL BE MADE IN THE FIELD TO ACHIEVE RAMP CONDITIONS.
- 2.) CONCRETE SHALL BE CLASS 520-C-2500, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 3.) A LEVEL 4' MINIMUM DEPTH LANDING IS REQUIRED AT THE TOP OF THE RAMP OVER THE ENTIRE RAMP WIDTH. CROSS SLOPE OF LANDING MAY NOT EXCEED 1:50 (2.0%).
- 4.) X SHALL HAVE A MAXIMUM SLOPE OF 1:10 (10%) (6" CURB X=5', 8" CURB X=7"-8"). IF THE LANDING IS LESS THAN 4', X SHALL HAVE A MAXIMUM SLOPE OF 1:12 (8.33%).
- 5.) GROOVED BORDER SHALL BE 12" WIDE ALONG THE TOP AND SIDES OF THE RAMP AT THE LEVEL SURFACE OF THE SIDEWALK. OMIT GROOVES ADJACENT TO NON-PAVED AREAS.
- 6.) RAMP SURFACE AND FLARED SIDES SHALL BE SLIP-RESISTANT AND SHALL BE OF CONTRASTING FINISH FROM ADJACENT SIDEWALK (MEDIUM BROOM FINISH OR EQUIVALENT).
- 7.) SEE STANDARD PLAN 411 FOR CROSSWALK DETAIL.
- 8.) THE SLOPES OF THE ROAD, GUTTER, OR ACCESSIBLE ROUTE ADJOINING THE CURB RAMP SHALL NOT EXCEED 1:20 (5%) WITHIN 4' OF THE TOP AND BOTTOM OF THE RAMP.
- 9.) DIMENSIONS SHOWN FOR SLOPING PORTIONS OF RAMP MAY VARY DUE TO FIELD CONDITIONS.

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE APPROVED			PREPARED BY PUBLIC WORKS	
	APPROVED BY		ACCESS RAMP:	
	<i>[Signature]</i>	08/31/2009	TYPE I	
	CITY ENGINEER	DATE	NO. 214A	
			1 OF 3	



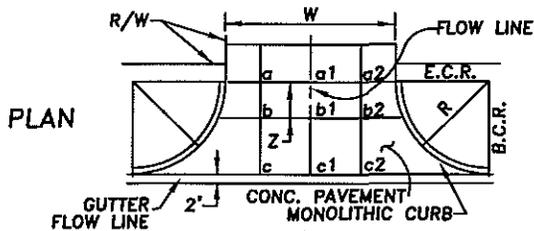
SECTION "A-A"



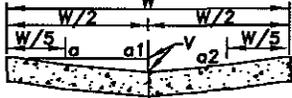
NOTES:

- 1.) CONCRETE SHALL BE CLASS 520-C-2500, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ADJUSTMENTS SHALL BE MADE IN THE FIELD AS NECESSARY TO ACHIEVE RAMP CONDITIONS.
- 3.) A LEVEL 4' MINIMUM DEPTH LANDING IS REQUIRED AT THE TOP OF THE RAMP OVER THE ENTIRE RAMP WIDTH. IF NOT POSSIBLE, SEE NOTE 4 BELOW.
- 4.) X SHALL HAVE A MAXIMUM SLOPE OF 1:10 (6" CURB X=5', 8" CURB X=6'-8") IF THE LANDING IS LESS THAN 4', X SHALL BE A MAXIMUM SLOPE OF 1:12.
- 5.) BORDER 1' WIDE OF 1/4" DEEP X 1/4" WIDE GROOVES 3/4" APART ON THE LEVEL SURFACE AT THE TOP AND SIDES OF RAMP.

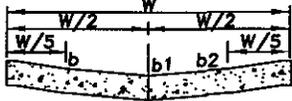
REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
			ACCESS RAMP:	
	CITY ENGINEER	08/31/2009 DATE	TYPE II	
			2 OF 3	
			NO.	
			214B	



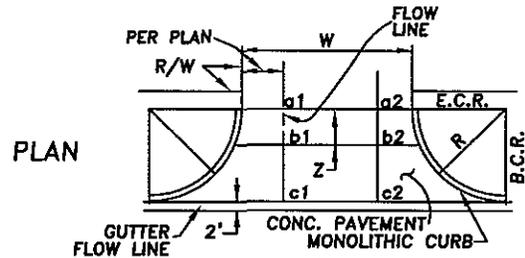
SECTION a a1 a2



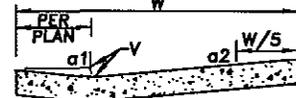
SECTION b b1 b2



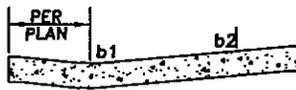
**TYPE A:
STANDARD ALLEY INTERSECTION**



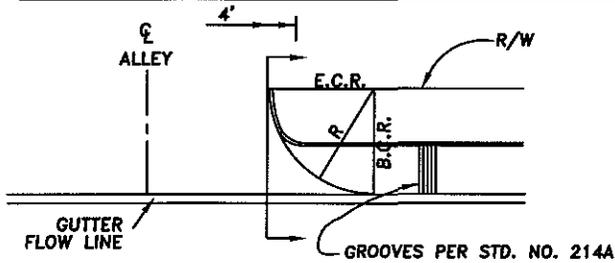
SECTION a1 a2



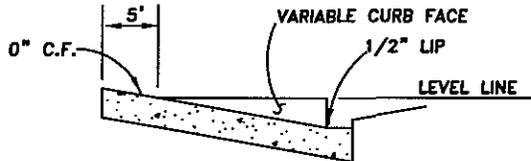
SECTION b1 b2



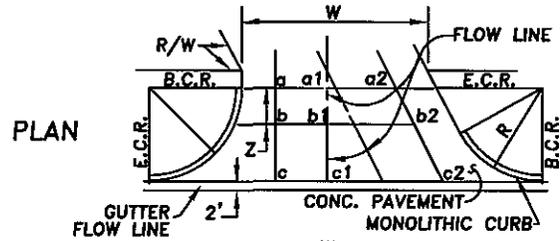
**TYPE B:
ALLEY INTERSECTION
WITH OFF-SET FLOW LINE**



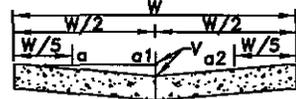
PLAN



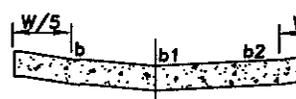
**ALLEY INTERSECTION:
HANDICAP ACCESS**



SECTION a a1 a2



SECTION b b1 b2



NOTES:

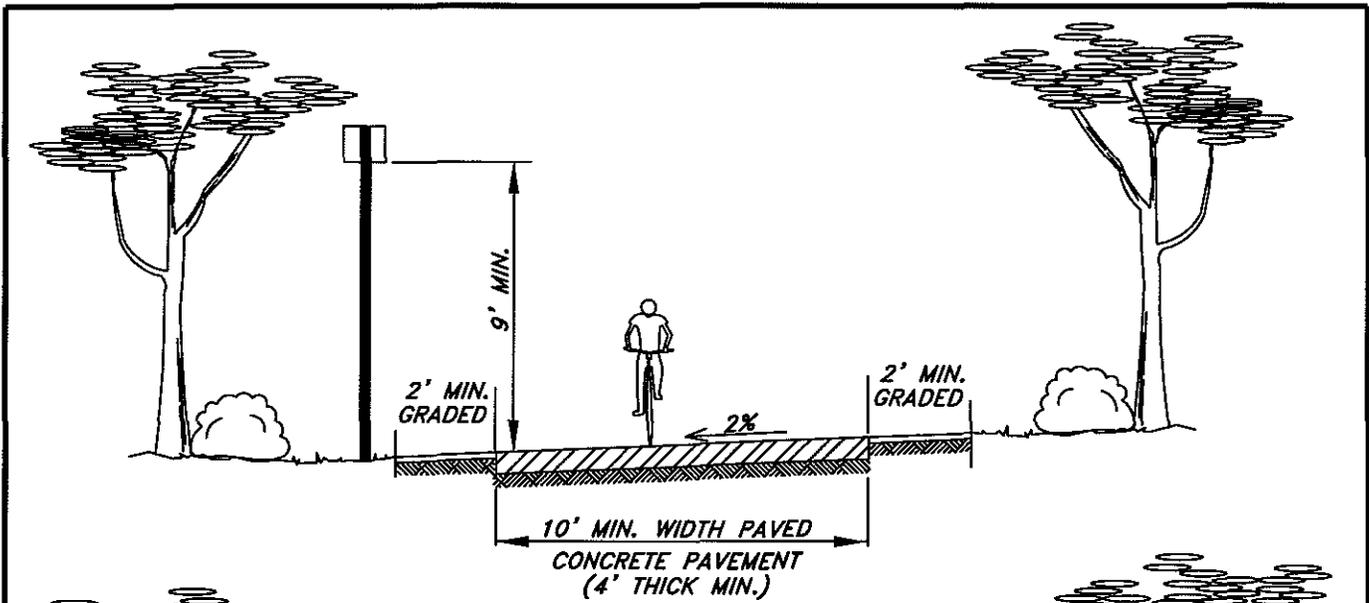
- 1.) V = THREE INCHES, UNLESS OTHERWISE SPECIFIED.
- 2.) POINTS b b1 b2 SHALL BE ON A STRAIGHT GRADE BETWEEN POINTS a a1 a2 AND POINTS c c1 c2 RESPECTIVELY.
- 3.) CONCRETE SURFACE FOR FOUR INCHES ON EACH SIDE OF A FLOW LINE SHALL BE GIVEN A STEEL TROWEL FINISH EXCEPT BETWEEN THE PROPERTY LINE AND THE GUTTER FLOW LINE.
- 4.) "Z" SHALL BE FIVE FEET UNLESS OTHERWISE SPECIFIED.
- 5.) CURB FACE SHALL BE VARIABLE BETWEEN LINES b b1 b2 AND c c1 c2.
- 6.) CURB FACE SHALL BE ZERO INCH BETWEEN LINES a a1 a2 AND b b1 b2 (SIDEWALK AREA) TO PROVIDE ACCESS FOR THE HANDICAPPED.
- 7.) CURB RETURNS SHALL HAVE A RADIUS (R) OF 12 FEET UNLESS OTHERWISE SPECIFIED. CURB RADIUS SHALL NOT EXCEED BORDER WIDTH.
- 8.) CONCRETE PAVEMENT SHALL BE 8 INCHES THICK UNLESS OTHERWISE SPECIFIED.
- 9.) ALL CONCRETE SHALL BE CLASS 560-C-3250, CURED WITH WHITE PIGMENTED CURING COMPOUND.

REVISION	ENGINEERING	DATE 07/09
DATE APPROVED	APPROVED BY	
	<i>Van A. Demato</i>	08/31/2009
	CITY ENGINEER	DATE

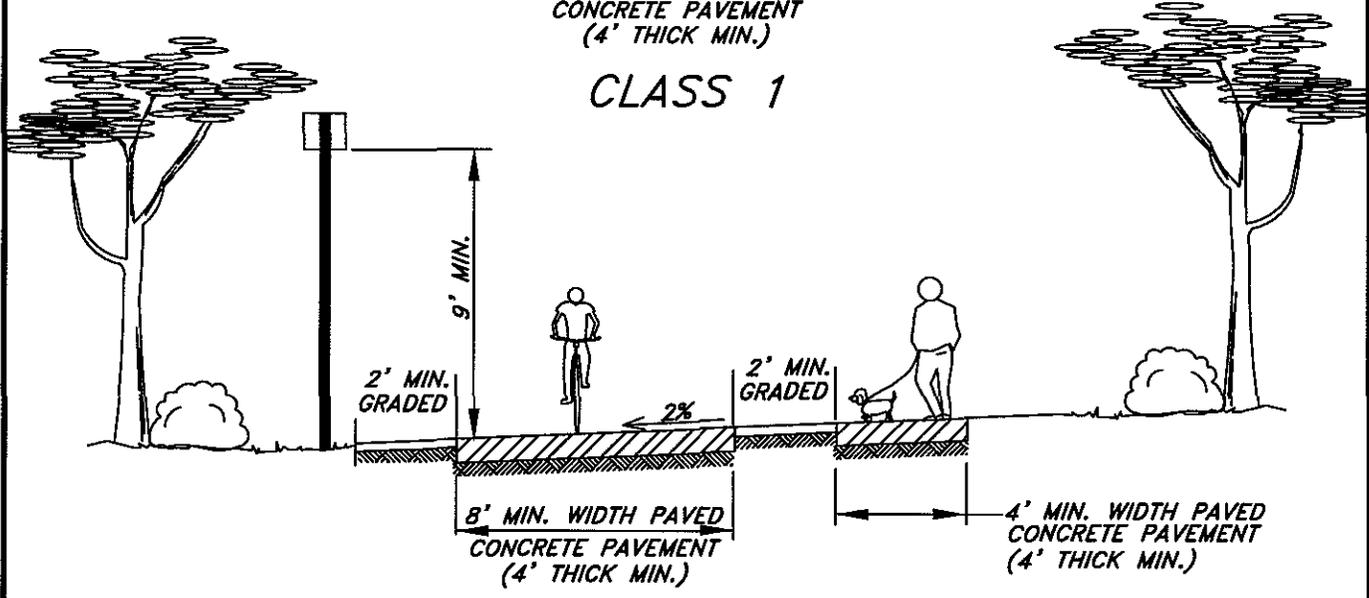
CITY OF LAKE ELSINORE
PREPARED BY PUBLIC WORKS

ALLEY INTERSECTION

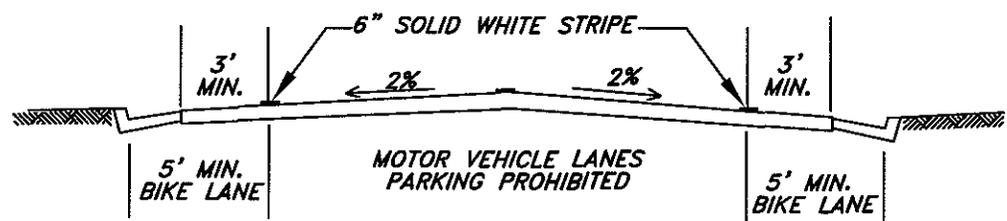
NO.
215



CLASS 1



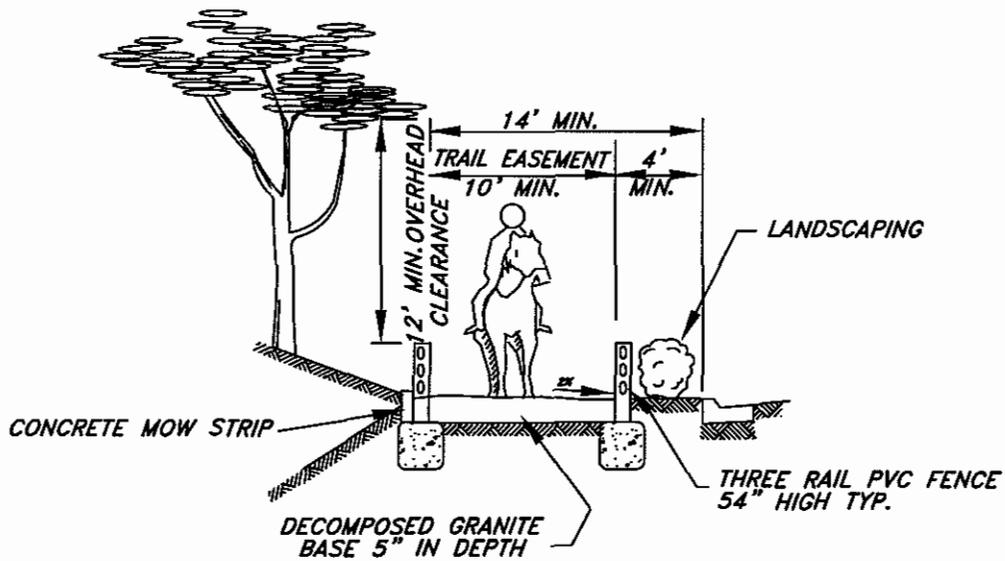
CLASS 1
(WITH PEDESTRIAN SEPARATION)



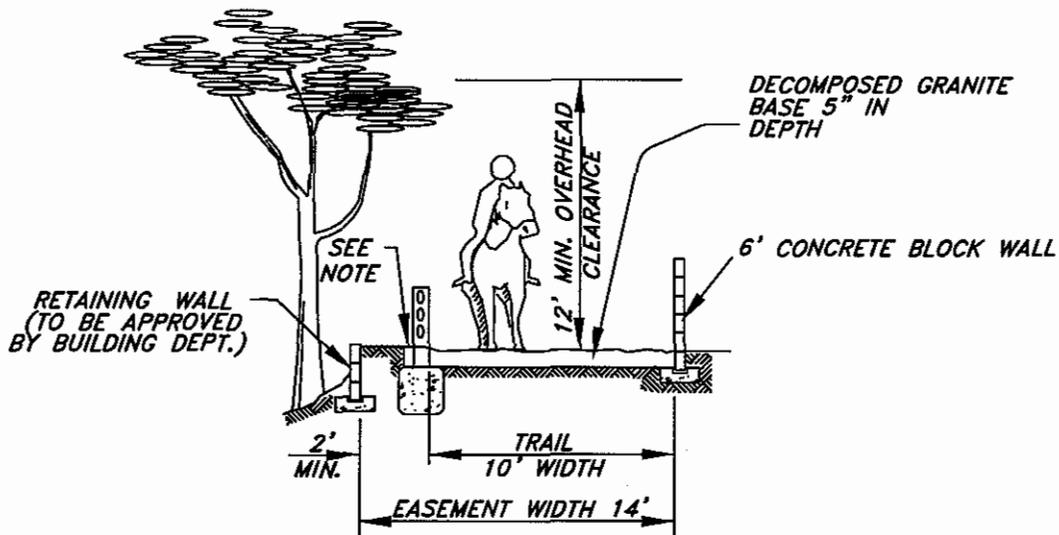
CLASS 2

NOTE: CLASS 3 BIKE ROUTES DESIGNATED WITH SIGNAGE ONLY.

<table border="1"> <tr> <th>REVISION</th> <th>DATE</th> <th>APPROVED</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		REVISION	DATE	APPROVED										<p>ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p><i>Ken A. Sanchez</i> CITY ENGINEER</p> <p>08/31/2009 DATE</p>	<p>CITY OF LAKE ELSINORE</p> <p>PREPARED BY PUBLIC WORKS</p>	<p>TWO-WAY BIKE PATH ON SEPARATE RIGHT-OF-WAY</p> <p>NO. 216</p>
REVISION	DATE	APPROVED														



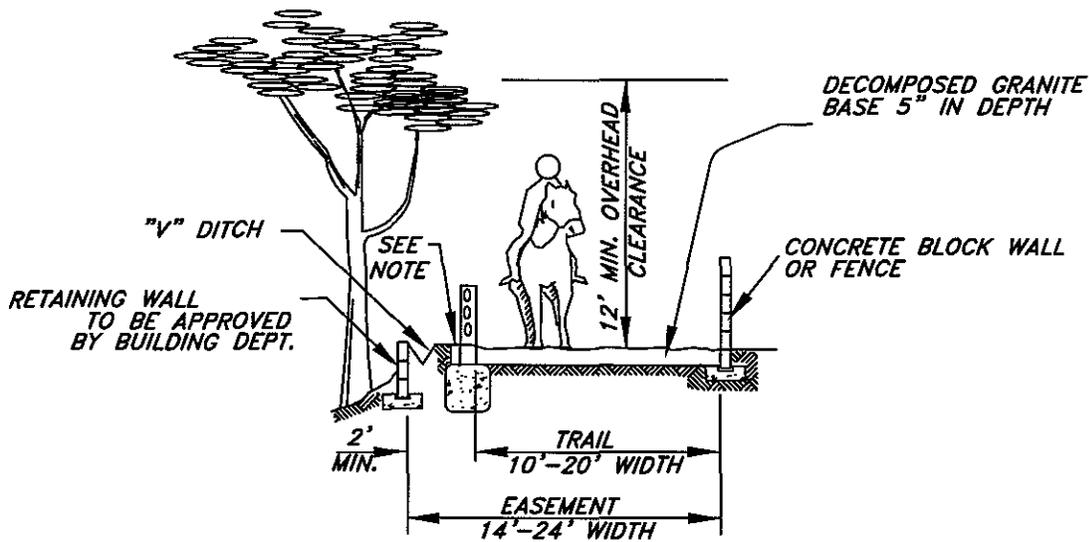
**EQUESTRIAN TRAIL EASEMENT
ADJACENT TO STREET WITHOUT SIDEWALK**



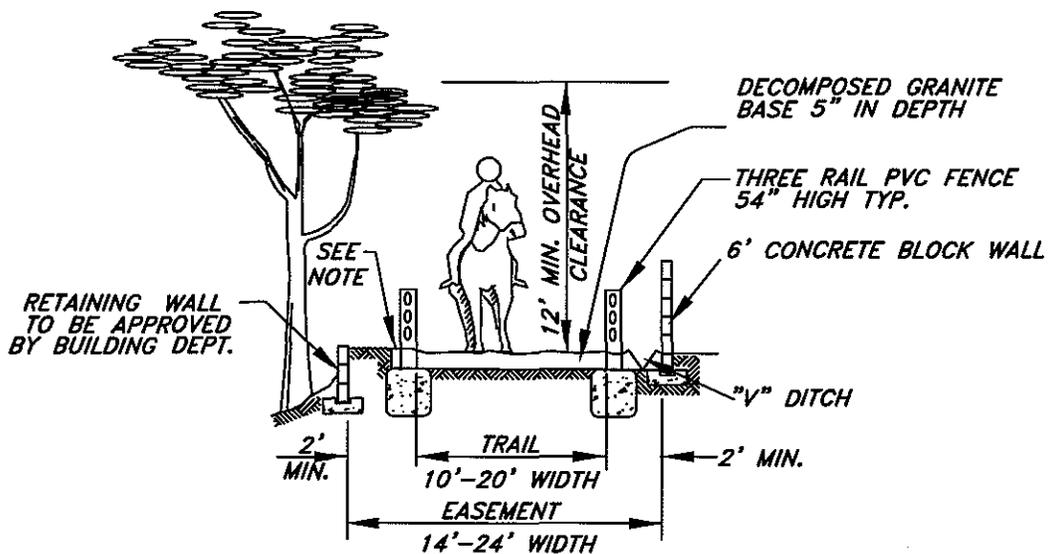
**SECONDARY EQUESTRIAN TRAIL EASEMENT
ADJACENT TO FENCE, BLOCK WALL
OR RETAINING WALL**

NOTE: REDWOOD HEADER REQUIRED WHERE LANDSCAPE IS PROVIDED.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		EQUESTRIAN TRAIL EASEMENT	2 OF 3
		08/31/2009 DATE			NO. 217B



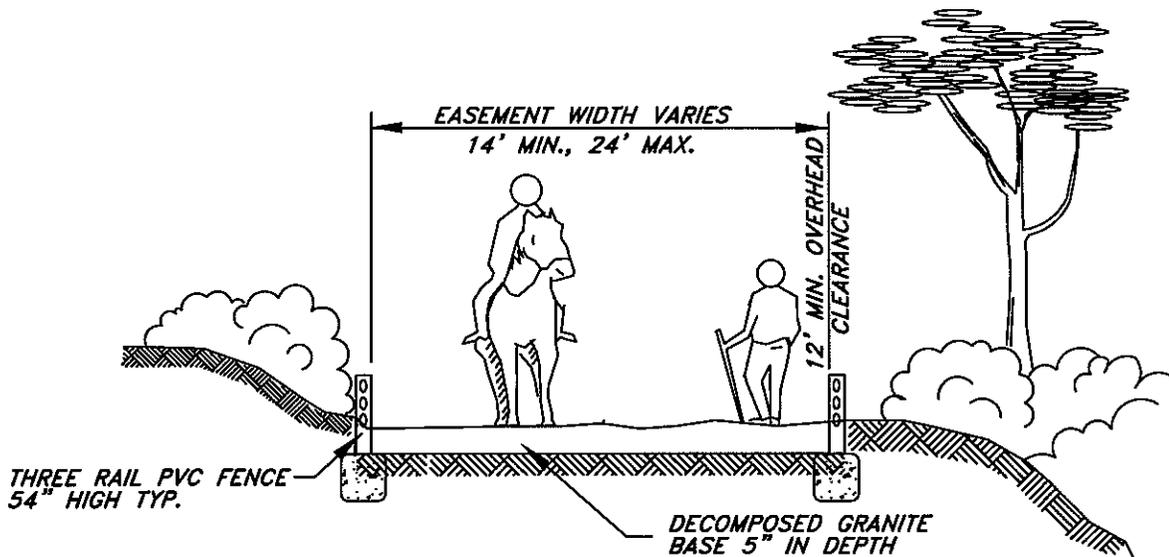
EQUESTRIAN TRAIL EASEMENT
 ADJACENT TO FENCE, BLOCK WALL
 OR RETAINING WALL



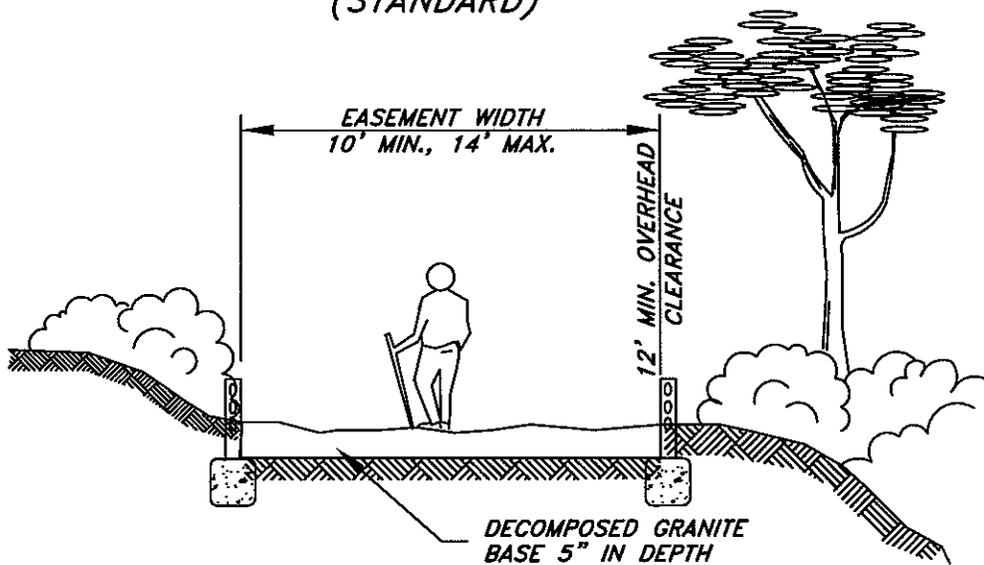
EQUESTRIAN TRAIL EASEMENT
 ADJACENT TO FENCE, BLOCK WALL
 OR RETAINING WALL

NOTE: REDWOOD HEADER REQUIRED WHERE LANDSCAPE IS PROVIDED.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		3 OF 3 NO. 217C	
		DATE 08/31/2009		EQUESTRIAN TRAIL EASEMENT	

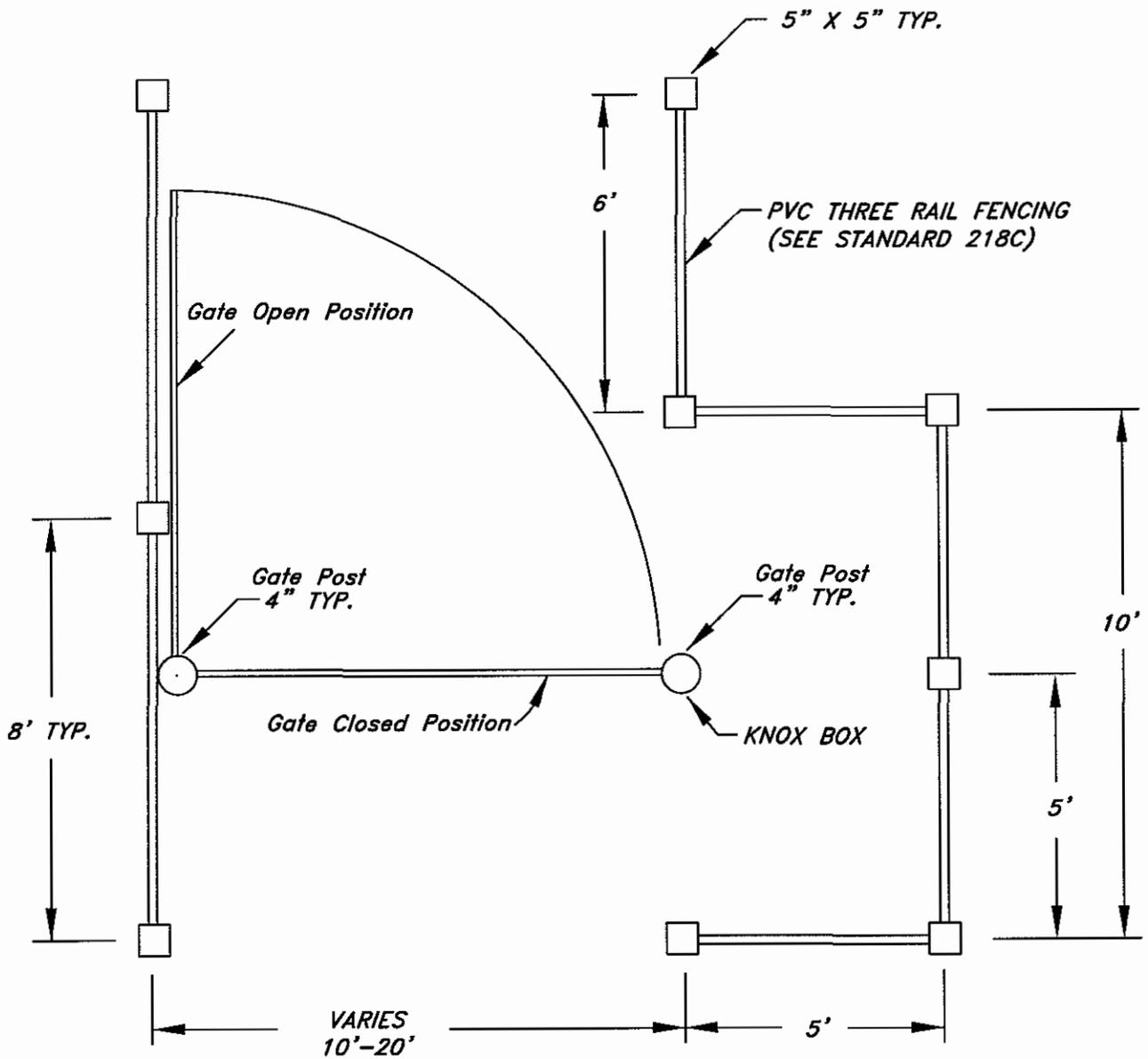


**PRIMARY RIDING AND HIKING TRAIL
(STANDARD)**



**SECONDARY RIDING AND HIKING TRAIL
(STANDARD)**

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		RIDING AND HIKING TRAILS	1 OF 6
		08/31/2009 DATE			NO. 218A



Note:
 Gate to be constructed in accordance to specifications STD 218C.
 width varies 10' - 20'.

<table border="1"> <tr> <th>REVISION</th> <th>DATE</th> <th>APPROVED</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		REVISION	DATE	APPROVED													<p>ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p><i>Karl Semalo</i> CITY ENGINEER 08/31/2009 DATE</p>	<p>CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS</p> <p>EQUESTRIAN/MULTI-USE TRAIL SPECIFICATIONS</p>	<p>2 OF 6 NO. 218B</p>
REVISION	DATE	APPROVED																	

Fencing type/brand:

The fence material shall be PVC, 3-rail routed equestrian fencing.

- PVC fence color shall be almond, unless indicated otherwise.
 - Fencing shall be installed with a finished height of 54" (top of post w/o cap).
 - Posts shall be 5" x 5" square.
 - Post footings shall be 12" diameter, 24" deep, spaced 8'0" on center where applicable. Post caps shall be installed with PVC clear solvent weld.
 - 2000 lb. minimum PSI concrete shall be poured into posthole, then the post driven into the concrete. 'Green Book' standards shall be in affect for all concrete.
 - Posts shall be installed plumb.
 - Post routing: First hole shall be 3" from top of post. Mid rail is to be spaced 11" from bottom of top rail to top of mid rail. Third rail is to be spaced 11" from bottom of mid rail to top of third rail. Third rail is to have approximately 12" spacing from bottom of third rail to finish grade. Finish grade shall be calculated to top of decomposed granite path. See drawing detail.
 - Rails shall be nominal 2" x 6" x 16' PVC.
 - Minimum trail width shall be 10'. Where Fire Department access is necessary, trail shall be a minimum of 20' wide. Trail width is defined as minimum surface area without obstructions (fence posts, 'V' ditch, etc.).
 - Equestrian fencing shall be installed on both sides of trail, unless approved by the Parks and Facilities Manager.
 - Equestrian trailheads shall be utilized when a trail terminates at a public street or highway, where specified. The rough dimensions for equestrian switchbacks are 5' x 10'. See drawing details. A 'STOP' sign shall be installed at all locations that exit onto a roadway. Sign and post specifications are to adhere to the City's Standard Plans.
 - The trail and fencing shall connect with adjacent trails.
- Gates are required in locations where fire and/or maintenance access is designated. Gates for openings shall be constructed of hot dipped galvanized steel pipe. Single gate width is not to exceed 10'. Gate openings in excess of 10' shall be equal sized double gates with a sleeved removable post 2-3/8" diameter. The gates shall be equipped with a latching mechanism and provisions made so the center post cannot be removed when the gates are latched. Additionally, the center post is to have a domed cap installed. All gates are to be equipped with a heavy-duty malleable iron fork latch assembly, heavy-duty chain, and Knox box. These items are to be welded to frame. Hinged posts shall be 4" SS-40 or schedule 40 pipe.

<table border="1"> <tr> <th colspan="2">REVISION</th> </tr> <tr> <th>DATE</th> <th>APPROVED</th> </tr> <tr> <td> </td> <td> </td> </tr> </table>		REVISION		DATE	APPROVED									<p align="center">ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p align="center"><i>Ken A. Sambo</i> 08/31/2009 CITY ENGINEER DATE</p>	<p align="center">CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS</p>	<p align="center">3 OF 6 NO. 218C</p>
REVISION																
DATE	APPROVED															
		<p align="center">EQUESTRIAN/MULTI-USE TRAIL SPECIFICATIONS</p>														

Latch posts shall be 2-3/8" SS-40 or schedule 40 pipe. All gate posts, with the exception of the center post shall be filled with concrete and dome topped. Gate frames shall be constructed of 1-5/8", SS-40 galvanized pipe. Frames shall have mitered corners and the center rail shall be cut with a radius to fit into frame. Frames shall be attached to posts with two (2) 180-degree industrial hinges, bolted and tack-welded to frame and post. The rail spacing on the gates shall match the rail spacing on the fence. 2" x 6", #1 Douglas fir shall be attached to the hinge posts, gate frame and rails with 'U' bolts counter sunk into the wood, filled, and finished flat. The wood shall be pre-primed (all sides before installation) and finished with 2 coats of semi-gloss acrylic latex paint. Touch-up priming and painting shall be performed after installation where applicable. The primer shall be 'Vista' brand 'Uniprime'. The paint shall be 'Vista' brand 'Carefree Semi-Gloss', #60 "Indian White" color. Gate design alternates must be approved by the Parks and Facilities Manager or designee before installation.

Trail Surface:

- All plan details are required to show cross sections of the trail. The trail cross sections must reflect and indicate the various grade changes along the length of the trail. Trails shall not exceed a 10% grade in any area and have a 2% cross slope. The Parks and Facilities Manager shall approve any grade changes in writing before plans are approved and construction commences. All landings shall be gradually incorporated into the grade, in order to allow large vehicles easy transition. All details and grades for the trail shall be reviewed and approved by the Parks and Facilities Manager prior to any trail construction.

- Decomposed granite (DG) shall be the material utilized for the trail surface. The D.G. specification is '3/8 California Gold with Stabilizer', installed at 4" – 6" thick compacted depth. The Decomposed Granite shall conform to Greenbook Standards 400-2.3, 400-2.3.1, 400-2.3.2, and 4002.3.3. The Sieve Analysis shall conform to ASTM C 136 and the Sand Equivalent shall conform to ASTM D 2419. Compaction shall be obtained through a combination of water and heavy equipment roller. A sample must be submitted to the Parks and Facilities Manager or designee for approval before installation. Decomposed Granite available from: Gail Materials, Corona, California.

- Where trail is adjacent and level to landscaped areas, the decomposed granite shall be confined in trail by the use of 2" thick redwood header, staked at a minimum spacing of 4'.

- Where trail boundaries an upslope, down slope, or is otherwise indicated, concrete shall be required in place of redwood header. The specification for concrete border is 4"- wide x 6" - 12" deep, 2,500 lb. PSI, 5" slump ('Green Book' 500-C-2500), with #3 rebar reinforcement.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		EQUESTRIAN/MULTI-USE TRAIL SPECIFICATIONS	
			DATE 08/31/2009		
		CITY ENGINEER		NO. 218D	

Concrete:

- All concrete shall be in accordance to "Greenbook" Standard Specification For Public Works Construction, Section 201, unless otherwise noted. Copies of all load tickets are required to be submitted to the Parks Division weekly.
- All concrete for 'V' or brow ditches, catch basins, swales, retaining walls, channels, drive approaches, and other flatwork shall be integrally mixed with Davis Colors concentrated pigments at the rate specified by the manufacturer. The color shall be "Omaha Tan". Finishes shall be per plan. Colored concrete shall be cured with Davis W-1000 Clear spray-on membrane. Any requested color deviances require a color chart submittal, product specification, and a finished sample of the product submitted to the Parks and Facilities Manager for written approval prior to any trail construction.
- "V" or brow ditch shall be separated from the trail by PVC fencing.
- Concrete drive approaches to trails shall be constructed 6"-thick, 3250 PSI, 4" slump ('Green Book' 560-C-3250), with #4 rebar tied 12" O.C. The finish shall be rough. All joints shall be deep trowel.

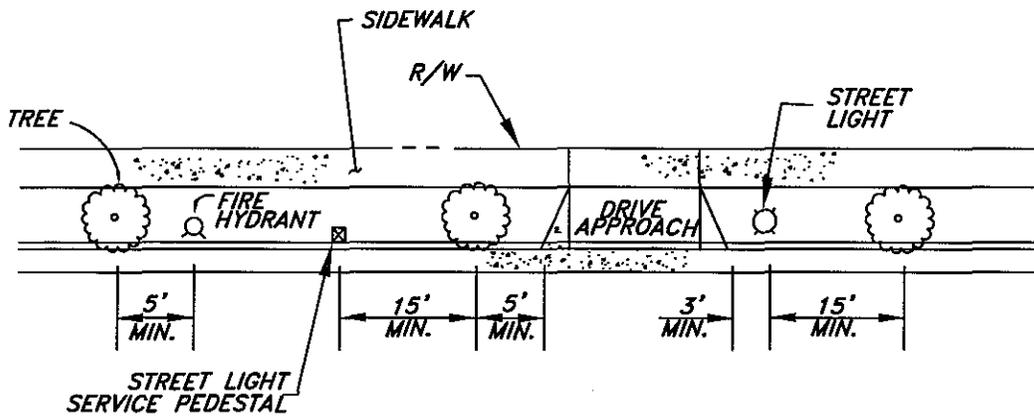
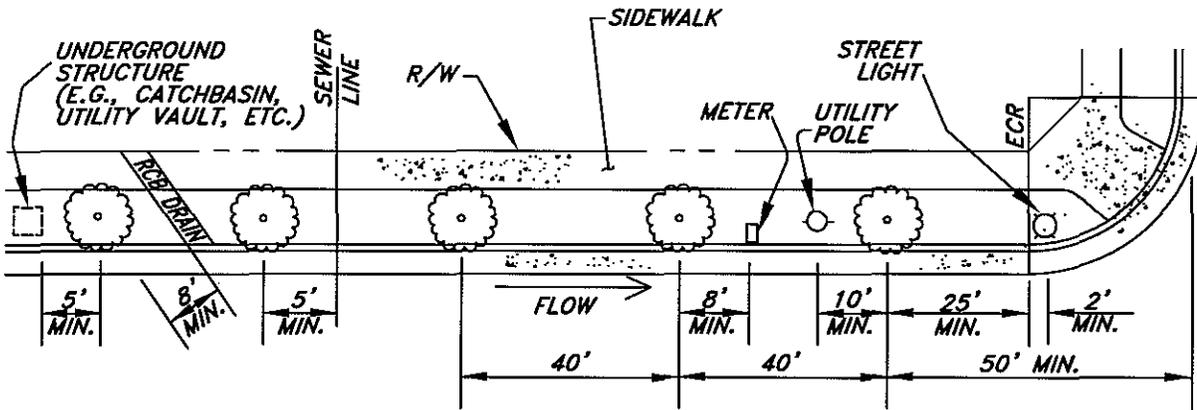
Masonry:

- The side of the trail that is adjacent to residences shall contain fencing constructed of concrete block or concrete block/ornamental iron with a minimum height of 72". The concrete block color shall be Angelus #201 or equal. The concrete block design and color shall be approved by the City's Planning Division and the Parks and Facilities Division.
- All masonry adjacent to trails and their entrances shall be graffiti coated with 'Vitrocem Hi-Build Anti Graffiti Glazed Coatings', Manufactured by Bithel Inc @(800) 277-1676. Follow manufacturers directions for application. Any requested product deviances require a product specification sheet and a finished sample of the product. They shall be submitted to the Parks and Facilities Manager for written approval prior to any trail construction.

Drawings and Inspections:

- All construction drawings must be submitted to the Parks and Facilities Manager and approved before construction begins.
- All changes shall be "Redlined" and approved by the Parks and Facilities Manager and the architect before they are made.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE <i>PREPARED BY PUBLIC WORKS</i>	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		5 OF 6 NO. 218E	
		08/31/2009 DATE		EQUESTRIAN/MULTI-USE TRAIL SPECIFICATIONS	



NOTES:

- 1.) DRIVE APPROACHES SHALL NOT BE LOCATED OVER SEWER OR WATER LATERALS.
- 2.) WATER METERS, FIRE HYDRANTS, AND STREET LIGHTS SHALL BE A MINIMUM OF 3' FROM DRIVE APPROACHES.
- 3.) ALTERNATE LOCATION AND SPACING MAY BE REQUIRED BY CITY ENGINEER TO PROVIDE FOR SITE CLEARANCE OR OTHER SAFETY CONCERNS.

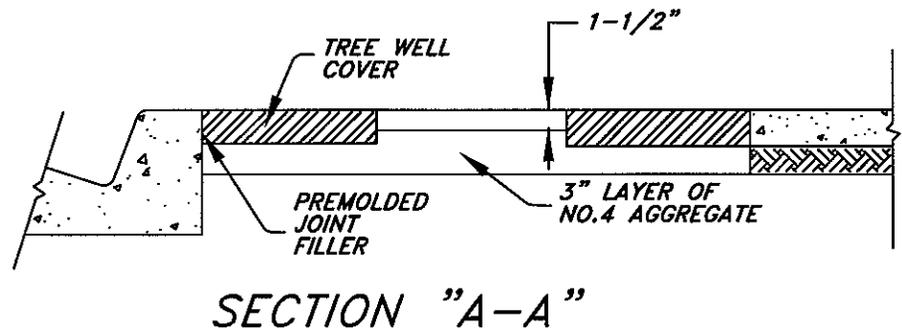
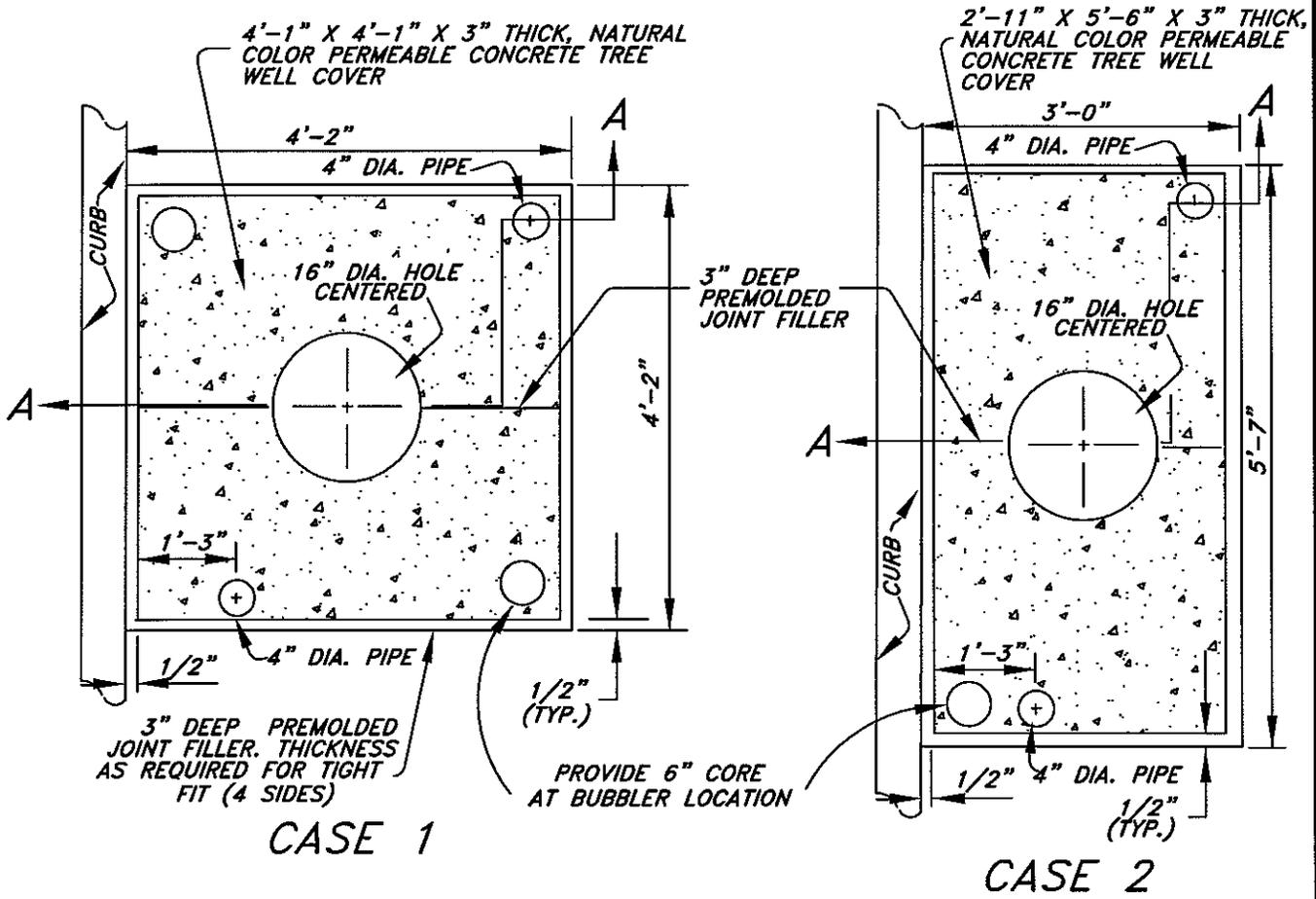
REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		<i>V. A. Sands</i>	08/31/2009
		CITY ENGINEER	DATE

CITY OF LAKE ELSINORE

PREPARED BY PUBLIC WORKS

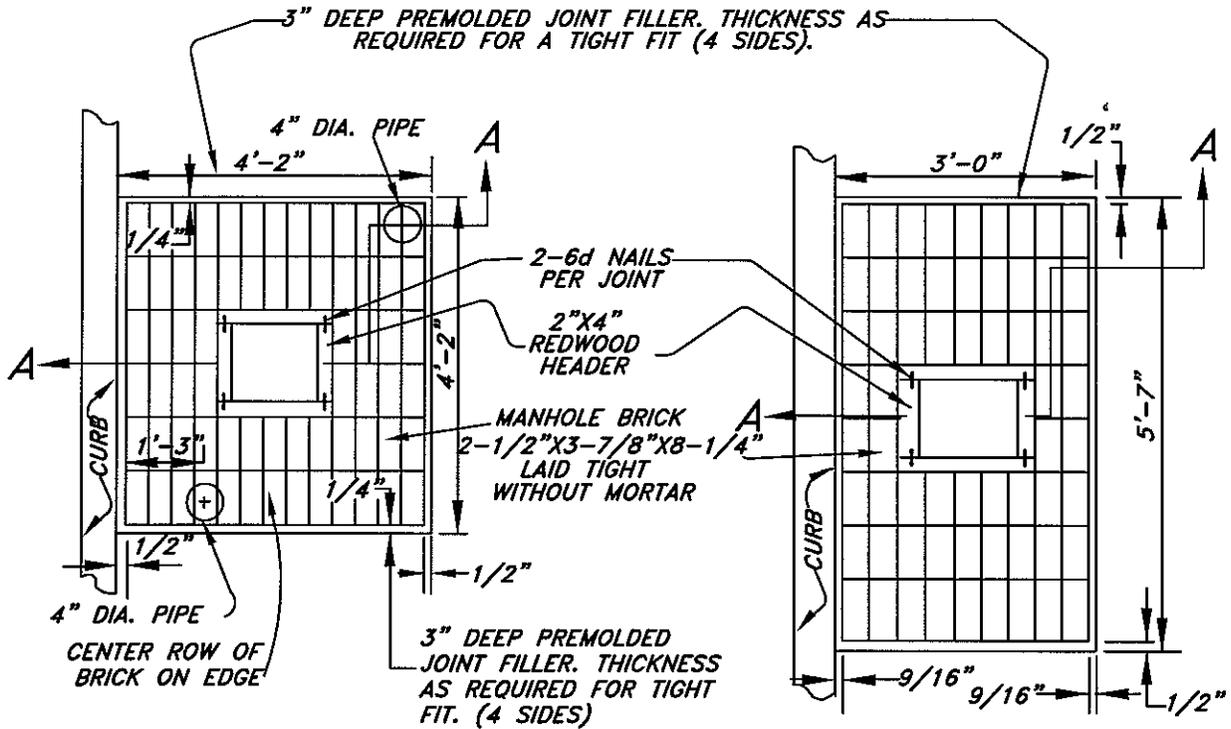
PARKWAY IMPROVEMENT SPACING

NO. 219



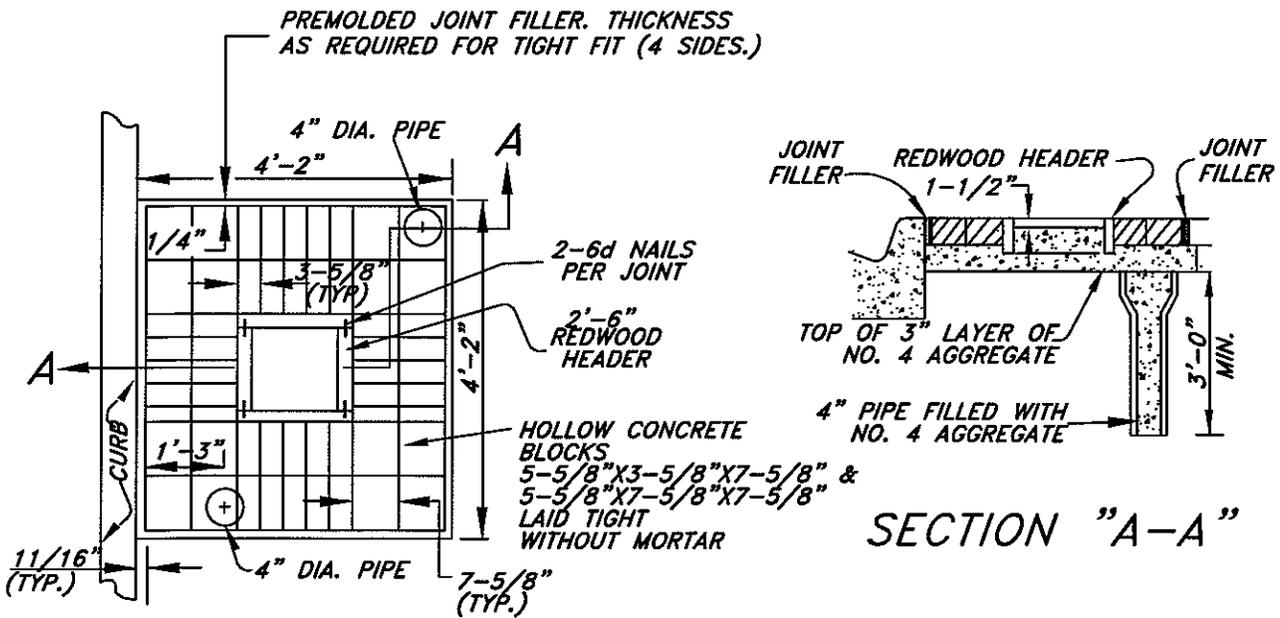
NOTE:
 NO TREES SHALL BE LOCATED WITHIN 200' OF AN INTERSECTION WITHOUT PRIOR APPROVAL OF THE TRAFFIC ENGINEER.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS
DATE	APPROVED	APPROVED BY		
		 CITY ENGINEER		1 OF 5
		08/31/2009 DATE		NO. 220A
				TREE WELL: TYPE 1



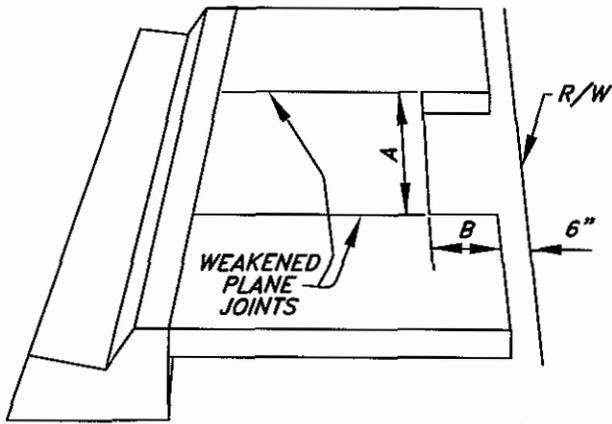
CASE 1

CASE 2

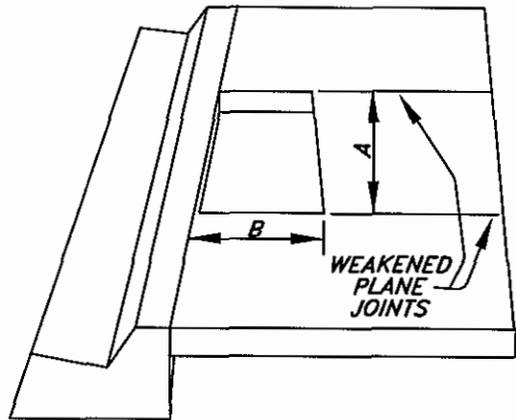


CASE 3

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		2 OF 5	
				08/31/2009 DATE	
				TREE WELL: TYPE 2	



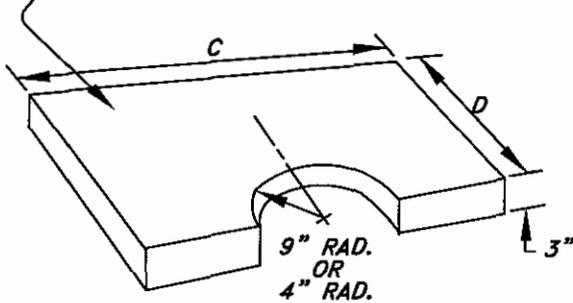
PARKWAYS LESS THAN 8'
STYLE
CASE 1: 1'-6" X 3' TREE WELL
CASE 2: 2'-4" TREE WELL



PARKWAYS 8' OR GREATER
2 COVERS REQUIRED
CASE 3: 3'-3" TREE WELL
CASE 4: 4'-4" TREE WELL

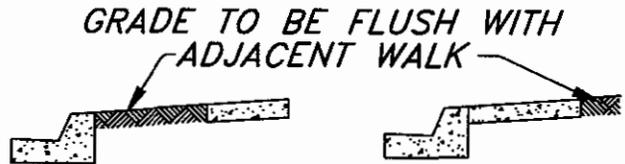
TREE WELLS

POROUS, PERMEABLE P.C.C.
 REINFORCED WITH 2-1/4" X 2-1/4"
 16 GAUGE WIRE MESH



POROUS TREE WELL COVER

CASE	A	B	C	D
1	3'-0"	1'-6"	2'-11"	1'-5 1/2"
2	4'-0"	2'-0"	3'-11"	1'-11 1/2"
3	3'-0"	3'-0"	2'-11"	1'-5 1/2"
4	4'-0"	4'-0"	3'-11"	1'-11 1/2"

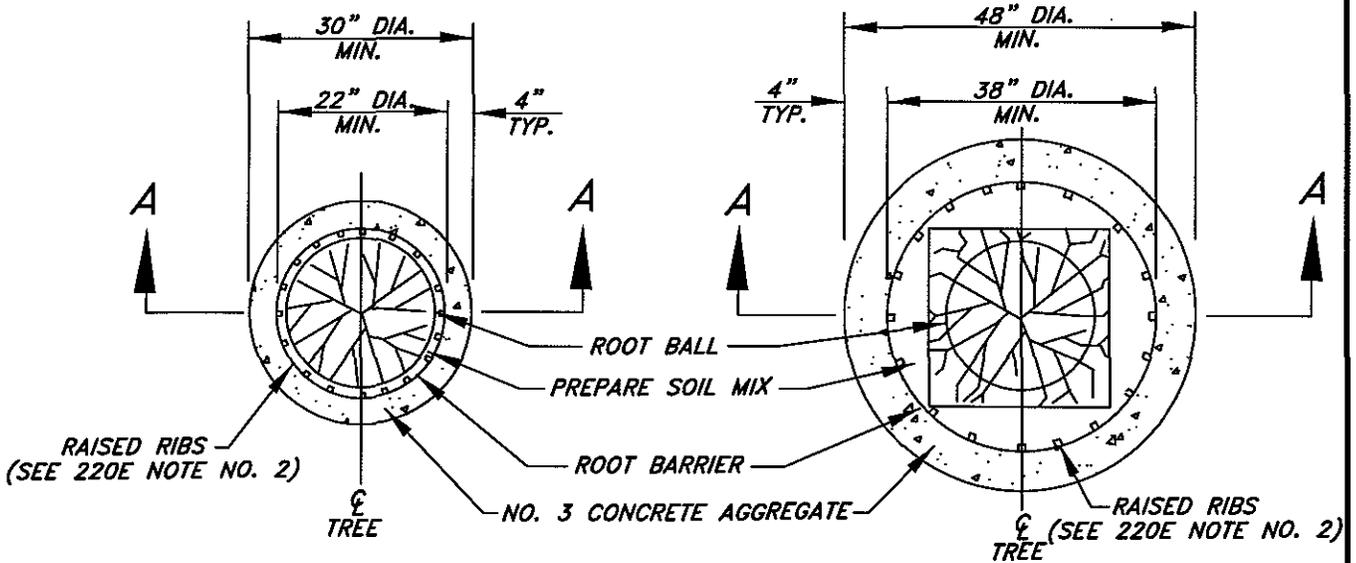


TYPICAL SECTIONS

NOTES:

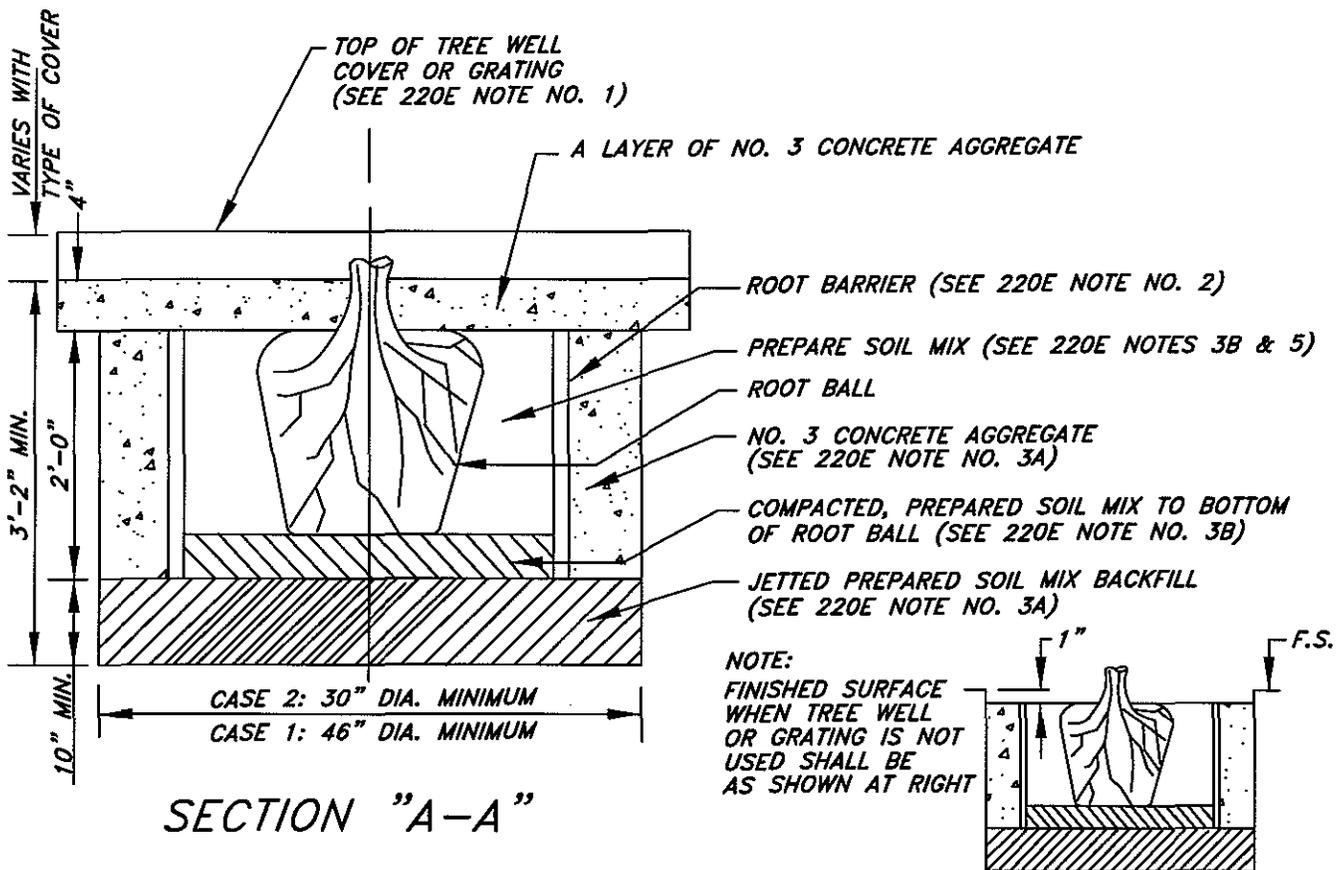
- 1.) TREE WELLS SHALL BE SPACED AS DIRECTED BY THE CITY ENGINEER OR INDICATED ON THE CONTRACT DOCUMENTS.
- 2.) LOCATION OF TREES WILL BE SUBJECT TO THE FOLLOWING CONDITIONS:
 - A. MIN. 25' FROM CURB RETURNS.
 - B. MIN. 15' FROM LIGHT STANDARDS.
 - C. MIN. 5' FROM FIRE HYDRANTS.
 - D. MIN. .5' FROM DRIVEWAYS.
- 3.) COVERS ARE TO BE COLORED BUFF USING AN ACCEPTABLE COLORING AGENT.
- 4.) TREE WELLS ARE TO BE BACKFILLED WITH CLEAN DIRT AND FLUSH WITH ADJACENT WALK UNTIL TREES ARE PLANTED.
- 5.) PARKWAYS LESS THAN 8': CASE 1-UNLESS OTHERWISE SPECIFIED. CASE 2-USE WHERE THERE IS AN EXISTING FENCE OR WALL AT THE P.L. CASE 3-UNLESS OTHERWISE SPECIFIED. CASE 4-MAY BE SPECIFIED WITH WALKS 7' OR GREATER.

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS
DATE APPROVED	APPROVED BY		
		08/31/2009	3 OF 5
	CITY ENGINEER	DATE	NO. 220C
			TREE WELL: TYPE 3



CASE 2
(15 GALLON SIZE OR LESS)

CASE 1
(BOXED TREE 24" SIZE OR LESS)



REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		<i>Paul Semels</i>	08/31/2009
		CITY ENGINEER	DATE

CITY OF LAKE ELSINORE
PREPARED BY PUBLIC WORKS

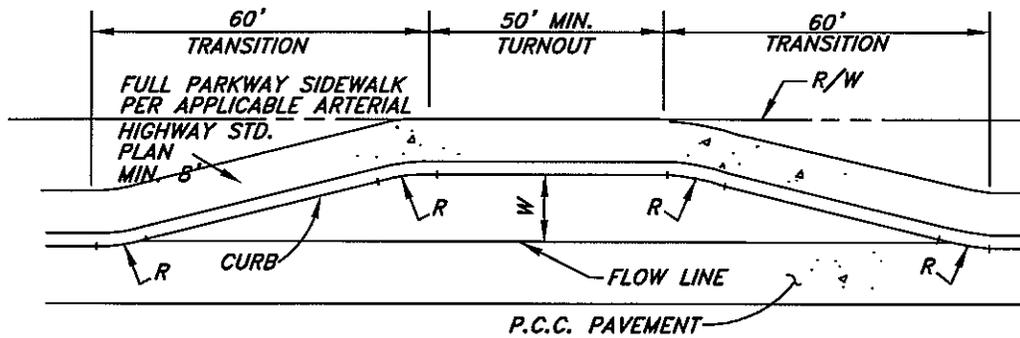
TREE WELL: TYPE 4

4 OF 5
NO. 220D

NOTES:

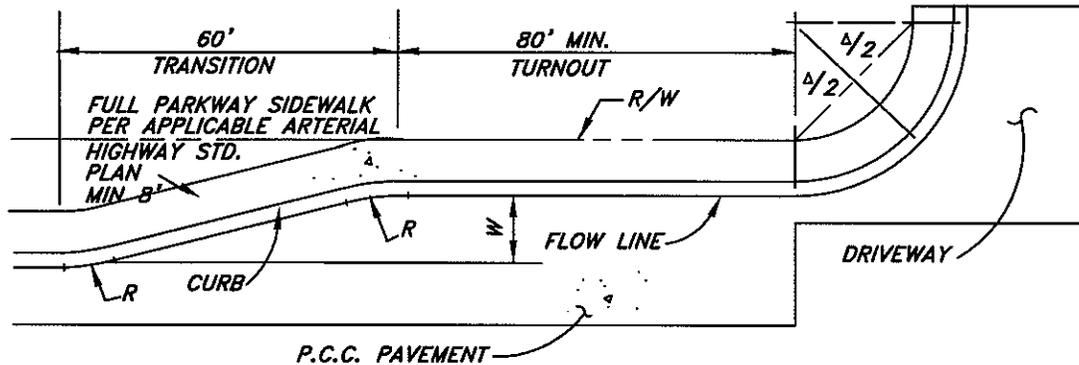
- 1.) See project plans for type of tree well cover or tree guard and grating to be used.
- 2.) Root barrier shall be fabricated from a high density and high impact plastic such as polyvinyl chloride, ABS or polyethylene and have a minimum thickness of 0.6 inch. The plastic shall have 1/2" high raised vertical ribs on the inner surface spaced not more than 6" apart. Installation per manufacturer's printed instructions.
- 3.) Planting shall conform to subsection 308-4 of the Standard Specifications for Public Works Construction, except that:
 - a. The lower 10" of the excavation shall be backfilled with prepared soil mix and jetted prior to placing the root barrier and the no. 3 concrete aggregate.
 - b. Prepared soil mix shall be placed in the planting hole and compacted to bottom of root ball elevation prior to proceeding with tree planting.
- 4.) After planting, each tree shall be watered immediately with a minimum of 20 gallons of water. Repeat the watering twice in the next 3 days, at no closer than 24 hour intervals.
- 5.) After the tree has been watered for three days, allow the soil to dry sufficiently, then tamp and grade the soil. Place and grade the layer of concrete aggregate in order to set the tree well cover or grating firmly and flush with the top of the sidewalk or curb.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
		 CITY ENGINEER		TREE WELL NOTES	
		08/31/2009 DATE		5 OF 5	NO. 220E



MID-BLOCK

W = VARIES PER STANDARD 100 OR AS REQUIRED BY CITY ENGINEER



FAR SIDE OF DRIVEWAY

NOTES:

- 1.) R = 50'.
- 2.) P.C.C. PAVEMENT THICKNESS SHALL BE DETERMINED BY THE ENGINEER. MINIMUM THICKNESS SHALL BE 8".
- 3.) BUS SHELTERS SHALL BE SET BACK FROM THE FACE OF THE CURB A MINIMUM CLEAR DISTANCE OF FOUR (4) FEET FOR PEDESTRIAN TRAVELWAY.
- 4.) CURB SHALL BE POURED MONOLITHIC WITH P.C.C. PAVEMENT.
- 5.) MODIFICATIONS OF THIS STANDARD SHALL BE REVIEWED FOR ACCEPTABILITY BY THE CITY ENGINEER.
- 6.) CONCRETE SHALL BE CLASS 560-C-3250.
- 7.) ADDITIONAL R/W MAY BE REQUIRED BY CITY ENGINEER.
- 8.) REFER TO 121(A) FOR KEY TO VARIABLES

REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		CITY ENGINEER	DATE

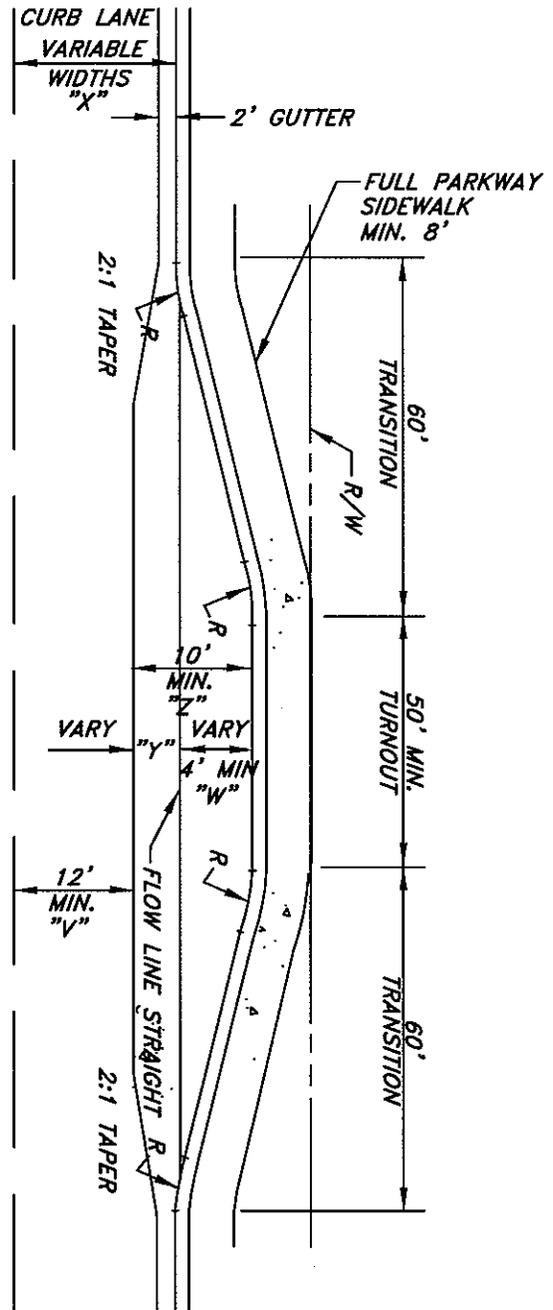
CITY OF LAKE ELSINORE

PREPARED BY PUBLIC WORKS

BUS TURNOUTS

NO.
121A

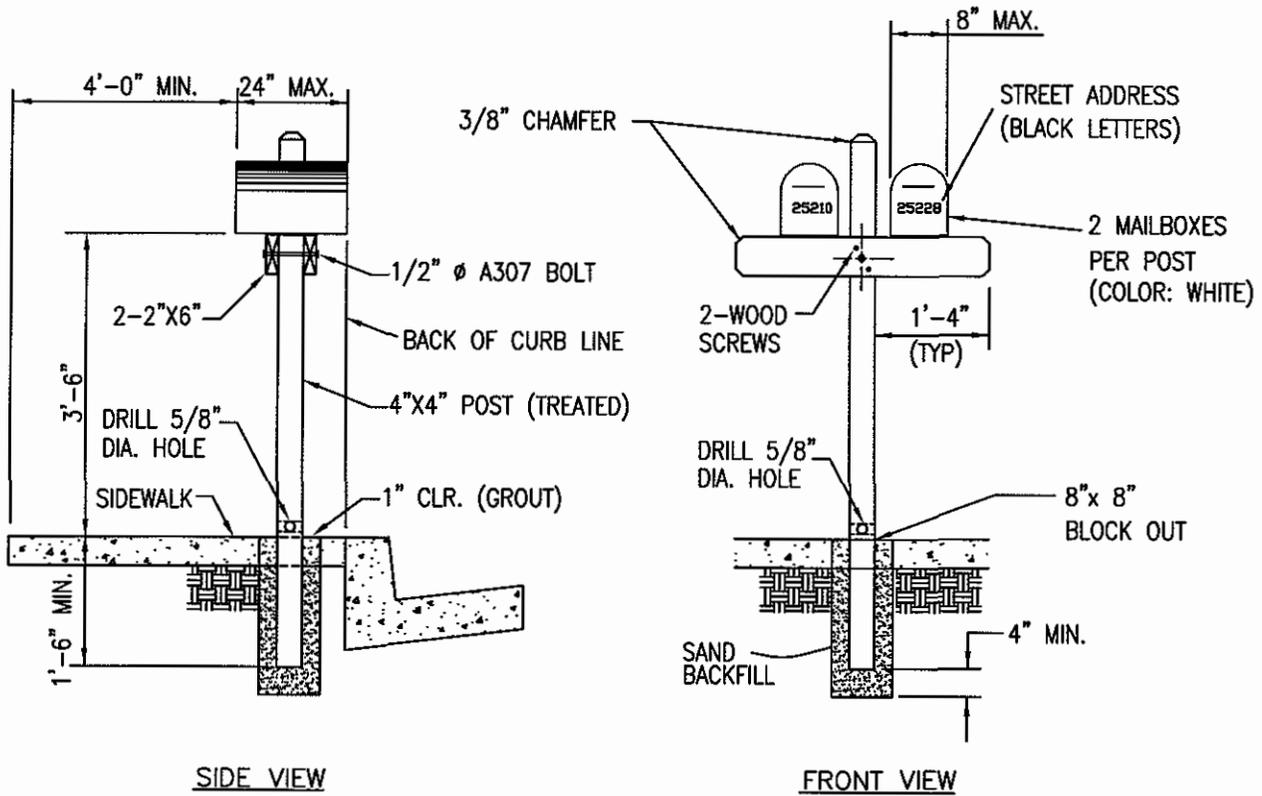
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14	2	8	10	12
15	3	7	10	12
16	4	6	10	12
17	5	5	10	12
18	6	4	10	12
19	6	4	10	13
20	6	4	10	14
21	6	4	10	15
22	6	4	10	16



NOTES:

- 1.) $R = 50'$.
- 2.) P.C.C. PAVEMENT THICKNESS SHALL BE DETERMINED BY THE ENGINEER. MINIMUM THICKNESS SHALL BE 8".
- 3.) BUS SHELTERS SHALL BE SET BACK FROM THE FACE OF THE CURB A MINIMUM CLEAR DISTANCE OF FOUR (4) FEET FOR PEDESTRIAN TRAVELWAY.
- 4.) CURB SHALL BE POURED MONOLITHIC WITH P.C.C. PAVEMENT.
5. MODIFICATIONS OF THIS STANDARD MAY BE MADE BY THE CITY ENGINEER.
- 6.) CONCRETE SHALL BE CLASS 560-C-3250.
- 7.) ADDITIONAL R/W MAY BE REQUIRED BY CITY ENGINEER.

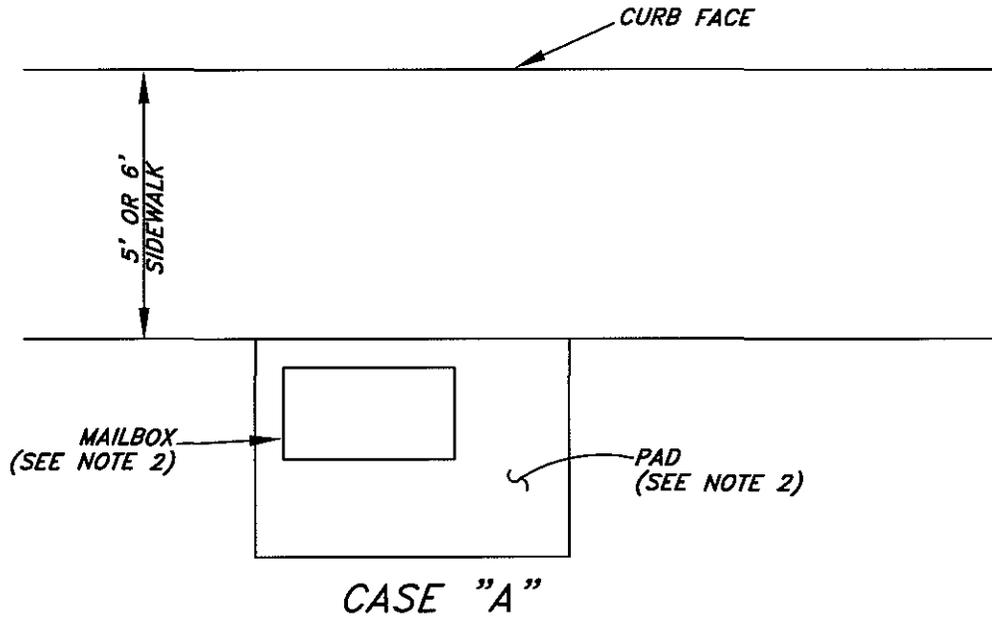
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		PREPARED BY PUBLIC WORKS	
		<i>Ken A. Lemato</i>	08/31/2009	BUS TURNOUTS	NO. 121B
		CITY ENGINEER	DATE		



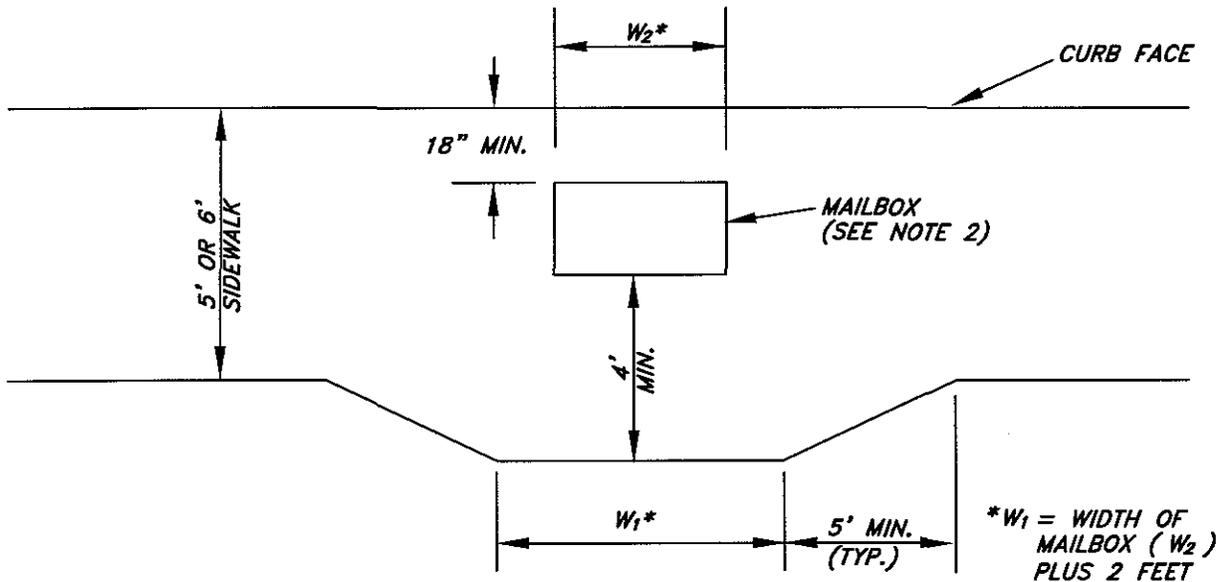
NOTE:

1. TOP AND END OPENING MAILBOXES PERMITTED PROVIDED THAT THE FACE OF MAILBOX DOES NOT EXTEND BEYOND BACK OF CURB LINE. OPENING MUST FACE STREET.

<table border="1"> <thead> <tr> <th>REVISION</th> <th>DATE</th> <th>APPROVED</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REVISION	DATE	APPROVED													<p>ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p><i>Ken A. Samuels</i> 08/31/2009 CITY ENGINEER DATE</p>	<p>CITY OF LAKE ELSINORE</p> <p>PREPARED BY PUBLIC WORKS</p>	<p>SINGLE POST MAILBOX INSTALLATION</p>	<p>NO. 222</p>
REVISION	DATE	APPROVED																		



CASE "A"



* W_1 = WIDTH OF MAILBOX (W_2) PLUS 2 FEET

CASE "B"

NOTES:

1. CASE "A" SHALL BE THE PREFERRED LOCATION FOR MAILBOX. WHEN FIELD CONDITIONS INDICATE, CASE "B" MAY BE USED.
2. MAILBOX LOCATION, FOUNDATION, PAD, ANCHOR BOLTS AND BOLT HOLES SHALL CONFORM TO SPECIFICATIONS FURNISHED BY THE POSTMASTER.
3. NO MAILBOXES SHALL BE LOCATED ON INDUSTRIAL COLLECTORS OR GREATER ROAD CLASSIFICATION.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		MULTIPLE MAILBOX INSTALLATION FOR NEW SIDEWALK	
			08/31/2009 DATE	NO. 223	

NOTES:

- 1.) *The contractor for the stamped concrete shall provide conclusive proof that he or she is qualified to and has previously produced such textured paving and can comply with the provisions specified herein. The contractor shall also stipulate that he or she will not infringe on any applicable patent rights and will hold the City harmless from any damages arising from patent infringement.*

- 2.) *The contractor shall submit a sample of the specified stamped concrete a minimum of 4 s.f. by 3 inches or shall indicate two locations where their prior work of similar stamped concrete can be observed. The samples shall meet the approval of the City Engineer and all work shall match the approved samples.*

- 3.) *Concrete work shall conform to the applicable requirements of Sections 200, 201 and 303 of the Standard Specifications for Public Works Construction. Any modification must have prior approval.*

- 4.) *Stamped concrete shall be a minimum of 5" thick. Concrete mix shall be proportioned using 560-C-3250. An air-entraining agent conforming to ASTM C260 and/or a normal set or retarded-set water reducing admixture conforming with ASTM C494 may be used. Calcium chloride will not be allowed. The slump shall not exceed 4".*

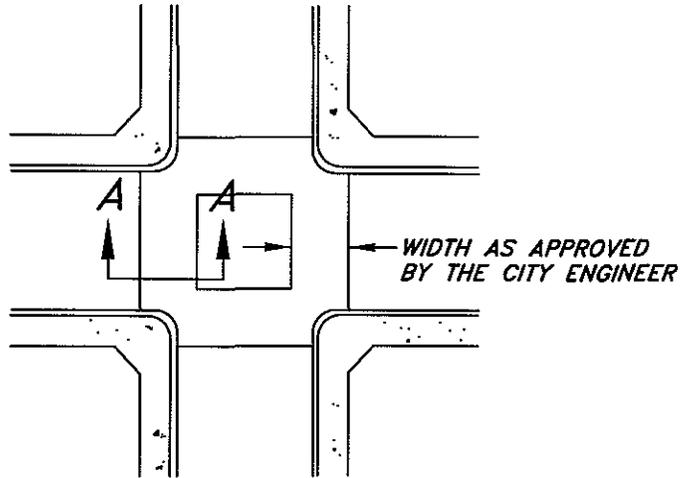
- 5.) *The coloring mixture for the stamped concrete shall be integrally mixed.*

- 6.) *The coloring mixture for the stamped concrete shall be "brick red" No. 160, by Davis Colors. matching the City Engineer's selected and approved sample pattern. A translucent curing compound shall be applied uniformly to the concrete immediately after finishing.*

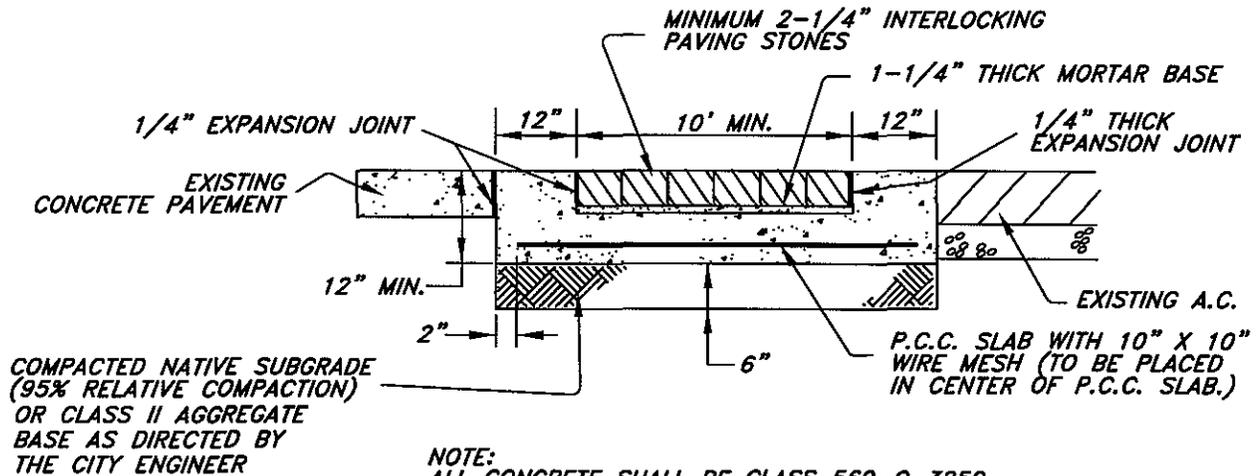
- 7.) *The contractor shall deliver to the City Engineer two labels from the packages containing the selected coloring agent used in the course of the specified work.*

- 8.) *The contractor shall be responsible for adjusting existing City electrical and irrigation valve boxes in all new concrete and for protecting existing irrigation systems from damage.*

<small>REVISION</small>	ENGINEERING	<small>DATE</small> 07/09	CITY OF LAKE ELSINORE	
<small>DATE</small>	<small>APPROVED</small>		<small>PREPARED BY PUBLIC WORKS</small>	
		<small>APPROVED BY</small>	GENERAL NOTES: STAMPED CONCRETE	
		 <small>CITY ENGINEER</small>	<small>DATE</small>	<small>NO.</small> 224
		08/21/2009		



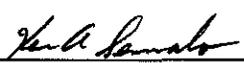
TYPICAL CROSSWALK

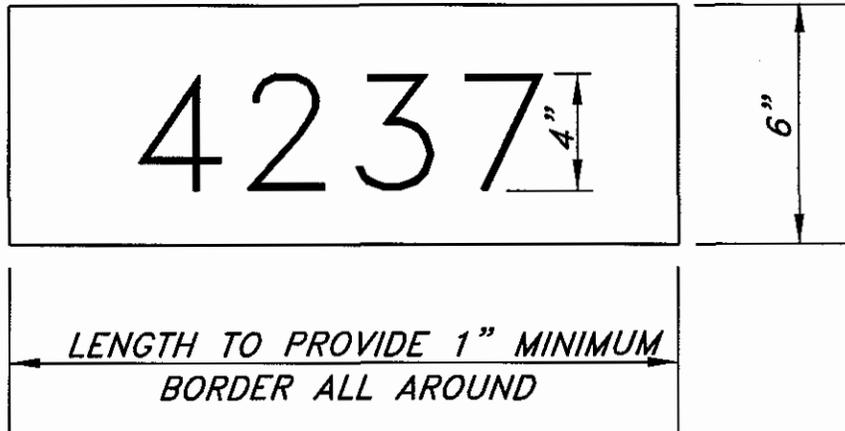


NOTE:
ALL CONCRETE SHALL BE CLASS 560-C-3250,
CURED WITH WHITE PIGMENTED CURING COMPOUND.

SECTION "A-A"

CROSSWALK ENHANCEMENT ALLOWED ONLY WITH THE APPROVAL
OF THE CITY ENGINEER.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		CROSSWALK ENHANCEMENT	
		 CITY ENGINEER			
			DATE 08/31/2009	NO. 225	

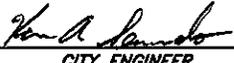


- 1.) BACKGROUND SHALL BE PAINTED WITH GOOD QUALITY HIGH GLOSS REFLECTIVE WHITE PAINT.
- 2.) NUMBERS SHALL BE PAINTED WITH GOOD QUALITY FLAT BLACK PAINT.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		1 OF 2 NO. 226A	
		08/31/2009 DATE			
				CURB PAINTING	

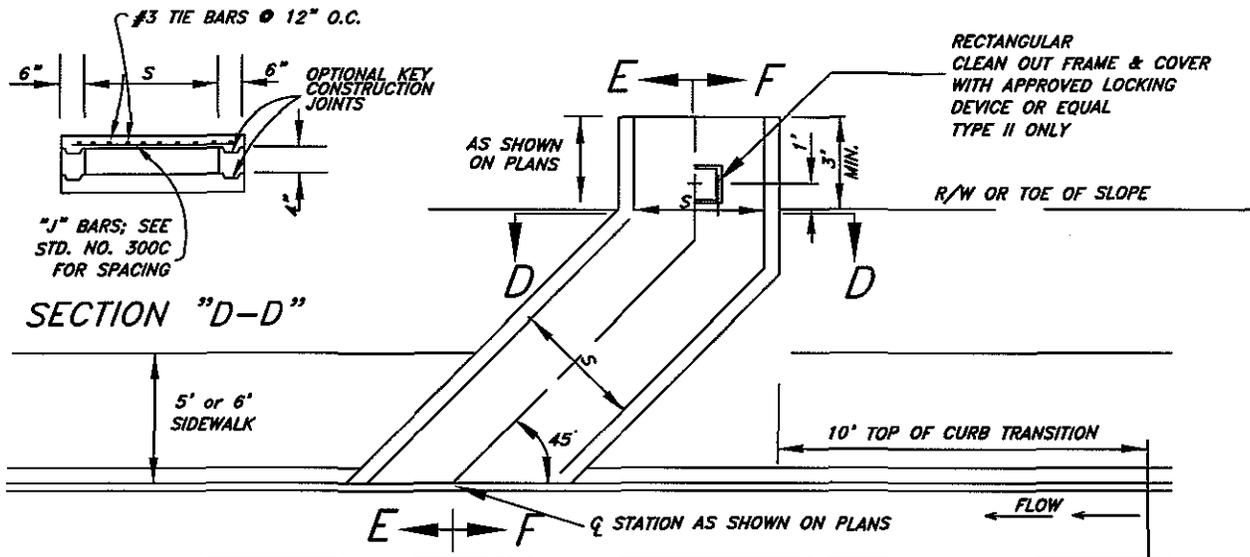
CURB PAINTING NOTES

- 1) A CITY BUSINESS LICENSE & AN ENCROACHMENT PERMIT SHALL BE REQUIRED.
- 2) THE CITY SHALL BE CONTACTED AT LEAST ONCE EACH WEEK TO RECEIVE NOTICE OF COMPLAINTS SO THAT THEY MAY BE RECTIFIED IN A TIMELY FASHION.
- 3) A CASH BOND SHALL BE POSTED WITH THE CITY FOR EACH AND EVERY INDIVIDUAL WHO WILL BE INVOLVED IN THE PAINTING OR SOLICITATION OF ORDERS FOR PAINTING TO INSURE THAT ALL VALID COMPLAINTS ARE RECTIFIED PROMPTLY. THIS DEPOSIT WILL BE REFUNDED WITHIN 30 DAYS AFTER SATISFACTORY COMPLETION OF THE LETTERING.
- 4) NO NUMBER SHALL BE PAINTED UNTIL AN ORDER IS RECEIVED FROM THE OCCUPANT AND/OR OWNER.
- 5) A RECEIPT SHALL BE ISSUED TO THE OCCUPANT FOR EACH ADDRESS SO PAINTED.
- 6) THERE WILL BE NO ORDERS REQUESTED BEFORE 9:00 A.M. OR AFTER 8:00 P.M. OR ANY TIME SUNDAY.
- 7) ANY WRITTEN DOCUMENTS INTENDED TO BE USED WITH THE SOLICITATION SHALL BE SUBMITTED TO THE CITY FOR PRIOR WRITTEN AUTHORIZATION TO USE THEM.
- 8) ANY VALID COMPLAINT REGARDING COERCION TO PURCHASE THE CURB NUMBERING IN ANY MANNER SHALL RESULT IN THE TERMINATION OF THE PERMIT AND THE FORFEITURE OF THE BOND.
- 9) UNLESS A CHANGE IS REQUESTED BY A PURCHASER, THE NUMBER SHALL BE IN THE IDENTICAL LOCATION WITH THE PREVIOUSLY PRINTED NUMBER. IF A LOCATION IS REQUESTED TO BE CHANGED, THE OLD NUMBER SHALL BE OBLITERATED AT NO EXTRA CHARGE.
- 10) ALL WORK SHALL BE DIRECTLY SUPERVISED BY AN ADULT AND SHALL BE DONE IN A WORKMANLIKE MANNER.
- 11) A LIST OF THOSE NUMBERS PAINTED SHALL BE SUBMITTED TO THE CITY AT THE COMPLETION OF WORK IN ORDER TO ALLOW FOR THE REFUND OF THE CASH DEPOSIT.
- 12) A COPY OF THE PERMIT ISSUED BY THE CITY SHALL BE IN THE POSSESSION OF THE INDIVIDUAL AUTHORIZED TO DO CURB LETTERING AT ALL TIMES WHILE ACTUALLY ENGAGED IN SUCH ACTIVITY.
- 13) PERMITTEE IS RESPONSIBLE FOR MAINTAINING A SAFE WORK AREA AND SHALL TAKE ALL NECESSARY SAFETY PRECAUTIONS.

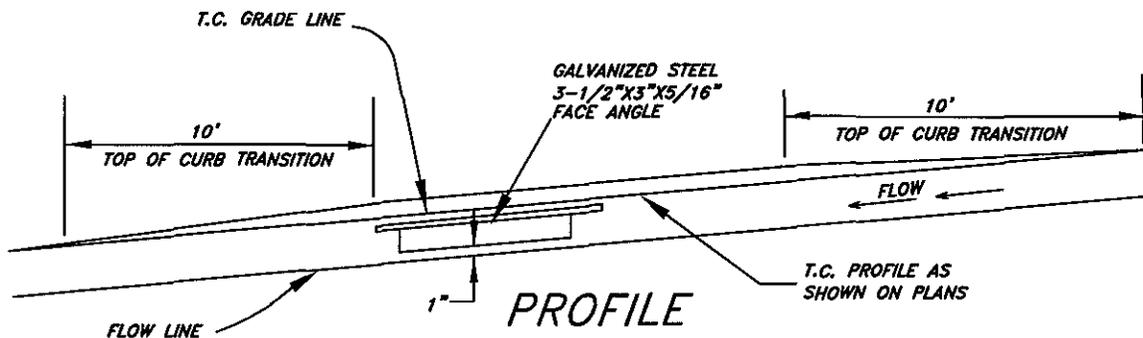
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
		 CITY ENGINEER		2 OF 2 NO. 226B	
		08/31/2009 DATE		CURB PAINTING NOTES	

CITY OF LAKE ELSINORE
STANDARD PLANS

SECTION 3:
Drainage



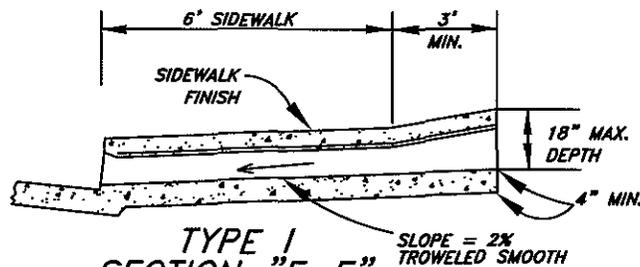
PLAN



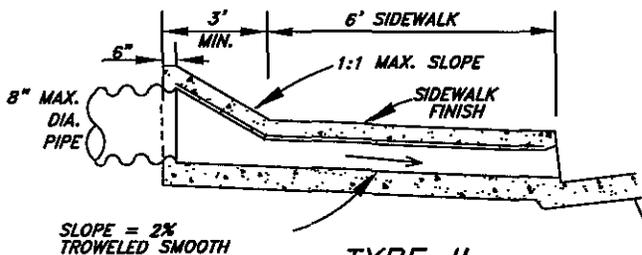
PROFILE

NOTES:

1. SPAN "S" AND HEIGHT OF OPENING AND CURB FACE AT CULVERT SHALL BE NOTED ON PLANS.
2. SEE STANDARD PLAN NO. 300C FOR DETAILS AND NOTES.
3. CONCRETE SHALL BE CLASS 560-C-3250.
4. FACE ANGLE SHALL BE ANCHORED BY FULL PENETRATION WITH A 3-5/8" X 6-3/8" STEEL STUD OR BUTT WELD.
5. UNLESS OTHERWISE SPECIFIED, STANDARD FRAME AND COVER SHALL BE ALHAMBRA FOUNDRY GALVANIZED PIPE OR EQUAL.
6. 1 INCH STEEL CLEARANCE MINIMUM FROM FACE OF CONCRETE.
7. TOP OF INLET STRUCTURE TO MATCH ADJACENT SLOPE.



TYPE I SECTION "E-E"



TYPE II SECTION "F-F"

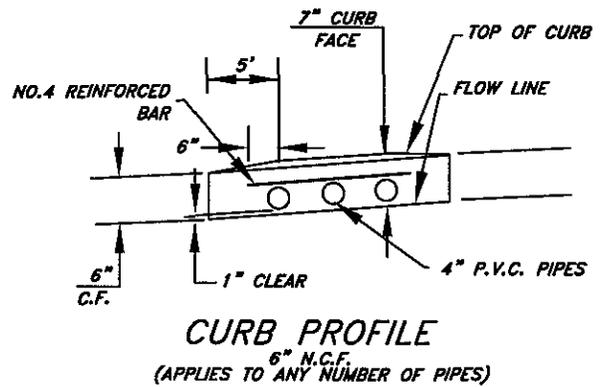
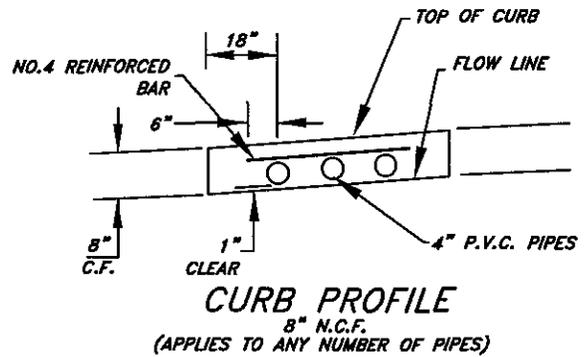
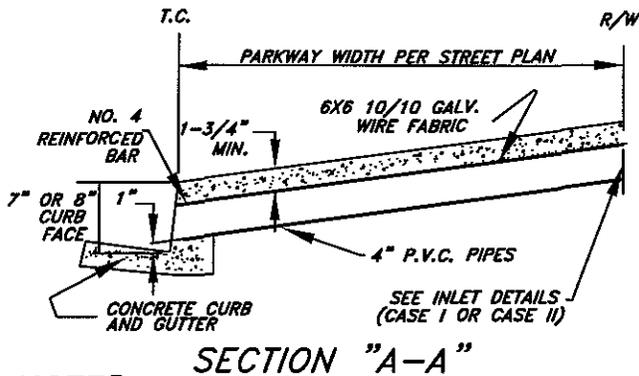
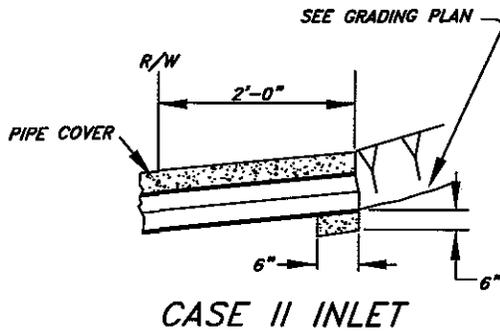
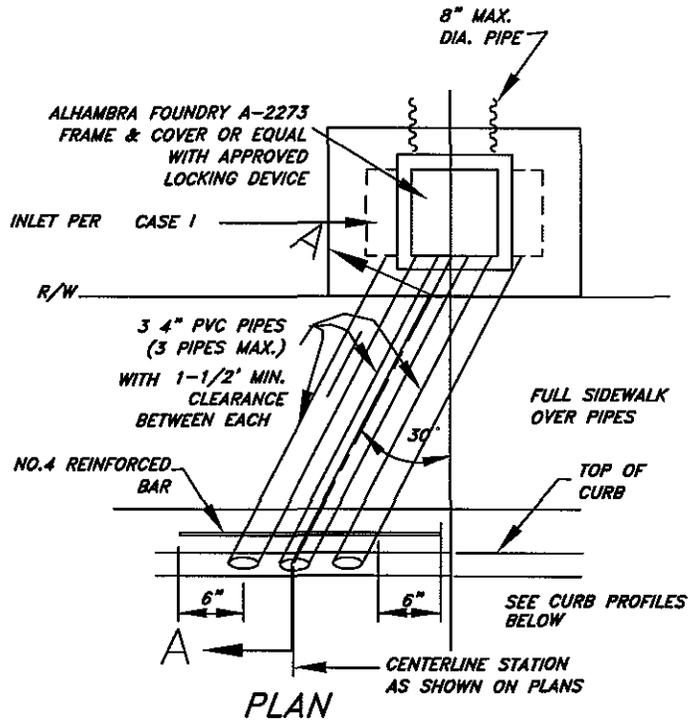
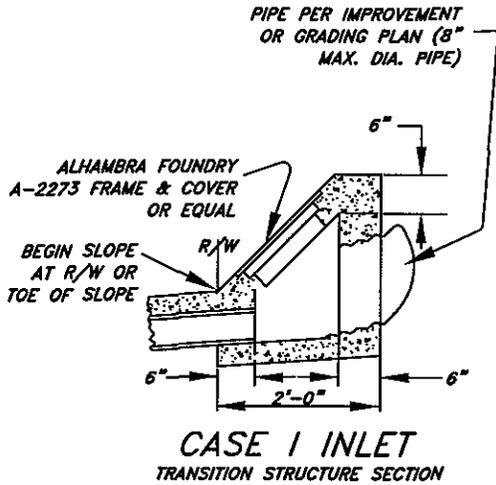
REVISION	ENGINEERING	DATE 07/09
DATE	APPROVED	
	APPROVED BY	
	<i>Kendall Samuels</i>	08/31/2009
	CITY ENGINEER	DATE

CITY OF LAKE ELSINORE

PREPARED BY PUBLIC WORKS

PARKWAY CULVERT
TYPE "A"

1 OF 3
NO.
300A



NOTES:

- 1.) SEE STD. NO. 300C FOR DETAILS AND NOTES.
- 2.) ALHAMBRA FOUNDRY A-470 RECTANGULAR CAST IRON PIPE MAY BE SUBSTITUTED AT THE CONTRACTOR'S OPTION OR AS SPECIFIED ON THE PLANS.
- 3.) CAST IRON FACILITIES SHALL HAVE A BITUMINOUS COATING CONFORMING TO AASHTO DESIGNATION:M190.
- 4.) P.V.C. PIPES SHALL BE SCHEDULE 40 OR AS SPECIFIED ON THE PLANS.

REVISION	ENGINEERING	DATE
DATE APPROVED		07/09
	APPROVED BY	
	<i>Tom A. Sanchez</i>	08/31/2009
	CITY ENGINEER	DATE

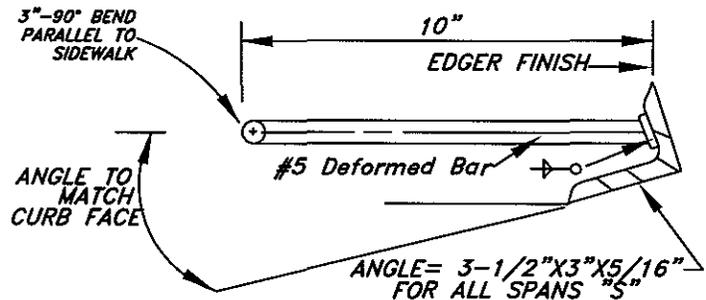
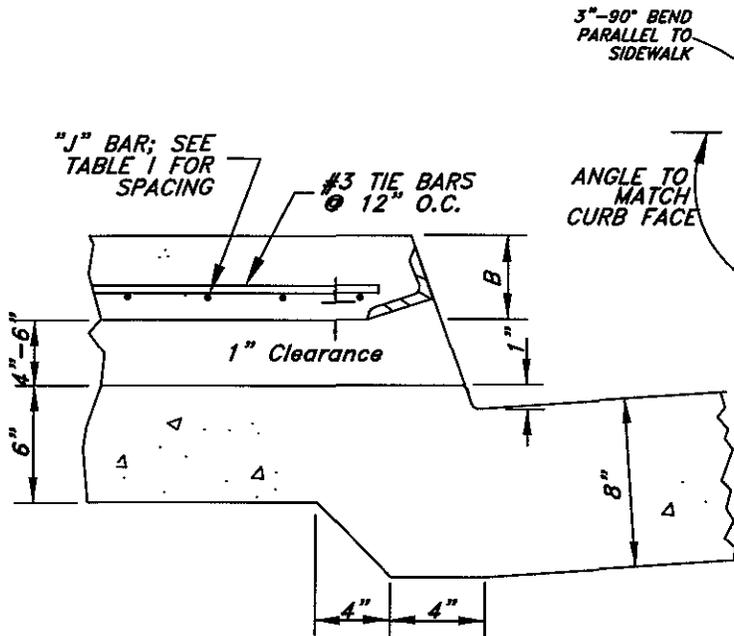
CITY OF LAKE ELSINORE

PREPARED BY PUBLIC WORKS

CURB OUTLET
TYPE "B"

2 OF 3

NO.
300B



LENGTH OF CURB OPENING	NO. OF ANCHORS
3' OR LESS	2
3'-0" TO 6'-0"	3

FACE ANCHOR ANCHOR DETAIL

OUTLET DETAIL

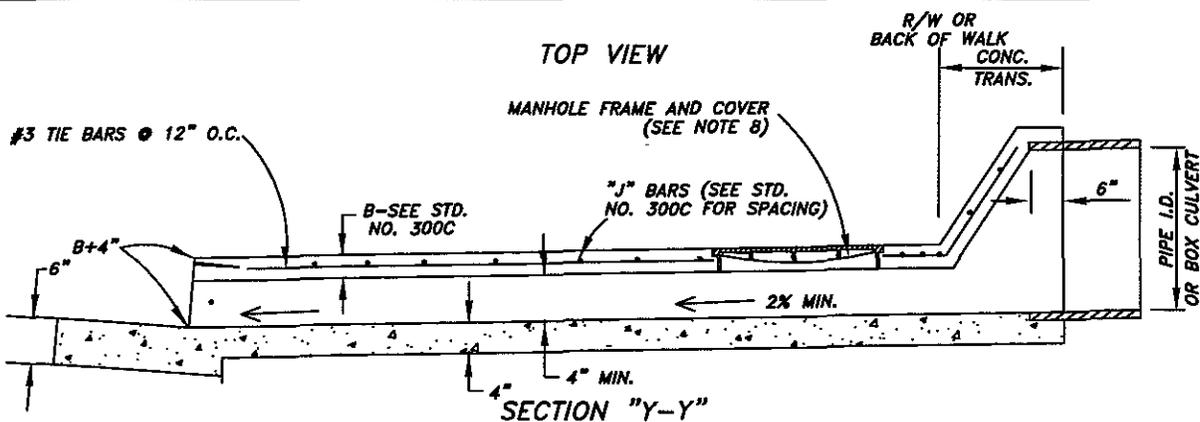
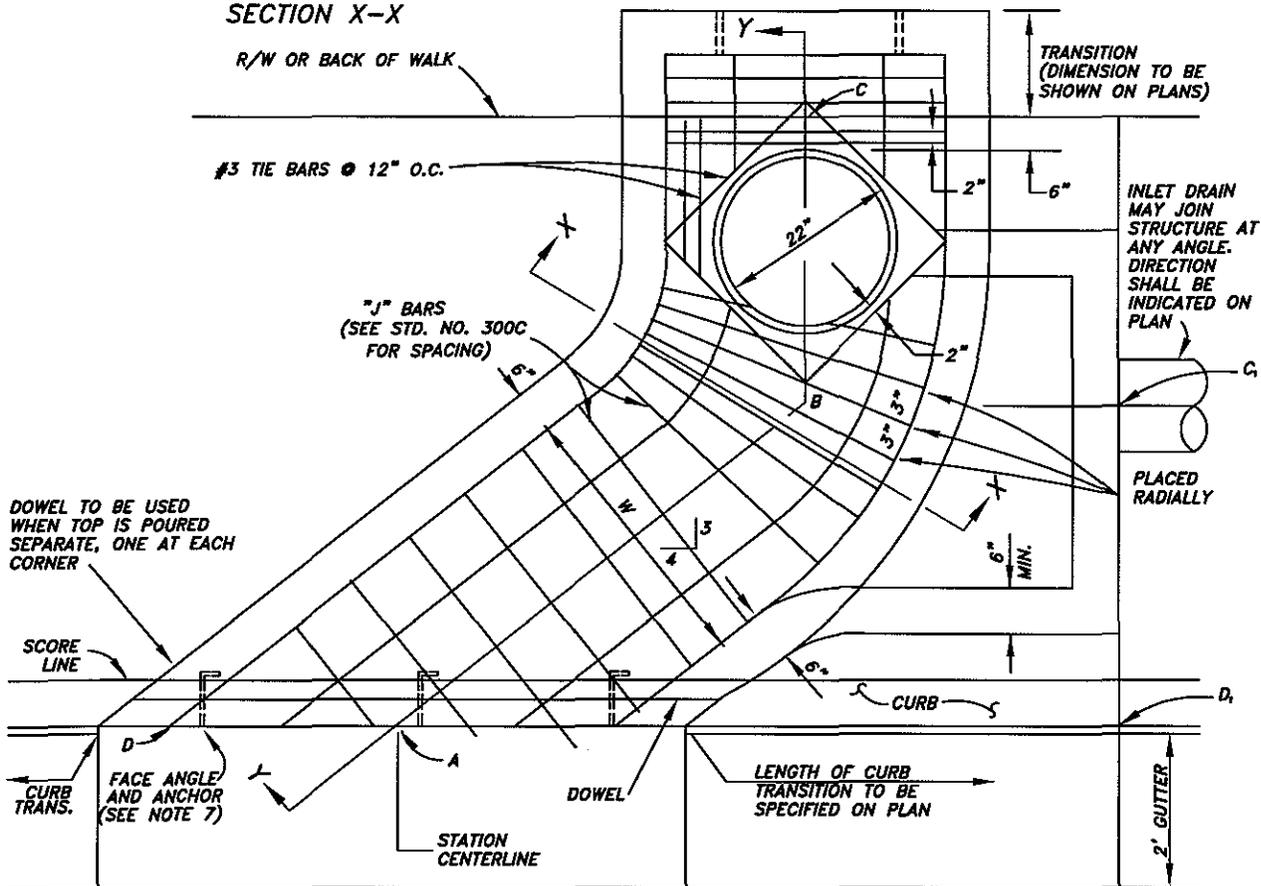
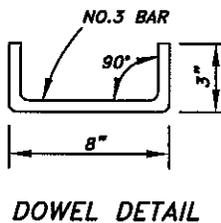
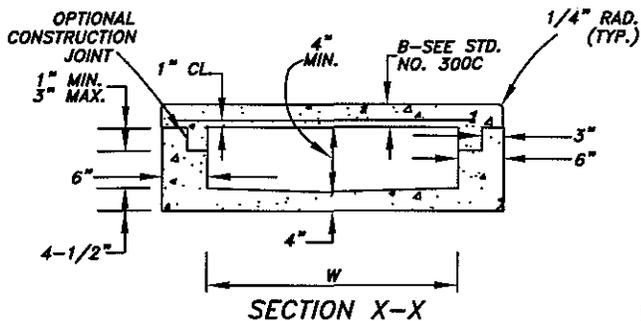
NOTES:

- 1.) USE PARKWAY CULVERT-TYPE "A" WHEN INLET VELOCITIES WILL BE 10 FEET PER SECOND OR GREATER.
- 2.) USE PARKWAY CULVERT-TYPE "B" WHEN INLET VELOCITIES WILL BE LESS THAN 10 FEET PER SECOND.
- 3.) FLOOR OF PARKWAY CULVERT SHALL HAVE A SMOOTH FINISH.
- 4.) ALL EXPOSED METAL SHALL BE GALVANIZED AFTER FABRICATION.
- 5.) HEIGHT OF CURB OPENING FOR TYPES "A" AND "B" PARKWAY CULVERTS WILL VARY WITH TYPE OF CURB.
- 6.) SPAN "S" AND HEIGHT OF CURB OPENING WILL BE DETERMINED FROM THE REQUIRED HYDRAULIC CAPACITY AND LIMITED TO THE DIMENSION IN TABLE I.
- 7.) REINFORCING STEEL SHALL BE 1" CLEAR TO INSIDE OF CULVERT UNLESS OTHERWISE SPECIFIED.
- 8.) CONSTRUCT P.C.C. WALK AS SPECIFIED ON PLAN. THE CONTRACT PRICE PAID FOR P.C.C. WALK ITEM SHALL INCLUDE WALK CONSTRUCTED IN CONJUNCTION WITH PARKWAY CULVERT.
- 9.) TYPE, DIMENSIONS, AND ELEVATIONS PER IMPROVEMENT PLAN.

SPAN "S"	B	STEEL SCHEDULE J-BARS		
		SIZE	SPACING C-C	LENGTH
2'-0"	3"	#3	6"	2'-9"
2'-6"	3"	#3	6"	3'-3"
3'-0"	3"	#3	6"	3'-9"
3'-6"	3"	#4	6"	4'-3"
4'-0"	3"	#4	6"	4'-9"
4'-6"	4"	#4	6"	5'-3"
5'-0"	4"	#4	6"	5'-9"
5'-6"	4"	#4	6"	6'-3"
6'-0"	4"	#4	6"	6'-9"

TABLE I

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
		08/31/2009	CURB OUTLET DETAILS AND NOTES	
	CITY ENGINEER	DATE	3 OF 3 NO. 300C	



REVISION	ENGINEERING	DATE 07/09
DATE APPROVED	APPROVED BY	
	<i>Paul A. Sanchez</i>	08/31/2009
	CITY ENGINEER	DATE

CITY OF LAKE ELSINORE

PREPARED BY PUBLIC WORKS

CURB OUTLET STRUCTURE

1 OF 2

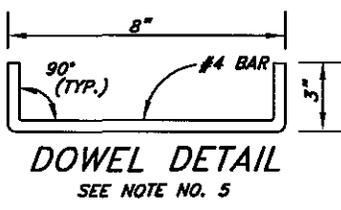
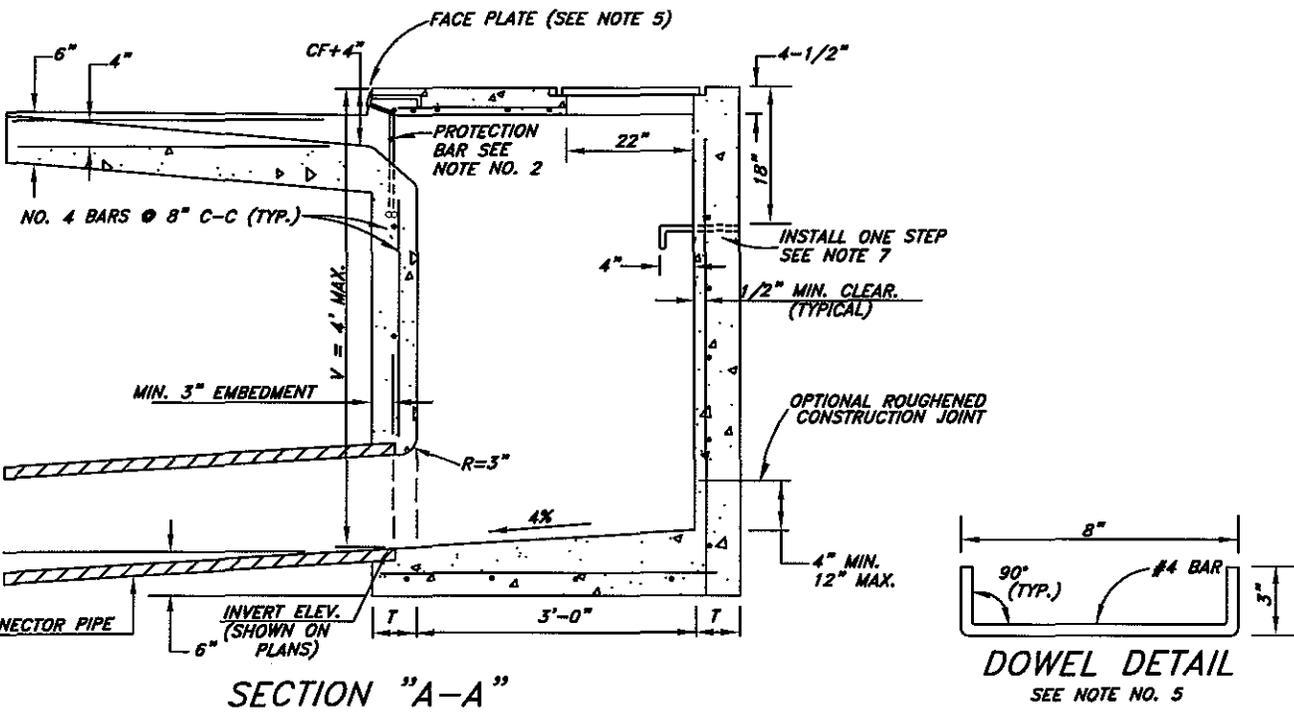
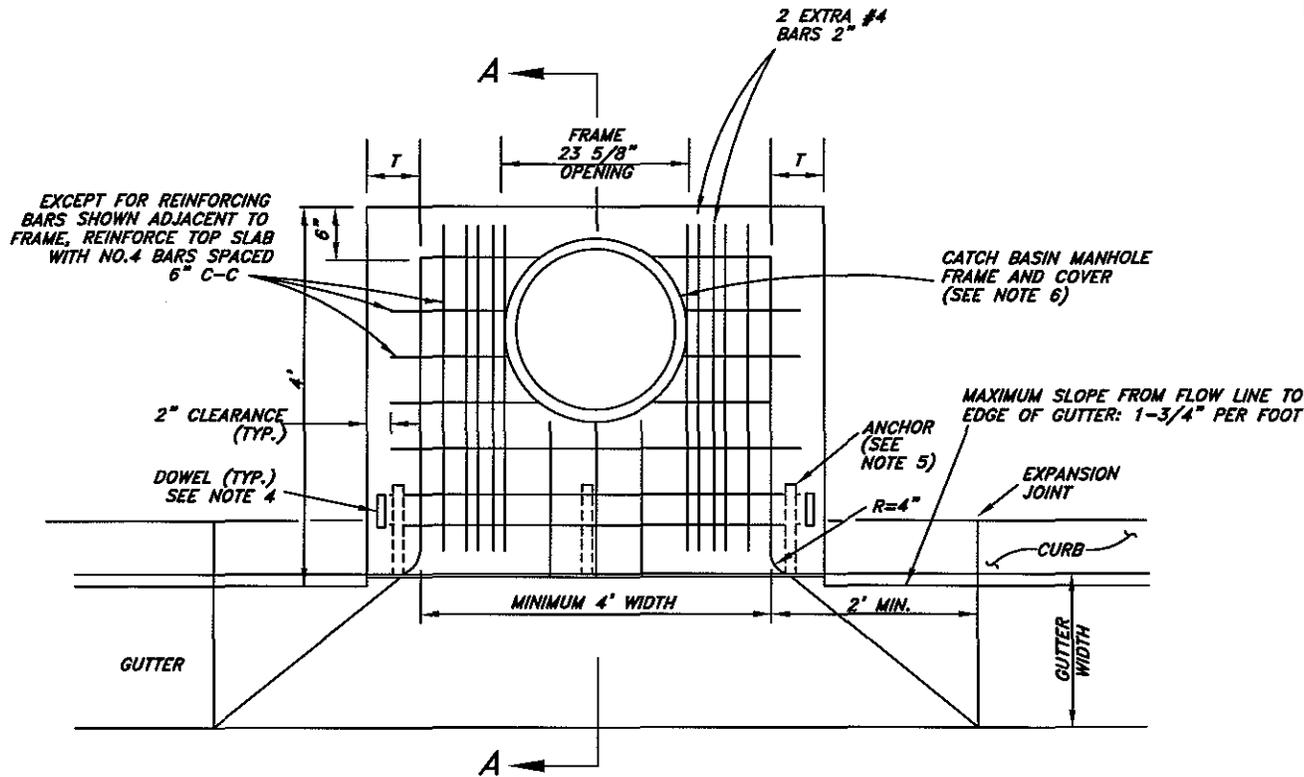
NO.

301A

NOTES:

- 1.) Concrete shall be class 560-C-3250 P.C.C., cured with white pigmented curing compound.
- 2.) The surface of all exposed concrete shall conform in slope, grade, finish, and scoring to existing curb, gutter and walk adjacent to the structure.
- 3.) Curvature of concrete surface shall be shaped by curved forms and shall not be shaped by plastering.
- 4.) The invert of the structure shall be given a steel troweled finish and constructed on a straight grade from the inlet invert through point B to point D. The V-section of the invert shall extend from point C through point B to point A. Warp the invert from the end of the V-section to join the gutter flow line at point D. The soffit of the structure shall be free of corrugations.
- 5.) Dimensions (unless otherwise indicated on the project plans):
 - A-B = 5'
 - B-C = 3'
 - C-D₁ = 3'
 - D-E = 5'
 - W = 3'
- 6.) Dowels shall be required at each corner and at 2 feet O.C. (max.) when the top slab is poured separately. When the top slab is poured monolithic with adjacent sidewalk, the dowels may be omitted.
- 7.) Install face angle and anchors at the outlet of the structure in conformance with Standard Plan No. 300C.
- 8.) Install catch basin manhole frame and cover conforming to A.P.W.A. Standard Plan No. 312-0. Agency inscription shall be "Lake Elsinore."

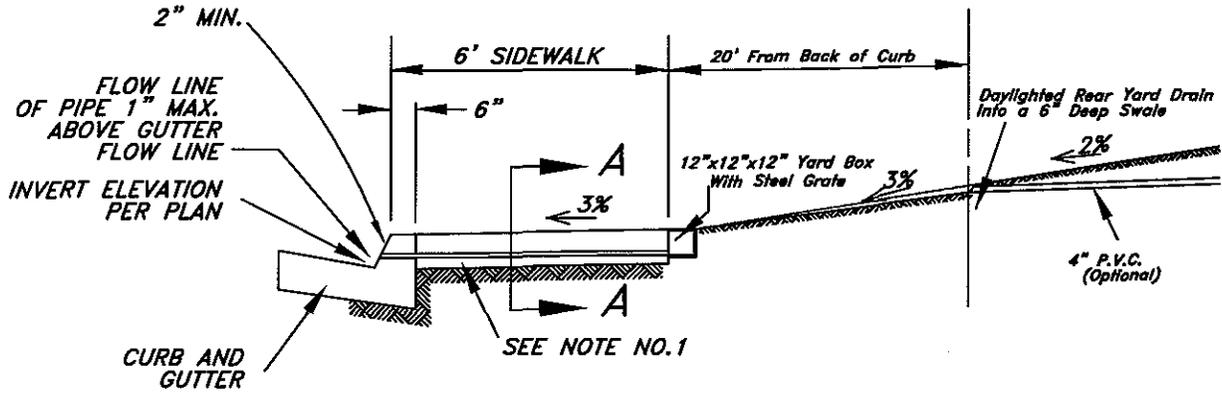
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY		<i>PREPARED BY PUBLIC WORKS</i>	
		 CITY ENGINEER		CURB OUTLET STRUCTURE NOTES	
		08/31/2009 DATE		2 OF 2	NO.
				301B	



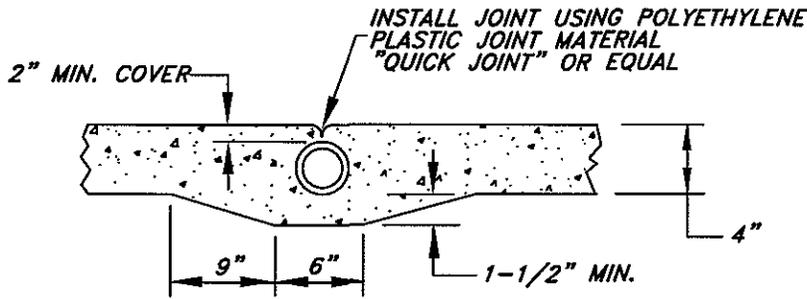
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REVISION	DATE	APPROVED																	

STANDARD BEING REVISED

**CONTACT ENGINEERING TECHNICIAN
FOR INFORMATION**



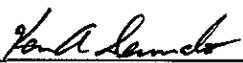
ELEVATION



SIDEWALK SECTION "A-A"

NOTES:

- 1.) DRAINS SHALL BE 4 INCH DIA. P.V.C. PIPE (SCHEDULE 40) OR RECTANGULAR CAST IRON BOX FOR 6 INCH CURB FACE AND 4 INCH DIA. P.V.C. PIPE (SCHEDULE 40) OR RECTANGULAR CAST IRON BOX FOR 8 INCH CURB FACE.
- 2.) THE CURB SHALL BE CORED FOR ALL DRAIN PIPES.
- 3.) THE NUMBER OF PIPES AT ANY LOCATION SHALL NOT EXCEED 1 @ 12" O.C.
- 3.) ALL CURB CORES MUST BE BORED, USE OF WATER JET IS UNACCEPTABLE.

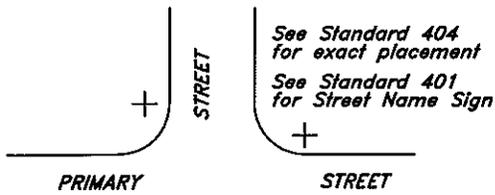
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		CURB DRAIN: RESIDENTIAL	NO. 303
		DATE 08/21/2009			

CITY OF LAKE ELSINORE
STANDARD PLANS

SECTION 4:
Traffic

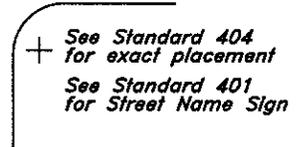
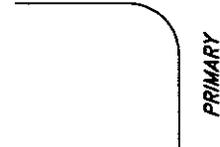
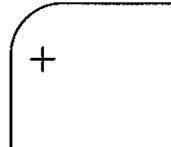
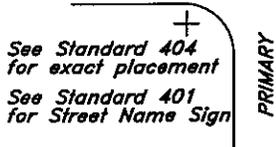
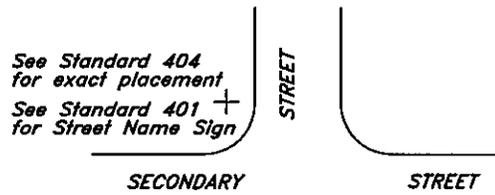
PRIMARY & PRIMARY INTERSECTION

Always locate street name sign as shown
 Exceptions as approved by City Engineer



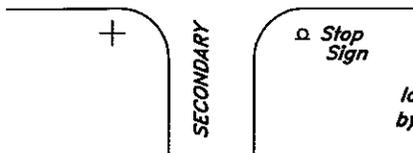
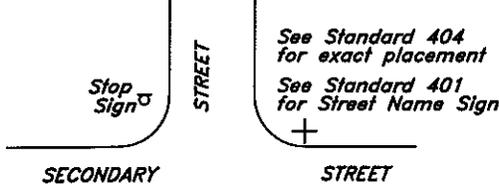
PRIMARY & SECONDARY INTERSECTION

Always locate street name sign on approaching
 nearside of primary street—regardless of street direction.
 Exceptions as approved by City Engineer



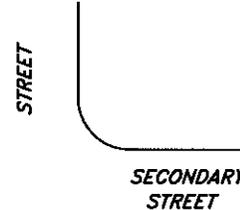
SECONDARY & SECONDARY INTERSECTION

Always locate street name sign on
 approaching nearside of street with out stop
 control. Exceptions as approved by City Engineer

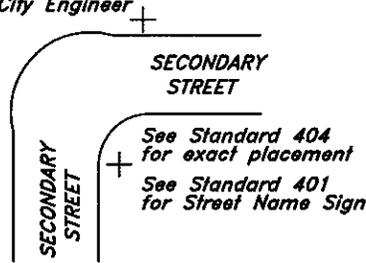


"T" INTERSECTIONS

Always locate street name sign on
 approaching nearside of through street
 Exceptions as approved by City Engineer



KNUCKLE INTERSECTION
 locate street name sign as approved
 by City Engineer



THE TERMS "PRIMARY" AND "SECONDARY" STREETS ARE INTENDED TO DENOTE WHICH STREET IS MORE IMPORTANT: e.g.: (The wider street is the primary street)

<u>PRIMARY</u>	VS.	<u>SECONDARY</u>
ARTERIAL	VS.	COLLECTOR/RESIDENTIAL
COLLECTOR	VS.	LOCAL
LOCAL	VS.	CUL-DE-SAC

AT THE INTERSECTION OF 2 LOCAL STREETS, THE STREET CONSIDERED TO BE THE THROUGH STREET WILL BE BASED ON EXAMINATION OF NEIGHBORHOOD STREET PATTERNS BY THE TRAFFIC ENGINEER.

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED		PREPARED BY PUBLIC WORKS	
			STREET NAME SIGN LOCATION	
	APPROVED BY			NO. 400A
		08/31/2009		
	CITY ENGINEER	DATE		

STANDARD BEING REVISED

**CONTACT ENGINEERING TECHNICIAN
FOR INFORMATION**

NOTES:

1.) SIGN MATERIALS, SIZES and FABRICATION

- A.) Sign blank must be 0.125 thick aluminum, 5052-H38 aluminum alloy.
- B.) Sign blank dimensions are 9" high by a minimum of 24" to maximum of 48" long as required (use metric equivalent).
- C.) Sign sheeting must be high performance wide angle prismatic lens reflective white (silver) sheeting (3M Scotchlite Diamond Grade VIP 3990) or approved equivalent. The background must be screen printed blue using reflective sheeting manufacturer match component ink (3M 883i) or approved equivalent.
- D.) Sign street name letters must be white (silver) FWHA (Federal Highway Administration) Series C-6" (150mm) upper case and 4 1/2" (115mm) lower case. Address block numbers must be white (silver) FWHA Series C-2" (50mm). Street name suffix must be white (silver) FWHA 2" (50mm) upper case and 1.5" (40mm) lower case.
EXCEPTION: Intersecting secondary streets use 5" upper case and equivalent lower case street name letters.
- E.) The letter sizing and spacing must meet FWHA spacing guidelines. Minor variations as approved by the City Engineer.
- F.) The City logo must be a blue graphic on a white (silver) background.
EXCEPTION: NO city emblem required for intersecting secondary streets.
- G.) Street name must appear on each side of the sign blank.
- H.) Street name signs MAY be fabricated using reflective sheeting manufactures matched component electronic cuttable films (3M E.C. 1175) or approved equal, with City Engineer approval.
- I.) Slight layout variations are permitted and must be approved by the City Engineer.

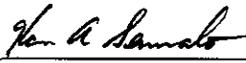
2.) POST MATERIALS

- A.) Post must be a Telespar 2" square post (hot dipped galvanized inside and outside) or approved equivalent.
- B.) Anchor must be Telespar 30" or 36" 2 1/4" square anchors and 2 1/2" sleeves or approved equivalent.
- C.) Drive rivets must be 3/8" or approved equivalent (2 rivets minimum required per post/anchor assembly).
- D.) Aluminum cap post bracket must be Zumar Industries 812 or approved equivalent.
- E.) Aluminum cross saddle bracket must be 12" sign hardware holding brackets or approved equivalent.

3.) STREET NAME SIGN PLACEMENT

- A.) Primary street intersecting secondary street locate on primary street - see Standard 404.
- B.) Primary street intersecting primary street locate on northeast corner AND southwest corner.
- C.) Secondary street intersecting secondary street locate on northeast corner or as approved.

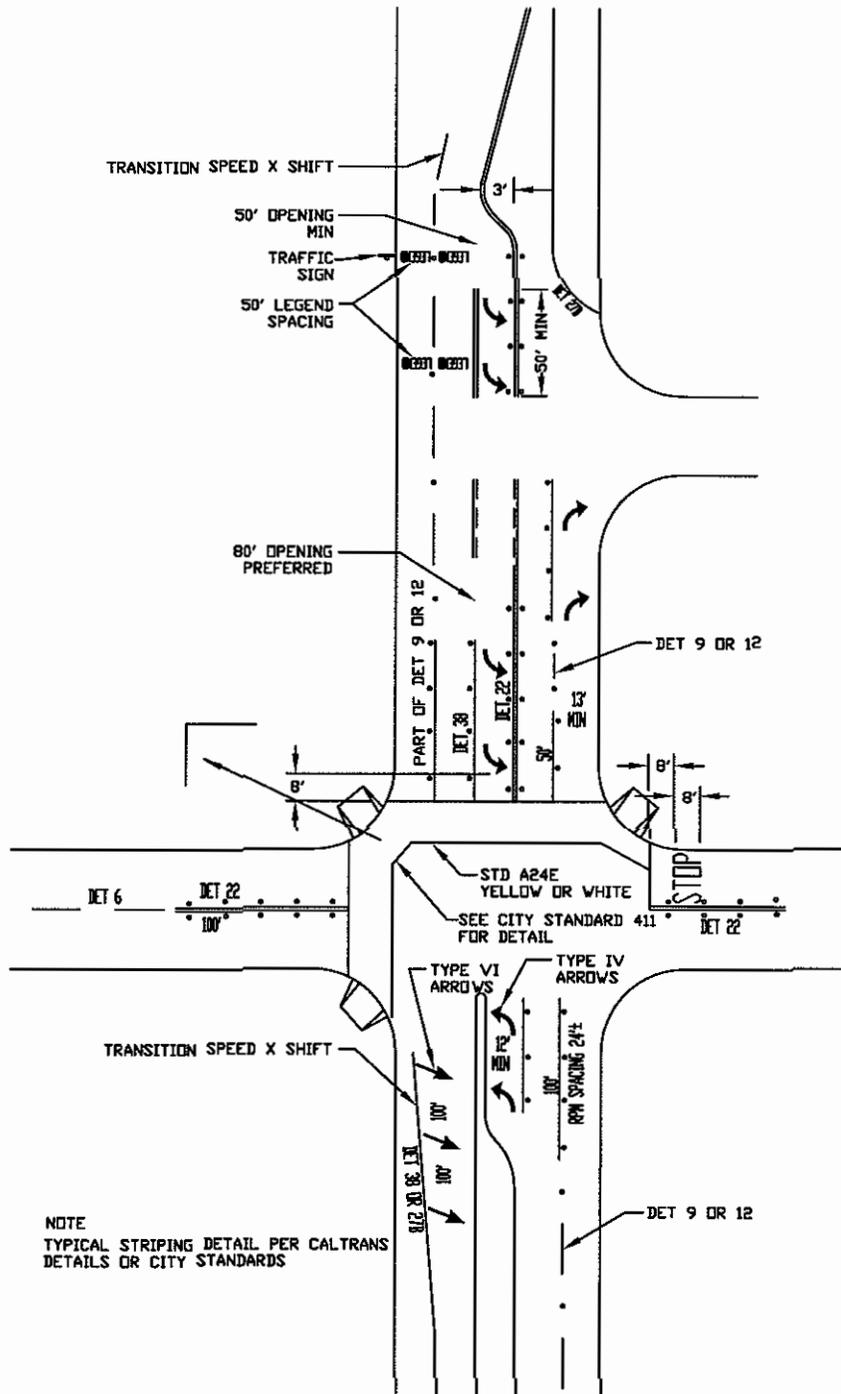
NOTES: Use metric equivalents as required.
Complete technical provisions are on file with the Transportation Engineering Division.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		STREET NAME SIGN NOTES	
		08/31/2009 DATE		NO. 402	

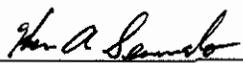
STANDARD ABBREVIATIONS

<i>Alley/Ally/Aly</i>	Ay	<i>Lake/Lakes</i>	Lk
<i>Avenue/Ave/Avenida</i>	Av	<i>Lane</i>	Ln
<i>Beach</i>	Bch	<i>Manor</i>	Mnr
<i>Boulevard</i>	Bl	<i>Mount</i>	Mt
<i>Bridge</i>	Br	<i>Mountain</i>	Mtn
<i>Brook</i>	Brk	<i>Park</i>	Pk
<i>Canal</i>	Cnl	<i>Parkway</i>	Pkwy
<i>Canyon</i>	Cyn	<i>Place</i>	Pl
<i>Center</i>	Cntr	<i>Plaza</i>	Plaza
<i>Circle</i>	Cir	<i>Point</i>	Pt
<i>Coast</i>	Cst	<i>Ranch/Rancho</i>	Rch
<i>Corner/Corners</i>	Cor	<i>River</i>	Rv
<i>Court</i>	Ct	<i>Road</i>	Rd
<i>Creek</i>	Cek	<i>Saint</i>	St
<i>Drive</i>	Dr	<i>Spring/Springs</i>	Spg
<i>Eastway</i>	Ewy	<i>Square</i>	Sq
<i>Estates</i>	Est	<i>Station</i>	Sta
<i>Expressway</i>	Expwy	<i>Street</i>	St
<i>Field/Fields</i>	Fld	<i>Summit</i>	Sum
<i>Fort</i>	Ft	<i>Terrace</i>	Ter
<i>Freeway</i>	Fwy	<i>Trail/Trails</i>	Trl
<i>Grove</i>	Gr	<i>Valley</i>	Vly
<i>Heights</i>	Hts	<i>Village</i>	Vlg
<i>Highway</i>	Hwy	<i>Walk</i>	Wk
<i>Home</i>	Hm	<i>Way</i>	Wy
<i>Island/Islands</i>	Isl	<i>Westway</i>	Wwy
<i>Junction</i>	Jct		

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
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	APPROVED BY		STREET NAME ABBREVIATIONS	NO. 403
		08/31/2009		
	CITY ENGINEER	DATE		



NOTE
TYPICAL STRIPING DETAIL PER CALTRANS
DETAILS OR CITY STANDARDS

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009 DATE	NO. 405A
				STREET STRIPING AND PAVEMENT LEGEND STANDARDS AND SPECIFICATIONS	

TRAFFIC STRIPES AND PAVEMENT MARKING REQUIREMENTS

ALL WORK AND MATERIALS SHALL CONFORM TO THE LATEST PROVISIONS SET FORTH IN SECTION 84, "TRAFFIC STRIPES AND PAVEMENT MARKINGS" OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, EXCEPT AS NOTED OTHERWISE IN THE FOLLOWING SPECIAL PROVISIONS OR CITY STANDARDS.

MATERIALS

PAINT FOR TRAFFIC STRIPING AND PAVEMENT MARKINGS SHALL BE WHITE, YELLOW OR BLACK AS REQUIRED, SHALL BE WATER BORNE TRAFFIC PAINT, FAST DRY CONFORMING TO CALIFORNIA STATE SPECIFICATIONS AND SHALL BE REVIEWED AND APPROVED BY THE CITY ENGINEER OR DESIGNEE PRIOR TO APPLICATION.

ALL STENCILS USED TO PAINT PAVEMENT MARKINGS MUST CONFORM TO THE LATEST CALTRANS APPROVED METRIC STENCILING STANDARDS.

LAYOUT

THE CONTRACTOR SHALL LAYOUT AND CATTRACK THE ALIGNMENT OF THE PROPOSED STRIPING AT 15 FOOT INTERVALS AND "SPOT" THE PROPOSED PAVEMENT MARKINGS AS CALLED FOR ON THE STRIPING PLANS. STRIPING SHALL VARY NO MORE THAN 1/2 INCH IN 50 FEET FROM THE SPECIFIED ALIGNMENT. MINOR VARIATIONS MAY BE WAIVED BY THE CITY ENGINEER OR DESIGNEE.

THE CONTRACTOR SHALL NOT PROCEED WITH THE PAINTING OF ANY PAVEMENT MARKINGS AND/OR STRIPING UNTIL THE CATTRACKING AND SPOTTING IS CHECKED AND APPROVED BY THE PUBLIC WORKS INSPECTOR.

APPLICATION

TRAFFIC STRIPING AND PAVEMENT MARKINGS SHALL BE APPLIED IN TWO (2) COATS WITH AIRLESS EQUIPMENT. ALL TRAFFIC STRIPING SHALL BE PERFORMED WITH A ROADLINER TRUCK MOUNTED STRIPING MACHINE. EXCEPTIONS ONLY AS APPROVED BY THE CITY ENGINEER OR DESIGNEE.

THE FIRST COAT OF PAINT SHALL BE APPLIED UPON COMPLETION OF THE SURFACING. THE SECOND COAT OF PAINT SHALL NOT BE APPLIED UNTIL AT LEAST SEVEN (7) CALENDAR DAYS AFTER THE FIRST COAT. EACH COAT OF PAINT SHALL BE APPLIED AT THE WET FILM THICKNESS OF 10-12 MILS FOR WHITE AND YELLOW PAINT AND 7 MILS FOR BLACK PAINT. ALL PAINT SHALL BE APPLIED AT A RELATIVE HUMIDITY BELOW 75% AND AN AMBIENT TEMPERATURE ABOVE 55 F., UNLESS WAIVED BY THE CITY ENGINEER OR DESIGNEE.

A CONTINUOUS ONE COAT 3-INCH WIDE BLACK STRIPE SHALL BE PAINTED BETWEEN THE TWO 4-INCH WIDE YELLOW STRIPES OF A DOUBLE TRAFFIC STRIPE. THIS SPECIFICATION APPLIES TO BOTH DOUBLE YELLOW CENTERLINE STRIPING AND CONTINUOUS TURN POCKET STRIPING DETAILS. THE BLACK STRIPE SHALL BE APPLIED CONCURRENTLY WITH THE SECOND COAT OF YELLOW STRIPES.

EXCEPT FOR BLACK PAINT, REFLECTIVE GLASS BEADS SHALL BE UNIFORMLY INCORPORATED IN ALL COATS OF PAINT CONCURRENTLY WITH THE APPLICATION OF THE PAINT. THE GLASS BEADS SHALL BE EMBEDDED IN THE COAT OF TRAFFIC PAINT BEING APPLIED TO A DEPTH OF AT LEAST ONE-HALF THEIR DIAMETERS. THE REFLECTIVE GLASS BEADS SHALL BE APPLIED TO THE FIRST COAT OF PAINT AT THE RATE OF 6 POUNDS OF BEADS PER GALLON OF PAINT AND TO THE SECOND COAT OF PAINT AT THE RATE OF 8 POUNDS OF BEADS PER GALLON OF PAINT.

ANY STRIPING OR PAVEMENT MARKINGS NOT SHOWN ON THE APPROVED PLAN, BUT DEEMED NECESSARY BY THE CITY ENGINEER OR DESIGNEE, SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE OF THE STREET.

PROTECTION

NEWLY PAINTED STRIPING AND PAVEMENT MARKINGS SHALL BE PROTECTED FROM DAMAGE BY PUBLIC TRAFFIC OR OTHER CAUSES UNTIL THE PAINT IS THOROUGHLY DRY. ANY NEWLY PAINTED STRIPING OR PAVEMENT MARKINGS WHICH ARE DAMAGED AS A RESULT OF THE CONSTRUCTION, INCLUDING WHEEL MARKINGS BY PUBLIC TRAFFIC AND THE CONSTRUCTION EQUIPMENT, SHALL BE REPAINTED BY THE CONTRACTOR.

REMOVALS

EXISTING TRAFFIC STRIPING AND PAVEMENT MARKINGS THAT DO NOT CONFORM TO THE APPROVED PLAN SHALL BE REMOVED BY WET SANDBLASTING. BLACKOUT OF EXISTING TRAFFIC STRIPING OR PAVEMENT MARKINGS WHICH DO NOT CONFORM TO THE APPROVED PLAN WILL NOT BE ALLOWED.

PAVEMENT MARKERS

ALL WORK SHALL CONFORM TO THE LATEST PROVISIONS SET FORTH IN SECTION 85, "PAVEMENT MARKERS" OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS EXCEPT AS NOTED OTHERWISE IN THE FOLLOWING SPECIAL PROVISIONS.

DURA-STRIPE

DURA-STRIPE INSTALLATION MUST HAVE PRIOR APPROVAL OF THE CITY ENGINEER OR DESIGNEE. ASPHALT SURFACES SHALL BE DRY, CLEAN, AND FREE OF CONTAMINANTS SUCH AS SURFACE OILS OR EXISTING ROAD MARKING MATERIALS. CONTAMINANTS SHALL BE REMOVED BY MECHANICAL MEANS. MATERIAL SHALL BE APPLIED ONLY WITH EQUIPMENT WHICH IS SPECIFICALLY DESIGNED AND CAPABLE OF PROPERLY MIXING AT THE POINT AND TIME OF APPLICATION. THE MATERIAL SHALL BE MIXED IN THE RATIO STATED IN THE DURA-STRIPE SPECIFICATIONS FOR THE TYPE IN USE. ROADWAY SURFACE TEMPERATURES SHALL BE IN THE RANGE OF 25° TO 105° FAHRENHEIT.

SPECIAL PROVISIONS

MATERIAL

REFLECTIVE PAVEMENT MARKERS SHALL BE OF THE PRISMATIC REFLECTOR TYPE (3M MODEL 291-2Y YELLOW, 290-W WHITE OR EQUAL) AS OUTLINED IN SECTION 85-1.05 OF THE CALTRANS STANDARD SPECIFICATIONS. NON-REFLECTIVE PAVEMENT MARKERS SHALL COMPLY WITH THE REQUIREMENTS OUTLINED IN SECTION 85-1.04A OF THE LATEST EDITION OF THE CALTRANS STANDARD SPECIFICATIONS.

INSTALLATION

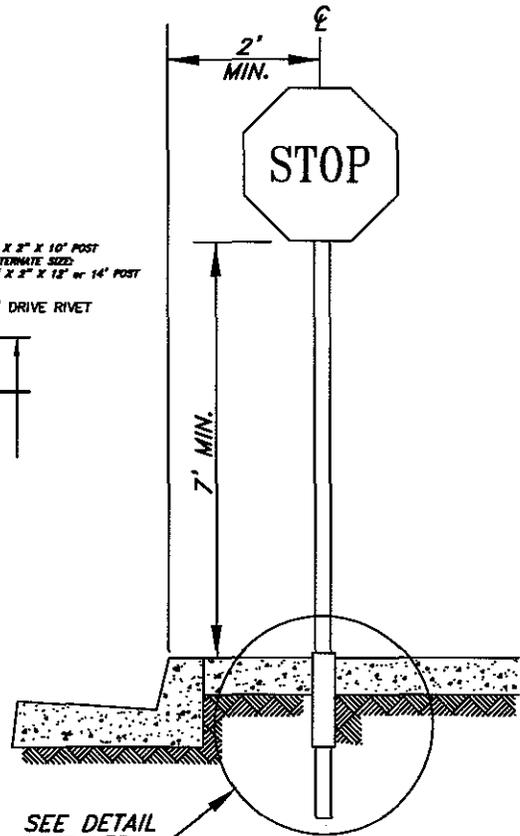
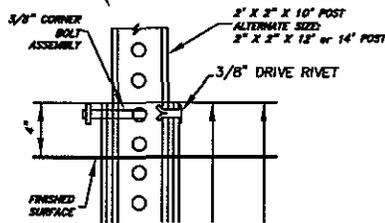
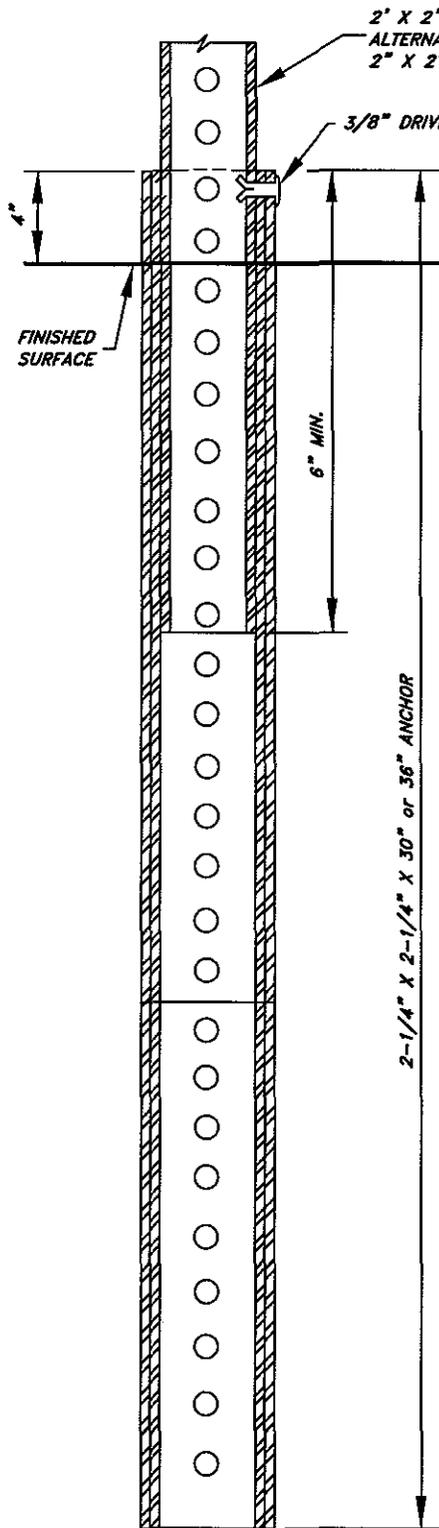
REFLECTIVE PAVEMENT MARKERS MUST BE NEW AND INSTALLED PER THE APPROVED PLAN. INSTALLATION OF REFLECTIVE PAVEMENT MARKERS SHALL BE ACCOMPLISHED WITH THE USE OF A BITUMINOUS TYPE HOT-MELT ADHESIVE SUITABLE FOR BONDING CERAMIC AND PLASTIC MARKERS TO PORTLAND CEMENT, ASPHALTIC CONCRETE AND CHIP-SEALED ROAD SURFACES. THE COMPOSITION OF THE MATERIAL MUST BE SUCH THAT ITS PROPERTIES WILL NOT DEGRADATE WHEN HEATED TO AND APPLIED AT TEMPERATURES UP TO 425 F. USING EITHER AIR OR OIL JACKETED MELTERS.

REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED ON A LOCATION ESTABLISHED BY THE APPLICABLE CALTRANS STRIPING DETAIL NOTED ON THE APPROVED STRIPING PLAN.

REMOVALS

EXISTING REFLECTIVE PAVEMENT MARKERS THAT DO NOT CONFORM TO THE APPROVED PLAN SHALL BE REMOVED BY THE CONTRACTOR PRIOR TO ANY CATTRACKING OR OTHER WORK RELATED TO THE TRAFFIC STRIPING.

<table border="1"> <tr> <td>REVISION</td> <td>ENGINEERING</td> <td>DATE 07/09</td> </tr> <tr> <td>DATE APPROVED</td> <td colspan="2">APPROVED BY</td> </tr> <tr> <td></td> <td colspan="2">  CITY ENGINEER </td> </tr> <tr> <td></td> <td colspan="2"> DATE 08/31/2009 </td> </tr> </table>		REVISION	ENGINEERING	DATE 07/09	DATE APPROVED	APPROVED BY			 CITY ENGINEER			DATE 08/31/2009		<h1>CITY OF LAKE ELSINORE</h1> <p>PREPARED BY PUBLIC WORKS</p>	
REVISION	ENGINEERING	DATE 07/09													
DATE APPROVED	APPROVED BY														
	 CITY ENGINEER														
	DATE 08/31/2009														
STREET STRIPING AND PAVEMENT LEGEND STANDARDS AND SPECIFICATIONS			NO. 405B												

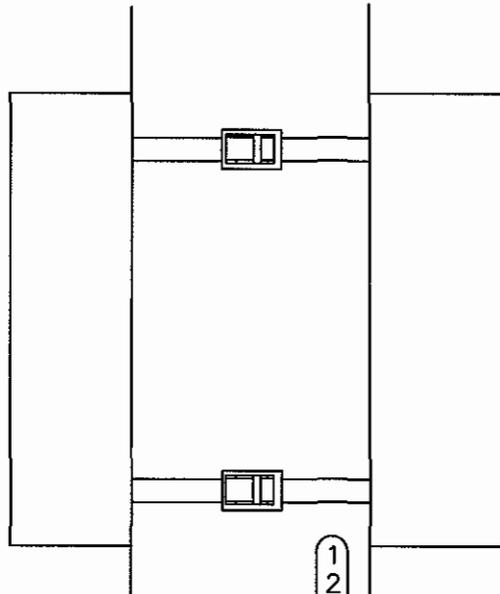
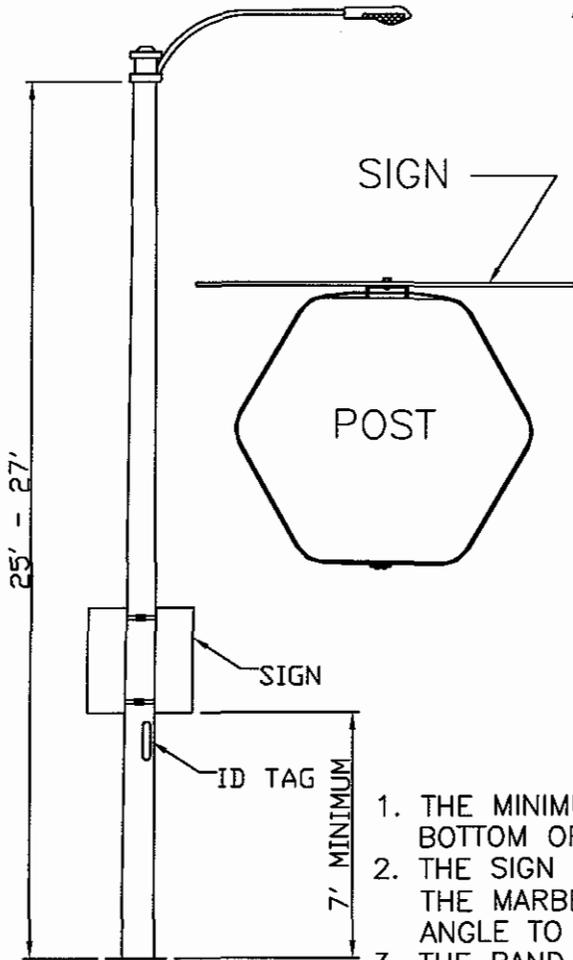


NOTES:

- 1.) STOP SIGNS ARE REQUIRED FOR TRAFFIC CONTROL ON ALL LOCAL STREETS INTERSECTING WITH DESIGNATED "THROUGH STREETS" EXCEPT WHERE CONTROL IS BY A TRAFFIC SIGNAL SYSTEM OR WHERE APPROVED BY THE CITY ENGINEER.
- 2.) STOP SIGNS SHALL BE INSTALLED PER THE ABOVE DRAWINGS.
- 3.) STOP BARS AND "STOP" LEGEND SHALL BE PAINTED IN CONJUNCTION WITH ALL STOP SIGNS
- 4.) THE POST AND ANCHOR SHALL BE MADE OF HOT DIPPED GALVANIZED STEEL SQUARE TUBE BY UNISTRUT OR EQUAL APPROVED IN WRITING PRIOR TO INSTALLATION. ALL SIGN POSTS ARE TO BE 2" TELES PAR SQUARE TUBE WITH ANCHOR BREAKAWAY ASSEMBLY, AVAILABLE FROM UNISTRUT OR EQUAL.
- 5.) THE POST SHALL BE SECURED TO THE ANCHOR ASSEMBLY A 3/8" DRIVE RIVET ABOVE THE SURFACE. NO "BOLT-THROUGH" SECURING METHODS WILL BE ALLOWED.
- 6.) THE STOP SIGN SHALL BE 36" X 36" HIGH INTENSITY GRADE REFLECTORIZED .080 ALUMINUM

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DATE	APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
		CITY ENGINEER		STOP SIGN INSTALLATION	
		DATE 08/31/2009		NO. 406A	

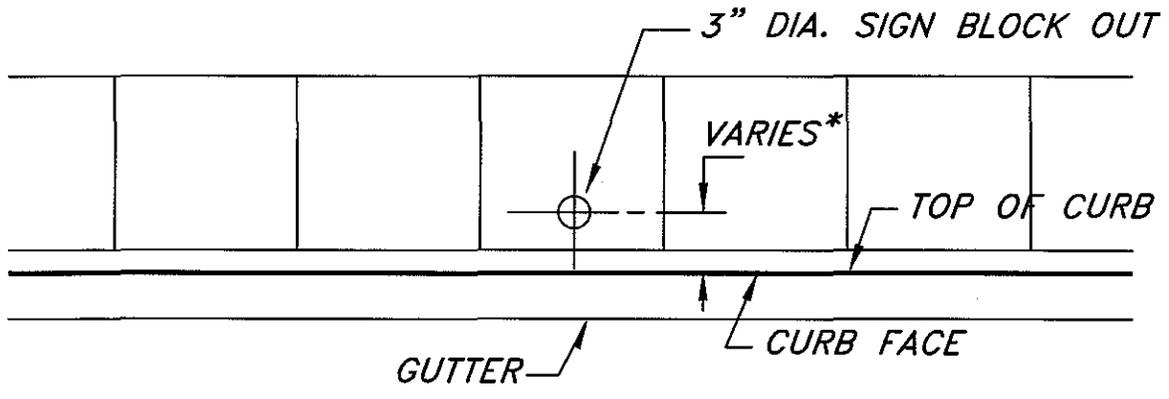
- BAND-IT - C406 OR EQUAL. 316 STAINLESS STEEL
3/4" OR 19.05mm WIDTH
.030" OR .76mm THICKNESS
- BRACKET - BAND-IT, D001 OR EQUAL. 1 BOLT
STRAIGHT LEG STAINLESS STEEL.
- BUCKLES - BAND-IT, C456 OR EQUAL. EAR LOCKED
316 STAINLESS STEEL 3/4" OR 19.05mm.
- BOLTS - 1" X 5/16" COARSE THREAD STAINLESS STEEL.
- WASHERS - ALL SIGNS SHALL BE INSTALLED WITH 5/16" ZINC
COATED WASHERS LARGER THAN THE HEAD OF THE BOLT.
ANY SIGN 24" OR LARGER SHALL BE INSTALLED WITH
WASHERS NO LESS THAN 1" OUTSIDE DIAMETER
ANY SIGN 30" OR LARGER SHALL BE INSTALLED WITH
WASHERS NO LESS THAN 1-1/2" OUTSIDE DIAMETER
(FENDER WASHER).



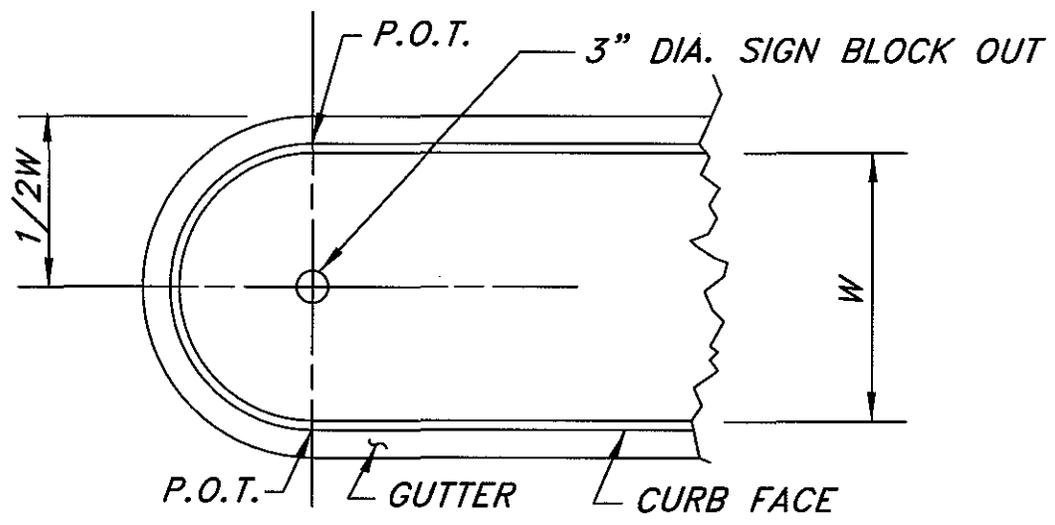
NOTES

1. THE MINIMUM VERTICAL CLEARANCE SHALL BE 7' TO THE BOTTOM OF THE LOWEST SIGN ON THE MARBELITE.
2. THE SIGN SHALL BE BANDED TO THE FLAT SURFACE OF THE MARBELITE THAT BEST ACCOMMODATES A 90 DEGREE ANGLE TO ON COMING TRAFFIC UNLESS OTHERWISE SPECIFIED.
3. THE BAND SHALL BE TIGHTENED TO A POINT AT WHICH IT DOES NOT BREAK, YET PREVENTS MOVEMENT BY HAND OF THE SIGN, BAND, OR BRACKET.
4. ALL SIGNS BEING BANDED TO MARBELITES SHALL HAVE NO LESS THAN 2 BANDS (UPPER AND LOWER). ANY SIGN LARGER THAN 36" SHALL HAVE NO LESS THAN 3 BANDS (UPPER, LOWER, AND MIDDLE).
5. UNDER NO CIRCUMSTANCES SHALL THE BANDS COVER THE IDENTIFICATION TAG ON THE MARBELITE.

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DATE	APPROVED	APPROVED BY					
		<i>Karla Sanchez</i> CITY ENGINEER		08/31/2009 DATE		MARBELITE SIGN INSTALLATION	
						NO. 406B	



SIDEWALK LOCATION



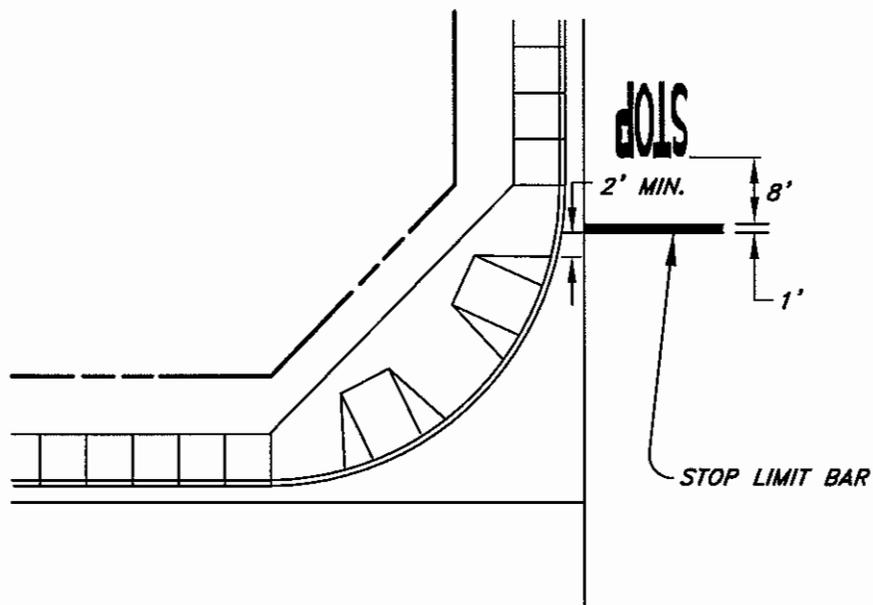
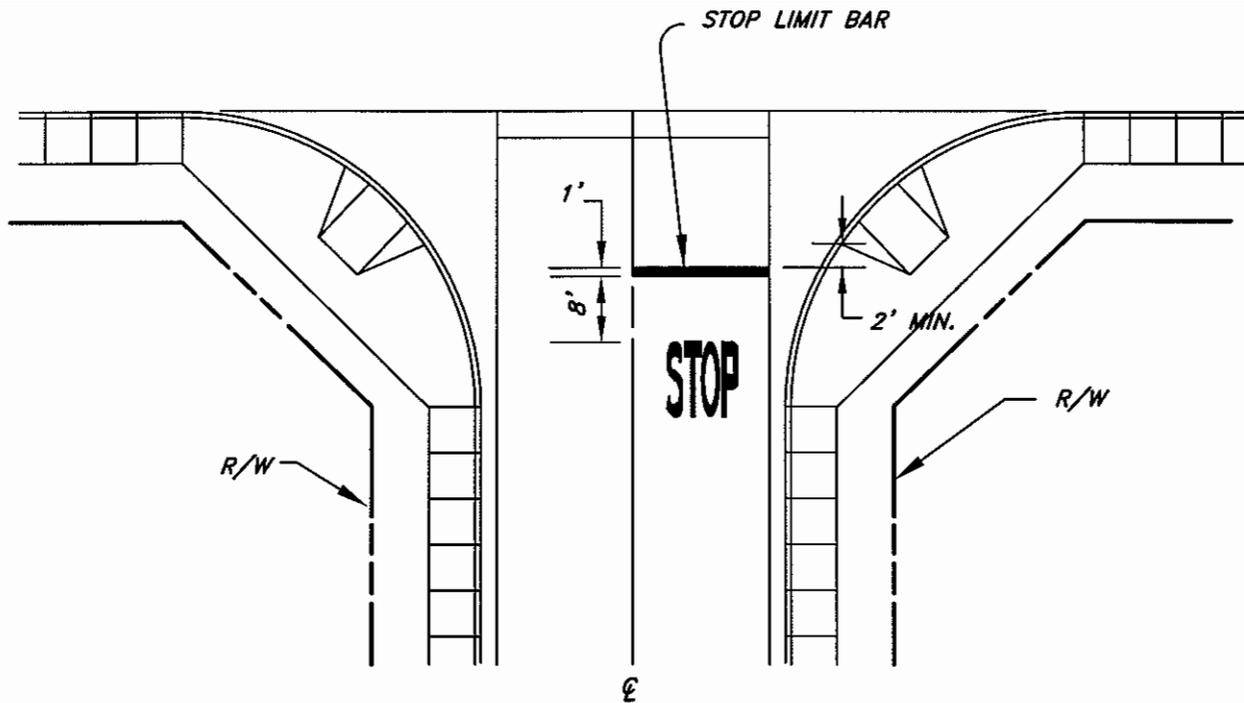
MEDIAN LOCATION

NOTE:

1. SIGN POST BLOCK OUTS SHALL BE USED FOR ANY SIGN IN CONCRETE.

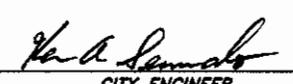
*DISTANCE DETERMINED BY WIDTH OF SIGN.

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		 CITY ENGINEER		SIGN POST BLOCK OUT	
		08/31/2009 DATE		NO. 409	



NOTES:

- 1.) ALL LETTERS WILL BE IN CONFORMANCE WITH THE CALTRANS STANDARD FOR PAVEMENT MARKINGS WORDS (LATEST EDITION).
- 2.) ONE STOP LEGEND SHALL BE INSTALLED IN CENTER OF EACH TRAVEL LANE.
- 3.) STOP LIMIT BAR AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC, STOP LIMIT BAR PLACED TO THE EDGE OF A.C. PAVEMENT.

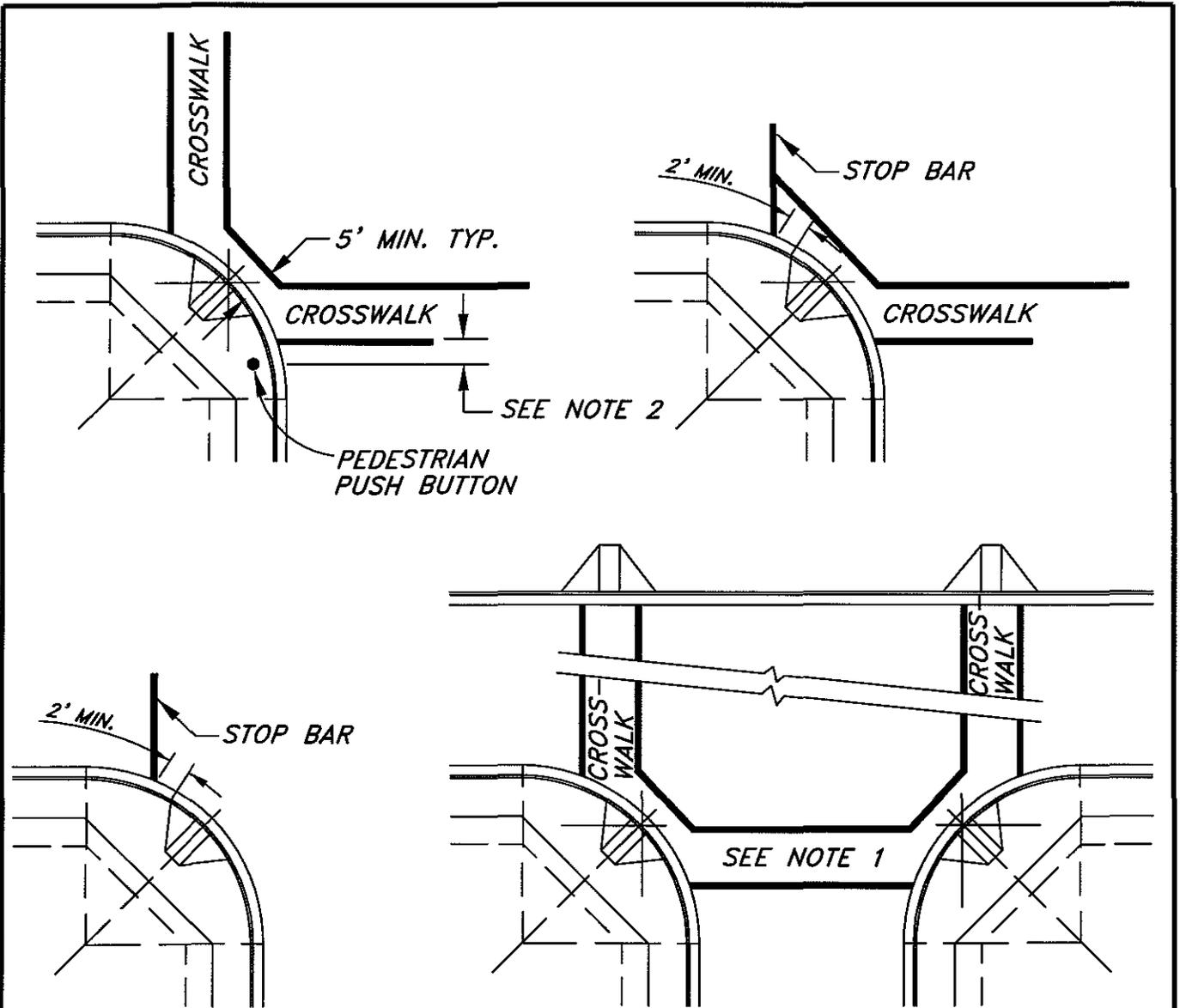
REVISION		ENGINEERING	DATE 07/09
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		 CITY ENGINEER	
		08/31/2009 DATE	

CITY OF LAKE ELSINORE

PREPARED BY PUBLIC WORKS

**STOP BAR LEGEND
PLACEMENT**

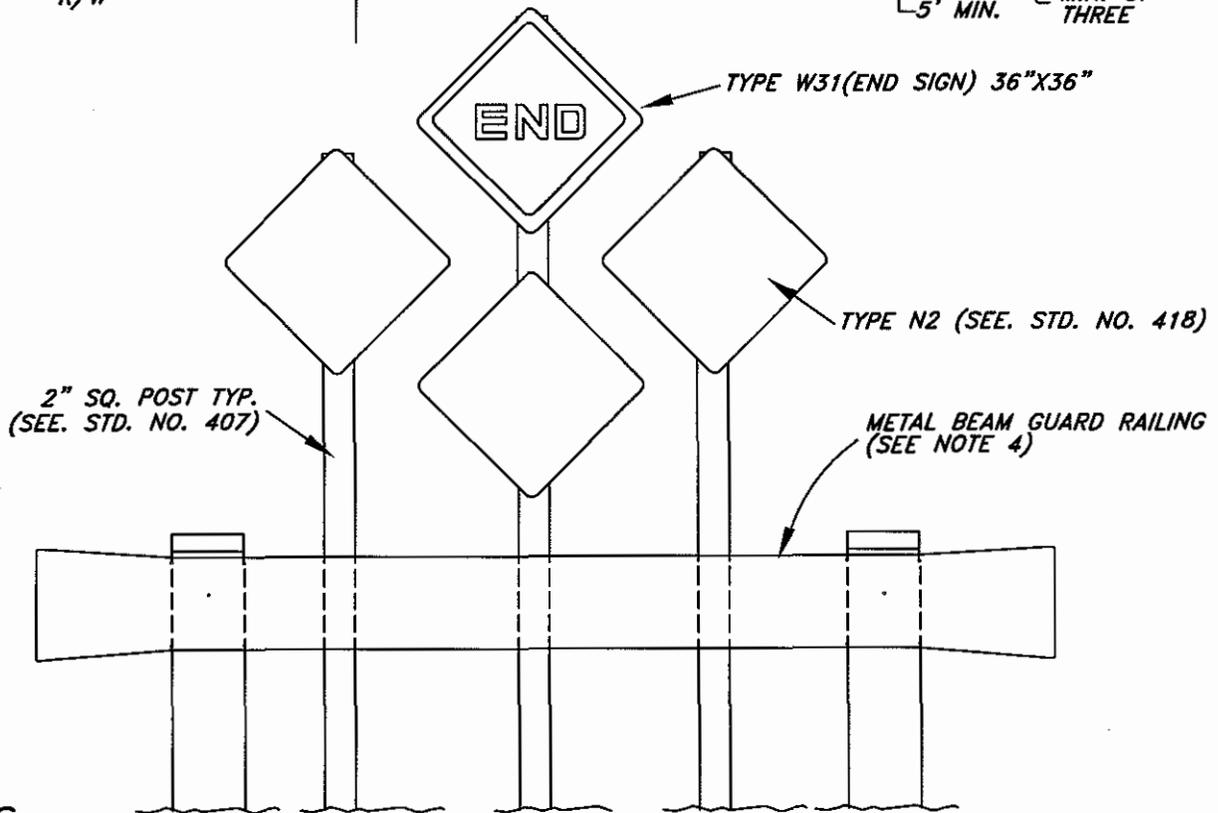
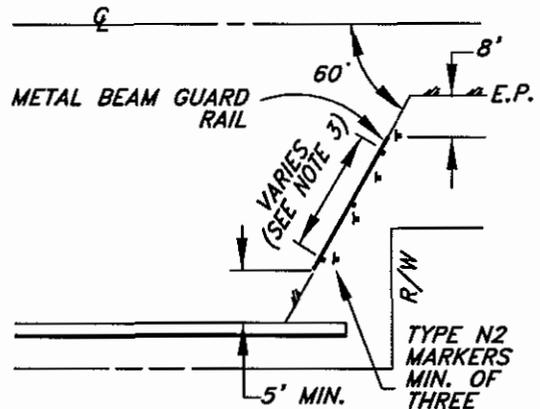
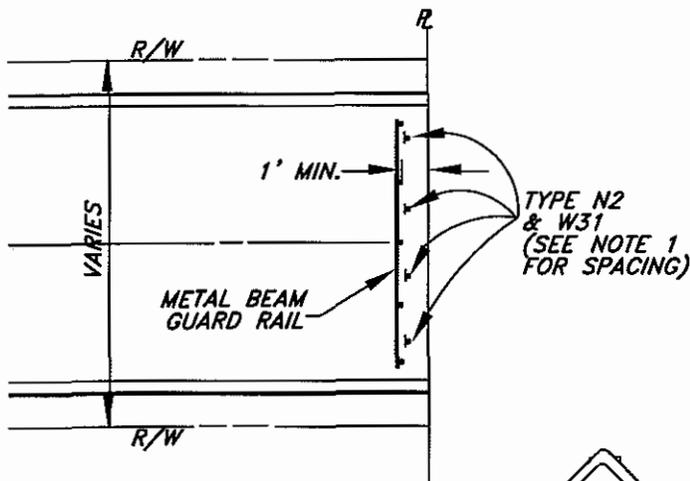
NO.
410



NOTES:

- 1.) CROSSWALK WIDTHS:
10' (INSIDE TO INSIDE) CROSSWALK FOR ROAD WIDTH 44' OR LESS.
- 2.) PEDESTRIAN PUSH BUTTON SHOULD BE LOCATED NOT MORE THAN 5' FROM CROSSWALK. SEPARATE PUSH BUTTON POSTS SHOULD BE USED WHEN THE SIGNAL POLES ARE MORE THAN 5' FROM CROSSWALK.
- 3.) STOP BAR AND CROSSWALK SHALL BE THERMOPLASTIC, LOCATION TO BE DETERMINED IN FIELD.
- 4.) THE ENGINEER WILL DETERMINE CROSSWALK LOCATIONS THAT VARY FROM THIS STANDARD.

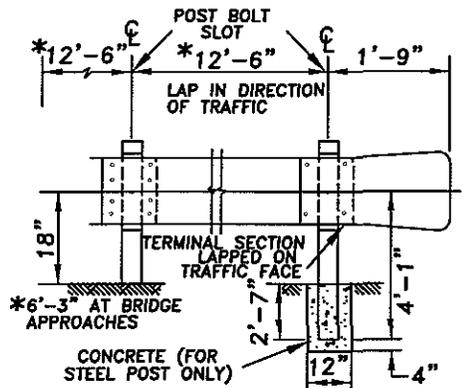
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009	NO. 411
				DATE	
				CROSSWALK LOCATION	



NOTES:

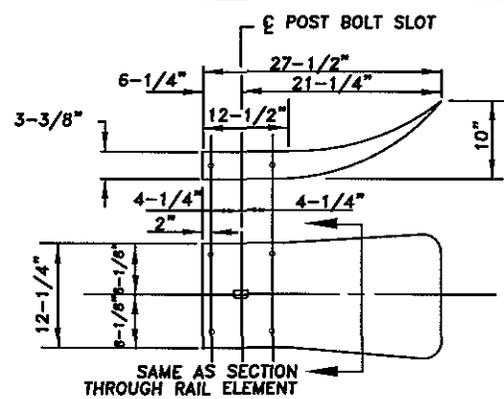
- 1.) THREE TYPE N2 AND ONE W31 (END SIGN) SHALL BE PLACED AT THE END OF EACH ROADWAY AS SHOWN ON THIS STANDARD DRAWING, AND ONLY AT THE DIRECTION OF THE CITY ENGINEER.
- 2.) TYPE N2 SIGNS OR TYPE W31 (END SIGNS) SHALL BE PLACED AS SHOWN WITH REFLECTIVE FACE IN DIRECT LINE OF SIGHT FOR APPROACHING MOTORIST.
- 3.) LENGTH OF METAL BEAM GUARD RAILING SHALL BE IN MULTIPLES OF 12'-6", PLUS 1'-9" FOR EACH END PIECE.
- 4.) SEE STANDARD DRAWING NUMBER 413B FOR METAL BEAM GUARD RAILING DETAILS.
- 5.) SHALL BE USED ONLY WITH THE APPROVAL BY CITY TRAFFIC ENGINEER.

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DATE	APPROVED				
		APPROVED BY		METAL BEAM GUARD RAILING	
		<i>Ken A. Lando</i>	08/31/2009		
		CITY ENGINEER	DATE	NO.	413A

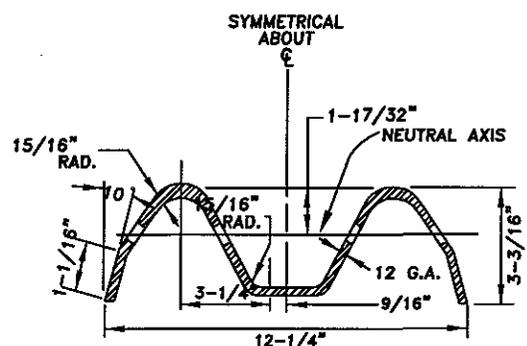


INSTALLATION

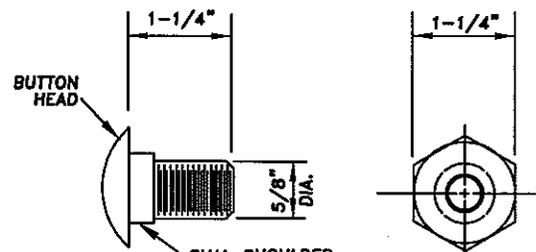
NOTE: GUARD RAILING FLARES AT BRIDGE APPROACHES SHALL HAVE A MINIMUM RADIUS OF 150'.



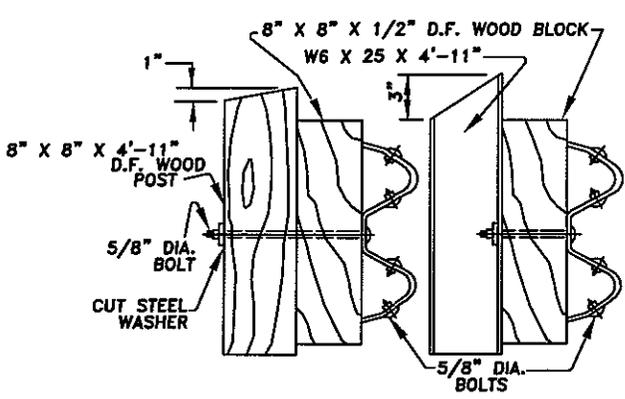
TERMINAL SECTION



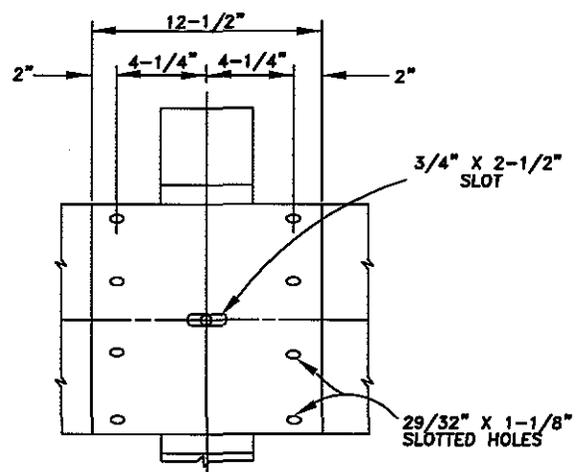
SECTION THROUGH RAIL ELEMENT



SPLICE BOLT AND NUT
POST BOLT: SIMILAR EXCEPT LENGTH



ARRANGEMENT OF POSTS



RAIL SPLICE

REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED	APPROVED BY	
		<i>Karl Lench</i>	09/31/2009
		CITY ENGINEER	DATE

CITY OF LAKE ELSINORE
PREPARED BY PUBLIC WORKS

METAL BEAM GUARD RAILING NOTES

2 OF 2
NO.
413B

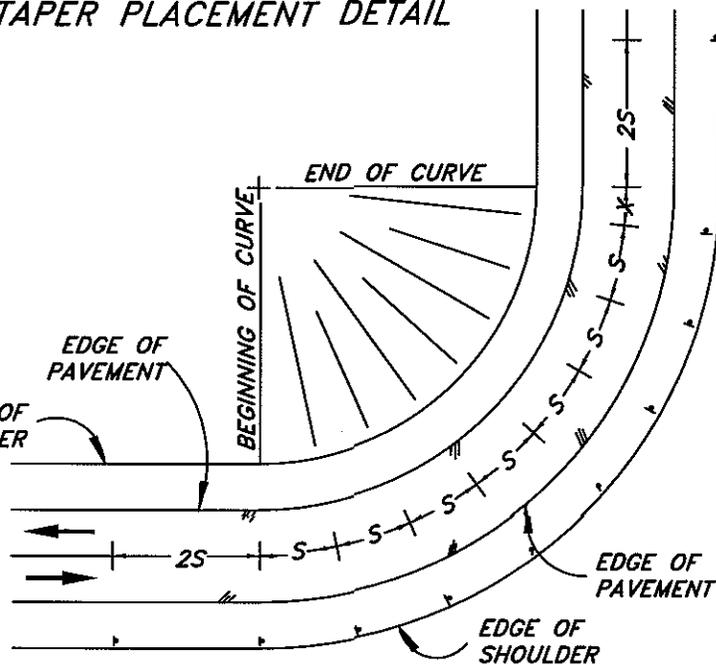
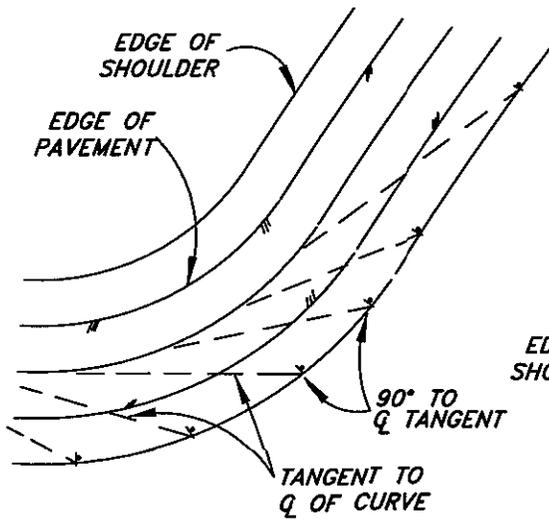
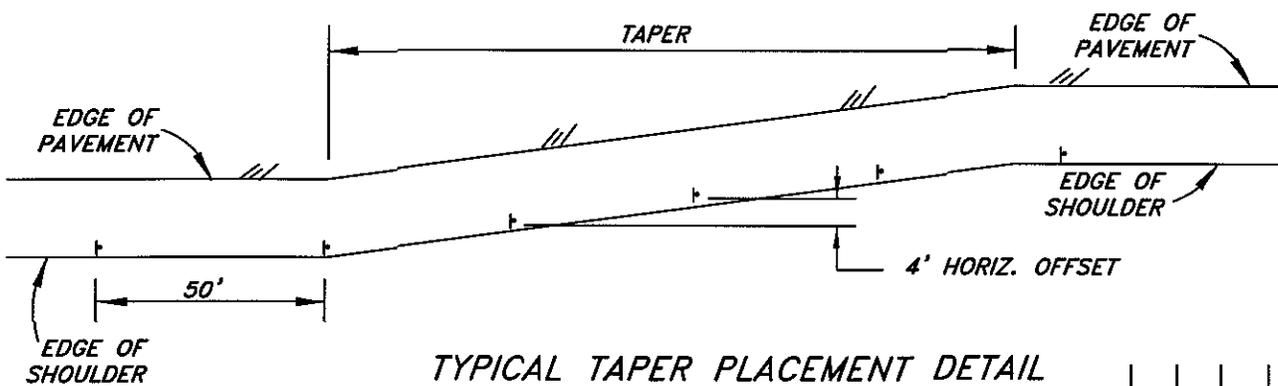


TABLE 1

R in feet	S in feet
50'	20'
75'	20'
100'	25'
150'	30'
200'	35'
300'	50'
400'	55'
500'	65'
600'	70'
700'	75'
800'	80'
900'	85'
1000'	90'
1200'	100'
1400'	110'
1600'	115'
1800'	125'
2000'	130'

NOTES:

1. MAXIMUM SPACING BETWEEN GUIDE MARKERS = 300', MINIMUM = 20'.
2. GUIDE MARKER SPACING ON CURVES LESS THAN 2000' RADIUS SHALL CONFORM TO THE SPACING INDICATED IN TABLE 1.
3. PRORATE DISTANCE "X" AMONG ALL SPACINGS WITHIN CURVE SO LAST GUIDE MARKER FALLS AT THE END OF CURVE.

LEGEND:

- S = GUIDE MARKER SPACING IN FEET. $S = 3\sqrt{R-50}$.
- R = CENTERLINE CURVE RADIUS IN FEET.
- ▴ = ALTERNATING GUIDE MARKERS TYPE L CLASS 1 AND WB1.
- X = DISTANCE REMAINING WITHIN CURVE FROM LAST CALCULATED GUIDE MARKER TO END OF CURVE.

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CITY OF LAKE ELSINORE

PREPARED BY PUBLIC WORKS

GUIDE MARKING PLACEMENT

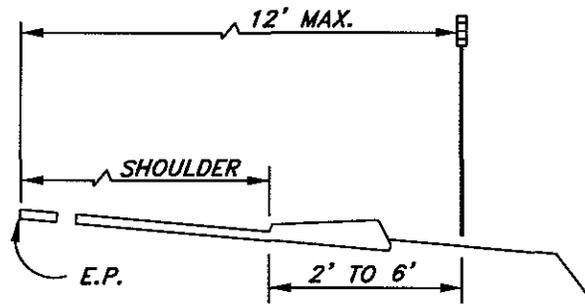
NO. 415

TYPE	REFLECTOR COLOR	
	FRONT	BACK
E	WHITE	WHITE (SEE NOTE 1)
F	WHITE	NONE
G	YELLOW	NONE
I	YELLOW	YELLOW (SEE NOTE 1)

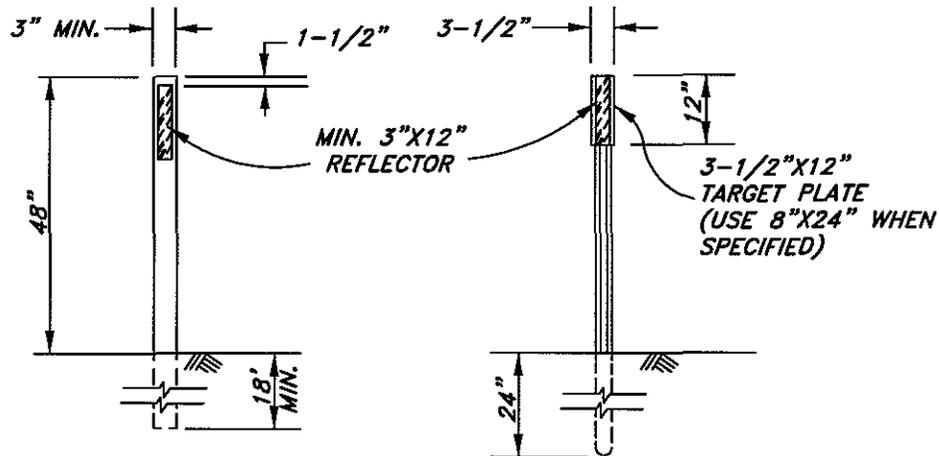
NOTES:

1. THE REFLECTOR USED ON BACK OF DELINEATOR SHALL BE ONE 3" SQUARE REFLECTIVE SHEETING ON CLASS 1 DELINEATOR AND ONE STANDARD REFLEX REFLECTOR ON CLASS 2 DELINEATOR.
2. THE TYPE OF REFLECTORIZATION AND THE CLASS OF DELINEATOR TO BE INSTALLED WILL BE DESIGNATED ON THE PLANS AS E-1, F-2, ETC.

DELINEATOR REFLECTORIZATION



DELINEATOR POSITIONING

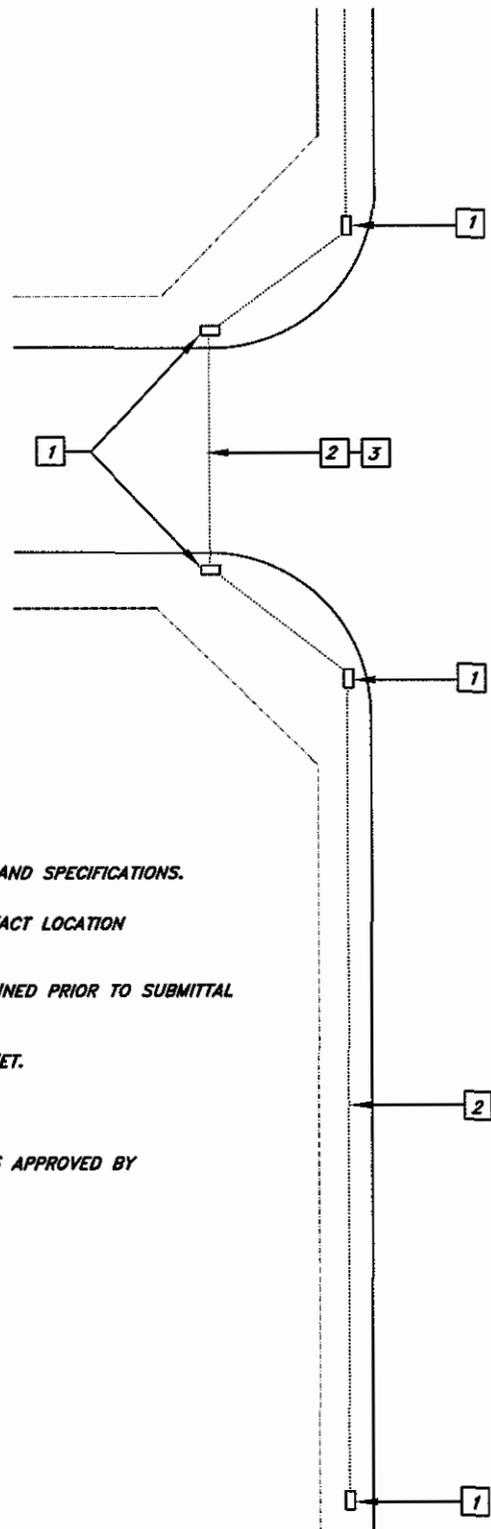


**CLASS 1
FLEXIBLE POST**

**CLASS 2
METAL POST**

DELINEATORS

<table border="1"> <thead> <tr> <th>REVISION</th> <th>DATE</th> <th>APPROVED</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REVISION	DATE	APPROVED													<p>ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p><i>Karl Samala</i> 08/31/2009 CITY ENGINEER DATE</p>	<p>CITY OF LAKE ELSINORE</p> <p>PREPARED BY PUBLIC WORKS</p>	<p>NO. 417</p>
REVISION	DATE	APPROVED																	
		<p>DELINEATORS</p>																	



NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO CALTRANS STANDARD PLANS AND SPECIFICATIONS.
2. THE CITY TRAFFIC ENGINEER OR HIS REPRESENTATIVE SHALL APPROVE THE EXACT LOCATION OF ALL CONDUIT AND PULL BOXES.
3. THE LOCATION OF INTERCONNECT CONDUIT AND PULL BOXES WILL BE DETERMINED PRIOR TO SUBMITTAL OF THE ENGINEERING PLANS.
4. NO SPLICE INTERCONNECT EXCEPT IN THE TRAFFIC SIGNAL CONTROLLER CABINET.

- 1 FURNISH AND INSTALL NO. 6 PULL BOX. (MAX. 200' SPACING)
- 2 FURNISH AND INSTALL NEW 4" GALVINIZED RIDGED STEEL CONDUIT (GRS), AS APPROVED BY THE CITY TRAFFIC ENGINEER OR HIS REPRESENTATIVE.
- 3 FURNISH AND INSTALL 6 PAIR NO. 19 INTERCONNECT CABLE.

REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED	APPROVED BY	
		 CITY ENGINEER	
		08/31/2009 DATE	

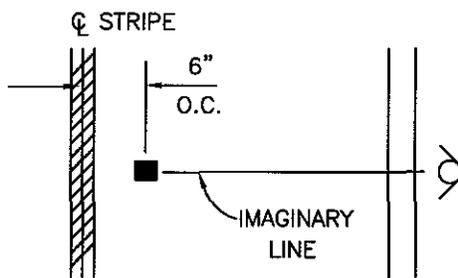
CITY OF LAKE ELSINORE
PREPARED BY PUBLIC WORKS

**TRAFFIC SIGNAL
INTERCONNECT DETAIL**

NO.
421

"BLUE DOT" TYPE 1 MARKER PLACEMENT NOTES

1. THE REFLECTIVE SIDE SHALL FACE THE FLOW OF TRAFFIC.
2. THE "BLUE DOT" SHALL BE IN LINE WITH THE FIRE HYDRANT, EXCEPT WHERE TWO (2) DOTS ARE USED FOR INTERSECTIONS.
3. A BLUE REFLECTIVE MARKER WILL BE PLACED 6" FROM THE CENTER OF THE PAINTED LINES AS PER PLACEMENT STANDARD 422B OR 422C AS APPLICABLE. IF NO TRAFFIC LINES EXIST, PLACE BLUE DOT 6" FROM CENTER OF THE STREET ON THE FIRE HYDRANT SIDE. (SEE STANDARD PLACEMENT DETAIL HEREON.)
4. IF A PAINTED TRAFFIC LIMIT LINE FOR STOP SIGNS EXISTS, PLACE THE SECOND "BLUE DOT" 2 FEET BACK FROM LINE, 6" ON CENTER FROM PAINTED TRAFFIC LIMIT LINE (SEE STANDARD 422B, "STREET INTERSECTION")
5. IF NO TRAFFIC LIMIT LINE FOR STOP SIGNS EXISTS, PLACE "BLUE DOT" IN LINE WITH SIDEWALK EDGE ON THE SIDE CLOSEST TO PROPERTY LINE, 6" ON CENTER FROM THE CENTER OF THE STREET LINE (SEE STANDARD 422B, "STREET INTERSECTION").
6. THE "BLUE DOT" SHALL BE APPLIED TO A DRY, DIRT FREE STREET AND ENOUGH ADHESIVE SHALL BE APPLIED SO THAT SOME ADHESIVE Oozes OUT AROUND THE EDGES OF THE "BLUE DOT".



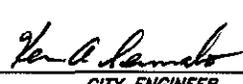
UNMARKED STREETS: PLACE MARKER 6" FROM EDGE OF IMAGINARY LINE OF STREET ON HYDRANT SIDE.

MARKED STREETS: PLACE MARKER 6" FROM CENTERLINE OF PAINTED LINE TO CENTERLINE OF MARKER ON HYDRANT SIDE.

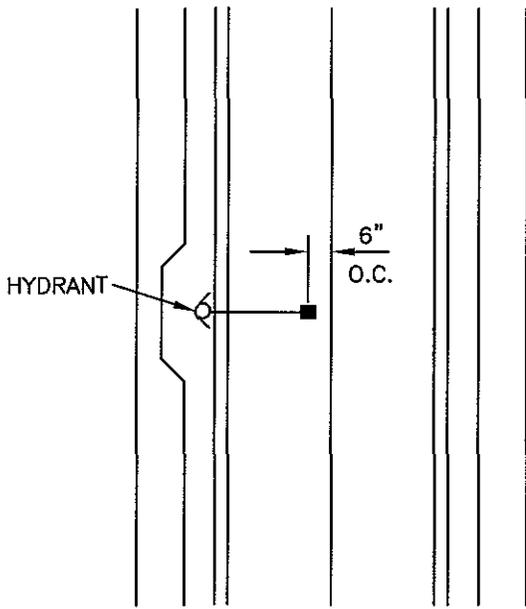
 — FIRE HYDRANT

 — BLUE MARKER

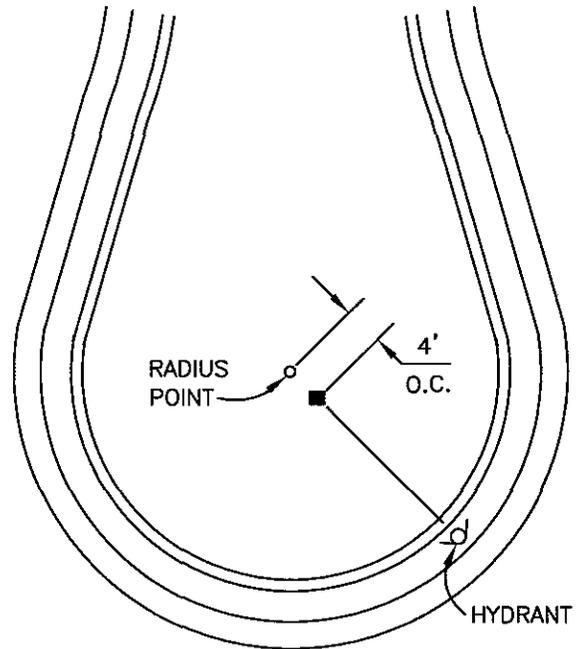
"BLUE DOT" TYPE 1 MARKER PLACEMENT

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED		<i>PREPARED BY PUBLIC WORKS</i>	
	APPROVED BY		"BLUE DOT" TYPE 1 MARKER PLACEMENT NOTES	
	 CITY ENGINEER	08/31/2009 DATE	1 OF 3 NO. 422A	

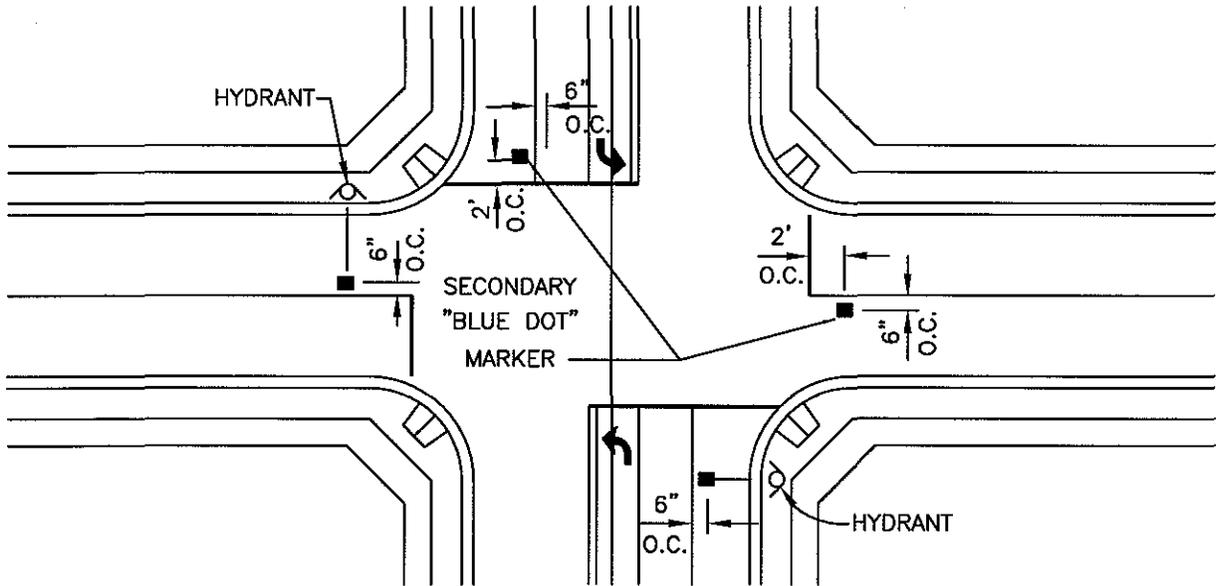
☐ STREET OR
CENTER STRIPE



TWO LANE STREET



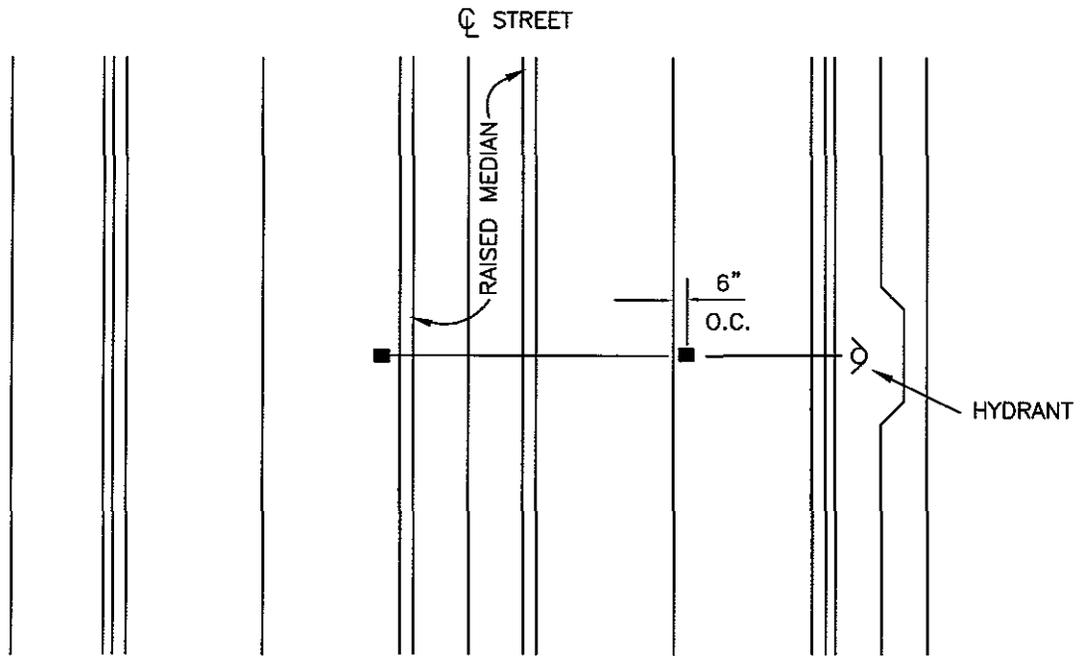
CUL-DE-SAC



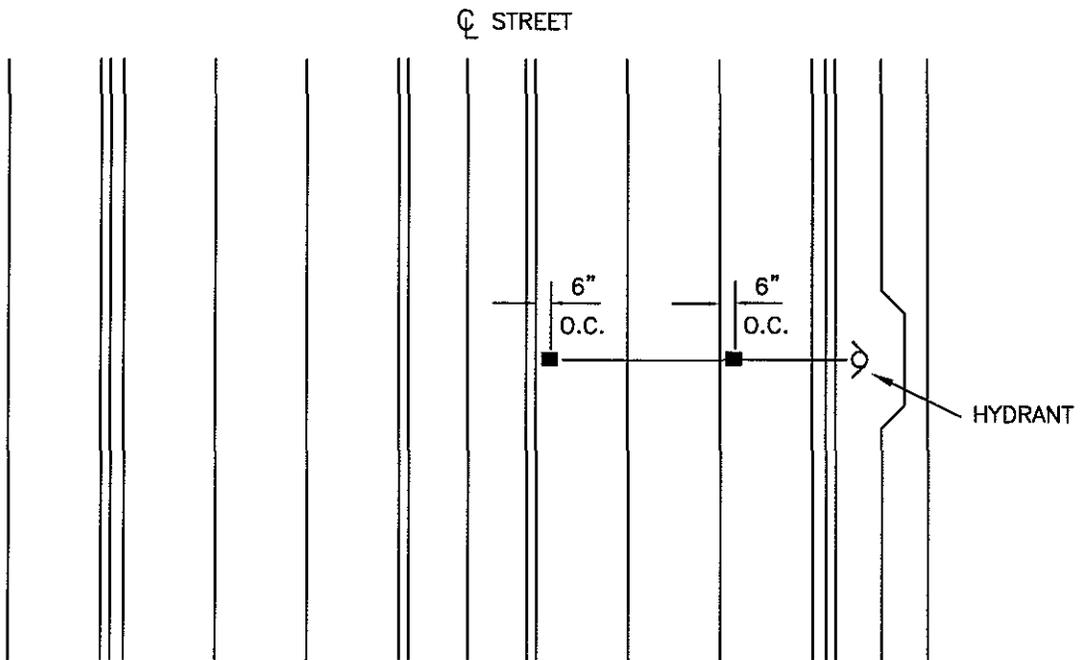
STREET INTERSECTION

NOTE: FOR NOTES REGARDING "BLUE DOT" MARKER PLACEMENT, SEE STD. PLAN 422A

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	PREPARED BY PUBLIC WORKS
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		"BLUE DOT" TYPE I MARKER PLACEMENT	
		08/31/2009 DATE		STREET INTERSECTION & CUL-DE-SACS	
					2 OF 3
					NO. 422B



DIVIDED STREET



STREET WITH TURN LANE

NOTE: FOR NOTES REGARDING "BLUE DOT" MARKER PLACEMENT, SEE STD. PLAN 422A

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED		PREPARED BY PUBLIC WORKS	
			"BLUE DOT" TYPE I MARKER PLACEMENT	
			DIVIDED STREET	
			&	
			STREET WITH TURN LANE	
			3 OF 3	
			NO.	
			422C	

APPROVED BY

Karl Samals

CITY ENGINEER

08/31/2009
DATE

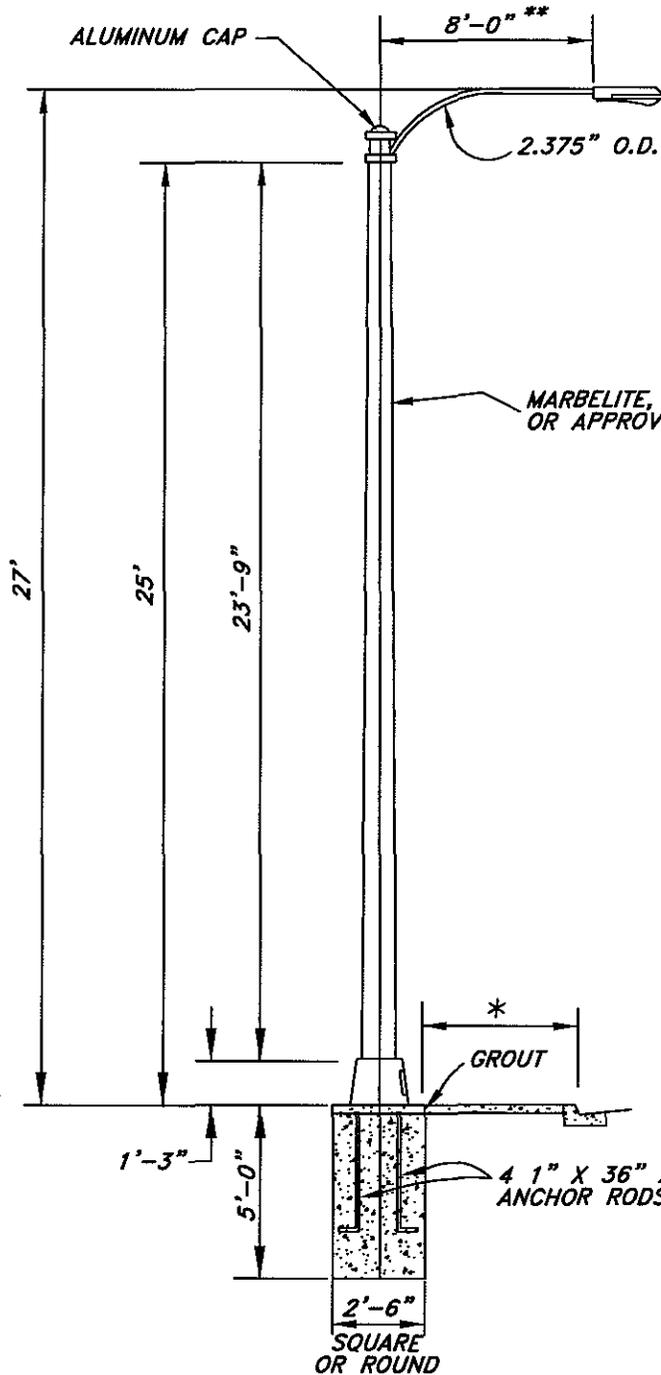
CITY OF LAKE ELSINORE
STANDARD PLANS

SECTION 5:
Street Lights,
Irrigation and
Planting

**STANDARD INSTALLATION DETAILS
IRRIGATION (PUBLIC WORKS)**

<u>Detail No.</u>	<u>Title</u>
LIGHTING	
501	<i>Residential Lighting</i>
502	<i>Arterial Highway Lighting</i>
IRRIGATION	
542	<i>CCU Radio Link Antenna Detail</i>
543	<i>Controller/Satellite Enclosure Detail</i>
544	<i>Flow Sensor Assembly Detail</i>
545	<i>Telemetry Pull-Box Assembly Detail</i>
547	<i>External Ground Rod Assembly Detail</i>
548	<i>Master Valve Assembly Detail</i>
549	<i>Toe Nipple Assembly</i>
551	<i>Irrigation Wire Connector</i>
552	<i>Irrigation Pump Detail</i>
553	<i>Reduced Pressure Backflow Preventer</i>
554	<i>Backflow Preventer Enclosure</i>
555	<i>Pressure Reducing Valve</i>
556	<i>Gate Valve - 3" or Smaller</i>
557	<i>Remote Control Valve with Union</i>
558	<i>Remote Control Valve for Drip Systems</i>
559	<i>Quick Coupling Valve</i>
560	<i>Irrigation Stub -Out Box</i>
561	<i>Trenching Detail</i>
562	<i>Sleeving Detail</i>
563	<i>Median & Parkway Irrigation Line Installation</i>
564	<i>6" Pop-up Spray Head</i>
565	<i>12" Pop-up Spray Head</i>
566	<i>Pop-up Rotary Head</i>
567	<i>Rotor Installation on Fixed Riser</i>
568	<i>Deep Well Tree Irrigation: Drip and/or Bubbler</i>
569	<i>Drip Emitter Installation</i>
PLANTING (PUBLIC WORKS AND PRIVATE)	
580	<i>Palm Tree Planting</i>
581	<i>Tree Guying Detail -36" Box or Larger</i>
582	<i>Typical Double Stake Tree (15 Gal.-25" Box)</i>
583	<i>Double Staked Tree on Slope</i>
584	<i>Tree Spacing Requirements</i>
585	<i>Container Planting</i>
586	<i>Container Planting on Slope</i>
587	<i>Shrub/Groundcover Spacing</i>
588	<i>Vine Detail: Non-Adhering Type</i>
589	<i>Mulch Installation</i>
590	<i>2x4 Redwood Header</i>
591	<i>Concrete Mow Curb</i>
592	<i>Erosion Control Netting</i>

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		INDEX	NO. 500
		 CITY ENGINEER			
		DATE 08/26/2009			



LUMINAIRE RESIDENTIAL 9500
LUMEN HIGH PRESSURE SODIUM
TYPE TO BE SHOWN ON GENERAL
STREET LIGHTING PLAN.

** WHEN STREET LIGHT IS INSTALLED
ADJACENT TO CURB, MAST ARM
LENGTH SHALL BE 4'-0"

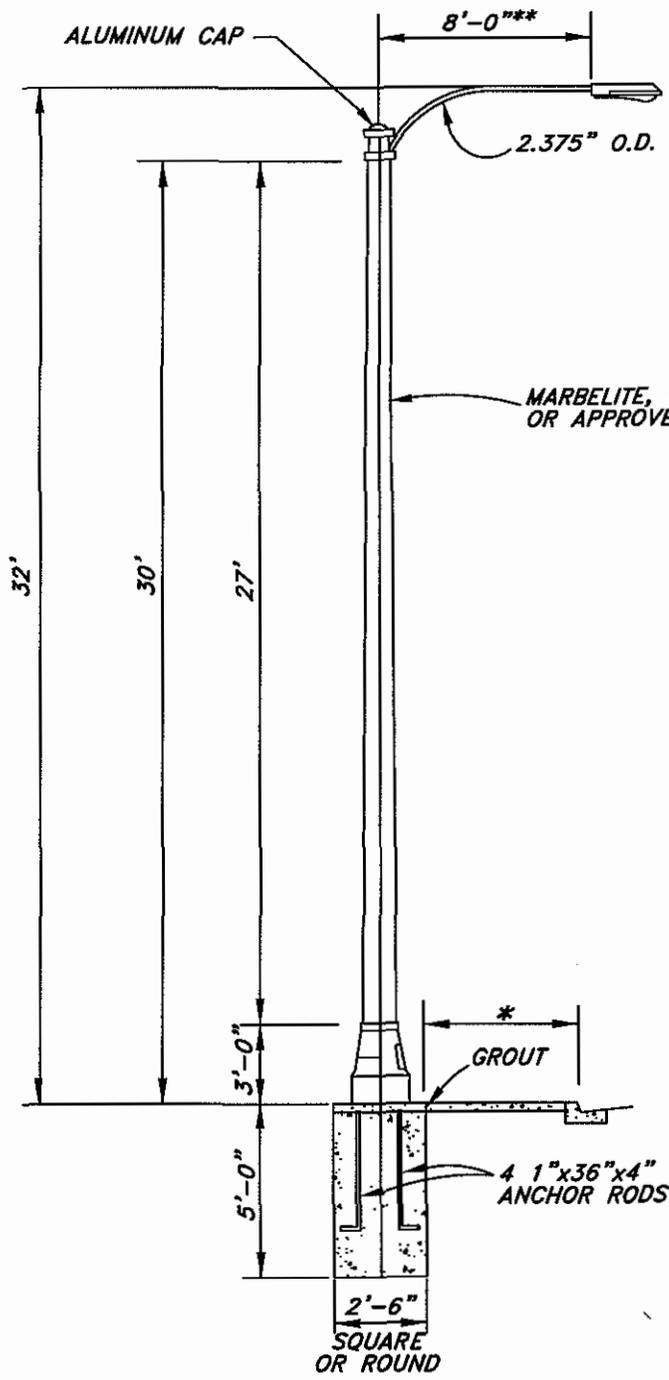
MARBELITE, ORNAMENTAL GRANITE,
OR APPROVED EQUAL

* 6'-0" STANDARD
1'-6" WHEN SIDEWALKS ARE
NOT PROPOSED FOR
INSTALLATION
MIN. 4' CLEARANCE FOR SIDEWALK

4 1" X 36" X 4"
ANCHOR RODS
2'-6"
SQUARE
OR ROUND

NOTE:
THESE LIGHTING STANDARDS MAY BE SUPERSEDED BY THE STANDARDS OF THE SERVING
UTILITY IF THEY ARE IN ACCORDANCE WITH THE NATIONAL STREET LIGHTING GUIDE.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		RESIDENTIAL LIGHTING	NO. 501
		 DATE			



LUMINAIRE 22,000
LUMEN HIGH PRESSURE SODIUM
TYPE TO BE SHOWN ON GENERAL
STREET LIGHTING PLAN.

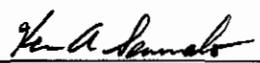
**WHEN STREET LIGHT IS INSTALLED
ADJACENT TO CURB, MAST ARM
LENGTH SHALL BE 4'-0"

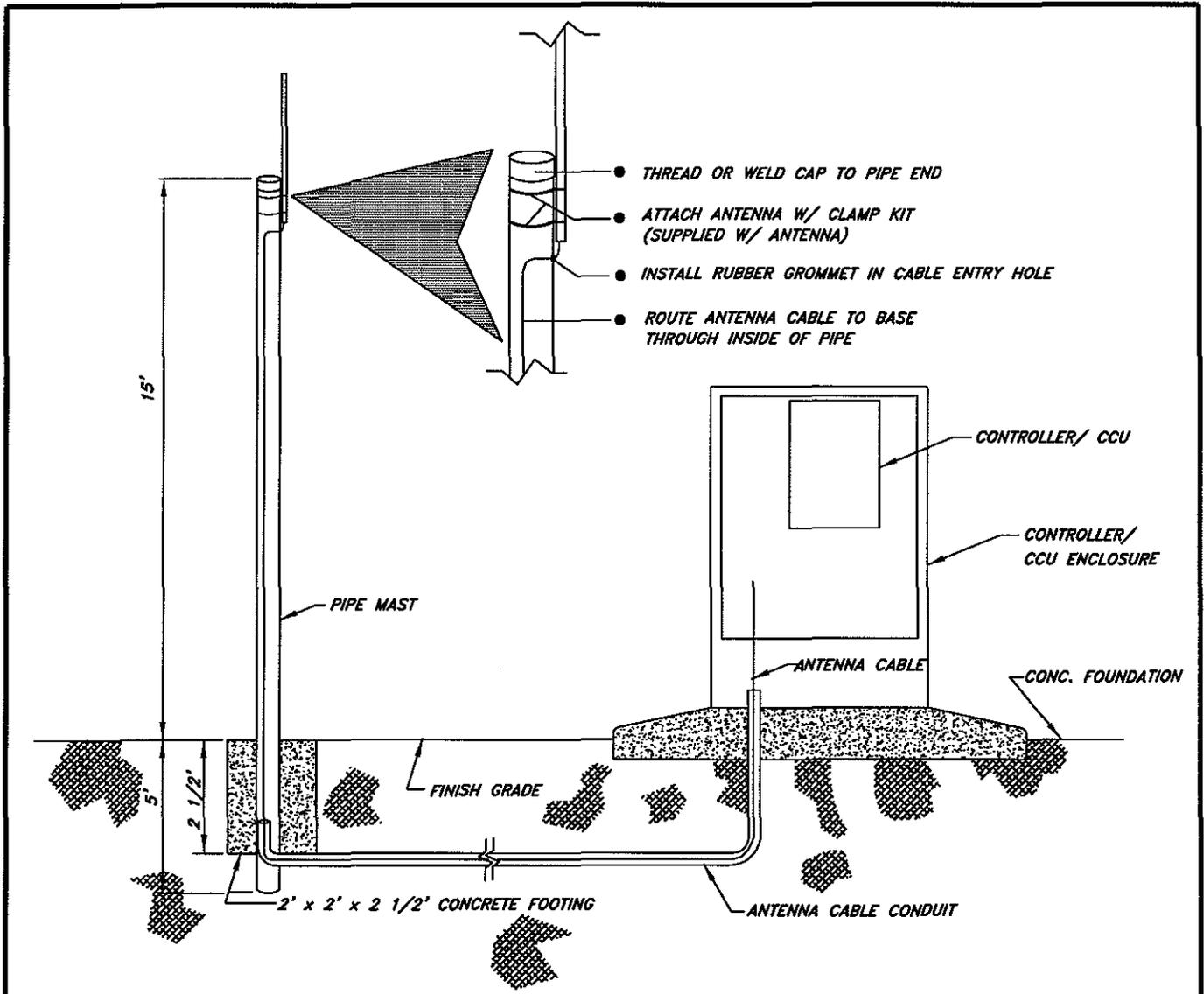
MARBELITE, ORNAMENTAL GRANITE,
OR APPROVED EQUAL

*6'-0" STANDARD
1'-6" WHEN SIDEWALKS ARE
NOT PROPOSED FOR
INSTALLATION

2'-6"
SQUARE
OR ROUND

NOTE:
THESE LIGHTING STANDARDS MAY BE SUPERSEDED BY THE STANDARDS OF THE SERVING
UTILITY IF THEY ARE IN ACCORDANCE WITH THE NATIONAL STREET LIGHTING GUIDE.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		ARTERIAL HIGHWAY LIGHTING	NO. 502
			08/31/2009 DATE		



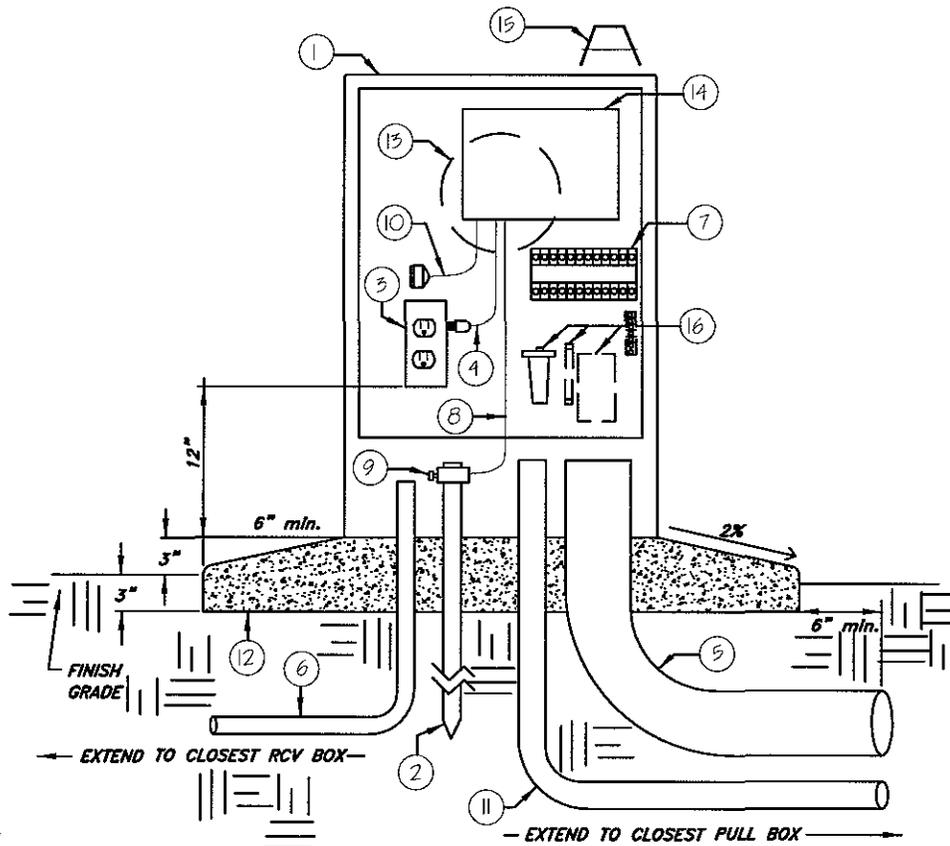
- THREAD OR WELD CAP TO PIPE END
- ATTACH ANTENNA W/ CLAMP KIT (SUPPLIED W/ ANTENNA)
- INSTALL RUBBER GROMMET IN CABLE ENTRY HOLE
- ROUTE ANTENNA CABLE TO BASE THROUGH INSIDE OF PIPE

NOTES:

- 1.) RADIO ANTENNA MAST SHALL BE 2" THREADED STEEL PIPE STOCK & FITTINGS
- 2.) ANTENNA MAST SURFACE COATING SHALL BE GLYD-ZINC Y-5536/ 5537 - GREY-GREEN (OR APPROVED EQUAL)
- 3.) ANTENNA LEAD WIRE SWEEPS/ CONDUIT TO BE SCHD. 40 PVC. ALL SWEEPS TO BE 1" MIN. DIA. EXTEND CONDUIT ALONG THE ENTIRE REACH OF LEAD WIRE PATH, ENDING IN CCU ENCLOSURE
- 4.) ANTENNA CABLE SHALL EXTEND INTO ENCLOSURE 18" PAST END OF SWEEP

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
		 CITY ENGINEER		CCU RADIO LINK ANTENNA DETAIL	
		08/31/2009 DATE		NO. 542	



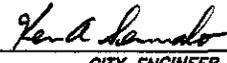
LEGEND:

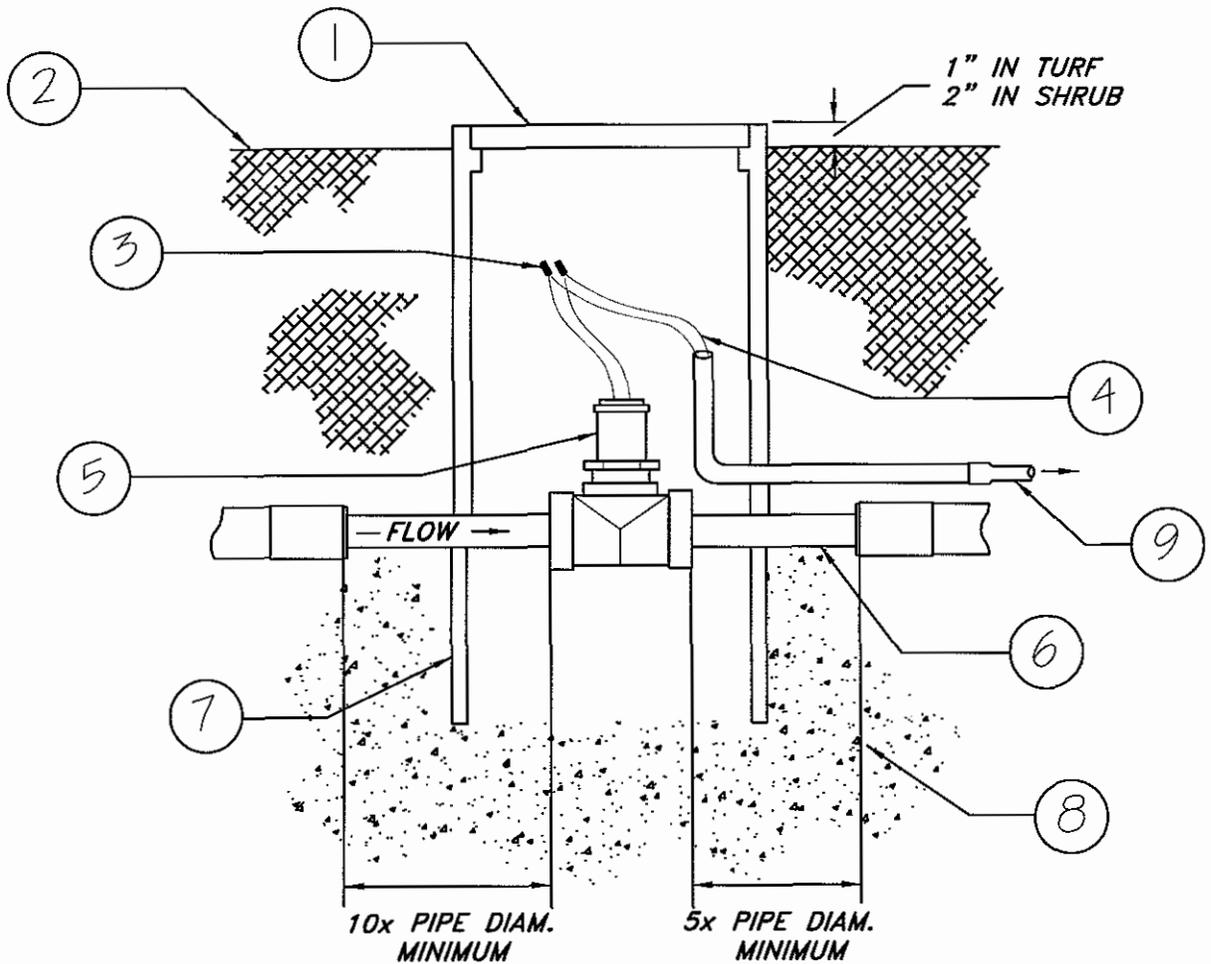
- ① ELECTRICAL METER/IRRIGATION CONTROLLER ENCLOSURE W/ 110 VAC SERVICE PANEL-DOUBLE DOOR-STAINLESS STEEL
- ② 5/8" x 8" COPPER-CLAD GROUNDING ROD (GROUND 110 & CONTROLLER)
- ③ DUPLEX OUTLET (CONDUIT PATH TO SERVICE PANEL PER CODE). INSTALL W/ SURGE
- ④ ARRESTOR - TRIPP-LITE MODEL ISO-BLOK 2-0
- ④ APPLIANCE GRADE 110 VAC 3-WIRE CONDUCTOR POWER CORD (SIZED TO REACH DUPLEX OUTLET). SECURE TO CONTROLLER CABINET
- ⑤ 3" SCH. 40 E.C. SWEEP ELL FOR 14 GA. UF CONTROL WIRE ONLY
- ⑥ 3/4" SCH. 40 E.C. SWEEP ELL W/ NYLON PULL ROPE FOR FUTURE MOISTURE SENSOR WIRING
- ⑦ TERMINAL STRIP FOR CONNECTION OF 14 GA. UF FIELD WIRE FROM SWEEP. USE 16 GA. UTILITY WIRE TO CONNECT TERMINAL STRIP TO CONTROLLER (typ.)
- ⑧ #10 SOLID COPPER WIRE FROM GROUNDING ROD TO CONTROLLER GROUND LUG
- ⑨ BRASS / BRONZE GROUND CLAMP
- ⑩ REMOTE CONTROL ACTUATOR INTERFACE-PER PLAN
- ⑪ TELEMETRY CONDUIT - SIZE PER PLAN. EXTEND PE 39 CABLE INTO ENCLOSURE 18" MIN. FROM END OF SWEEP (USE FOR MAXICOM WIRE LINK / FLOW SENSOR WIRE LINK @ 1 PER ea.)
- ⑫ 6" THICK CONCRETE FOOTING POURED ON COMPACTED SUBGRADE (95% RELATIVE COMPACTION). RADIUS EDGES @ 1/2"
- ⑬ ELECTRIC METER
- ⑭ IRRIGATION CONTROLLER - MODEL # PER PLAN CALL-OUT
- ⑮ ANTENNA - RADIO LINKED MAXICOM ONLY - MODEL # PER PLAN CALL-OUT
- ⑯ FLOW SENSING COMPONENTS (INSTALL IF SHOWN ON PLAN) - MODEL #'S PER PLAN CALL-OUT

NOTES:

- 1.) COMMON WIRE TO BE WHITE. PILOT WIRES TO BE RED
- 2.) NO SPLICES ALLOWED BETWEEN TERMINAL STRIP AND RCV
- 3.) INSTALL ONE (1) EXTRA PILOT WIRE (ORANGE) TO FARTHEST RCV IN ANY/ALL DIRECTIONS FROM ENCLOSURE. LOOP INTO EACH VALVE BOX ALONG WIRE PATH
- 4.) IF FLOW SENSOR TO BE INSTALLED, INCLUDE 3/4" CONDUIT PATH FROM ENCLOSURE TO SENSOR VAULT

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009	CONTROLLER/SATELLITE ENCLOSURE DETAIL NO. 543
				DATE	

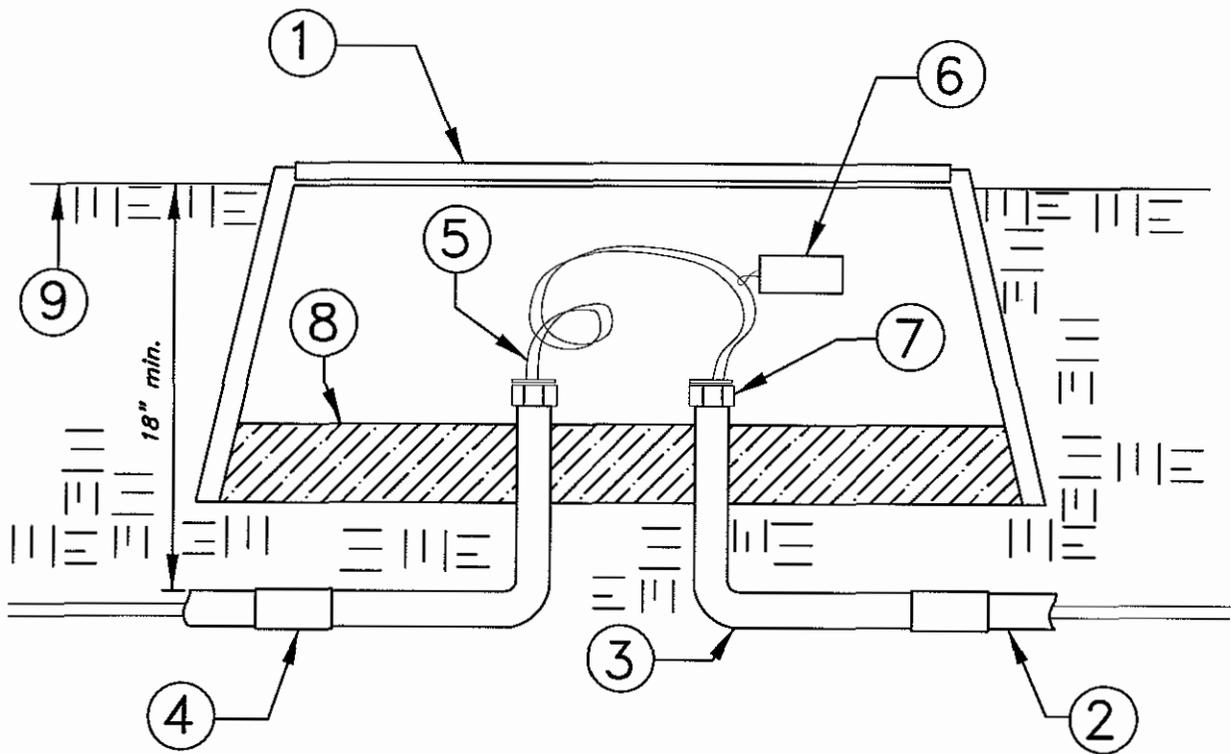


LEGEND:

- ① PLASTIC VALVE BOX W/ TWO 6" EXTENSIONS & LOCKING COVER
- ② FINISH GRADE
- ③ WATERPROOF CONNECTION
- ④ TWO CONDUCTOR SHIELDED CABLE - ROUTE TO CONTROLLER VIA CONDUIT
- ⑤ DATA INDUSTRIAL FLOW SENSOR - PER PLAN
- ⑥ PIPE CHOKE - REDUCE TO NEXT SIZE BELOW MAINLINE PIPE SIZE
- ⑦ VALVE BOX EXTENSION
- ⑧ PEA GRAVEL DRAIN SUMP - 30" DIAM. x 6" DEEP MINIMUM
- ⑨ 3/4" E.C. WIRE PATH FROM SENSOR VAULT TO NEAREST SATELLITE ENCLOSURE

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

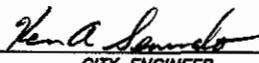
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		FLOW SENSOR ASSEMBLY DETAIL	
		DATE 08/12/09		NO. 544	

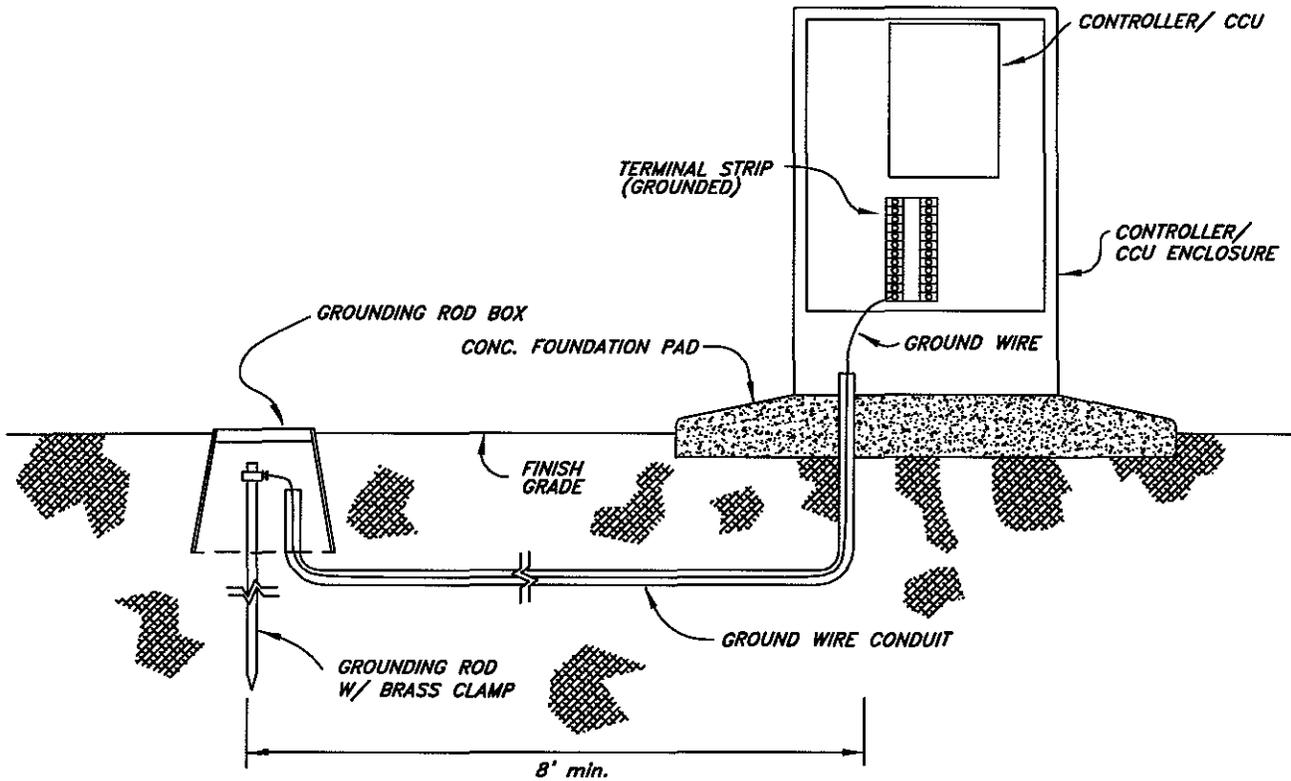


LEGEND:

- ① APPROVED PULL BOX - NOM. DIM. \odot 17"L x 11"W x 12"D
 - INSTALL \odot INTERVALS NOT TO EXCEED 200 ft.
 - SET 1" ABOVE FINISH GRADE IN TURF AREAS
 - SET 2" ABOVE FINISH GRADE IN PLANTER AREAS
- ② PVC Schd. 40 CONDUIT - 1 1/2" NOM. O.D.
- ③ PVC Schd. 40 90 deg. SWEEP ELL (typ.)
- ④ PVC Schd. 40 SxS COUPLER (typ.)
- ⑤ POLY PULL ROPE - 500 lb. TEST
 - INSTALL PULL ROPE ALONG WITH COMM. CABLE
 - LEAVE 2ft. LOOP IN BOX
- ⑥ COMMUNICATION CABLE w/ PERMANENT I.D. TAG (Christy's or EQ.)
 - LEAVE 18" min. LOOP IN BOX
 - COMM. CABLE TO BE "PE 39"
- ⑦ CONDUIT BUSHING - INSTALL ON PVC Schd. 40 MALE ADAPTER
 - SEAL ALL CONDUIT ENDS w/ WATERPROOF SILICONE SEALER AFTER CABLE/PULL ROPE INSTALLED
- ⑧ 3/4" WASHED CRUSHED AGGREGATE - 6" DEPTH
- ⑨ FINISH GRADE

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	PREPARED BY PUBLIC WORKS
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		TELEMETRY PULL-BOX ASSEMBLY DETAIL	NO. 545
		08/31/2009 DATE			

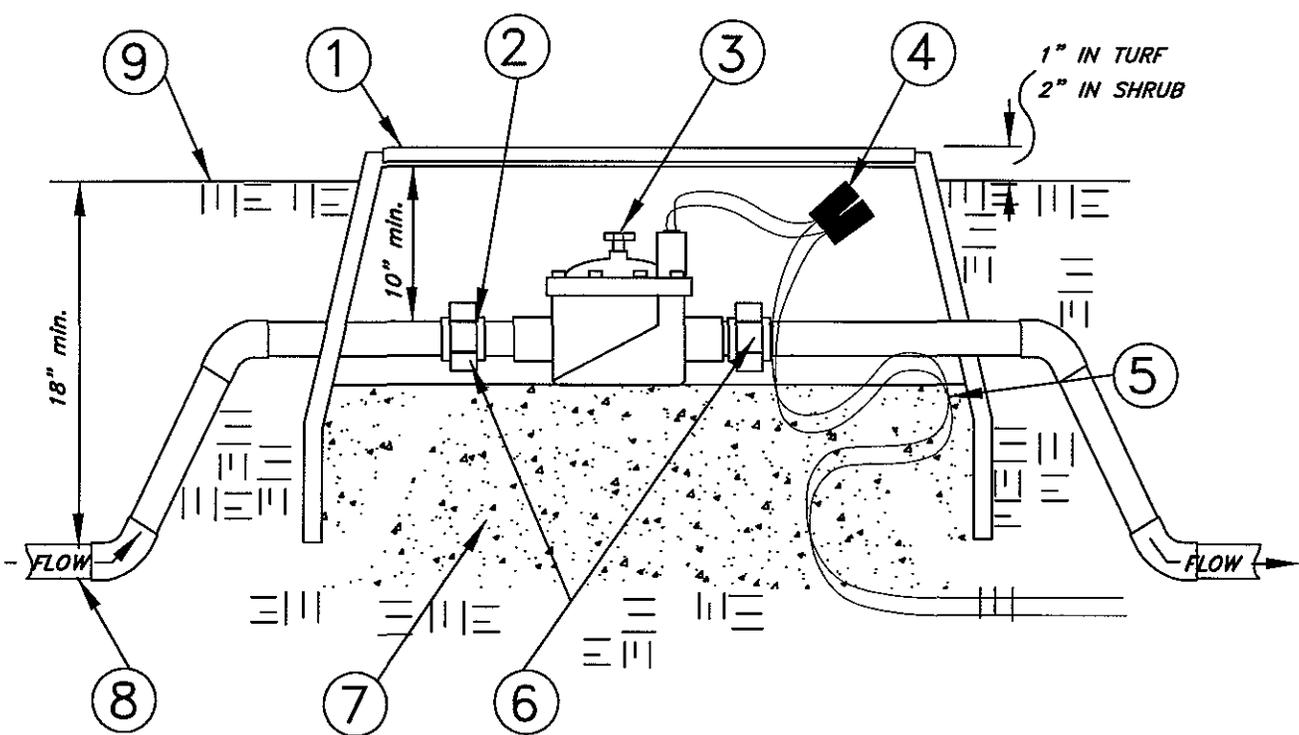


NOTES:

- 1.) GROUND WIRE SHALL BE #10 COPPER (INSULATED - GREEN).
- 2.) GROUNDING ROD SHALL BE 5/8" x 8'0" COPPER CLAD.
- 3.) ATTACH GROUND WIRE TO GROUNDING ROD USING BRASS GROUND ROD CLAMP.
- 4.) ENCLOSE GROUND ROD IN 10-INCH ROUND PLASTIC VALVE BOX w/ LOCKING LID.
- 5.) CONNECT FIELD GROUND WIRE TO TERMINAL STRIP
- 6.) GROUND WIRE SWEEPS/CONDUIT TO BE SCHD. 80 PVC. ALL SWEEPS TO BE 1" MIN. DIAM. EXTEND CONDUIT ALONG THE ENTIRE REACH OF GROUND WIRE PATH, ENDING IN GROUND ROD BOX.

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009	EXTERNAL GROUND ROD ASSEMBLY DETAIL
			DATE	NO. 547	



LEGEND:

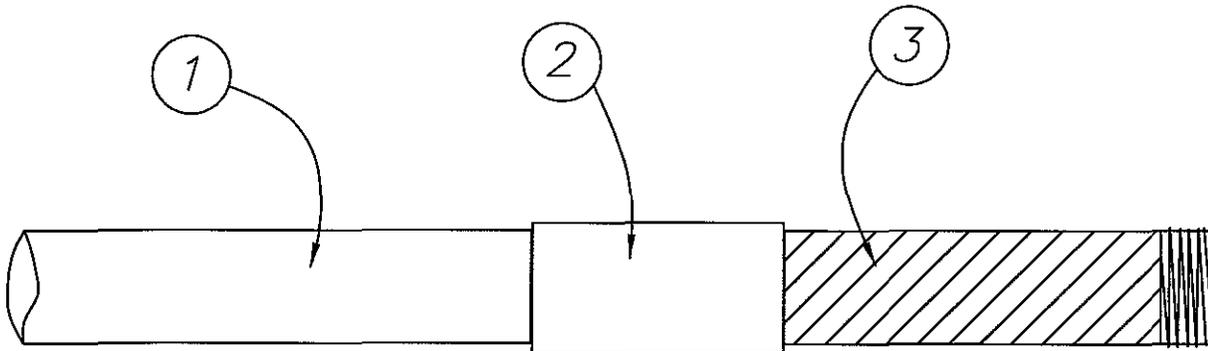
- ① VALVE BOX - MODEL # & SIZE PER PLAN
- ② TOE NIPPLE ASSEMBLY - USE IN PLACE OF MIPT ADAPTERS (typ)
- ③ MASTER CONTROL VALVE - MODEL # & SIZE PER PLAN
- ④ WATERPROOF CONNECTION - SPEARS DS-100 OR APPROVED EQUAL. FILL W/ DS-300 SEALANT OR APPROVED EQUAL
- ⑤ PROVIDE 24" min. EXPANSION LOOP
- ⑥ SCHD. 80 PVC UNION
- ⑦ 3/4" WASHED CRUSHED AGGREGATE - 6" DEPTH
- ⑧ MAINLINE FROM POC/BACKFLOW PREVENTER ASSEMBLY
- ⑨ FINISH GRADE

NOTES:

- 1.) INSTALL MASTER VALVE MINIMUM 3 ft. DOWNSTREAM OF POC/BACKFLOW ASSEMBLY
- 2.) INSTALL MASTER VALVE MINIMUM 12" FROM STRUCTURES/HARDSCAPE

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009	MASTER VALVE ASSEMBLY DETAIL
				DATE	



LEGEND:

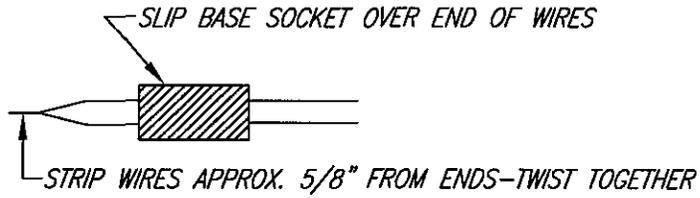
- ① PVC MAIN / LATERAL LINE PIPE
- ② SCHD. 40 PVC COUPLER FS x FS
- ③ SCHD. 80 PVC NIPPLE - THREADED ONE END
 - 6" MIN. LENGTH
 - CUT THREADS ONLY - NO MOLDED NIPPLES

NOTE:

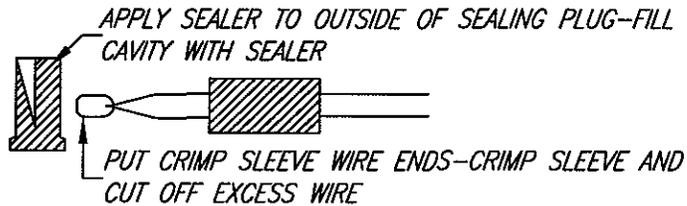
- 1.) USE TOE NIPPLE ASS'Y IN PLACE OF MIPT ADAPTERS

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED		PREPARED BY PUBLIC WORKS	
			APPROVED BY	
			 CITY ENGINEER	
			08/31/2009 DATE	NO. 549
			TOE NIPPLE ASSEMBLY	

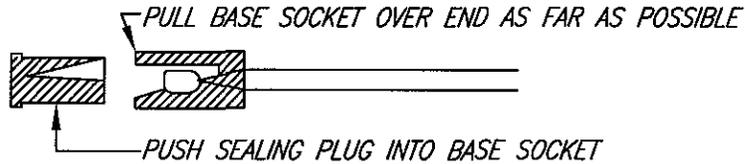
STEP 1



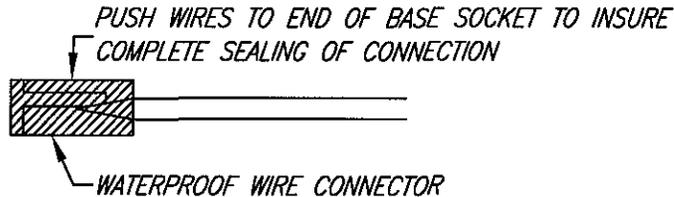
STEP 2



STEP 3



STEP 4

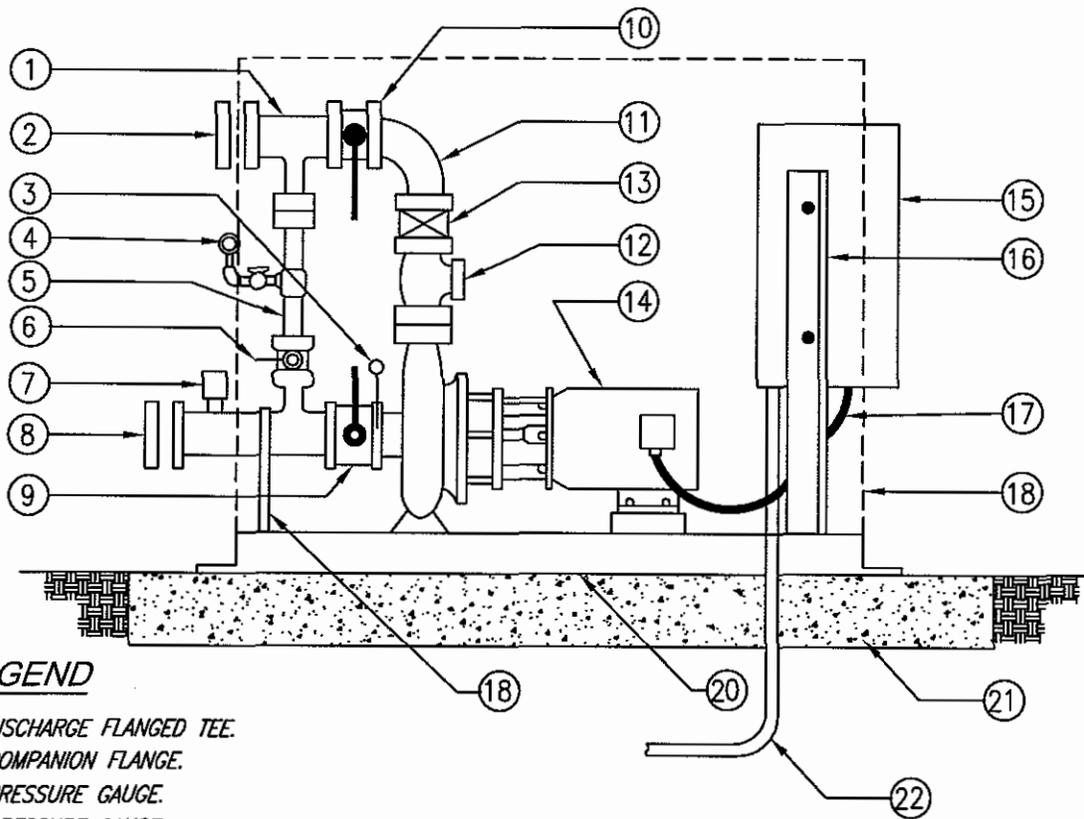


NOTE:

1.) PRE-FILLED CONNECTORS NOT TO BE USED WITHOUT PRIOR APPROVAL OF CITY ENGINEER

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009	IRRIGATION WIRE CONNECTOR
				DATE	



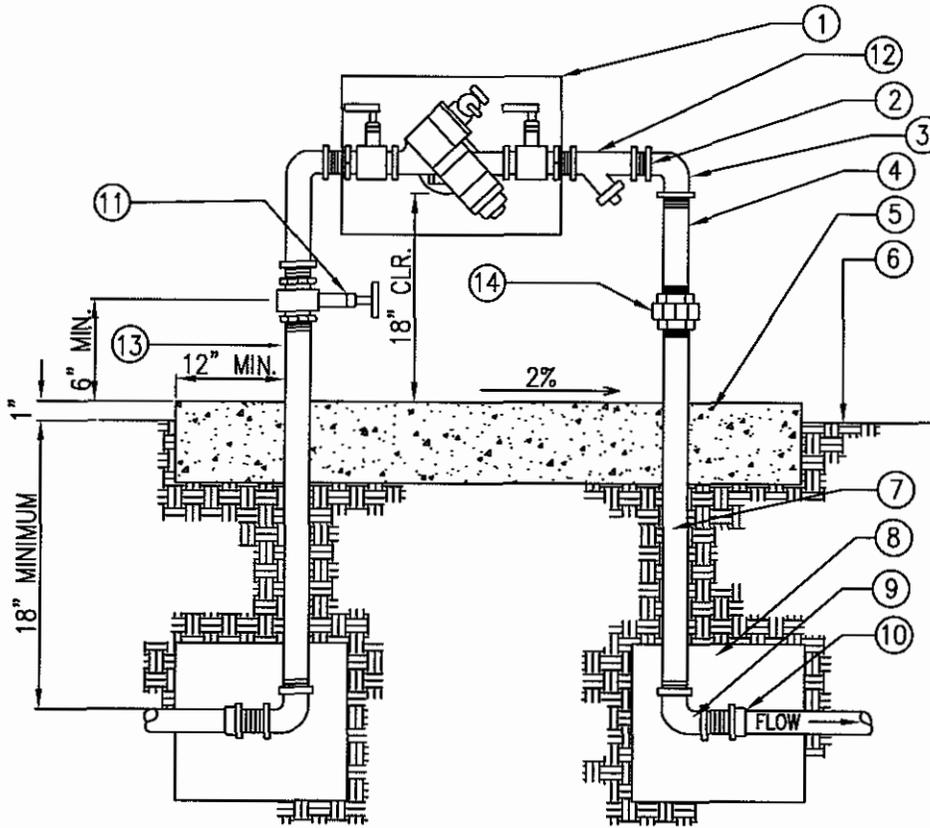
LEGEND

- ① DISCHARGE FLANGED TEE.
- ② COMPANION FLANGE.
- ③ PRESSURE GAUGE.
- ④ PRESSURE GAUGE.
- ⑤ BYPASS - 2" DIA. MIN.
- ⑥ BUTTERFLY VALVE
- ⑦ FLOW SWITCH TO BE INSTALLED IN SECTION HEADER WIRED TO PUMP PANEL.
- ⑧ COMPANION FLANGE.
- ⑨ BUTTERFLY VALVE.
- ⑩ BUTTERFLY VALVE.
- ⑪ FLANGED 90 COMBINATION PRESSURE REGULATING AND NON-SLAM CHECK VALVE.
- ⑫ BAILEY # 400 ACP OR CLA-VAL # 91A.
- ⑬ FLANGED CONCENTRIC REDUCER.
- ⑭ PUMP AND MOTOR.
- ⑮ CONTROLLER (3 PHASE, 230 VOLT)
- ⑯ CONTROLLER SUPPORT.
- ⑰ SEALITTE CONDUIT
- ⑱ SUPPORT LEG.
- ⑲ 36" X 42" X 20" SHEET METAL ENCLOSURE FOR EXTERIOR PUMP INSTALLATION.
- ⑳ GALVANIZED STEEL SKID, WITH 4 9/16" HOLES.
- ㉑ PRE-CAST CONCRETE PAD BY MFG.
- ㉒ RIGID STEEL CONDUIT TO POWER SOURCE

NOTES:

- 1.) ENCLOSURE IS REQUIRED SUBJECT TO CITY APPROVAL
- 2.) CONTRACTOR TO VERIFY AVAILABLE VOLTAGE COMPATIBLE WITH MOTOR SPECIFICATIONS.
- * SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		IRRIGATION BOOSTER PUMP	
		08/31/2009 DATE		DETAIL	
				NO. 552	



LEGEND

- ① BACKFLOW PREVENTER ASSEMBLY
- ② BRASS NIPPLE-TYPICAL (4) PLACES
- ③ BRASS 90 ELL-TYPICAL (2) PLACES
- ④ BRASS NIPPLE
- ⑤ 6" THICK CONCRETE PAD (SEE PAD SCHEDULE)
SLOPE TO DRAIN AT MINIMUM 2%
- ⑥ FINISH GRADE
- ⑦ BRASS NIPPLE - TYPICAL (2) PLACES
- ⑧ 12" X 12" X 12" CONCRETE THRUST BLOCKS - TYPICAL (2) PLACES
- ⑨ BRASS 90 ELL - TYPICAL (2) PLACES
- ⑩ SCHEDULE 80 TOE NIPPLE ASSEMBLY - TYPICAL (2) PLACES
- ⑪ LINE SIZED BRASS GATE VALVE / BALL VALVE
- ⑫ BRASS WYE STRAINER WITH 60 MESH SCREEN
- ⑬ FROM WATER SOURCE
- ⑭ BRASS UNION

PAD SCHEDULE

RP DEVICE SIZE	WIDTH	LENGTH
2 1/2"	30"	66"
3"-4"	36"	78"

NOTES:

- 1.) EQUIPMENT TO BE INSTALLED AT A MINIMUM OF 24" FROM ANY STRUCTURES OR HARDSCAPING.
- 2.) WHEN UNIT IS NEXT TO A STRUCTURE (i.e., WALL, BUILDING, ETC.) MOUNT TEST COCKS ON OPEN OR NON-STRUCTURE SIDE.
- 3.) SERVICE LINE MUST BE SAME SIZE AS RP DEVICE PER EMWD

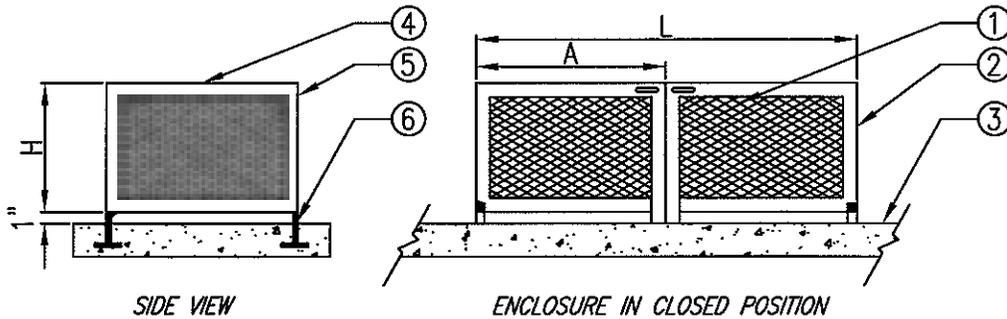
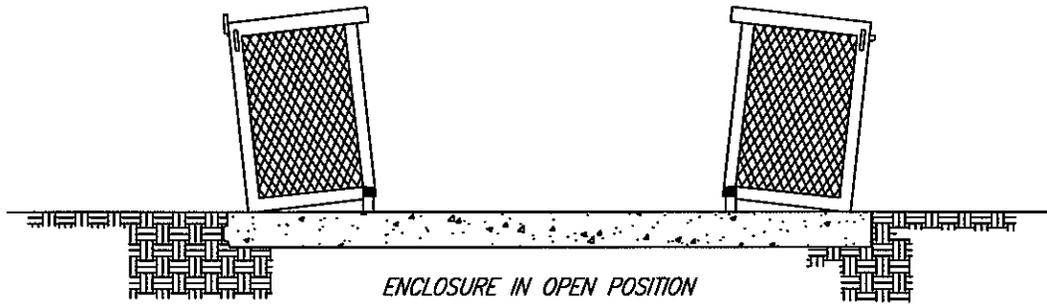
* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION	ENGINEERING	DATE 07/09
DATE APPROVED	APPROVED BY	
	 CITY ENGINEER	
		08/31/2009 DATE

CITY OF LAKE ELSINORE
PREPARED BY PUBLIC WORKS

**REDUCED PRESSURE
BACKFLOW PREVENTER**

NO.
553



RP DEVICE SIZE	W	L	H	A
2 1/2"	24"	60"	36"	30"
3"-4"	30"	72"	42"	36"

LEGEND

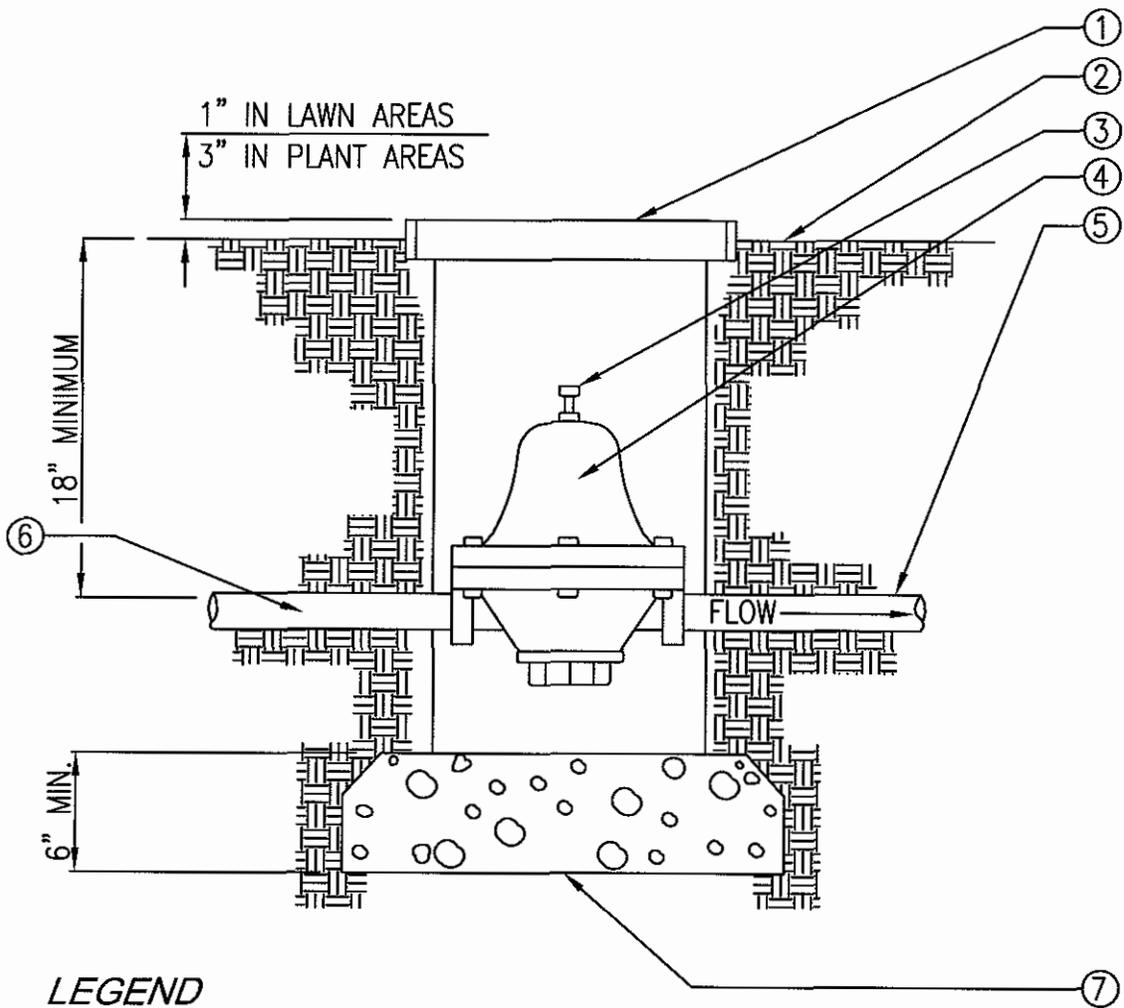
- ① 1 1/2"-#9 EXPANDED METAL
- ② 1 1/2" X 1 1/2" X 3/16" ANGLE FRAME
- ③ CONCRETE PAD (SEE STANDARD MV-553)
- ④ HASP FOR PAD LOCK
- ⑤ LIFTING HANDLE
- ⑥ HINGE PLATE

NOTES:

- 1.) FINISH TO BE TWO COATS OF SEMI-GLOSS GREEN ENAMEL PAINT
- 2.) FOR UNITS 2" AND UNDER USE SINGLE SWING HINGE MODEL

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
	 CITY ENGINEER	08/21/2009 DATE	BACKFLOW PREVENTER ENCLOSURE	
			NO. 554	

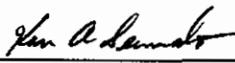


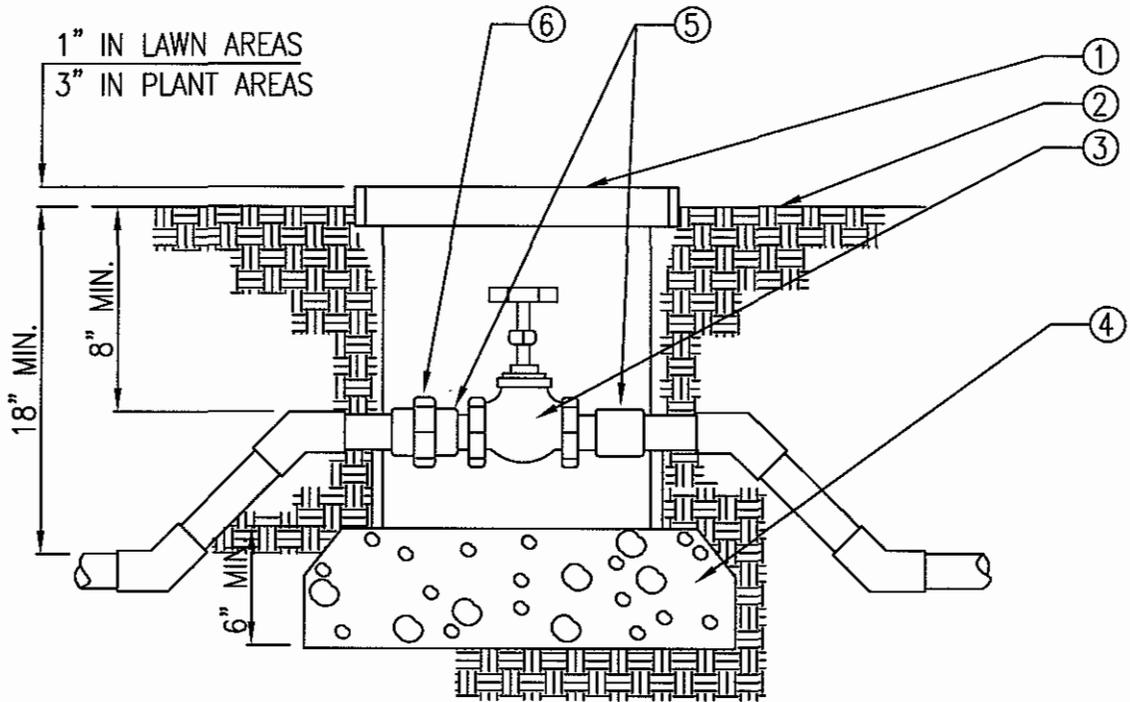
LEGEND

- ① 10" ROUND VALVE BOX WITH LOCKING LID, "PR" TO BE BRANDED ON LID USE EXTENSIONS AS NECESSARY TO REACH FINISH GRADE
- ② FINISH GRADE
- ③ PRESSURE ADJUSTMENT SCREW
- ④ PRESSURE REGULATOR
- ⑤ PIPE TO IRRIGATION SYSTEM
- ⑥ PIPE FROM BACKFLOW PREVENTER
- ⑦ 3/4" WASHED CRUSHED AGGREGATE BASE

NOTE:

- 1.) PLACE AGGREGATE PRIOR TO INSTALLATION OF BOX
- * SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
	 CITY ENGINEER		PRESSURE REDUCING VALVE	
	08/31/2009 DATE		NO. 555	



LEGEND

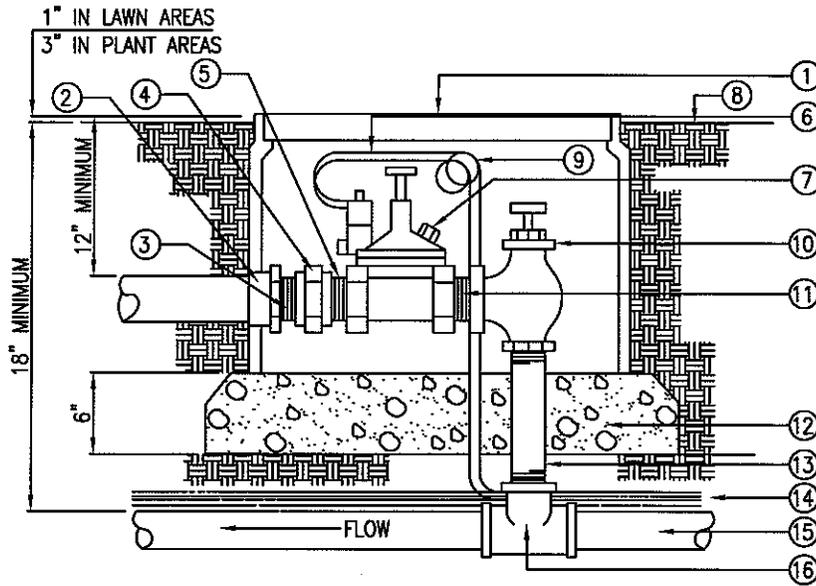
- ① 10" ROUND PLASTIC VALVE BOX WITH LOCKING LID COVER SHALL BE MARKED "GV" VIA BRANDING
- ② FINISH GRADE
- ③ BRASS GATE VALVE WITH BRONZE HAND WHEEL
- ④ 3/4" WASHED CRUSHED AGGREGATE BASE
- ⑤ SCH 80 PVC TOE NIPPLE ASSEMBLIES
- ⑥ SCH 80 PVC UNION, SLIP X SLIP

NOTE:

- 1.) PLACE AGGREGATE PRIOR TO INSTALLATION OF VALVE BOX
- 2.) IF BALL VALVES USED, A JUMBO RECTANGULAR BOX SHALL BE INSTALLED
- 3.) CAST IRON AND/OR FLANGED VALVES WILL REQUIRE A POURED-IN-PLACE CONCRETE SUPPORT (NOT SHOWN)

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		GATE VALVE - 3" OR SMALLER	NO. 556
		08/31/2009 DATE			



LEGEND

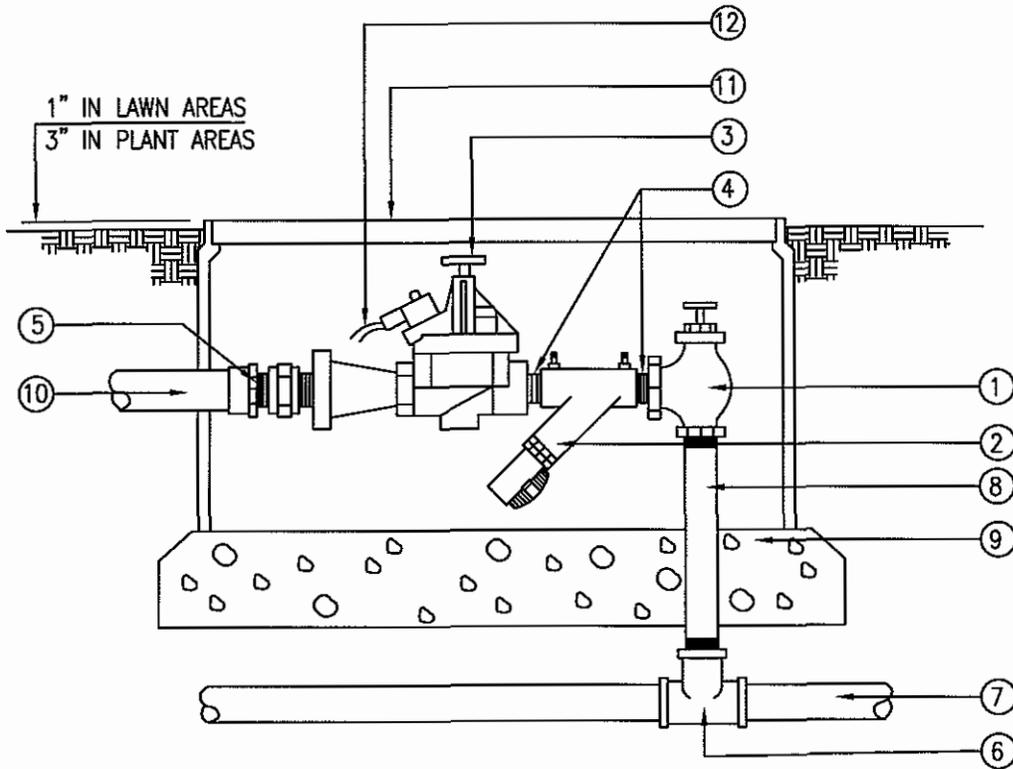
- ① JUMBO PLASTIC VALVE BOX WITH LOCKING LID, SHALL BE MARKED "RCV" WITH STATION NUMBERS FOR CONTROL VALVES BRANDED ON LID
- ② TO SPRINKLER - ANGLE PIPE TO SPECIFIED DEPTH WITH 45 DEGREE ELLS IF NECESSARY
- ③ SCH 80 PVC TOE NIPPLE ASSEMBLY
- ④ SCH 80 PVC UNION
- ⑤ SCH 80 PVC CLOSE NIPPLE
- ⑥ WATER PROOF CONNECTORS, (SEE DETAIL #551-STEP 4)
- ⑦ ELECTRIC CONTROL VALVE
- ⑧ FINISH GRADE
- ⑨ PIG TAIL EXPANSION LOOP (MIN. 24" LONG)
- ⑩ ANGLE VALVE
- ⑪ SCH. 80 PVC CLOSE NIPPLE
- ⑫ WASHED CRUSHED AGGREGATE
- ⑬ SCH 80 PVC NIPPLE
- ⑭ CONTROL & COMMON WIRES
- ⑮ PRESSURE SUPPLY LINE
- ⑯ SCH 40 PVC SXSXT TEE

NOTES:

- 1). INSTALL CONTROL VALVES A MINIMUM OF 12" FROM STRUCTURES OR HARDSCAPE
- 2). INSTALL VALVES IN PLANTER BEDS WHEREVER POSSIBLE NEXT TO SIDEWALKS.
- 3). PLACE VALVE BOX AT RIGHT ANGLES TO STRUCTURES OR HARDSCAPE
- 4). PLACE AGGREGATE PRIOR TO INSTALLATION OF VALVE BOX.
- 5). ATTACH VALVE IDENTIFICATION TAG WITH APPROPRIATE CONTROLLER DESIGNATION TO CONTROL WIRE.
- 6). ONE VALVE PER BOX ALLOWED ONLY.
- 7). PLACE AGGREGATE PRIOR TO INSTALLATION OF VALVE BOX

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
	CITY ENGINEER		REMOTE CONTROL VALVE WITH UNION	
	08/31 (2009) DATE		NO.	557



LEGEND

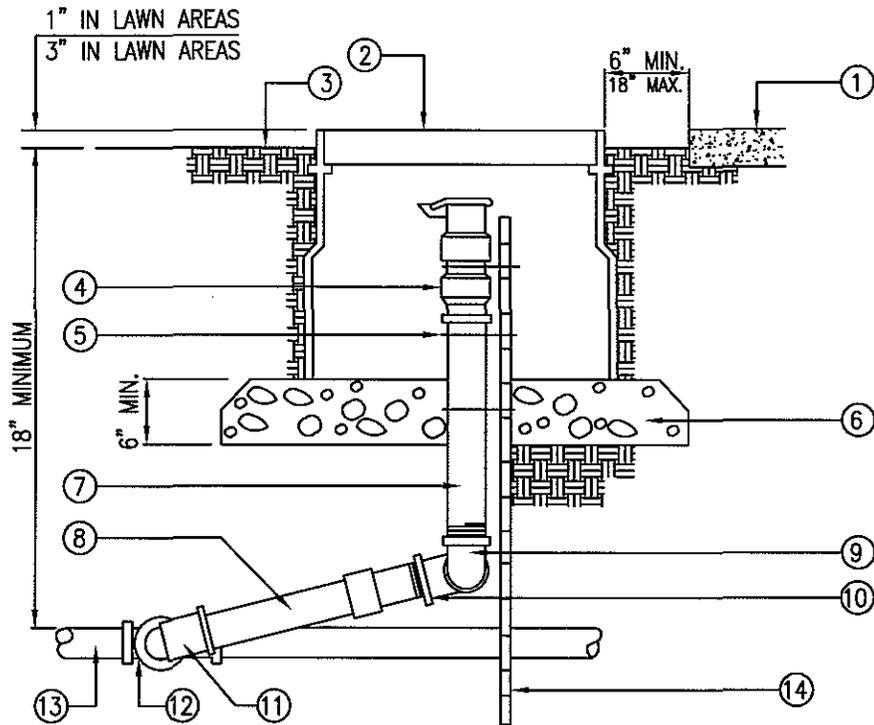
- ① BRASS ANGLE VALVE WITH UNION - SAME SIZE AS RCV
- ② PVC WYE STRAINER WITH INTEGRAL BALL FLUSH VALVE AND SCHRADER PRESSURE TEST VALVE
- ③ REMOTE CONTROL VALVE - PLAN SIZED W/ PRESSURE REGULATOR
- ④ SCH. 80 PVC CLOSE NIPPLE
- ⑤ SCH. 80 UNION WITH TOE NIPPLE ASSEMBLY
- ⑥ SCH. 40 PVC S X S X T TEE
- ⑦ PRESSURE SUPPLY LINE
- ⑧ SCH. 80 PVC NIPPLE
- ⑨ 6" THICK 3/4" WASHED CRUSHED AGGREGATE
- ⑩ 3/4" OR 1 O.D. FLEXIBLE ALGAE RESISTANT HEAVY WALL PVC HOSE (OR RIDIG PVC HEADER)
- ⑪ JUMBO PLASTIC VALVE BOX WITH LOCKING LID SHALL BE BRANDED "RCV" WITH STATION NUMBERS FOR CONTROL VALVES
- ⑫ SOLENOID WIRES. PIG -TAIL EACH 24" LONG

NOTE:

1). PLACE AGGREGATE PRIOR TO INSTALLING VALVE BOX

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

<table border="1"> <tr> <th>REVISION</th> <th>DATE</th> <th>APPROVED</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		REVISION	DATE	APPROVED													<p>ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p><i>Kend Samuels</i> CITY ENGINEER</p> <p>08/31/2009 DATE</p>	<p>CITY OF LAKE ELSINORE</p> <p>PREPARED BY PUBLIC WORKS</p> <p>REMOTE CONTROL VALVE FOR DRIP SYSTEMS</p>	<p>NO. 558</p>
REVISION	DATE	APPROVED																	



LEGEND

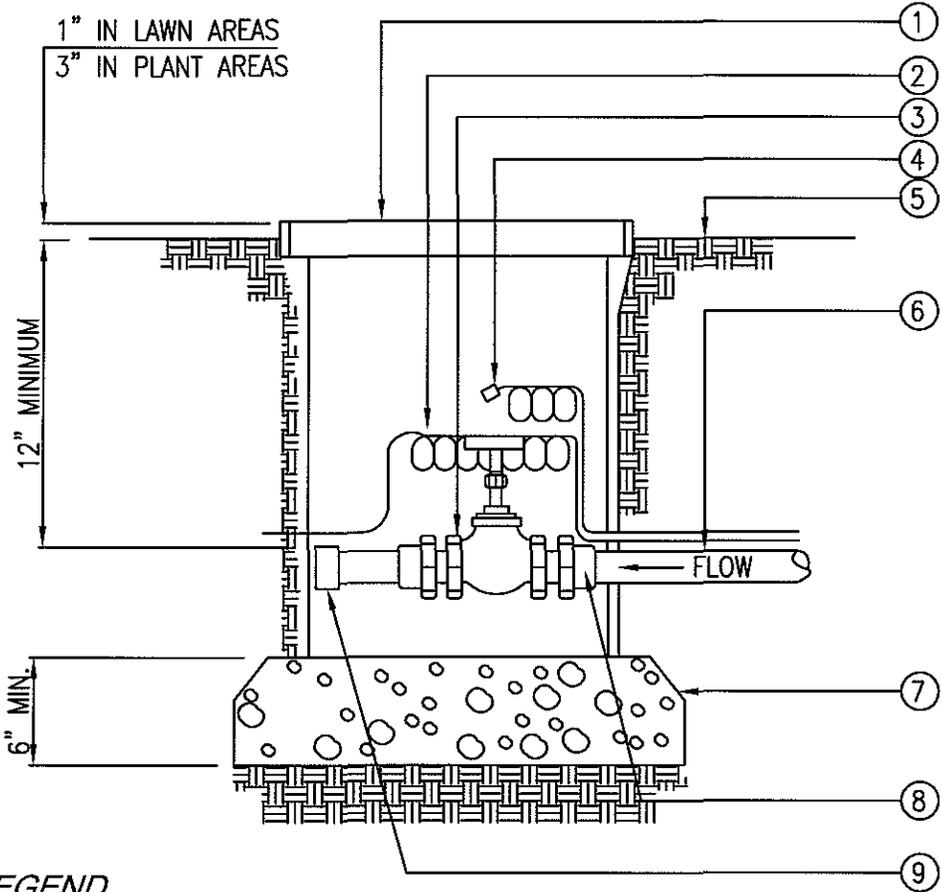
- ① STRUCTURE OR HARDSCAPE
- ② 10" ROUND VALVE BOX WITH "QC" BRANDED ON LID
- ③ FINISH GRADE
- ④ QUICK COUPLING VALVE (SIZE PER PLAN)
- ⑤ STAINLESS STEEL SCREW, CLAMP MIN. (3) PLACES
- ⑥ 3/4" WASHED CRUSHED AGGREGATE BASE
- ⑦ SCH. 80 NIPPLE
- ⑧ SCH. 80 NIPPLE - 6" LONG
- ⑨ SCH. 40 PVC 90 DEGREE ELL
- ⑩ SCH. 40 PVC 90 DEGREE STREET ELL
- ⑪ 90 DEGREE STREET ELL AND 1" X 3/4" MIPT X FIPT REDUCER BUSHING - (SCH 80 PVC)
- ⑫ PRESSURE SUPPLY LINE FITTING
- ⑬ PRESSURE SUPPLY LINE
- ⑭ #4 REBAR STAKE (24" LONG)

NOTES:

- 1). PLACE AGGREGATE PRIOR TO INSTALLATION OF VALVE BOX
- 2). INSTALL Q.C.V. & BOX IN PLANTERS WHEN EVER POSSIBLE, NOT IN TURF AREAS

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		QUICK COUPLING VALVE	NO. 559
			08/31/2009 DATE		



LEGEND

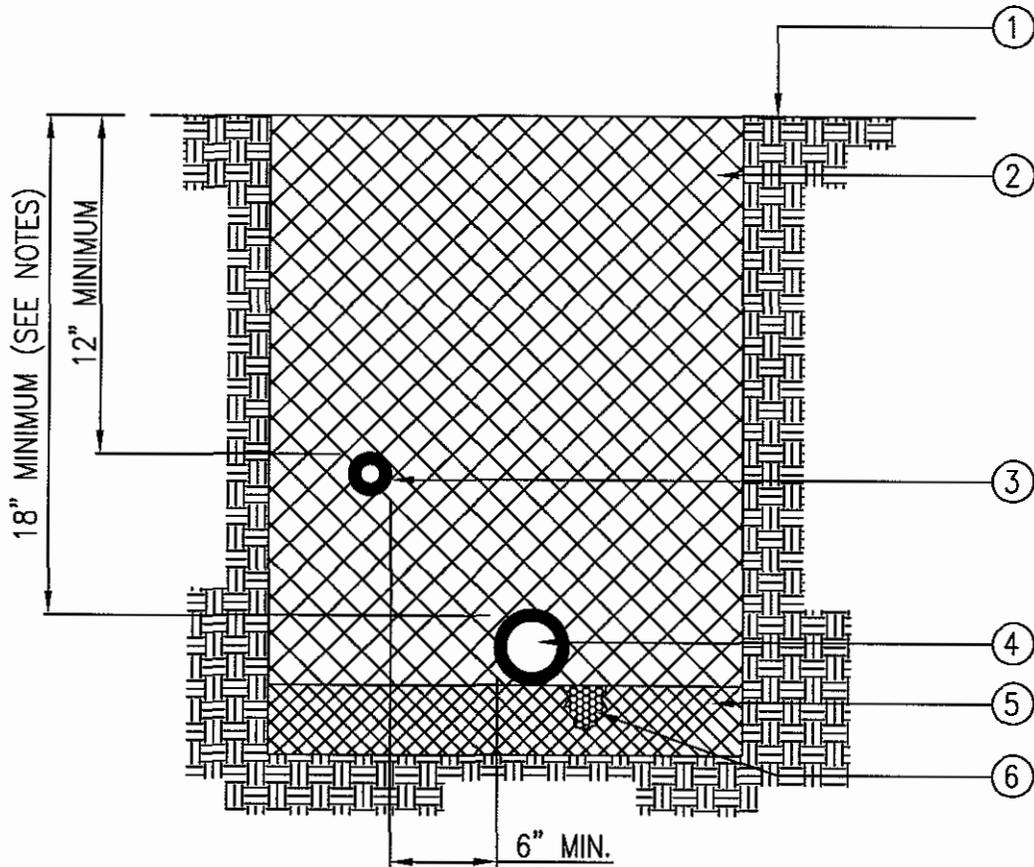
- ① PLASTIC VALVE BOX WITH LOCKING LID - BRANDED X -RCV
REFER TO CITY RCV BOX STANDARD # 557
- ② PIG-TAIL COMMON WIRE (CONTINUOUS LOOP)
- ③ BRASS GATE VALVE - LINE SIZE
- ④ PIG-TAIL PILOT WIRE AND WATERPROOF END (SEE DETAIL # 551)
- ⑤ FINISH GRADE
- ⑥ SUPPLY LINE-SIZE PER PLAN
- ⑦ 3/4" WASHED CRUSHED AGGREGATE BASE
- ⑧ SCH. 80 TOE NIPPLE ASSEMBLY
- ⑨ SCH. 80 TOE NIPPLE ASSEMBLY WITH THREADED CAP

NOTES:

- 1). PLACE AGGREGATE PRIOR TO INSTALLING BOX
- 2). GATE VALVE TO REMAIN AT TIME OF INSTALLATION OF NEW REMOTE CONTROL VALVE BOX

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED		PREPARED BY PUBLIC WORKS	
			NO.	
	APPROVED BY		IRRIGATION STUB-OUT BOX 560	
	<i>Van A. Samuels</i>	08/21/2009	DATE	
	CITY ENGINEER			



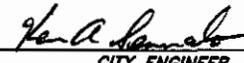
LEGEND

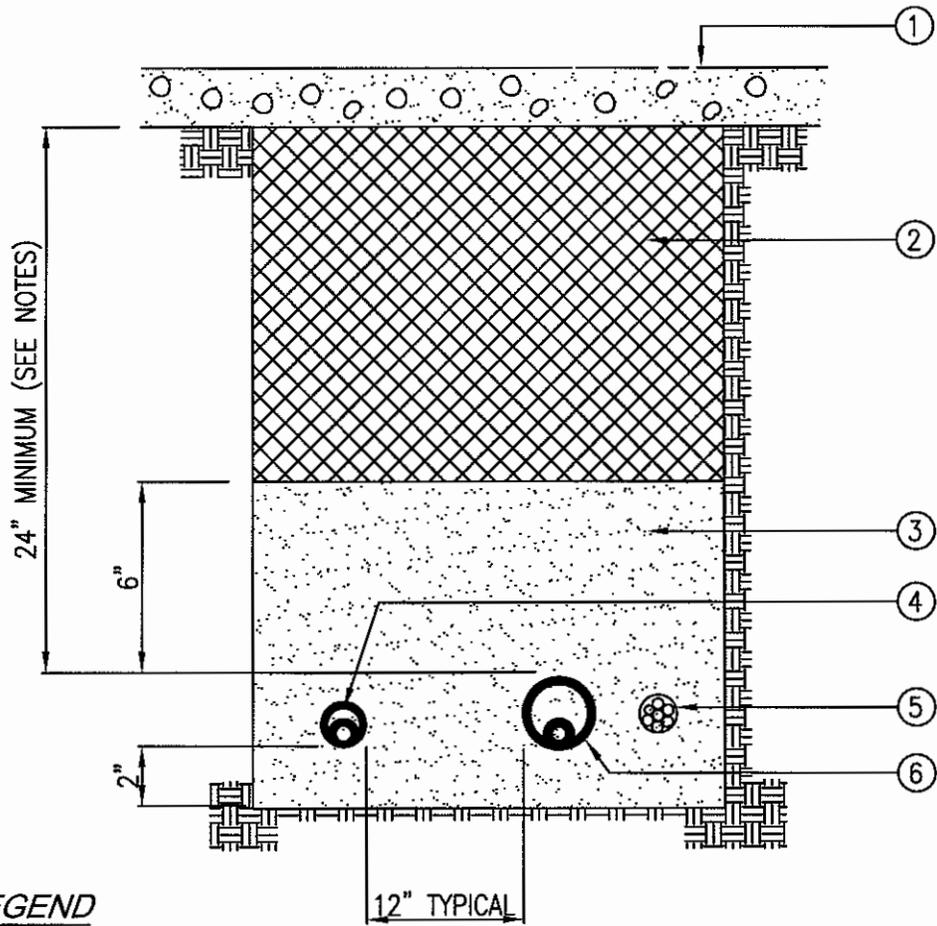
- ① FINISH GRADE
- ② CLEAN BACKFILL—SEE SPECS. FOR MATERIAL, 90% COMPACTION REQUIRED
- ③ NON - PRESSURE LATERAL LINE
- ④ PRESSURE SUPPLY LINE
- ⑤ PROVIDE 2" OF CLEAN BACKFILL
- ⑥ CONTROL WIRES - BUNDLE AND TAPE AT 15" O.C. AND INSTALL BELOW PRESSURE SUPPLY LINE

NOTES:

- 1). PIGTAIL AND LOOP CONTROL WIRE AT ALL 90 DEGREE CHANGES IN DIRECTION
- 2). SPLICING OF WIRE RUN PER CITY SPECIFICATIONS ONLY
- 3). MINIMUM COVER FOR RECLAIMED WATER MAINLINE: 3" AND LARGER - 24",
2" AND SMALLER - 18"

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
	 CITY ENGINEER		TRENCHING DETAIL	
	08/31/2009 DATE		NO. 561	



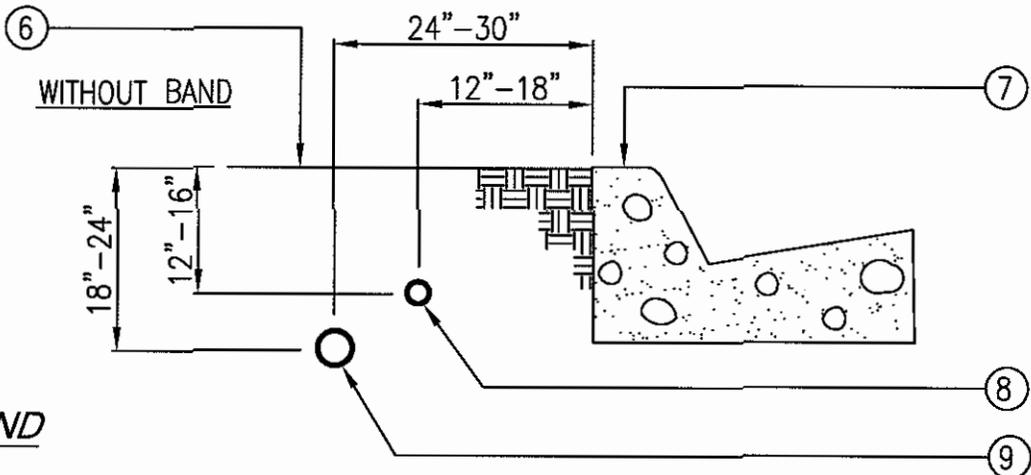
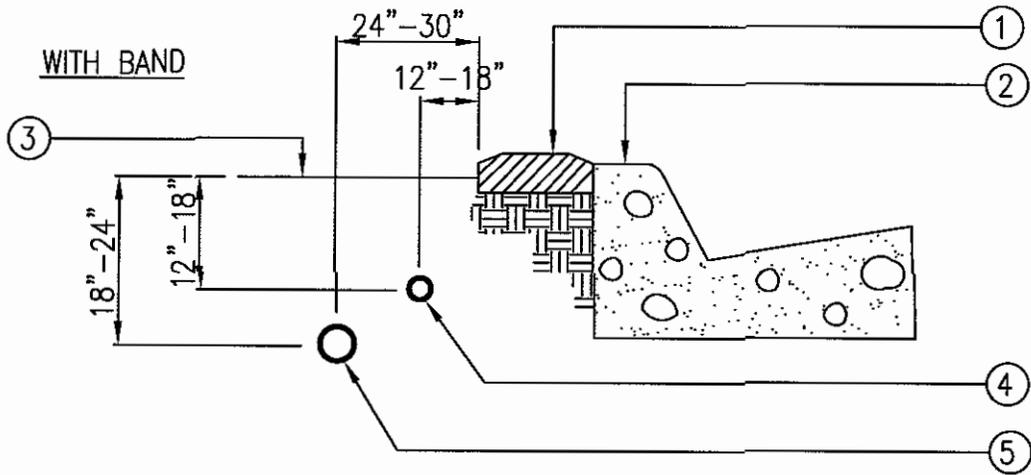
LEGEND

- ① HARDCAPING
- ② CLEAN BACKFILL - SEE SPECS. FOR MATERIAL, 90% COMPACTION REQUIRED
- ③ SAND
- ④ NON-PRESSURE LATERAL LINE SLEEVE SIZE TWICE DIAMETER OF NON-PRESSURE LATERAL LINE
- ⑤ CONTROL WIRE SLEEVE - SIZE PER PLAN, INSTALL ADJACENT TO PRESSURE SUPPLY LINE
- ⑥ PRESSURE SUPPLY LINE SLEEVE - SIZE TWICE DIAMETER OF PRESSURE SUPPLY LINE

NOTES:

- 1). ALL SLEEVES TO BE SCH. 40 PVC.
- 2). EXTEND ALL SLEEVES 12" BEYOND EDGE OF HARDCAPE AT BOTH ENDS

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		SLEEVING DETAIL	NO. 562
		08/31/2009 DATE			

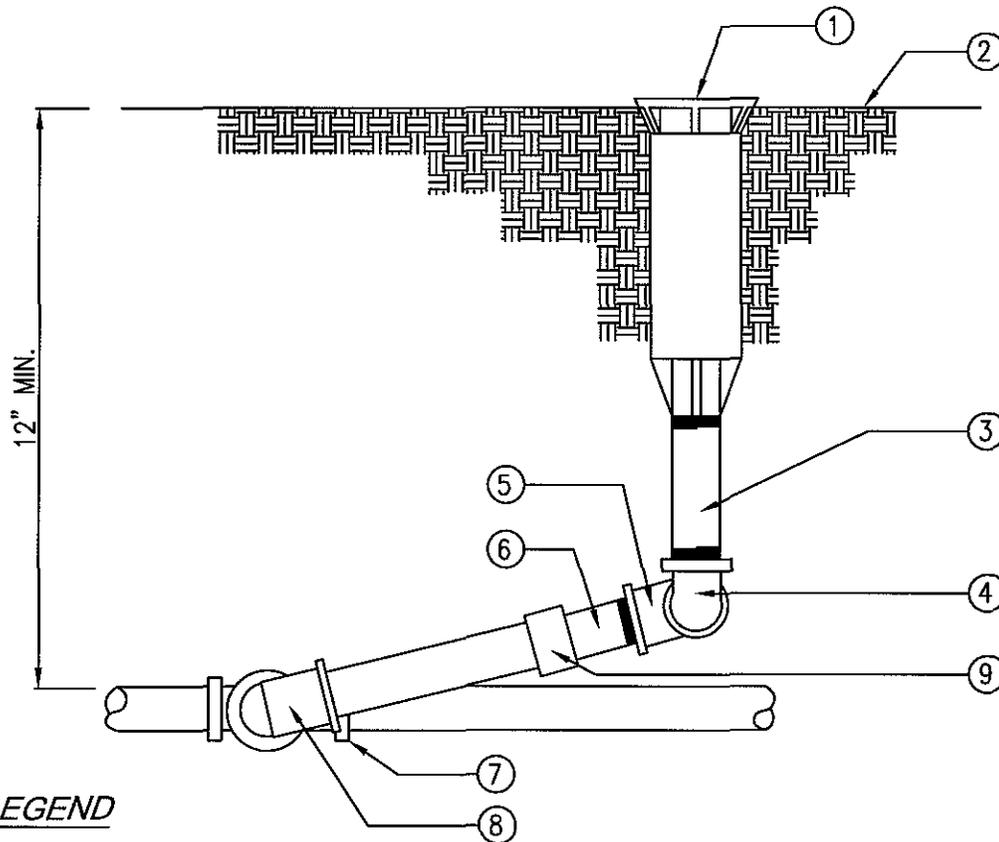


LEGEND

- ① STAMPED CONCRETE, PAVER, ETC.
- ② CONC. CURB
- ③ FINISH GRADE
- ④ LATERAL LINE LOCATION
- ⑤ MAIN LINE LOCATION
- ⑥ FINISH GRADE
- ⑦ CONC. CURB
- ⑧ LATERAL LINE LOCATION
- ⑨ MAIN LINE LOCATION

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		MEDIAN AND PARKWAY IRRIGATION LINE INSTALLATION	
		08/31/2009 DATE		NO. 563	



LEGEND

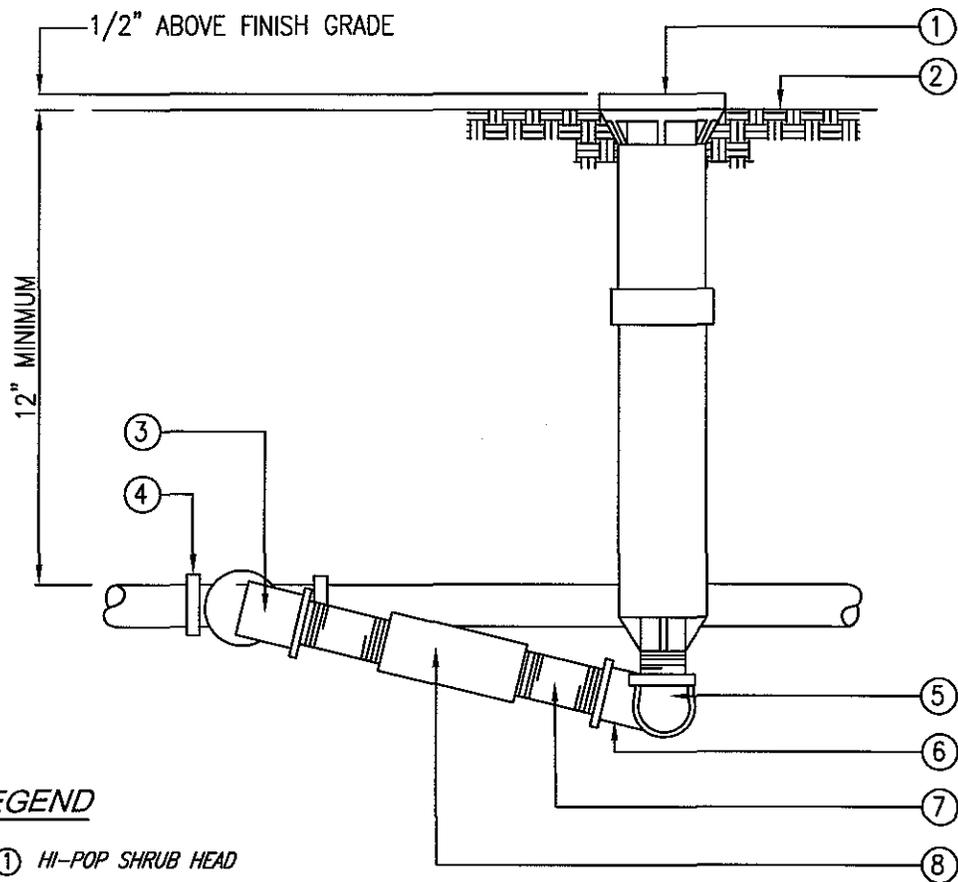
- ① POP-UP HEAD
- ② FINISH GRADE
- ③ SCH. 80 PVC NIPPLE LENGTH AS NECESSARY
- ④ SCH. 40 PVC T x T 90 DEGREE ELL
- ⑤ MARLEX 90 DEGREE STREET ELL
- ⑥ SCH. 80 PVC NIPPLE (6" LONG)
- ⑦ NON-PRESSURE LATERAL LINE & TEE FITTING
- ⑧ MARLEX 90 DEGREE ELL
- ⑨ ANTI-DRAIN VALVE--ALL DOWN SLOPE HEADS--IF NOT RETROFITTED IN HEADS

NOTE:

- 1). LOCATE HEAD 4" FROM HARDSCAPING, IN TURF - 8" MINIMUM IN PLANTER (THESE MINIMUMS MAY BE INCREASED PER SPEC.)
- 2). USE TEFLON TAPE ON ALL MALE THREADS.

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		6" POP-UP SPRAY HEAD	NO. 564
			08/31/2009 DATE		



LEGEND

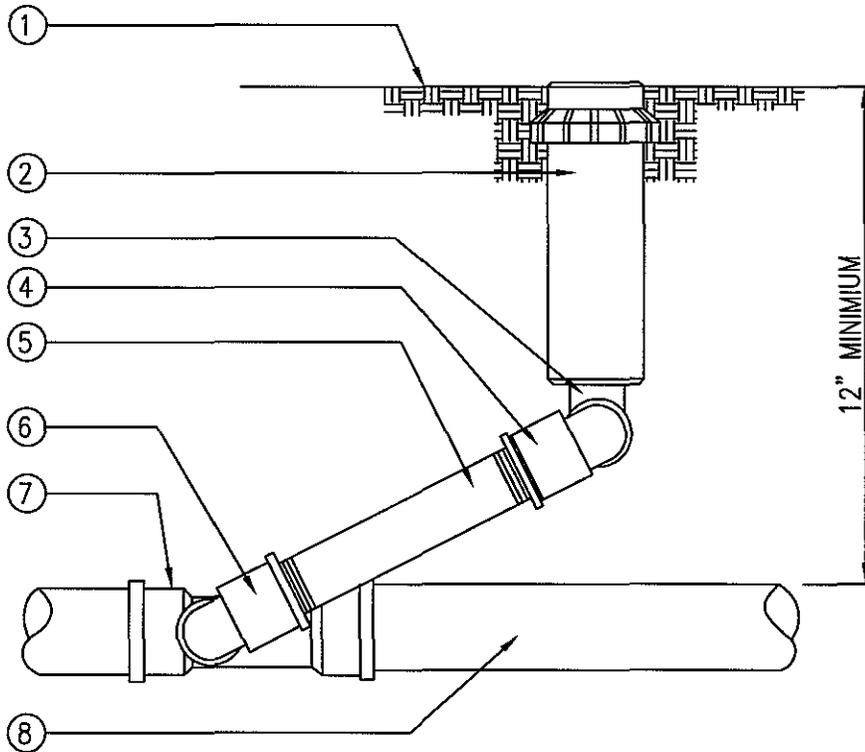
- ① HI-POP SHRUB HEAD
- ② FINISH GRADE
- ③ MARLEX 90 DEGREE STREET ELL
- ④ NON PRESSURE LATERAL LINE & TEE FITTING
- ⑤ SCH 80 PVC 90 DEGREE STREET ELL
- ⑥ MARLEX 90 DEGREE STREET ELL
- ⑦ SCH 80 PVC NIPPLE - TYPICAL (2) PLACES
- ⑧ ANTI-DRAIN VALVE-ALL DOWN SLOPE HEADS-IF NOT RETROFITTED IN HEAD

NOTES:

- 1). LOCATE HEAD 4" FROM HARDSCAPING, IN TURF - 8" MINIMUM IN PLANTER (THESE MINIMUMS MAY BE INCREASED PER SPEC.)
- 2). USE TEFLON TAPE ON ALL MALE THREADS.

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		12" POP-UP SPRAY HEAD	NO. 565
			08/31/2008 DATE		



LEGEND

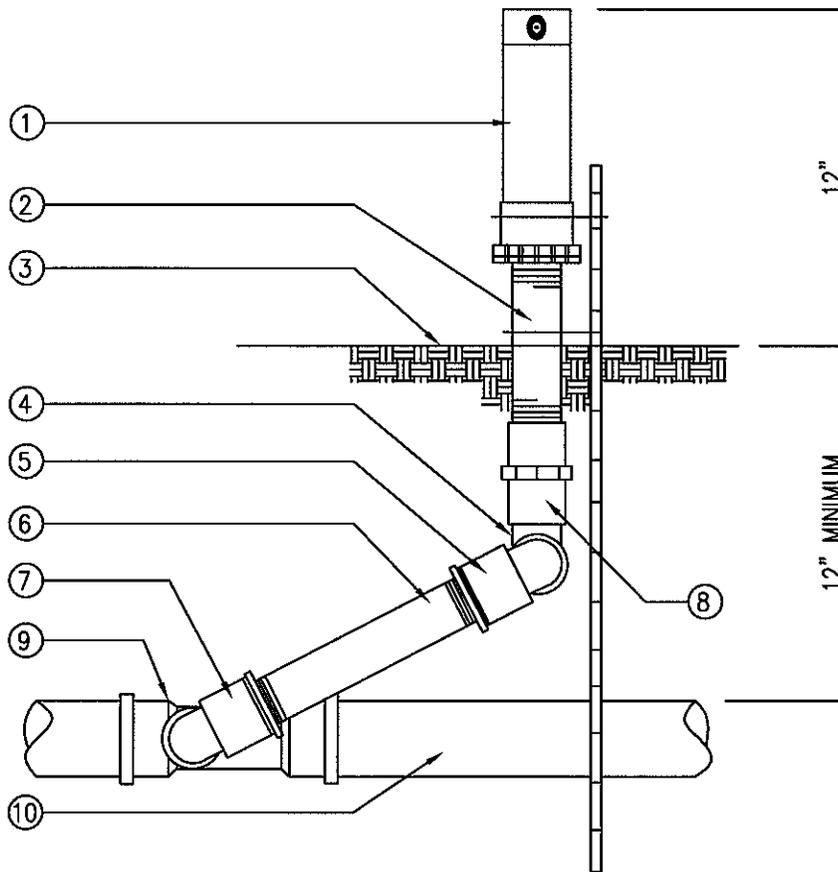
- ① FINISH GRADE
- ② POP-UP GEARED ROTOR W/INTERNAL ANTI-DRAIN VALVES
- ③ 3/4" SCH. 40 PVC 90 DEGREE STREET ELL
- ④ 3/4" MARLEX 90 DEGREE STREET ELL
- ⑤ 3/4" SCH. 80 NIPPLE (LENGTH AS REQUIRED)
- ⑥ 3/4" MARLEX 90 DEGREE STREET ELL
- ⑦ PVC TEE
- ⑧ NON - PRESSURE LATERAL

NOTE:

- 1). USE 12" HIGH-POPS IN SHRUB AREAS
- 2). ALIGN HEADS PERPENDICULAR WITH ANGLE OF SLOPE
- 3). ADD ANTI-DRAIN VALVES ON 3/4" NIPPLE ON DOWN SLOPE ROTORS IF NOT FITTED IN HEAD BY MFG
- 4). LOCATE HEAD 6" FROM HARDSCAPE IN TURF - 12" IN PLANTER (THESE MINIMUMS MAY BE INCREASED PER SPEC.)

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		POP-UP ROTARY HEAD	NO. 566
		08/31/2009 DATE			

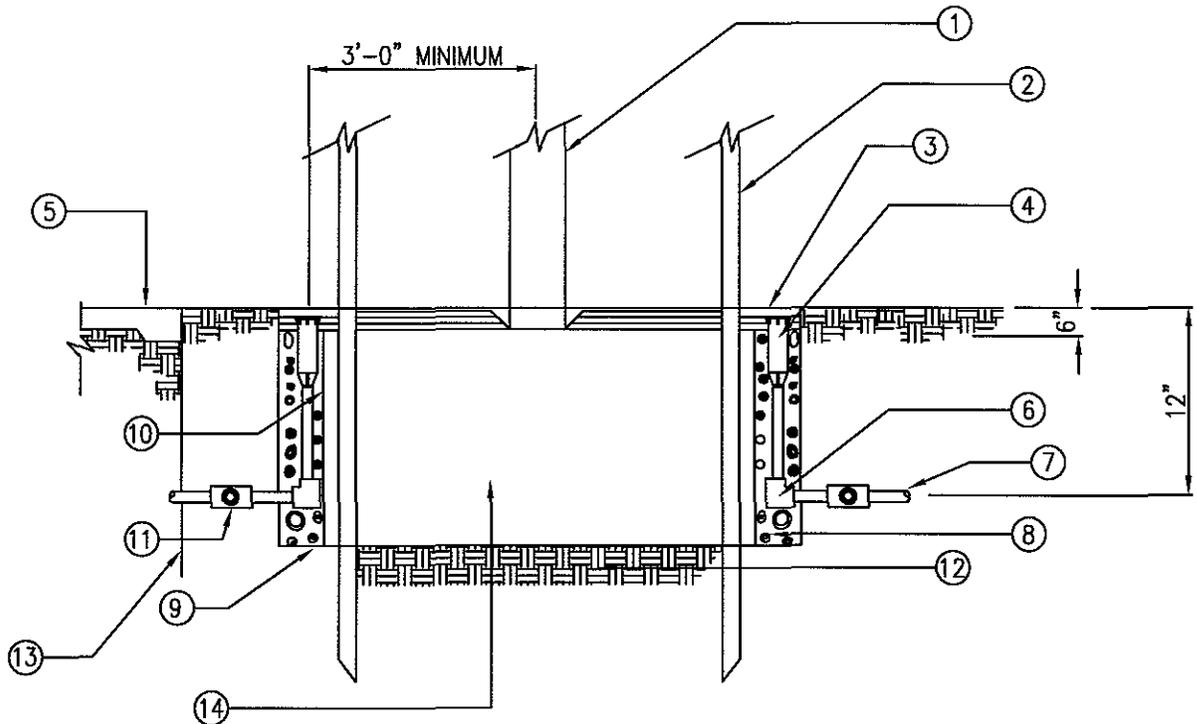


LEGEND

- ① GEARED SHRUB ROTOR
- ② SCH. 80 3/4" PVC RISER (LENGTH AS REQUIRED) (REBAR STAKED WITH 2 STAINLESS STEEL CLAMPS IF 6" OR MORE EXPOSURE)
- ③ FINISH GRADE (ALIGN HEAD PERPENDICULAR WITH ANGLE OF SLOPE)
- ④ 3/4" SCH. 40 PVC 90 DEGREE STREET ELL
- ⑤ 3/4" MARLEX 90 DEGREE STREET ELL
- ⑥ 3/4" X 4" SCH. 80 NIPPLE
- ⑦ 3/4" MARLEX STREET ELL
- ⑧ ANTI DRAIN VALVE ON DOWN SLOPE ROTORS IF NOT FITTED IN BY MFG.
- ⑨ PVC TEE
- ⑩ 3/4" PVC LATERAL LINE OR LARGER
- ⑪ STAINLESS STEEL SCREW, CLAMP MIN. (2) PLACES
- ⑫ #4 REBAR STAKE (24" LONG)

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		ROTOR INSTALLATION ON FIXED RISER	



LEGEND

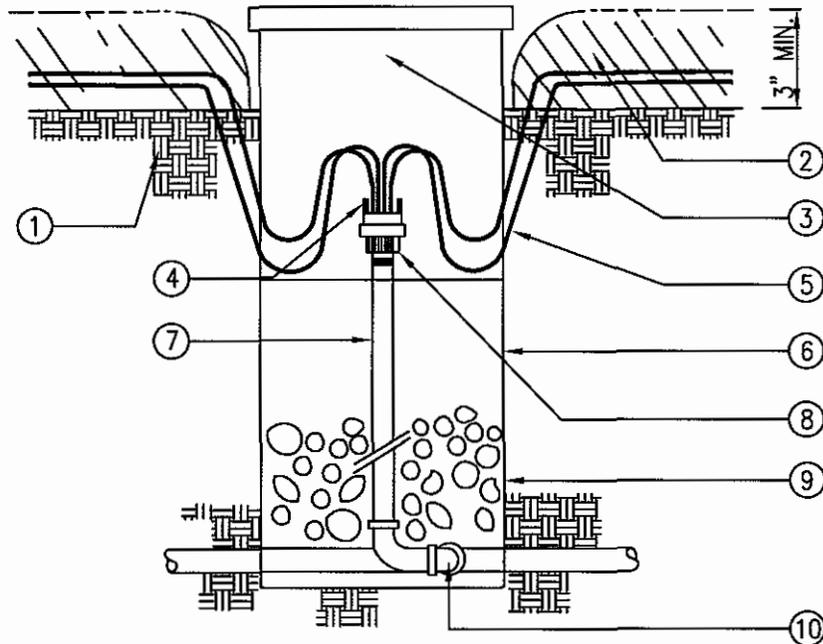
- ① TREE TRUNK
- ② 2" LODGE POLE STAKES (PER CITY STANDARDS)
- ③ FINISH GRADE: 2" BELOW TOP OF WALK
- ④ 6" POP UP SPRINKLER WITH FLOOD BUBBLER INSERT (PER PLAN)
- ⑤ EXISTING HARDSCAPE EDGE
- ⑥ MARLEX DOUBLE STREET ELLS
- ⑦ CL. 200 PVC LATERAL IRRIGATION LINE -THRU "CHIMNEY" - BOTH SIDES
- ⑧ 6" DIAMETER X 24" LONG PERFORATED ABS DRAIN PIPE WITH 1/2" AGGREGATE, FILLED TO TOP OF SPRINKLER
- ⑨ TREE PLANTING PIT WIDTH OF 4 TIMES ROOTBALL DIAMETER
- ⑩ PLANT TABLETS PER MANUFACTURER'S RECOMMENDATIONS (DISTRIBUTED AROUND ROOTBALL)
- ⑪ TEE AROUND PERIMETER OF TREE WELL
- ⑫ UNDISTURBED NATIVE SOIL
- ⑬ INSTALL VERTICAL ROOT BARRIER PER MFG. INSTRUCTIONS (WHERE SPECIFIED)
- ⑭ ROOTBALL

NOTE:

- 1). SUPPLEMENTAL TREE IRRIGATION: 1 DEEP WELL SYSTEM FOR 5 GALLON TREES. 2 DEEP WELL SYSTEMS FOR 15 GALLON TREES, AND LARGER

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER.

REVISION DATE APPROVED		ENGINEERING DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
APPROVED BY  CITY ENGINEER		DATE 08/31/2009		
			NO. 568	



LEGEND

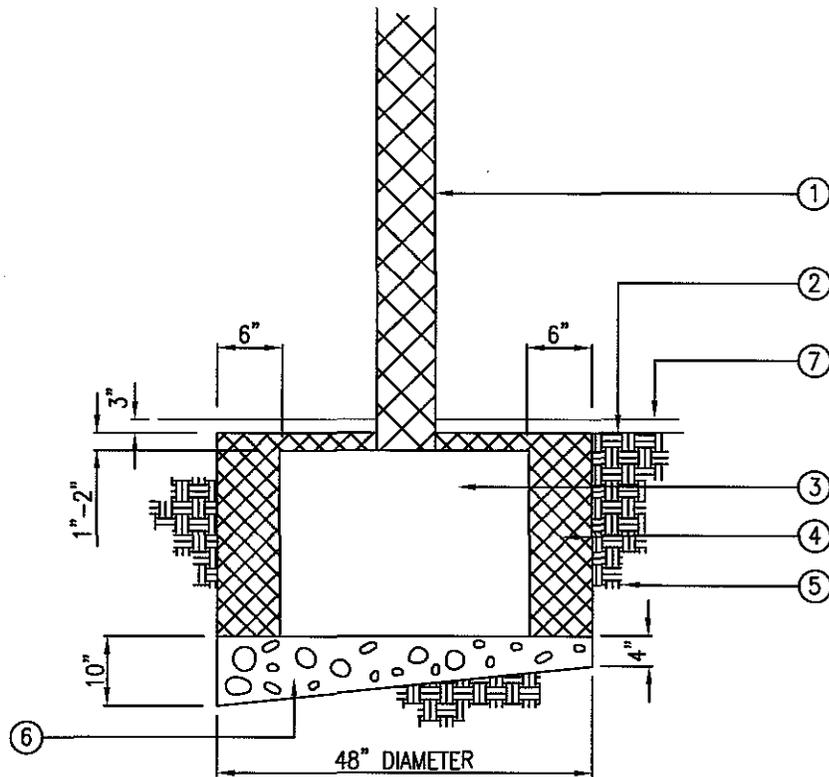
- ① FINISH GRADE
- ② MEDIUM GRIND SHREDDED MULCH COVER OVER DIST. TUBES -IN PLANTER BEDS
- ③ VALVE BOX 3" ABOVE FINISH GRADE
- ④ EMITTER OUTLET - CAP/PLUG UNUSED OUTLETS IF NECESSARY
- ⑤ DISTRIBUTION TUBES WITH OUTLET CHECK VALVE CAPS. (MIN. 2 PER SHRUB) INSTALL WITH PLASTIC TUBE STAKES)
- ⑥ 10" PLASTIC VALVE BOX BRANDED "EMT" ON LID
- ⑦ 1/2" DIA. SCH. 80 PVC NIPPLE LENGTH AS REQUIRED
- ⑧ MULTI-OUTLET EMITTER WITH THREADED RISER ADAPTER. (1 EMITTER PER 2 OR 3 SHRUBS. 1 EMITTER FOR 5 GALLON TREES AND 2 EMITTERS PER 15 GALLON AND LARGER TREES
- ⑨ 3/8" WASHED AGGREGATE. LEAVE SPACE BETWEEN EMITTER AND TOP OF AGGREGATE
- ⑩ MARLEX DBL STREET ELLS BETWEEN LATERAL LINE AND RISER

NOTES:

- 1). INSTALL TWO MULTI EMITTERS 18" FROM TRUNK OF EVERY TREE (DO NOT USE DISTRIBUTION TUBING).
- 2). INSTALL ONE MULTI EMITTER PER SIX GROUND COVER PLANTS (ONE DISTRIBUTION TUBE PER PLANT.)

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER.

<table border="1"> <thead> <tr> <th>REVISION</th> <th>DATE</th> <th>APPROVED</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REVISION	DATE	APPROVED										<p>ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p><i>Ken A. Sanchez</i> 08/31/2009 CITY ENGINEER DATE</p>	<p>CITY OF LAKE ELSINORE</p> <p>PREPARED BY PUBLIC WORKS</p>	<p>NO. 569</p>
REVISION	DATE	APPROVED														
		<p>DRIP EMITTER INSTALLATION</p>														



LEGEND

- ① PALM TRUNK (TRIMMED)
- ② FINISH GRADE
- ③ PALM ROOT BALL (TRIMMED)
- ④ WASHED PLASTER SAND BACKFILL
- ⑤ NATIVE SOIL
- ⑥ 3/4" WASHED CRUSHED AGGREGATE
- ⑦ 3" SHREDDED MULCH IN PLANTER BED

NOTES:

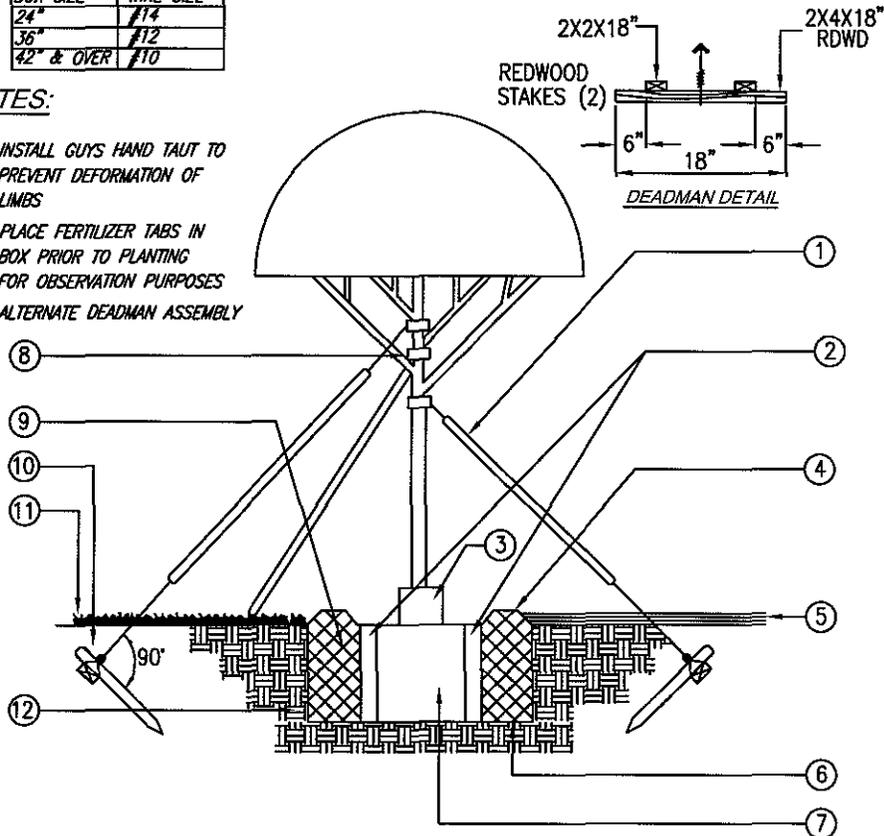
- 1.) ALL PALMS SHALL BE TRIMMED & TIED PRIOR TO PLANTING, LEAVE TIED 30 DAYS MIN.
- 2.) TRIMMED PALM TO HAVE 6-8 FRONDS MAX.
- 3.) UPON INSTALLATION REPRESENTATIVES OF THE CITY, THE LANDSCAPE ARCHITECT, AND THE LANDSCAPE CONTRACTOR SHALL DETERMINE IF PALMS REQUIRE GUYING

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		PALM TREE PLANTING	
		08/31/2009 DATE		NO. 580	

WIRE SIZE LEGEND	
BOX SIZE	WIRE SIZE
24"	#14
36"	#12
42" & OVER	#10

NOTES:

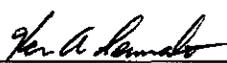
- 1.) INSTALL GUYS HAND TAUT TO PREVENT DEFORMATION OF LIMBS
- 2.) PLACE FERTILIZER TABS IN BOX PRIOR TO PLANTING FOR OBSERVATION PURPOSES
- 3.) ALTERNATE DEADMAN ASSEMBLY

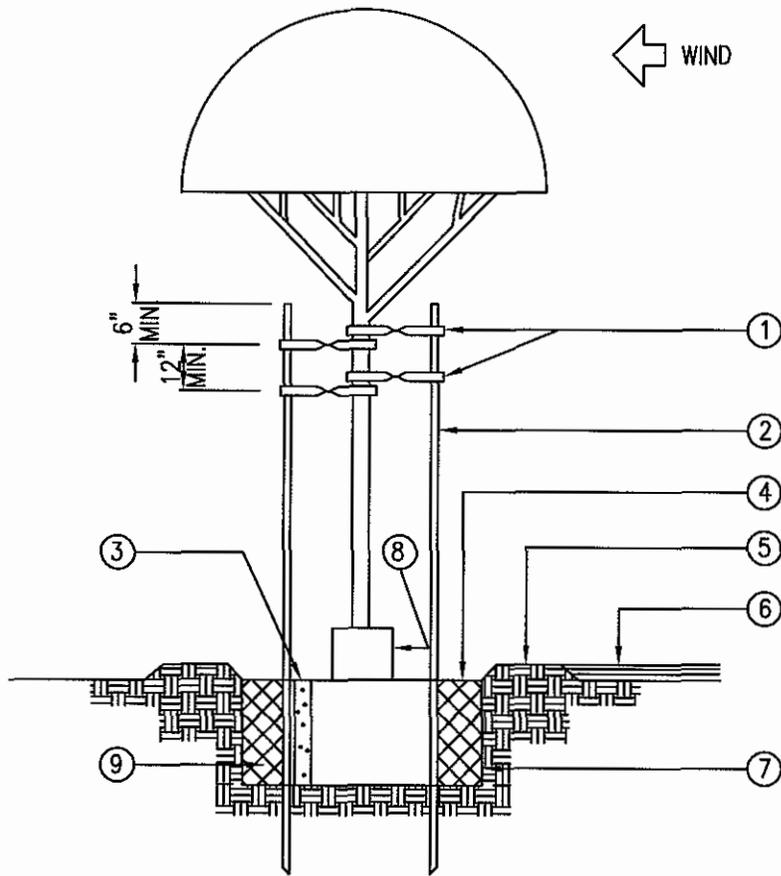


LEGEND:

- ① (3) DOUBLE STRAND GALV. 12 GA. WIRE GUYS SPACED EQUALLY AROUND TREE - COVER WITH 3/8" DIA. x3" WHITE PVC TUBING
- ② REFER TO DETAIL STANDARD MV-568 FOR IRRIGATION METHOD
- ③ USE TRUNK GUARD WHERE TREE IS INSTALLED IN TURF AREAS
- ④ 4" BERM TO FORM DEPRESSED WATERING BASIN
- ⑤ 3" THICK SHREDDED MULCH IN PLANTER
- ⑥ PLANT TABS PER MANUFACTURER'S RECOMMENDATIONS
- ⑦ ROOT BALL
- ⑧ NEW RUBBER HOSE OVER WIRE AT POINT OF CONNECTION
- ⑨ BACKFILL MIX PER SPECIFICATIONS
- ⑩ REDWOOD DEADMAN PER DETAIL THIS SHEET, ALTERNATE METHOD PER CITY EQUIPMENT LIST
- ⑪ TURF
- ⑫ PLANT PIT TO BE 2 TIMES THE WIDTH OF ROOT BALL & SAME DEPTH AS THE ROOT BALL

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		PREPARED BY PUBLIC WORKS	
		 CITY ENGINEER		TREE GUYING DETAIL - 36" BOX OR LARGER	
		08/31/2009 DATE		NO. 581	



LEGEND:

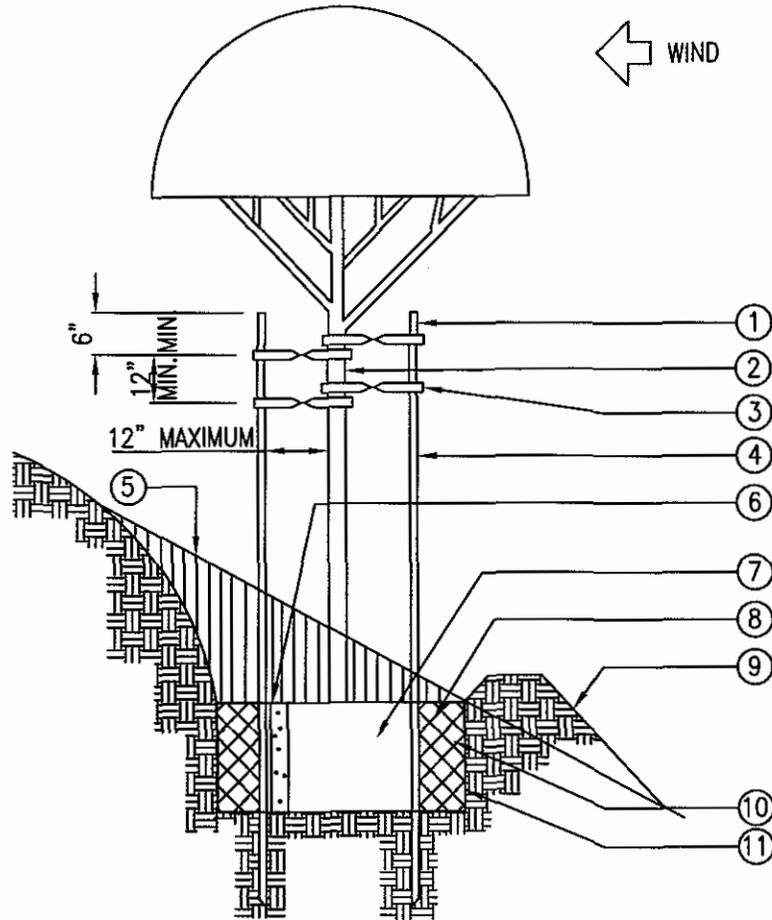
- ① TREE TIES 4 REQ'D
- ② 2" LODGEPOLE PINE STAKE
- ③ REFER TO MV-568 CITY STANDARD FOR IRRIGATION METHOD
- ④ BACKFILL MIX PER SPECIFICATIONS
- ⑤ 4" BERM FOR TEMPORARY WATERING UNTIL SEEDING
- ⑥ 3" THICK SHREDDED MULCH - WHERE APPLICABLE IN PLANTER BEDS
- ⑦ PLANT PIT: 2 TIMES WIDTH OF ROOT BALL & SAME DEPTH AS ROOT BALL
- ⑧ TRUNK GUARD IN TURF AREAS
- ⑨ PLACE PLANT TABS PER MANUFACTURERS RECOMMENDATION

NOTE:

1.) INSTALL STAKES 12" FROM TREE TRUNK

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009 DATE	NO. 582
				TYPICAL DOUBLE STAKE TREE (15 GAL. - 25" BOX)	

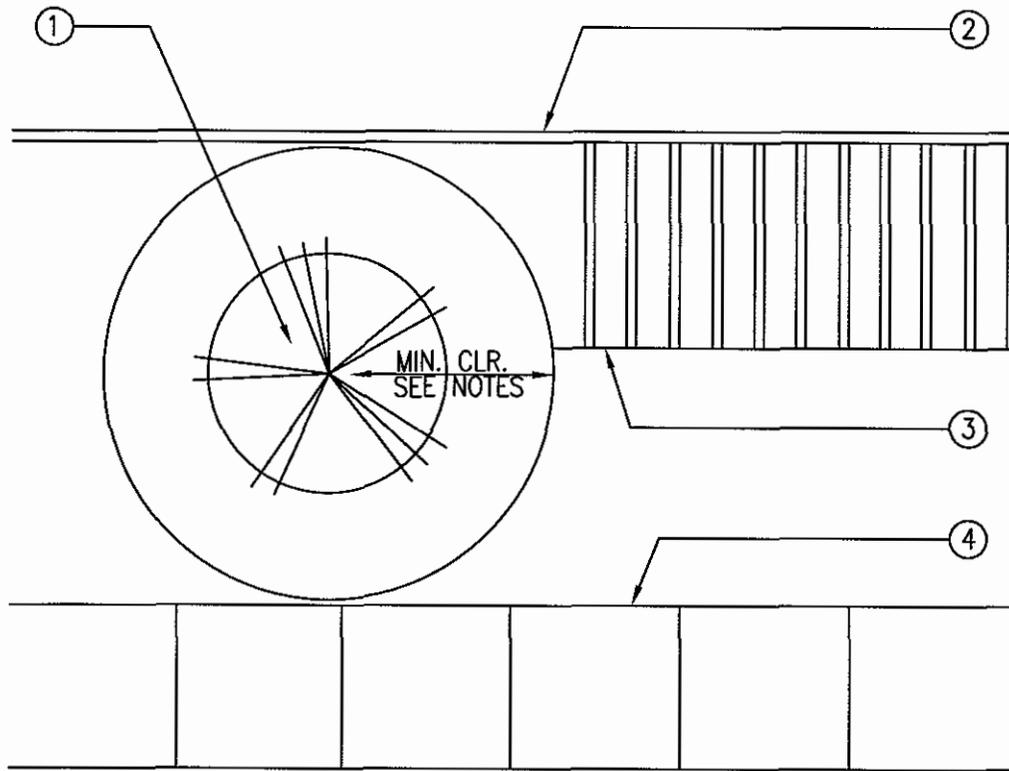


LEGEND

- ① TOP OF STAKES
- ② MAIN TRUNK
- ③ TREE TIES (4 REQ'D) 12" APART MIN. NAILED TO STAKES
- ④ APPROVED 10' TREE STAKES (2) PER SPECIFICATIONS
- ⑤ ORIGINAL GRADE
- ⑥ REFER TO STANDARD DETAIL MV-568 FOR IRRIGATION METHOD
- ⑦ CONTAINER ROOT BALL
- ⑧ BACKFILL MIX PER SPECIFICATIONS
- ⑨ 3" BERM TIGHTLY COMPACTED IN PLACE TO FORM WATERING BASIN
- ⑩ PLANT TABS PER MANUFACTURERS RECOMMENDATIONS
- ⑪ PLANT PIT TO BE 2 TIMES WIDTH OF ROOT BALL & SAME DEPTH AS THE ROOT BALL
- ⑫ NATIVE SOIL BACKFILL (COMPACTED)

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009 DATE	NO. 583
				DOUBLE STAKE TREE ON SLOPE	



LEGEND:

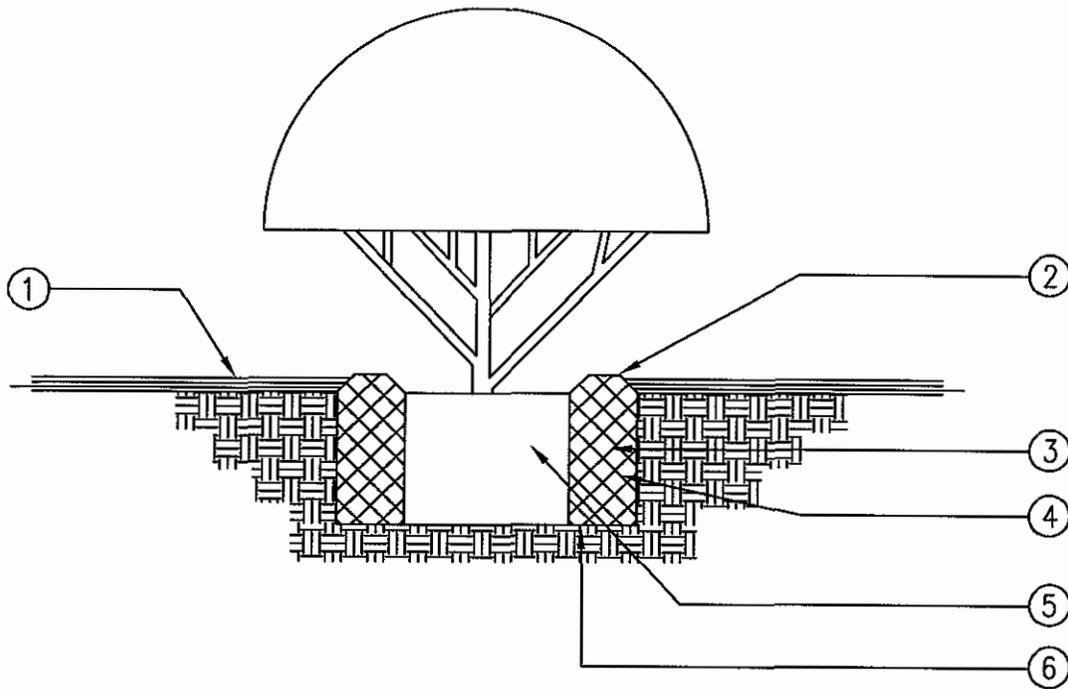
- ① PROPOSED CENTER OF TREE
- ② STRUCTURE /WALL/ETC.
- ③ AWNING/BUILDING OVERHANG
- ④ HARDSCAPING

NOTES:

- 1.) MINIMUM CLEARANCE: 5'-0" FOR 5 GALLON TO 24" BOX TREES. LARGER TREES PER CITY APPROVAL 10' MINIMUM CLEARANCE FROM STREET LIGHTS - ALL TREES
- 2.) IN CASES WHERE TREE TRUNKS ARE 5'-0" OR LESS FROM WALLS AND HARDSCAPING, INSTALL TREE WITH ROOT BARRIERS
- 3.) TREE SPACING SHALL BE APPROVED ON PLAN BY THE CITY BEFORE ANY SCHEDULED INSTALLATION
- 4.) STREET TREE PLANS SHALL INCLUDE ALL VERTICAL UTILITIES ON PLANTING PLAN

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		TREE SPACING REQUIREMENTS NO. 584	
		 DATE			



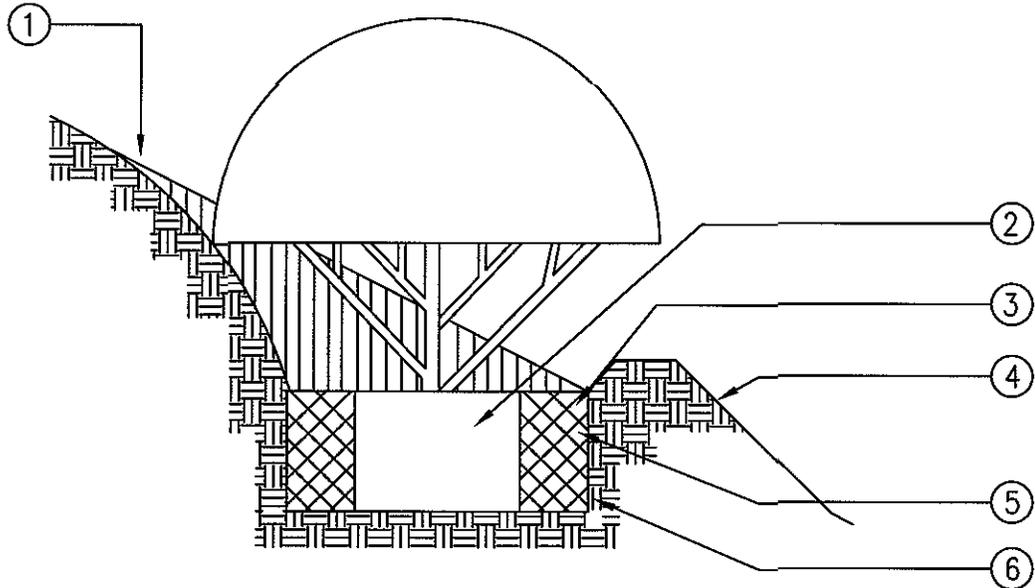
LEGEND:

- ① 3" THICK SHREDDED MULCH (MINIMUM)
- ② 4" BERM TO FORM DEPRESSED WATERING BASIN
- ③ PLANT TABS PER MANUFACTURER'S RECOMMENDATIONS
- ④ BACKFILL MIX PER SPECIFICATIONS
- ⑤ CONTAINER PLANT ROOT BALL
- ⑥ PLANT PIT TO BE 2 TIMES THE WIDTH OF THE ROOT BALL & SAME DEPTH AS THE ROOT BALL

NOTES:

- 1.) UNTANGLE MATTED ROOTS BY LOOSENING ALL ROOTS AT EDGE OF ROOT BALL WITH WATER FROM HOSE. DO NOT CRACK ROOT BALL
- 2.) DO NOT USE BARK CHIPS WHERE PLAN CALLS FOR MULCH COVER IN PLANTER AREAS

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE		
DATE	APPROVED					PREPARED BY PUBLIC WORKS
		APPROVED BY		CONTAINER PLANTING		
		 CITY ENGINEER				NO. 585
		DATE 08/31/2009				



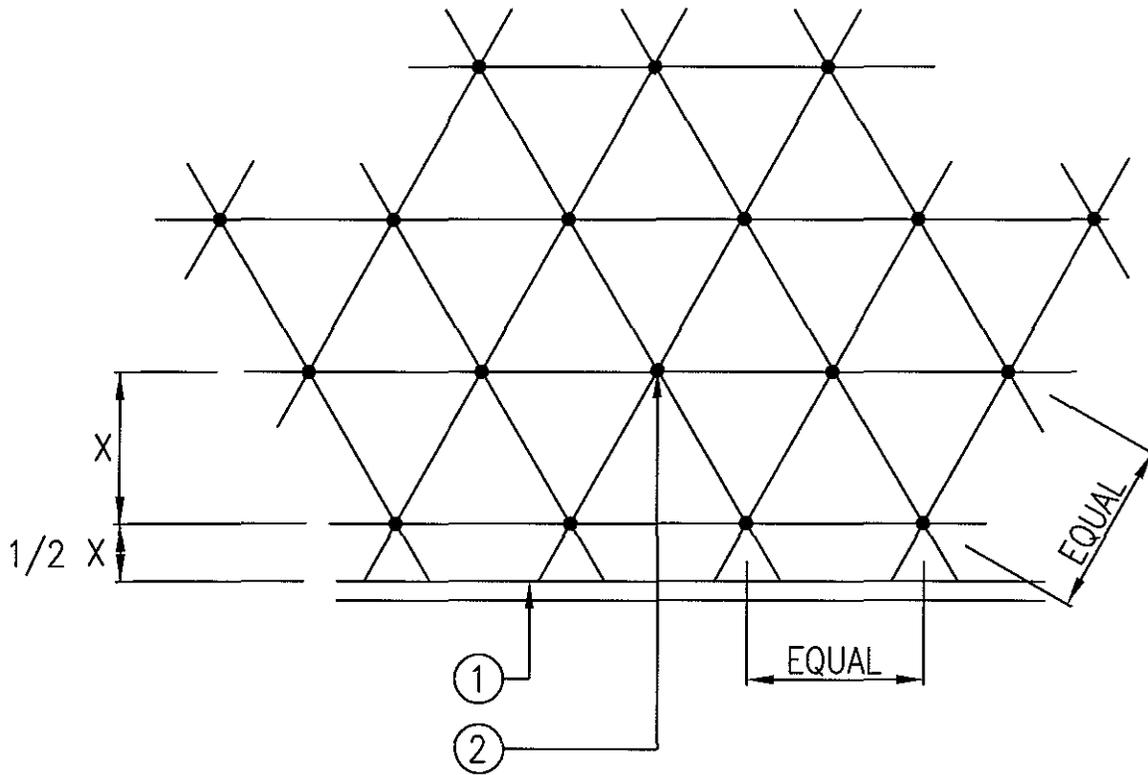
LEGEND:

- ① ORIGINAL GRADE
- ② CONTAINER PLANT ROOT BALL
- ③ BACKFILL MIX PER SPECIFICATIONS
- ④ 3" BERM TIGHTLY COMPACTED IN PLACE TO FORM WATERING BASIN
- ⑤ PLANT TABS PER MANUFACTURER'S RECOMMENDATIONS
- ⑥ PLANT PIT TO BE 2 TIMES THE WIDTH OF THE ROOT BALL & SAME DEPTH AS THE ROOT BALL

NOTES:

1.) UNTANGLE MATTED ROOTS BY LOOSENING ALL ROOTS AT EDGE OF ROOT BALL WITH WATER FROM HOSE. DO NOT CRACK ROOT BALL

<table border="1"> <thead> <tr> <th colspan="2">REVISION</th> </tr> <tr> <th>DATE</th> <th>APPROVED</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> </tbody> </table>		REVISION		DATE	APPROVED											<p>ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p><i>Ken A. Daniels</i> 08/31/2009 CITY ENGINEER DATE</p>	<p>CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS</p>	<p>NO. 586</p>
REVISION																		
DATE	APPROVED																	
		<p>CONTAINER PLANTING ON SLOPE</p>																



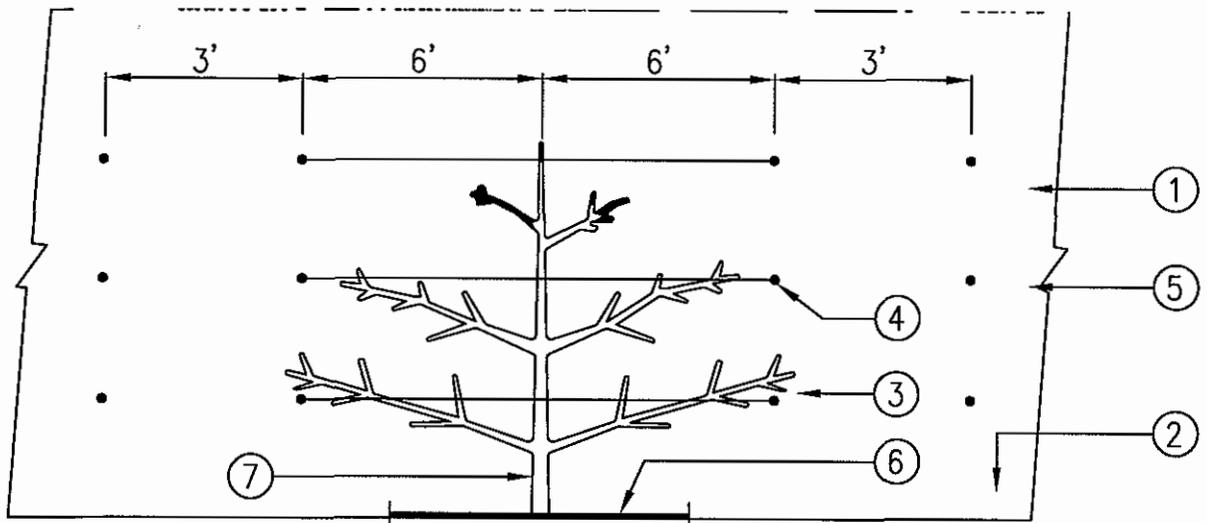
LEGEND

- ① BACK OF CURB OR EDGE OF PAVING
- ② PLANT LOCATION

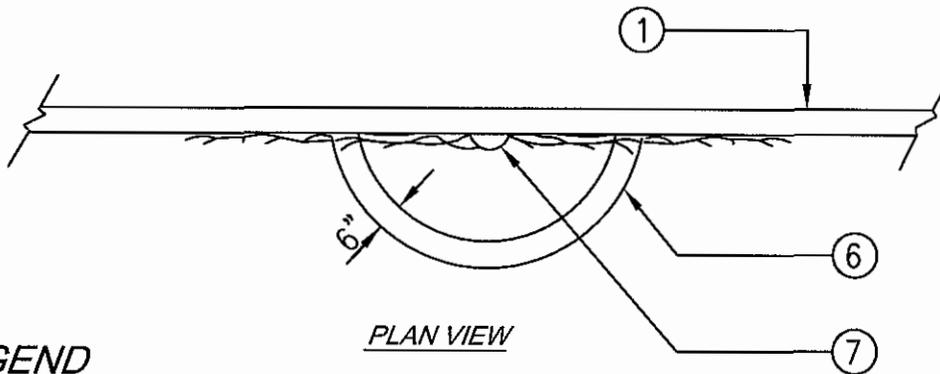
NOTE:

1.) ALL SHRUBS/GROUND COVER TO BE PLANTED AT EQUAL SPACING (TRIANGULAR) UNLESS OTHERWISE INDICATED ON PLANS: SEE LEGEND FOR SPACING REQUIREMENTS

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		SHRUB/GROUNDCOVER SPACING	NO. 587



ELEVATION

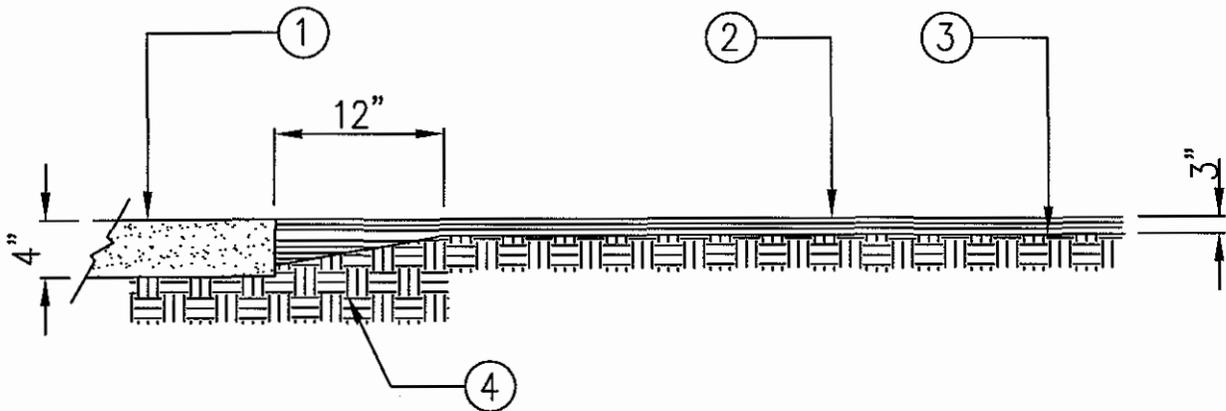


PLAN VIEW

LEGEND

- ① WALL
- ② FINISH GRADE
- ③ EYEBOLTS: 1/2" DIA. EYEBOLTS IN LEAD SHIELDS
- ④ 12 GA. GALV. WIRE: SECURE VINE TO WIRE WITH NURSERYMAN'S TAPE
- ⑤ EYEBOLTS FOR FUTURE USE
- ⑥ 6" X 8" CONCRETE VINE COLLARS IN TURF AREAS ONLY. INSIDE RADIUS OF COLLAR TO BE TWO TIMES THE DIAMETER OF ROOTBALL MINIMUM
- ⑦ ANGLE BACK TO WALL TRUNK OF VINE, AND REMOVE STAKE WHILE SECURING VINE TO WIRES

REVISION		ENGINEERING		DATE 07/09		CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY					
		 CITY ENGINEER		08/31/2009 DATE		VINE DETAIL: NON-ADHERING TYPE	
						NO. 588	



LEGEND

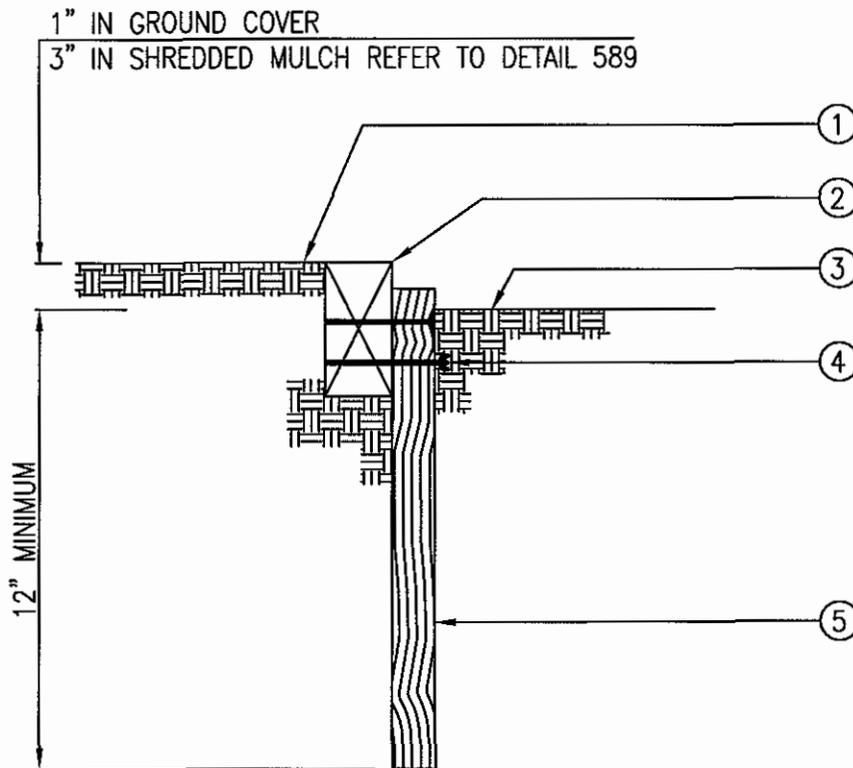
- ① HARDESCAPING/HEADERBOARD
- ② SHREDDED MULCH (MEDIUM GRIND) DO NOT BARK CHIPS
- ③ FINISH GRADE
- ④ SHOVEL CUT EDGE

NOTES:

- 1.) MULCH UNDER TREES AND SHRUBS, AND BLEND EDGES AT GROUND COVER AREAS
- 2.) NOT TO BE USED WITH FLATTED PLANTS UNDER 16" ON CENTER
- 3.) PULL MULCH AWAY FROM ROOT CROWNS OF TREES & SHRUBS

* SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER.

REVISION		ENGINEERING		DATE 07/09		CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY					
		 CITY ENGINEER		08/31/2009 DATE		NO. 589	
MULCH INSTALLATION							



LEGEND

- ① FINISH GRADE
- ② 2 X 4 ROUGH SAWN REDWOOD HEADER BOARD (NOTCH) OR INSTALL AT GRADE LEVEL AT SWALE CROSSING
- ③ FINISH GRADE IN PLANT BED
- ④ 8d GALVANIZED NAILS (2)
- ⑤ 2" X 2" X 24" REDWOOD STAKES AT 3" O.C. AND AT ALL SPLICES

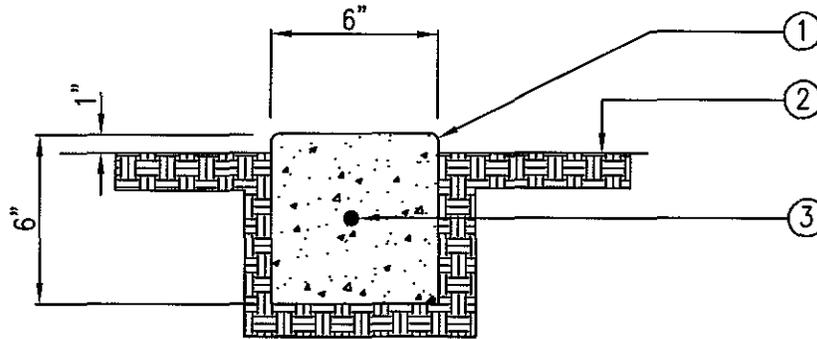
NOTES:

- 1.) 24" LAP ALL SPLICES. USE ROUGH SAWN LUMBER UNLESS OTHERWISE APPROVED BY CITY
- 2.) CURVED SECTIONS OF HEADER SHALL BE CONSTRUCTED OF THREE 3/8" X 4" LAMINATED REDWOOD BENDER BOARD

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		 DATE	NO. 590
		2 X 4 REDWOOD HEADER			

NOTE:

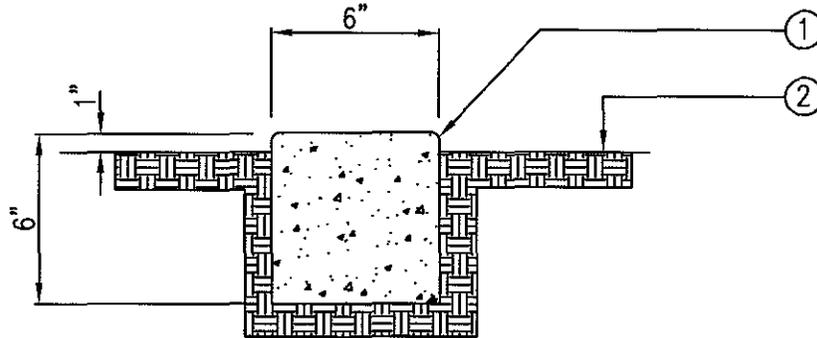
- 1.) PROVIDE SCORE JOINTS AT 10'-0" O.C. AND 3/8" BITUMINOUS FELT EXPANSION JOINTS AT 20'-0" O.C.



TYPICAL FOR MOW CURBS OVER 20' IN LENGTH

NOTE:

- 1.) PROVIDE SCORE JOINT AT 10'-0" O.C. AND 3/8" BITUMINOUS FELT EXPANSION JOINT AT EACH END

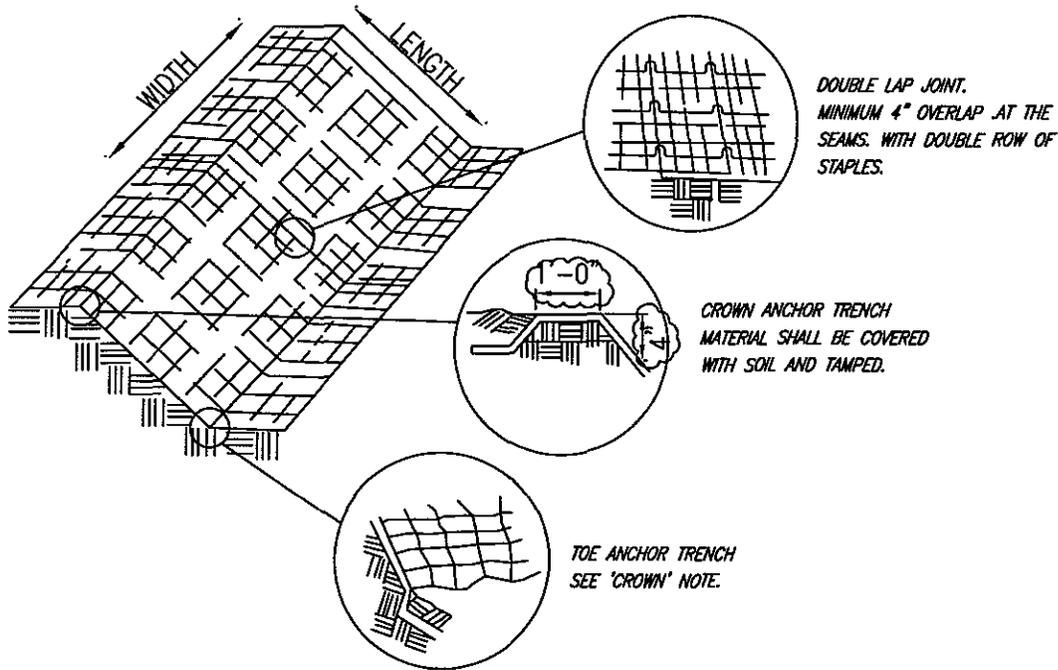


TYPICAL FOR MOW CURBS UNDER 20' IN LENGTH

LEGEND

- ① CONCRETE MOW CURB - RADIUS EXPOSED EDGES. MED. BROWN FINISH OR PER PLAN (INSTALL GRADE LEVEL AT SWALE CROSSING)
- ② FINISH GRADE
- ③ #3 REBAR CONTINUOUS (UNLESS OTHERWISE INSTRUCTED)

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009 DATE	NO. 591
		CONCRETE MOW CURB			



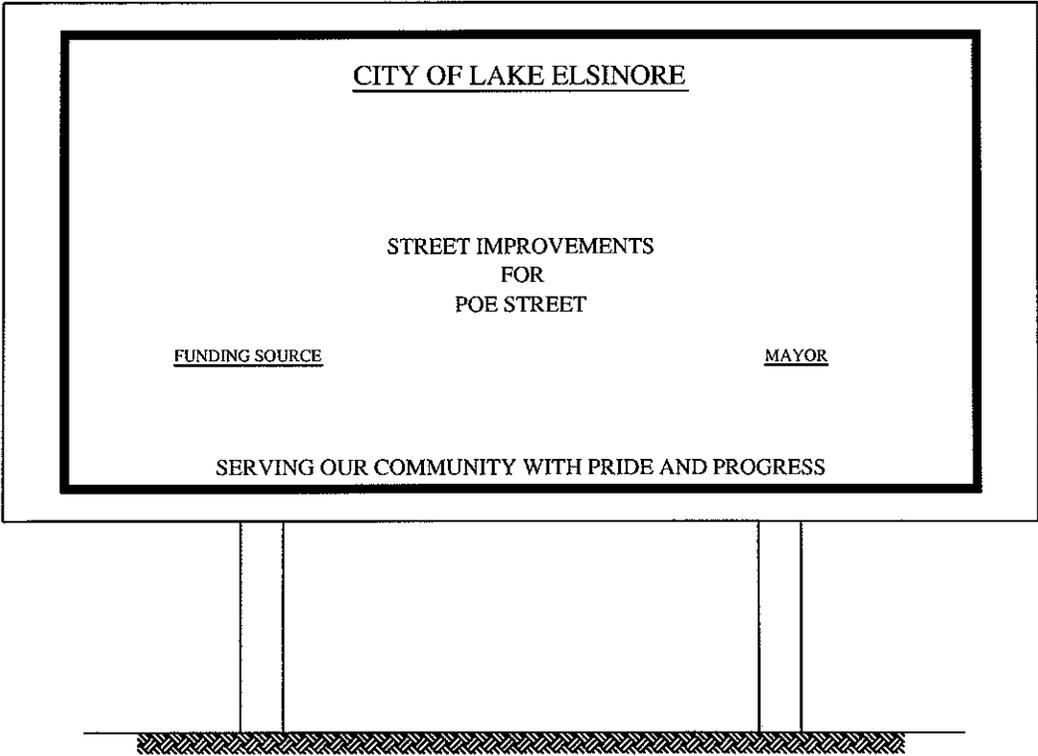
INSTALLATION NOTES:

- 1.) GROUND COVER MAY BE PLANTED THROUGH THE FABRIC.
- 2.) THE FABRIC SHALL BE INSTALLED ON GROUND A MINIMUM OF 48 HOURS PRIOR TO PLANTING TO ALLOW FABRIC TO SETTLE.
- 3.) HOLES FOR PLANTING SHALL BE MADE WITH SHARP KNIVES OR SHEARS.
- 4.) FABRIC IS TO BE FASTENED USING NO.11 GAUGE WIRE, 'U' SHAPED WITH 1" CROWN AND LESS 12" IN LENGTH OR PREFABRICATED STAPLES.
- 5.) INSTALLATION SPECIFICATIONS PER MFG.

<table border="1"> <tr> <th>REVISION</th> <th>DATE</th> <th>APPROVED</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		REVISION	DATE	APPROVED													<p align="center">ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p align="center"><i>Ken A. Samuels</i> CITY ENGINEER 08/31/2009 DATE</p>	<p align="center">CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS</p>	<p align="center">EROSION CONTROL NETTING</p>	<p align="center">NO. 592</p>
REVISION	DATE	APPROVED																		

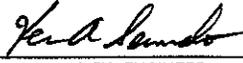
CITY OF LAKE ELSINORE
STANDARD PLANS

SECTION 6:
Miscellaneous



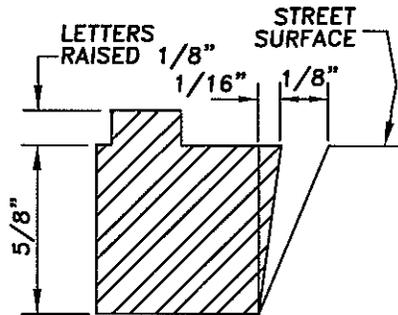
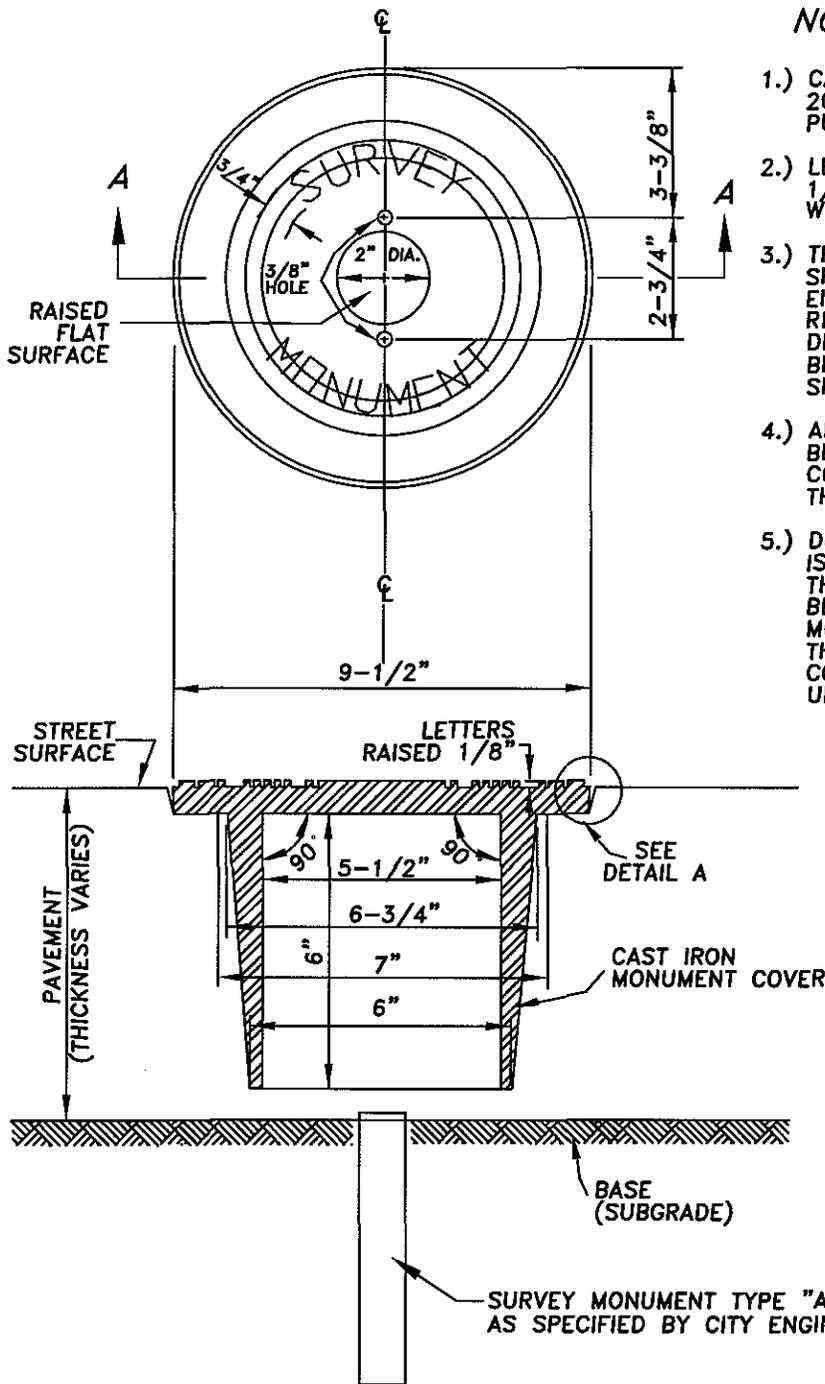
NOTES:

- 1.) SIGN SHALL BE 4' x 8' & HAVE MINIMUM 7' GROUND CLEARANCE
- 2.) SIGN SHALL BE STARK WHITE BACKGROUND AND BLUE LETTERING
- 4.) SIGN SHALL BE PLACED AT THE END OF THE STREET THAT WORK IS BEING CONSTRUCTED ON. IF VARIOUS LOCATIONS OF THE WORK ARE INCLUDED, THE SIGNS WILL BE MOVED BY THE CONTRACTOR PER THE CITY SCHEDULE.

REVISION		PUBLIC WORKS	DATE 07/09	CITY OF LAKE ELSINORE <i>PREPARED BY PUBLIC WORKS</i>	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		CITY CAPITAL IMPROVEMENT PROJECT CONSTRUCTION SIGN	NO. 600
			08/31/2009 DATE		

NOTES

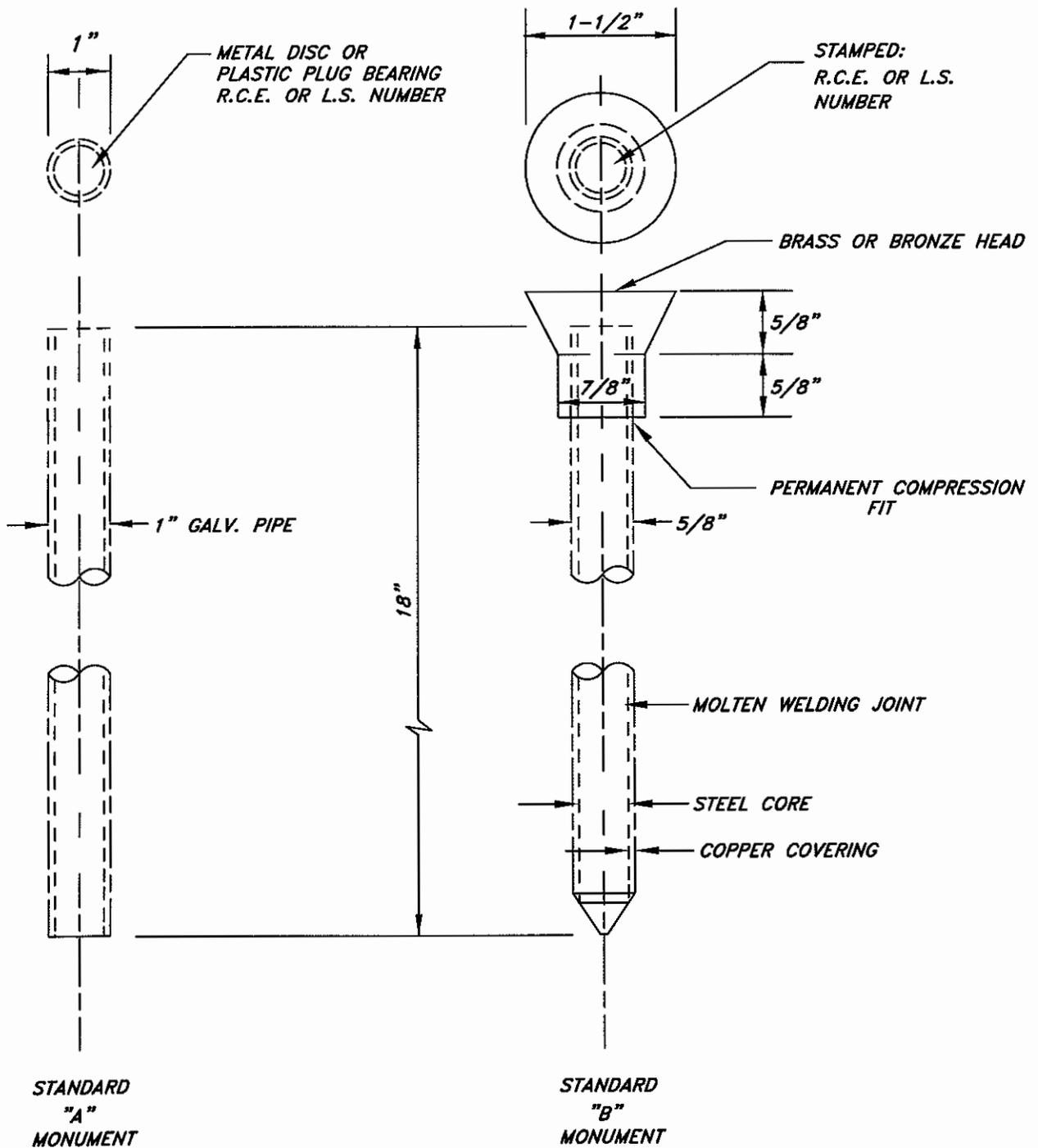
- 1.) CAST IRON SHALL CONFORM TO SECTION 206-3 OF "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION."
- 2.) LETTERING SHALL BE AS SHOWN HEREON, 1/8" HIGH, AND SHALL BE CAST INTEGRAL WITH THE CASTING.
- 3.) THE 3/8" DIAMETER HOLES IN THE COVER SHALL BE AS SHOWN HEREON, AND SHALL EITHER BE FORMED BY PROVIDING A REMOVABLE PLUG PRIOR TO CASTING OR DRILLED AFTER CASTING HAS COOLED AND BEFORE COATING IS APPLIED. THE HOLES SHALL NOT BE PUNCHED.
- 4.) AFTER CASTING HAS COOLED, IT SHALL BE GIVEN AN ASPHALTIC COATING CONFORMING TO SECTION 206-3.6 OF THE STANDARD SPECIFICATIONS.
- 5.) DURING INSTALLATION, WHEN THE PAVEMENT IS FOUND TO BE LESS THAN 6-5/8" THICK THE BASE OF THE MONUMENT COVER SHALL BE CUT SO THAT THE BASE OF THE MONUMENT COVER DOES NOT EXTEND INTO THE BASE. APPLY A COAT OF ASPHALTIC COATING OR ASPHALT PAINT TO ANY UNCOATED SURFACE OR CUTEDGE.



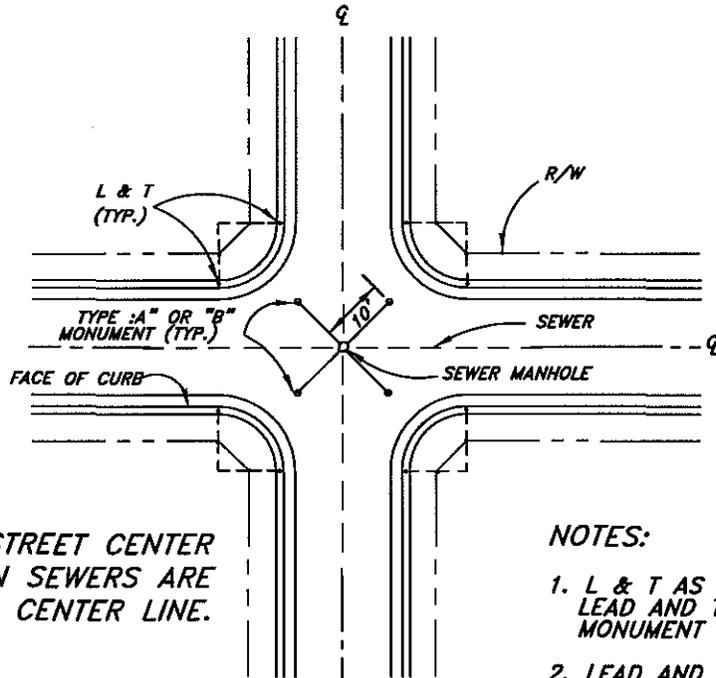
DETAIL A

SECTION "A-A"

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE <small>PREPARED BY PUBLIC WORKS</small>
DATE APPROVED	APPROVED BY		
	<i>He A. Lando</i> CITY ENGINEER	08/31/2009 DATE	MONUMENT COVER
			1 OF 5 NO. 601A



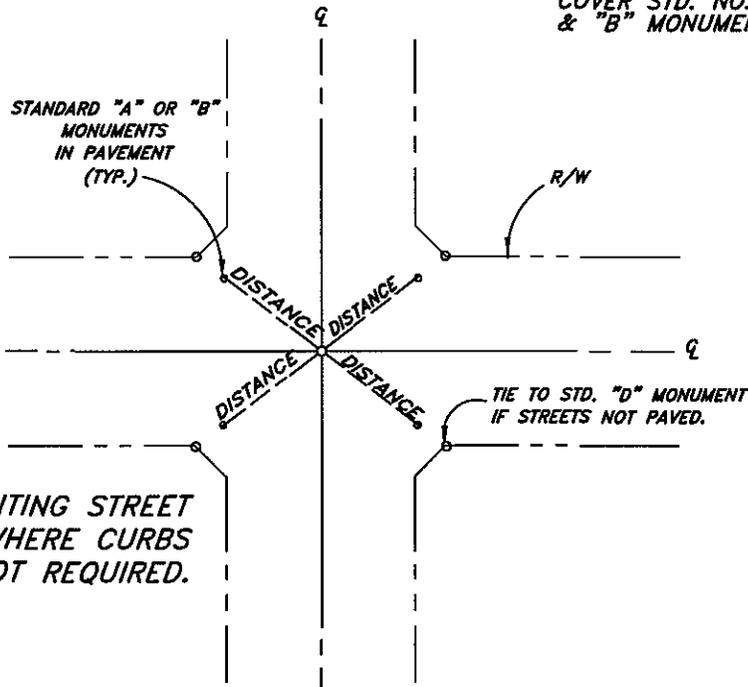
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		2 OF 5	
		08/31/2009 DATE		SURVEY MONUMENT NO. 601B	



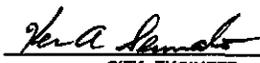
MONUMENTING STREET CENTER LINES WHEN SEWERS ARE LOCATED ON CENTER LINE.

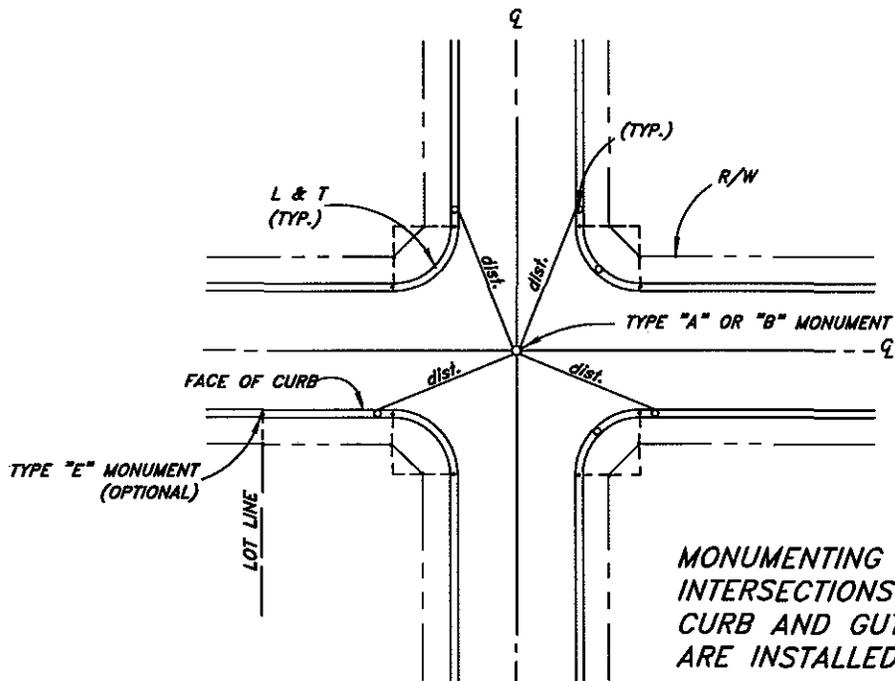
NOTES:

1. L & T AS SHOWN HEREON INDICATES LEAD AND TACK OR STEEL PIN MONUMENT SET IN CURB.
2. LEAD AND TACK OR STEEL PIN MONUMENT WITNESS TO PROPERTY CORNER MAY BE SET, NOT REQUIRED.
3. SEE STD. NO. 601A FOR MONUMENT COVER STD. NO. 601B FOR TYPE "A" & "B" MONUMENT.

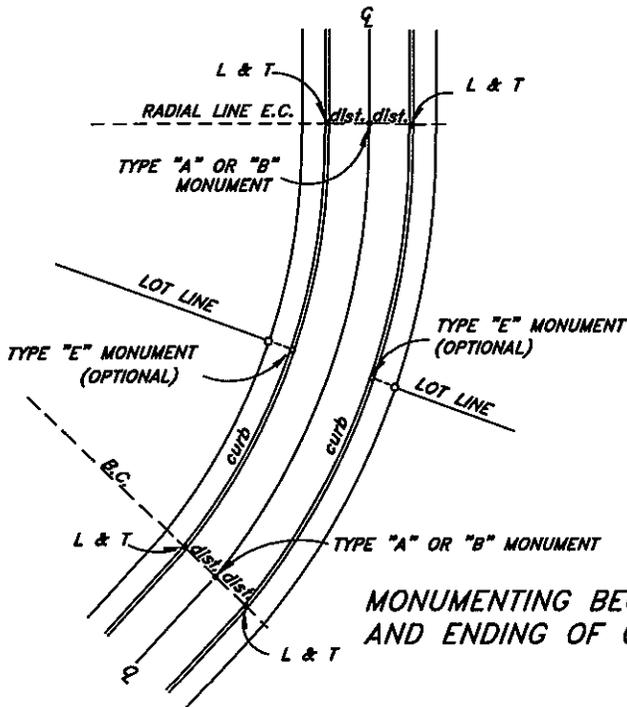


MONUMENTING STREET CENTER LINES WHERE CURBS ARE NOT REQUIRED.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED			PREPARED BY PUBLIC WORKS	
		APPROVED BY		3 OF 5	
		 CITY ENGINEER		TIE-OUT STANDARDS	
		08/31/2009 DATE		NO. 601C	



MONUMENTING STREET INTERSECTIONS WHERE CURB AND GUTTERS ARE INSTALLED.



MONUMENTING BEGINNING AND ENDING OF CURVE.

NOTES:

1. L&T SHOWN HEREON INDICATES LEAD AND TACK OR STEEL PIN MONUMENT SET IN CONCRETE CURB.
2. LEAD AND TACK OR STEEL PIN MONUMENT WITNESS TO PROPERTY CORNER MAY BE SET ("E" MONUMENT) IN LIEU OF SETTING FRONT LOT CORNERS.
3. THE P.I. OF THE CURVE C/O F A STREET MAY BE MONUMENTED IN LIEU OF E.C. AND B.C. IF THE P.I. FALLS WITHIN THE TRAVELLED WAY. IT SHALL BE REFERENCED WITH L&T'S IN CURB.

REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		<i>Ken A. Sanchez</i>	08/31/2009
		CITY ENGINEER	DATE

CITY OF LAKE ELSINORE

PREPARED BY PUBLIC WORKS

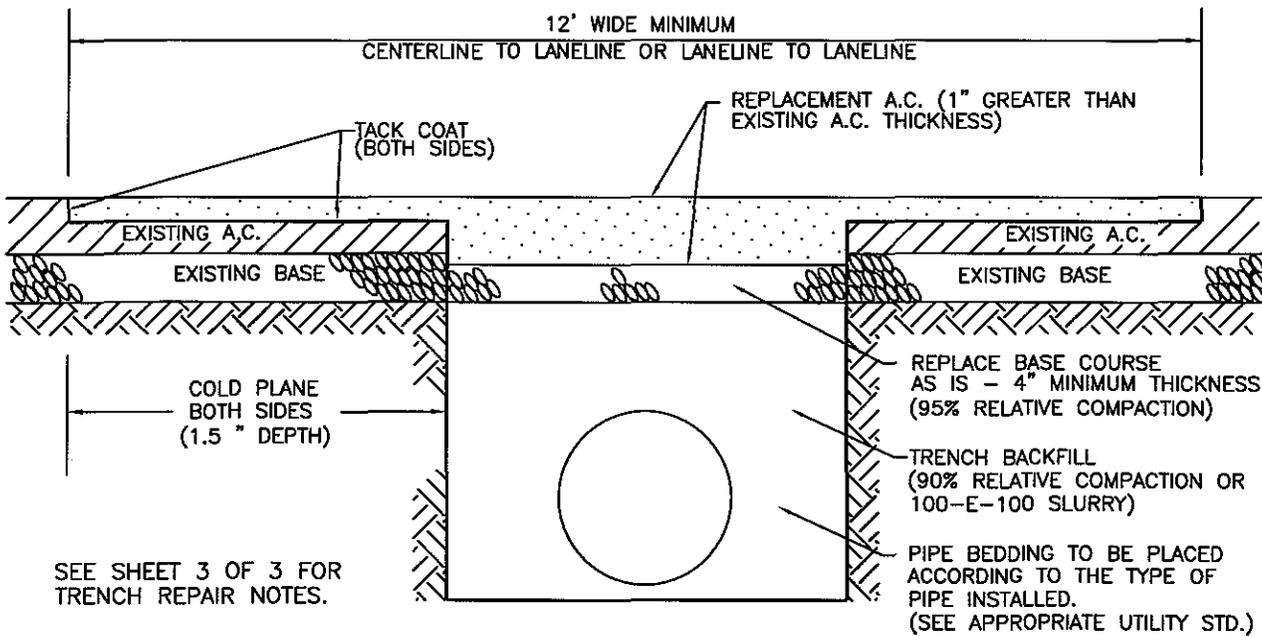
STREET CENTER LINE MONUMENT

4 OF 5

NO. 601D

STANDARD BEING REVISED

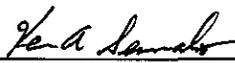
**CONTACT ENGINEERING TECHNICIAN
FOR INFORMATION**



SEE SHEET 3 OF 3 FOR TRENCH REPAIR NOTES.

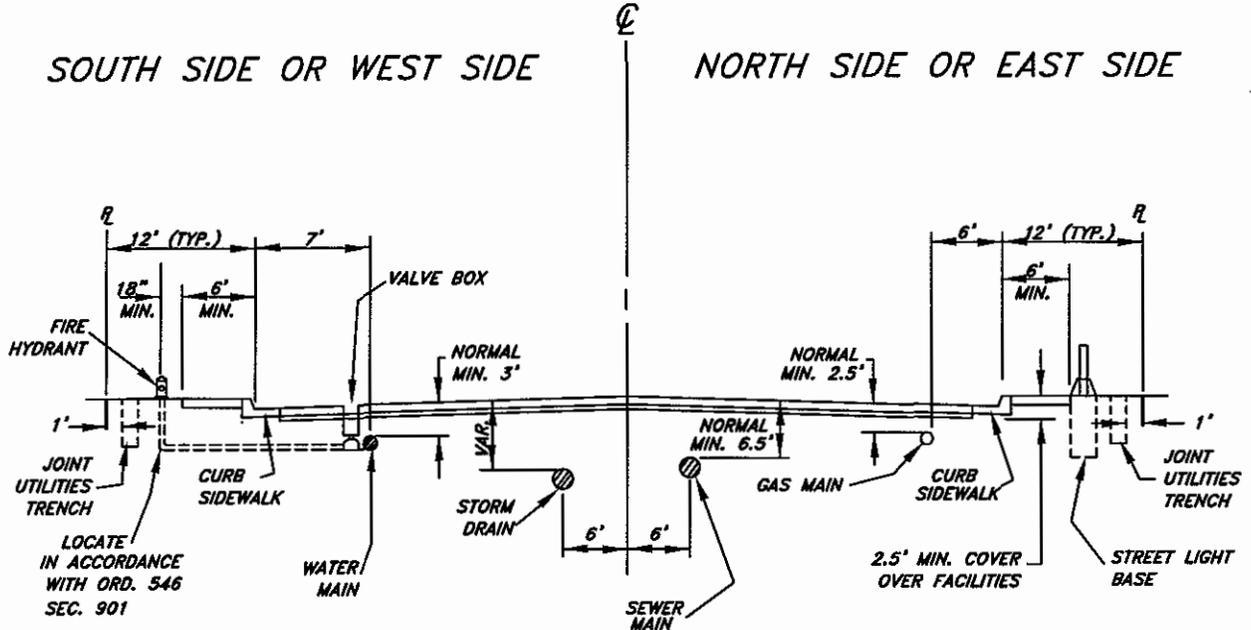
NOTE:

Street sections newly paved, reconstructed, or overlaid within the last five (5) years will require special pavement replacement at the discretion of the City Engineer.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED				
		APPROVED BY		PARALLEL TRENCH BACKFILL AND ROADWAY REPAIR	
		 CITY ENGINEER			
		DATE 08/31/2009		NO. 602B	

STANDARD BEING REVISED

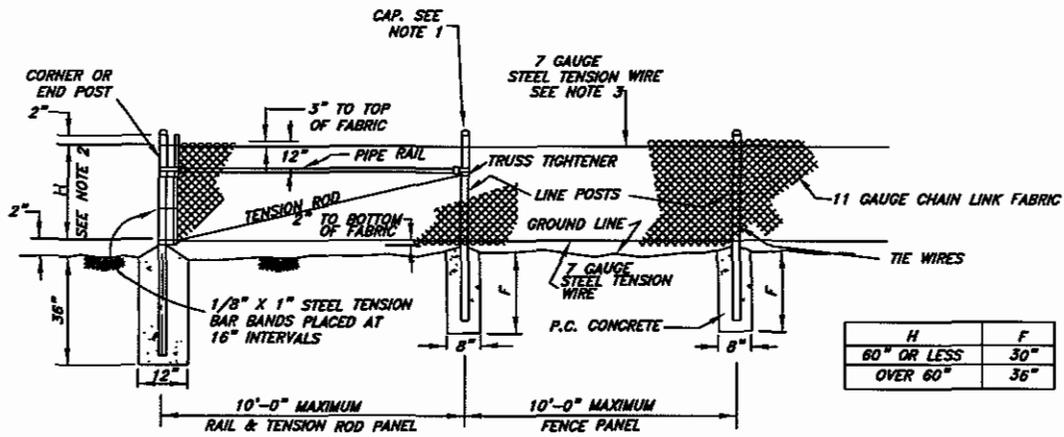
**CONTACT ENGINEERING TECHNICIAN
FOR INFORMATION**



NOTES:

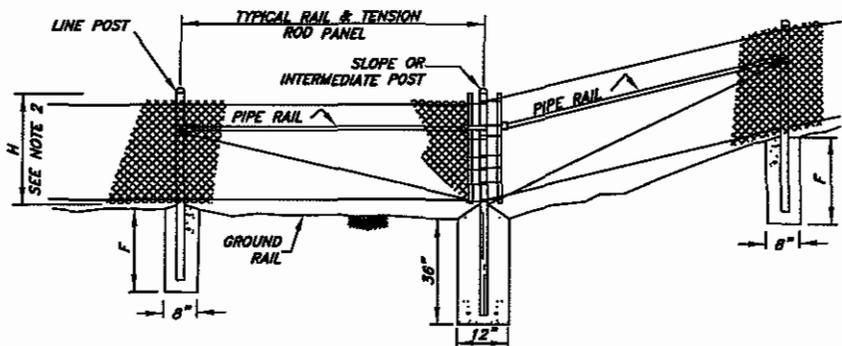
- 1.) LOCATION AND DEPTH OF EXISTING AND PROPOSED UTILITIES MUST BE PROVIDED BY THE SUBDIVIDER AND SHOWN ON ANY PLANS SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.
- 2.) CHANGES MAY BE PERMITTED BY CITY ENGINEER IN CASES OF CONFLICTING FACILITIES.
- 3.) CONFLICTS BETWEEN UTILITY COMPANIES FACILITIES, EXISTING AND PROPOSED, MUST BE MUTUALLY RESOLVED BY THE UTILITY COMPANIES.
- 4.) FOR COMMERCIAL SIDEWALKS, THE FIRE HYDRANT SHALL BE PLACED WITHIN THE SIDEWALK 1.5' BEHIND FACE OF CURB.
- 5.) SEE STANDARD NOS. 500 AND 501 FOR LIGHTING DETAILS.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
				NORMAL LOCATION OF UNDERGROUND UTILITIES	
			08/31/2009 DATE	NO. 603	



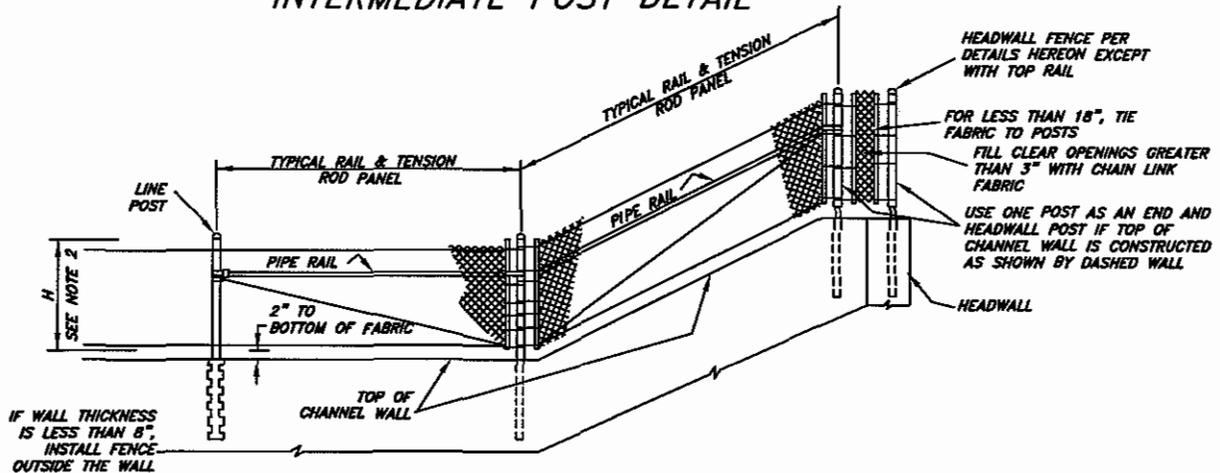
H	F
60" OR LESS	30"
OVER 60"	36"

TYPICAL FENCE ELEVATION



INTERMEDIATE AND SLOPE POSTS SHALL BE INSTALLED AT NOT MORE THAN 300' INTERVALS ALONG FENCE LINE AND AT GRADE CHANGES EXCEEDING 5% ALSO APPLICABLE TO CHANNEL FENCE

INTERMEDIATE POST DETAIL



CHANNEL WALL AND WINGWALL DETAIL AT HEADWALL

REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		<i>Ken A. Samala</i>	08/31/2009
		CITY ENGINEER	DATE

CITY OF LAKE ELSINORE

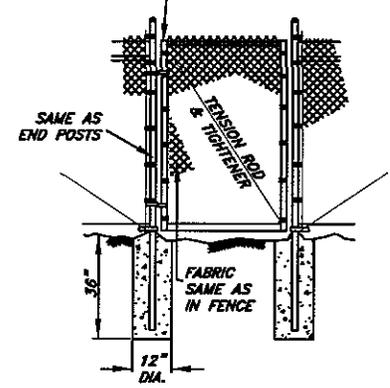
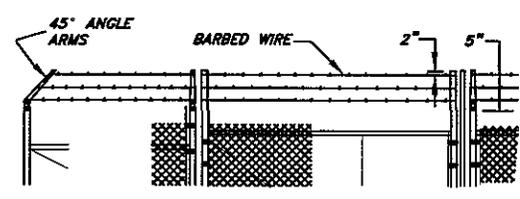
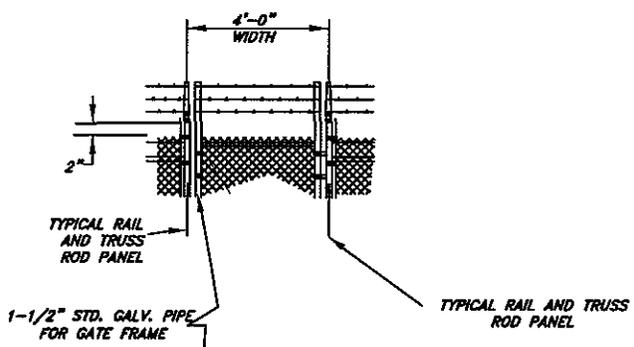
PREPARED BY PUBLIC WORKS

FENCE AND GATES FOR WALL AND CHANNEL

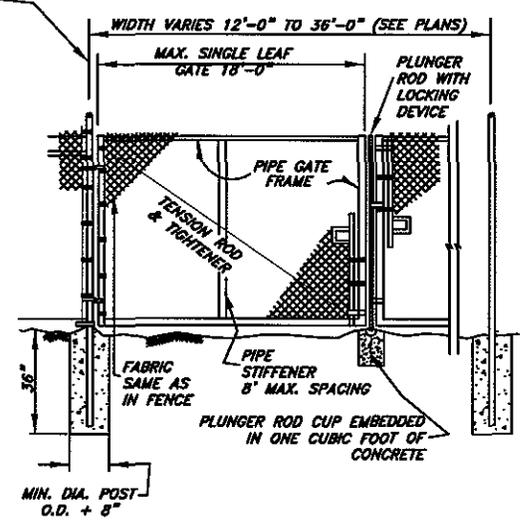
1 OF 2

NO.

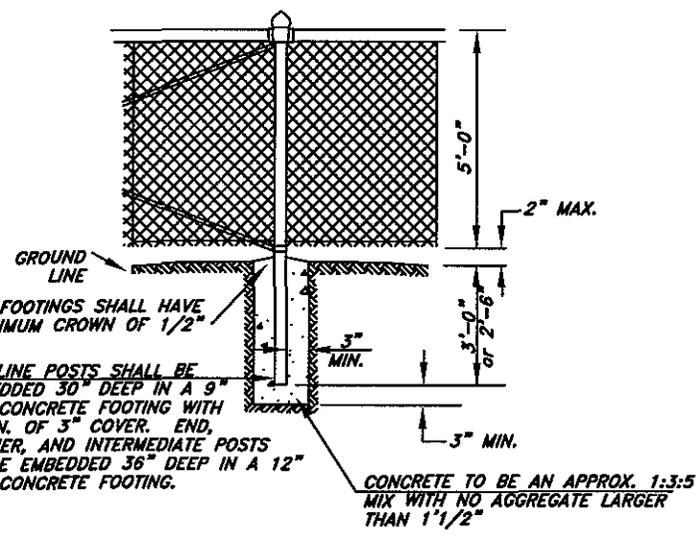
604A



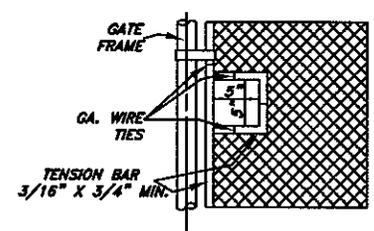
TYPICAL WALK GATE



TYPICAL DRIVE GATE



TYPICAL FENCE POST FOOTING EMBEDMENT DETAIL



DETAIL OF CUT-OUT FOR CHAIN AND LOCK

NOTES:

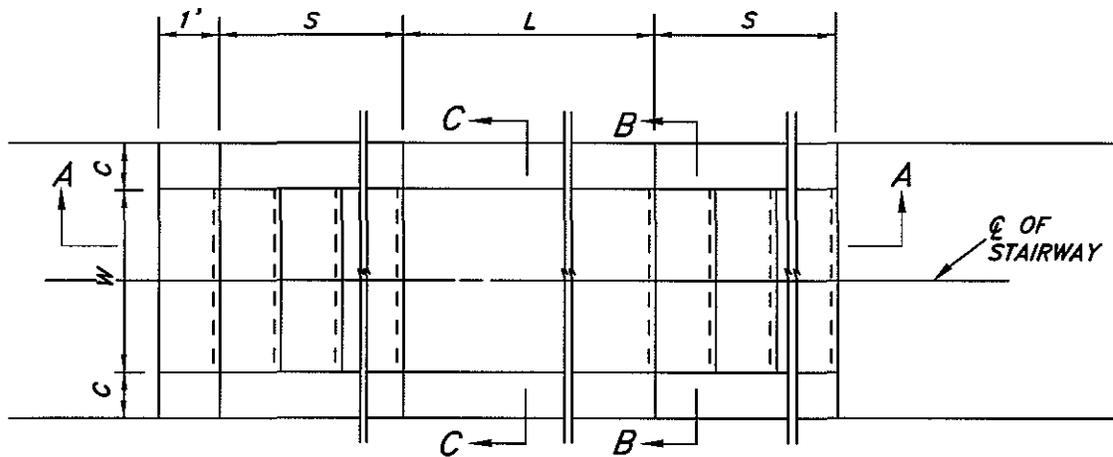
- 1.) SECURE DRIVE FIT GALVANIZED CAP TO POST WITH 1/4" ROUND HEAD RIVET.
- 2.) H DENOTES FABRIC WIDTH AND NOMINAL FENCE HEIGHT. H SHALL BE 5'-0" UNLESS OTHERWISE SPECIFIED.
- 3.) IF CHAIN LINK FENCE WITH TOP RAIL IS SPECIFIED, DELETE STEEL TENSION WIRE AT THE TOP AND THE PIPE RAILS AT THE INTERMEDIATE, END AND CORNER POSTS. EXTEND TENSION ROD TO THE TOP RAIL.
- 4.) BARBED WIRE SHALL BE USED ONLY WHEN SPECIFIED.
- 5.) ALL DATA SHOWN ON TYPICAL DETAILS SHALL BE APPLICABLE TO OTHER PERTINENT DETAILS.
- 6.) THE GALVANIZING OF THE FENCE FABRIC SHALL PRODUCE A ZINC COATING WEIGHING NOT LESS THAN 1.2 OZ. PER SQ.FT.

REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		<i>Ken A. Daniels</i>	08/31/2009
		CITY ENGINEER	DATE

CITY OF LAKE ELSINORE
PREPARED BY PUBLIC WORKS

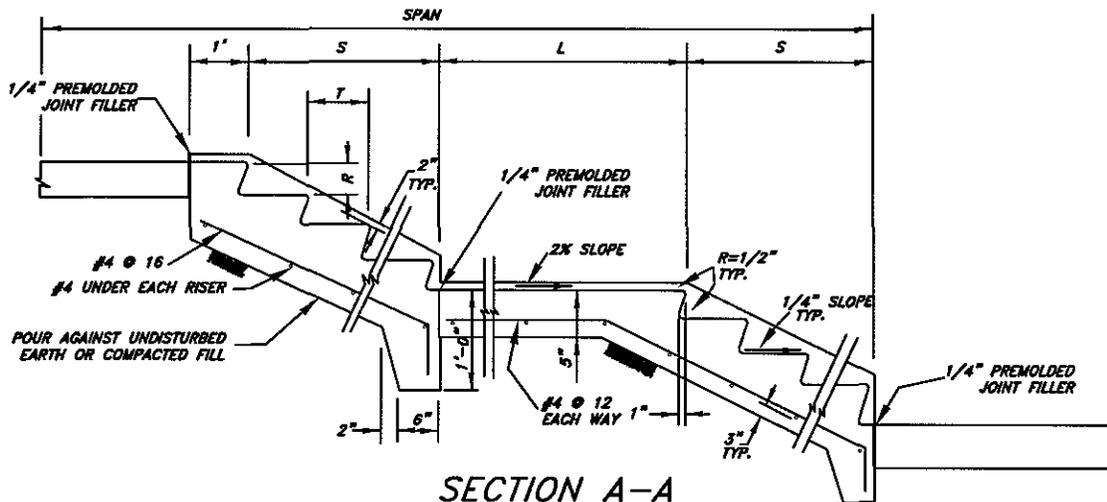
HIGHWAY CHAIN LINK FENCE AND GATES

2 OF 2
NO. 604B

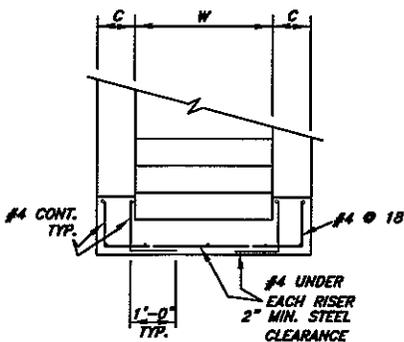


NOTE: SEE PROJECT PLAN FOR STAIR AND HANDRAIL DETAILS OR STANDARD PLAN NO. 607

PLAN

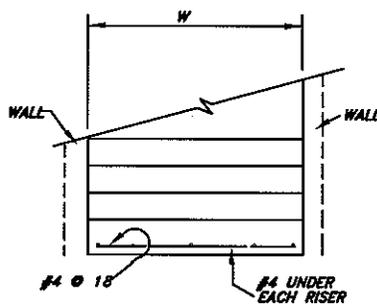


SECTION A-A

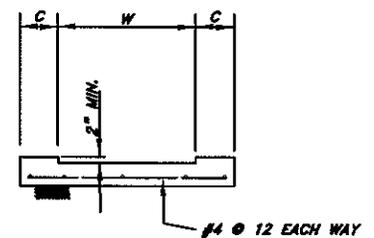


TYPE A

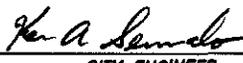
SECTION B-B



TYPE B



SECTION C-C

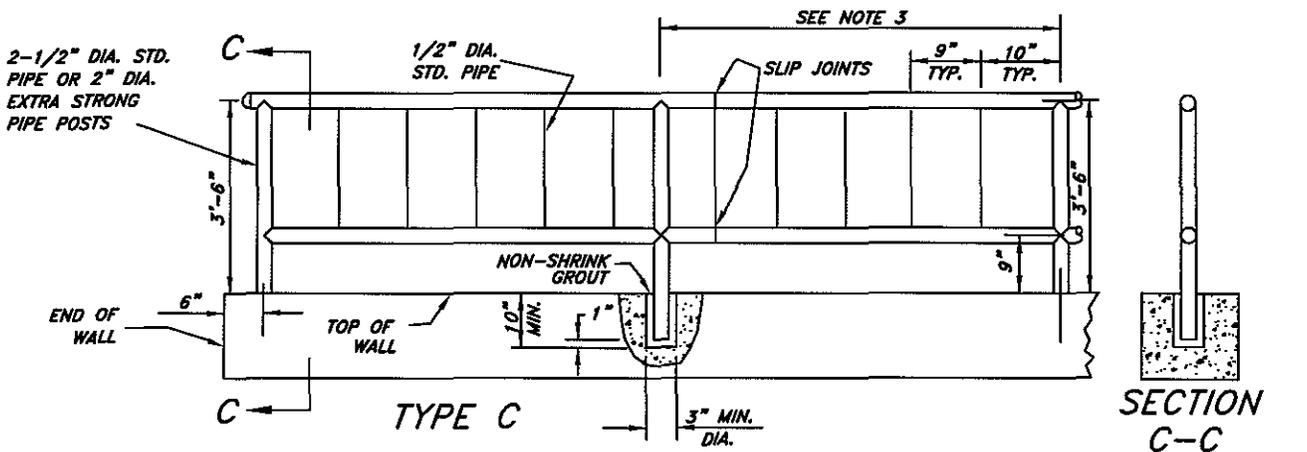
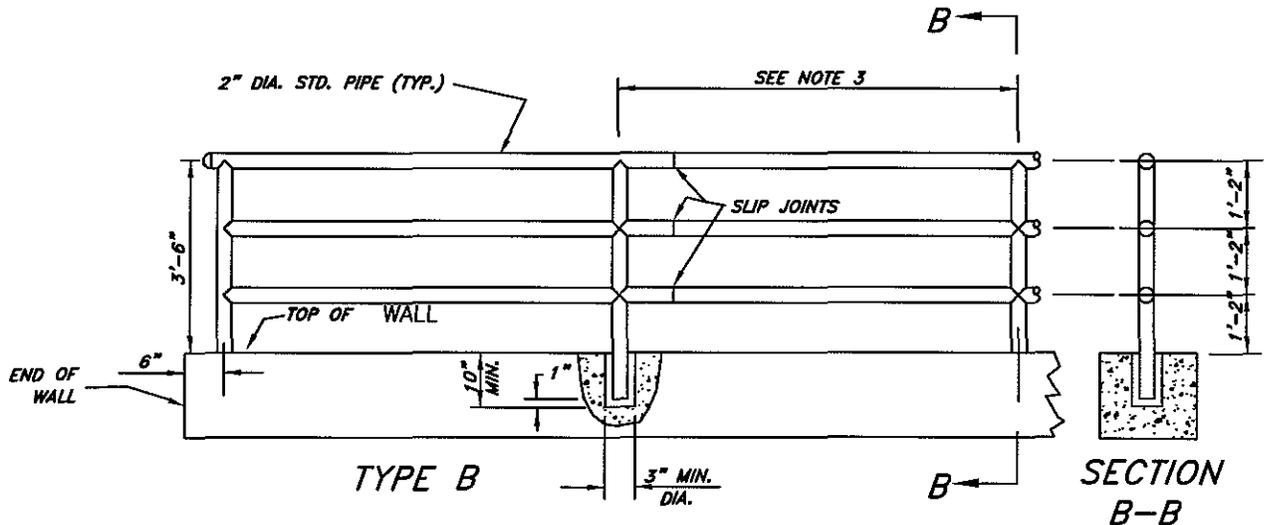
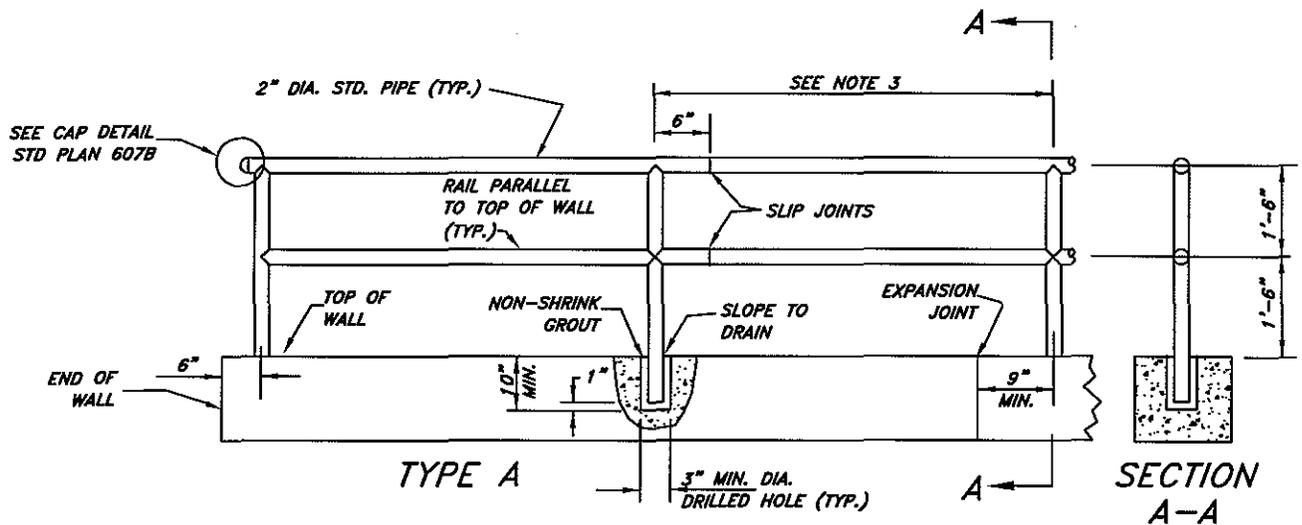
REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		 CITY ENGINEER	
		08/31/2009 DATE	

CITY OF LAKE ELSINORE

PREPARED BY PUBLIC WORKS

REINFORCED CONCRETE STAIRWAY

NO. 606



REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		<i>Ken A. Daniels</i>	08/11/2009
		CITY ENGINEER	DATE

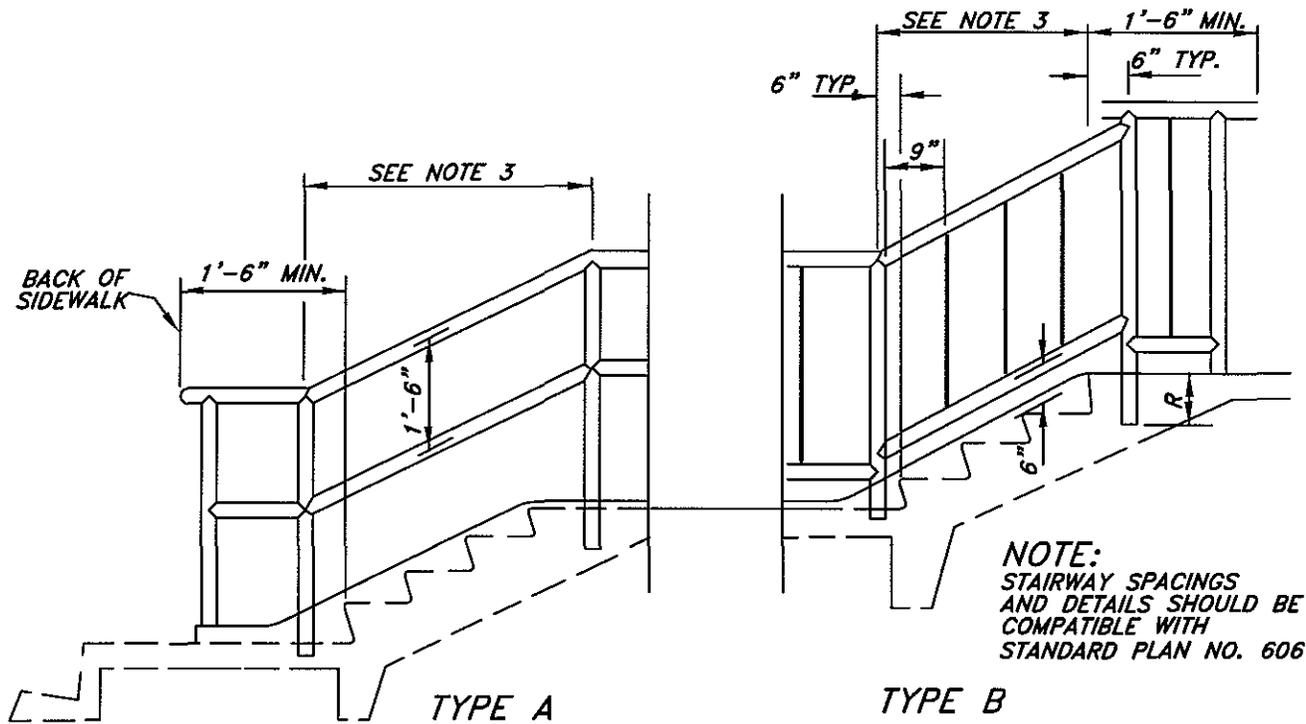
CITY OF LAKE ELSINORE

PREPARED BY PUBLIC WORKS

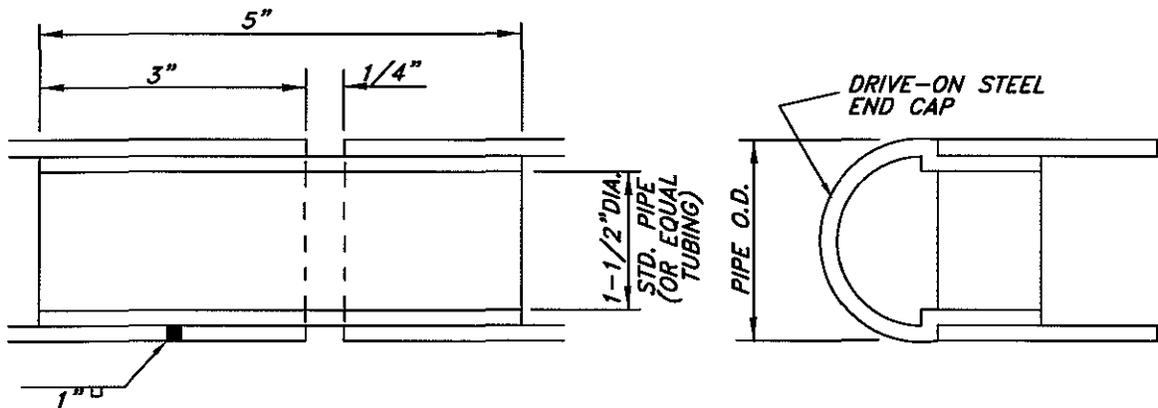
METAL HAND RAILINGS

1 OF 2

NO. 607A



HANDRAIL INSTALLATION ON STAIRWAYS



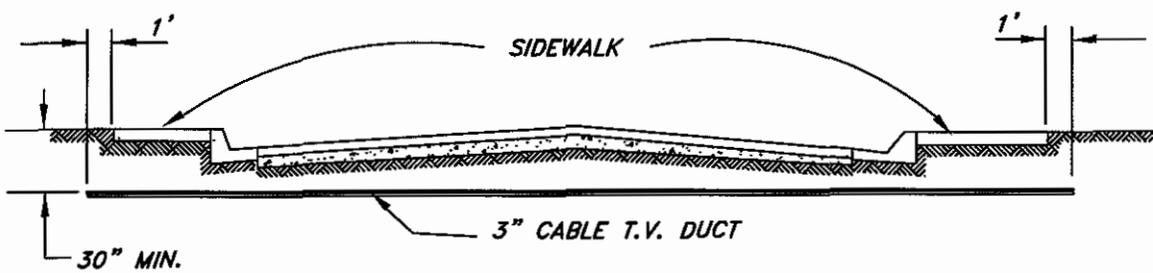
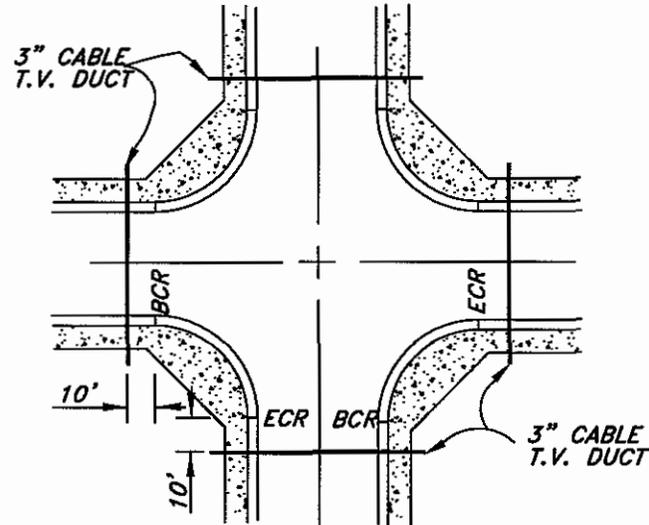
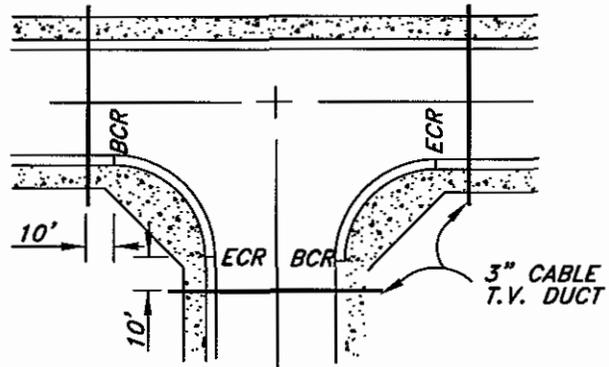
SLIP JOINT DETAIL

CAP DETAIL FOR RAIL END

NOTES:

- 1.) TYPE B OR TYPE C SHALL BE USED WHERE ADJACENT GRADE IS MORE THAN 2'-6" BELOW LANDING OR SIDEWALK FINISHED SURFACE.
- 2.) PROVIDE SLIP JOINTS AT STAIRWAY EXPANSION JOINTS AND AT EVERY 24 FEET ON CENTER MAXIMUM.
- 3.) MAXIMUM SPACING OF POST SHALL BE 8 FEET ON STRAIGHT ALIGNMENT 6 FEET ON CURVED ALIGNMENT LESS THAN 30 FEET RADIUS. SPACING SHALL BE UNIFORM BETWEEN CHANGES IN ALIGNMENT.

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY		PREPARED BY PUBLIC WORKS	
		 CITY ENGINEER		2 OF 2 NO. 607B	
		08/31/2009 DATE		METAL HAND RAILINGS	



TYPICAL CROSS SECTION

<table border="1"> <tr> <th>REVISION</th> <th>DATE</th> <th>APPROVED</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		REVISION	DATE	APPROVED													<p>ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p><i>Ken A. Lemuelo</i> CITY ENGINEER 08/31/2009 DATE</p>	<p>CITY OF LAKE ELSINORE</p> <p>PREPARED BY PUBLIC WORKS</p> <p>LOCATION OF CABLE T.V. DUCTS AT STREET INTERSECTIONS</p>	<p>NO. 608</p>
REVISION	DATE	APPROVED																	

STANDARD BEING REVISED

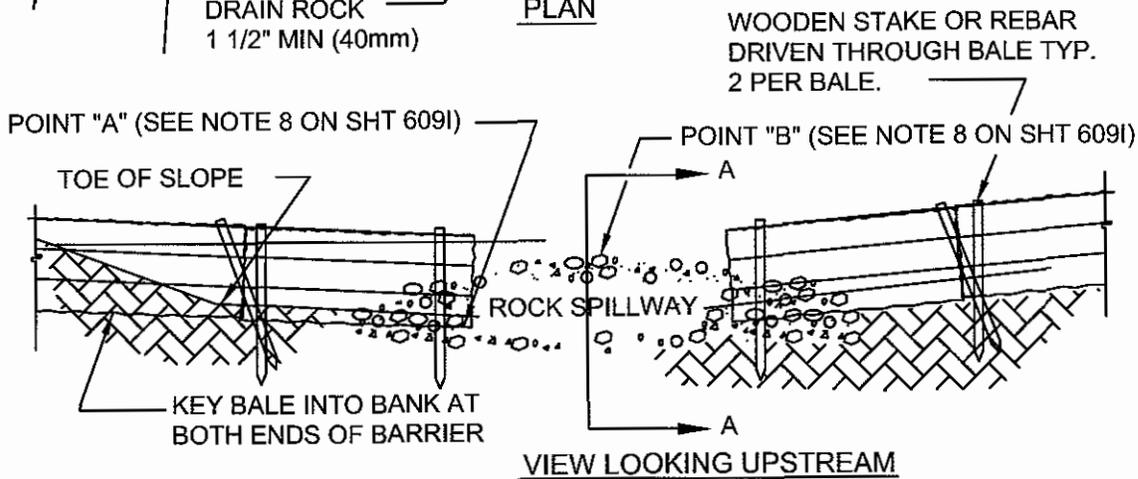
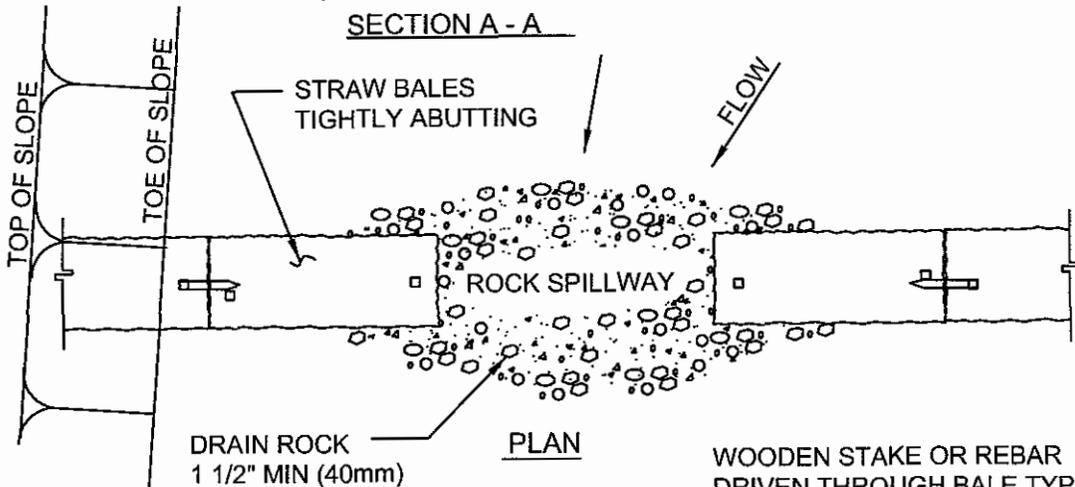
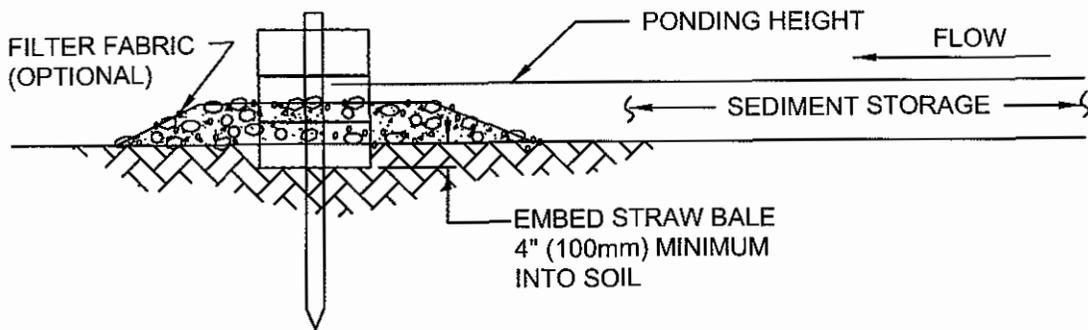
**CONTACT ENGINEERING TECHNICIAN
FOR INFORMATION**

STANDARD BEING REVISED

**CONTACT ENGINEERING TECHNICIAN
FOR INFORMATION**

STANDARD BEING REVISED

**CONTACT ENGINEERING TECHNICIAN
FOR INFORMATION**

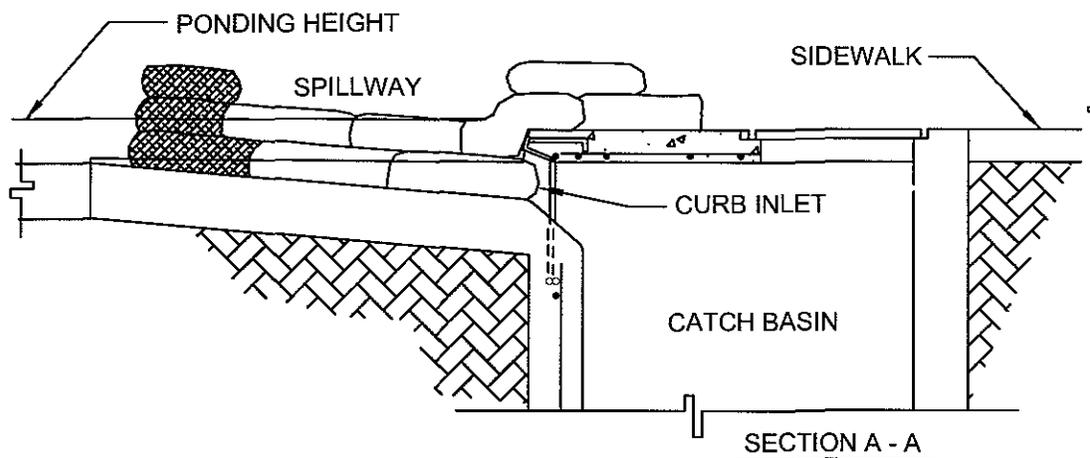
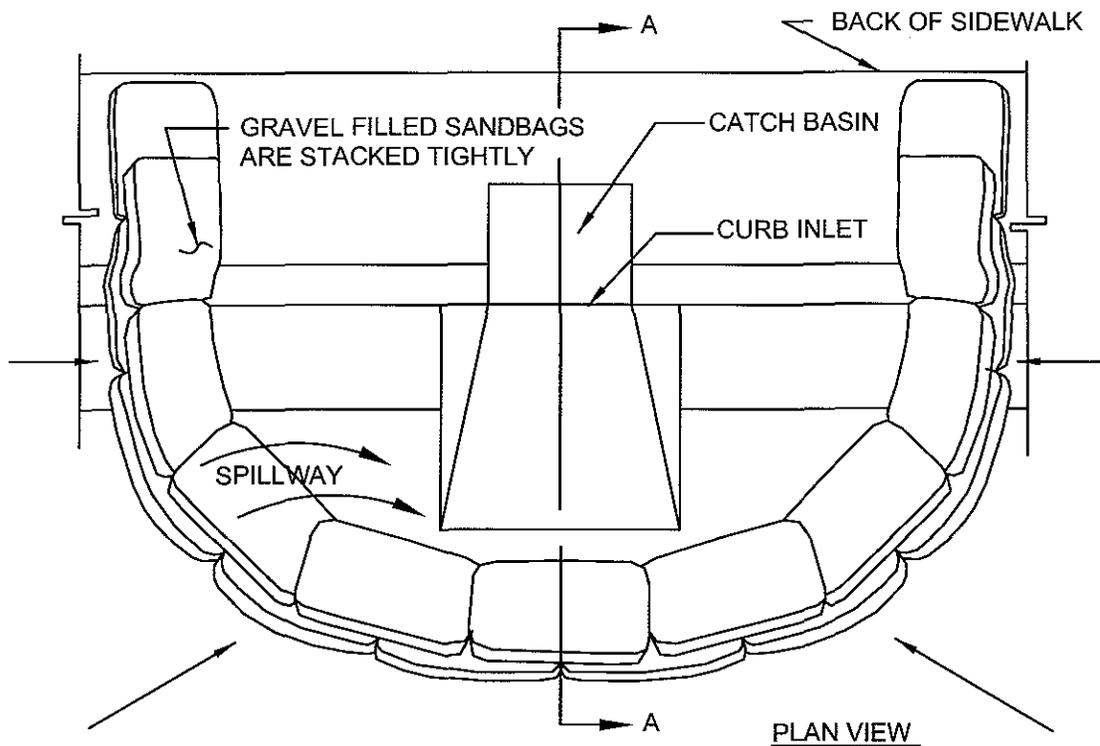


NOTES:

1. PLACE BALES PERPENDICULAR TO FLOW.
2. EMBED THE BALES 4" (100mm) INTO THE SOIL AND "KEY" THE END BALES INTO THE CHANNEL BANKS TO PREVENT FLOW AROUND THE BALES.
3. BALES PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING.
4. POINT "A" SHALL BE HIGHER THAN POINT "B".
5. SPILLWAY HEIGHT SHALL NOT EXCEED 24" (0.6m)

* SEE EROSION CONTROL NOTES, CITY STANDARD NUMBER 609

REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE APPROVED			PREPARED BY PUBLIC WORKS	
	APPROVED BY		SEMI-PERVIOUS STRAW BALE SEDIMENT BARRIER	
	<i>Ken A. Samala</i>		NO. 610	
	CITY ENGINEER			
	08/31/2009			
	DATE			

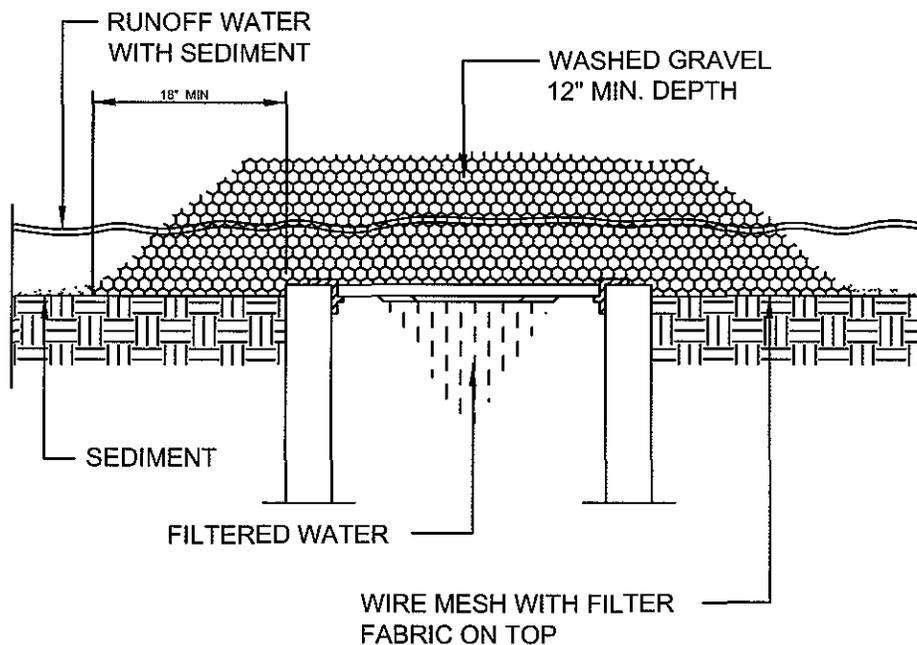


NOTES:

1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. SANDBAGS, OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY.
3. LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVER FLOW.
4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVEL WAY IMMEDIATELY.

* SEE EROSION CONTROL NOTES, CITY STANDARD NUMBER 609

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		08/31/2009 DATE	TEMPORARY DESILTING BASIN
					NO. 611



GRAVEL AND WIRE MESH FILTER

- A. PLACE WIRE MESH OVER THE CATCH BASIN SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE CATCH BASIN. USE HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2 INCH OPENINGS. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, OVERLAP THE STRIPS. PLACE FILTER FABRIC OVER WIRE MESH.
- B. PLACE 3/4 TO 3 INCH GRAVEL OVER THE FILTER/WIRE MESH. THE DEPTH OF WASHED GRAVEL SHOULD BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING.
- C. IF THE WASHED GRAVEL FILTER BECOMES CLOGGED WITH SEDIMENT, THE WASHED GRAVEL MUST BE PULLED AWAY FROM THE INLET AND CLEANED OR REPLACED. SINCE CLEANING OF WASHED GRAVEL AT A CONSTRUCTION SITE MAY BE DIFFICULT, AN ALTERNATIVE APPROACH WOULD BE TO USE THE CLOGGED WASHED GRAVEL AS FILL AND PUT FRESH WASHED GRAVEL AROUND THE INLET.

* SEE EROSION CONTROL NOTES, CITY STANDARD NUMBER 609

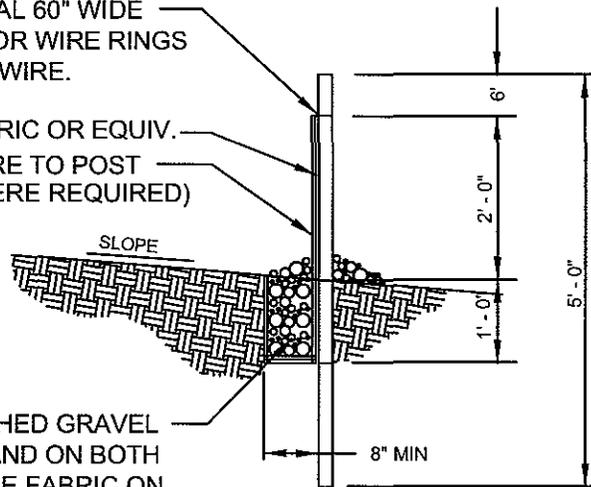
REVISION	ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED		PREPARED BY PUBLIC WORKS	
		APPROVED BY	CB PROJECTION DETAIL	
		<i>Ken A. Samuels</i> CITY ENGINEER		
		DATE 08/31/2009	NO. 612	

FILTER FABRIC MATERIAL 60" WIDE ROLLS. USE STAPLES OR WIRE RINGS TO ATTACH FABRIC TO WIRE.

2"X2"X14 GA. WIRE FABRIC OR EQUIV. FILTER FABRIC - SECURE TO POST WASHED GRAVEL (WHERE REQUIRED)

PROVIDE 3/4"-1.5" WASHED GRAVEL BACKFILL IN TRENCH AND ON BOTH SIDES OF FILTER FABRIC ON THE SURFACE.

2"X4" WOOD POST ALT: STEEL FENCE POSTS 6' MAX. SPACING.

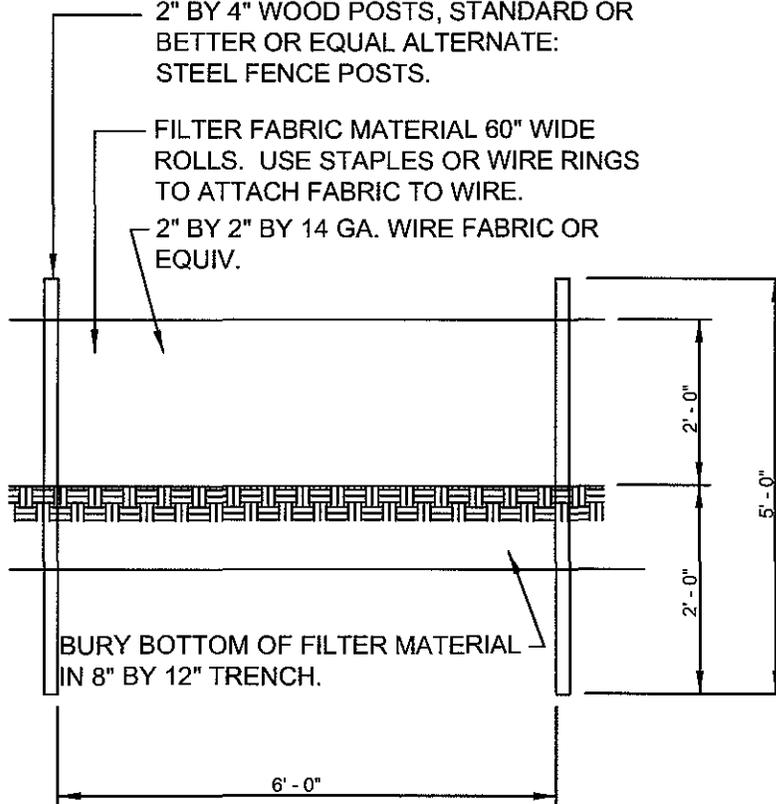


2" BY 4" WOOD POSTS, STANDARD OR BETTER OR EQUAL ALTERNATE: STEEL FENCE POSTS.

FILTER FABRIC MATERIAL 60" WIDE ROLLS. USE STAPLES OR WIRE RINGS TO ATTACH FABRIC TO WIRE.

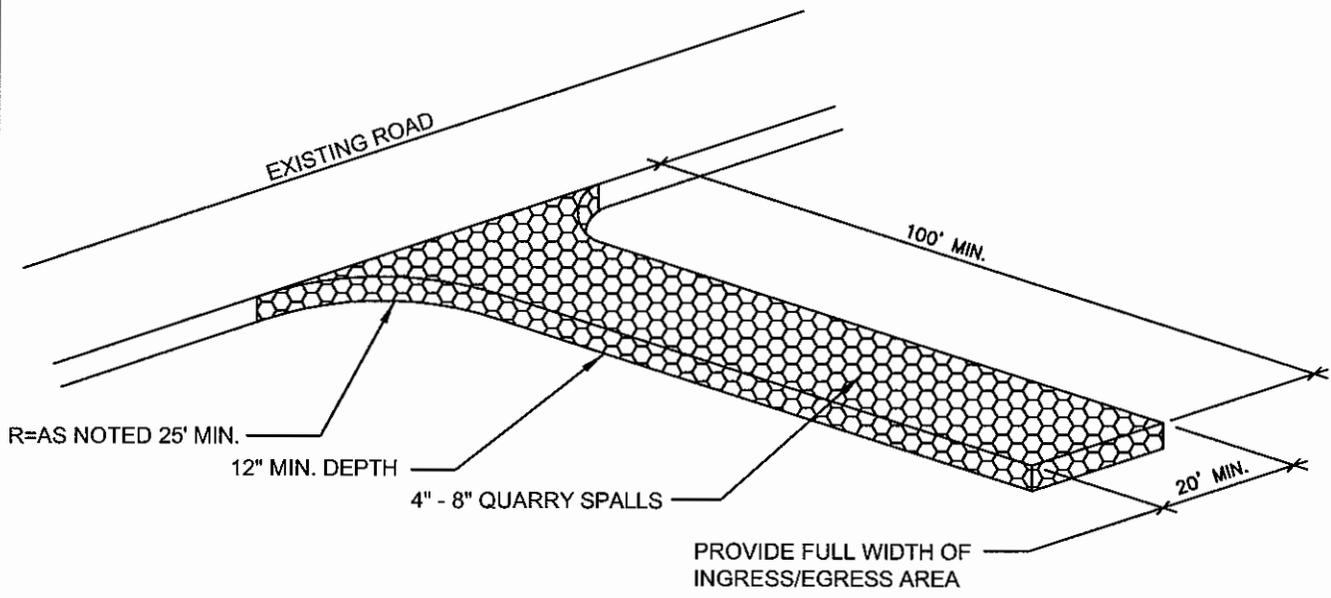
2" BY 2" BY 14 GA. WIRE FABRIC OR EQUIV.

BURY BOTTOM OF FILTER MATERIAL IN 8" BY 12" TRENCH.



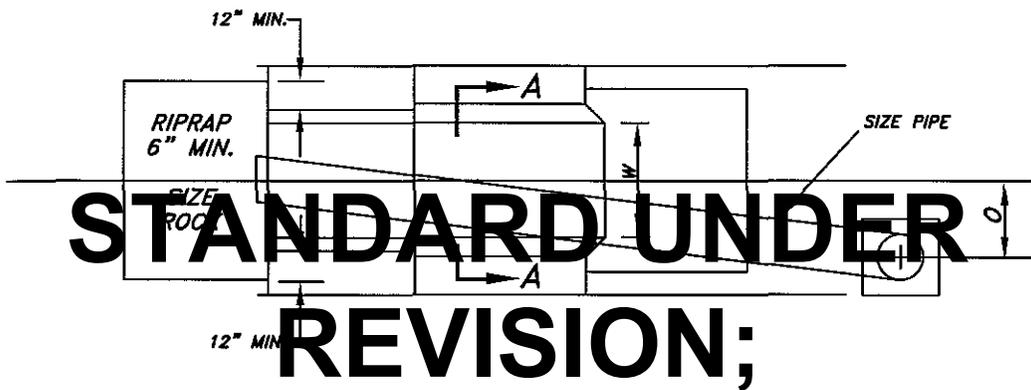
* SEE EROSION CONTROL NOTES, CITY STANDARD NUMBER 609

<table border="1"> <thead> <tr> <th>REVISION</th> <th>DATE</th> <th>APPROVED</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REVISION	DATE	APPROVED													<p>ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p><i>Kent Sandoz</i> CITY ENGINEER 08/31/2009 DATE</p>	<p>CITY OF LAKE ELSINORE</p> <p>PREPARED BY PUBLIC WORKS</p>	<p>NO. 613</p>
REVISION	DATE	APPROVED																	
		<p>SILT FENCE DETAIL</p>																	



* SEE EROSION CONTROL NOTES, CITY STANDARD NUMBER 609

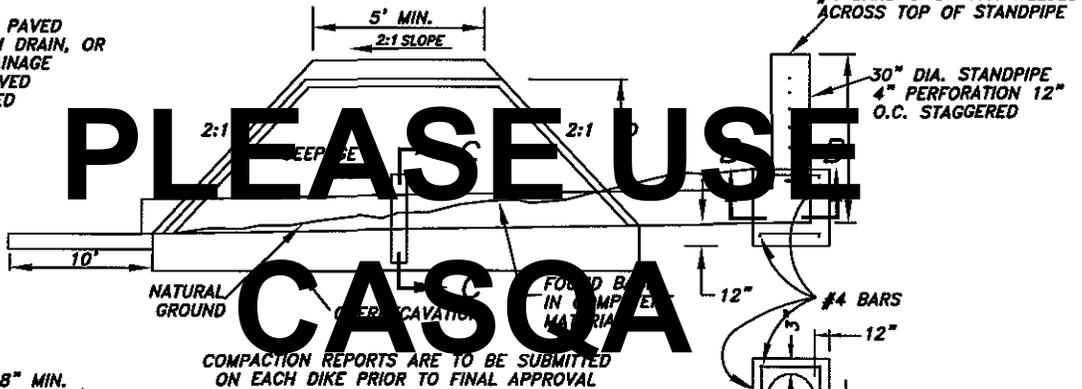
REVISION DATE APPROVED		ENGINEERING DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
APPROVED BY  CITY ENGINEER		DATE 08/31/2009		
			NO. 614	



STANDARD UNDER REVISION;

DISCHARGE TO PAVED STREET, STORM DRAIN, OR APPROVED DRAINAGE COURSE IN PAVED OR SANDBAGGED CHANNEL.

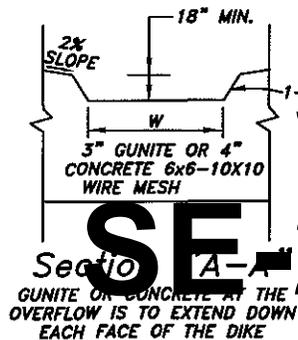
PLEASE USE



CASQA

COMPACTION REPORTS ARE TO BE SUBMITTED ON EACH DIKE PRIOR TO FINAL APPROVAL

STANDARD



SE-2 AND/OR SE-3

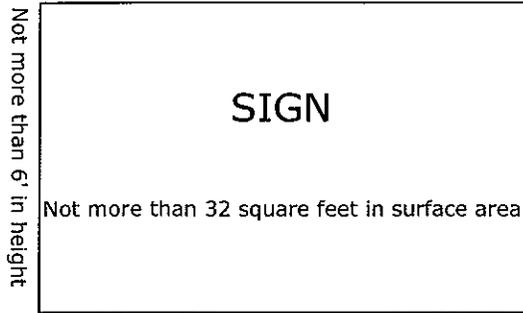
Section "C-C"

NOTES:

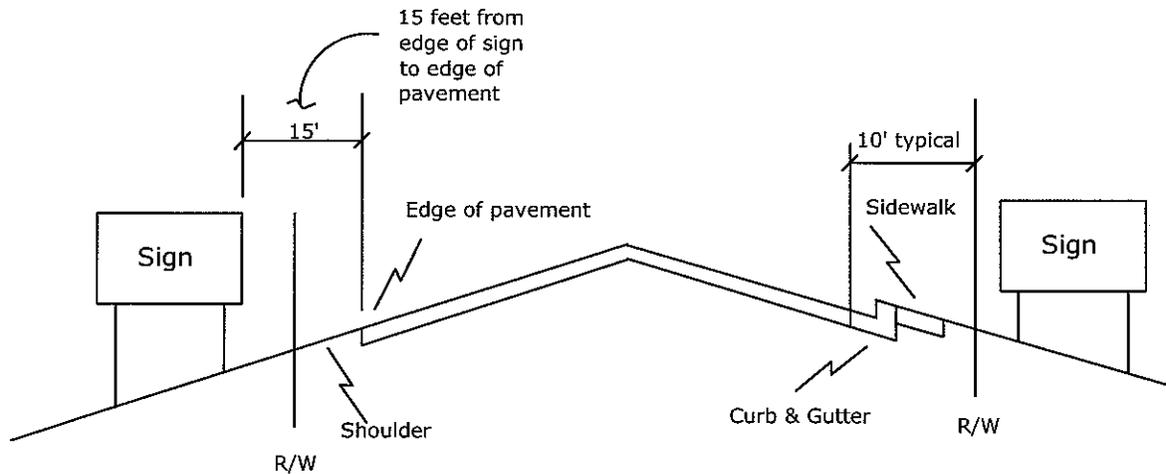
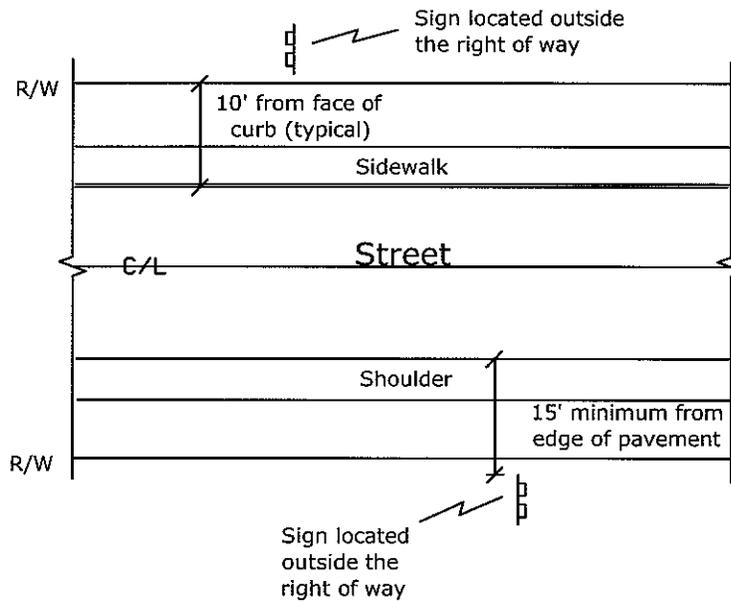
1. INDICATE DIMENSIONS FOR D, H, W, AND O ON THE PLANS.
2. THE TOP OF THE STANDPIPE MUST BE SET AT THE ELEVATION OF THE TOP OF THE DIKE.
3. THE SPILLWAY MUST BE CONSTRUCTED WITH CONCRETE OR GUNITES WHEN D EXCEEDS 3' OR WHEN THE STORAGE VOLUME EXCEEDS 1 ACRE FOOT (1600 CUBIC YARDS). SANDBAGGED SPILLWAYS MAY BE ALLOWED FOR LESSER DEPTHS AND STORAGE VOLUMES DEPENDING ON EXISTING DOWNSTREAM DEVELOPMENT.
4. THE DIKE SHALL BE COMPACTED TO 95% COMPACTION.

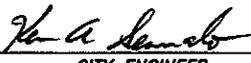
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE PREPARED BY PUBLIC WORKS	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		MINIMUM DESILTING BASIN	NO. 615
			08/31/2009 DATE		

Standards For Non-Commercial Signs During Election Period



For Right of Way assistance, please contact City of Lake Elsinore Engineering Division at 951-674-3124, ext 241.



REVISION		ENGINEERING	DATE 07/09
DATE	APPROVED		
		APPROVED BY	
		 CITY ENGINEER	
		08/31/2009	DATE

CITY OF LAKE ELSINORE
PREPARED BY PUBLIC WORKS

**NON COMMERCIAL ELECTION
SIGNAGE STANDARD**

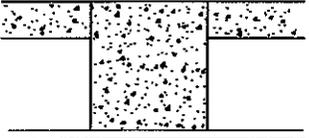
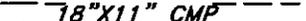
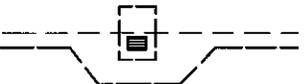
NO.
616

CITY OF LAKE ELSINORE
STANDARD PLANS

SECTION 7:
Standard Notes
and Symbols

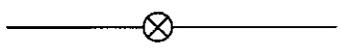
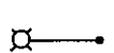
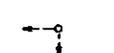
A.C.	Asphaltic Concrete	Mon.	Monument
&	and	No.	Number
⊙	at	%	Per cent
A.C.P.	Asbestos Cement Pipe	P.C.C.	Point of Compound Curve
Ave.	Avenue	P	Property Line
B.C.	Begin Curve	P.R.C.	Point of Reverse Curve
B.C.R.	Begin curb return	Proj.	Project
Bit.	Bituminous	P.I.	Point of Intersection
Bldg.	Building	P.V.I.	Point of Vertical Intersection
Blvd.	Boulevard	P.P.	Power Pole
BVC	Begin Vertical Curve	Pvmt.	Pavement
B/W	Back of sidewalk	R	Radius
Bk.	Book	R.C.P.	Reinforced Concrete Pipe
B.M.	Bench Mark	Rd.	Road
C	Correction at center of V.C.	Rdwy.	Roadway
C.B.	Catch Basin	R/S	Record of Survey
c.c.	Center to Center	Rt.	Right
C.F.	Curb Face	R/W	Right of Way
C.I.	Cast Iron	S.	South
C	Center line	Sect.	Section
C.M.P.	Corrugated Metal Pipe	Sl.	Slope
C.O.	Cleanout	S.P.	Site Plan
Conc.	Concrete	Sp.M.H.	Special Manhole
Constr.	Construct	Spec.	Specification
C.U.P.	Conditional Use Permit	S.S.	Sanitary Sewer
D.A.	Drive Approach	St.	Street
Dia.	Diameter	Std.	Standard
D.M.H.	Drop Manhole	Sta.	Station
Drwg.	Drawing	S.W.	Sidewalk
Dwy.	Driveway	T	Tangent Length for Curve
E.	East	Tr.	Tract
E.C.	End Curve	V.C.	Vertical Curve
E.C.R.	End Curb Return	V.C.P.	Vitrified Clay Pipe
El.	Elevation	W.	West or Width
E.V.C.	End Vertical Curve	2:1	Slope of one foot measured vertically for every two feet measured horizontally
Exist.	Existing		
F.B.	Field Bok		
F.H.	Fire Hydrant		
F.L.	Flow Line		
F.S.	Finished Surface		
G.P.	Grading Plan		
G.L.	Ground Line		
G.T.P.	Gas Tax Project		
Gr.	Grade		
I	Central Angle or Delta		
L	Length or Length of Arc		
Lt.	Left		
M.H.	Manhole		
M.B.	Map Book		
N.	North		

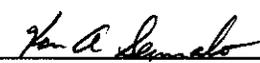
REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
DATE	APPROVED	APPROVED BY			
		 CITY ENGINEER		ABBREVIATIONS	
		08/31/2009 DATE			

-  CENTER LINE
-  POINT OF INTERSECTION
-  RIGHT OF WAY
-  PROPERTY LINE
-  EXISTING CURB
-  NEW CURB
-  EXISTING CURB AND GUTTER
-  NEW CURB AND GUTTER
-  EXISTING SIDEWALK
-  NEW CONCRETE SIDEWALK
-  NEW CONCRETE DRIVEWAY
-  NEW PAVEMENT
-  NEW PAVEMENT TO BE OVERLAID OVER EXISTING PAVEMENT
-  EXISTING REINFORCED CONCRETE PIPE OR STORM DRAIN
-  EXISTING CORRUGATED METAL PIPE OR STORM DRAIN
-  EXISTING CURB INLET
-  EXISTING CURB INLET WITH GRATING
-  NEW STORM DRAIN, CURB INLET AND GUTTER DEPRESSION

REVISION		ENGINEERING		DATE 07/09		CITY OF LAKE ELSINORE <small>PREPARED BY PUBLIC WORKS</small>	
<small>DATE</small>	<small>APPROVED</small>	<small>APPROVED BY</small>		<small>DATE</small>			
		 CITY ENGINEER		 DATE		DRAFTING STANDARDS AND SYMBOLS	
						NO. 702A	

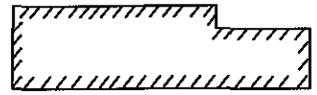

 UTILITY LINE (* = LISTED BELOW)
 E = ELECTRICAL SD = STORM DRAIN
 G = GAS T = TELEPHONE
 I = IRRIGATION TV = TELEVISION CABLE
 O = OIL W = WATER
 S = SEWER X = INDUSTRIAL WASTE

- 
 WATER METER
- 
 WATER VALVE
- 
 FIRE HYDRANT
- 
 TELEPHONE POLE
- 
 POLE ANCHOR
- 
 GUY POLE
- 
 TELEPHONE AND POWER ON SAME POLE
- 
 EXISTING STREET LIGHT
- 
 NEW STREET LIGHT
- 
 EXISTING TRAFFIC SIGNAL
- 
 EXISTING TRAFFIC SIGNAL DETECTOR
- 
 EXISTING TRAFFIC SIGNAL CONTROLLER
- 
 PULL BOX
- 
 STOP SIGN
- 
 NEW YIELD SIGN
- 
 NEW INFORMATIONAL SIGN
- 
 EXISTING STREET NAME SIGN
- 
 NEW STREET NAME SIGN
- 
 RAILROAD TRACK
- 
 EXISTING RAILROAD CROSSING SIGN
- 
 EXISTING RAILROAD CROSSING SIGNAL
- 
 EXISTING HEDGE
- 
 SHRUB

REVISION		ENGINEERING	DATE 07/09	CITY OF LAKE ELSINORE	
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		 CITY ENGINEER		DRAFTING STANDARDS AND SYMBOLS	
		08/31/2009 DATE		2 OF 3	NO. 702B



EXISTING TREE
 PROPOSED TREE
 PALM TREE



BUILDING



MONUMENT



EXISTING NATURAL FLOW LINE



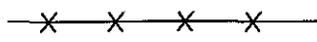
EXISTING TOE OF SLOPE



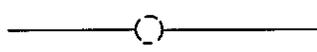
NEW TOE OF SLOPE



DIRECTION OF FLOW



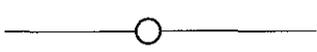
FENCE



EXISTING MANHOLE



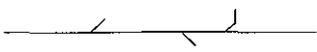
EXISTING SEWER CLEANOUT



NEW SANITARY SEWER AND MANHOLE



NEW SEWER CLEANOUT



NEW SANITARY SEWER MAIN WITH WYES AND LATERAL

PROFILE SYMBOLS

EXISTING PAVEMENT PROFILE

EXISTING CURB PROFILE

EXISTING SIDEWALK PROFILE

EXISTING GROUND PROFILE

FINISHED CENTERLINE GRADE

TOP OF CURB GRADE

BACK OF SIDEWALK GRADE

POINT OF INTERSECTION



NEW CULVERT OR STORM DRAIN AND CURB INLET



EXISTING SANITARY SEWER, MANHOLE AND CLEANOUT



NEW SANITARY SEWER, MANHOLE AND CLEANOUT

<table border="1"> <thead> <tr> <th>REVISION</th> <th>DATE</th> <th>APPROVED</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		REVISION	DATE	APPROVED													<p>ENGINEERING DATE 07/09</p> <p>APPROVED BY</p> <p><i>For A. Sandoz</i> 08/31/2009 CITY ENGINEER DATE</p>	<p>CITY OF LAKE ELSINORE</p> <p>PREPARED BY PUBLIC WORKS</p>	<p>3 OF 3</p> <p>NO. 702C</p>
REVISION	DATE	APPROVED																	
<p>DRAFTING STANDARDS AND SYMBOLS</p>		<p>NO. 702C</p>																	

METRIC HARD CONVERSION

NEW METRIC STANDARD	REPLACES IMPERIAL STANDARD
0.6m (1.97')	2'
1.2m (3.94')	4'
1.5m (4.92')	5'
1.8m (5.91')	6'
2.1m (6.89')	7'
2.4m (7.87')	8'
2.7m (8.86')	9'
3.0m (9.84')	10'
3.3m (10.83')	11'
3.6m (11.81')	12'
4.0m (13.12')	13'
4.2m (13.78')	14'
4.6m (15.09')	15'
5.5m (18.05')	18'
6.0m (19.69')	20'
6.6m (21.25')	22'
7.6m (24.93')	25'
9.0m (29.53')	30'
9.8m (32.15')	32'
10.7m (35.10')	35'
10.8m (35.43')	36'
11.6m (38.06')	38'
12.2m (40.03')	40'
13.1m (42.98')	43'
13.4m (43.97')	44'
15.2m (49.87')	50'
16.8m (55.12')	55'
17.1m (56.11')	56'
18.3m (60.04')	60'
20.1m (65.95')	66'
20.4m (66.93')	67'
23.8m (78.09')	78'

REVISION		ENGINEERING	DATE 07/09
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CITY OF LAKE ELSINORE
PREPARED BY PUBLIC WORKS

METRIC CONVERSION

NO.
703