

# CITY OF LAKE ELSINORE STANDARD PLANS 2024 EDITION



**CITY OF LAKE ELSINORE  
STANDARD PLANS – 2024 EDITION**

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**CITY OF LAKE ELSINORE  
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# CITY OF LAKE ELSINORE STANDARD PLANS

## SECTION 1: STANDARD STREET SECTION

DRAFT

# STREET CLASSIFICATION AND CROSS SECTION DESIGN STANDARDS

CITY STANDARD PLAN NO.	STREET CLASS	ROW/* CURB TO CURB (FT)	TYPICAL SECTION (BIKE LANES & OR PARKING, TRAVEL LANES & MEDIAN) (FT)	PARKWAY WIDTH (FT)	THRU LANES	DESIGN CAPACITY (ADT)	MIN. TRAFFIC INDEX** (TI)	MIN A.C. THICKNESS *** (IN)	MIN A.B. THICKNESS *** (IN)
101	AUGMENTED URBAN ARTERIAL/ STATE HWY. (SR-74)	134/110 (RAISED MEDIAN)	10 12 12 14 14 14 12 12 10	12	6	50,000 -60,000	10	6	12
102	URBAN ARTERIAL	120/96 (RAISED MEDIAN)	6 12 11 12 14 12 11 12 6	12	6	50,000 -60,000	10	6	12
103	MAJOR ARTERIAL	100/80 (RAISED MEDIAN)	6 13 14 14 14 13 6	10	4	32,000 -40,000	10	6	12
104	SECONDARY ARTERIAL	90/70 ****	6 11 11 14 11 11 6	10	4	20,000 -32,000	10	6	12
105	DIVIDED COLLECTOR	78/56	10 12 12 12 10	11	2		10	6	12
106	COLLECTOR (2 LANE)	68/48	6 12 12 12 6	10	2	10,000 -15,000	7	4	6
107	COLLECTOR (4 LANE)	68/48	12 12 12 12	10	4		9	5.5	9
108	LOCAL STREET	60/40	8 12 12 8	10	2	N/A	6	4	6
109	HILLSIDE RESIDENTIAL STREET	50/34	17 17	5	2	N/A	6	4	6

\* ROW REQUIREMENTS SHALL BE BASED UPON AN ALIGNMENT STUDY AS APPROVED BY THE CITY ENGINEER. INCREASED WIDTH MAY BE REQUIRED TO ACCOMMODATE ADDITIONAL TURN LANES.

\*\* STREETS DESIGNATED AS TRUCK ROUTES SHALL HAVE A MINIMUM TI OF 12, SUBJECT TO CITY ENGINEER APPROVAL.

\*\*\* STREETS DESIGNATED AS TRUCK ROUTES SHALL HAVE A MINIMUM THICKNESS AC OVER AB OF 0.67' / 1.00' R-VALUE = 50 MAXIMUM

\*\*\*\* SECONDARY ARTERIAL MAY CONSIST OF A PAINTED MEDIAN OR RAISED MEDIAN

**NOTES:**

1. PARKING MAY BE ELIMINATED ON SOME STREETS AND CLASS II BIKEWAYS STRIPED, SEE GENERAL PLAN.
2. PARKING MAY BE ELIMINATED AT INTERSECTION APPROACHES TO ACCOMMODATE TURN POCKETS.
3. ALL OF THE ABOVE LANE WIDTHS SHALL BE USED TO DESIGN STRIPING PLANS UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

**STREET CLASSIFICATION  
AND CROSS SECTION  
DESIGN STANDARDS**

STANDARD PLAN NO.

**100**

SHEET 1 OF 1

## STREET CLASSIFICATION

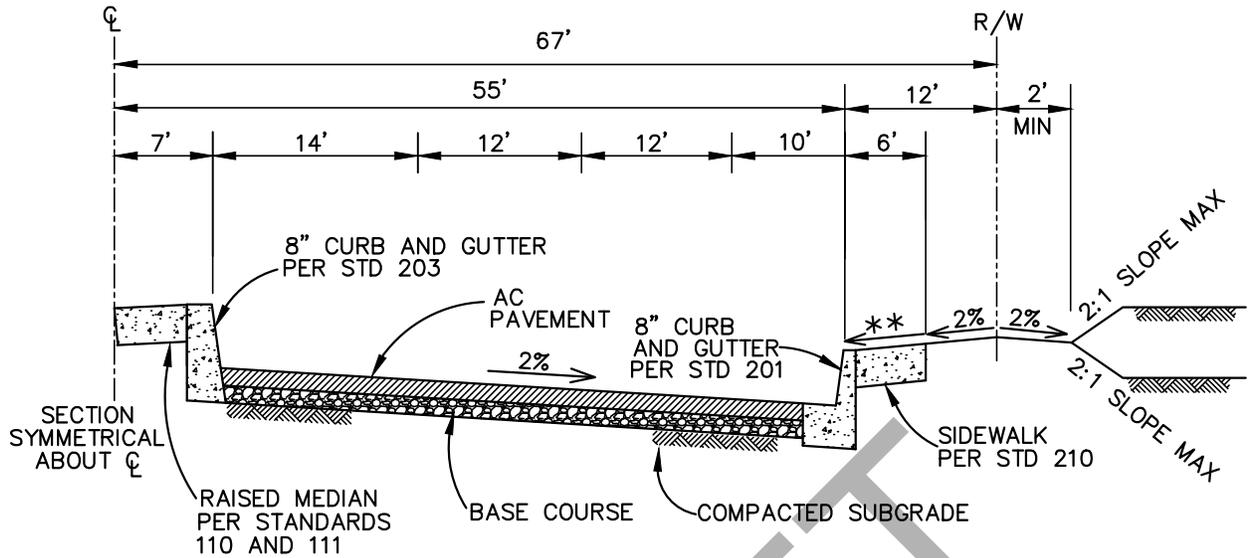
		HILLSIDE RESIDENTIAL (STD 109)	LOCAL STREET (STD 108)	COLLECTOR (STD 106 AND 107)	DIVIDED COLLECTOR (STD 105)	SECONDARY ARTERIAL (STD 104)	MAJOR ARTERIAL (STD 103)	URBAN ARTERIAL (STD 102)	AUGMENTED URBAN ARTERIAL (STD 101)
R/W (FT)		50	60	68	78	90	100	120	134
CURB TO CURB WIDTH (FT)		34	40	48	56	70	80	102	110
MINIMUM RADIUS HORIZONTAL (FT)	FLAT (0-4%)	300	300	850	850	1600	2000	2000	2000
	ROLLING (4-6%)	300	300	550	550	1000	1600	1600	1600
	MOUNTAINOUS (> 6%)	150	150	300	300	550	1000	1000	-
MAXIMUM GRADE (%)	FLAT	4	4	4	4	3	3	3	3
	ROLLING	9	9	8	8	6	6	6	6
	MOUNTAINOUS	12	12	12	12	9	9	9	1
DESIGN SPEED (MPH)	FLAT	30	30	45	45	55	60	60	60
	ROLLING	30	30	35	35	48	55	55	55
	MOUNTAINOUS	20	25	30	30	35	48	48	-
INTERSECTION (C/C TO C/C) INTERVALS (FT)		N/A	200	200	200	330	660	1320	1320 (1)

- (1) DIRECT RESIDENTIAL ACCESS RESTRICTED.  
 (2) DIRECT ACCESS RESTRICTED.

### NOTES:

- 1.) MINIMUM GRADE = 1.0 %  
 2.) ROADWAY DESIGN LESS THAN SHOWN REQUIRES APPROVAL OF THE CITY ENGINEER.

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB			DATE		<b>ROADWAY DESIGN REQUIREMENTS</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>100A</b> SHEET 1 OF 1	



## TYPICAL SECTION

### NOTES:

- 1.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R-VALUE TESTING PER CALTRANS DESIGN METHOD TEST 301 WITH RECOMMENDED SAFETY FACTOR, MINIMUM 6" AC / 12" AB\*. R-VALUE = 50 MAXIMUM. AC SHALL BE PLACED IN LIFTS, AND THICKNESS OF EACH LIFT SHALL NOT EXCEED 3".
- 2.) MINIMUM T.I. = 10, TRUCK ROUTES SHALL BE 12.
- 3.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET PLUS 21' WITH MEDIAN.\*\*
- 4.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

\* MINIMUM 8" AC / 12" AB ON STREETS DESIGNATED AS TRUCK ROUTES

\*\* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.0% MAX AS-BUILT)

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



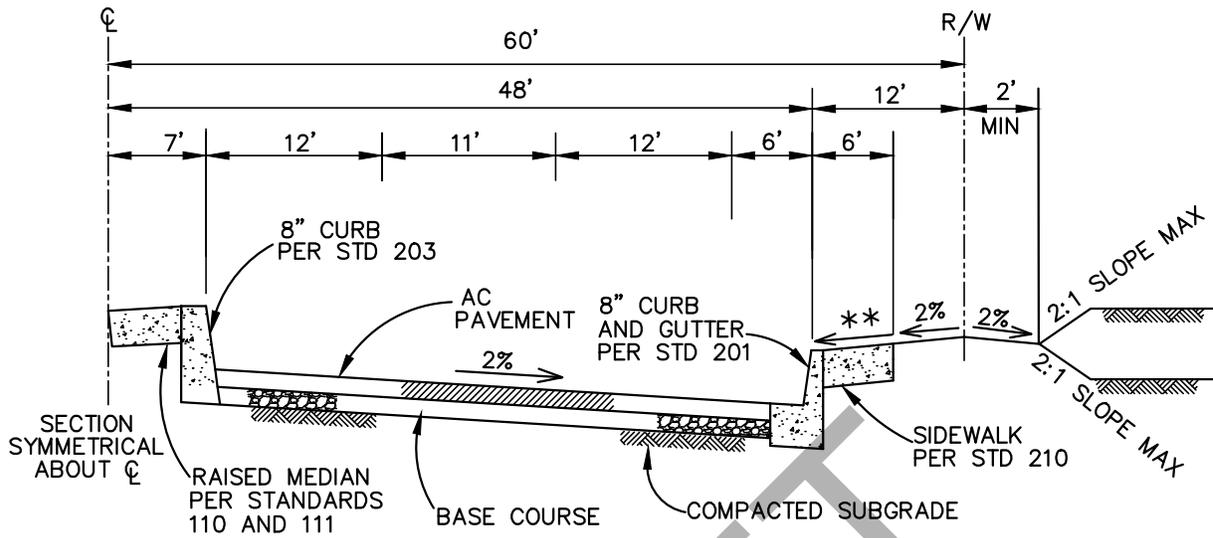
**CITY OF LAKE ELSINORE**

**AUGMENTED URBAN  
ARTERIAL**

STANDARD PLAN NO.

**101**

SHEET 1 OF 1



## TYPICAL SECTION

### NOTES:

- 1.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R-VALUE TESTING PER CALTRANS DESIGN METHOD TEST 301 WITH RECOMMENDED SAFETY FACTOR, MINIMUM 6" AC / 12" AB\*. R-VALUE = 50 MAXIMUM. AC SHALL BE PLACED IN LIFT, AND THICKNESS OF EACH LIFT SHALL NOT EXCEED 3".
- 2.) MINIMUM T.I. = 10, TRUCK ROUTES SHALL BE 12.
- 3.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 19' WITH MEDIAN.
- 4.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

\* MINIMUM 8" AC / 12" AB ON STREETS DESIGNATED AS TRUCK ROUTES

\*\* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.0% MAX AS-BUILT)

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



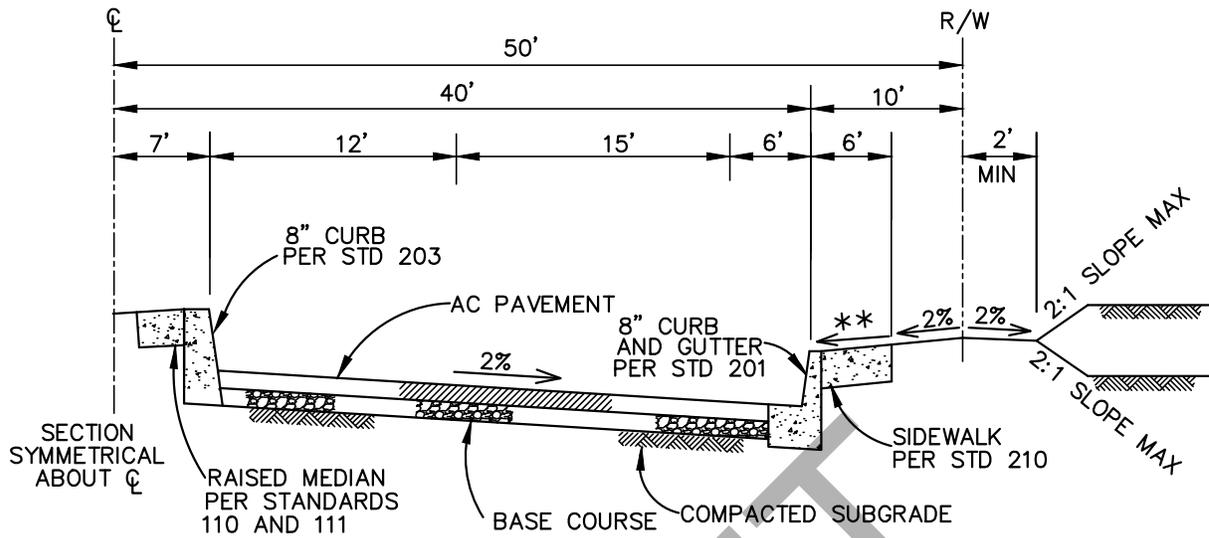
**CITY OF LAKE ELSINORE**

**URBAN ARTERIAL  
(6-LANE)**

STANDARD PLAN NO.

**102**

SHEET 1 OF 1



## TYPICAL SECTION

### NOTES:

- 1.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R VALUE TESTING PER CALTRANS DESIGN METHOD TEST 301 WITH RECOMMENDED SAFETY FACTOR, MINIMUM 6" AC / 12" AB\*. R-VALUE = 50 MAXIMUM. AC SHALL BE PLACED IN LIFTS, AND THICKNESS OF EACH LIFT SHALL NOT EXCEED 3".
- 2.) MINIMUM T.I. = 10, TRUCK ROUTES SHALL BE 12..
- 3.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 21' WITH MEDIAN.
- 4.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

\* MINIMUM 8" AC / 12" AB ON STREETS DESIGNATED AS TRUCK ROUTES

\*\* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.0% MAX AS-BUILT)

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



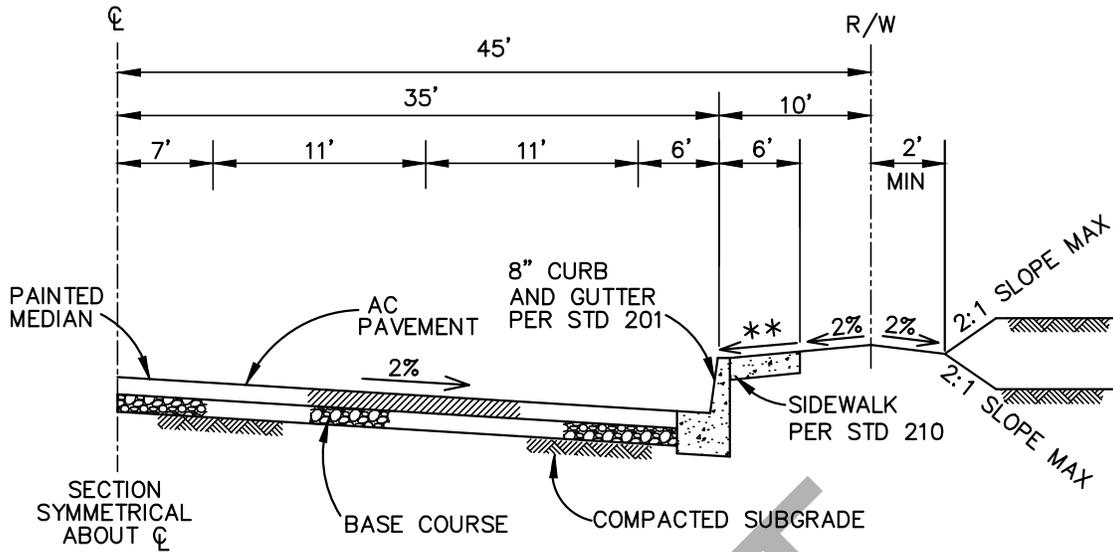
**CITY OF LAKE ELSINORE**

**MAJOR ARTERIAL  
(4-LANE)**

STANDARD PLAN NO.

**103**

SHEET 1 OF 1



## TYPICAL SECTION

### NOTES:

- 1.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R-VALUE TESTING PER CALTRANS DESIGN METHOD TEST 301 WITH RECOMMENDED SAFETY FACTOR, MINIMUM 6" AC / 12" AB\*. R-VALUE = 50 MAXIMUM. AC SHALL BE PLACED IN LIFTS, AND THICKNESS OF EACH LIFT SHALL NOT EXCEED 3".
- 2.) MINIMUM T.I. = 10, TRUCK ROUTES SHALL BE 12.
- 3.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 18'.
- 4.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.
- 5.) SECONDARY ARTERIAL MAY CONSIST OF A PAINTED OR RAISED MEDIAN PER STANDARDS 110 AND 111.

\* MINIMUM 8" AC / 12" AB ON STREETS DESIGNATED AS TRUCK ROUTES

\*\* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.0% MAX AS-BUILT)

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



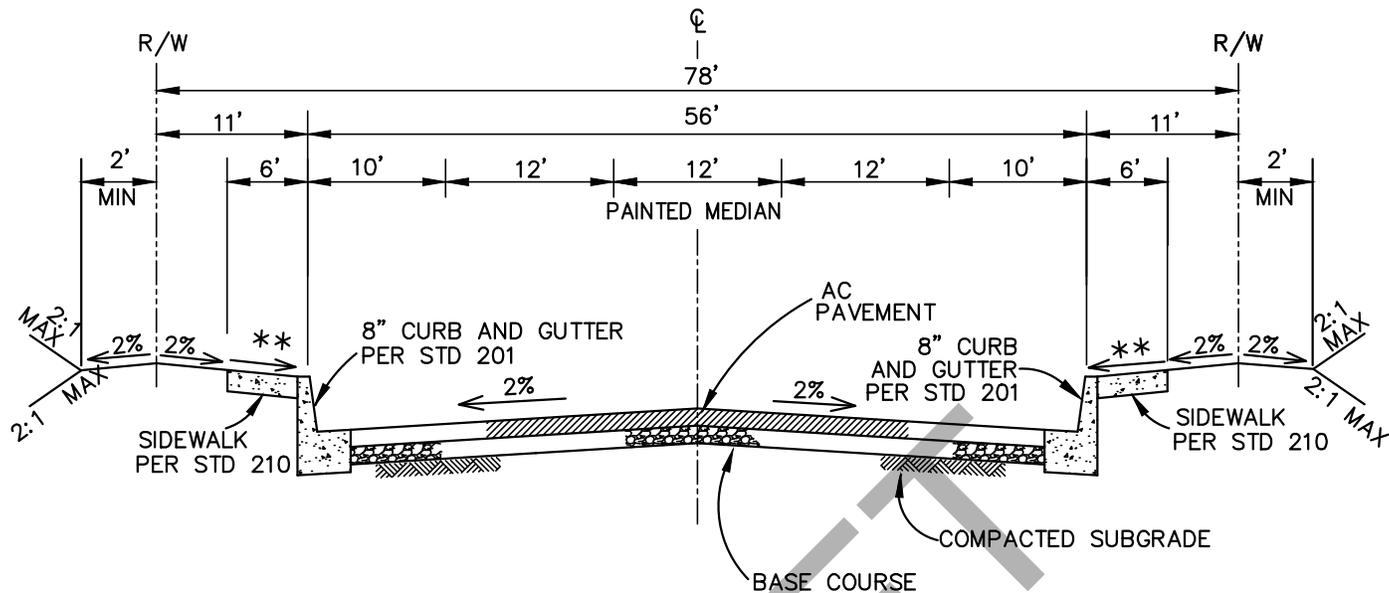
**CITY OF LAKE ELSINORE**

**SECONDARY ARTERIAL  
(4 LANE)**

STANDARD PLAN NO.

**104**

SHEET 1 OF 1



**TYPICAL SECTION**

**NOTES:**

- 1.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R VALUE TESTING PER CALTRANS DESIGN METHOD TEST 301 WITH RECOMMENDED SAFETY FACTOR, MINIMUM 6" AC / 12" AB\*. AC SHALL BE PLACED IN LIFTS, AND THICKNESS OF EACH LIFT SHALL NOT EXCEED 3".
- 2.) MINIMUM T.I. = 10, TRUCK ROUTES SHALL BE 12.
- 3.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 18'.
- 4.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

\* MINIMUM 8" AC / 12" AB ON STREETS DESIGNATED AS TRUCK ROUTES  
 \*\* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.0% MAX AS-BUILT)

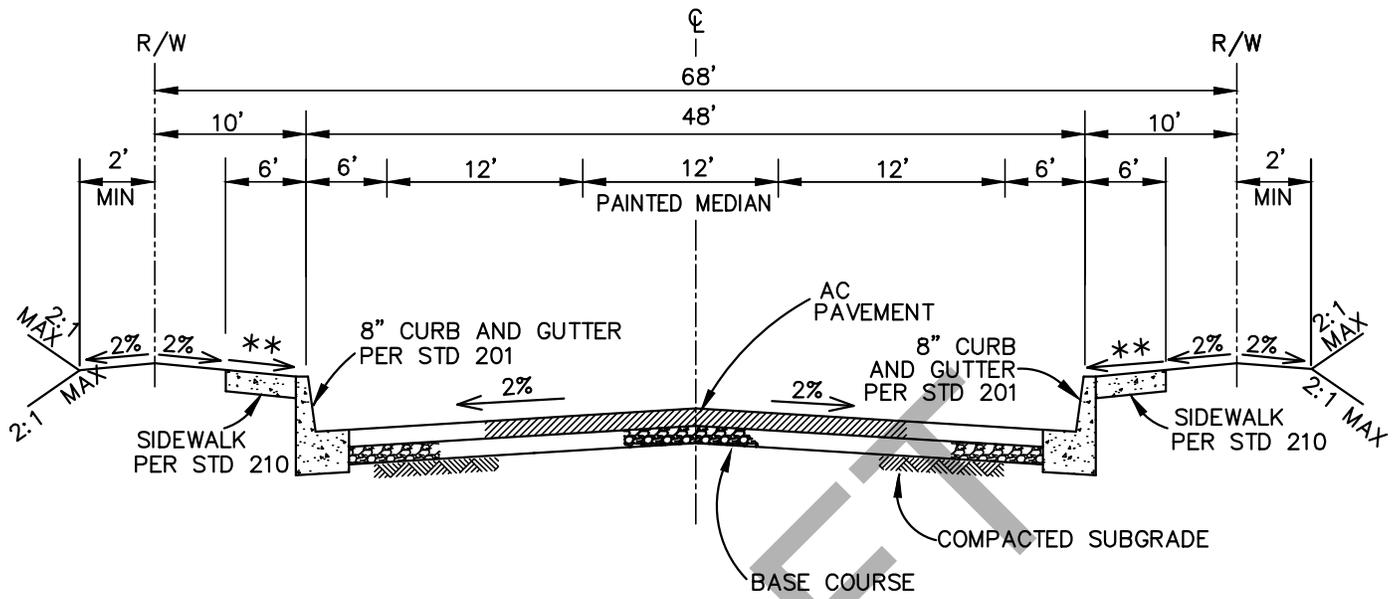
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CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**DIVIDED COLLECTOR**

STANDARD PLAN NO. **105** SHEET 1 OF 1



**TYPICAL SECTION**

**NOTES:**

- 1.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R-VALUE TESTING PER CALTRANS DESIGN METHOD TEST 301 WITH RECOMMENDED SAFETY FACTOR, MINIMUM 4" AC / 6" AB. AC SHALL BE PLACED IN LIFTS, AND THICKNESS OF EACH LIFT SHALL NOT EXCEED 3".
- 2.) MINIMUM T.I. = 7.
- 3.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 18'.
- 4.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

\*\* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.0% MAX AS-BUILT)

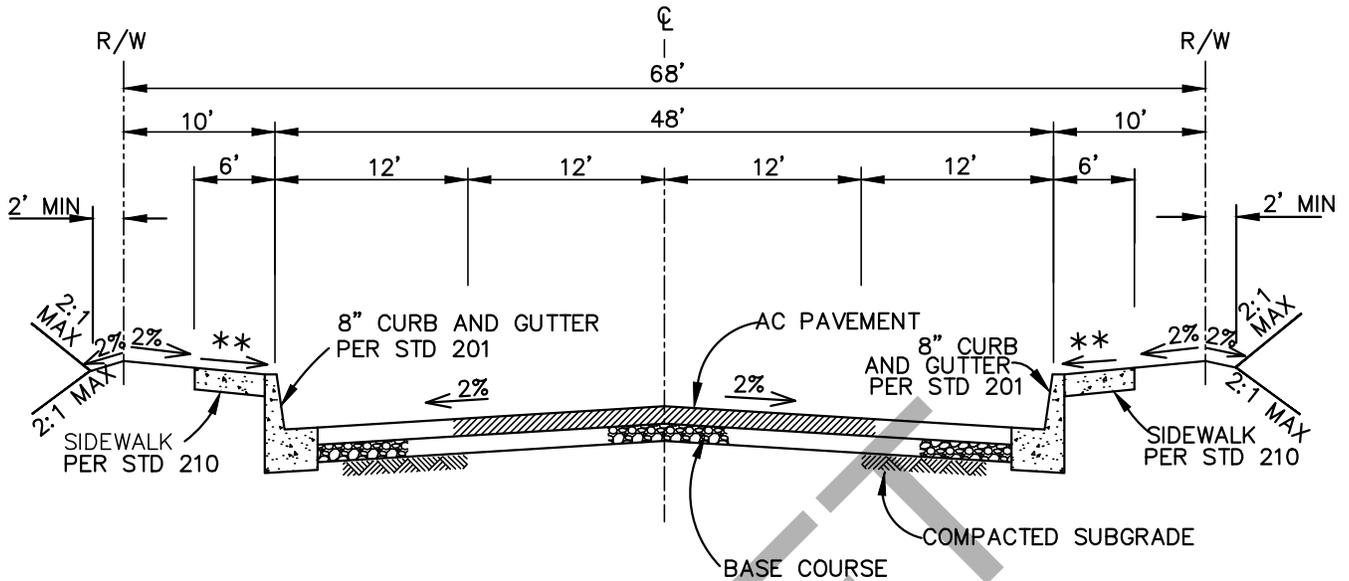
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CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**COLLECTOR  
(2-LANE)**

STANDARD PLAN NO. **106** SHEET 1 OF 1



## TYPICAL SECTION

### NOTES:

- 1.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R VALUE TESTING PER CALTRANS DESIGN METHOD TEST 301 WITH RECOMMENDED SAFETY FACTOR, MINIMUM 5.5" AC / 9" AB. AC SHALL BE PLACED IN LIFTS, AND THICKNESS OF EACH LIFT SHALL NOT EXCEED 3".
- 2.) MINIMUM T.I. = 9.
- 3.) HALF WIDTH STREETS SHALL BE CONSTRUCTED TO A WIDTH OF 1/2 STREET WIDTH PLUS 12'.

\*\* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.0% MAX AS-BUILT)

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



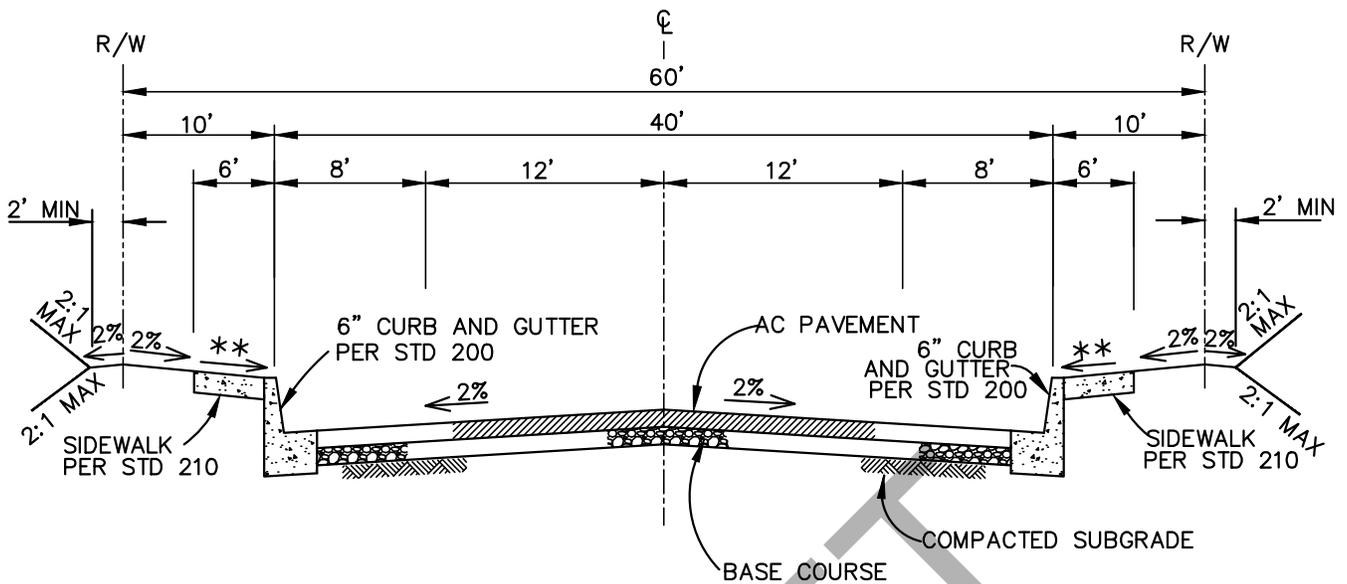
**CITY OF LAKE ELSINORE**

**COLLECTOR  
(4-LANE)**

STANDARD PLAN NO.

**107**

SHEET 1 OF 1



## TYPICAL SECTION

### NOTES:

- 1.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R VALUE TESTING PER CALTRANS DESIGN METHOD TEST 301 WITH RECOMMENDED SAFETY FACTOR, MINIMUM 4" AC / 6" AB. AC SHALL BE PLACED IN LIFTS, AND THICKNESS OF EACH LIFT SHALL NOT EXCEED 3".
- 2.) MINIMUM 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.

\*\* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.0% MAX AS-BUILT)

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CITY ENGINEER  
REMON HABIB

DATE

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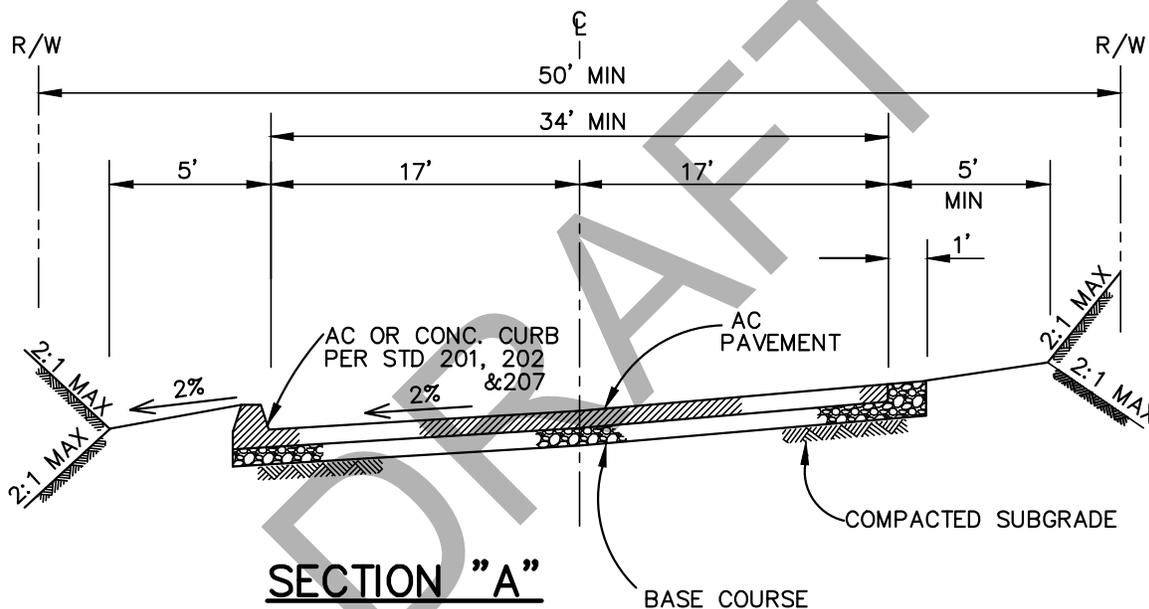
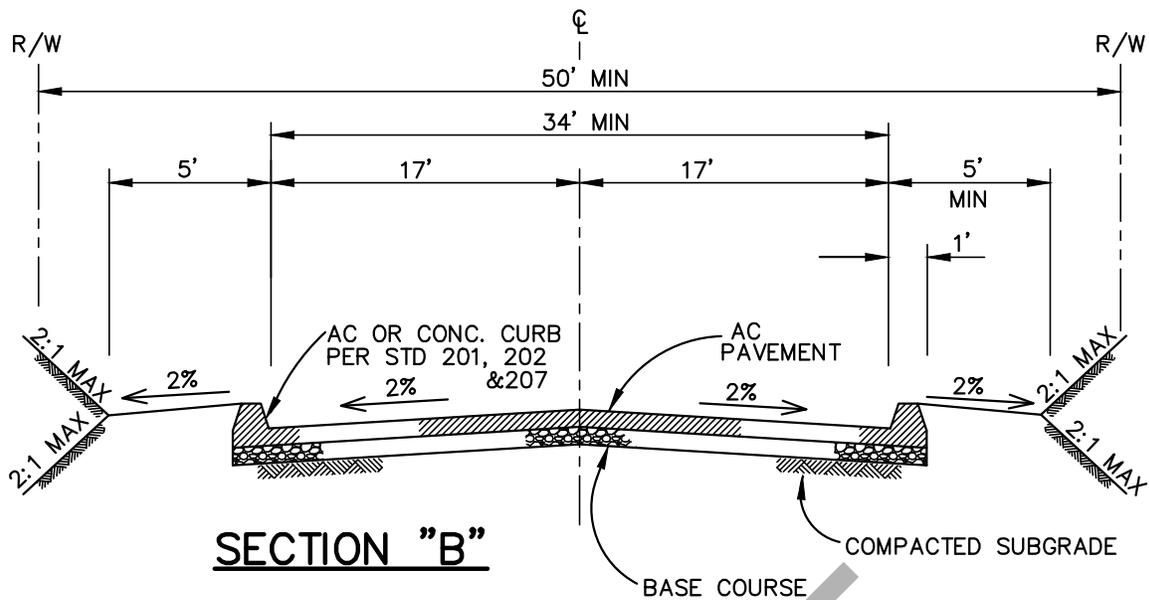
**CITY OF LAKE ELSINORE**

**LOCAL STREET**

STANDARD PLAN NO.

**108**

SHEET 1 OF 1



**NOTES:**

- 1.) DRAINAGE CONTROL TO BE APPROVED BY THE CITY ENGINEER. CONCRETE CURB AND/OR CURB AND GUTTER MAY BE REQUIRED.
- 2.) THICKNESS OF PAVEMENT SECTION TO BE DETERMINED BY R VALUE TESTING PER CALTRANS DESIGN METHOD TEST 301 WITH RECOMMENDED SAFETY FACTOR, MINIMUM 4" AC / 6" AB. AC SHALL BE PLACED IN LIFTS, AND THICKNESS OF EACH LIFT SHALL NOT EXCEED 3".
- 3.) MINIMUM T.I. = 6.
- 4.) NO PARKING PERMITTED ON EITHER SIDE.
- 5.) STRUCTURAL SECTION COMPACTION PER APPROVED PLANS OR MIN. CALTRANS STANDARDS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

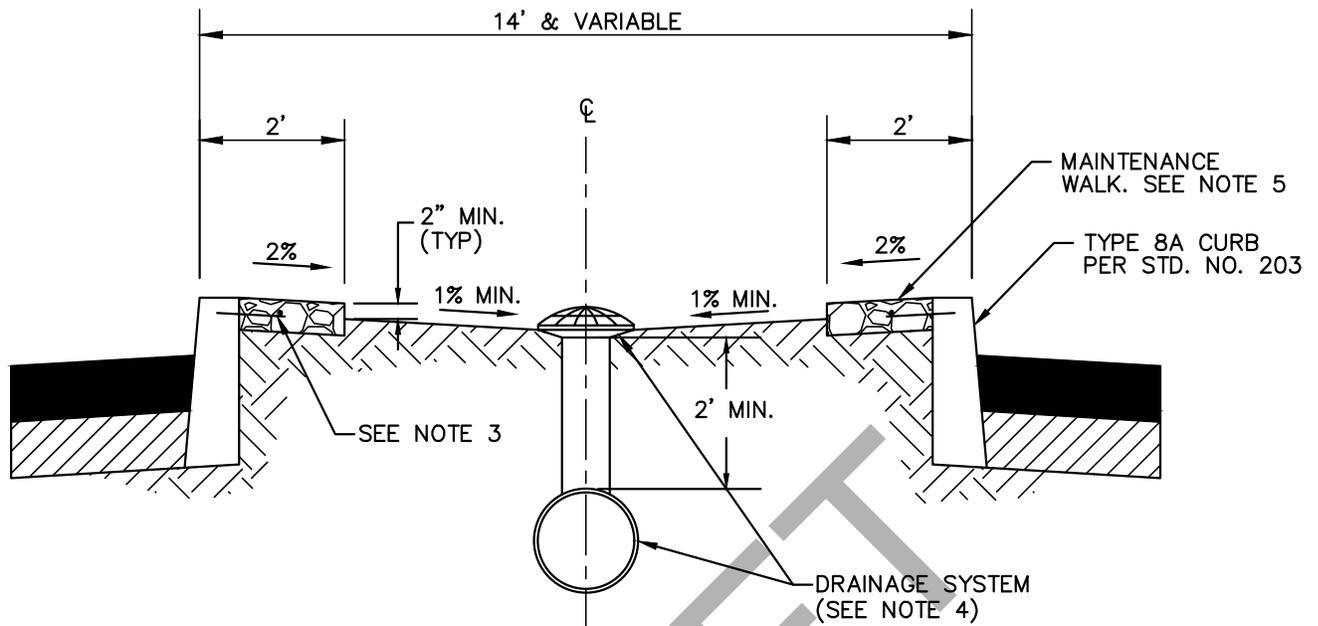
**HILLSIDE RESIDENTIAL  
STREET**

STANDARD PLAN NO.

**109**

SHEET 1 OF 1

REVISION	BY:	APPROVED	DATE



## TYPICAL SECTION

### NOTES:

- 1.) ANY IRRIGATION SHALL BE PROVIDED BY A DRIP SYSTEM OR POINT TO POINT SYSTEM.
- 2.) INSTALL TYPE 8 CURB AND GUTTER (STD. NO. 201) IN PLACE OF TYPE 8A WHEN FLOW LINE IS AGAINST MEDIAN DUE TO SUPERELEVATION.
- 3.) #4 REBAR X 10" DOWELS AT 24" C-C TO TIE THE MAINTENANCE WALK TO THE CURB. ADD #3 LONGITUDINAL TIE BAR.
- 4.) DRAINAGE SYSTEM IF REQUIRED SHALL BE APPROVED BY THE PUBLIC WORKS/ ENGINEERING DEPARTMENT.
- 5.) MAINTENANCE WALK SHALL BE 5" THICK 560-C-3250 PCC WITH STAMPED FINISH OR APPROVED EQUAL, SEE STANDARD NO. 115 FOR GENERAL NOTES.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



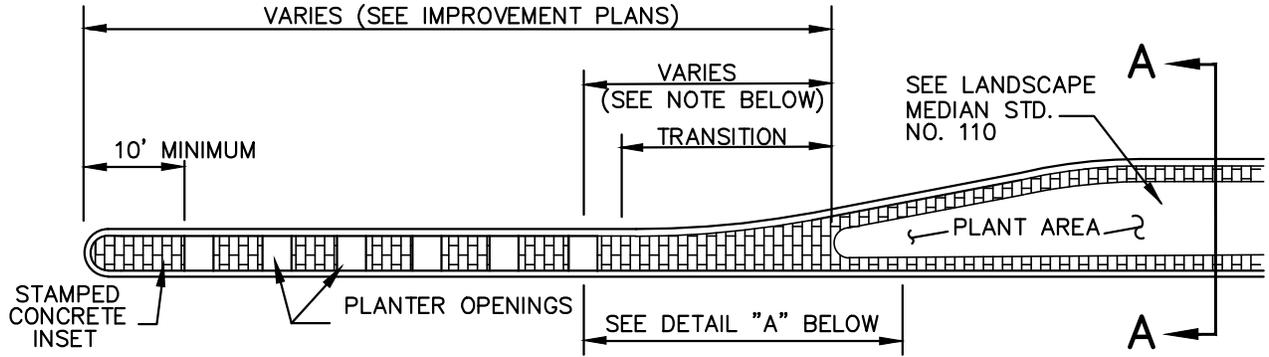
**CITY OF LAKE ELSINORE**

**LANDSCAPED MEDIAN**

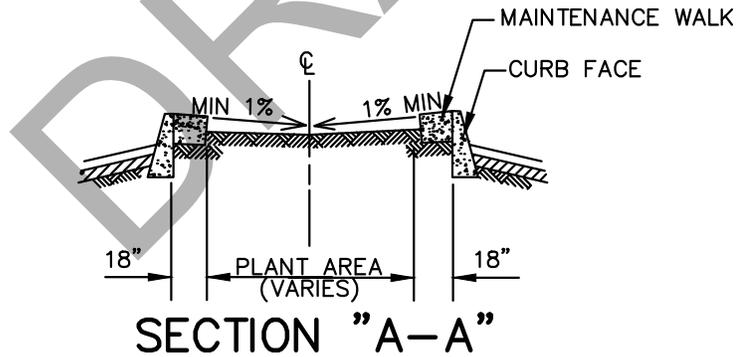
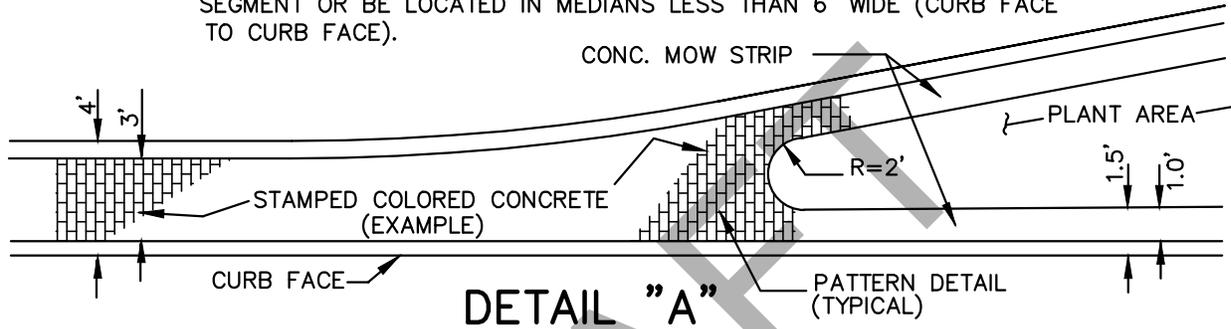
STANDARD PLAN NO.

**110**

SHEET 1 OF 1



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).



APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



CITY OF LAKE ELSINORE

MEDIAN HARDSCAPE

STANDARD PLAN NO.

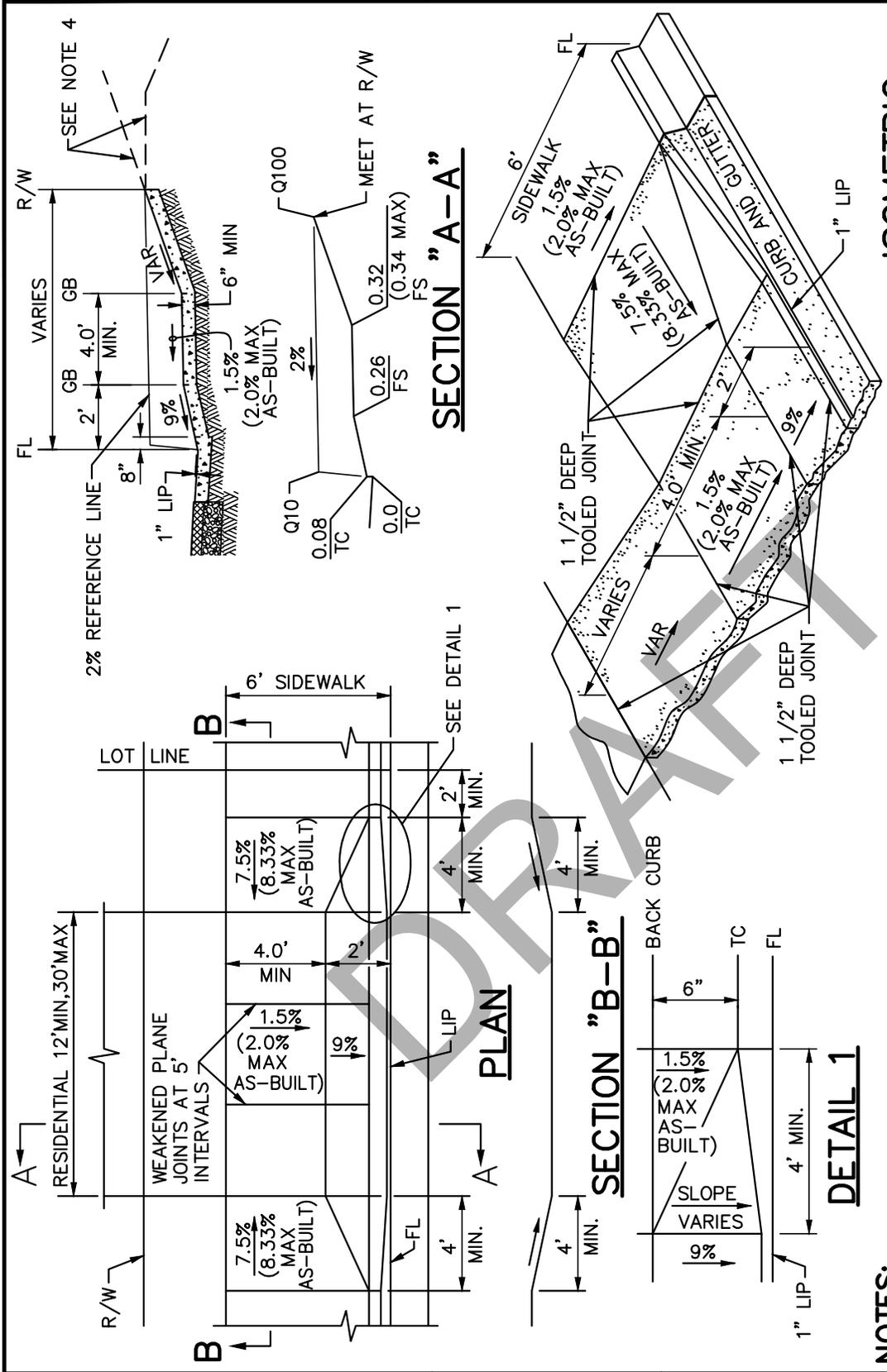
111

SHEET 1 OF 1

**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.

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB			DATE		<b>GENERAL NOTES: STAMPED CONCRETE</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>115</b> SHEET 1 OF 1	



**ISOMETRIC**

**NOTES:**

- 1.) ALL CONCRETE SHALL BE CLASS 560-C-3250, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXISTING PCC TO BE REMOVED SHALL BE SAWCUT AT THE JOINTS.
- 3.) DRIVEWAYS WITH 14' ≤ W ≤ 20' SHALL HAVE A MINIMUM OF 1 WEAKENED PLANE JOINT AT 1/2 W. DRIVEWAYS WITH W > 20' SHALL HAVE WEAKENED PLANE JOINTS AT 1, NOT TO EXCEED 5', ON CENTER. ALL DRIVEWAY WIDTHS SHALL HAVE WEAKENED PLANE LINES AT THE BOTTOM "X" LOCATION OF THE DRIVEWAY APPROACH TO CONTROL CRACKING.
- 4.) FOR CONSTRUCTING NEW DRIVEWAY APPROACHES ON EXISTING STREETS, A 12" WIDTH OF ASPHALT CONCRETE SHALL BE REMOVED AND REPLACED TO FULL DEPTH.
- 5.) DRIVEWAYS FOR CORNER LOTS SHALL BE LOCATED ADJACENT TO THE PROPERTY LINE AWAY FROM THE INTERSECTION.
- 6.) W DIMENSION SHALL MATCH WIDTH OF GARAGE(S) UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- 7.) CONSTRUCT THE PROFILE GRADE OF THE PRIVATE ON-SITE DRIVEWAY SO THAT IT PROVIDES SMOOTH VEHICLE ACCESS OVER THE DRIVE APPROACH
- 8.) RELATIVE COMPACTION OF SUBGRADE UNDER DRIVEWAYS SHALL BE 95% MINIMUM.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



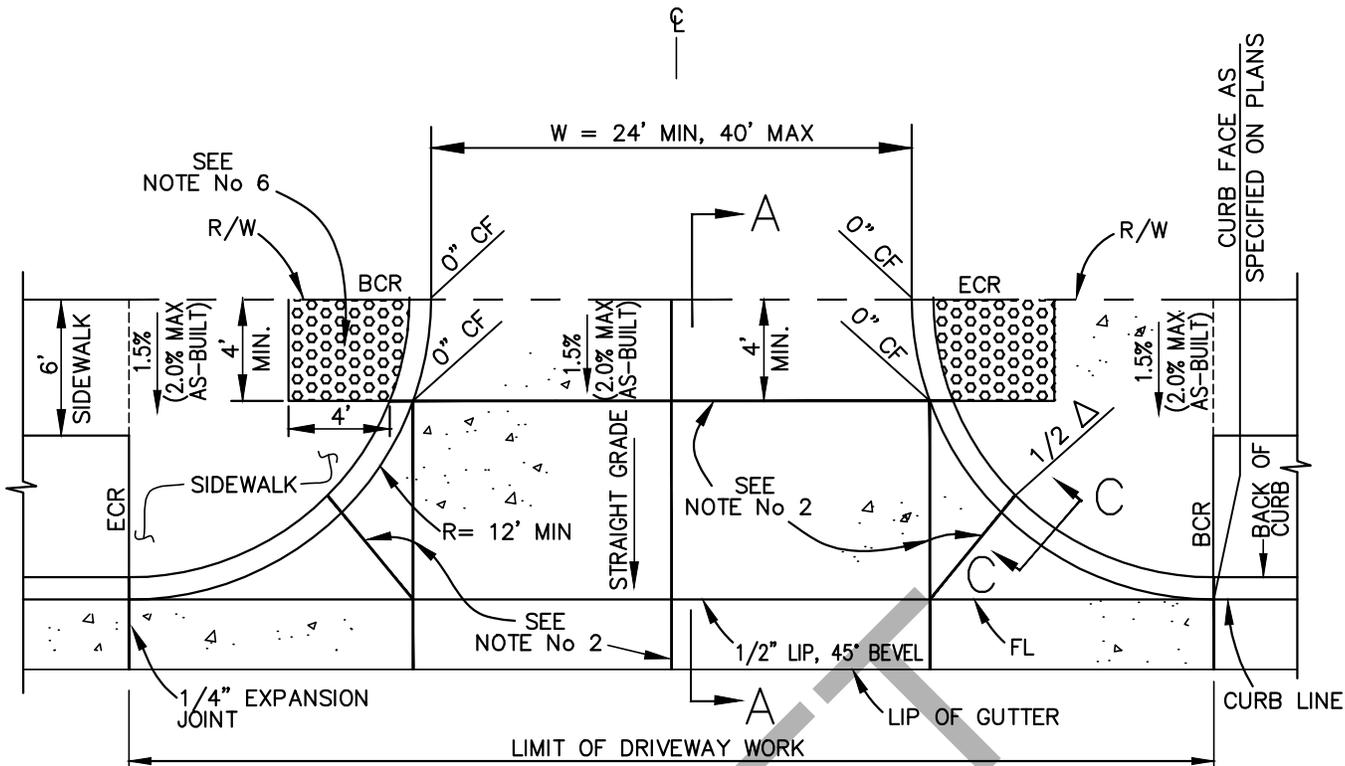
**CITY OF LAKE ELSINORE**

**RESIDENTIAL DRIVEWAY  
APPROACH**

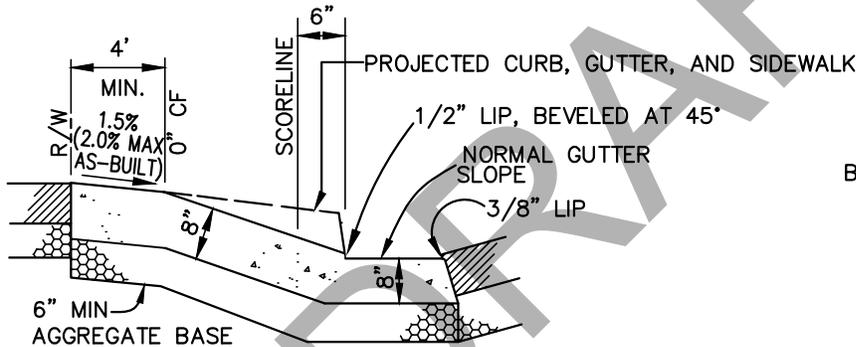
STANDARD PLAN NO.

**117**

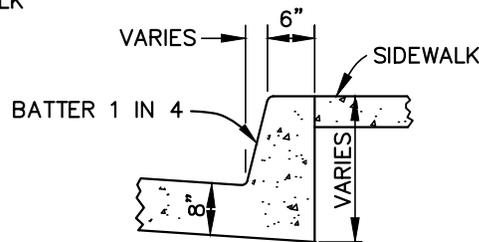
SHEET 1 OF 1



**PLAN VIEW**



**SECTION A-A**



**SECTION C-C**

**NOTES:**

- 1.) TYPE I APPROACH MAY BE USED WHEN SIDEWALK IS ADJACENT TO PROPERTY LINE.
- 2.) WEAKENED PLANE JOINTS ARE REQUIRED AT CENTERLINE OF APPROACH AND AT LOCATIONS AS SHOWN, SPACED 10' MAXIMUM AND AS NECESSARY.
- 3.) CONCRETE SHALL BE CLASS 560-C-3250, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 4.) 4' LONG #4 SMOOTH ROUND BARS SHALL BE USED WHEN DRIVEWAY APPROACH IS NOT POURED MONOLITHICALLY.
- 5.) FOR NEW DRIVEWAY APPROACHES ON EXISTING STREETS A 12" WIDTH OF ASPHALT CONCRETE SHALL BE REMOVED AND REPLACED TO FULL DEPTH.
- 6.) TRUNCATED DOMES SHALL BE LOCATED AS SHOWN AND SHALL BE COLOR YELLOW. TRUNCATED DOMES SHALL BE SET IN CONCRETE, ADHESIVE MAY BE ALLOWED BY THE CITY ENGINEER. TRUNCATED DOMES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ADA. SEE CITY STD. PLAN NO. 214D.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE

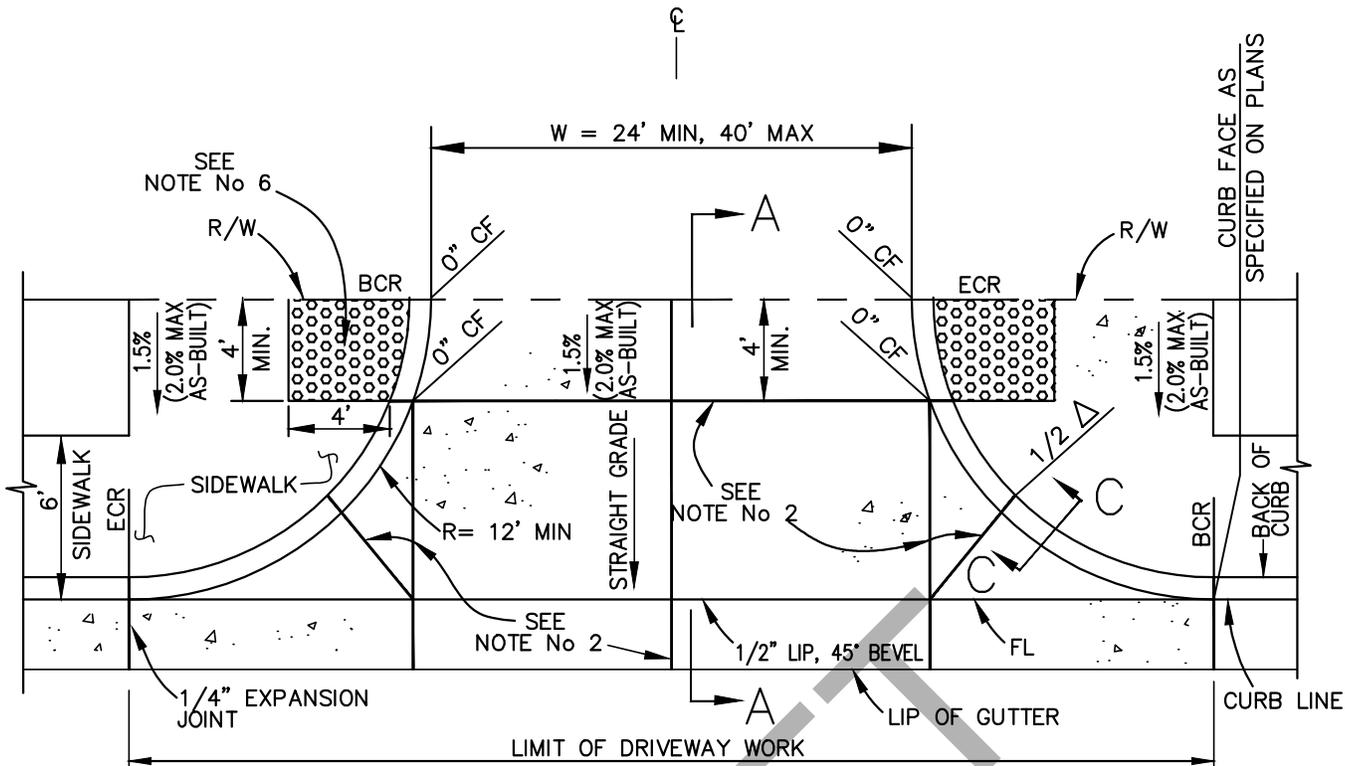


**CITY OF LAKE ELSINORE**  
**COMMERCIAL DRIVEWAY**  
**APPROACH**  
**(WITH SIDEWALK AT R/W)**

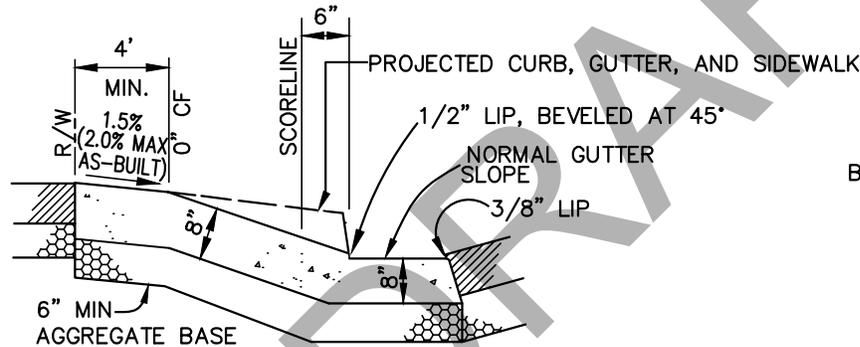
STANDARD PLAN NO.

**118A**

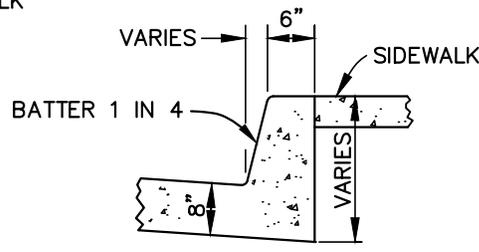
SHEET 1 OF 1



**PLAN VIEW**



**SECTION A-A**



**SECTION C-C**

**NOTES:**

- 1.) TYPE I APPROACH MAY BE USED WHEN SIDEWALK IS ADJACENT TO PROPERTY LINE.
- 2.) WEAKENED PLANE JOINTS ARE REQUIRED AT CENTERLINE OF APPROACH AND AT LOCATIONS AS SHOWN, SPACED 10' MAXIMUM AND AS NECESSARY.
- 3.) CONCRETE SHALL BE CLASS 560-C-3250, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 4.) 4' LONG #4 SMOOTH ROUND BARS SHALL BE USED WHEN DRIVEWAY APPROACH IS NOT POURED MONOLITHICALLY.
- 5.) FOR NEW DRIVEWAY APPROACHES ON EXISTING STREETS A 12" WIDTH OF ASPHALT CONCRETE SHALL BE REMOVED AND REPLACED TO FULL DEPTH.
- 6.) TRUNCATED DOMES SHALL BE LOCATED AS SHOWN AND SHALL BE COLOR YELLOW. TRUNCATED DOMES SHALL BE SET IN CONCRETE, ADHESIVE MAY BE ALLOWED BY THE CITY ENGINEER. TRUNCATED DOMES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ADA. SEE CITY STD. PLAN NO. 214D.

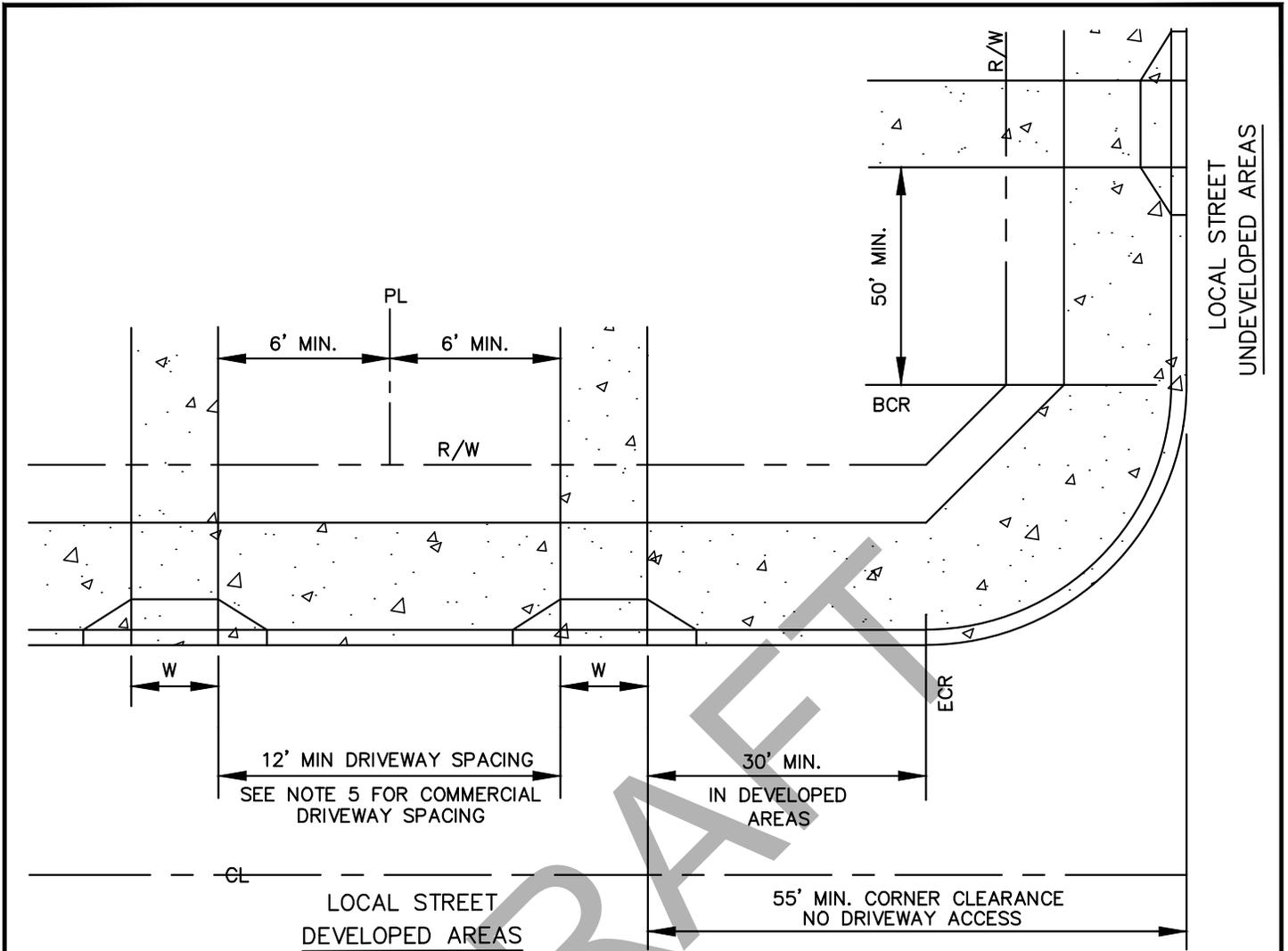
APPROVED BY:			
CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**COMMERCIAL DRIVEWAY APPROACH**  
**(WITH SIDEWALK AT CURB)**

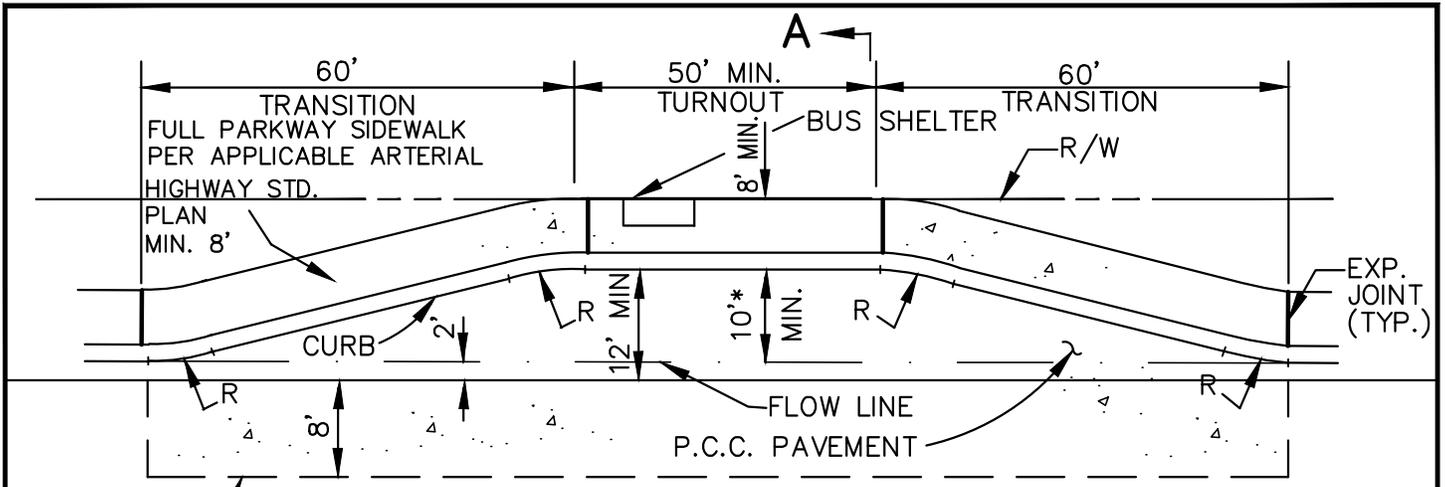
STANDARD PLAN NO. **118B** SHEET 1 OF 1



**NOTES:**

1. IN DEVELOPED AREAS, CONSTRAINTS SUCH AS SMALL LOT FRONTAGE OR EXISTING ON-SITE IMPROVEMENTS MAY MAKE STRICT ADHERENCE TO THE ABOVE MINIMUM SPACING IMPRACTICAL SITUATIONS WILL BE REVIEWED ON A CASE BY CASE BASIS BY THE CITY ENGINEER.
  2. SECONDARY DRIVEWAYS (RESIDENTIAL): 22' MINIMUM FULL HEIGHT CURB BETWEEN OPENINGS ON SAME PROPERTY. 6' MINIMUM TO PROPERTY LINE. SECONDARY DRIVEWAY SHALL NOT EXCEED 12'.
  3. FOR RESIDENTIAL DRIVEWAYS SEE STANDARD PLAN No. 117 FOR 'W' DIMENSION AND SPACING.
  4. FOR COMMERCIAL DRIVEWAYS SEE STANDARD PLAN No. 118 A/B FOR 'W' DIMENSION AND SPACING.
  5. COMMERCIAL DRIVEWAY SPACING SHALL FOLLOW THE TABLE BELOW OR AS APPROVED BY THE CITY ENGINEER.
- | ROAD SPEED | MIN. SPACING |
|------------|--------------|
| 20 MPH     | 85'          |
| 25 MPH     | 105'         |
| 30 MPH     | 125'         |
| 35 MPH     | 150'         |
| 40 MPH     | 185'         |
| 45 MPH     | 230'         |
| 50 MPH     | 275'         |
6. PUBLIC PEDESTRIAN ACCESS RAMPS SHALL NOT BE USED AS DRIVEWAY ACCESS UNDER ANY CIRCUMSTANCES.

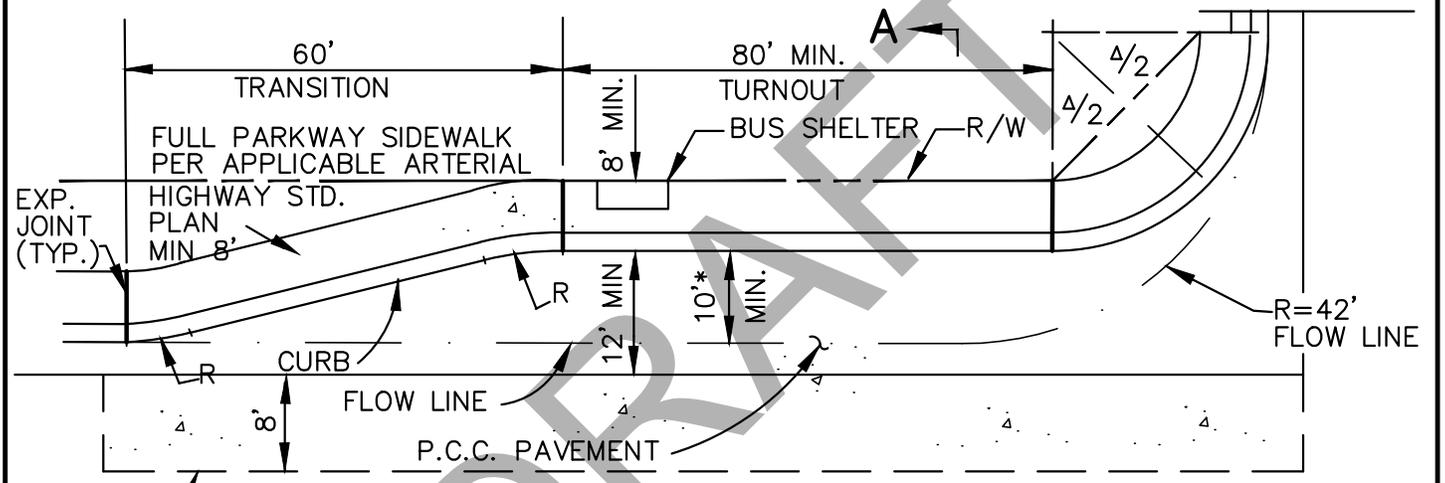
APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB		DATE			<b>DRIVEWAY APPROACH LOCATIONS</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>119</b>	
				SHEET 1 OF 1		



SEE NOTE NO. 8\*

### MID-BLOCK

\* 4' MIN. IF ON-STREET PARKING IS AVAILABLE OTHERWISE 10' MIN.



SEE NOTE NO. 8\*

### FAR SIDE OF DRIVEWAY

\* 4' MIN. IF ON-STREET PARKING IS AVAILABLE OTHERWISE 10' MIN.

#### NOTES:

- 1.) R=50'.
- 2.) P.C.C. PAVEMENT THICKNESS SHALL BE DETERMINED BY THE ENGINEER. MINIMUM THICKNESS SHALL BE 8" WITH #4 BARS AT 24" O.C. IN BOTH DIRECTIONS OVER 6" AB OVER 12" MIN. 95% COMPACTED NATIVE SUBGRADE OR PER SOIL REPORT.
- 3.) BUS SHELTERS SHALL BE SET BACK FROM THE FACE OF THE CURB A MIN. CLEAR DISTANCE OF FOUR (4) FEET FOR PEDESTRIAN TRAVELWAY.
- 4.) CURB SHALL BE POURED MONOLITHIC WITH THE P.C.C. PAVEMENT.
- 5.) MODIFICATIONS OF THIS STANDARD MAY BE MADE BY THE CITY ENGINEER.
- 6.) CONCRETE SHALL BE CLASS 560-C-3250, CURED WITH CURING COMPOUND.
- 7.) ADDITIONAL R/W MAY BE REQUIRED BY CITY ENGINEER.
- 8.) DASHED LINE - CONCRETE PAD FOR 4' BUS TURNOUT.

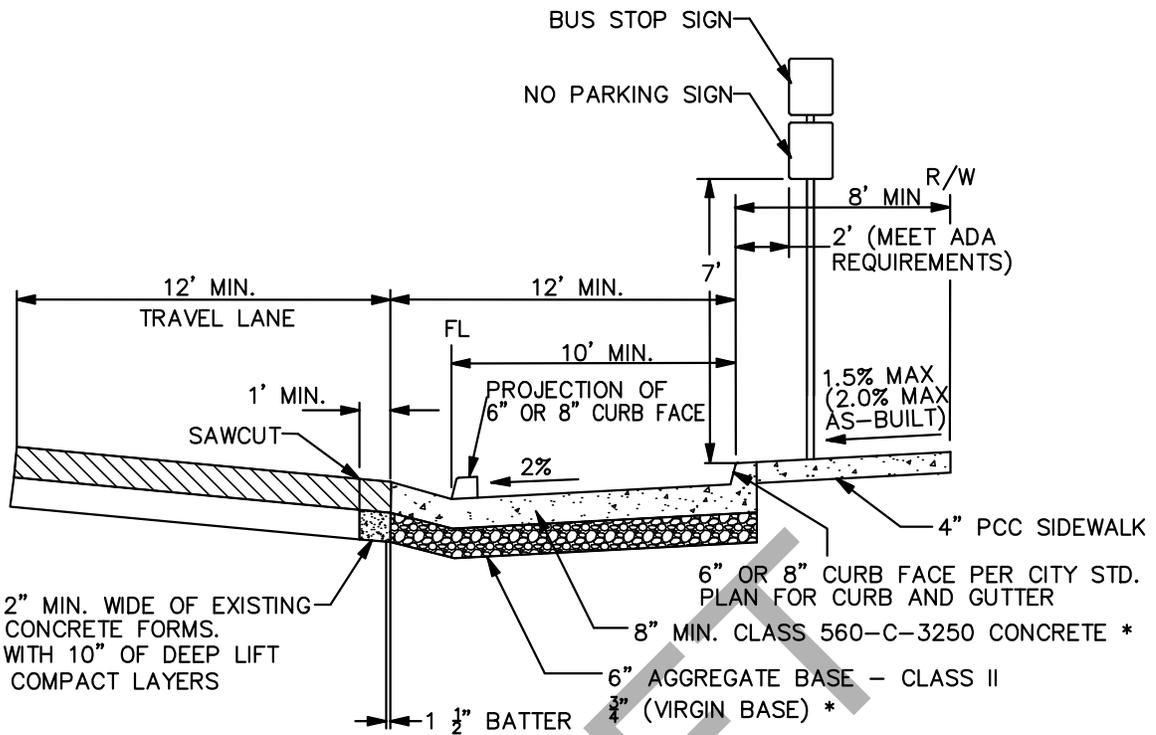
APPROVED BY:			
CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**BUS TURNOUTS**

STANDARD PLAN NO. **121** SHEET 1 OF 2



REMOVE 12" MIN. WIDE OF EXISTING A.C. FOR CONCRETE FORMS. REPLACE WITH 10" OF DEEP LIFT A.C. IN 4 COMPACT LAYERS

### SECTION A-A

\* 8" PCC/8" AB MIN. SECTION UNLESS REQUIRED OTHERWISE BY CITY ENGINEER.

### NOTES:

- 1.) COMPACTION ON THE UPPER 12" OF NATIVE SOIL AND AGGREGATE BASE SHALL BE 95%.
- 2.) CONCRETE CYLINDER TESTS SHALL BE TAKEN AS REQUIRED BY INSPECTOR.
- 3.) CONCRETE SHALL HAVE A MAXIMUM OF 4" SLUMP.
- 4.) ALL CONCRETE TO BE CLASS 560-C-3250.
- 5.) CURING COMPOUND WITH FUGITIVE DYE SHALL BE APPLIED IMMEDIATELY AFTER FINAL FINISHING.
- 6.) 1 1/2" DEEP WEAKENED PLANE JOINTS TO BE INSTALLED AT 20' O.C.
- 7.) CONTRACTOR SHALL MAINTAIN TRAFFIC DETOUR, INCLUDING FLASHING ARROW BOARDS FOR A MINIMUM OF 5 DAYS TO ALLOW CONCRETE BUS PAD TO CURE BEFORE PLACING TRAFFIC ON IT.
- 8.) FINAL LOCATION OF BUS PAD TO BE APPROVED IN FIELD BY PUBLIC WORKS INSPECTION PRIOR TO EXCAVATION.
- 9.) CONTRACTOR SHALL FINISH CONCRETE PAD WITH MEDIUM TO HEAVY BROOM FINISH.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



CITY OF LAKE ELSINORE

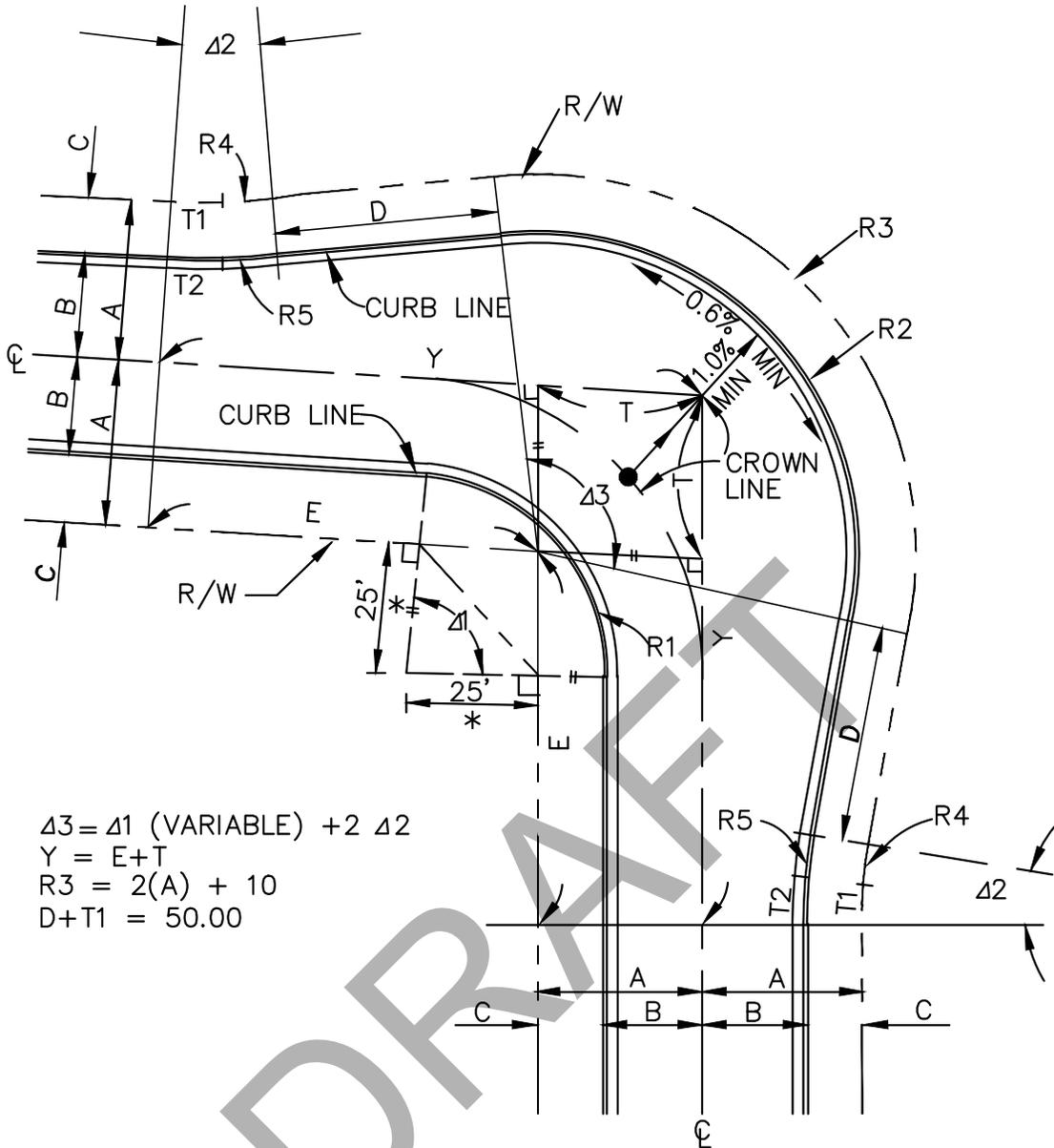
BUS TURNOUTS

STANDARD PLAN NO.

121

SHEET 2 OF 2

REVISION	BY:	APPROVED	DATE



$\Delta 3 = \Delta 1 \text{ (VARIABLE)} + 2 \Delta 2$   
 $Y = E + T$   
 $R3 = 2(A) + 10$   
 $D + T1 = 50.00$

R/W	ROADWAY IMPROVEMENT WIDTH	A	B	C	D	E	R1	R2	R3	$\Delta 2$	R4	T1	R5	T2
50'	34'	25'	17'	8'	40.91'	69.09'	33'	52'	60'	10°23'20"	100'	9.09'	108'	9.91'
60'	40'	30'	20'	10'	41.04'	70.60'	35'	60'	70'	10°14'12"	100'	8.96'	110'	9.85'
68'	48'	34'	24'	10'	41.12'	71.78'	35'	68'	78'	10°07'28"	100'	8.88'	110'	9.74'
78'	56'	39'	28'	11'	41.27'	73.23'	36'	77'	88'	9°58'58"	100'	8.73'	111'	9.69'

**NOTES:**

- 1.) THE VALUE FOR "T" & "Y" WILL VARY ACCORDING TO DESIGN.
  - 2.) LIMITS OF CROSS SLOPE, CROWN LINE TO OUTSIDE GUTTER: MINIMUM OF 1%.
- \*25' REGARDLESS OF R/W WIDTH.

APPROVED BY: \_\_\_\_\_

CITY ENGINEER REMON HABIB DATE \_\_\_\_\_

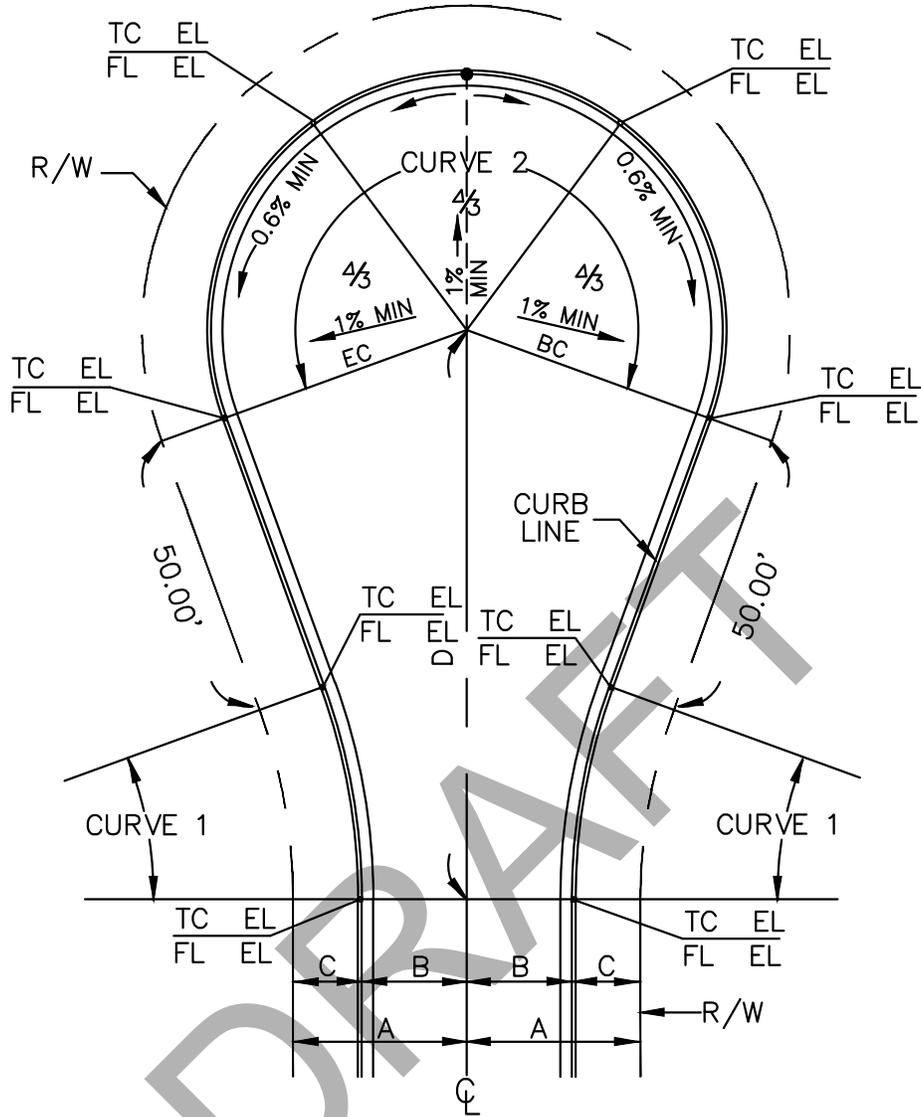
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**STANDARD KNUCKLE**

STANDARD PLAN NO. **122** SHEET 1 OF 1



R/W	CURVE 1					△	CURVE 2				△	CURVE 2				
	A	B	C	D	R		L	CURB		R/W		R	L	R/W		
								R	L	R				L	R	L
50'	25'	17'	8'	88.88'	16°23'22"	108'	30.89'	100'	28.60'	212°46'43"	37'	137.41"	45'	167.12'		
60'	30'	20'	10'	98.11'	19°09'43"	110'	36.79'	100'	33.44'	218°19'27"	45'	171.47"	55'	209.58'		
68'	34'	24'	10'	94.23'	17°20'42"	110'	33.30'	100'	30.27'	214°41'24"	46'	172.36"	56'	209.83'		
78'	39'	28'	11'	95.39'	17°12'31"	111'	33.34'	100'	30.03'	214°25'02"	50'	187.11"	61'	228.28'		

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



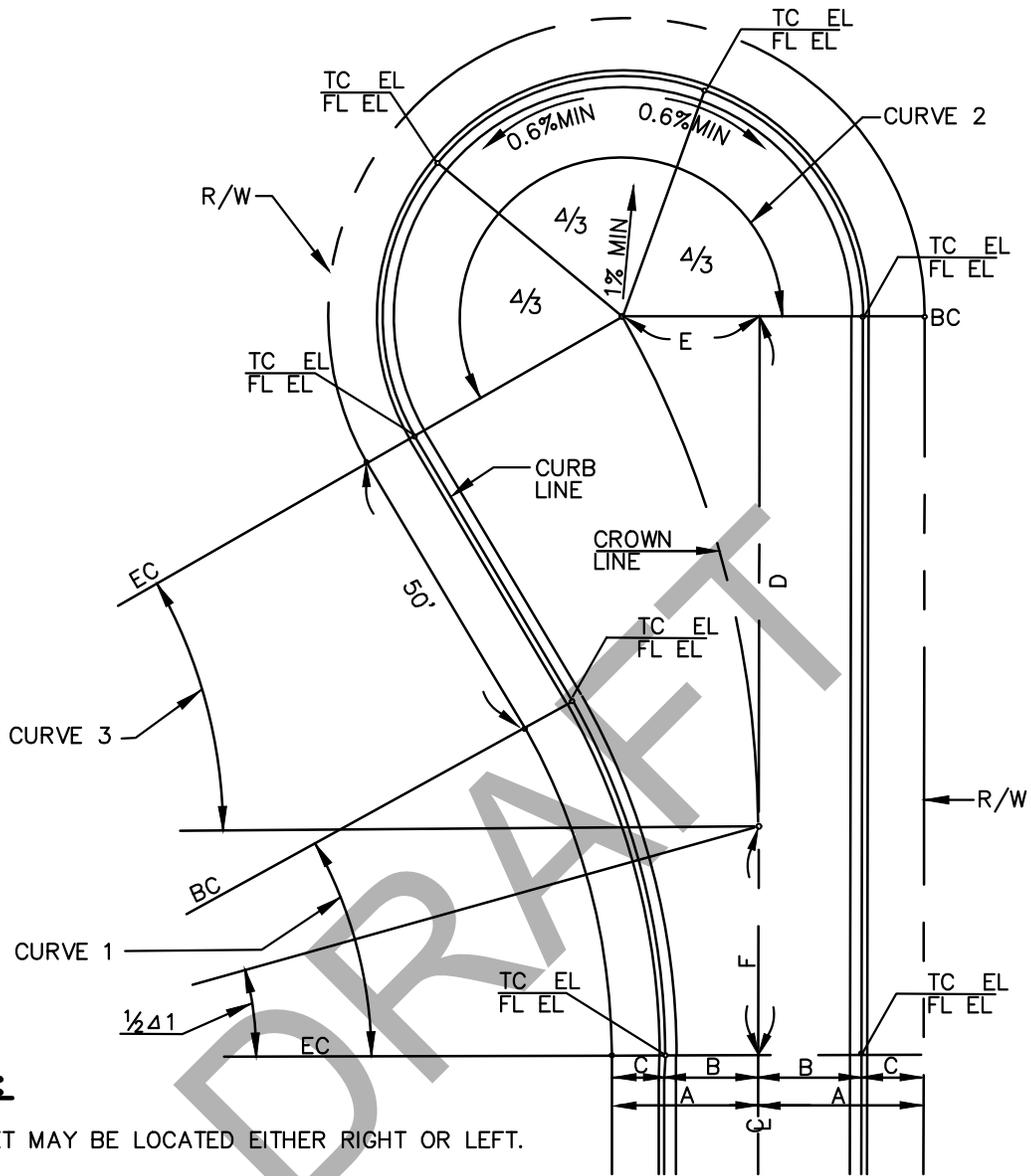
CITY OF LAKE ELSINORE

CUL-DE-SAC  
(SYMMETRICAL)

STANDARD PLAN NO.

123

SHEET 1 OF 1



**NOTES:**

1.) OFFSET MAY BE LOCATED EITHER RIGHT OR LEFT.

R/W	CURVE 1						CURVE 2				CURVE 3								
	A	B	C	D	E	F	△	CURB		R/W		△	CROWN LINE						
								R	L	R	L		R	L					
50'	25'	17'	8'	83.35'	20'	33.35'	26°59'08"	122'	57.46'	114'	53.69'	206°59'08"	37'	133.67'	45'	162.57'	26°59'08"	183.69'	86.52'
60'	30'	20'	10'	121.38'	22'	35.69'	28°47'49"	119'	59.81'	109'	54.78'	208°48'03"	42'	153.06'	52'	189.50'	28°48'01"	177.87'	89.41'
68'	34'	24'	10'	84.77'	22'	34.77'	29°05'46"	110'	55.86'	100'	50.78'	209°05'46"	46'	167.87'	56'	204.37'	29°05'46"	174.33'	88.53'
78'	39'	28'	11'	85.69'	22'	35.69'	28°47'56"	111'	55.79'	100'	50.26'	208°47'56"	50'	182.21'	61'	222.30'	28°47'56"	177.87'	89.41'

APPROVED BY: \_\_\_\_\_

CITY ENGINEER REMON HABIB DATE \_\_\_\_\_

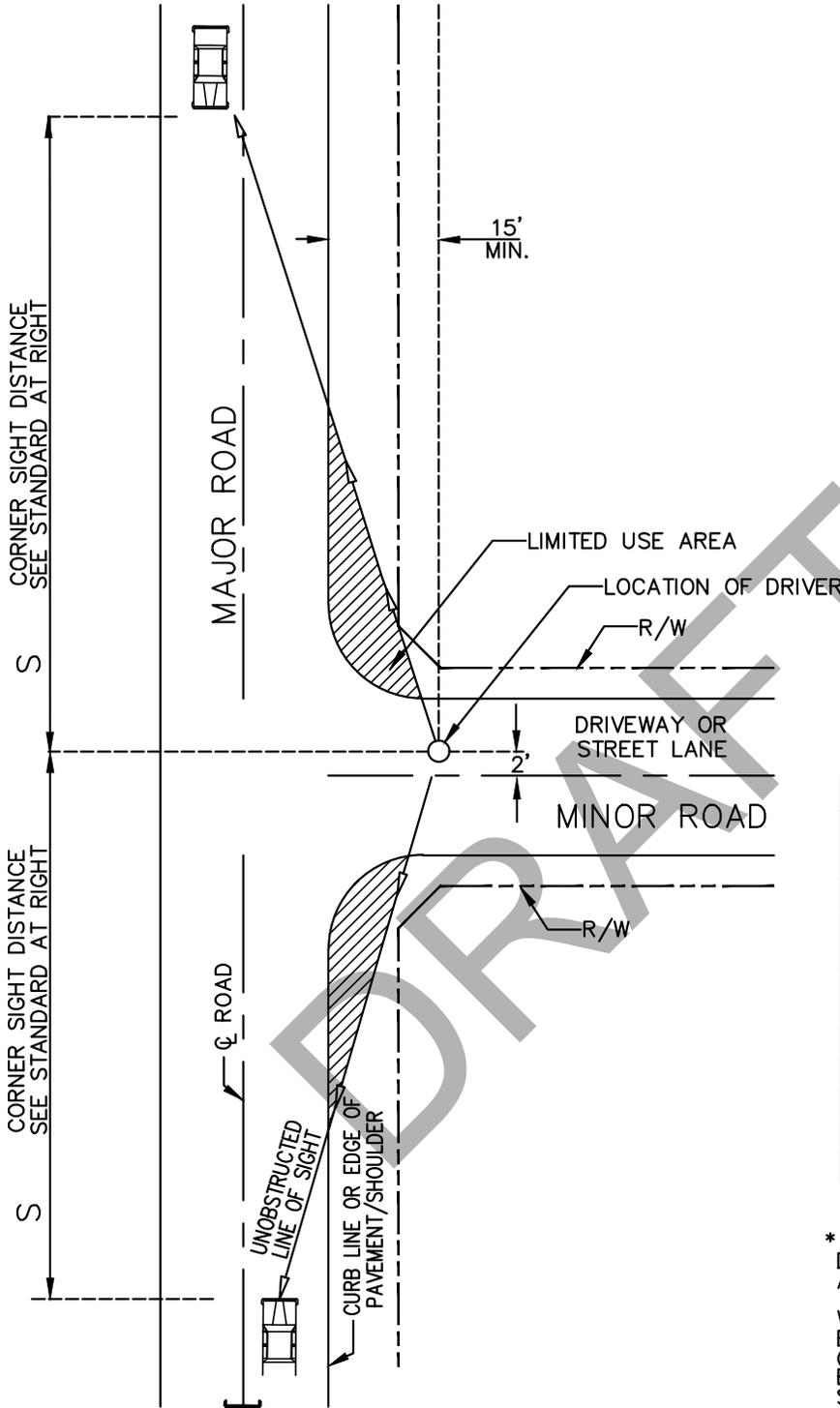
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**CITY OF LAKE ELSINORE**

**CUL-DE-SAC (OFFSET)**

STANDARD PLAN NO. **124** SHEET 1 OF 1



DESIGN SPEED (M.P.H.)	SIGHT DISTANCE	
	CORNER SIGHT DISTANCE*	STOPPING SIGHT DISTANCE*
20	220	125
25	275	150
30	330	200
35	385	250
40	440	300
45	495	360
50	550	430
55	605	500
60	660	580
65	715	660

\* INCREASE BY 20% ON SUSTAINED DOWNGRADE GREATER THAN 3% AND LONGER THAN ONE MILE.

WHERE RESTRICTIVE CONDITIONS EXIST, THE MINIMUM VALUE FOR CORNER SIGHT DISTANCE SHALL BE EQUAL TO THE STOPPING SIGHT DISTANCE WITH APPROVAL OF THE CITY ENGINEER.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



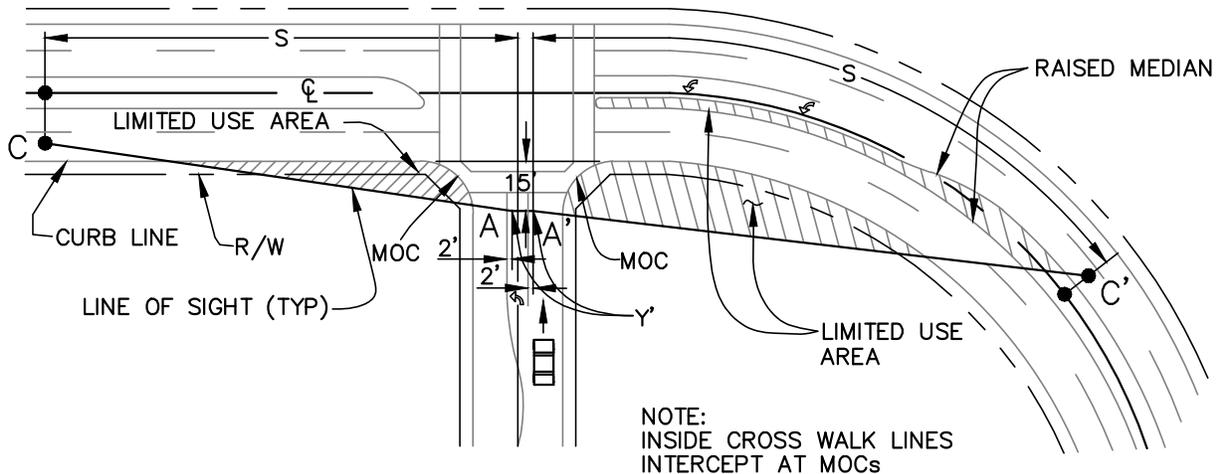
CITY OF LAKE ELSINORE

MINIMUM SIGHT  
DISTANCE REQUIREMENT

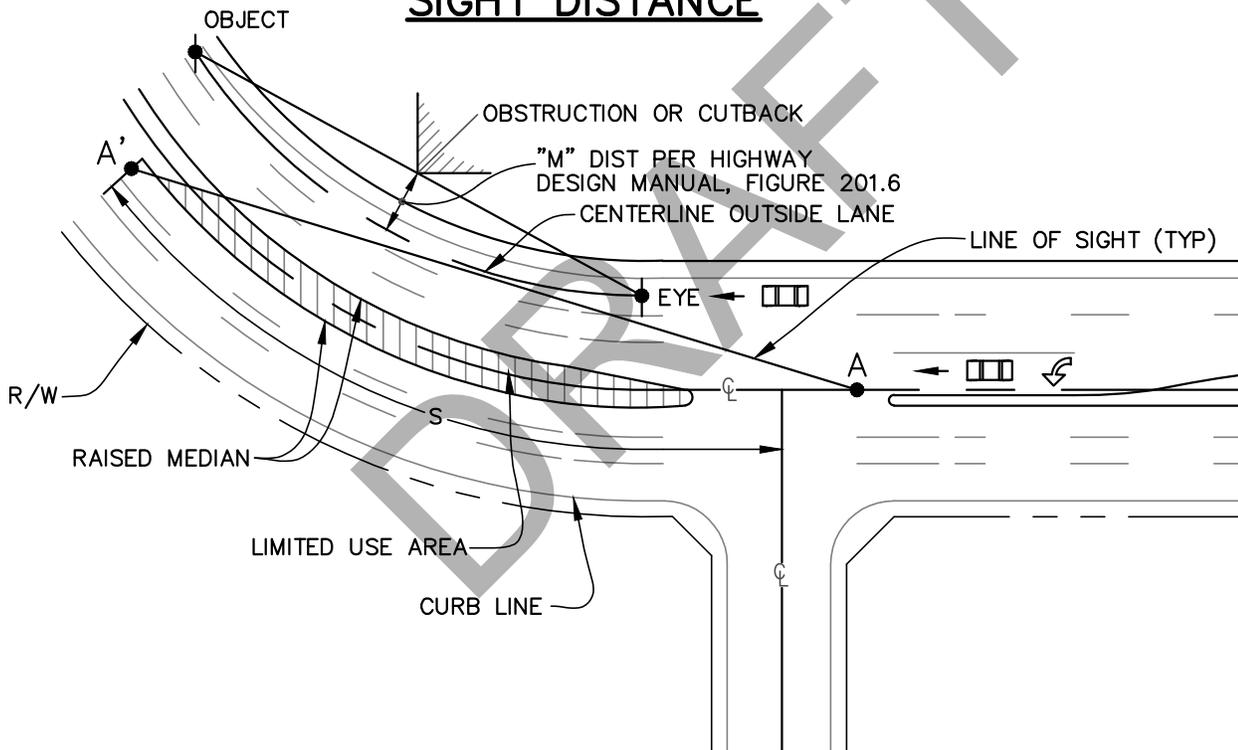
STANDARD PLAN NO.

125

SHEET 1 OF 1



**LEFT AND RIGHT TURN OUT  
AND CROSS TRAFFIC  
SIGHT DISTANCE**



**LEFT TURN IN AND OBSTRUCTION  
SIGHT DISTANCE**

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



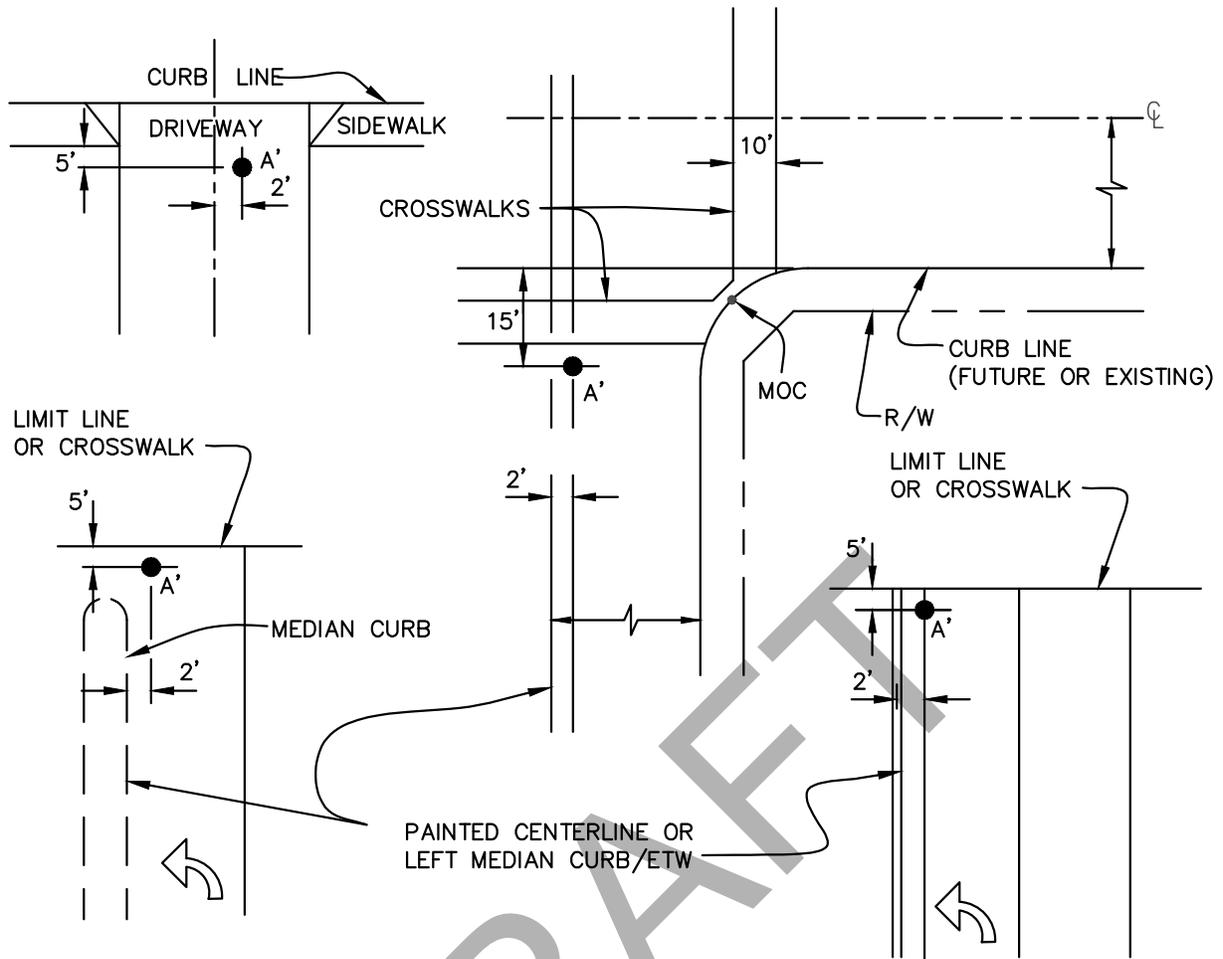
**CITY OF LAKE ELSINORE**

**SIGHT DISTANCE  
DETAIL**

STANDARD PLAN NO.

**126**

SHEET 1 OF 3



**NOTES:**

1. ● = POINT OF MEASUREMENT.
2. FOR INTERSECTION CASES, SEE STD 126 SHEET 3 FOR APPLICATION.
3. REFER TO STD 125 FOR LINE OF SIGHT APPLICATION TO DISTANCE (S).
4. WHERE VEHICLES ARE BACKING INTO ON COMING TRAFFIC, A' SHALL BE 13' VERSUS 5'.
5. MOC – MIDDLE OF CURB RETURN.
6. ETW – EDGE OF TRAVELED WAY.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**SIGHT DISTANCE  
DETAIL**

STANDARD PLAN NO.

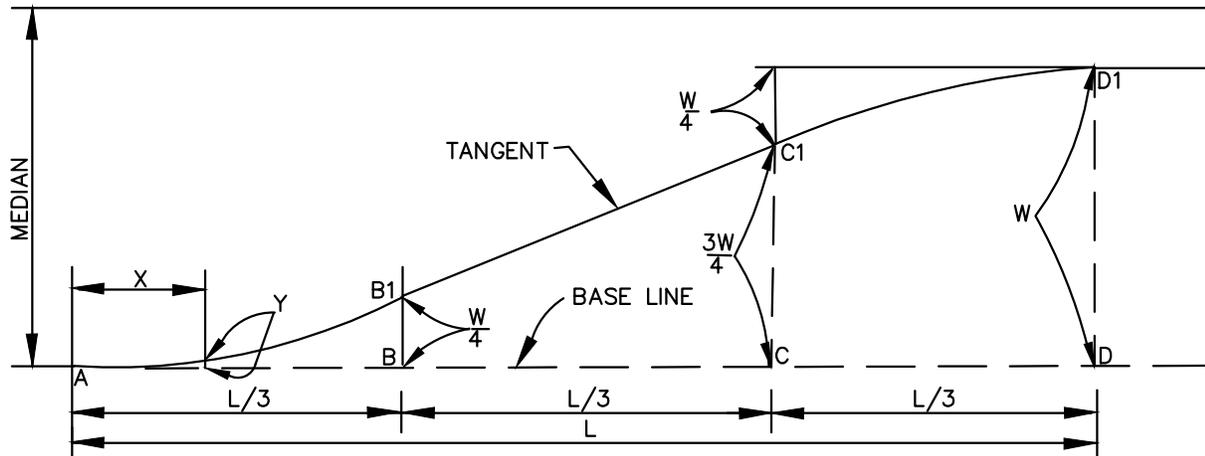
**126**

SHEET 2 OF 3

**NOTES:**

1. THE DISTANCE S REPRESENTS THE INTERSECTION SIGHT DISTANCE MEASURED ALONG THE CENTERLINE OF THE ROAD. THE INTERSECTION SIGHT DISTANCE IS THE DISTANCE REQUIRED TO ALLOW STOPPING DISTANCE FOR THE DRIVER ON THE CROSS ROAD (OR LEFT TURN POCKET) TO CROSS THE MAIN ROADWAY OR TURN LEFT WHILE THE APPROACH VEHICLE TRAVELS AT THE ASSUMED DESIGN SPEED OF THE MAIN ROADWAY.
2. THE DISTANCE S SHOULD BE INCREASED BY 20% FROM THE AMOUNT SHOWN ON THE STOPPING DISTANCE TABLE ON SUSTAINED DOWNGRADES STEEPER THAN 3% AND LONGER THAN ONE MILE.
3. POINTS A AND A' ARE THE LOCATIONS OF A DRIVER'S LINE OF SIGHT (3.5 FOOT EYE HEIGHT) TO ONCOMING VEHICLES (4.25 FOOT OBJECT HEIGHT) LOCATED AT POINTS C AND C' WHILE IN A VEHICLE AT AN INTERSECTION FIFTEEN FEET FROM THE EDGE OF THE TRAVELED WAY.
4. THE DISTANCE Y' IS THE 2 FOOT DISTANCE MEASURED FROM THE LEFT EDGE OF THE TRAVELED WAY TO THE LOCATION OF THE DRIVER.
5. THE LIMITED USE AREA IS DETERMINED BY THE GRAPHICAL METHOD USING THE APPROPRIATE DISTANCES GIVEN IN THE TABLE IN STANDARD 125. IT SHALL BE USED FOR THE PURPOSE OF PROHIBITING OR CLEARING OBSTRUCTIONS IN ORDER TO MAINTAIN ADEQUATE SIGHT DISTANCE AT INTERSECTIONS.
6. THE LINE OF SIGHT LINE SHALL BE SHOWN AT INTERSECTIONS ON ALL LANDSCAPING PLANS, GRADING PLANS, AND TENTATIVE TRACT PLANS. IN CASES, WHERE AN INTERSECTION IS LOCATED ON A VERTICAL CURVE, A PROFILE OF THE LINE OF SIGHT MAY BE REQUIRED. THE LANDSCAPE PLAN SUBMITTED SHALL SHOW THE NAME, LOCATION AND MATURE DIMENSIONS, PLOTTED TO SCALE OF ALL THE PROPOSED TREES WITHIN THE LIMITED USE AREA.
7. OBSTRUCTIONS SUCH AS BUS SHELTERS, WALLS OR LANDSCAPING WITHIN THE LIMITED USE AREA WHICH COULD RESTRICT THE LINE OF SIGHT SHALL NOT BE PERMITTED. DRIVEWAYS ARE NOT PERMITTED WITHIN "T" INTERSECTION AREA DUE TO SIGHT DISTANCE RESTRICTION BY ENTERING VEHICLES.
  - a. PLANTS AND SHRUBS WITHIN THE LIMITED USE AREA SHALL BE OF THE TYPE THAT WILL GROW NO HIGHER THAN 30 INCHES ABOVE THE TOP OF CURB AND SHALL BE MAINTAINED AT A HEIGHT WHICH WILL ASSURE THAT THE 30 INCH MAXIMUM HEIGHT IS NOT EXCEEDED BETWEEN MAINTENANCE INTERVALS. MAINTENANCE AT A LOWER HEIGHT MAY BE REQUIRED ON CREST VERTICAL CURVES PER NOTE 6 ABOVE.
  - b. A PROFILE DETAIL OF THE LINE OF SIGHT MAY BE REQUIRED TO VERIFY 12" MINIMUM VERTICAL CLEARANCE ABOVE VARIABLE HEIGHT OBSTRUCTIONS SUCH AS SLOPE LANDSCAPING, PLANTS, SHRUBS AND PERIMETER WALLS.
  - c. THE TOE OF SLOPE MAY NOT ENCROACH INTO THE LIMITED USE AREA UNLESS THE REQUIREMENTS OF (b) ABOVE ARE SATISFIED.
  - d. IN LIEU OF PROVIDING A PROFILE OF THE LINE OF SIGHT PER NOTE 7.b. ABOVE, THE TOE OF SLOPE SHALL NOT ENCROACH INTO THE LIMITED USE AREA, AND THE LIMITED USE AREA SHALL SLOPE 2% MAXIMUM BETWEEN THE LINE OF SIGHT AND THE BACK OF SIDEWALK.
8. NO PARKING IS ALLOWED WITHIN THE LIMITED USE AREA.
9. TREES ARE GENERALLY NOT PERMITTED WITHIN ANY PORTION OF THE LIMITED USE AREA. EXCEPTIONS ARE ALLOWED WHEN THE SPECIES HAS A MATURE TRUNK DIAMETER OF 6 INCHES OR LESS.
10. MEDIAN AREAS LESS THAN FIVE (5) FEET IN WIDTH SHALL NOT BE LANDSCAPED.
11. INTERSECTION SIGHT DISTANCE AT RIGHT ANGLE INTERSECTIONS IS MEASURED FROM THE IDENTIFIED MEASUREMENT POINT A' , IN ACCORDANCE WITH THE DIAGRAMS ON STD 126, SHT. 2.

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB		DATE			<b>SIGHT DISTANCE DETAIL</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO.	<b>126</b>
				SHEET 3 OF 3		



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

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:**

- 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.

APPROVED BY:

CITY ENGINEER  
 REMON HABIB

DATE

REVISION

BY:

APPROVED

DATE



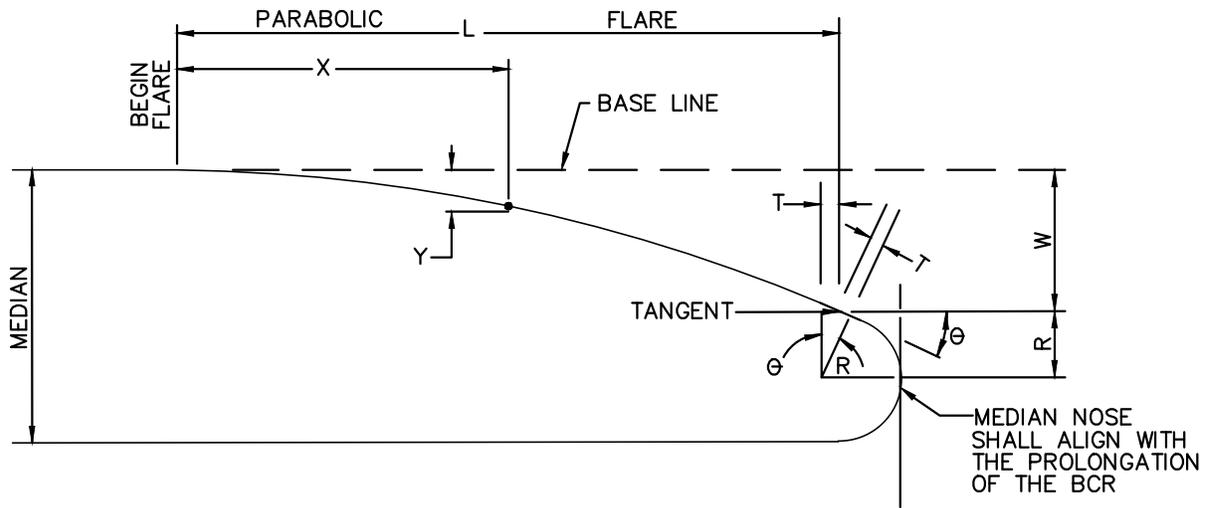
**CITY OF LAKE ELSINORE**

**MEDIAN TAPER**

STANDARD PLAN NO.

**127**

SHEET 1 OF 1



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

L=LENGTH OF FLARE IN FEET, PER PLAN  
 W=MAXIMUM OFFSET DISTANCE IN FEET, PER PLAN  
 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  
 theta = MAXIMUM FLARE DEFLECTION ANGLE

**OFFSET Y**

$\frac{X}{L}$	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'	

**NOTES:**

- IF STATION OF RADIUS POINT IS NOT GIVEN ON PLAN, TANGENT, T, MAY BE IGNORED. PLANS SHALL SPECIFY L AND W.

APPROVED BY:

CITY ENGINEER  
 REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**MEDIAN FLARE**

STANDARD PLAN NO.

**128**

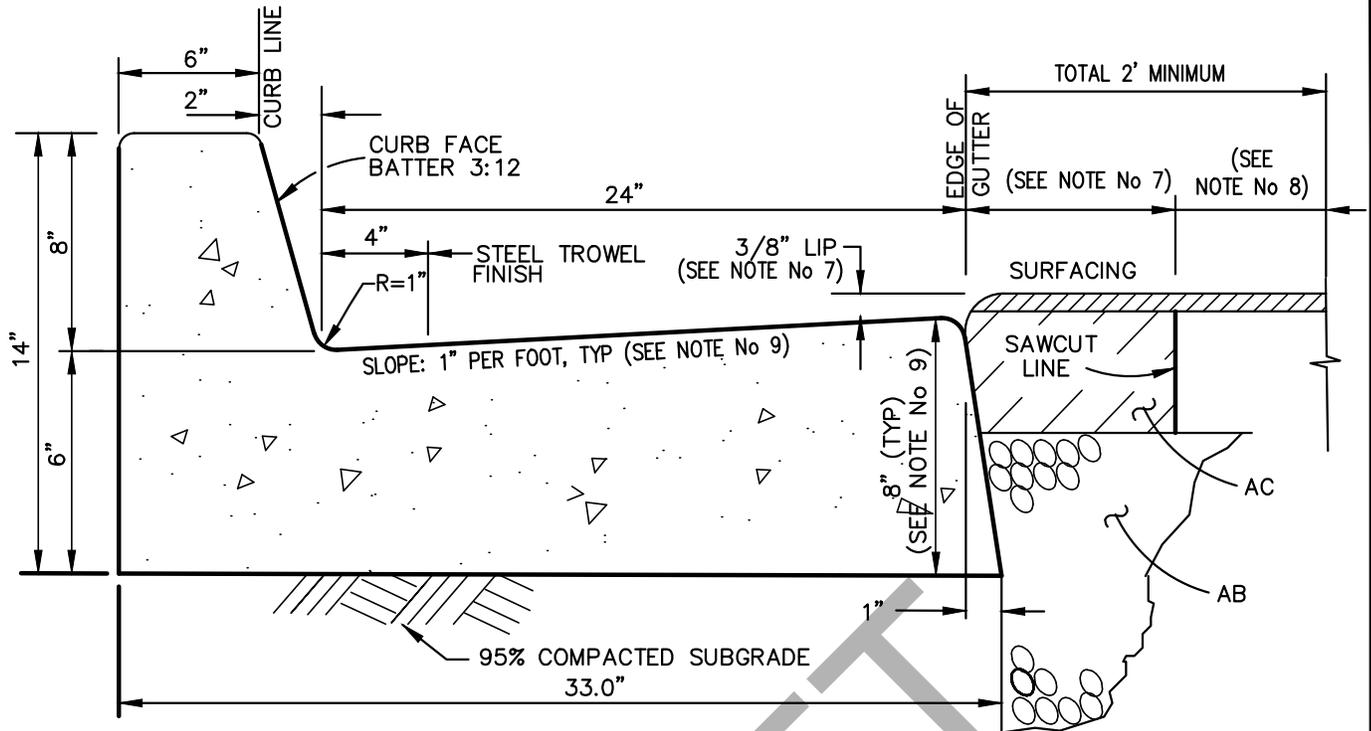
SHEET 1 OF 1

# CITY OF LAKE ELSINORE STANDARD PLANS

## SECTION 2: CURBS, GUTTERS AND SIDEWALKS

DRY  
LET





**NOTES:**

- 1.) CONCRETE SHALL BE CLASS 560-C-3250 PCC, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXPOSED CORNERS SHALL BE FINISHED WITH  $\frac{1}{2}$ " RADIUS UNLESS OTHERWISE STATED.
- 3.) FINISH SHALL BE FINE BROOM.
- 4.) EXISTING PCC SHALL BE SAWCUT AT WEAKENED PLANE JOINT PRIOR TO REMOVAL.
- 5.) CURBS SHALL HAVE WEAKENED PLANE JOINTS AT 10' INTERVALS; NO SCORE LINES 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 AC PAVEMENT REPAIR PATCH IS REQUIRED WHEN CURB AND GUTTER IS PLACED ADJACENT TO EXISTING AC PAVEMENT. PAVEMENT SURFACE NEAR BOTTOM OF ACCESS RAMP SHALL BE FLUSH WITH EDGE OF GUTTER (NO LIP) AND PAVEMENT SLOPE SHALL NOT EXCEED 5% IN DIRECTION OF TRAVEL FOR WHEELCHAIRS. REFER TO STDS 214A, 214B AND 214C FOR REQUIREMENTS.
- 8.) A MINIMUM 1' WIDE GRIND/COLDMILL 1.2" DEEP SLOT OR AS DIRECTED BY THE CITY ENGINEER. SEE STD 602A FOR FINISH OVERLAY REQUIREMENTS.
- 9.) GUTTER SLOPE NEAR BOTTOM OF ACCESS RAMP SHALL NOT EXCEED 5% (HIKE = 1.2" MAX) REFER TO STDS 214A, 214B AND 214C FOR REQUIREMENTS.
- 10.) SLOPE TOP OF CURB  $\frac{1}{4}$ " PER FOOT TOWARD STREET.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



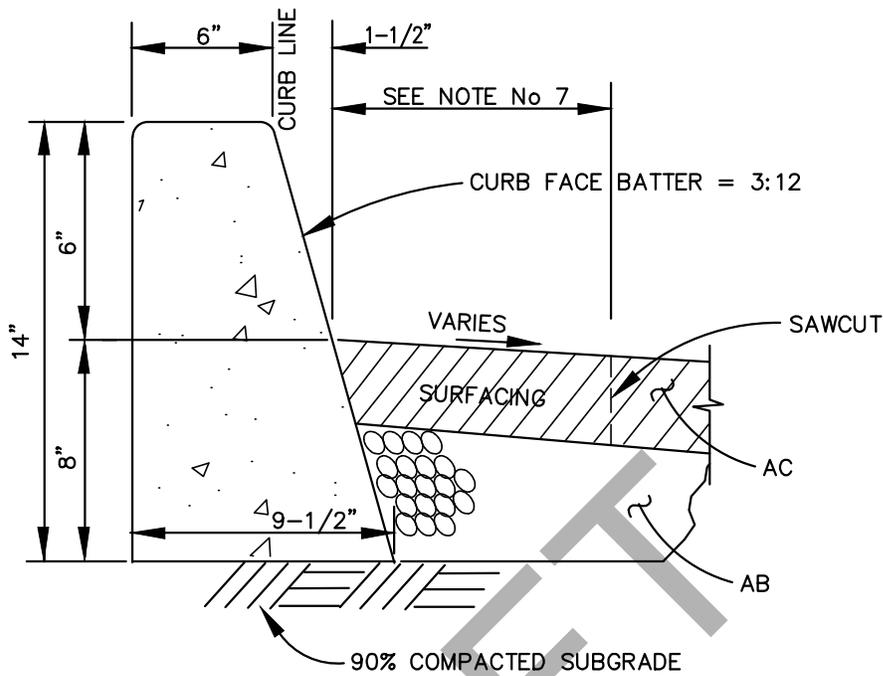
**CITY OF LAKE ELSINORE**

**TYPE 8 INTEGRAL  
CURB AND GUTTER**

STANDARD PLAN NO.

**201**

SHEET 1 OF 1



**NOTES:**

- 1.) CONCRETE SHALL BE CLASS 560-C-3250 PCC, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXPOSED CORNERS SHALL BE FINISHED WITH  $\frac{1}{2}$ " RADIUS.
- 3.) FINISH SHALL BE FINE BROOM.
- 4.) EXISTING PCC SHALL BE SAWCUT AT JOINT PRIOR TO REMOVAL.
- 5.) CURBS SHALL HAVE EXPANSION JOINTS AT BCR AND ECR AND WEAKENED PLANE JOINTS AT 10' INTERVALS.
- 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.) MINIMUM 2' WIDE AC PAVEMENT REPAIR PATCH IS REQUIRED WHEN CURB AND GUTTER IS PLACED ADJACENT TO EXISTING AC PAVEMENT.
- 8.) SLOPE TOP OF CURB  $\frac{1}{4}$ " PER FOOT TOWARD STREET.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

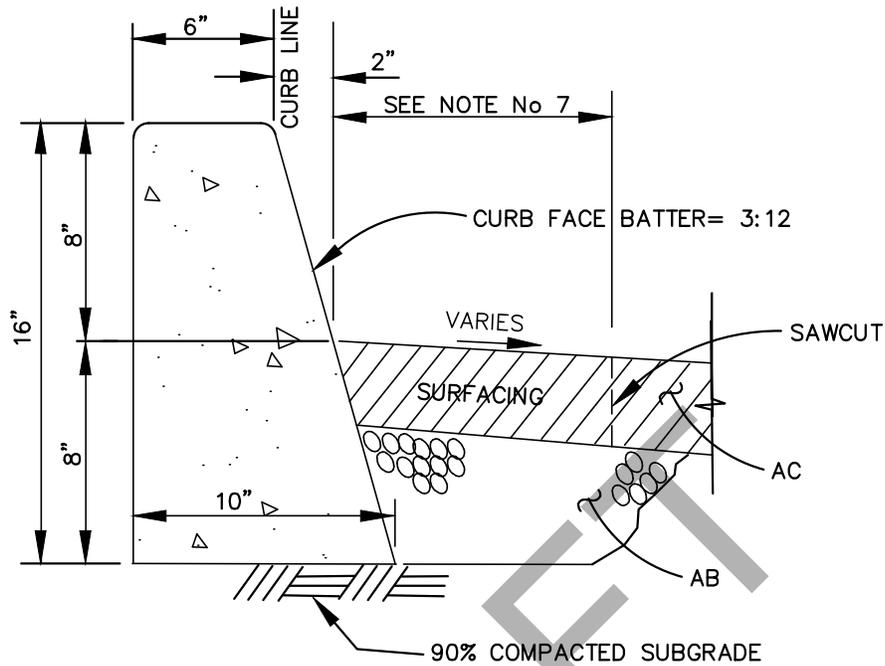
**TYPE 6A CURB**

REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

**202**

SHEET 1 OF 1



**NOTES:**

- 1.) CONCRETE SHALL BE CLASS 560-C-3250 PCC, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXPOSED CORNERS SHALL BE FINISHED WITH  $\frac{1}{2}$ " RADIUS.
- 3.) FINISH SHALL BE FINE BROOM.
- 4.) EXISTING PCC 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.
- 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.) MINIMUM 2' WIDE AC PAVEMENT REPAIR PATCH IS REQUIRED WHEN CURB AND GUTTER IS PLACED ADJACENT TO EXISTING AC PAVEMENT.
- 8.) SLOPE TOP OF CURB  $\frac{1}{4}$ " PER FOOT TOWARDS STREET.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

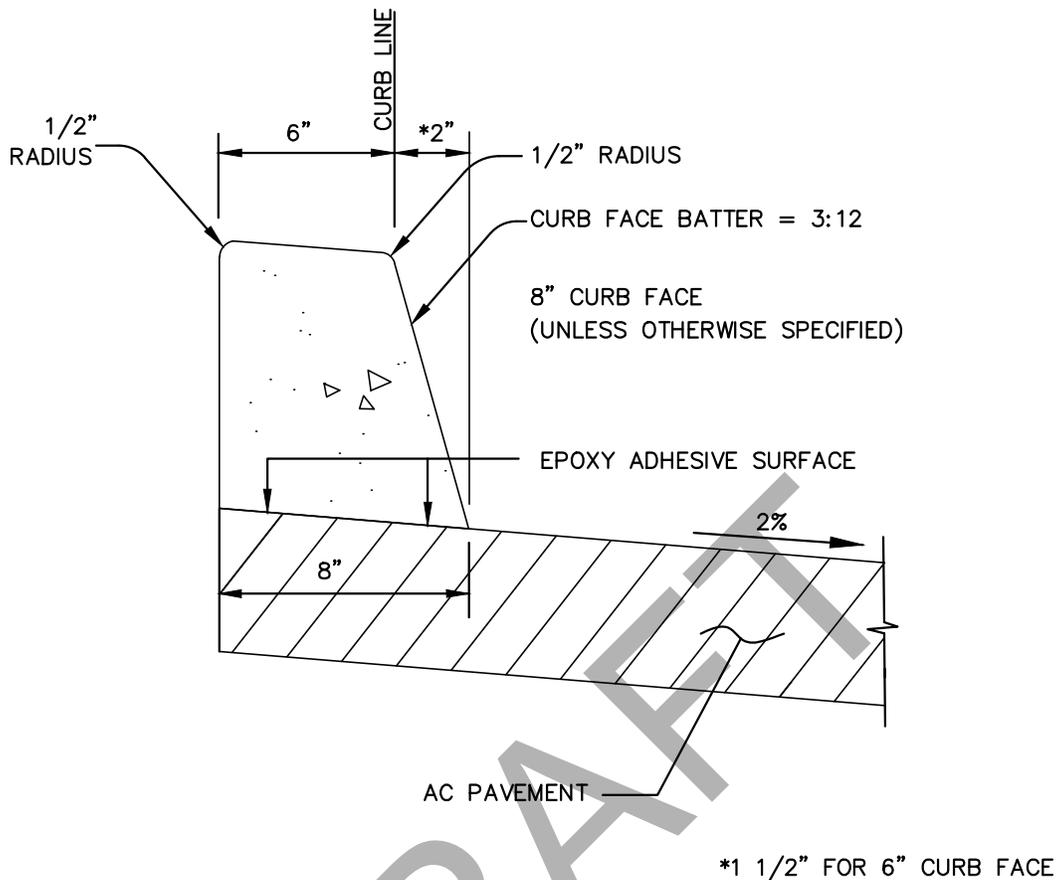
**TYPE 8A CURB**

REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

**203**

SHEET 1 OF 1



**NOTES:**

- 1.) CONCRETE SHALL BE CLASS 560-C-3250 PCC, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXPOSED CORNERS SHALL BE FINISHED WITH 1/2" RADIUS UNLESS OTHERWISE STATED.
- 3.) FINISH SHALL BE FINE BROOM.
- 4.) EXISTING PCC SHALL BE SAWCUT AT JOINT PRIOR TO REMOVAL.
- 5.) CURBS SHALL HAVE EXPANSION JOINTS AT BCR AND ECR 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.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

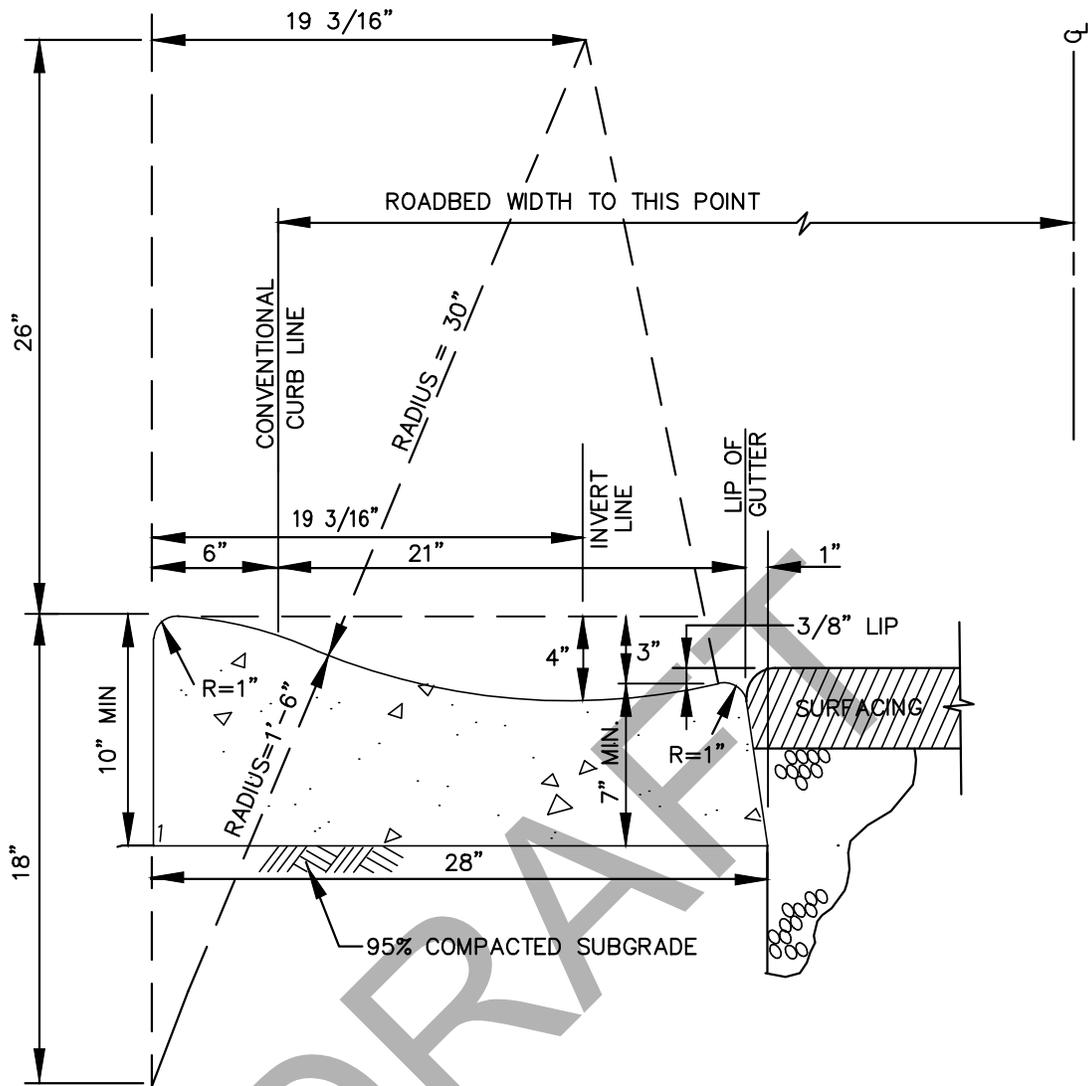
**TYPE D-1 CURB**

REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

**204**

SHEET 1 OF 1



**NOTES:**

- 1.) CONCRETE SHALL BE CLASS 560-C-3250 PCC, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2.) ALL EXPOSED CORNERS SHALL BE FINISHED WITH  $\frac{1}{2}$ " RADIUS.
- 3.) FINISH SHALL BE FINE BROOM.
- 4.) EXISTING PCC 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 SCORELINE ALLOWED.
- 6.) WHEN ROLLED CURB IS PLACED BY AN EXTRUSION MACHINE, FINISHING WORK SHALL PROVIDE AN ACCEPTABLE FINISH AND WEAKENED PLANE JOINTS MAY BE SAWCUT.
- 7.) ROLLED CURB MAY BE USED WITH THE APPROVAL OF THE CITY ENGINEER.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



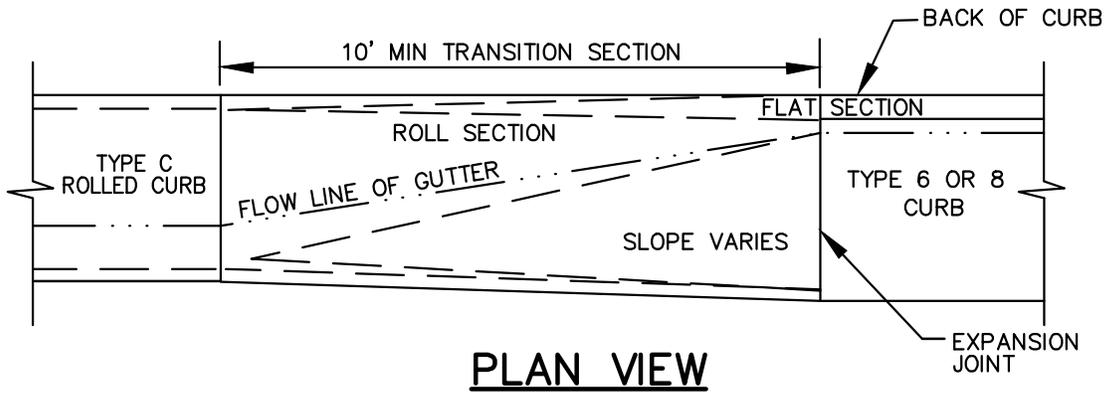
**CITY OF LAKE ELSINORE**

**TYPE C  
ROLLED CURB**

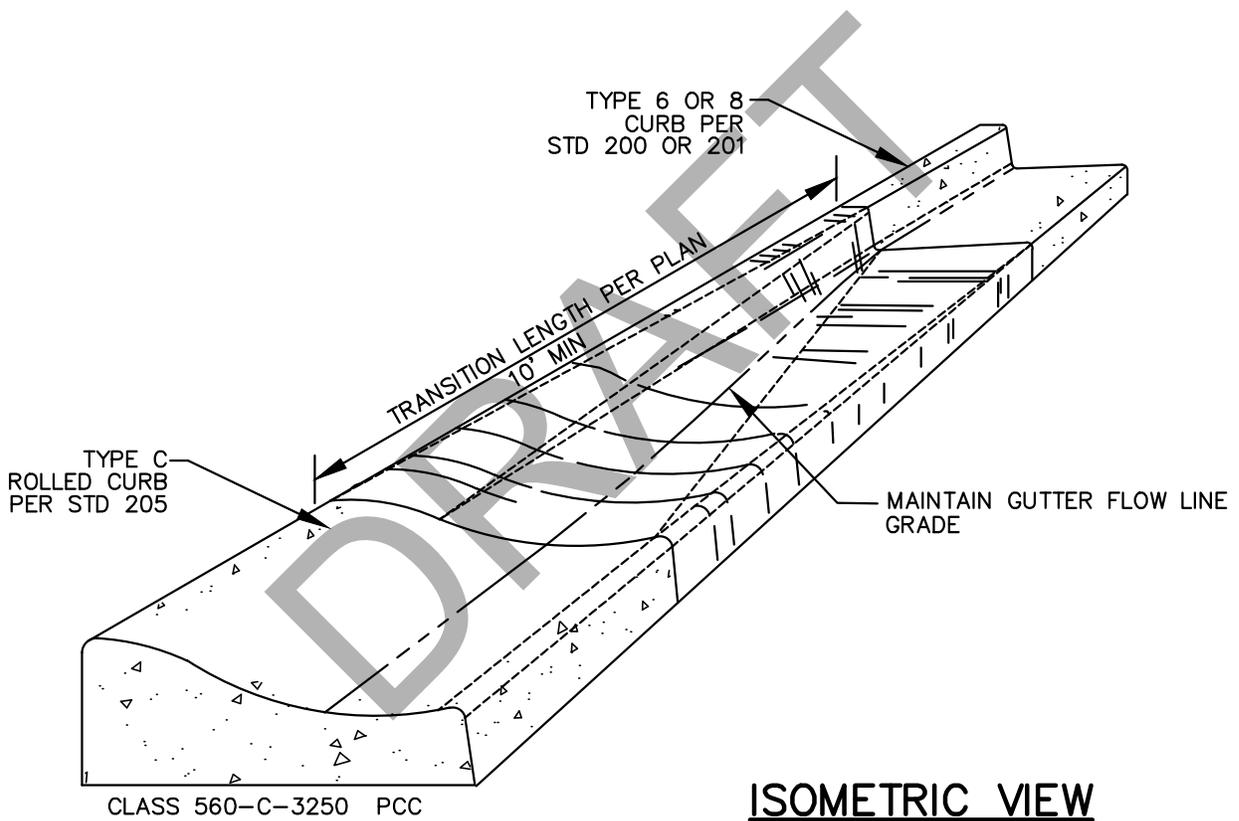
STANDARD PLAN NO.

**205**

SHEET 1 OF 1



**PLAN VIEW**



**ISOMETRIC VIEW**

**NOTE:**

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

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



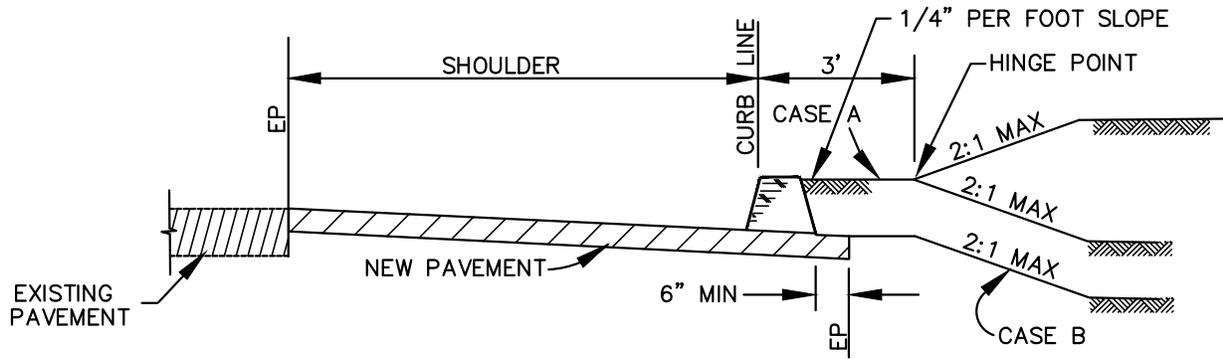
**CITY OF LAKE ELSINORE**

**CURB TRANSITION**

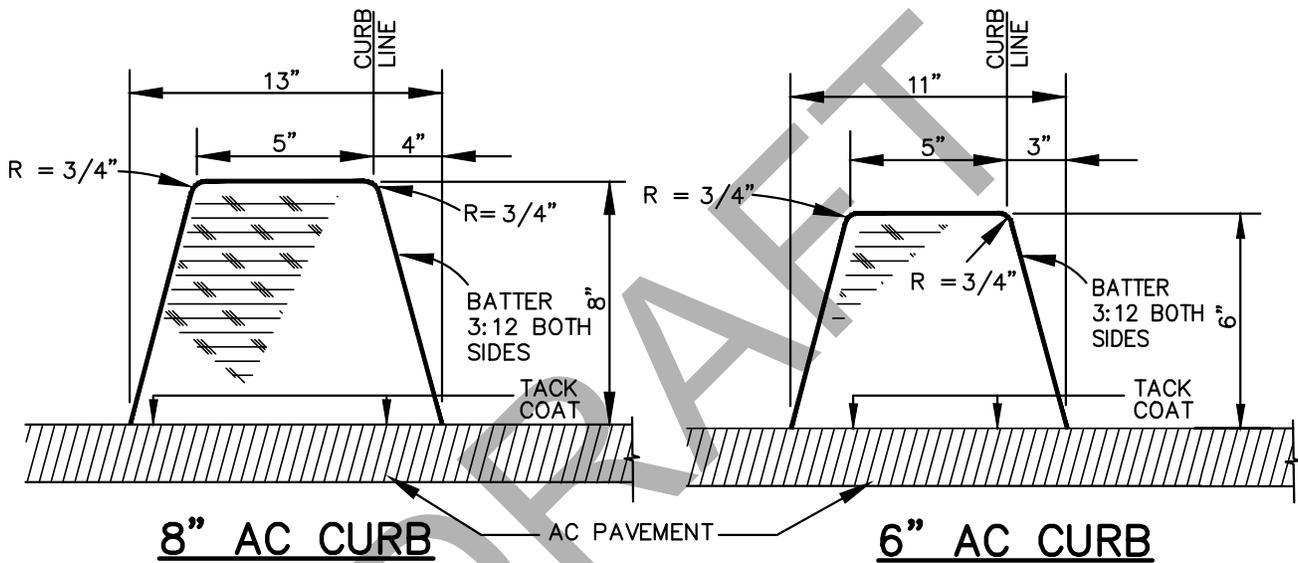
STANDARD PLAN NO.

**206**

SHEET 1 OF 1



## PAVED SHOULDER WITH AC CURB



### NOTES:

- 1.) THE ASPHALT CONCRETE MIXTURE SHALL BE TYPE III D-PG 70-10 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 CITY ENGINEER.
- 5.) USE CASE A BACKFILL UNLESS NOTED OTHERWISE.
- 6.) A.C. CURB IS TO BE PLACED ON A MIN. 2" OF A.C. ROAD SURFACING , EXTENDING THROUGHOUT THE WIDTH OF A CURB
- 7.) BERM TO BE PAINTED WITH WHITE STRIPED PAINT IN A 10'X10' HATCH PATTERN INTERVALS WITH REFLECTIVE BEADS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



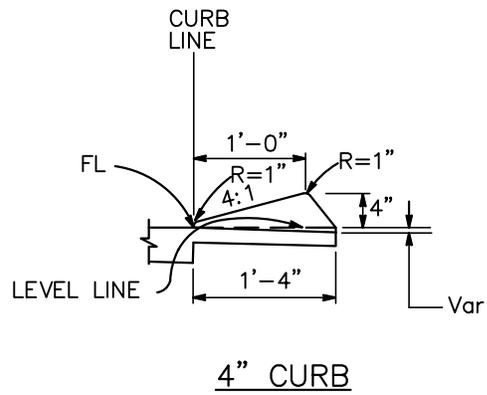
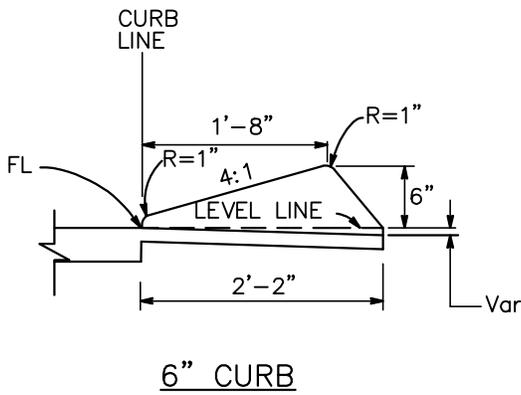
## CITY OF LAKE ELSINORE

### ASPHALT CONCRETE CURB

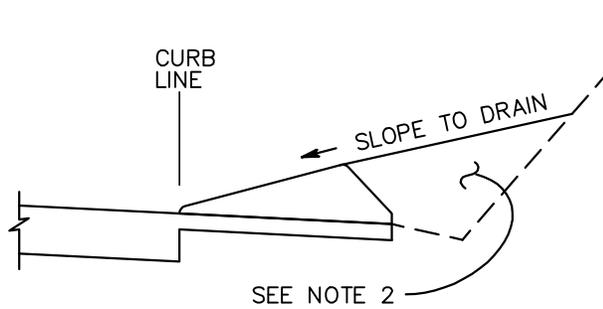
STANDARD PLAN NO.

207

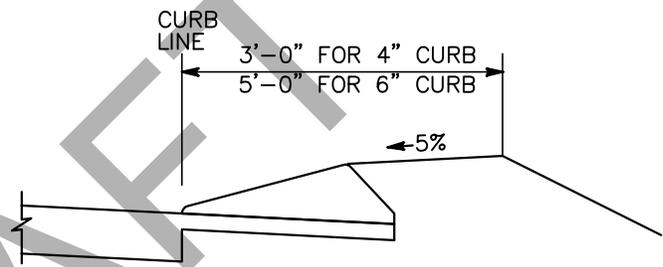
SHEET 1 OF 2



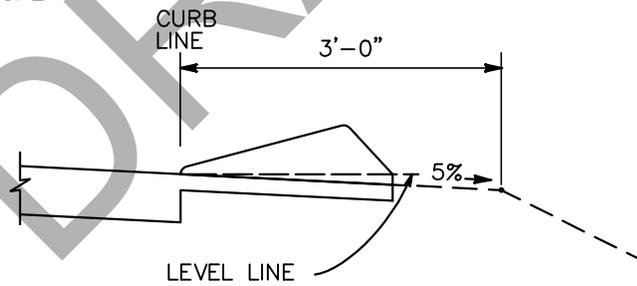
**MOUNTABLE A.C. CURB**



CASE 1  
CUT SLOPE



CASE 2



CASE 3  
SEE NOTE 1

**BACKFILL DETAILS**

**NOTE:**

- 1.) CASE 3 APPLIES TO RETROFIT ONLY PROJECTS WHERE RESTRICTIVE CONDITIONS DO NOT PROVIDE ENOUGH WIDTH FOR CASE 2 BACKFILL.
- 2.) FILL AND COMPACT WITH EXCAVATED MATERIAL TO TOP OF A.C. CURB.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



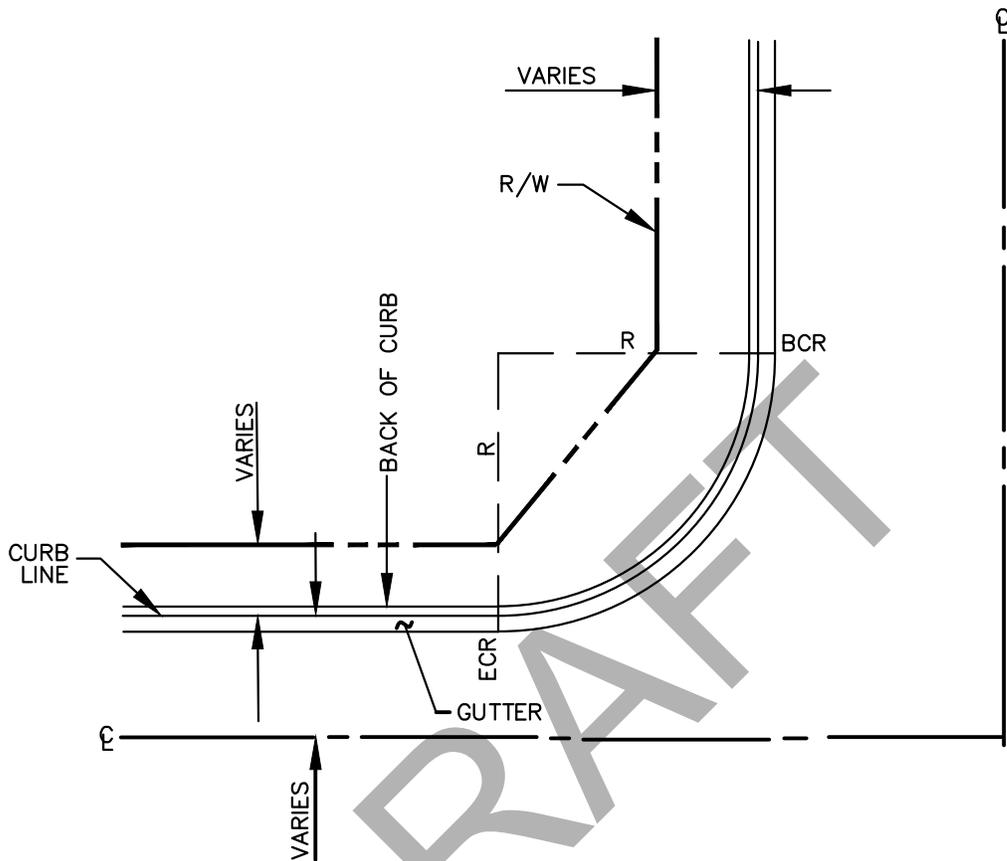
**CITY OF LAKE ELSINORE**

**ASPHALT  
CONCRETE CURB**

STANDARD PLAN NO.

**207**

SHEET 2 OF 2



**NOTES:**

- 1.)  $R = 25'$  IF INTERSECTING STREETS HAVE A WIDTH LESS THAN 64' CURB TO CURB.
- 2.)  $R = 35'$  IF EITHER INTERSECTING STREET HAS A WIDTH EQUAL TO OR GREATER THAN 64' CURB TO CURB, EXCEPT IN CASES WHERE SPECIAL DESIGN EXISTS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



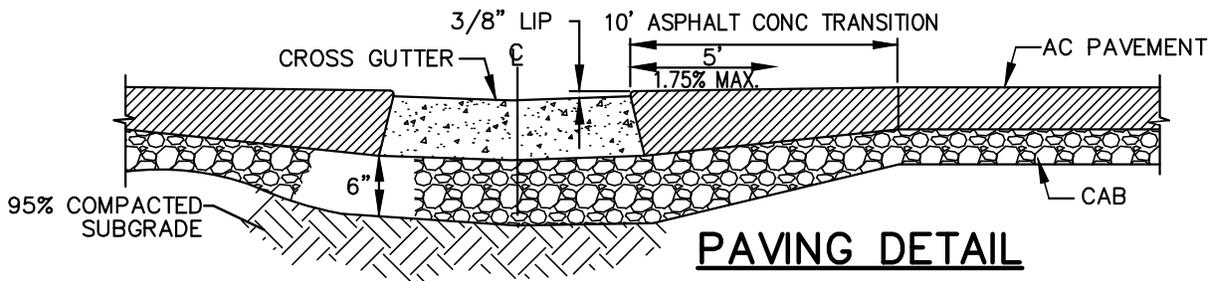
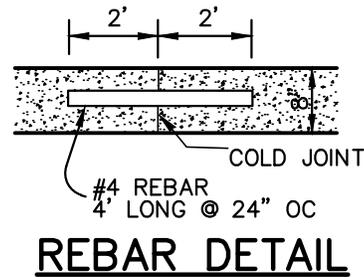
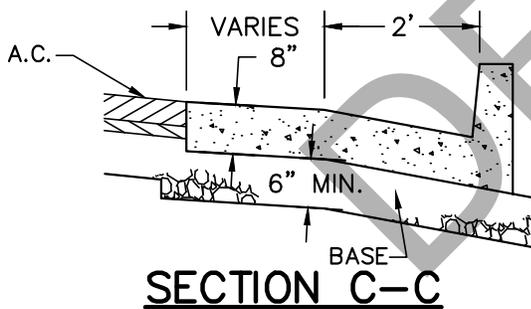
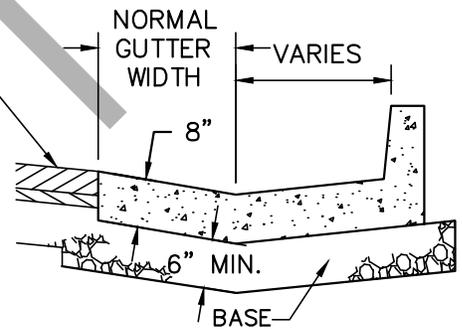
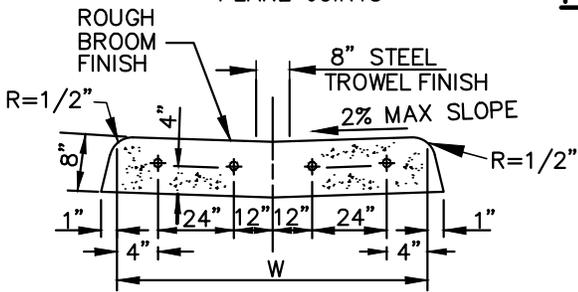
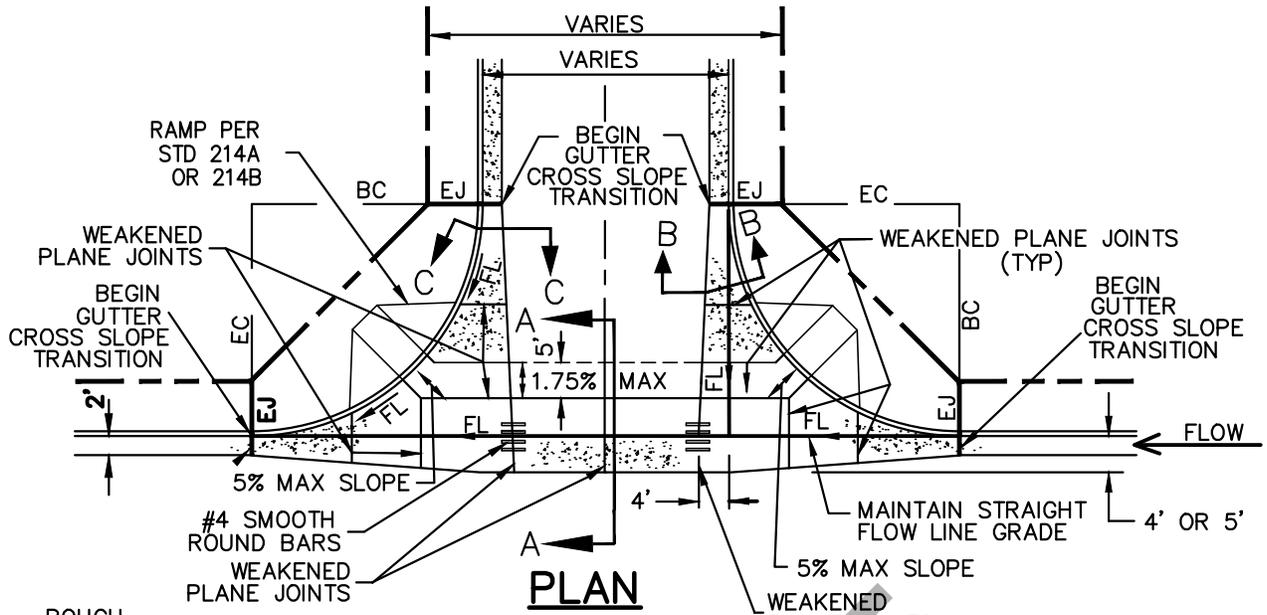
**CITY OF LAKE ELSINORE**

**PROPERTY LINE  
CORNER CUT-BACK  
CURB RETURN RADIUS**

STANDARD PLAN NO.

**208**

SHEET 1 OF 1



APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



CITY OF LAKE ELSINORE

CROSS GUTTER  
AND SPANDREL

STANDARD PLAN NO.

209

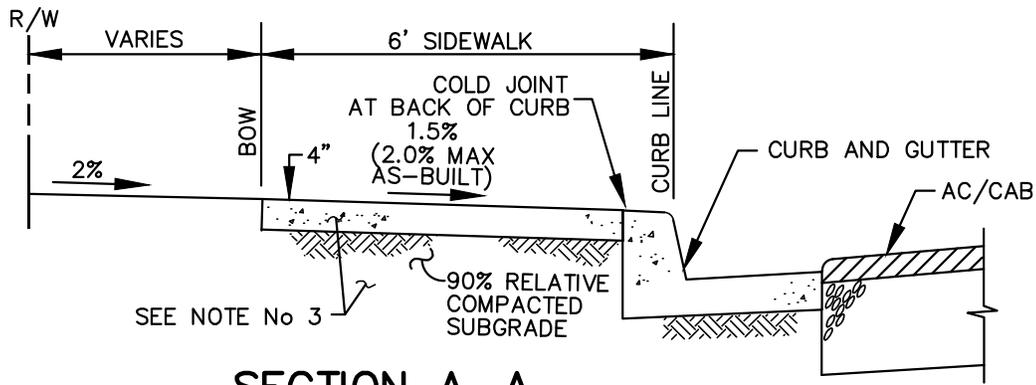
SHEET 1 OF 2

**NOTES:**

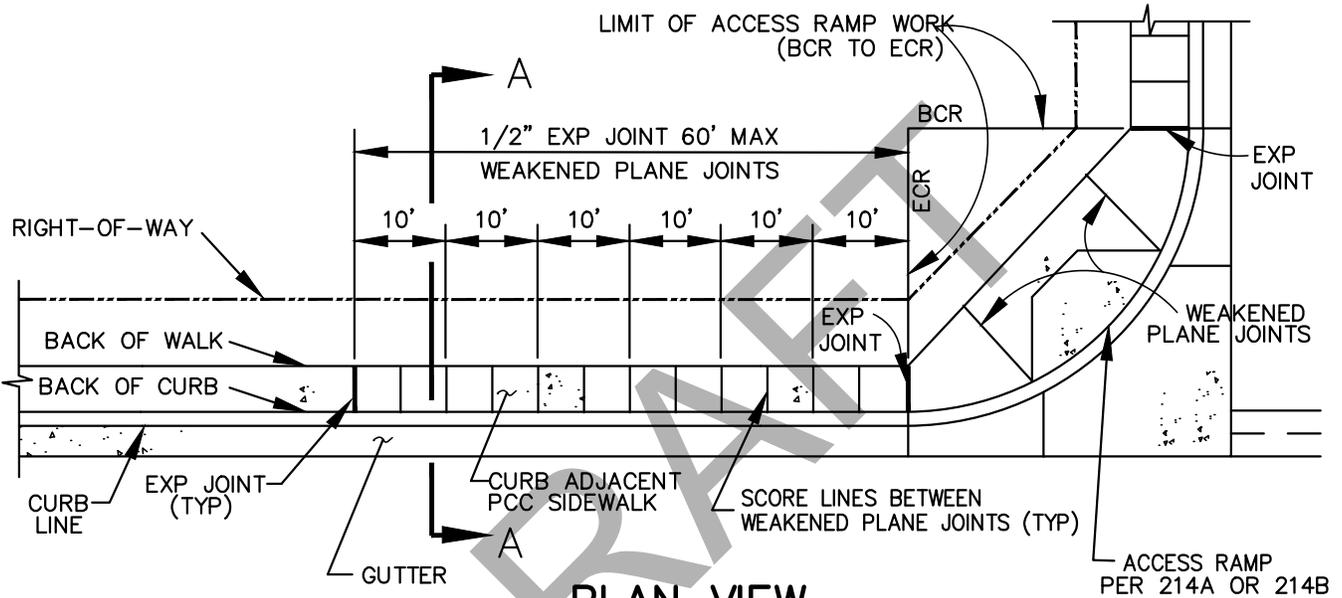
- 1.) ALL CONCRETE SHALL BE CLASS 560-C-3250, CURED WITH WHITE PIGMENTED DURING COMPOUND.
- 2.) COAT 1/2 THE LENGTH OF DOWELS WITH GREASE TO PROVIDE SLIPPAGE.
- 3.) DIMENSIONS MAY BE INCREASED DEPENDING ON DRAINAGE CONSIDERATIONS.
- 4.) 6" THICK CLASS (2) AGGREGATE BASE SHALL BE PLACED AND COMPACTED TO 95% RELATIVE COMPACTION UNDER 8" THICK CROSS GUTTER AND SPANDRELS.
- 5.) DOWELS REQUIRED WHEN CROSS GUTTER AND SPANDREL ARE POURED SEPARATELY.
- 6.) SPANDREL WEAKENED PLANE JOINT LOCATIONS WILL BE DETERMINED BY ACCESS RAMP LOCATIONS.
- 7.) A MINIMUM 2' WIDE AC PAVEMENT REPAIR PATCH IS REQUIRED WHEN CROSS GUTTER IS PLACED ADJACENT TO EXISTING AC PAVEMENT.
- 8.) THE MINIMUM DISTANCE  $W = 10'$  ON ARTERIAL STREETS,  $8'$  ON OTHERS.
- 9.) CURB BETWEEN P.R.C.'S SHALL BE CONSIDERED AS PART OF CROSS GUTTER.
- 10.) CURB RETURN, SPANDRELS, AND GUTTER SHALL BE POURED MONOLITHIC.
- 11.) ALL CONCRETE ABUTTING A.C. SHALL BY CONSTRUCTED WITH A 1" BATTER.

DRAFT

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB			DATE		<b>CROSS GUTTER AND SPANDREL</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>209</b> SHEET 2 OF 2	



**SECTION A-A**



**PLAN VIEW**

**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 COMMERCIAL DRIVEWAYS.
- 2.) SIDEWALK SHALL HAVE 1/2" WIDE PREMOLDED EXPANSION JOINTS AND 1- 1/2" DEEP WEAKENED PLANE JOINTS AT INTERVALS SHOWN HEREON. JOINTS SHALL HAVE EDGES WITH 1/4" RADIUS.
- 3.) CONCRETE SHALL BE CLASS 560-C-3250, MEDIUM BROOM FINISH, CURED WITH WHITE PIGMENTED CURING COMPOUND OVER 90% RELATIVE COMPACTED SUBGRADE.
- 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 STREET LIGHTS, ELECTROLIERS, POWER POLES, AND FIRE HYDRANTS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



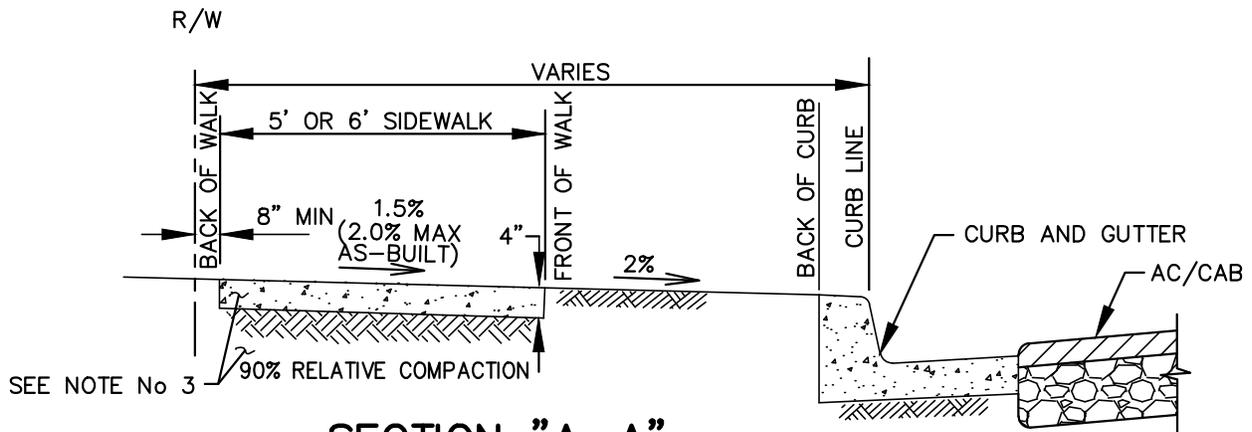
**CITY OF LAKE ELSINORE**

**CONTIGUOUS SIDEWALK**

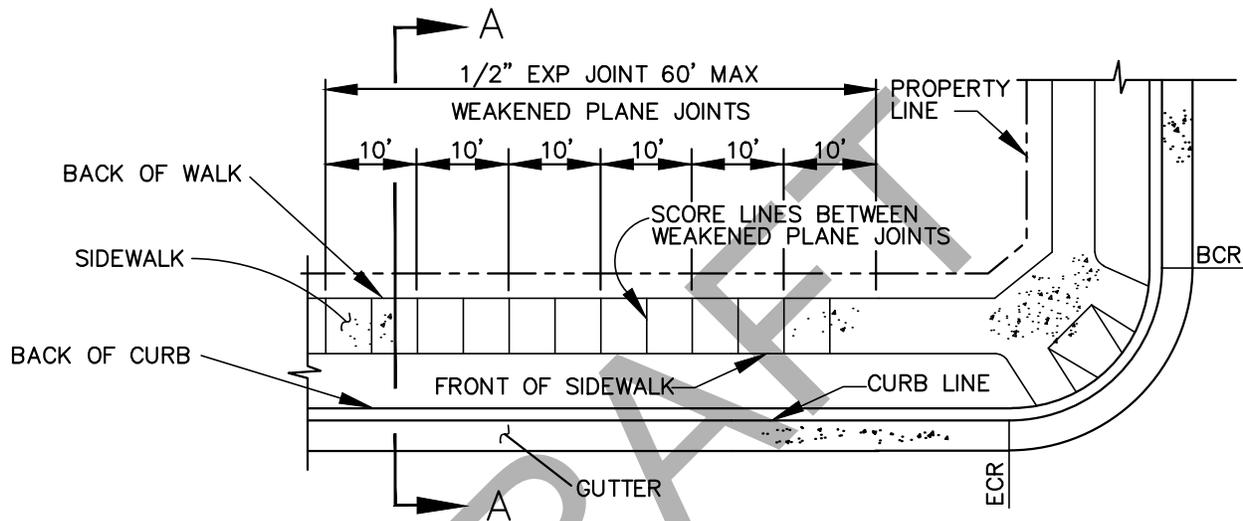
STANDARD PLAN NO.

**210**

SHEET 1 OF 1



**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" WIDE PREMOLDED EXPANSION JOINTS AND 1- 1/2" DEEP WEAKENED PLANE JOINTS AT INTERVALS SHOWN HEREON. JOINTS SHALL HAVE EDGES WITH 1/4" RADIUS.
- 3.) CONCRETE SHALL BE CLASS 560-C-3250, MEDIUM BROOM FINISH, CURE WITH WHITE PIGMENTED CURING COMPOUND OVER 90% RELATIVE COMPACTED SUBGRADE.
- 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 STREET LIGHTS, ELECTROLIERS, POWER POLES, AND FIRE HYDRANTS.

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REMON HABIB

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**CITY OF LAKE ELSINORE**

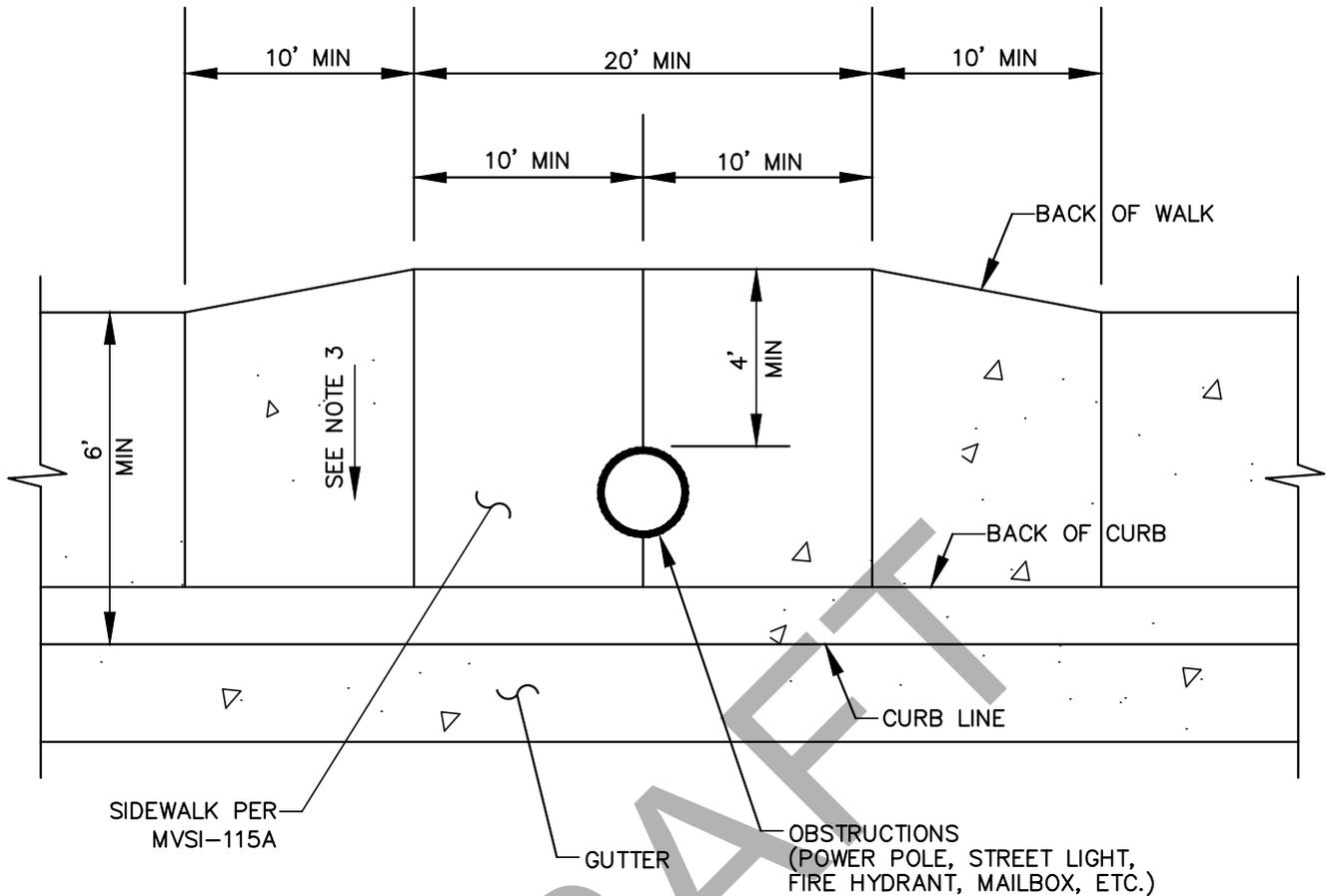
**CURB SEPARATED  
SIDEWALK**

REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

**211**

SHEET 1 OF 1



NOTE: CLEARANCE FROM CURB FACE TO FACE OF POLE SHALL BE 18" MINIMUM.

**NOTES:**

- 1.) SIDEWALK SHALL WIDEN TO MINIMUM 4' CLEARANCE FOR A MINIMUM LENGTH OF 20', CENTERED AROUND OBSTRUCTION.
- 2.) MINIMUM TRANSITION LENGTH SHALL BE 10'.
- 3.) ALL CROSS SLOPES ON SIDEWALK WILL BE 1.5% (2.00% MAX AS-BUILT)

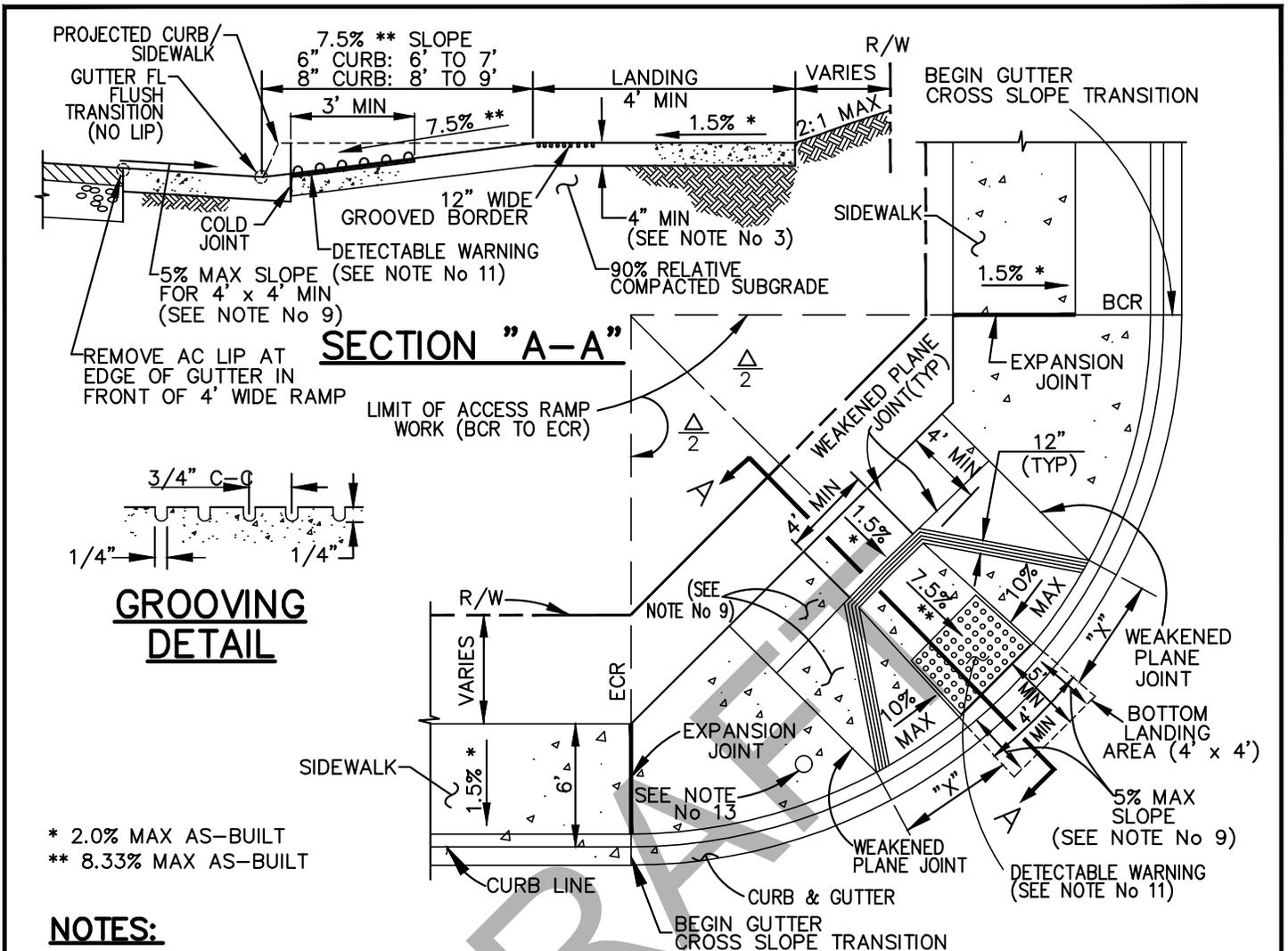
APPROVED BY:			
CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**SIDEWALK  
PLACEMENT AROUND  
OBSTRUCTIONS**

STANDARD PLAN NO. **213** SHEET 1 OF 1



\* 2.0% MAX AS-BUILT  
 \*\* 8.33% MAX AS-BUILT

**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 560-C-3250, CURED WITH WHITE PIGMENTED CURING COMPOUND OVER 90% RELATIVE COMPACTION.
- 3.) THICKNESS OF RAMP AND LANDING AREAS AROUND THE RAMP WITHIN THE CURB RETURN, FROM BCR TO ECR, SHALL BE 4" MINIMUM. RAMP AND LANDING AREAS SHALL BE POURED MONOLITHIC.
- 4.) A 4' MINIMUM DEPTH LANDING IS REQUIRED AT THE TOP OF THE RAMP OVER THE ENTIRE RAMP WIDTH. CROSS SLOPE OF LANDING MAY NOT EXCEED 1.5% IN ANY DIRECTION.
- 5.) RAMP SIDES ALONG "X" SHALL HAVE A MAXIMUM SLOPE OF 10%.
- 6.) 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.
- 7.) RAMP SURFACE AND FLARED SIDES SHALL BE SLIP-RESISTANT (ROUGH BROOM FINISH OR EQUIVALENT) AND SHALL BE OF CONTRAST FINISH FROM ADJACENT SIDEWALK (MEDIUM BROOM FINISH).
- 8.) SEE STANDARD PLAN 411 FOR CROSSWALK LOCATION DETAIL. SEE STANDARD PLAN 208 FOR R/W CORNER CUT-BACK.
- 9.) SLOPES JOINING BOTTOM OF THE RAMP (I.E. ROAD GUTTERS) SHALL NOT EXCEED 5%. THE SLOPES JOINING TOP OF RAMP SHALL NOT EXCEED 1.5%.
- 10.) DIMENSIONS SHOWN FOR SLOPING PORTIONS OF RAMP VARY DUE TO FIELD CONDITIONS.
- 11.) DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL CURB RAMPS THAT ENTER INTO A VEHICULAR TRAVELED WAY. SEE STANDARD PLAN 214D FOR DETECTABLE WARNING SURFACE DETAILS AND NOTES.
- 12.) FOR NEW ACCESS RAMPS ON EXISTING STREETS, A 12" WIDTH OF PAVEMENT SHALL BE REMOVED AND REPLACED TO FULL DEPTH FOR CONSTRUCTION OF CURB AND GUTTER.
- 13.) FOR TRAFFIC SIGNAL LOCATIONS, A 30"x48" 2% MAXIMUM LANDING AREA SHALL BE LOCATED ADJACENT TO THE PEDESTRIAN PUSH BUTTON.

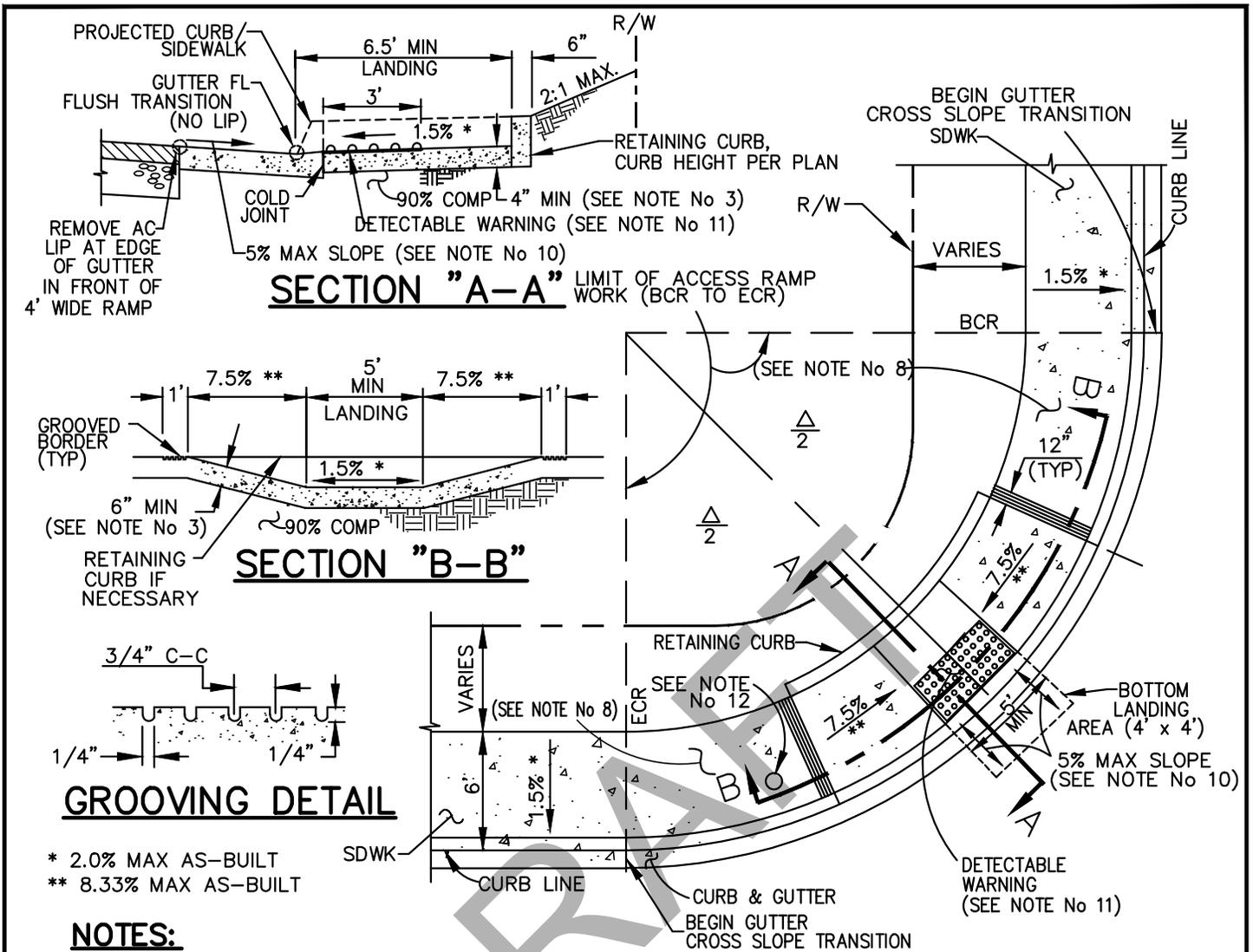
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CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**ACCESS RAMP-TYPE I**

STANDARD PLAN NO.	<b>214A</b>	SHEET 1 OF 1
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\* 2.0% MAX AS-BUILT  
 \*\* 8.33% MAX AS-BUILT

**NOTES:**

- 1.) TYPE II RAMP MAY BE USED WHEN MINIMUM DISTANCE OF 4' AT TOP OF TYPE I RAMP CANNOT BE ACHIEVED.
- 2.) 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.
- 3.) THICKNESS OF RAMP AND LANDING AREAS ON BOTH SIDES OF THE RAMP WITHIN CURB RETURN, FROM BCR TO ECR, SHALL BE 4" MINIMUM. RAMP AND LANDING AREAS SHALL BE POURED MONOLITHIC.
- 4.) CONCRETE SHALL BE CLASS 560-C-3250, CURED WITH WHITE PIGMENTED CURING COMPOUND OVER 90% RELATIVE COMPACTION.
- 5.) CROSS SLOPE OF LANDING MAY NOT EXCEED 1.5% IN ANY DIRECTION.
- 6.) RAMP SIDES SHALL HAVE A SLOPE OF 7.5% (8.33% MAX. AS-BUILT).
- 7.) GROOVED BORDER SHALL BE 12" WIDE ALONG THE TOP OF THE RAMP AT THE LEVEL SURFACE OF THE SIDEWALK. OMIT GROOVES ADJACENT TO NON-PAVED AREAS.
- 8.) RAMP SURFACE AND SIDES SHALL BE SLIP-RESISTANT (ROUGH BROOM FINISH OR EQUIVALENT) AND SHALL BE OF CONTRASTING FINISH FROM ADJACENT SIDEWALK.
- 9.) SEE STANDARD PLAN 411 FOR CROSSWALK LOCATION DETAIL.
- 10.) SLOPES JOINING BOTTOM OF THE RAMP (I.E. ROAD GUTTERS) SHALL NOT EXCEED 5%. THE SLOPES JOINING TOP OF RAMP SHALL NOT EXCEED 1.5% IN ANY DIRECTION.
- 11.) DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL CURB RAMPS THAT ENTER INTO A VEHICULAR TRAVELED WAY. SEE STANDARD PLAN 214D FOR DETECTABLE WARNING SURFACE DETAILS AND NOTES.
- 12.) FOR TRAFFIC SIGNAL LOCATIONS, A 30" x 48" 2% MAXIMUM LANDING AREA SHALL BE LOCATED ADJACENT TO THE PEDESTRIAN PUSH BUTTON.
- 13.) ALL EXPOSED CORNERS OF THE RETAINING CURB SHALL BE FINISHED WITH 1/2" RADIUS.

APPROVED BY: \_\_\_\_\_

CITY ENGINEER REMON HABIB DATE \_\_\_\_\_

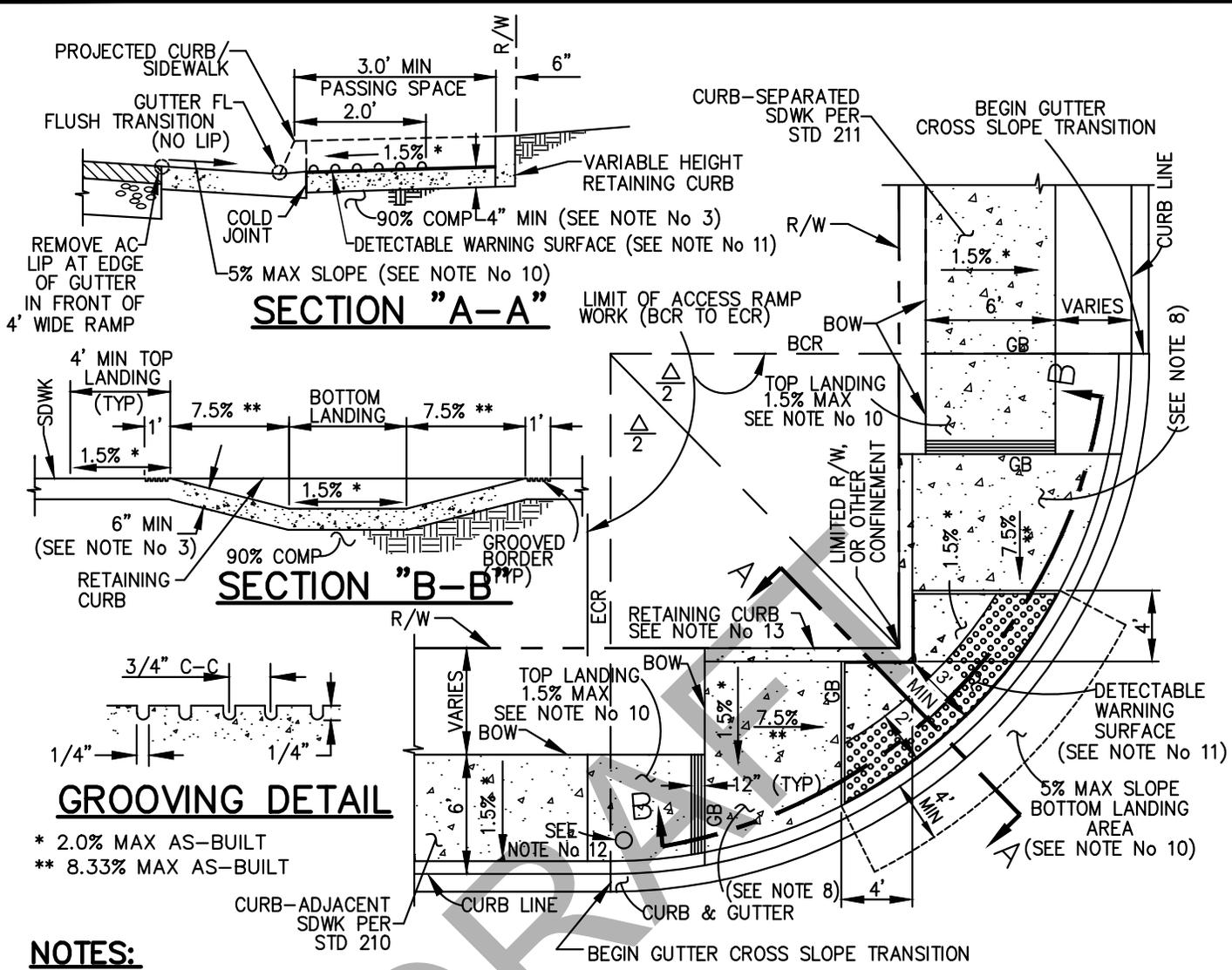
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**ACCESS RAMP-TYPE II**

STANDARD PLAN NO. **214B** SHEET 1 OF 1



\* 2.0% MAX AS-BUILT  
 \*\* 8.33% MAX AS-BUILT

**NOTES:**

- 1.) TYPE II RAMP MAY BE USED WHEN A STANDARD TYPE I OR TYPE II RAMP CANNOT BE ACHIEVED DUE TO CONFINEMENT RESTRICTIONS SUCH AS R/W OR OTHER PHYSICAL CONSTRAINTS.
- 2.) 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.
- 3.) THICKNESS OF RAMP AND LANDING AREAS ON BOTH SIDES OF THE RAMP WITHIN CURB RETURN, FROM BCR TO ECR, OR BEYOND BCR/ECR AS REQUIRED, SHALL BE 4" MINIMUM. RAMP AND LANDING AREAS SHALL BE POURED MONOLITHICALLY.
- 4.) CONCRETE SHALL BE CLASS 560-C-3250, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 5.) CROSS SLOPE OF LANDING SHALL NOT EXCEED 1.5% IN ANY DIRECTION.
- 6.) RAMP SIDES SHALL HAVE A SLOPE OF 7.5% (8.33% MAX. AS-BUILT).
- 7.) GROOVED BORDER SHALL BE 12" WIDE ALONG THE TOP OF THE RAMP AT THE LEVEL SURFACE OF THE SIDEWALK. OMIT GROOVES ADJACENT TO NON-PAVED AREAS.
- 8.) RAMP SURFACE AND SIDES SHALL BE SLIP-RESISTANT (ROUGH BROOM FINISH OR EQUIVALENT) AND SHALL BE OF CONTRASTING FINISH FROM ADJACENT SIDEWALK.
- 9.) SEE STANDARD PLAN 411 FOR CROSSWALK LOCATION DETAIL.
- 10.) SLOPES JOINING BOTTOM OF THE RAMP (I.E. ROAD GUTTERS) SHALL NOT EXCEED 5%. THE SLOPES JOINING TOP OF RAMP (TOP LANDING) SHALL NOT EXCEED 1.5% IN ANY DIRECTION FOR 4' MIN.
- 11.) DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL CURB RAMPS THAT ENTER INTO A VEHICULAR TRAVELED WAY. SEE STANDARD PLAN 214D FOR DETECTABLE WARNING SURFACE DETAILS AND NOTES.
- 12.) FOR TRAFFIC SIGNAL LOCATIONS, A 30"x48" 2% MAXIMUM LANDING AREA SHALL BE LOCATED ADJACENT TO THE PEDESTRIAN PUSH BUTTON.
- 13.) ALL EXPOSED CORNERS OF THE RETAINING CURB SHALL BE FINISHED WITH 1/2" RADIUS.

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CITY ENGINEER REMON HABIB DATE \_\_\_\_\_

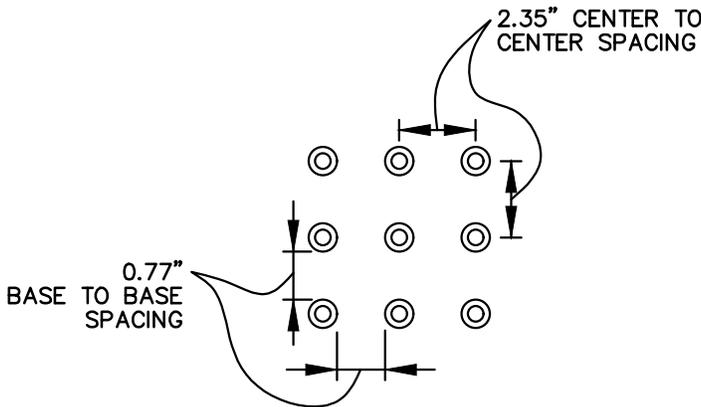
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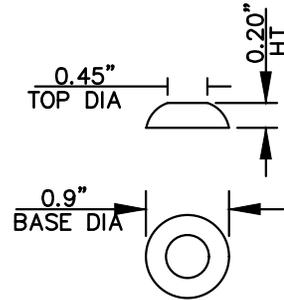
**CITY OF LAKE ELSINORE**

**ACCESS RAMP-TYPE III**

STANDARD PLAN NO. **214C** SHEET 1 OF 1

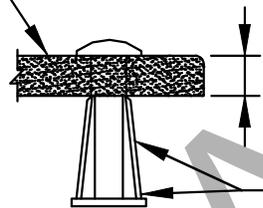


**RAISED TRUNCATED DOME PATTERN  
(IN-LINE)**



**RAISED TRUNCATED DOME**

DETECTABLE WARNING TILE  
MANUFACTURED BY ADA SOLUTIONS  
PRODUCT COMPANY OR APPROVED EQUAL



1/2" THICK MIN (EXCLUDING TRUNCATED  
DOME HEIGHT)

STEEL CONCRETE ANCHOR  
MANUFACTURED BY ADA SOLUTIONS  
PRODUCT COMPANY OR APPROVED EQUAL

**ANCHOR DETAIL**

**NOTES:**

- 1.) DETECTABLE WARNING, MOUNTED FLUSH, SURFACE SHALL BE CAST-IN-PLACE DETECTABLE WARNING TILE WITH STEEL ANGLES AND ANCHORS, MANUFACTURED BY ADA SOLUTIONS OR APPROVED EQUAL, AND SHALL MEET ALL ADA REQUIREMENTS AS WELL AS STATE TITLE 24 REQUIREMENTS.
- 2.) COLOR SHALL BE YELLOW CONFORMING TO FEDERAL STANDARD 595B, COLOR No 33538.
- 3.) DETECTABLE WARNING SURFACE SHALL CONFORM TO THE DETAILS ON THIS STANDARD PLAN.
- 4.) DETECTABLE WARNING SURFACE SHALL BE FULL WIDTH OF RAMP AND 3 FOOT MINIMUM IN DEPTH OF RAMP AND UTILIZE A SINGLE PIECE.
- 5.) DETECTABLE WARNING SURFACE SHALL BE INSTALLED SO THAT DOMES ARE ALIGNED PARALLEL TO CENTERLINE OF ACCESS RAMP.
- 6.) THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOW LINE.
- 7.) RETROFIT INSTALLATION SHALL BE DETECTABLE WARNING TILE (PER NOTE 1) TIED DOWN TO EXISTING RAMP SURFACE WITH ANCHORS AND SEALED WITH WATERPROOFING ADHESIVE OR SELF-ADHESIVE SURFACE APPLIED DOME MATS IF ALLOWED BY CITY ENGINEER. TILE AND MATS SHALL BE INSTALLED FLUSH WITH THE RAMP SURFACE. PERIMETER "LIP" SHALL NOT EXCEED 1/4".

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CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

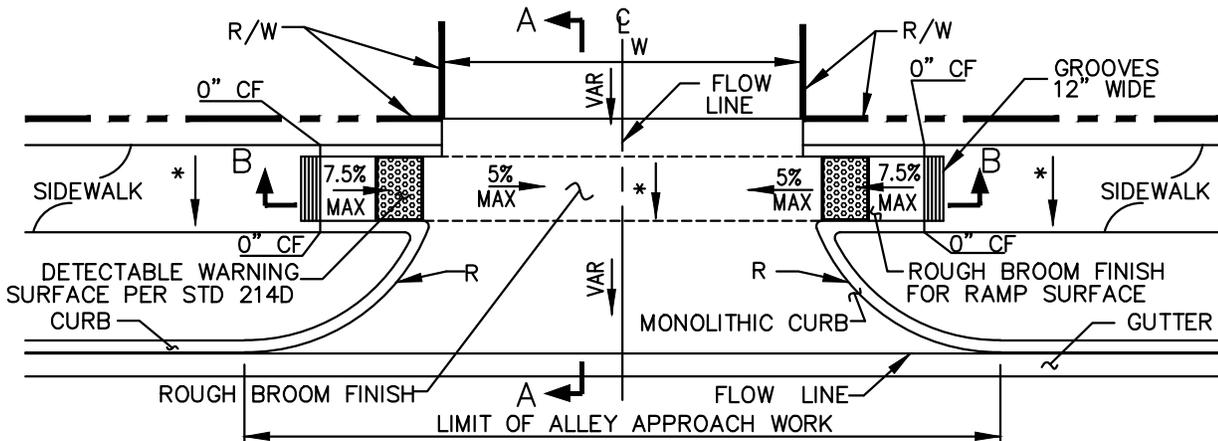
**DETECTABLE WARNING  
SURFACE  
DETAILS AND NOTES**

REVISION	BY:	APPROVED	DATE

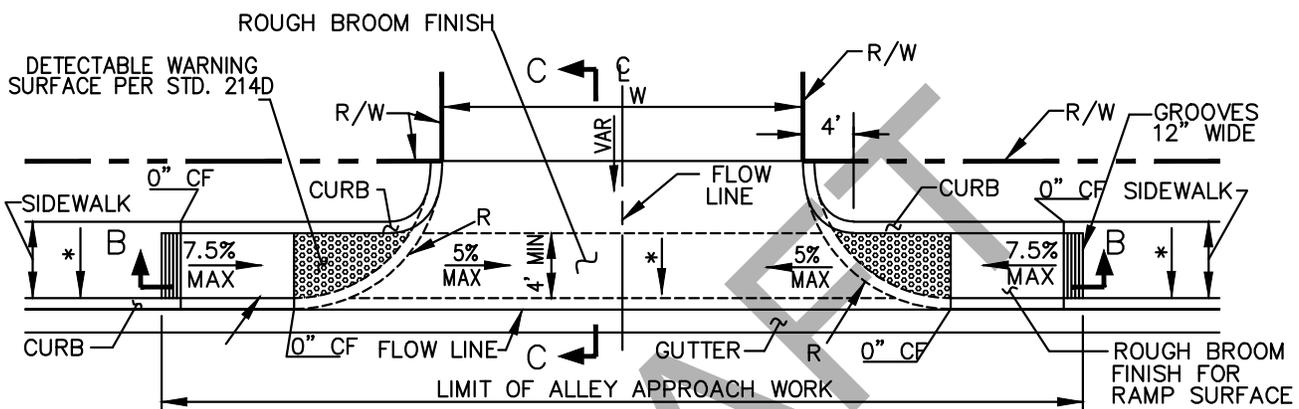
STANDARD PLAN NO.

**214D**

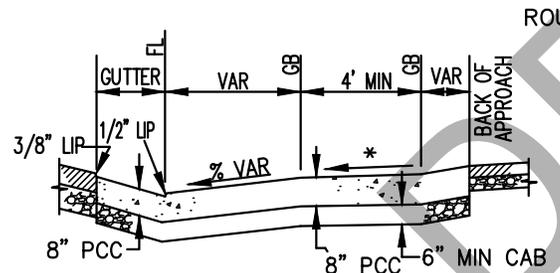
SHEET 1 OF 1



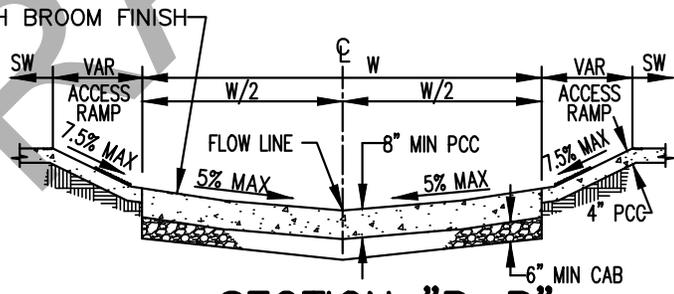
**AT CURB-SEPARATED SIDEWALK LOCATION**



**AT CURB-ADJACENT SIDEWALK LOCATION**



**SECTION "A-A"**



**SECTION "B-B"**

**NOTES:**

- 1.) CURB RETURNS SHALL HAVE A RADIUS (R) OF 12 FEET UNLESS OTHERWISE SPECIFIED. CURB RADIUS SHALL NOT EXCEED PARKWAY WIDTH.
- 2.) ALL CONCRETE SHALL BE CLASS 560-C-3250, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 3.) RAMP SURFACE SHALL BE SLIP-RESISTANT WITH ROUGH BROOM FINISH OR EQUIVALENT.

\* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.0% MAX AS-BUILT)

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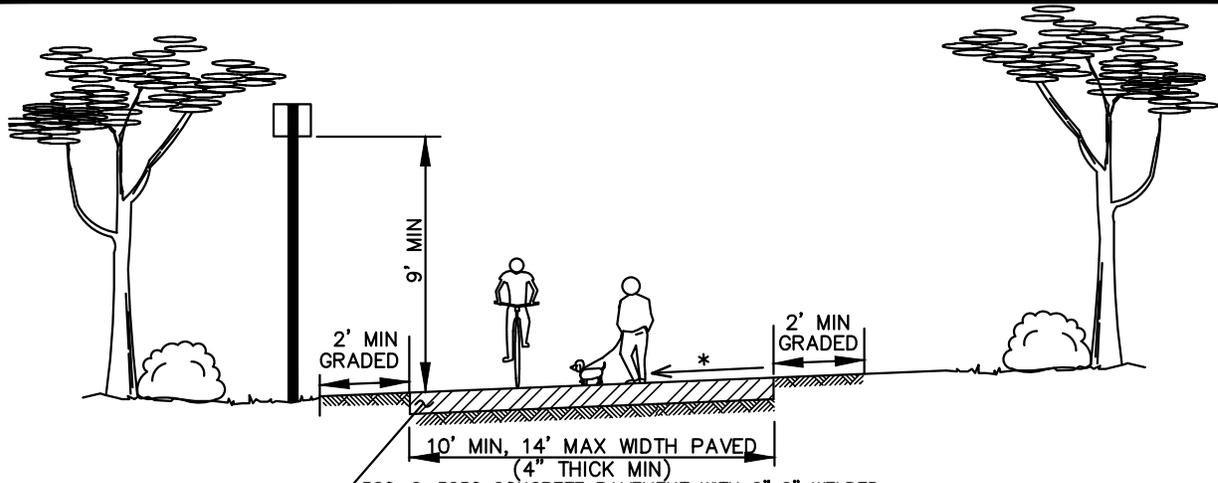
CITY ENGINEER REMON HABIB		DATE	
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**CITY OF LAKE ELSINORE**

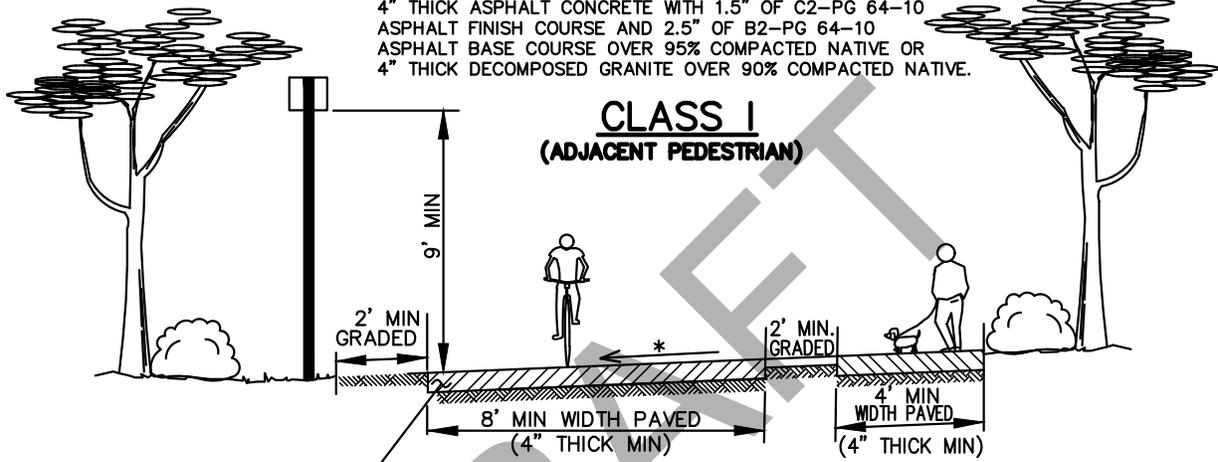
**ALLEY INTERSECTION**

STANDARD PLAN NO. **215** SHEET 1 OF 1



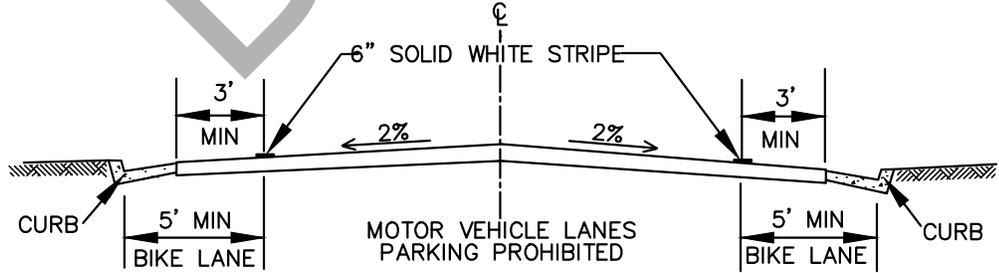
520-C-3250 CONCRETE PAVEMENT WITH 6"x6" WELDED WIRE MESH OVER 95% COMPACTED NATIVE, OR 4" THICK ASPHALT CONCRETE WITH 1.5" OF C2-PG 64-10 ASPHALT FINISH COURSE AND 2.5" OF B2-PG 64-10 ASPHALT BASE COURSE OVER 95% COMPACTED NATIVE OR 4" THICK DECOMPOSED GRANITE OVER 90% COMPACTED NATIVE.

**CLASS I  
(ADJACENT PEDESTRIAN)**



520-C-3250 CONCRETE PAVEMENT WITH 6"x6" WELDED WIRE MESH OVER 95% COMPACTED NATIVE, OR 4" THICK ASPHALT CONCRETE WITH 1.5" OF C2-PG 64-10 ASPHALT FINISH COURSE AND 2.5" OF B2-PG 64-10 ASPHALT BASE COURSE OVER 95% COMPACTED NATIVE OR 4" THICK DECOMPOSED GRANITE OVER 90% COMPACTED NATIVE.

**CLASS I  
(WITH PEDESTRIAN SEPARATION)**



**CLASS II**

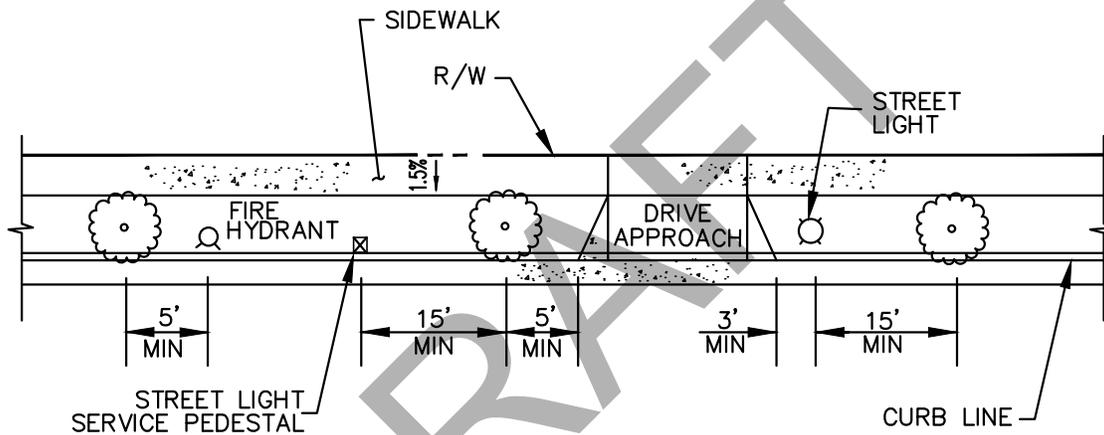
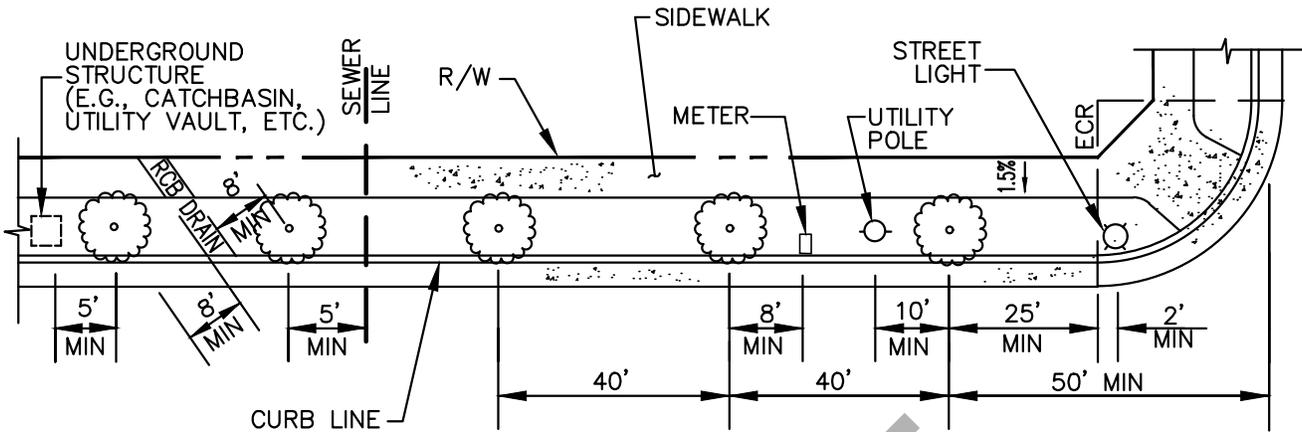
**NOTES:**

- 1.) CONCRETE MOW STRIP REQUIRED NEXT TO LANDSCAPE AREAS. (REFER TO STANDARD 591 FOR DETAIL).
  - 2.) CLASS I & II BIKE ROUTES TO BE STRIPED AND DESIGNATED WITH SIGNAGE.
  - 3.) CLASS III BIKE ROUTES DESIGNATED WITH SIGNAGE AND/OR SHARROW MARKINGS.
- \* CROSS SLOPE OF PATH SHALL BE 1.5% (2.0% MAX AS-BUILT)

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CITY ENGINEER REMON HABIB		DATE	
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**CITY OF LAKE ELSINORE**  
**TWO-WAY BIKE PATH**  
**ON SEPARATE**  
**RIGHT-OF-WAY**  
 STANDARD PLAN NO. **216** SHEET 1 OF 1



**NOTES:**

- 1.) DRIVE APPROACHES SHALL NOT BE LOCATED OVER SEWER OR WATER LATERALS.
- 2.) WATER METERS AND STREET LIGHTS SHALL BE A MINIMUM OF 3' FROM DRIVE APPROACHES.
- 3.) FIRE HYDRANTS SHALL BE A MINIMUM OF 5' FROM DRIVE APPROACHES.
- 4.) ALTERNATE LOCATION AND SPACING MAY BE REQUIRED BY CITY ENGINEER TO PROVIDE FOR SIGHT CLEARANCE OR OTHER SAFETY CONCERNS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

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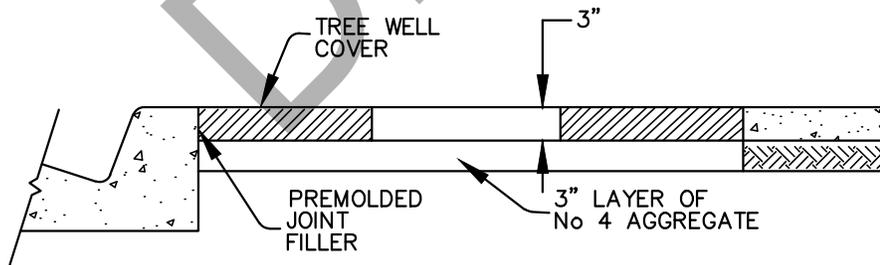
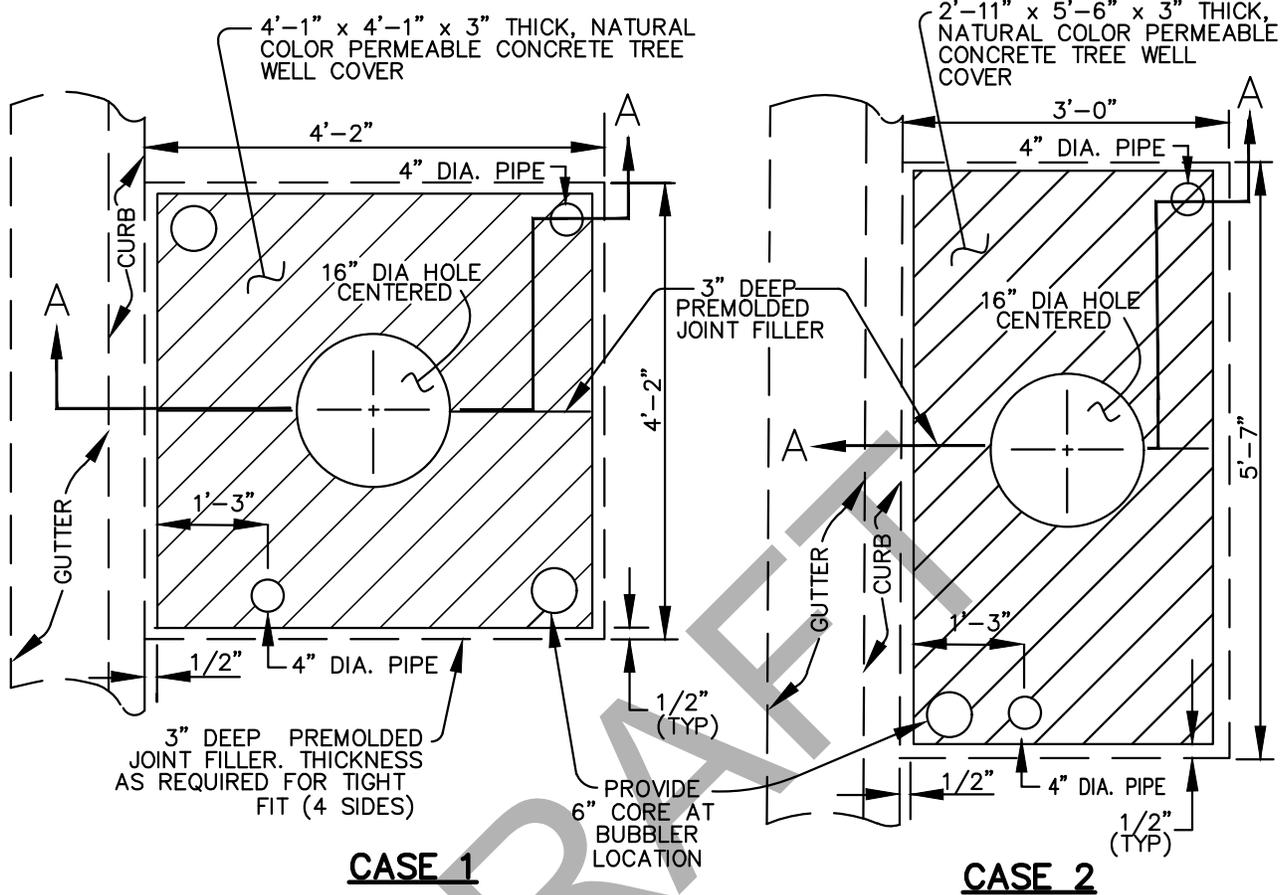
**CITY OF LAKE ELSINORE**

**PARKWAY IMPROVEMENT  
SPACING**

STANDARD PLAN NO.

**219**

SHEET 1 OF 1



**SECTION "A-A"**

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CITY ENGINEER  
REMON HABIB

DATE

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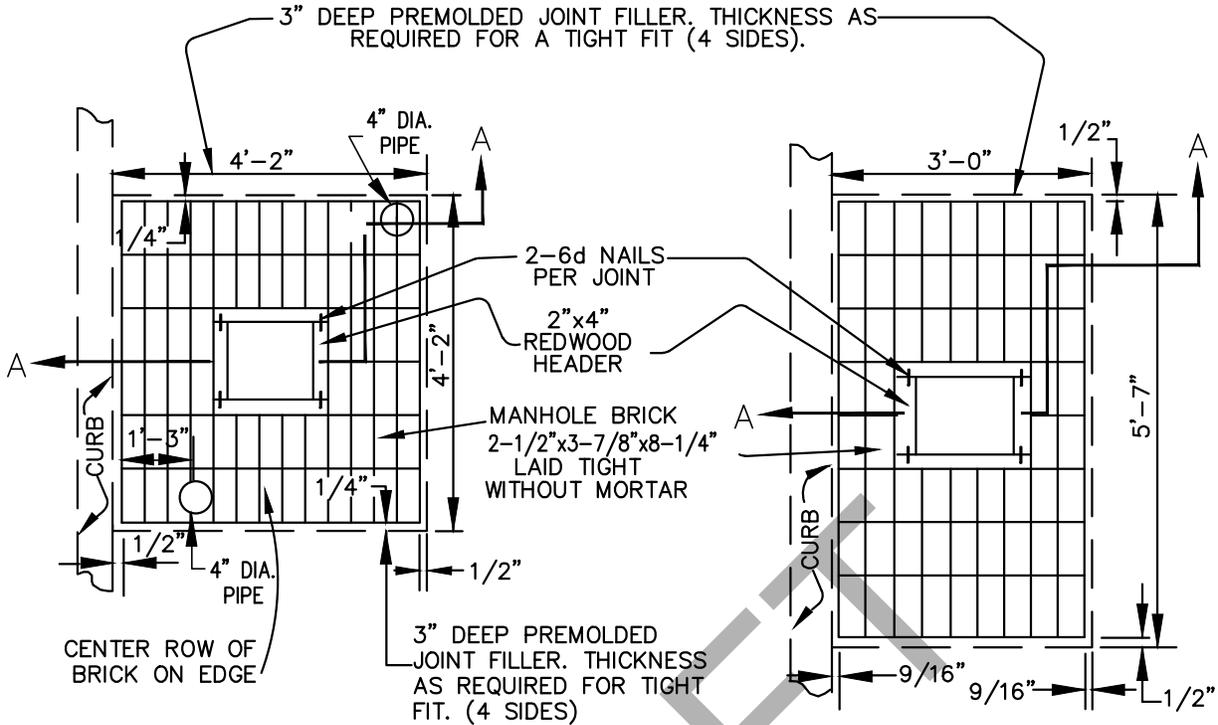
**CITY OF LAKE ELSINORE**

**TREE WELL - TYPE 1**

STANDARD PLAN NO.

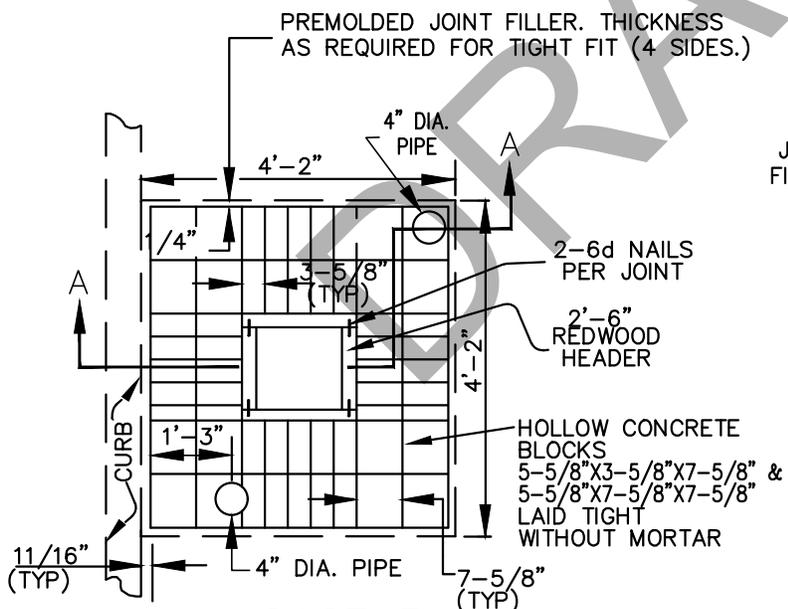
**220A**

SHEET 1 OF 1

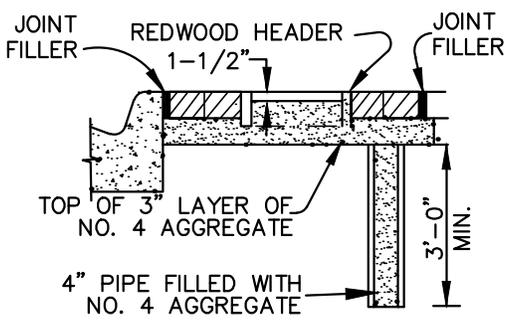


**CASE 1**

**CASE 2**



**CASE 3**



**SECTION "A-A"**

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



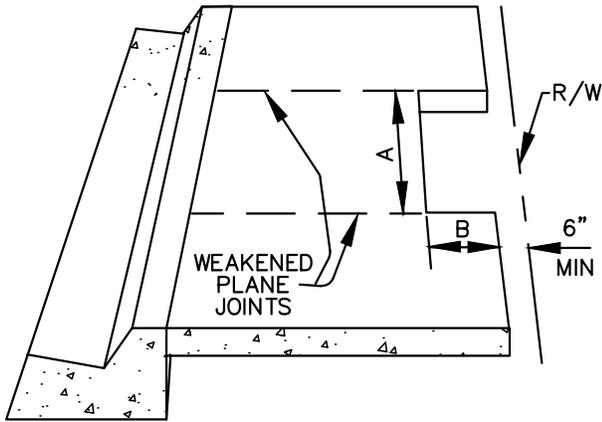
**CITY OF LAKE ELSINORE**

**TREE WELL - TYPE 2**

STANDARD PLAN NO.

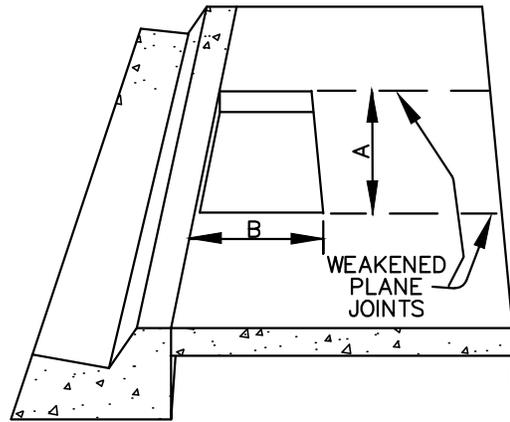
**220B**

SHEET 1 OF 1



**PARKWAYS LESS THAN 8'**

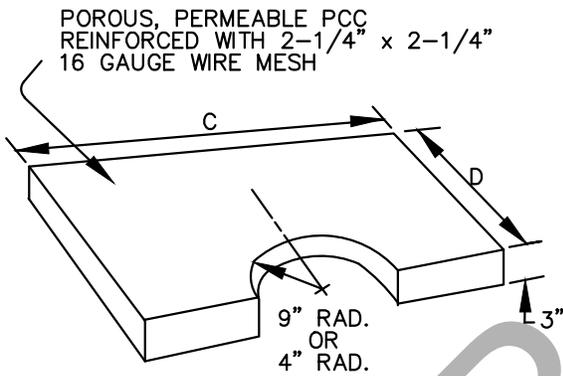
CASE 1: 1'-6" x 3' TREE WELL  
 CASE 2: 2'-4" TREE WELL



**PARKWAYS 8' OR GREATER**  
**2 COVERS REQUIRED**

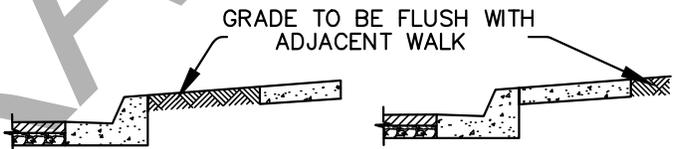
CASE 3: 3'-3" TREE WELL  
 CASE 4: 4'-4" TREE WELL

**TREE WELLS**



**POROUS 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 (PER STD. 219).
- 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 PROPERTY LINE.
  - CASE 3-UNLESS OTHERWISE SPECIFIED.
  - CASE 4-MAY BE SPECIFIED WITH WALKS 7' OR GREATER.

APPROVED BY:

CITY ENGINEER  
 REMON HABIB

DATE

REVISION BY: APPROVED DATE



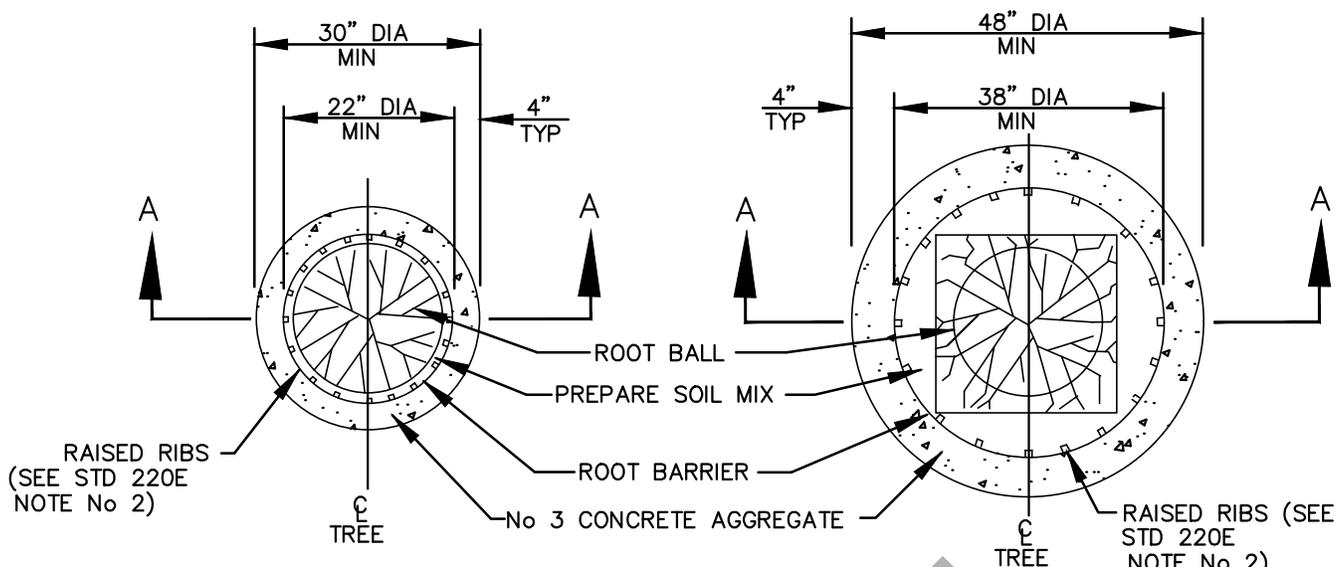
**CITY OF LAKE ELSINORE**

**TREE WELL - TYPE 3**

STANDARD PLAN NO.

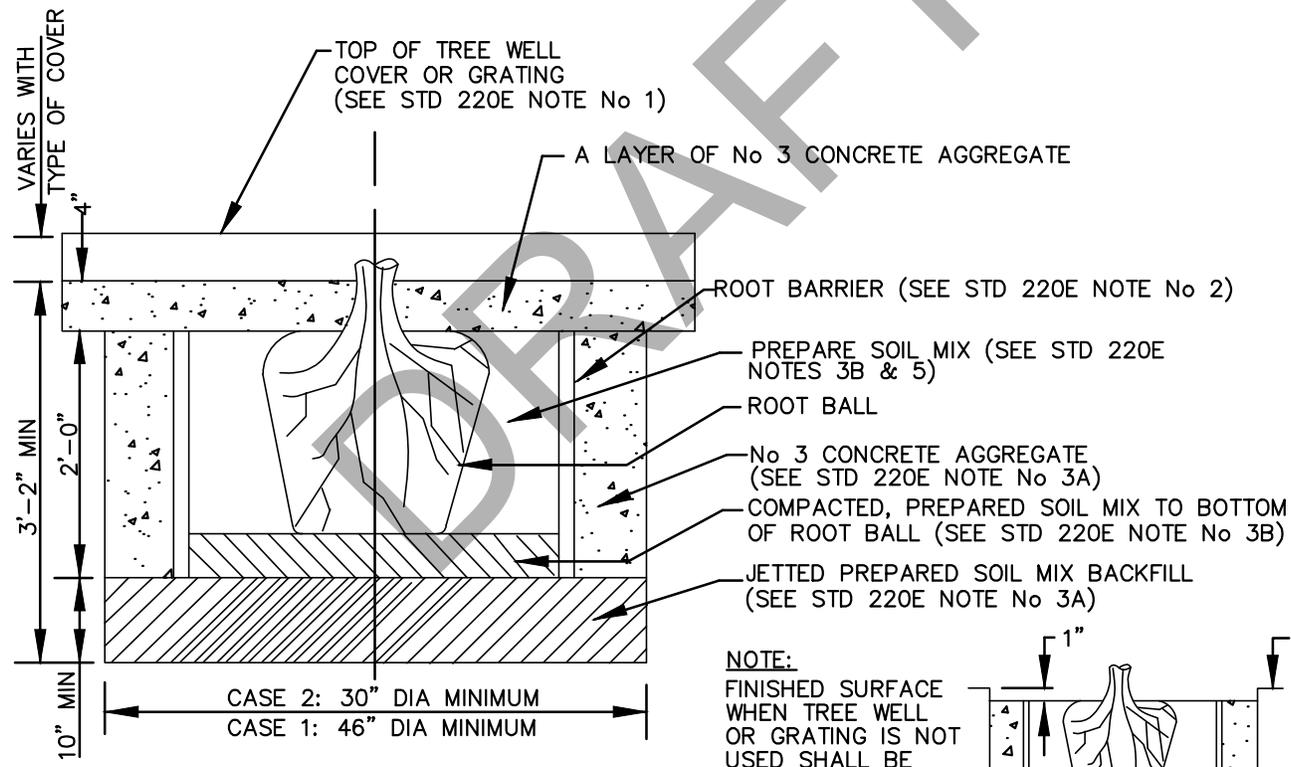
**220C**

SHEET 1 OF 1



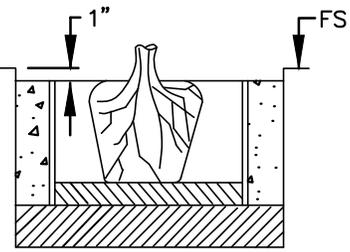
**CASE 2**  
(15 GALLON SIZE OR LESS)

**CASE 1**  
(BOXED TREE 24" SIZE OR LESS)



**SECTION "A-A"**

**NOTE:**  
FINISHED SURFACE WHEN TREE WELL OR GRATING IS NOT USED SHALL BE AS SHOWN AT RIGHT



APPROVED BY: \_\_\_\_\_

CITY ENGINEER REMON HABIB DATE \_\_\_\_\_

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**TREE WELL - TYPE 4**

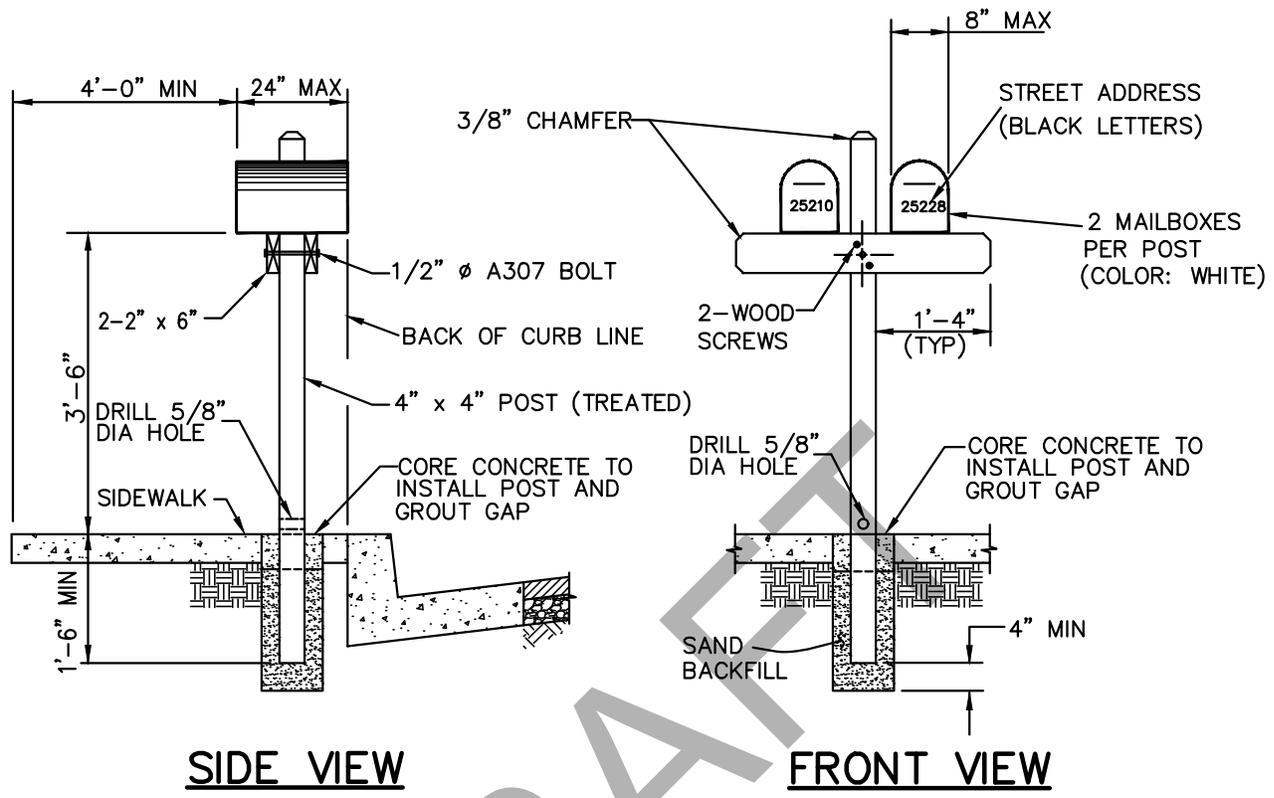
STANDARD PLAN NO. **220D** SHEET 1 OF 1

**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 ½" 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.

DRAFT

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB			DATE		<b>TREE WELL NOTES</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>220E</b> SHEET 1 OF 1	



DRAFT

**NOTES:**

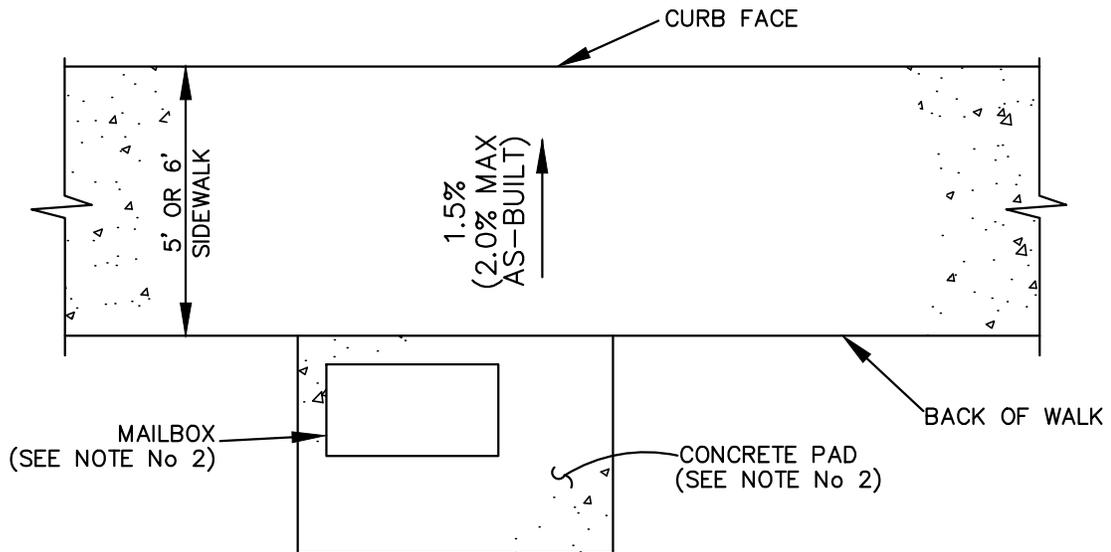
- 1.) TOP AND END OPENING MAILBOXES PERMITTED PROVIDED THAT THE FACE OF MAILBOX DOES NOT EXTEND INTO BACK OF CURB LINE. OPENING MUST FACE STREET.

APPROVED BY:			
CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE

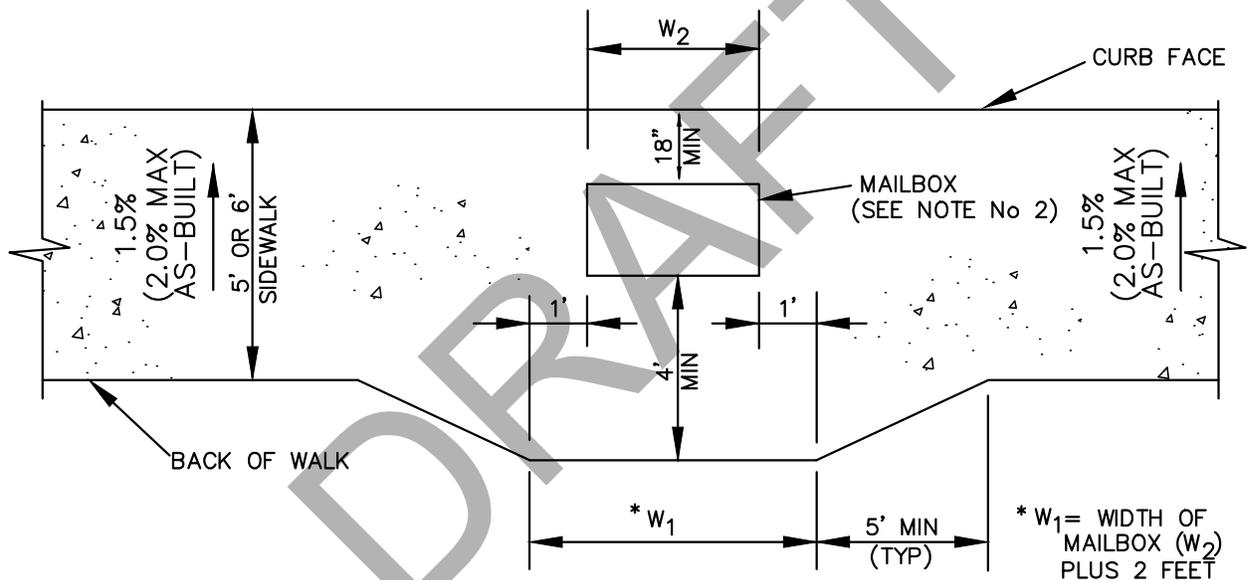


**CITY OF LAKE ELSINORE**

**SINGLE POST  
MAILBOX INSTALLATION**



**CASE "A"**



**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.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

**MULTIPLE MAILBOX  
INSTALLATION FOR  
NEW SIDEWALK**

STANDARD PLAN NO.

**223**

SHEET 1 OF 1

REVISION	BY:	APPROVED	DATE



**NOTES:**

- 1.) BACKGROUND SHALL BE PAINTED WITH GOOD QUALITY HIGH GLOSS REFLECTIVE WHITE PAINT.
- 2.) NUMBERS SHALL BE PAINTED WITH GOOD QUALITY FLAT BLACK PAINT.
- 3.) NUMBERS SHALL BE CENTERED VERTICALLY WITH NO BORDERS.
- 4.) NUMBERS SHALL BE PLACED ALONG CURB FACE, 3' FROM THE TOP OF 'X' (STD. 117) ON THE MAIN DRIVEWAY APPROACH THAT IS CLOSEST TO THE CENTER OF THE LOT.

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DATE



**CITY OF LAKE ELSINORE**

**CURB ADDRESS  
PAINTING**

REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

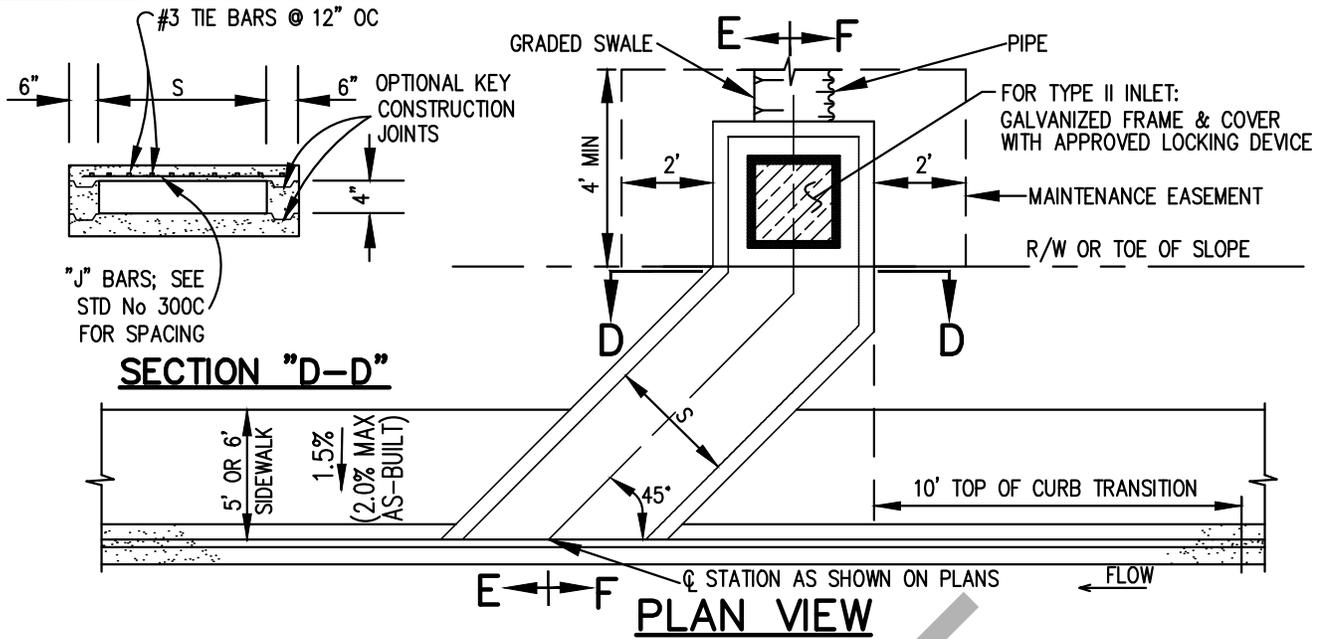
**226**

SHEET 1 OF 1

# CITY OF LAKE ELSINORE STANDARD PLANS

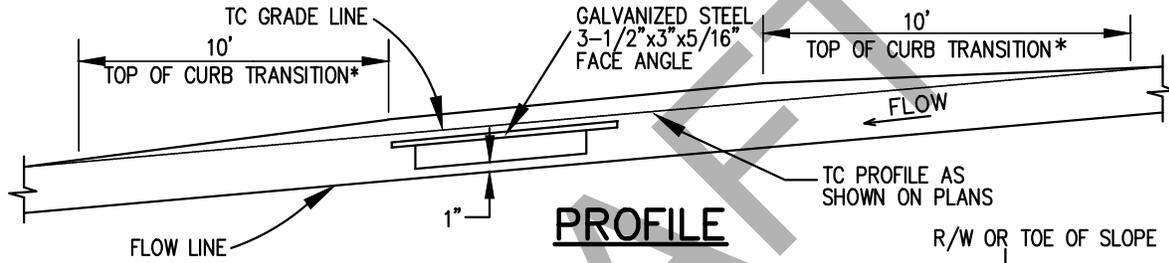
## SECTION 3: DRAINAGE

DRAFT



**SECTION "D-D"**

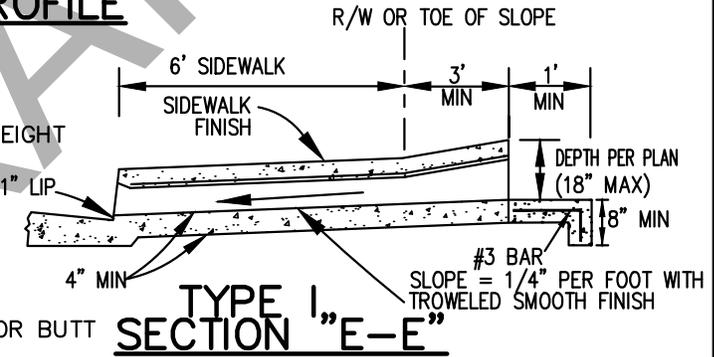
**PLAN VIEW**



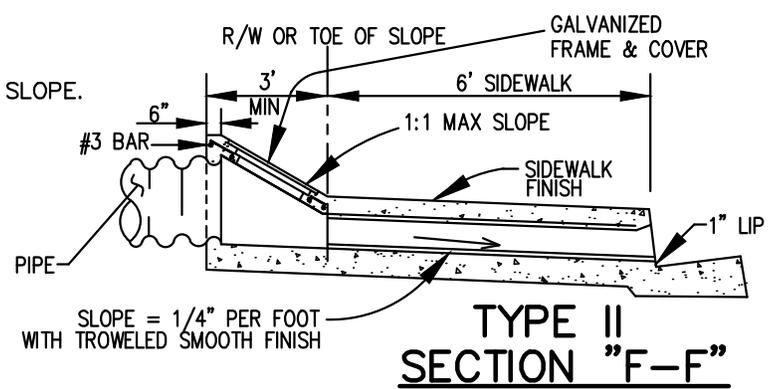
**PROFILE**

**NOTES:**

- 1) SPAN "S" AND HEIGHT OF OPENING AND CURB FACE HEIGHT AT CULVERT SHALL BE NOTED ON PLANS.
- 2) SEE STD 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) 1 INCH STEEL CLEARANCE MINIMUM FROM FACE OF CONCRETE.
- 6) TOP OF INLET STRUCTURE TO MATCH ADJACENT SLOPE.



**TYPE I SECTION "E-E"**



**TYPE II SECTION "F-F"**

\* TOP OF CURB TRANSITION IS REQUIRED FOR 6" CURBS OR 8" CURBS WITH S > 4.0', SEE STD. PLAN NO. 300C

APPROVED BY: \_\_\_\_\_

CITY ENGINEER REMON HABIB DATE \_\_\_\_\_

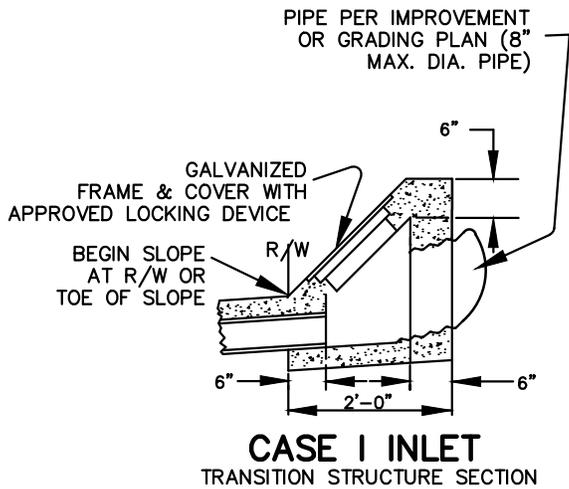
REVISION	BY:	APPROVED	DATE



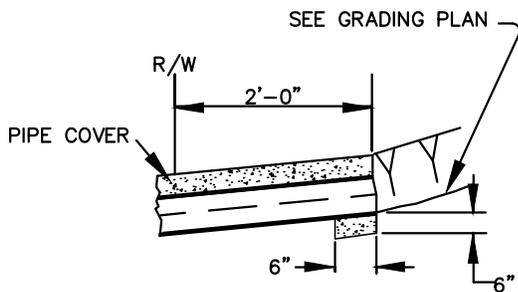
**CITY OF LAKE ELSINORE**

**PARKWAY CULVERT TYPE "A"**

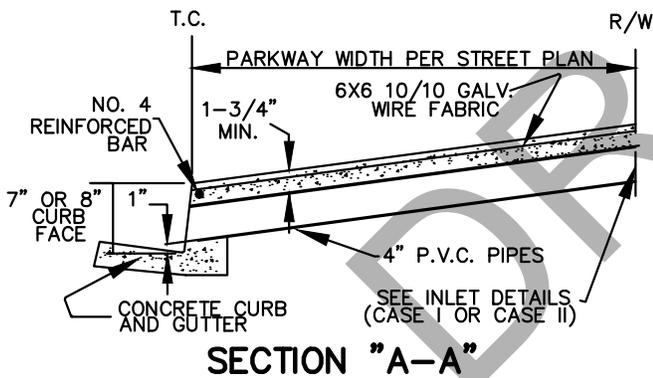
STANDARD PLAN NO. **300A** SHEET 1 OF 1



**CASE I INLET**  
TRANSITION STRUCTURE SECTION



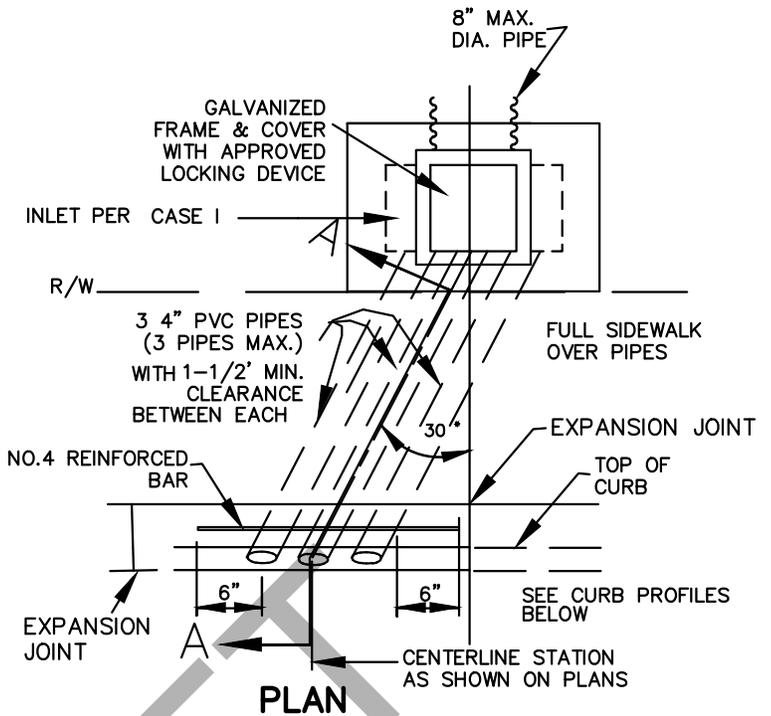
**CASE II INLET**



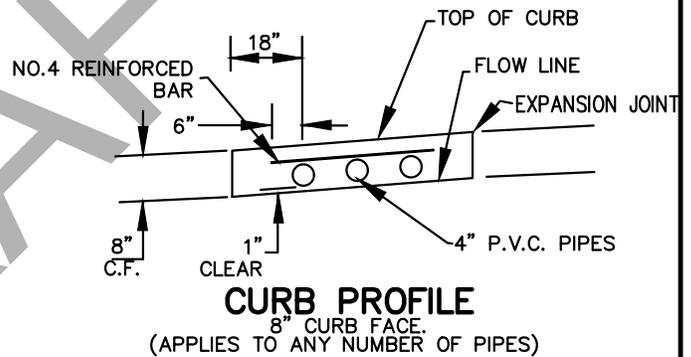
**SECTION "A-A"**

**NOTES:**

- 1.) SEE STD. NO. 300C FOR DETAILS AND NOTES.
- 2.) CAST IRON FACILITIES SHALL HAVE A BITUMINOUS COATING CONFORMING TO AASHTO DESIGNATION: M190.
- 3.) P.V.C. PIPES SHALL BE SCHEDULE 40 OR AS SPECIFIED ON THE PLANS.

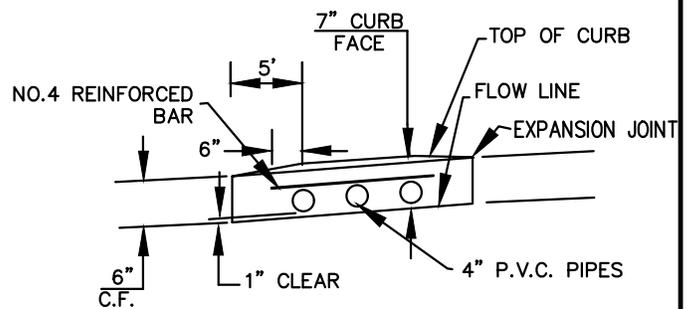


**PLAN**



**CURB PROFILE**

(APPLIES TO ANY NUMBER OF PIPES)



**CURB PROFILE**

(APPLIES TO ANY NUMBER OF PIPES)

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



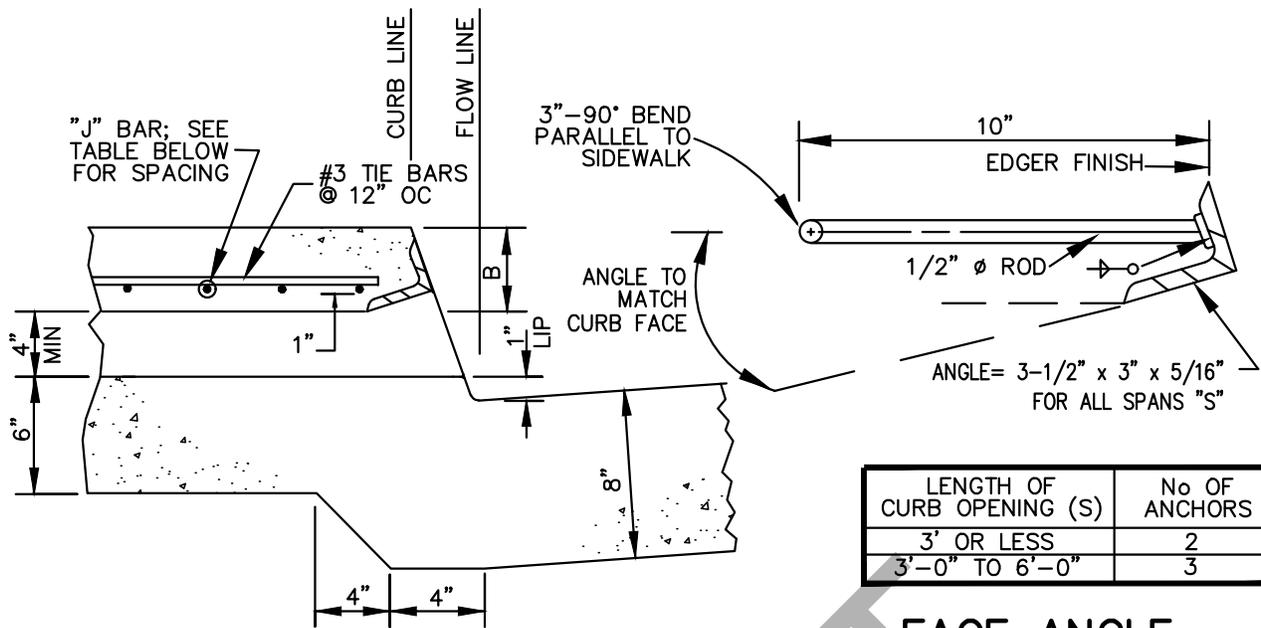
**CITY OF LAKE ELSINORE**

**CURB OUTLET  
TYPE "B"**

STANDARD PLAN NO.

**300B**

SHEET 1 OF 1



**OUTLET DETAIL**

**FACE ANGLE ANCHOR DETAIL**

LENGTH OF CURB OPENING (S)	No OF ANCHORS
3' OR LESS	2
3'-0" TO 6'-0"	3

SPAN "S"	B	STEEL SCHEDULE J-BARS		
		SIZE	SPACING C-C	LENGTH
2'-0"	3"	#3	7"	2'-9"
2'-6"	3"	#3	7"	3'-3"
3'-0"	3"	#3	7"	3'-9"
3'-6"	3"	#3	6"	4'-3"
4'-0"	3"	#3	5"	4'-9"
4'-6"	4"	#3	6-1/2"	5'-3"
5'-0"	4"	#3	5"	5'-9"
5'-6"	4"	#3	4"	6'-3"
6'-0"	4"	#3	3-1/2"	6'-9"

**STEEL SCHEDULE TABLE**

**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 TROWELED FINISH.
- 4.) ALL EXPOSED METAL SHALL BE GALVANIZED AFTER FABRICATION.
- 5.) HEIGHT OF CURB OPENING FOR TYPE 'A' AND 'B' PARKWAY CULVERT 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 STEEL SCHEDULE TABLE.
- 7.) REINFORCING STEEL SHALL BE 1" CLEAR TO INSIDE OF CULVERT UNLESS OTHERWISE SPECIFIED.
- 8.) CONSTRUCT PCC WALK AS SPECIFIED ON PLAN. THE CONTRACT PRICE PAID FOR PCC SIDEWALK ITEM SHALL INCLUDE WALK CONSTRUCTED IN CONJUNCTION WITH PARKWAY CULVERT.
- 9.) TYPE, DIMENSIONS, AND ELEVATIONS PER IMPROVEMENT PLAN.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**PARKWAY CULVERT  
DETAILS AND NOTES**

STANDARD PLAN NO.

**300C**

SHEET 1 OF 1

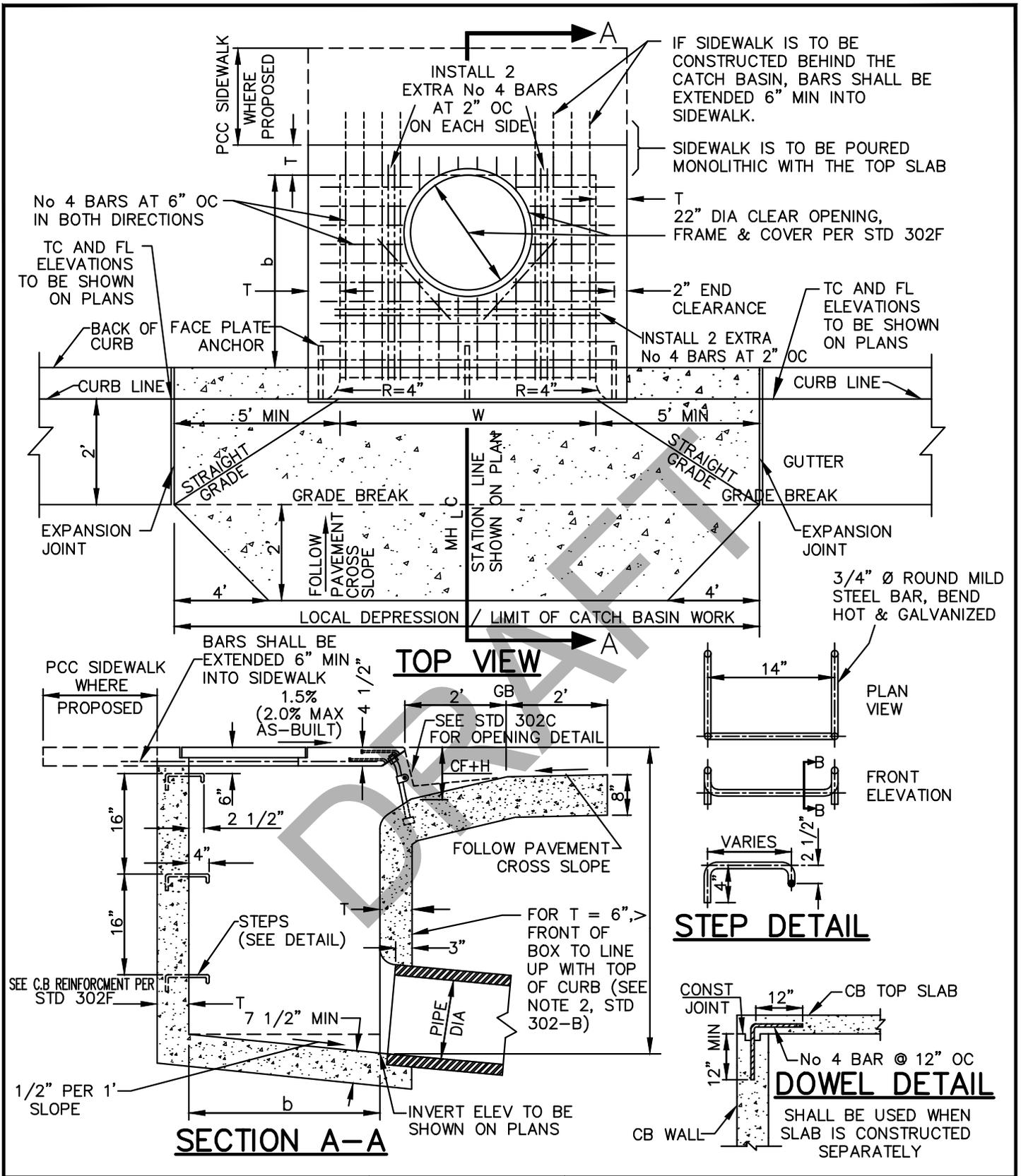


**NOTES:**

- 1.) CONCRETE SHALL BE CLASS 560-C-3250 PCC, 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 A. 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'
  - 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 CONSTRUCTED SEPARATELY. WHEN THE TOP SLAB IS CONSTRUCTED 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".

DRAFT

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB			DATE		<b>CURB OUTLET STRUCTURE NOTES</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>301B</b>   SHEET 1 OF 1	



APPROVED BY:

CITY ENGINEER REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**CURB INLET CATCH BASIN**

STANDARD PLAN NO. **302A** SHEET 1 OF 1

**NOTES:**

- 1) CONCRETE SHALL BE CLASS 560-C-3250 PCC, CURED WITH WHITE PIGMENTED CURING COMPOUND.
- 2) DIMENSIONS:
  - a. W SHALL BE AS SPECIFIED ON THE PLAN (4' MIN).
  - b. V SHALL BE AS SPECIFIED ON THE PLAN.
  - c. H = 4" UNLESS OTHERWISE SPECIFIED ON THE PLAN.
  - d. b = 36" UNLESS OTHERWISE SPECIFIED ON THE PLAN.
  - e. T = 6" IF V IS 4' OR LESS. T = 8" IF V IS BETWEEN 4' AND 8'. T = 10" IF V IS 8' OR MORE.
  - f. THICKNESS OF THE WALL UNDER THE OPENING SHALL BE T + 2" WHEN W EXCEEDS 7'-0". IF T > 6", WIDENING OF WALL SHALL BE ON THE STREET SIDE.
- 3) PROTECTION BAR:
  - a. PROTECTION BAR SHALL BE PER STD 302D.
  - b. ALL BARS SHALL BE 1" Ø GALVANIZED SMOOTH STEEL. BAR LENGTHS SHALL NOT EXCEED 21' AND SHALL BE CUT TO FIT IN FIELD.
  - c. WHEN "W" IS OVER 21', PROTECTION BAR SHALL CONSIST OF TWO OR MORE SECTIONS DEPENDING UPON LENGTH OF BASIN.
  - d. INSTALL COUPLING AT DOWNSTREAM END OF CATCH BASIN OPENING.
  - e. PROTECTION BAR "S" SHALL BE INSTALLED WHEN THE MINIMUM CLEAR OPENING OF THE CATCH BASIN EXCEEDS 6". BAR "S" SHALL BE PLACED SUCH THAT NO MINIMUM CLEAR OPENING EXCEEDS 6".
  - f. WHEN ONE BAR IS REQUIRED, "S" SHALL BE 6 3/4". HOWEVER, THIS SHALL BE REDUCED IF NECESSARY SO THAT THE CENTER OF THE PROTECTION BAR IS NOT LESS THAN 2 1/2" FROM THE FACE PLATE.
  - g. WHEN TWO OR MORE BARS ARE REQUIRED, "S" SHALL BE 6 3/4" WITH REMAINING BARS SPACED AT 6 3/4" CC. SPACING OF TOP BAR SHALL BE REDUCED IF NECESSARY SO THAT THE CENTER OF THE BAR IS NOT LESS THAN 2 1/2" FROM THE FACE PLATE.
- 4) SUPPORT BOLT:
  - a. SUPPORT BOLTS SHALL BE PER STD 302C
  - b. SUPPORT BOLTS ARE REQUIRED WHEN LENGTH OF THE CATCH BASIN IS 7' OR GREATER.
  - c. LOCATION OF SPECIAL SUPPORT BARS AND ADDITIONAL SOCKET SET SCREWS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
  - d. SOCKET SET SCREW SHALL BE STAINLESS STEEL.
- 5) FACE PLATE ASSEMBLY:
  - a. FACE PLATE SHALL BE PER STD 302D.
  - b. LENGTH OF FACE PLATE SHALL BE "W" + 12" EXCEPT AS MODIFIED FOR CURB OPENING CATCH BASIN AT DRIVEWAY.
  - c. WHERE CATCH BASIN IS TO BE CONSTRUCTED ON CURVE, THE MAXIMUM CHORD LENGTH FOR FACE PLATE SHALL BE SUCH THAT THE MAXIMUM DIMENSION FROM SAID CHORD (MEASURED PERPENDICULAR THERETO) TO THE TRUE CURVE WILL NOT EXCEED ONE INCH. WHERE MORE THAN ONE CHORD IS REQUIRED, CHORD LENGTHS SHALL BE EQUAL.
  - d. WHERE LENGTH OF FACE PLATE IS BETWEEN 22' AND 43', TWO SECTIONS MAY BE USED. WHEN LENGTH EXCEEDS 43', THREE SECTIONS MAY BE USED. SECTIONS SHALL BE SPLICED ACCORDING TO THE SPLICE DETAIL PER STD MVFE-300D. SPLICE SHALL BE PLACED ONE FOOT FROM SUPPORT BOLT.
  - e. SET END ANCHORS 3" FROM ENDS OF FACE PLATE.
  - f. PLACE ONE ANCHOR AT EACH SIDE OF ANY OR ALL SPLICE JOINTS AND WITHIN 6" THEREOF.
  - g. ROUND HEAD ANCHORS FOR FACE PLATE SHALL BE NELSON H-4F SHEAR CONNECTOR, KSN WELDING SYSTEMS DIVISION SHEAR CONNECTOR OR EQUAL.
- 6) CONNECTOR PIPE: UNLESS OTHERWISE INDICATED ON THE PROJECT PLANS, CONNECTOR PIPE SHALL BE 18" ID MINIMUM, REINFORCED CONCRETE PIPE (RCP).
- 7) STEPS: SHALL BE PER STD 302A AND SHALL BE 3/4" Ø ROUND MILD STEEL BAR, BEND HOT & GALVANIZED. STEPS SHALL BE INSTALLED 16" APART WHEN V EXCEED 4 1/2'. THE TOP STEP SHALL BE 6" BELOW THE TOP SURFACE AND SHALL BE 2 1/2" CLEAR FROM THE WALL. ALL OTHER STEPS SHALL BE 4" CLEAR FROM THE WALL. ONLY ONE STEP 12" FROM THE BOTTOM FLOOR SHALL BE INSTALLED IF V IS 4 1/2' OR LESS. ALL STEPS SHALL BE ANCHORED NOT LESS THAN 4" INTO THE CATCH BASIN WALL. IF STEPS ARE NOT WET SET / INSTALLED, HIGH-STRENGTH EPOXY ANCHORING ADHESIVE, TYPE SET-XP BY STRONG-TIES OR EQUAL APPROVED, SHALL BE USED FOR THE INSTALLATION.
- 8) STEEL REINFORCEMENT: SHALL BE PER STD 302F.
- 9) MANHOLE FRAME AND COVER: SHALL BE PER STD 302E.
- 10) WHERE THE STRUCTURE IS TO BE CONSTRUCTED WITHIN THE LIMITS OF A PROPOSED SIDEWALK OR IS CONTIGUOUS TO SUCH A SIDEWALK THE TOP SLAB OF THE STRUCTURE SHALL BE POURED MONOLITHIC WITH THE SIDEWALK (WITH NO WEAKENED PLANE JOINT IN BETWEEN). THE SIDEWALK SHALL BE PROVIDED WITH A WEAKENED PLANE JOINT OR A ONE INCH DEEP SAWCUT CONTINUOUSLY ON BOTH SIDES OF THE STRUCTURE WALLS, INCLUDING ACROSS THE FULL WIDTH OF THE SIDEWALK.
- 11) THE SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH AND SCORING TO EXISTING OR PROPOSED CURB, GUTTER AND WALK ADJACENT TO THE STRUCTURE. CURVATURE OF CONCRETE SURFACE SHALL BE SHAPED BY CURVED FORMS AND SHALL NOT BE SHAPED BY PLASTERING. FLOOR OF STRUCTURE SHALL BE GIVEN A STEEL TROWELLED FINISH.
- 12) DOWELS SHALL BE REQUIRED PER DETAIL SHOWN ON STD 302A WHEN THE TOP SLAB IS CONSTRUCTED SEPARATELY.
- 13) STENCIL INLET STRUCTURE WITH "ONLY RAIN IN THE STORM DRAIN".

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

**CURB INLET  
CATCH BASIN NOTES**

REVISION	BY:	APPROVED	DATE

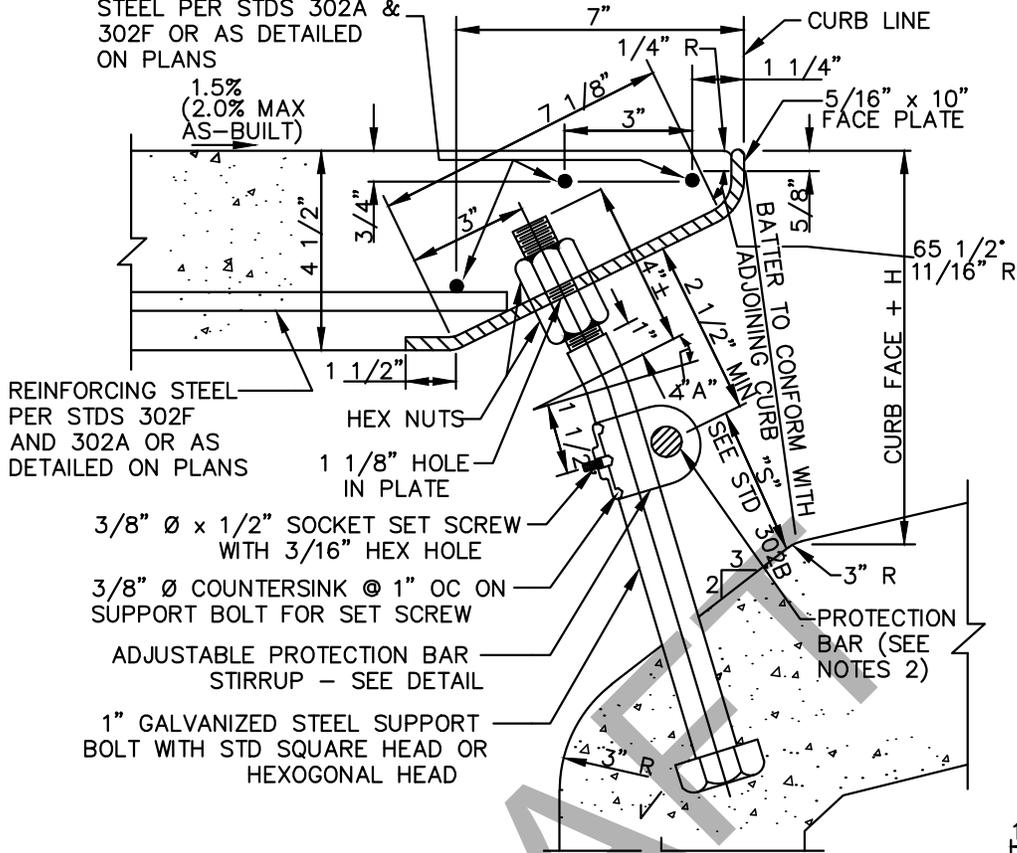
STANDARD PLAN NO.

**302B**

SHEET 1 OF 1

3 - #4 BARS x ( W + 6" ) IN  
ADDITION TO REINFORCING  
STEEL PER STDS 302A &  
302F OR AS DETAILED  
ON PLANS

1.5%  
(2.0% MAX  
AS-BUILT)



REINFORCING STEEL  
PER STDS 302F  
AND 302A OR AS  
DETAILED ON PLANS

HEX NUTS  
1 1/8" HOLE  
IN PLATE

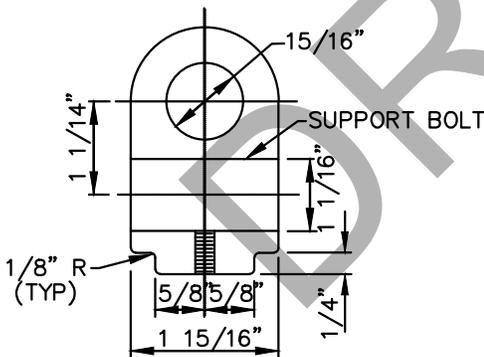
3/8" Ø x 1/2" SOCKET SET SCREW  
WITH 3/16" HEX HOLE

3/8" Ø COUNTERSINK @ 1" OC ON  
SUPPORT BOLT FOR SET SCREW

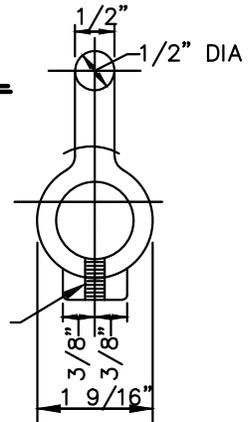
ADJUSTABLE PROTECTION BAR  
STIRRUP - SEE DETAIL

1" GALVANIZED STEEL SUPPORT  
BOLT WITH STD SQUARE HEAD OR  
HEXAGONAL HEAD

### CATCH BASIN OPENING DETAIL



DRILL AND TAP HOLE  
AND INSTALL 3/8" x  
1/2" SOCKET SET  
SCREW WITH 3/16"  
RECESSED HEX HOLE



### NOTES:

### STIRRUP DETAIL

- 1) SUPPORT BOLT ANGLE "A" SHALL VARY TO CONFORM WITH BATTER OF ADJOINING CURB.
- 2) PROTECTION BAR SHALL BE INSTALLED AND SUPPORT BOLTS SHALL BE SPACED PER STD 302D.
- 3) SUPPORT BOLTS SHALL BE EQUAL LENGTH TO CURB FACE + 6" FOR ALL CURB BATTER.
- 4) ALL EXPOSED METAL PARTS SHALL BE GALVANIZED AFTER FABRICATION.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



CITY OF LAKE ELSINORE

CURB INLET  
CATCH BASIN  
DETAILS

STANDARD PLAN NO.

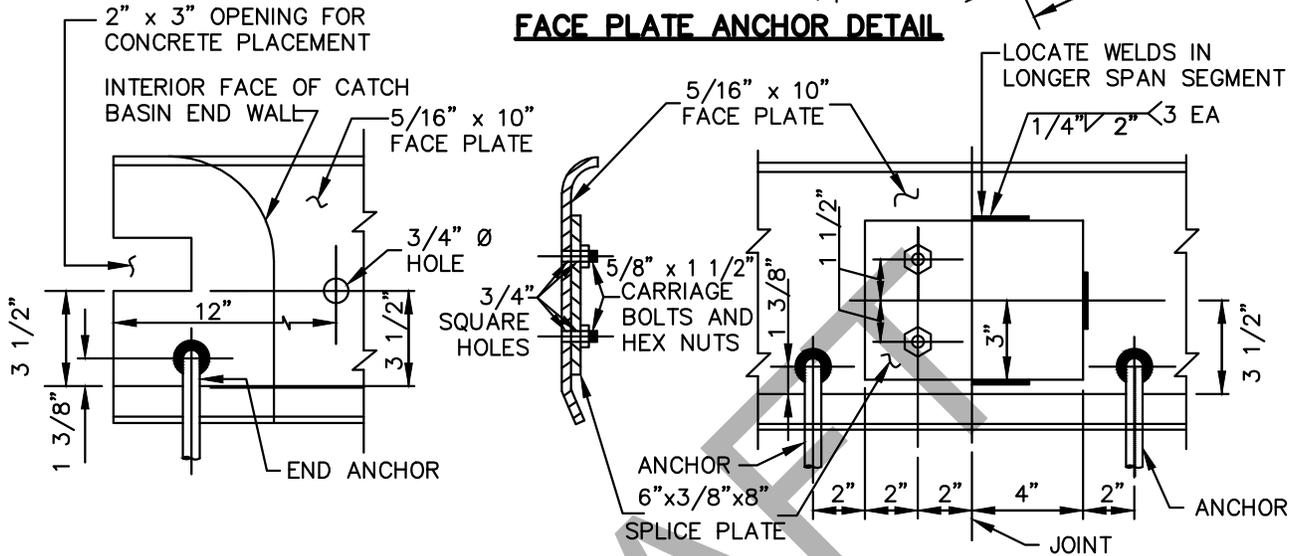
302C

SHEET 1 OF 1

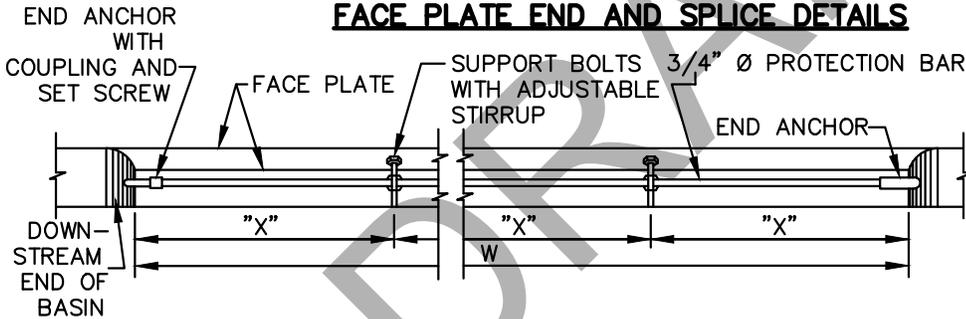
1/2" Ø x 8" STEEL ANCHORS, 15" MAX OC,  
ALTERNATE UPPER "A" AND LOWER "B"  
ANCHORS AS SHOWN

NELSON H-4F SHEAR  
CONNECTOR, KSN WELDING  
SYSTEMS DIVISION SHEAR  
CONNECTOR OR EQUAL

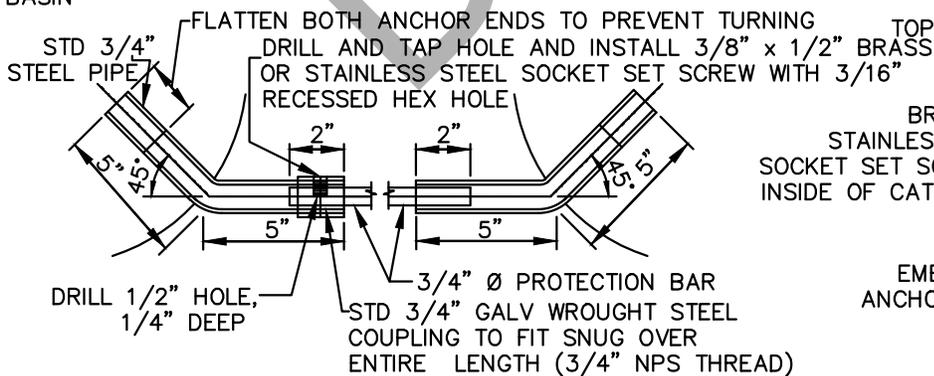
**FACE PLATE ANCHOR DETAIL**



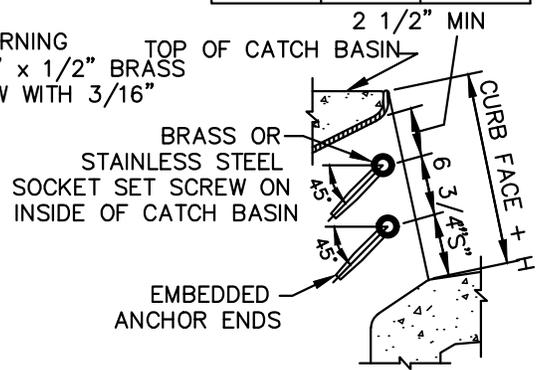
**FACE PLATE END AND SPLICE DETAILS**



SUPPORT BOLT SPACING		
W	NUMBER OF BOLTS	NUMBER OF "X" LENGTHS
7' TO 10'	1	2
10' TO 15'	2	3
15' TO 20'	3	4
20' TO 25'	4	5
25' TO 30'	5	6



**PROTECTION BAR AND END ANCHOR DETAILS**



**SECTION VIEW**

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION BY: APPROVED DATE



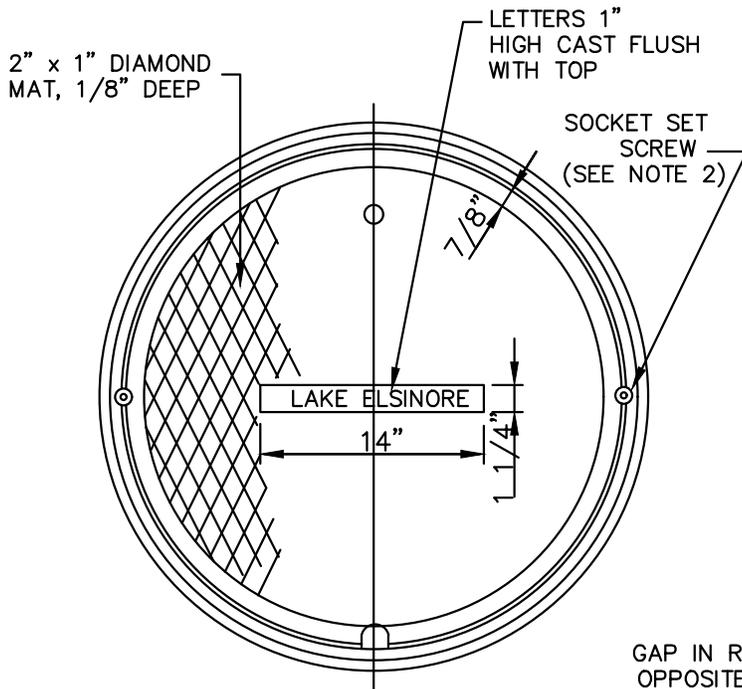
**CITY OF LAKE ELSINORE**

**CURB INLET  
CATCH BASIN FACE PLATE  
& PROTECTION BAR DETAIL**

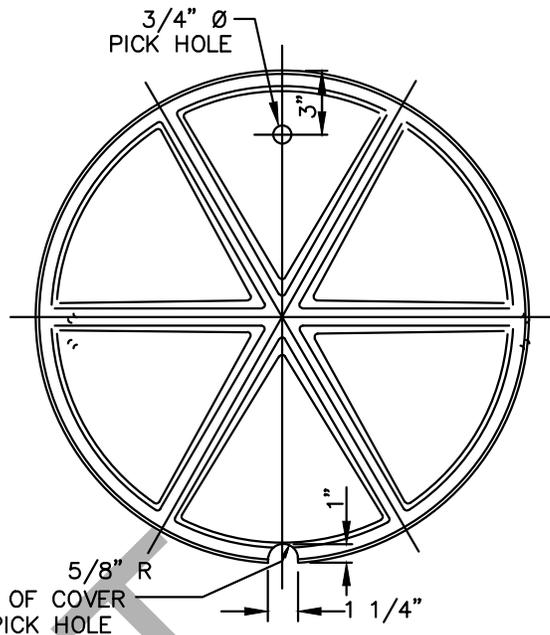
STANDARD PLAN NO.

**302D**

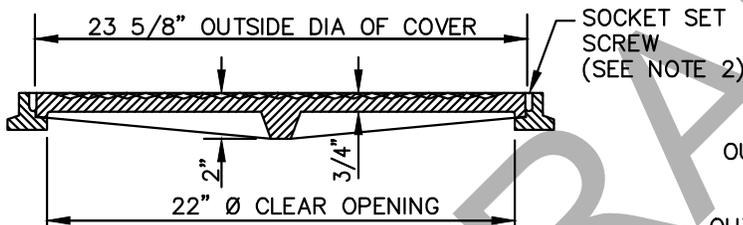
SHEET 1 OF 1



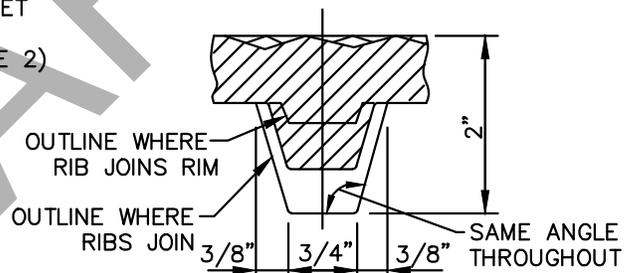
**TOP OF MANHOLE FRAME AND COVER**



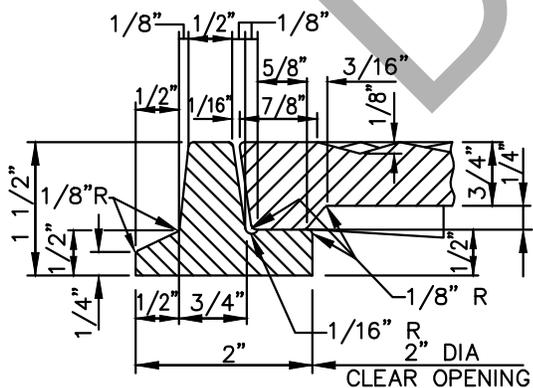
**BOTTOM OF MANHOLE COVER**



**CROSS SECTION THRU FRAME AND COVER**



**CROSS SECTION THRU AT MID RADIUS**



**CROSS SECTION THRU RIM**

**NOTES:**

1. FRAME AND COVER SHALL BE GRAY CAST IRON CONFORMING TO THE LATEST A.S.T.M. STANDARD A48, CLASS 30 OR BETTER, AND GALVANIZED PER A.S.T.M. A385.
2. DRILL AND TAP HOLE AND INSTALL 3/4" x 1 1/4" STAINLESS STEEL SOCKET SET SCREW WITH 3/8" RECESSED HEX HOLE. ALL THREADS TO BE NC.
3. FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS BEFORE DELIVERY.
4. TOTAL WEIGHT OF FRAME AND COVER = 130 LBS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**  
**CURB INLET CATCH BASIN**  
**MANHOLE FRAME &**  
**COVER**

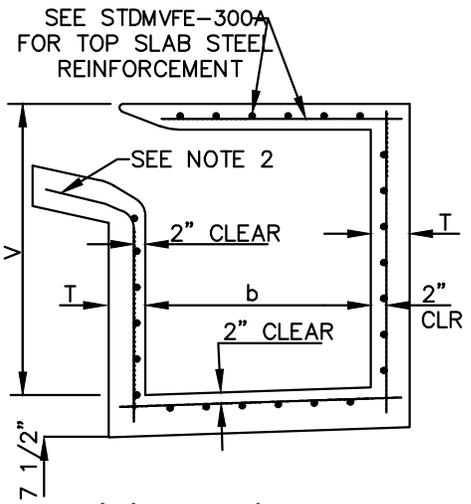
STANDARD PLAN NO.

**302E**

SHEET 1 OF 1

REVISION	BY:	APPROVED	DATE

WALL AND FLOOR STEEL						
W	V (ft)		T (in)	FRONT WALL STEEL		REAR, END WALLS, & FLOOR STEEL (EACH WAY)
	FROM	TO (INCLUDE)		HORIZONTAL	VERTICAL	
TO 7'		4	6	#3 @ 6"	#3 @ 6"	#3 @ 6"
TO 7'	4	8	8	#4 @ 12"	#4 @ 12"	#4 @ 12"
TO 7'	8	12	10	#4 @ 10"	#4 @ 10"	#4 @ 10"
14'		4	6	#3 @ 6"	#3 @ 6"	#3 @ 6"
14'	4	8	8	#4 @ 12"	#4 @ 12"	#4 @ 12"
14'	8	10	10	#4 @ 8"	#4 @ 12"	#4 @ 10"
14'	10	12	10	#4 @ 6"	#4 @ 12"	#4 @ 10"



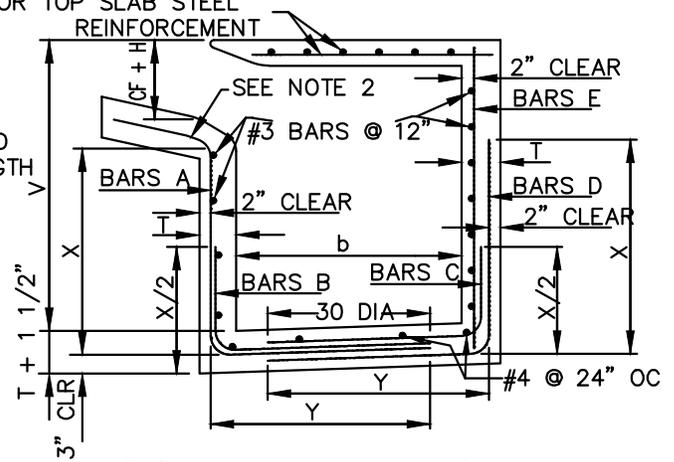
**REINFORCEMENT FOR CATCH BASIN WITH "W" TO 14' (INCLUDE)**

WALL AND FLOOR STEEL							
V (ft)		T (in)	FRONT WALL STEEL	REAR WALL STEEL			END WALL STEEL
FROM	TO (INCLUDE)		BARS A & B	BARS C	BARS D	BARS E	HORIZONTAL & VERTICAL
	4	6	#3 @ 24"	#3 @ 12"	----	#4 @ 24"	#3 @ 18"
4	5	8	#3 @ 20"	#3 @ 12"	----	#4 @ 24"	#3 @ 14"
5	6	8	#3 @ 12"	#3 @ 10 1/2"	----	#4 @ 24"	#3 @ 14"
6	7	8	#4 @ 17"	#3 @ 8 1/2"	----	#4 @ 24"	#3 @ 14"
7	8	8	#4 @ 13"	#3 @ 6 1/2"	----	#4 @ 24"	#3 @ 14"
8	9	10	#4 @ 15"	#3 @ 7 1/2"	----	#4 @ 20"	#3 @ 11"
9	10	10	#4 @ 12"	#4 @ 12"	----	#4 @ 20"	#3 @ 11"
10	11	10	#5 @ 15"	----	#4 @ 11"	#4 @ 18"	#3 @ 11"
11	12	10	#6 @ 18"	----	#4 @ 9"	#4 @ 13"	#3 @ 11"
X = (V + T) - (CF + H + 4 1/2")			Y = ( $\frac{b + 2T}{2}$ ) + 15 DIA. - 2"				

SEE STD 302A FOR TOP SLAB STEEL REINFORCEMENT

**NOTES:**

1. REINFORCING STEEL SHOWN HEREON SHALL BE USED FOR ALL CATCH BASIN REGARDLESS OF BASIN LENGTH "W" OF DEPTH "V".
2. VERTICAL BARS SHALL BE EXTENDED INTO LOCAL DEPRESSION AREA.
3. SEE STD 302A FOR REINFORCEMENT FOR TOP SLAB.



**REINFORCEMENT FOR CATCH BASIN WITH "W" GREATER THAN 14'**

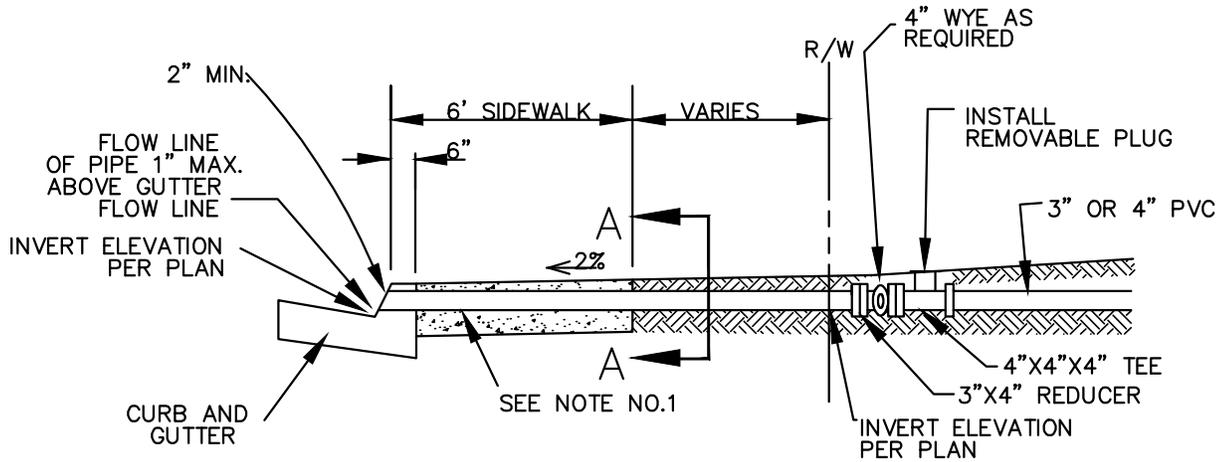
APPROVED BY:			
CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



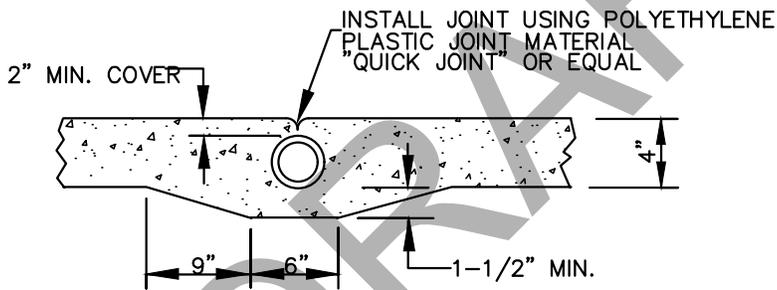
**CITY OF LAKE ELSINORE**

**CATCH BASIN REINFORCEMENT**

STANDARD PLAN NO. **302F** SHEET 1 OF 1



**ELEVATION**



**SIDEWALK SECTION "A-A"**

**NOTES:**

1. DRAINS SHALL BE 3 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 4 @ 12" O.C.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**CURB DRAIN – RESIDENTIAL**

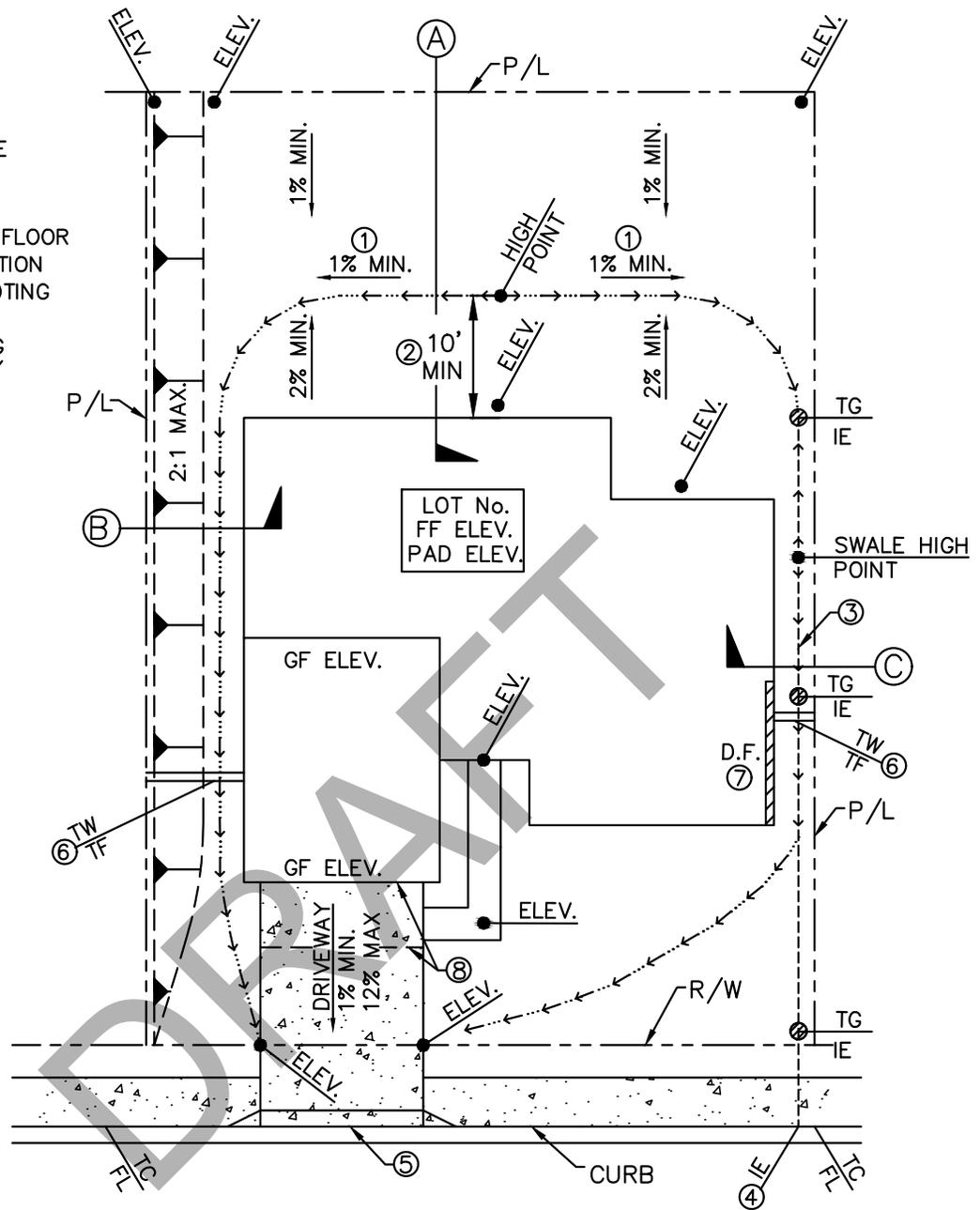
STANDARD PLAN NO.

**303**

SHEET 1 OF 1

**LEGEND:**

- P/L – PROPERTY LINE
- TG – TOP OF GRADE
- FF – FINISH FLOOR
- GF – GARAGE FINISH FLOOR
- IE – INVERTED ELEVATION
- D.F. – DEEPEENED FOOTING
- TW – TOP OF WALL
- TF – TOP OF FOOTING
- R/W – RIGHT OF WAY
- TC – TOP OF CURB
- FL – FLOWLINE



**NOTES:**

1. BACKYARD AND SIDE SWALES TO BE GRADED AT 1% MIN.
2. HIGH POINT SHALL BE LOCATED AT 10' MIN FROM BUILDING (15' PREFERRED)
3. 3" DIA. MIN. PVC PIPE, WHERE NEEDED. DRAINAGE PIPE SHALL HAVE 0.50% MIN. SLOPE
4. SEE CITY STANDARD 303 FOR UNDERSIDEWALK CURB DRAIN.
5. SEE CITY STANDARD 117 FOR DRIVEWAY APPROACHES.
6. PROVIDE 6' HIGH MIN. CONCRETE BLOCK WALL. PROVIDE A ONE BLOCK OPENING AT SWALE LINE FOR DRAINAGE, EVEN IF AREA DRAIN INLETS ARE INSTALLED.
7. PROVIDE DEEPEENED FOOTING AS NEEDED.
8. PROVIDE A 8' MIN. LANDING AT 5% MAX. FOR DRIVEWAYS OVER 12%

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

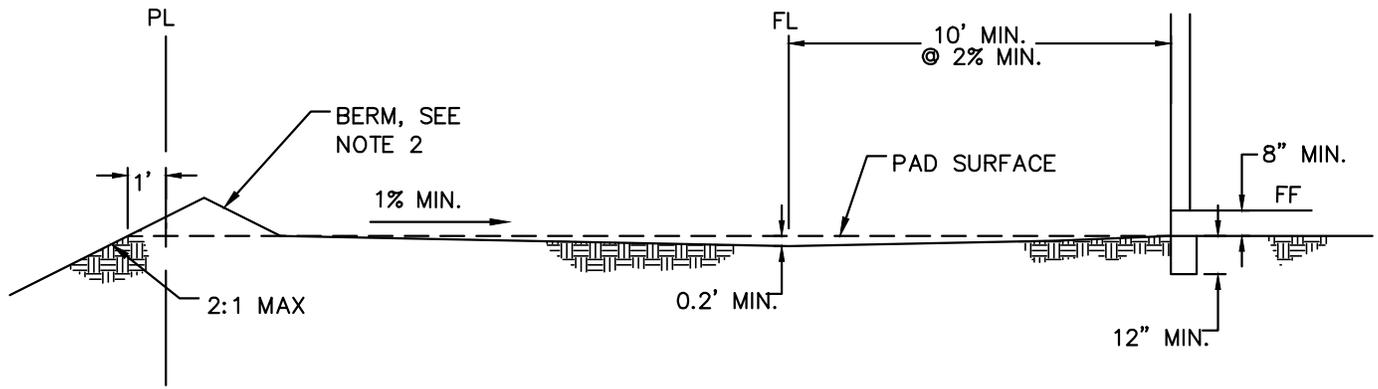
**RESIDENTIAL LOT  
GRADING**

STANDARD PLAN NO.

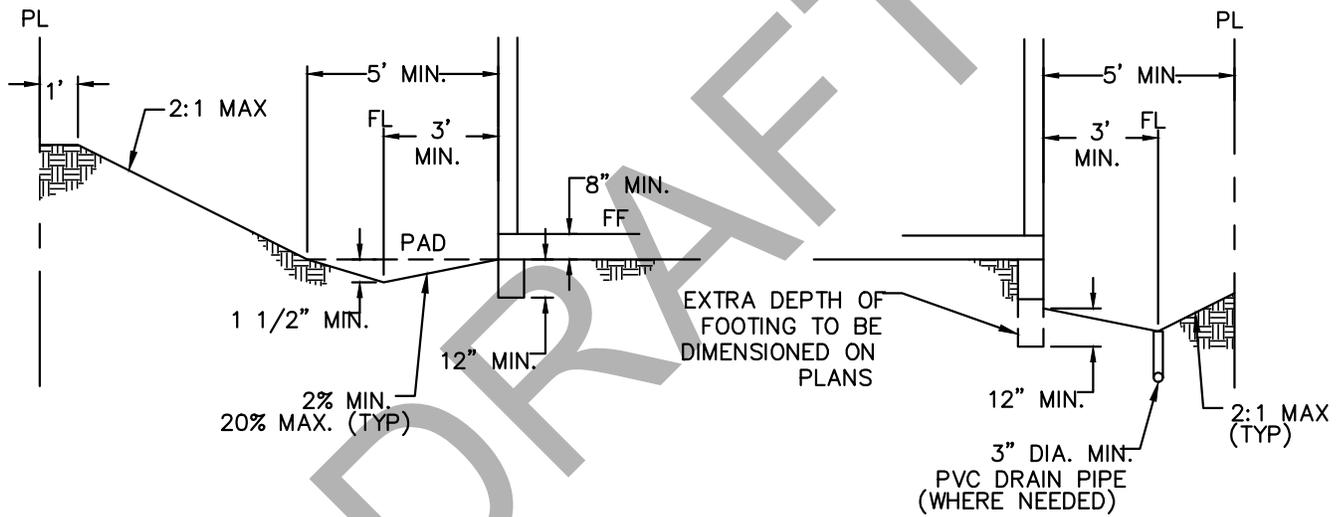
**304**

SHEET 1 OF 2

REVISION	BY:	APPROVED	DATE



**SECTION "A"**



**SECTION "B"**

**SECTION "C"**

**NOTES:**

1. IN NO CASE SHALL THE SWALE FLOWLINE BE LOWER THAN THE BOTTOM OF THE FOOTING WITHIN 5' FROM BUILDING LINE
2. PROVIDE 4' WIDE BY 1' HIGH EARTH BERM AT THE TOP OF ALL FILL SLOPES OVER 5' HIGH.
3. BUILDING FINISH FLOOR CAN BE 6" ABOVE GROUND IF A CONCRETE SLAB IS PROVIDED PER 2022 CBC SECTION 2304.11.2.2

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



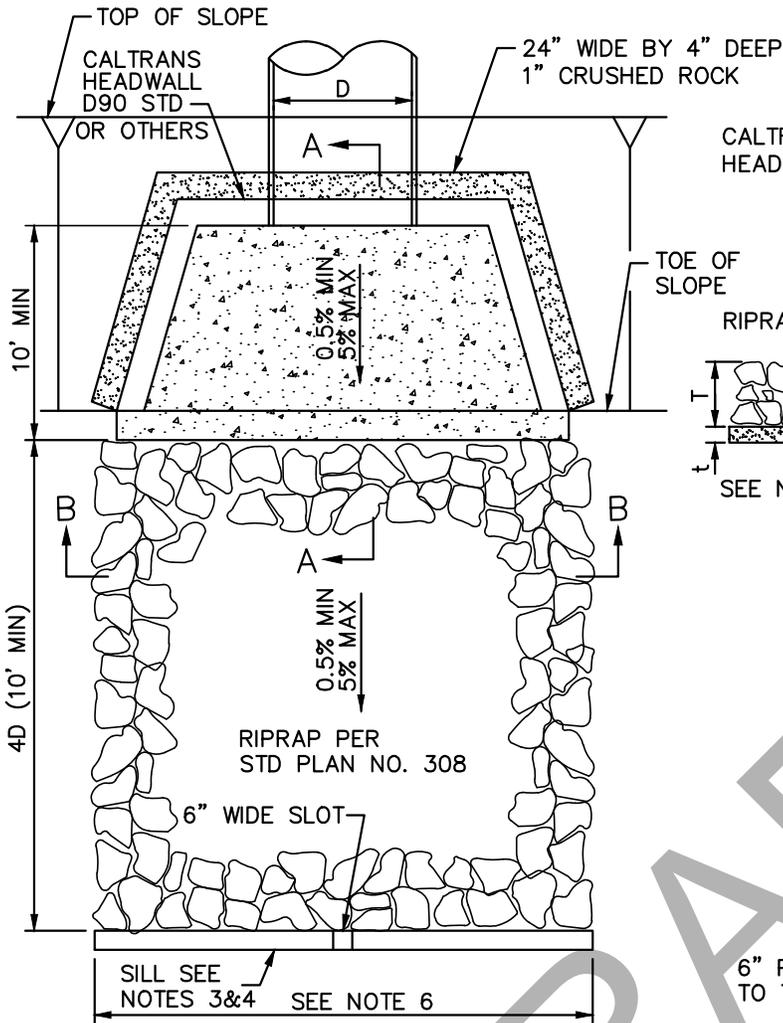
**CITY OF LAKE ELSINORE**

**RESIDENTIAL LOT  
GRADING**

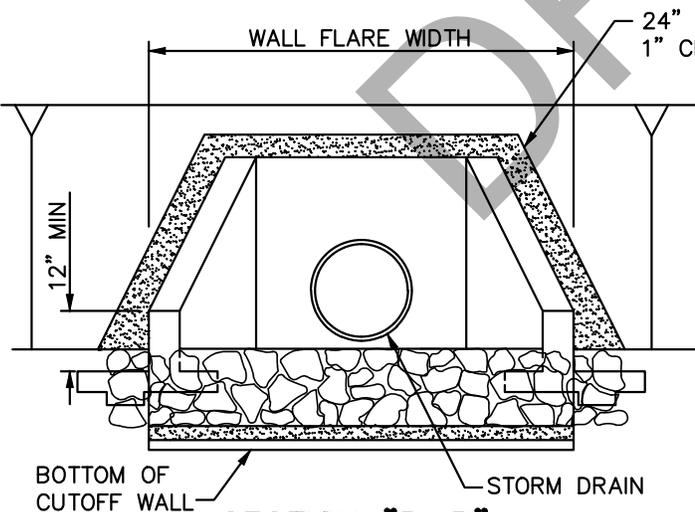
STANDARD PLAN NO.

**304**

SHEET 2 OF 2

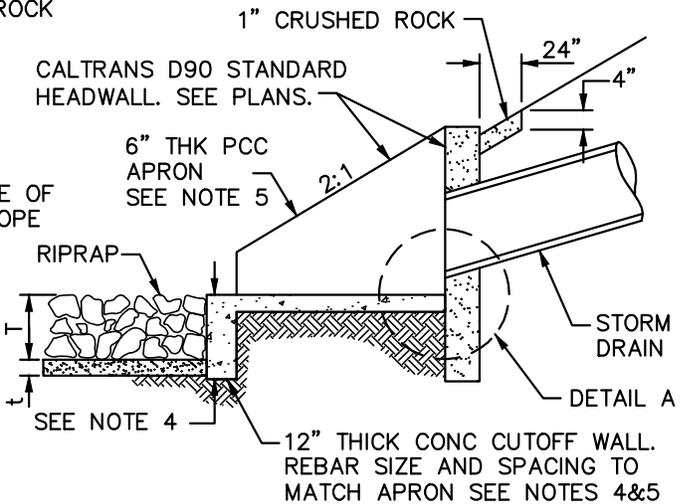


**PLAN**

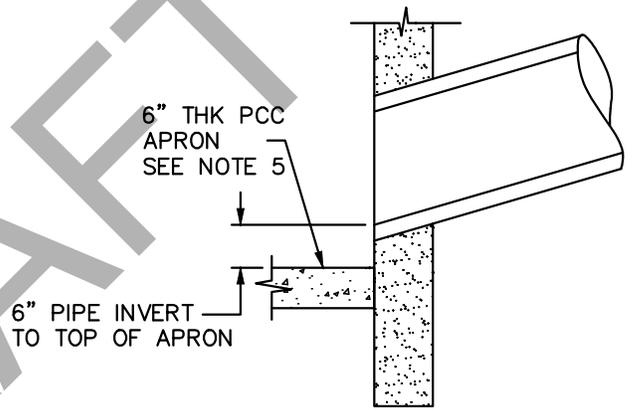


**SECTION "B-B"**

NOT TO SCALE



**SECTION "A-A"**



**DETAIL A**

**NOTES:**

1. PLANS SHALL SPECIFY FOR THIS STANDARD:  
(A) RIPRAP CLASS AND THICKNESS (T)  
(B) FILTER BLANKET MATERIAL AND THICKNESS (t).
2. ADDITIONAL RIPRAP MAY BE NECESSARY FOR STEEP APPLICATIONS (> 5%).
3. ADD 12" THICK CONCRETE SILL WHEN D>36", OR WHEN REQUIRED BY THE ENGINEER -SEE STD PLAN NO. 308.
4. CUTOFF WALL AND SILL DEPTH TO BE 4' OR RIPRAP THICKNESS (T) PLUS FILTER THICKNESS (t) WHICHEVER IS GREATER.
5. 10' LONG (MIN) BY 6" THICK CONCRETE APRON WITH #4 BARS AT 18" OC.
6. RIPRAP PAD WIDTH TO BE THE GREATER OF THE WALL FLARE WIDTH OR 10'.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



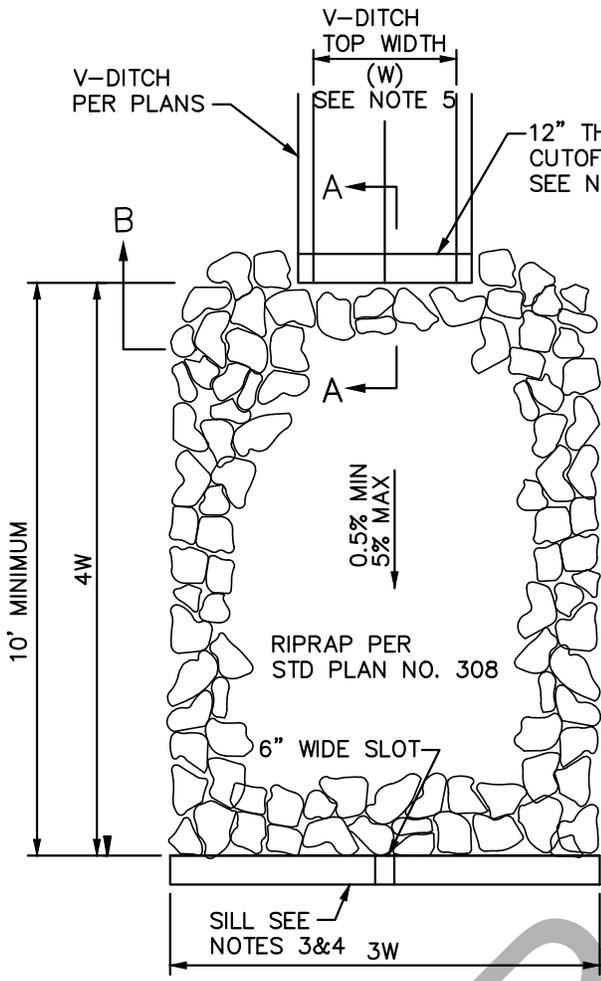
**CITY OF LAKE ELSINORE**  
**RIPRAP ENERGY DISSIPATOR**  
**AND APRON AT WINGWALL**  
**STORM DRAIN OUTFALL**

STANDARD PLAN NO.

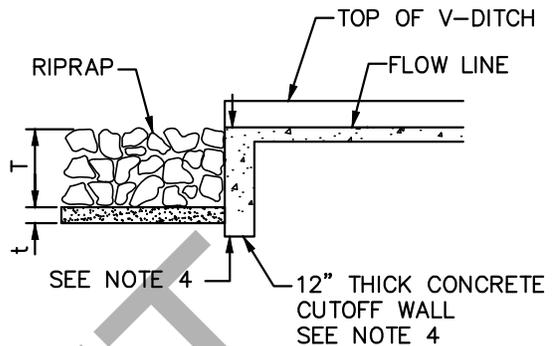
**305**

SHEET 1 OF 1

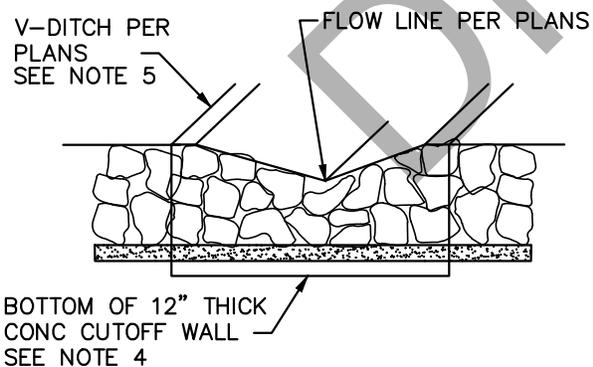
REVISION	BY:	APPROVED	DATE



**PLAN**



**SECTION "A-A"**



**SECTION "B-B"**

**NOTES:**

1. PLANS SHALL SPECIFY FOR THIS STANDARD:  
(A) RIPRAP CLASS AND THICKNESS (T)  
(B) FILTER BLANKET MATERIAL AND THICKNESS (t).
2. ADDITIONAL RIPRAP MAY BE NECESSARY FOR STEEP APPLICATIONS (> 5%).
3. ADD 12" THICK CONCRETE SILL WHEN  $W > 36"$ , OR WHEN REQUIRED BY THE ENGINEER - SEE STD PLAN NO. 308.
4. CUTOFF WALL AND SILL DEPTH TO BE 4' OR RIPRAP THICKNESS (T) PLUS FILTER THICKNESS (t) WHICHEVER IS GREATER.
5. DETAIL MAY BE UTILIZED FOR CIRCULAR CONCRETE DITCH ALSO.
6. FOR 3' WIDE DITCH AT SLOPE OF <5% AND A FLOW RATE < 3.0 CFS, ENERGY DISSIPATOR MAY BE 6' BY 6' No. 2 BACKING PER STD 308.

APPROVED BY: \_\_\_\_\_

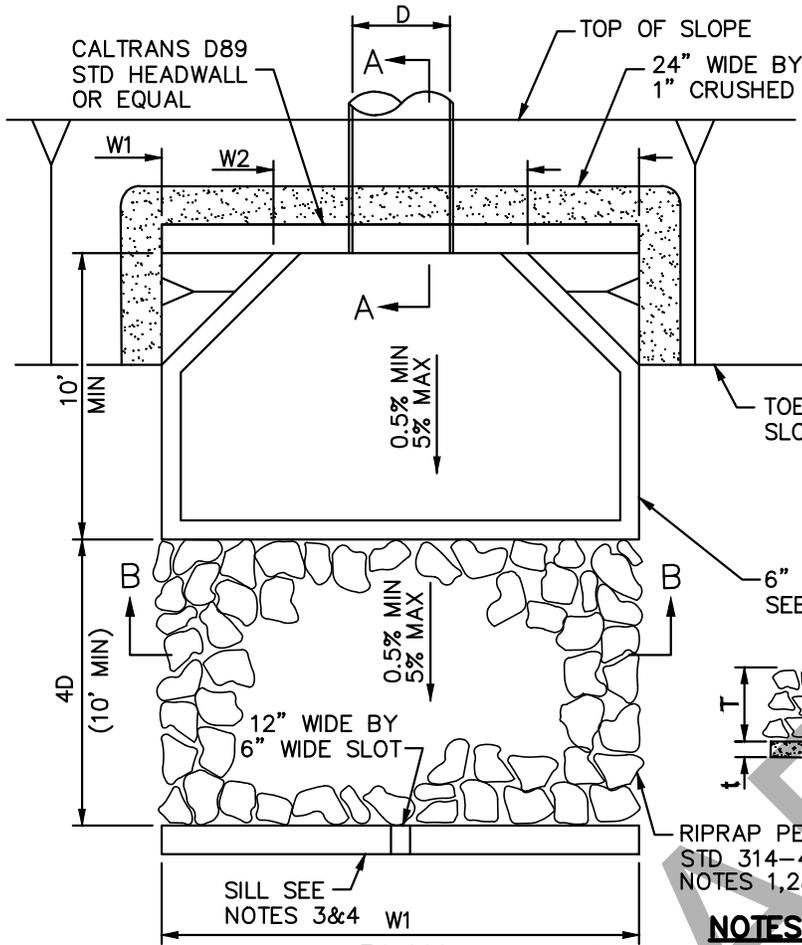
CITY ENGINEER REMON HABIB DATE \_\_\_\_\_

REVISION	BY:	APPROVED	DATE

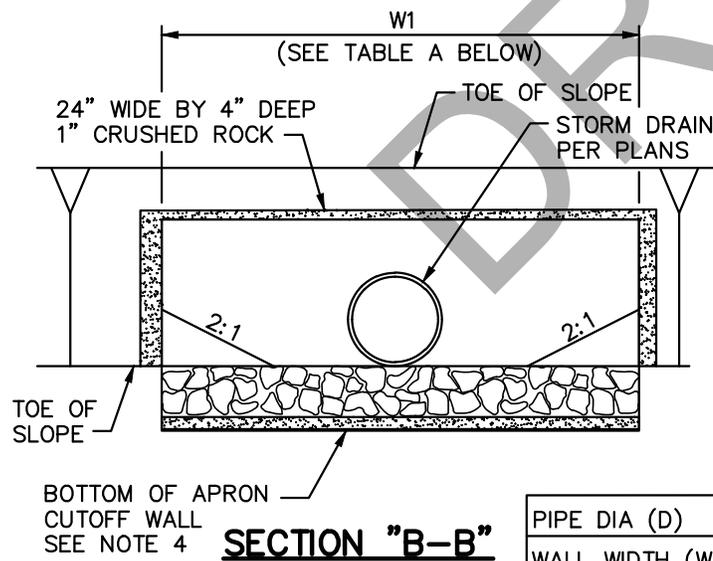


**CITY OF LAKE ELSINORE**

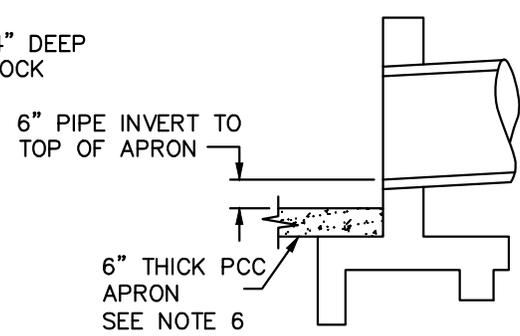
**RIPRAP ENERGY DISSIPATOR AT V-DITCH OUTFALL**



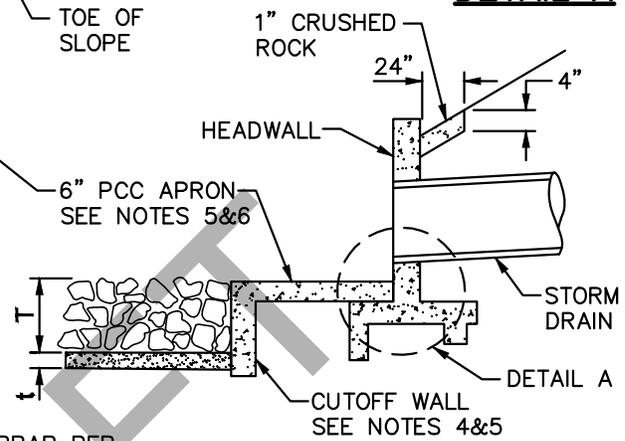
**PLAN**



**SECTION "B-B"**



**DETAIL A**



**SECTION "A-A"**

**NOTES:**

1. PLANS SHALL SPECIFY FOR THIS STANDARD:  
(A) RIPRAP CLASS AND THICKNESS (T)  
(B) FILTER BLANKET MATERIAL AND THICKNESS (t).
2. ADDITIONAL RIPRAP MAY BE NECESSARY FOR STEEP APPLICATIONS (> 5%).
3. ADD 12" THICK CONCRETE SILL WHEN D>36", OR WHEN REQUIRED BY THE ENGINEER -SEE STD PLAN NO. 308.
4. CUTOFF WALL AND SILL DEPTH TO BE 4' OR RIPRAP THICKNESS (T) PLUS FILTER THICKNESS (t) WHICHEVER IS GREATER.
5. CUTOFF WALL TO BE ON BOTH SIDES AND END OF PCC APRON ADJACENT TO RIPRAP.
6. 10' LONG BY 6" THICK CONCRETE APRON WITH #4 BARS AT 18" OC. APRON WIDTH TO MATCH HEADWALL WIDTH (W1).
7. RIPRAP WIDTH TO EQUAL HEADWALL WIDTH (W1).

**TABLE A**

PIPE DIA (D)	18"	21"	24"	27"	30"	36"	42"	48"	54"
WALL WIDTH (W1)	12.7'	13.7'	14.7'	15.7'	16.7'	18.7'	20.7'	22.7'	25.2'
APRON WIDTH (W2)	4.0'	4.0'	4.0'	4.0'	4.0'	4.0'	4.0'	4.0'	4.5'

APPROVED BY: \_\_\_\_\_

CITY ENGINEER REMON HABIB \_\_\_\_\_ DATE \_\_\_\_\_

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**RIPRAP ENERGY DISSIPATOR AND APRON AT STRAIGHT HEADWALL OUTFALL**

STANDARD PLAN NO. **307** SHEET 1 OF 1

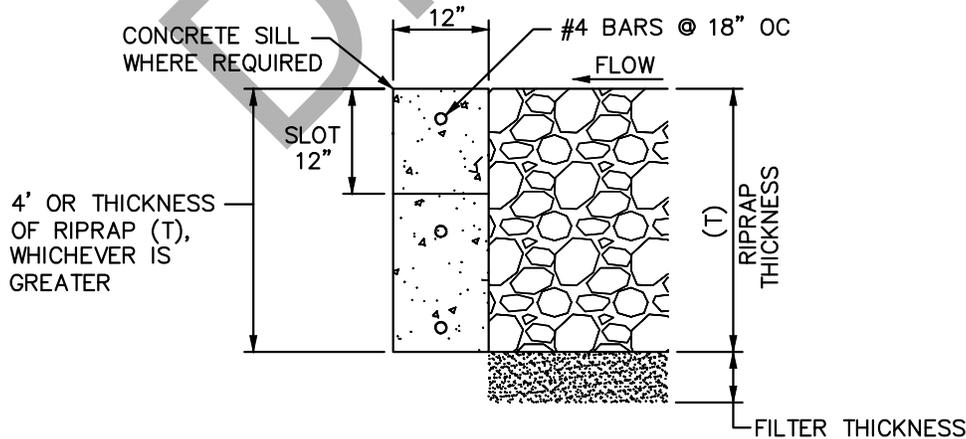
## RIPRAP ENERGY DISSIPATOR SIZING TABLE

DESIGN VELOCITY (FT/SEC)	RIPRAP CLASS	RIPRAP THICKNESS (T) PLACEMENT METHOD A *	RIPRAP THICKNESS (T) PLACEMENT METHOD B *	FILTER MATERIAL **	FILTER THICKNESS (t)
6-8	NO. 2 BACKING	N/A	1.25'	1" CRUSHED ROCK	0.5'
8-13	1/4 TON	N/A	3.3'	1" CRUSHED ROCK	0.75'
13-15	1/2 TON	3.4'	4.3'	1" CRUSHED ROCK	1.0'
15-17	1 TON	4.3'	5.4'	1" CRUSHED ROCK	1.0'
17-20	2 TON	5.4'	N/A	1" CRUSHED ROCK	1.0'

\* FOR RIPRAP GRADATION AND PLACEMENT METHOD DESCRIPTIONS  
SEE CALTRANS STD SPECIFICATIONS SECTION 72-2  
\*\* SEE 1" CRUSHED ROCK GRADATION THIS SHEET

### 1" CRUSHED ROCK GRADATION

SIEVE SIZE	PERCENT (%) PASSING
1-1/2" (37.5 mm)	100
1" (25.0 mm)	90-100
3/4" (19.0 mm)	30-60
1/2" (12.5 mm)	0-20
3/8" (9.5 mm)	-
No. 4 (4.75 mm)	0-5
No. 8 (2.36 mm)	-
ASTM C131 Testing Grading	A



APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



## CITY OF LAKE ELSINORE

### RIPRAP ENERGY DISSIPATOR SIZING AND CONCRETE SILL

STANDARD PLAN NO.

308

SHEET 1 OF 1

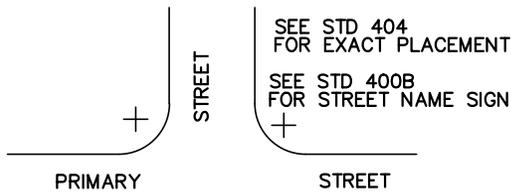
# CITY OF LAKE ELSINORE STANDARD PLANS

## SECTION 4: TRAFFIC

DRAFT

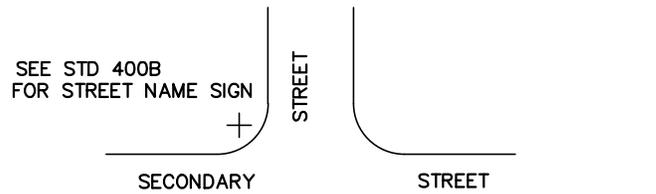
**PRIMARY & PRIMARY INTERSECTION**

ALWAYS LOCATE STREET NAME SIGN ON APPROACHING NEARSIDE OF NORTHEAST CORNER AND SOUTHWEST CORNER. EXCEPTIONS AS APPROVED BY CITY ENGINEER

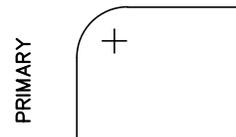


**PRIMARY & SECONDARY INTERSECTION**

ALWAYS LOCATE STREET NAME SIGN ON APPROACHING NEARSIDE OF PRIMARY STREET—REGARDLESS OF STREET DIRECTION EXCEPTIONS AS APPROVED BY CITY ENGINEER



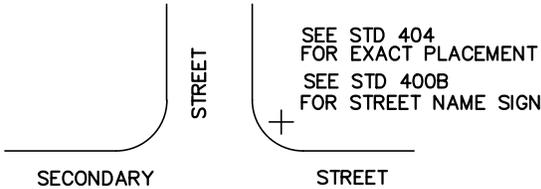
SEE STD 404 FOR EXACT PLACEMENT  
SEE STD 400B FOR STREET NAME SIGN



SEE STD 404 FOR EXACT PLACEMENT  
SEE STD 400B FOR STREET NAME SIGN

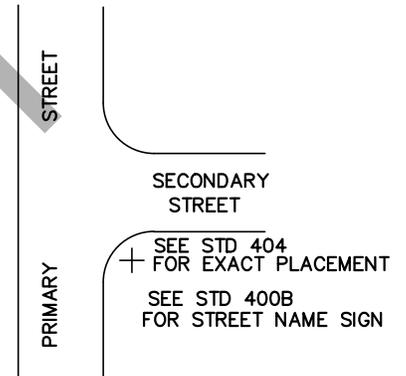
**SECONDARY & SECONDARY INTERSECTION**

ALWAYS LOCATE STREET NAME SIGN ON APPROACHING NEARSIDE OF NORTHEAST CORNER. EXCEPTIONS AS APPROVED BY CITY ENGINEER

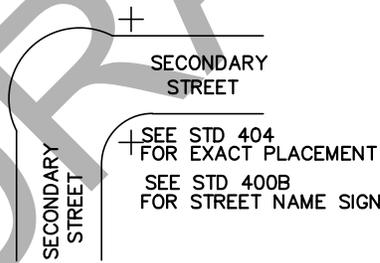


**"T" INTERSECTIONS**

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>		<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 FIELD ENGINEER.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

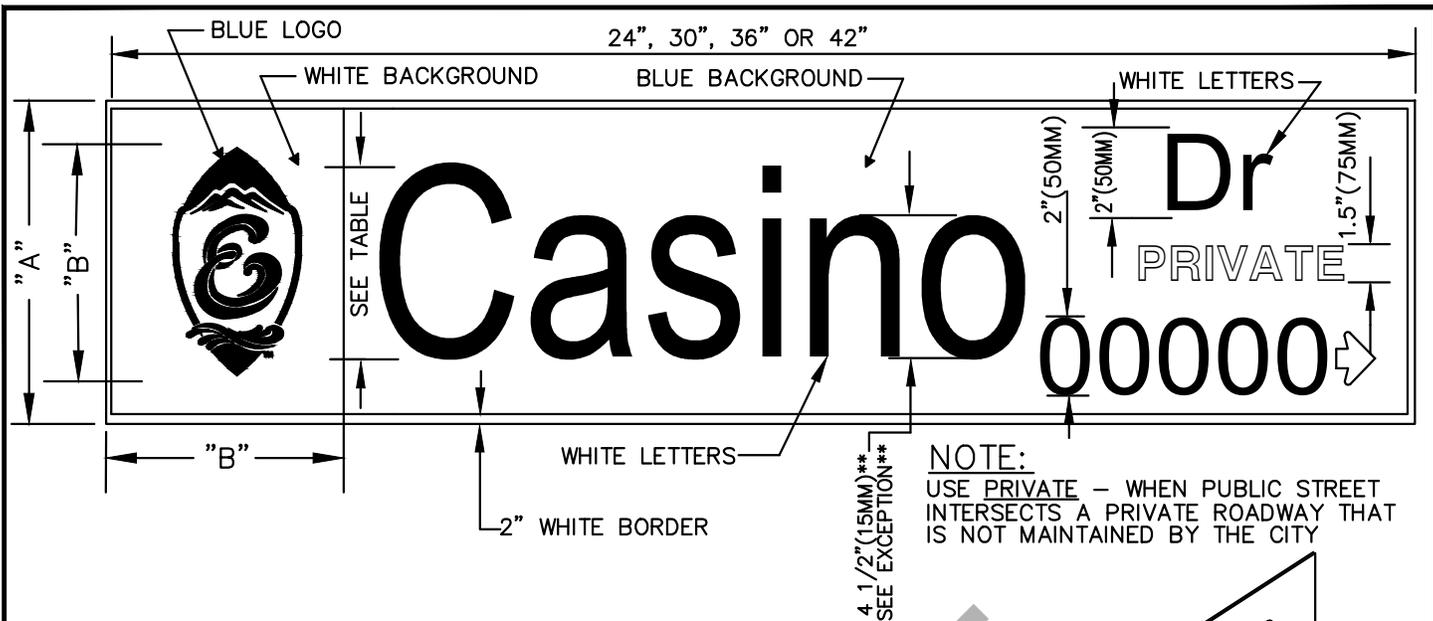
**STREET NAME SIGN  
LOCATIONS**

REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

**400A**

SHEET 1 OF 1



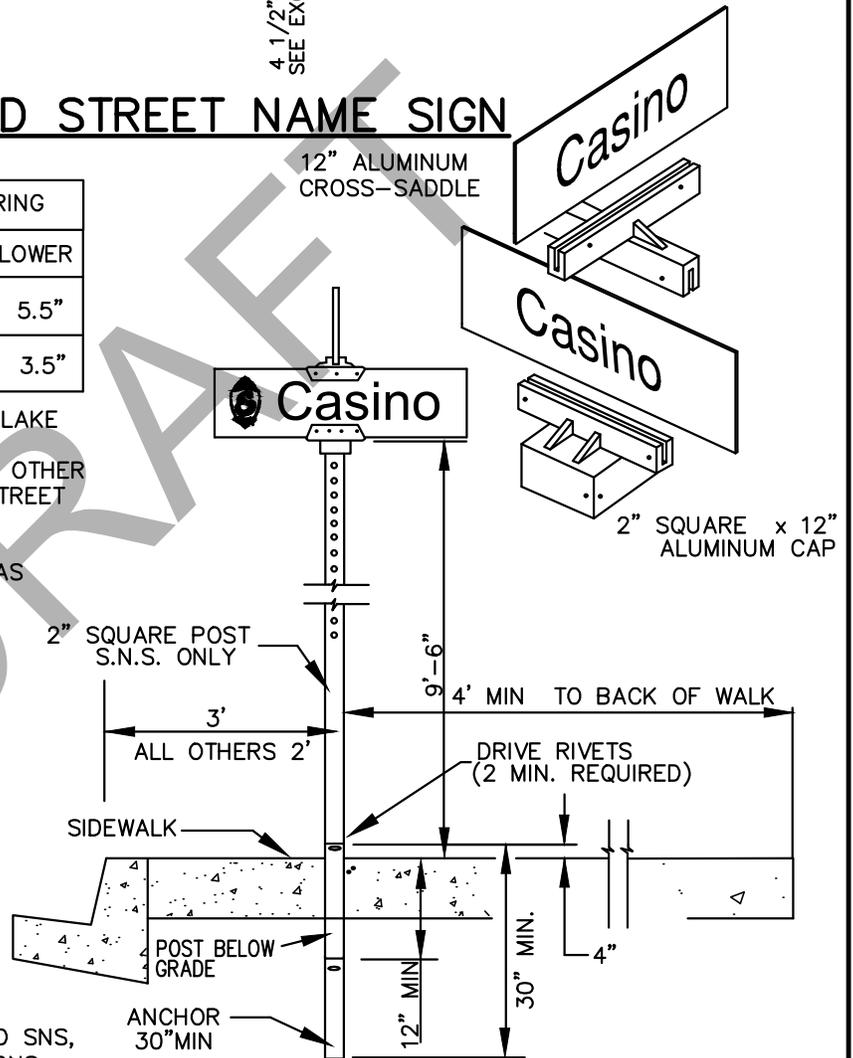
## STANDARD STREET NAME SIGN

	LETTERING					
	A	B	C	D	UPPER	LOWER
TYPE 1	9"	7"	5.88"	3.25"	7"	5.5"
TYPE 2	6.75"	5.88"	4.15"	1.75"	4.5"	3.5"

TYPE 1 INCLUDES ALL STREETS ON CITY OF LAKE ELSINORE GENERAL PLAN CLASSIFIED AS ARTERIALS, MAJORS, SECONDARIES AND ANY OTHER STREET, OF TYPE, THAT INTERSECT THESE STREET CLASSIFICATIONS.

TYPE 2 INCLUDES ALL STREETS CLASSIFIED AS LOCAL AND COLLECTOR.

12" ALUMINUM CROSS-SADDLE



### NOTES:

- EACH SIGN POST SHALL ACCOMPANY TWO STREET NAME SIGN BLADES SEE STD 402 FOR COMPLETE STREET NAME SIGN SPECIFICATIONS SEE STD 404 FOR COMPLETE ADDRESS AND ARROW PLACEMENT SEE STD 407 & 408 FOR COMPLETE SIGN POST INSTALLATION BLOCK NUMBERS NOT DISPLAYED ON INTERSECTING SECONDARY STREETS. FOR SIGNAL MOUNTED SNS, SEE CITY TRAFFIC SIGNAL SPECIAL PROVISIONS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION BY: APPROVED DATE



CITY OF LAKE ELSINORE

STREET NAME SIGN

STANDARD PLAN NO.

400B

SHEET 1 OF 1

**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 42" LONG AS REQUIRED
- C.) SIGN SHEETING MUST BE HIGH PERFORMANCE WIDE ANGLE PRISMATIC LENS REFLECTIVE WHITE SHEETING (3M SCOTCHLITE DIAMOND GRADE DG3) 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 FHWA (FEDERAL HIGHWAY ADMINISTRATION) SERIES C-6" UPPER CASE AND 4½" LOWER CASE. ADDRESS BLOCK NUMBERS MUST BE WHITE FHWA SERIES C-2" STREET NAME SUFFIX MUST BE WHITE FHWA 2" UPPER CASE AND 1.5" LOWER CASE. "PRIVATE" MUST BE WHITE FHWA 1.5" UPPER CASE.  
EXCEPTION: INTERSECTING SECONDARY STREETS USE 5" UPPER CASE AND EQUIVALENT LOWER CASE STREET NAME LETTERS.
- E.) THE LETTER SIZING AND SPACING MUST MEET FHWA SPACING GUIDELINES. MINOR VARIATIONS AS APPROVED BY THE CITY ENGINEER.
- F.) THE CITY EMBLEM MUST BE A BLUE GRAPHIC ON A WHITE 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 SIGN MAY BE FABRICATED USING REFLECTIVE SHEETING MANUFACTURED 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.
- J.) CERTIFICATES OF COMPLIANCE SHALL BE SUPPLIED FOR ALL SIGNS INSTALLED.

2.) POST MATERIALS

- A.) POST MUST BE A TELES PAR 2" SQUARE POST (HOT DIPPED GALVANIZED INSIDE AND OUTSIDE). ALL SIGN POSTS SHALL BE 12 GAUGE STEEL.
- B.) ANCHORS MUST BE TELES PAR 30" OR 36" 2¼" SQUARE ANCHORS AND 2½" SLEEVES. ALL ANCHORS AND SLEEVES SHALL BE 12 GAUGE STEEL.
- C.) DRIVE RIVETS MUST BE ⅜" STEEL COATED IN NICKEL, ZINC, OR CHROMIUM TO RESIST RUST (2 RIVETS MINIMUM REQUIRED PER POST / ANCHOR ASSEMBLY).
- D.) ALUMINUM CAP POST BRACKET MUST BE 2" SQUARE CAP WITH 12" SADDLE TO FIT 0.125 SIGN BLANK PER DETAIL 400B.
- E.) ALUMINUM CROSS SADDLE BRACKET MUST BE 12" SIGN HARDWARE HOLDING BRACKETS. MUST BE MANUFACTURED TO FIT 0.125 SIGN BLADE.

3.) STREET NAME SIGN PLACEMENT

- A.) PRIMARY STREET INTERSECTING SECONDARY STREET LOCATE ON PRIMARY STREET – SEE STD 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.

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB		DATE			<b>STREET NAME SIGN NOTES</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>402</b>	
				SHEET 1 OF 1		

## STANDARD ABBREVIATIONS

ALLEY / ALLY / ALY	AY	LAKE / LAKES	LK
AVENUE / AVE / AVENIDA	AV	LANE	LN
BEACH	BCH	MANOR	MNR
BOULEVARD	BL	MOUNT	MT
BRIDGE	BR	MOUNTAIN	MTN
BROOK	BRK	PARK	PK
CANAL	CNL	PARKWAY	PKWY
CANYON	CYN	PLACE	PL
CENTER	CNTR	PLAZA	PLAZA
CIRCLE	CIR	POINT	PT
COAST	CST	RANCH / RANCHO	RCH
CORNER / CORNERS	COR	RIVER	RV
COURT	CT	ROAD	RD
CREEK	CEK	SPRING / SPRINGS	SPG
DRIVE	DR	SQUARE	SQ
EASTWAY	EWY	STATION	STA
ESTATES	EST	STREET	ST
EXPRESSWAY	EXPWY	SUMMIT	SUM
FIELD / FIELDS	FLD	TERRACE	TER
FORT	FT	TRAIL / TRAILS	TRL
FREEWAY	FWY	VALLEY	VLV
GROVE	GR	VILLAGE	VLG
HEIGHTS	HTS	WALK	WK
HIGHWAY	HWY	WAY	WY
HOME	HM	WESTWAY	WWY
ISLAND / ISLANDS	ISL		
JUNCTION	JCT		

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



## CITY OF LAKE ELSINORE

### STREET NAME ABBREVIATIONS

STANDARD PLAN NO.

403

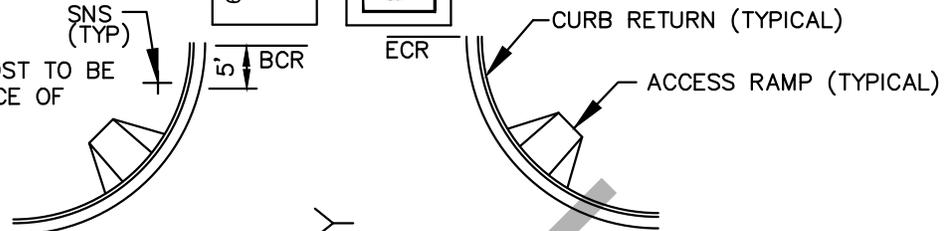
SHEET 1 OF 1

LOCATE SECONDARY STREET NAME SIGN ON THE BOTTOM



NORTH OR EAST  
NOT TO SCALE

STREET NAME SIGN (SNS) POST TO BE A MINIMUM OF 24" FROM FACE OF CURB AND 5' OUT FROM CURB RETURN (SNS ONLY)



SECONDARY

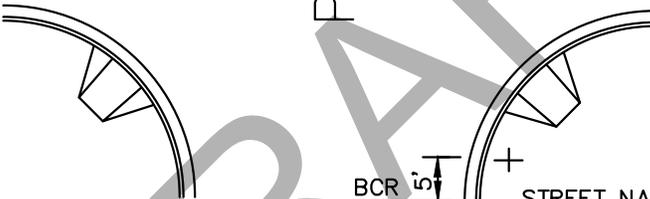
PRIMARY

CORRECT CORNER LOCATION PER STREET CLASSIFICATION SEE STANDARD 400

USE EQUIVALENT METRIC EXCEPTIONS AS APPROVED BY CITY ENGINEER

NOTE: STREET NAME SIGNS FOR INTERSECTING SECONDARY STREETS DO NOT SHOW ADDRESS BLOCK NUMBERS

STREET NAME SIGNS FOR INTERSECTING PRIMARY AND SECONDARY STREETS, AND ABOVE, DO SHOW ADDRESS BLOCK NUMBERS



STREET NAME POST TO BE A MINIMUM OF 24" FROM FACE OF CURB AND 5' OUT FROM CURB RETURN (SNS ONLY)



LOCATE SECONDARY STREET NAME SIGN ON THE BOTTOM

**NOTES:**

- 1.) ADDRESS BLOCK NUMBER POINTS IN THE LEADING DIRECTION – INCREASING ADDRESS NUMBERS FOR SOUTH AND EAST ( ##000➔ ) AND DECREASING ADDRESS NUMBERS FOR WEST AND NORTH ( ➔##999 ).
- 2.) SEE STD 400A FOR CORRECT CORNER LOCATION BASED ON STREET CLASSIFICATION.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



CITY OF LAKE ELSINORE

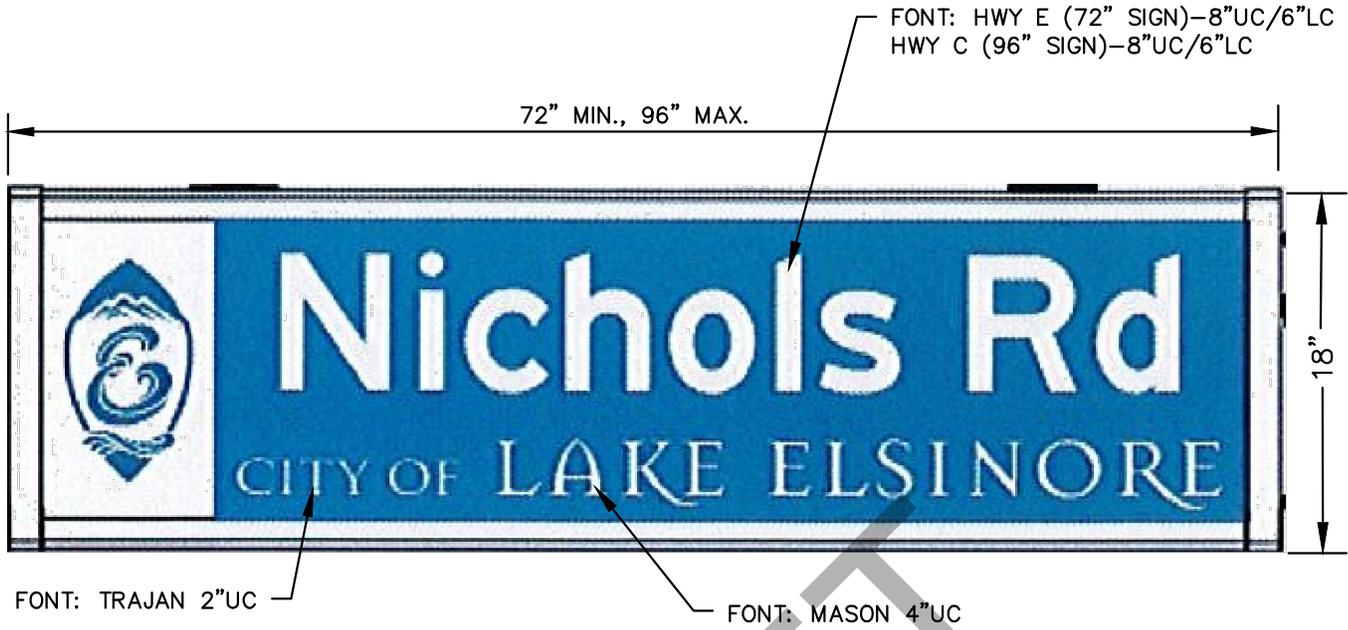
STREET NAME SIGN  
PLACEMENT

REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

404

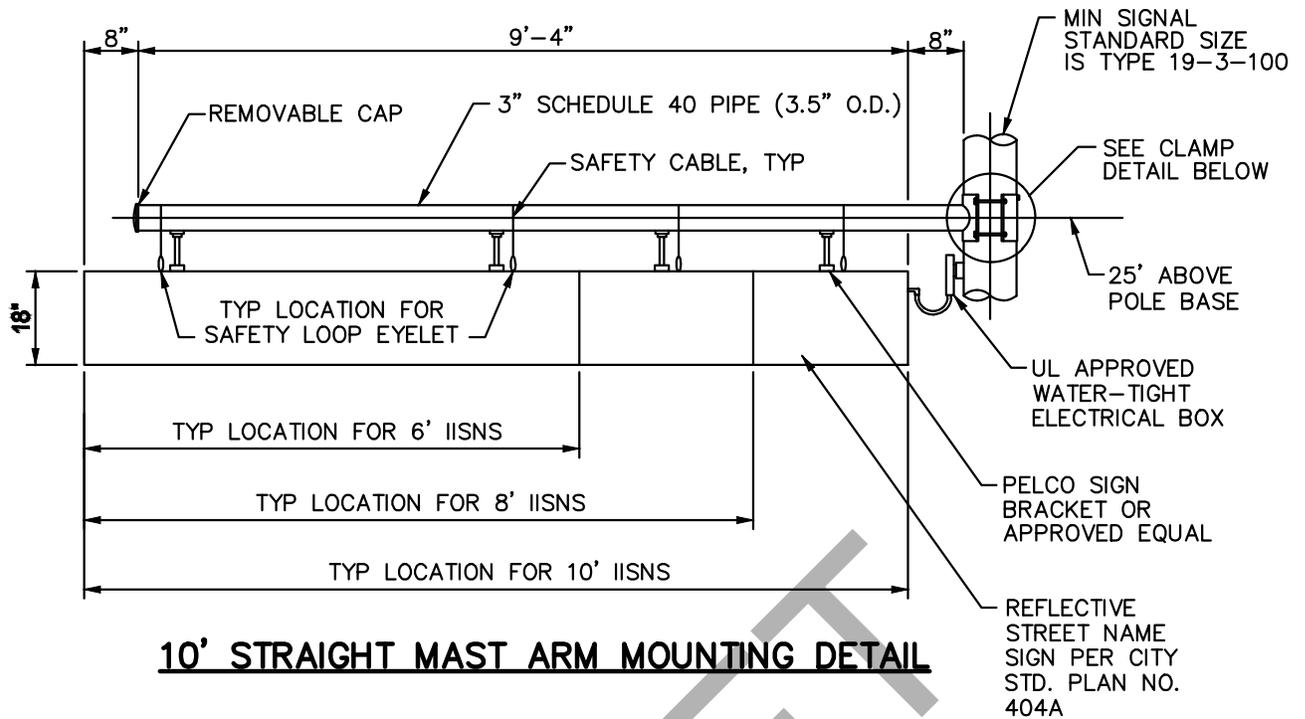
SHEET 1 OF 1



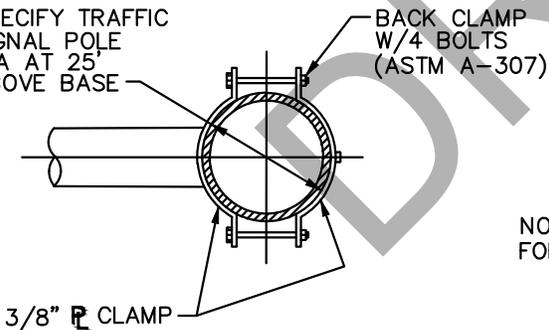
**NOTES:**

- 1.) SIGN SHALL BE MANUFACTURED BY NATIONAL SIGNAL INC. OR CITY-APPROVED EQUAL.
- 2.) SIGN SHALL BE DOUBLE-SIDED.
- 3.) REFLECTIVE SHEETING FOR THE SIGN BACKGROUND SHALL BE 3M DIAMOND GRADE VIP BLUE #1175.
- 4.) REFLECTIVE SHEETING FOR THE LETTERING, AND CITY OF LAKE ELSINORE LOGO SHALL BE 3M DIAMOND GRADE VIP WHITE #4090.
- 5.) SIGN SHALL BE MOUNTED PER CITY STD. PLAN NO. 404B.

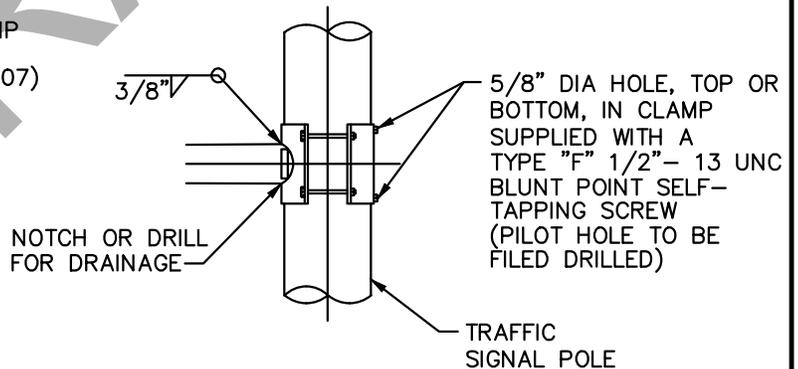
APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB		DATE			<b>REFLECTIVE STREET NAME SIGN SIGNAL-MOUNTED</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>404A</b>	SHEET 1 OF 1



SPECIFY TRAFFIC  
SIGNAL POLE  
DIA AT 25'  
ABOVE BASE



**TOP VIEW**



**ELEVATION**

**CLAMP DETAIL**

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



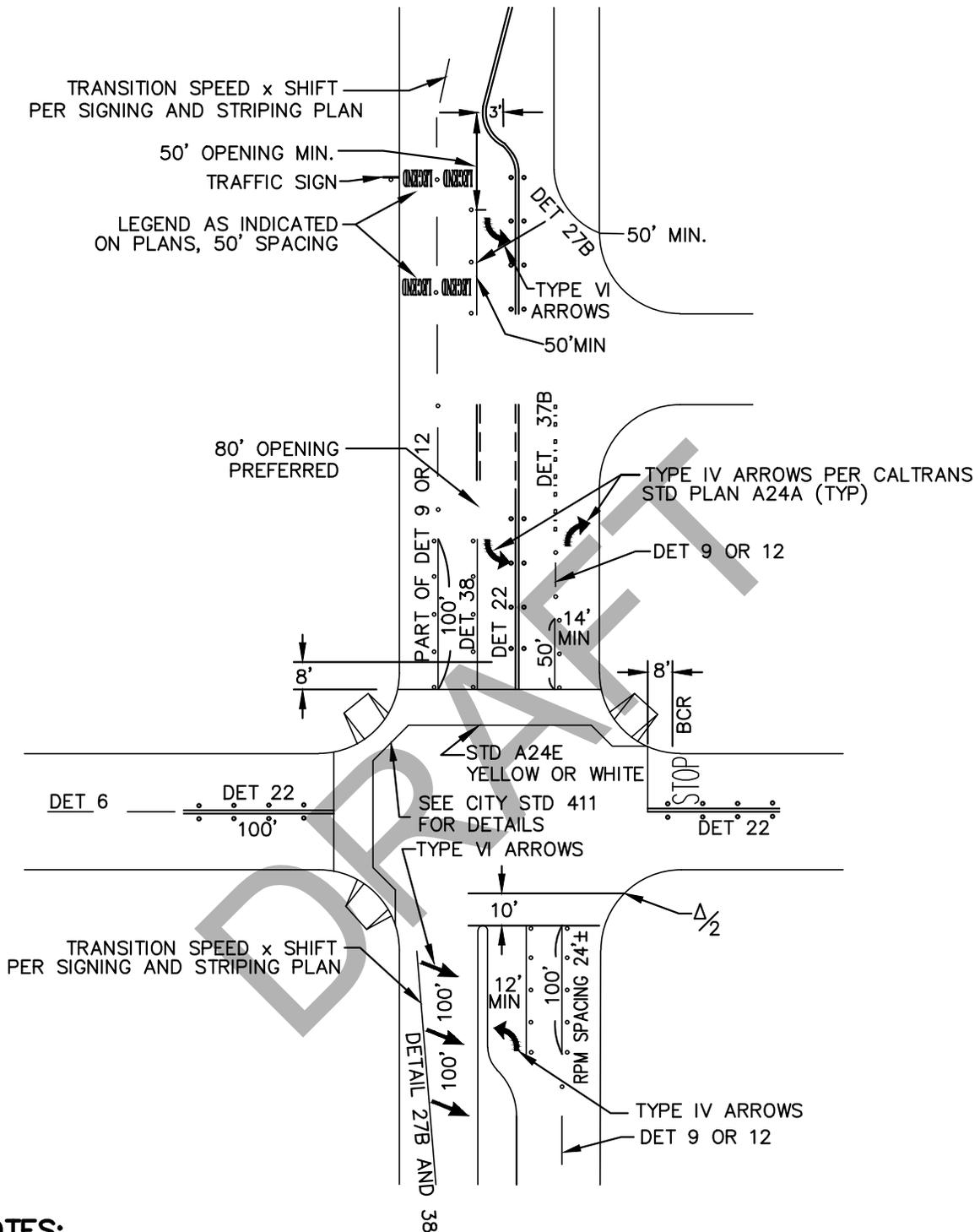
**CITY OF LAKE ELSINORE**

**MAST ARM  
MOUNTING DETAIL**

STANDARD PLAN NO.

**404B**

SHEET 1 OF 1



**NOTES:**

1.) TYPICAL STRIPING DETAIL PER CALTRANS DETAILS OR CITY STANDARDS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**  
**STREET STRIPING & PAVEMENT**  
**LEGEND STANDARDS**  
**AND SPECIFICATIONS**

STANDARD PLAN NO.

**405A**

SHEET 1 OF 1

# 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 LEGENDS" OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, EXCEPT AS NOTED OTHERWISE IN THE FOLLOWING SPECIAL PROVISIONS OR CITY STANDARDS.

## MATERIALS

THERMOPLASTIC STRIPING MATERIAL SHALL CONSIST OF 3M BONDED CORE ALL WEATHER REFLECTIVE ELEMENTS SERIES 50 (OR APPROVED EQUAL) AND SHALL ALLOW FOR BOTH WET AND DRY REFLECTIVITY. THERMOPLASTIC MATERIAL FOR TRAFFIC STRIPES AND PAVEMENT MARKINGS SHALL BE APPLIED AT A MINIMUM THICKNESS OF 0.100 INCH. THERMOPLASTIC TRAFFIC STRIPES AND PAVEMENT MARKINGS WITH ENHANCED WET-NIGHT VISIBILITY SHALL CONSIST OF A SINGLE UNIFORM LAYER OF THERMOPLASTIC AND A LAYER OF BONDED CORE ELEMENTS AND A LAYER OF GLASS BEADS. GLASS BEADS SHALL COMPLY WITH AASHTO M247 TYPE 2.

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.

TYPE "A" MARKERS SHALL BE PLASTIC AND SHALL NOT BE CERAMICS.

## LAYOUT

THE CONTRACTOR SHALL LAYOUT AND CATTRACK THE ALIGNMENT OF THE PROPOSED STRIPING AT 15 FOOT INTERVALS AND "SPOT" THE PROPOSED PAVEMENT LEGENDS 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 LEGENDS AND/OR STRIPING UNTIL THE CATTRACKING AND SPOTTING IS CHECKED AND APPROVED BY THE CITY ENGINEER OR DESIGNEE.

## APPLICATION

ALL PAVEMENT LEGENDS SHALL BE INSTALLED USING A METRIC STENCIL.

TRAFFIC STRIPING AND PAVEMENT LEGENDS SHALL BE SURFACE TREATED AND APPLIED IN TWO (2) LAYERS WITH EQUIPMENT CAPABLE OF DOUBLE DROP APPLICATION. ALL TRAFFIC STRIPING SHALL BE PERFORMED WITH A ROADLINER TRUCK MOUNTED MACHINE. EXCEPTIONS ONLY AS APPROVED BY THE CITY ENGINEER OR DESIGNEE.

APPLY PRIMER OR SURFACE PREPARATION ADHESIVE UNDER THE MANUFACTURER'S INSTRUCTIONS AT A MINIMUM RATE OF 1 GALLON PER 300 SQUARE FEET TO ALLOW TIME FOR THE THERMOPLASTIC PRIMER TO DRY AND BECOME TACKY BEFORE APPLICATION OF THE THERMOPLASTIC.

PREHEAT THERMOPLASTIC USING PREHEATERS WITH MIXERS HAVING A 360-DEGREE ROTATION. APPLY THERMOPLASTIC IN A SINGLE UNIFORM LAYER BY SPRAY OR EXTRUSION METHOD.

### EXTRUDED THERMOPLASTIC

APPLY EXTRUDED THERMOPLASTIC AT A TEMPERATURE OF 400 TO 425 DEGREES F OR AS RECOMMENDED BY THE MANUFACTURER.

APPLY EXTRUDED THERMOPLASTIC FOR A TRAFFIC STRIPE AT A RATE OF AT LEAST 0.36 LB OF THERMOPLASTIC PER FOOT OF 6-INCH-WIDE SOLID STRIPE. THE APPLIED TRAFFIC STRIPE MUST BE AT LEAST 0.060 INCH THICK.

APPLY EXTRUDED THERMOPLASTIC PAVEMENT MARKINGS AT A THICKNESS FROM 0.100 TO 0.150 INCH.

APPLY TYPE 2 GLASS BEADS TO THE SURFACE OF THE MOLTEN THERMOPLASTIC AT A RATE OF AT LEAST 8 LB OF BEADS PER 100 SQ. FT.

### SPRAYABLE THERMOPLASTIC

APPLY SPRAYABLE THERMOPLASTIC AT A TEMPERATURE OF 350 TO 400 DEGREES F.

APPLY SPRAYABLE THERMOPLASTIC FOR A TRAFFIC STRIPE AT A RATE OF AT LEAST 0.24 LB OF THERMOPLASTIC PER FOOT OF 6-INCH-WIDE SOLID STRIPE. THE APPLIED STRIPE MUST BE AT LEAST 0.040 INCH THICK.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**STREET STRIPING & PAVEMENT  
LEGEND STANDARDS  
AND SPECIFICATIONS**

STANDARD PLAN NO.

**405B**

SHEET 1 OF 2

# TRAFFIC STRIPES AND PAVEMENT MARKING REQUIREMENTS:

## APPLICATION (CONTINUATION)

### THERMOPLASTIC WITH ENHANCED WET-NIGHT VISIBILITY

APPLY A THERMOPLASTIC TRAFFIC STRIPE OR PAVEMENT MARKING WITH ENHANCED WET-NIGHT VISIBILITY IN A SINGLE PASS AND IN THE FOLLOWING ORDER:

1. UNIFORM LAYER OF EXTRUDED THERMOPLASTIC
2. LAYER OF HIGH-PERFORMANCE GLASS BEADS.
3. LAYER OF TYPE 2 GLASS BEADS.

APPLY THERMOPLASTIC WITH ENHANCED WET-NIGHT VISIBILITY AT A MAXIMUM SPEED OF 8 MPH.

APPLY THERMOPLASTIC WITH ENHANCED WET-NIGHT VISIBILITY FOR A TRAFFIC STRIPE AT A RATE OF AT LEAST 0.47 LB OF THERMOPLASTIC PER FOOT OF 6-INCH-WIDE SOLID STRIPE. THE APPLIED STRIP MUST BE AT LEAST 0.090 INCH THICK.

APPLY THERMOPLASTIC WITH ENHANCED WET-NIGHT VISIBILITY FOR A PAVEMENT MARKING AT A RATE OF AT LEAST 1.06 LB OF THERMOPLASTIC PER SQUARE FOOT OF MARKING. THE APPLIED PAVEMENT MARKING MUST BE AT LEAST 0.100 INCH THICK.

APPLY HIGH-PERFORMANCE GLASS BEADS AT A RATE OF AT LEAST 6 LB OF GLASS BEADS PER 100 SQ FT OF STRIPE OR MARKING. APPLY TYPE 2 GLASS BEADS AT A RATE OF AT LEAST 8 LB OF GLASS BEADS PER 100 SQ FT OF STRIPE OR MARKING.

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.

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.

ANY STRIPING OR PAVEMENT LEGENDS 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.

CONTRACTOR SHALL INSTALL BLUE MARKERS (3M TYPE DB OR EQUAL) ADJACENT TO FIRE HYDRANTS PER CITY STANDARDS 422A, 422B AND 422C.

NEWLY APPLIED STRIPING AND PAVEMENT LEGENDS SHALL BE PROTECTED FROM DAMAGE BY PUBLIC TRAFFIC OR OTHER CAUSES UNTIL THE THERMOPLASTIC IS THOROUGHLY DRY. ANY EXISTING OR NEWLY APPLIED STRIPING OR PAVEMENT LEGENDS WHICH ARE DAMAGED AS A RESULT OF THE CONSTRUCTION, INCLUDING WHEEL LEGENDS BY PUBLIC TRAFFIC AND THE CONSTRUCTION EQUIPMENT, SHALL BE REAPPLIED BY THE CONTRACTOR.

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.

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 MARKERS TO PORTLAND CEMENT, ASPHALTIC CONCRETE AND CHIP-SEALED ROAD SURFACES. THE COMPOSITION OF THE MATERIAL MUST BE SUCH THAT ITS PROPERTIES WILL NOT DETERIORATE WHEN HEATED TO AND APPLIED AT TEMPERATURES UP TO 425° F. USING EITHER AIR OR OIL JACKETED MELTERS.

REFLECTIVE PAVEMENT 3M TYPE MARKERS SHALL BE PLACED ON A LOCATION ESTABLISHED BY THE APPLICABLE CALTRANS STRIPING DETAIL NOTED ON THE APPROVED STRIPING PLAN.

EXISTING TRAFFIC STRIPING AND PAVEMENT LEGENDS THAT DO NOT CONFORM TO THE APPROVED PLAN SHALL BE REMOVED BY WET SANDBLASTING AND/OR GRINDING MACHINE AS APPROVED BY CITY TRAFFIC ENGINEER OR DESIGNEE. BLACKOUT PAINTING OF EXISTING NON CONFORMING TRAFFIC STRIPING OR PAVEMENT LEGENDS SHALL NOT BE ALLOWED.

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.

THERMOPLASTIC SHALL BE APPLIED TO ALL PAVEMENT LEGENDS AT 80 TO 120 MILS THICK WITH THE EXCEPTION OF SPEED LEGENDS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



## CITY OF LAKE ELSINORE

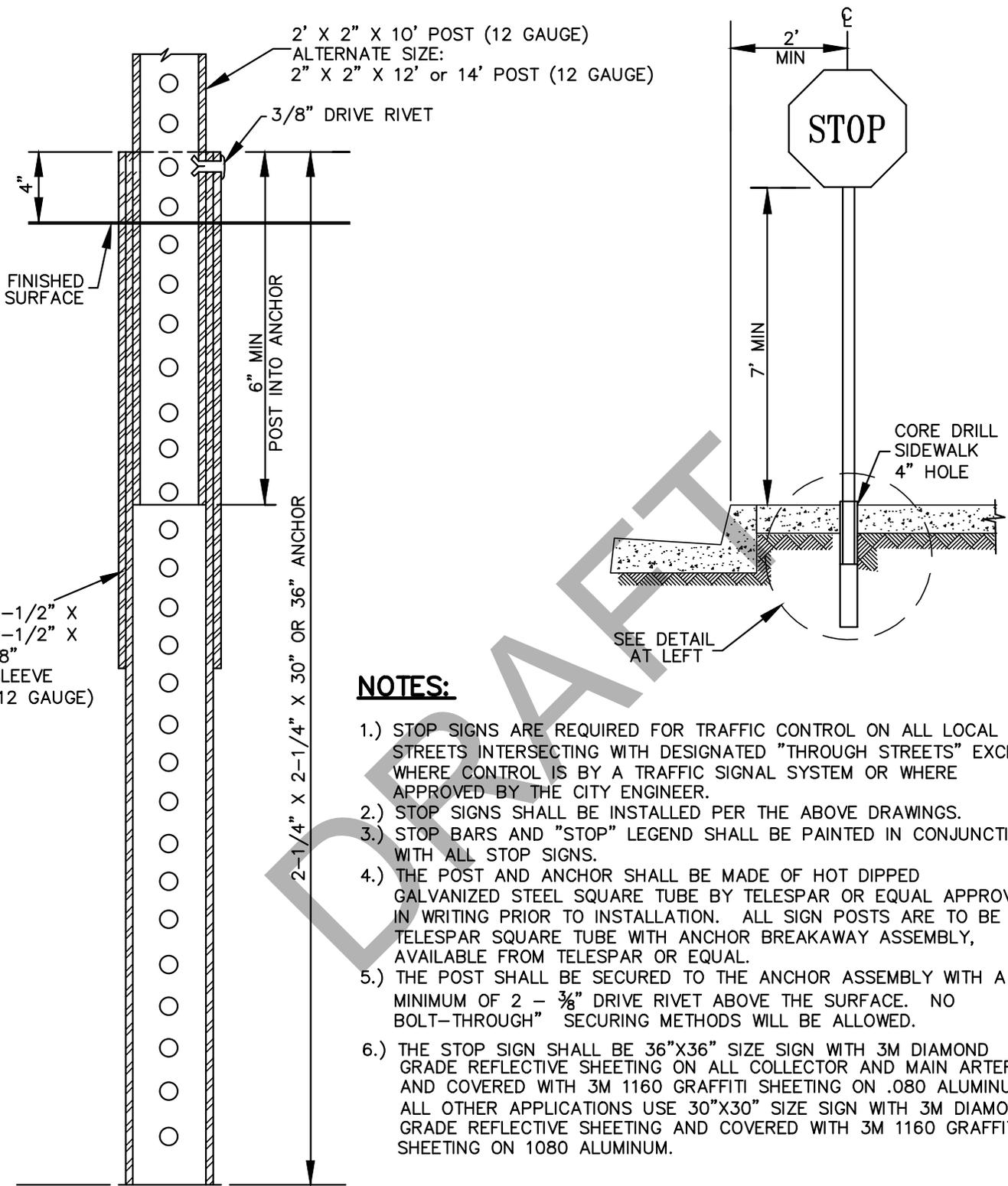
### STREET STRIPING & PAVEMENT LEGEND STANDARDS AND SPECIFICATIONS

STANDARD PLAN NO.

**405B**

SHEET 2 OF 2

REVISION	BY:	APPROVED	DATE



**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 TELES PAR 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 TELES PAR OR EQUAL.
- 5.) THE POST SHALL BE SECURED TO THE ANCHOR ASSEMBLY WITH A MINIMUM OF 2 - 3/8" DRIVE RIVET ABOVE THE SURFACE. NO BOLT-THROUGH" SECURING METHODS WILL BE ALLOWED.
- 6.) THE STOP SIGN SHALL BE 36"X36" SIZE SIGN WITH 3M DIAMOND GRADE REFLECTIVE SHEETING ON ALL COLLECTOR AND MAIN ARTERIALS AND COVERED WITH 3M 1160 GRAFFITI SHEETING ON .080 ALUMINUM. ALL OTHER APPLICATIONS USE 30"X30" SIZE SIGN WITH 3M DIAMOND GRADE REFLECTIVE SHEETING AND COVERED WITH 3M 1160 GRAFFITI SHEETING ON 1080 ALUMINUM.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

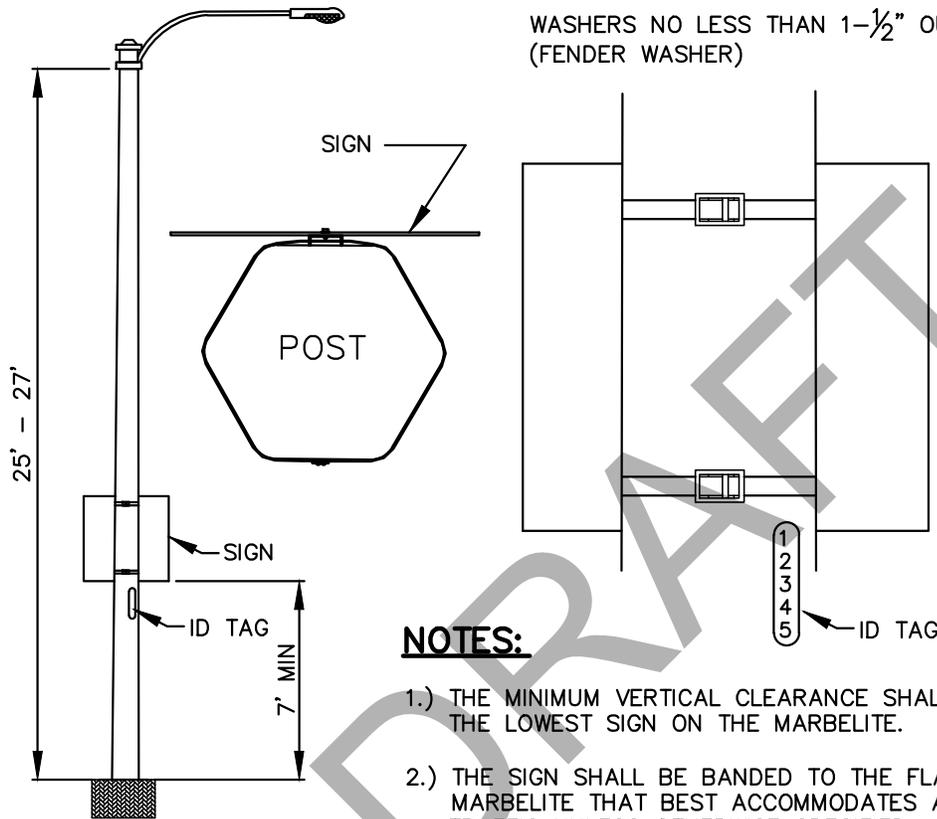
**STOP SIGN  
INSTALLATION**

STANDARD PLAN NO.

**406A**

SHEET 1 OF 1

- BAND-IT - C406 OR EQUAL. 316 STAINLESS STEEL  
3/4" OR 19.05 mm WIDTH  
.030" OR 0.76 mm 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 19.05 mm
- 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° 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 MARBELITE 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.
- 6.) INSTALLATION OF 2 OR MORE SIGNS ON A SINGLE POST SHALL NOT OVERLAP. SIGNS SHOULD HAVE A 1" GAP BETWEEN EACH SIGN.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**MARBELLITE  
SIGN INSTALLATION**

STANDARD PLAN NO.

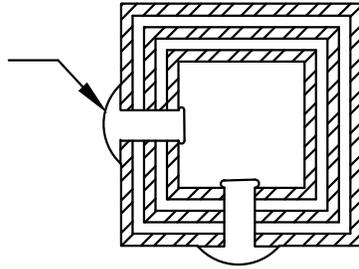
**406B**

SHEET 1 OF 1

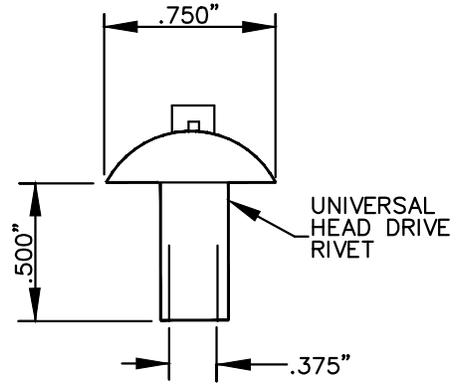
RIVET LOCATIONS  
(SEE NOTE 6 ON  
STD No 408)

DIRECTION OF  
TRAFFIC FLOW

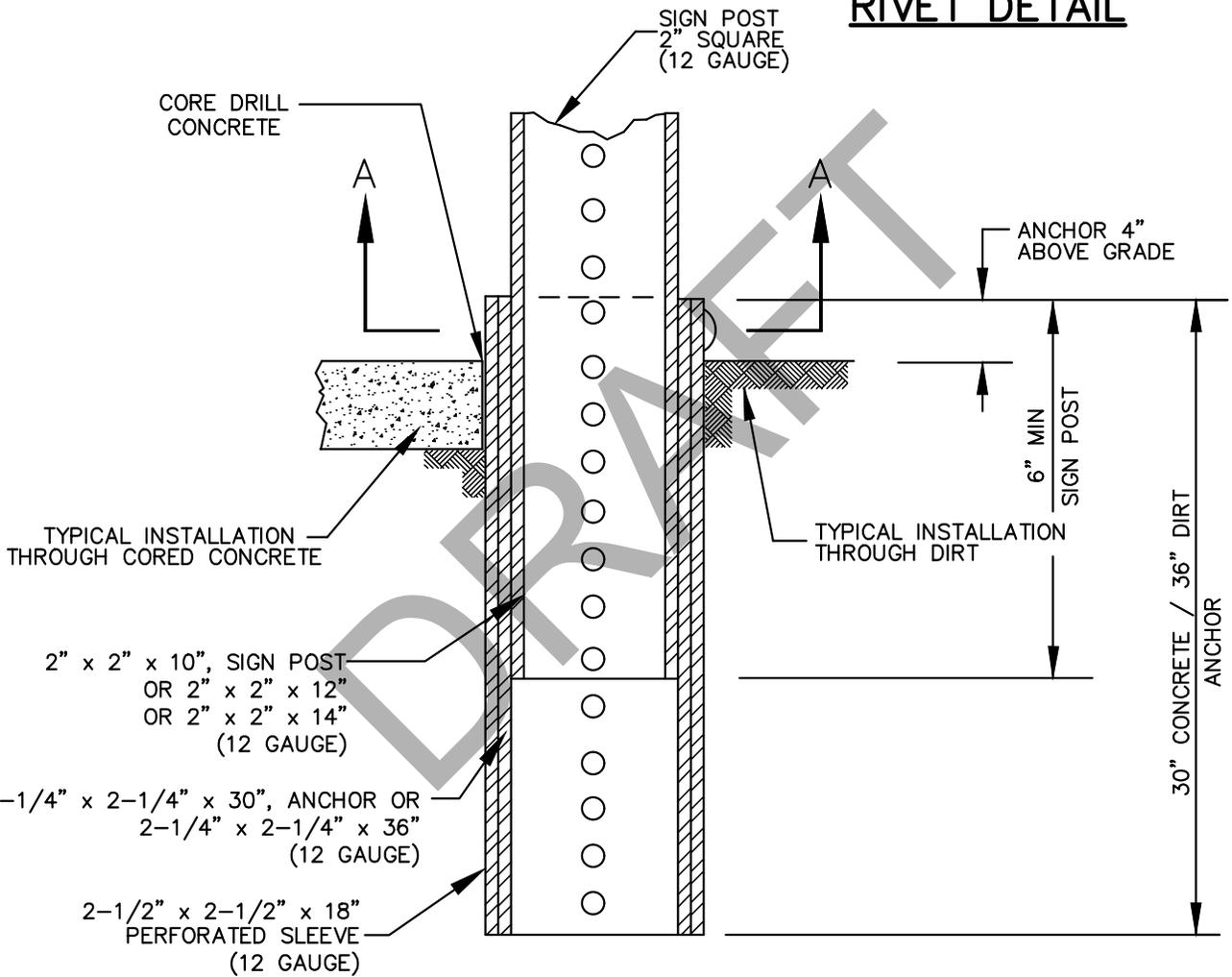
STREET  
SIDE  
OF  
POST



**SECTION "A-A"**



**RIVET DETAIL**



**TYPICAL SECTION**

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**SIGN POST INSTALLATION**

STANDARD PLAN NO.

**407**

SHEET 1 OF 1

**NOTES:**

- 1.) SQUARE PERFORATED STEEL TUBE POSTS WITH TWO PIECE ANCHOR AND SLEEVE, "TELESPAR", SHALL BE USED FOR ALL TRAFFIC CONTROL AND INFORMATIONAL SIGNS WITHIN ROAD RIGHT-OF-WAY.
- 2.) THE NUMBER OF POSTS REQUIRED FOR SIGN INSTALLATION SHALL BE DETERMINED BY THE AREA OF THE SIGN OR COMBINATION OF SIGNS TO BE INSTALLED. A SINGLE POST SHALL BE USED WHERE BOTH THE LENGTH AND WIDTH ARE 48" OR LESS. DOUBLE POSTS SHALL BE USED WHERE EITHER THE LENGTH OR THE WIDTH EXCEEDS 48"
- 3.) THE 2 PIECE ANCHOR AND SLEEVE ASSEMBLY SHALL CONSIST OF A 2 1/4" SQUARE BY 30" (THROUGH SIDEWALK) OR 36" (THROUGH SOIL) ANCHOR WITH A 2 1/2" SQUARE BY 18" SLEEVE. ALL SLEEVES AND ANCHORS SHALL BE 12 GAUGE.
- 4.) THE ANCHOR AND SLEEVE ASSEMBLIES SHALL BE DRIVEN SIMULTANEOUSLY UNTIL ONLY 4" REMAINS ABOVE GROUND LEVEL.
- 5.) ALL DIRT SHALL BE REMOVED FROM THE INSIDE TOP 6" MIN. OF THE ANCHOR ASSEMBLY TO ALLOW FOR INSTALLATION OF THE SIGN POST.
- 6.) INSTALL THE 2" SQUARE SIGN POST MINIMUM 6" INTO THE ANCHOR ASSEMBLY AND SECURE IN PLACE WITH TWO 3/8" DRIVE RIVETS AS SHOWN. THE RIVETS SHALL BE INSTALLED ON THE SIDE FACING TRAFFIC FLOW AND THE SIDE OF APPROACHING TRAFFIC AS SHOWN IN ORDER TO ACHIEVE THE MAXIMUM BREAK-AWAY EFFECT.
- 7.) INSTALLATION ACCORDING TO THESE REQUIREMENTS IS ESSENTIAL TO MAINTAIN THE BREAK-AWAY CHARACTERISTICS OF THE POST SYSTEM. UNDER NO CIRCUMSTANCES SHALL THE ANCHOR ASSEMBLY BE SECURED IN CONCRETE FOOTINGS.
- 8.) THE BOTTOM OF THE LOWEST SIGN ON THE POST SHALL BE A MINIMUM OF 7 FEET ABOVE THE FINISHED SURFACE.
- 9.) SEE STANDARD PLAN NO. 409 FOR PLACEMENT OF SIGN POST.
- 10.) ALL ANCHOR ASSEMBLIES SHALL BE CORE DRILLED WITH THREE (3") INCHES DIAMETER THROUGH CONCRETE AND ASPHALT.
- 11.) ALL SIGNS ATTACHED TO PERFORATED POSTS SHALL HAVE ZINC COATED OR S.S. WASHERS BEHIND THE RIVET THAT ARE LARGER THAN THE HEAD OF THE RIVET (FENDER WASHERS PREFERRED).
- 12.) ALL REGULATORY, WARNING AND GUIDE SIGNS INSTALLED SHALL BE 0.080 INCHES IN THICKNESS WITH SHEETING.
- 13.) ALL SIGNS 36" OR LARGER SHALL BE INSTALLED WITH BACK BRACES SPECIFICALLY DESIGNED FOR 2" SQUARE PERFORATED POSTS (2" RISE).
- 14.) ALL SIGN 50" OR GREATER SHALL BE INSTALLED WITH 1-1/2"X1-1/2" ALUMINUM U-CHANNEL BACK BRACE THAT ARE SPECIFICALLY DESIGNED FOR 2" SQUARE PERFORATED POSTS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

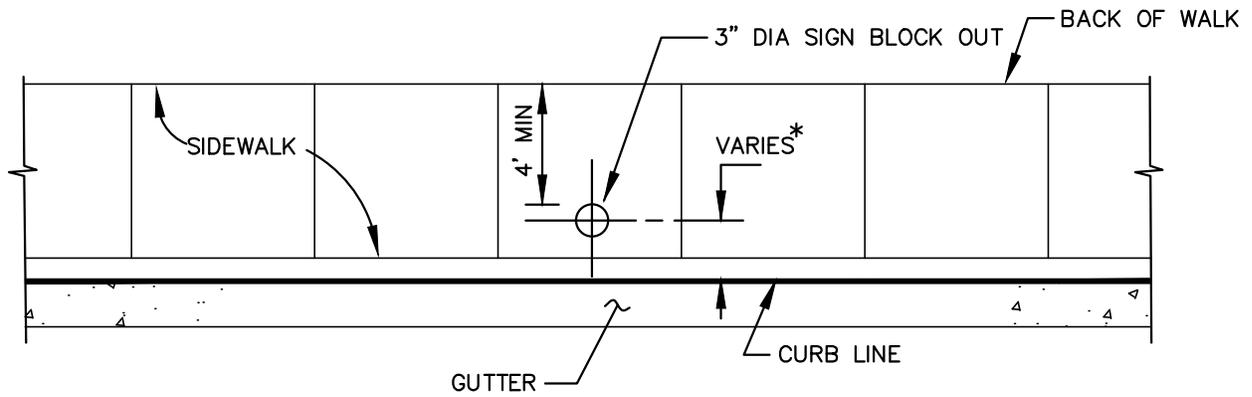
**SIGN POST INSTALLATION  
NOTES**

REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

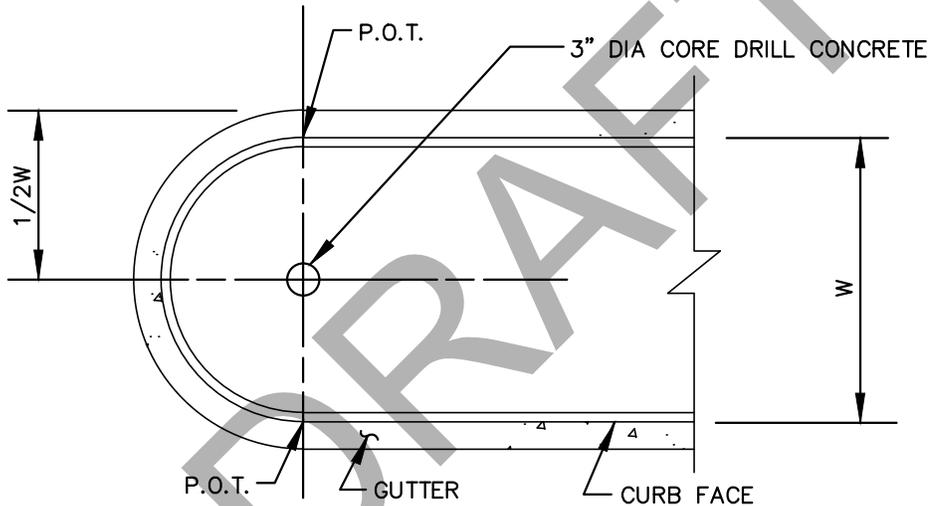
**408**

SHEET 1 OF 1



## SIDEWALK LOCATION

\* DISTANCE DETERMINED BY WIDTH OF SIGN, 18" MINIMUM.



## MEDIAN LOCATION

### NOTES:

- 1.) SIGN POST 3" CORE DRILL SHALL BE USED FOR ANY SIGN IN CONCRETE.
- 2.) SIGNS LARGER THAN 48 INCHES OR LOCATIONS WHERE SIDEWALKS ARE LESS THAN 5 FEET WIDE, SIGN POST MUST BE INSTALLED BEHIND THE SIDEWALK.
- 3.) SEE STANDARD PLAN NO. 213 FOR SIDEWALK PLACEMENT AROUND OBSTRUCTIONS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



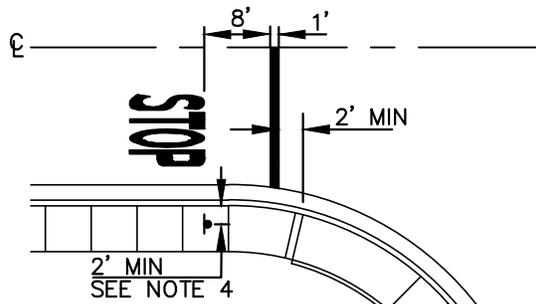
**CITY OF LAKE ELSINORE**

**SIGN POST  
BLOCK OUT**

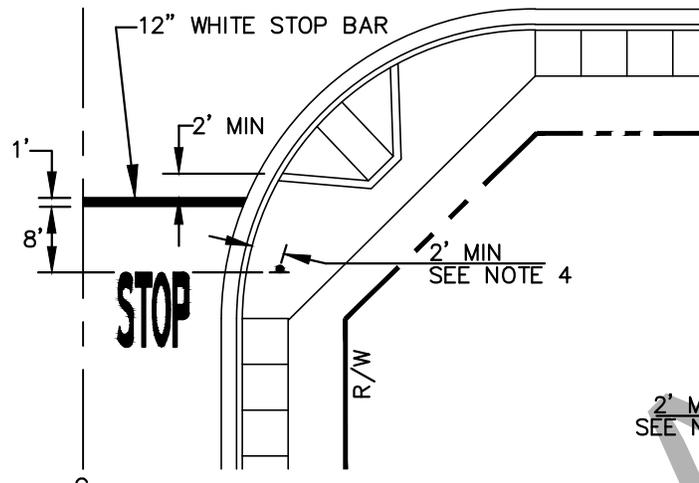
STANDARD PLAN NO.

**409**

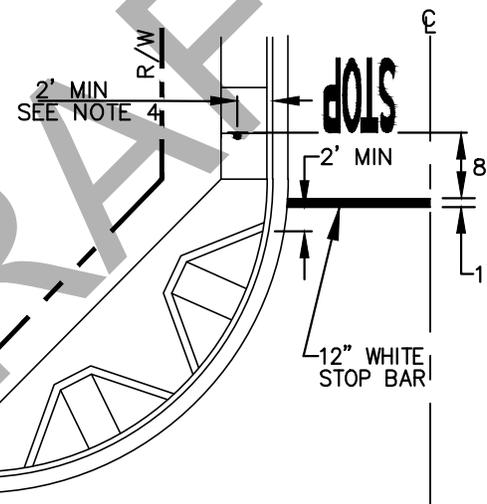
SHEET 1 OF 1



**TYPE II RAMP**



**SINGLE TYPE I RAMP**



**DUAL TYPE I RAMPS**

**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 BAR AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC. STOP BAR PLACED TO THE EDGE OF A.C. PAVEMENT.
- 4.) IF SIDEWALK IS LESS THAN 6' WIDE , THE SIGN AND POST SHALL BE INSTALLED BEHIND THE SIDEWALK.

APPROVED BY: \_\_\_\_\_

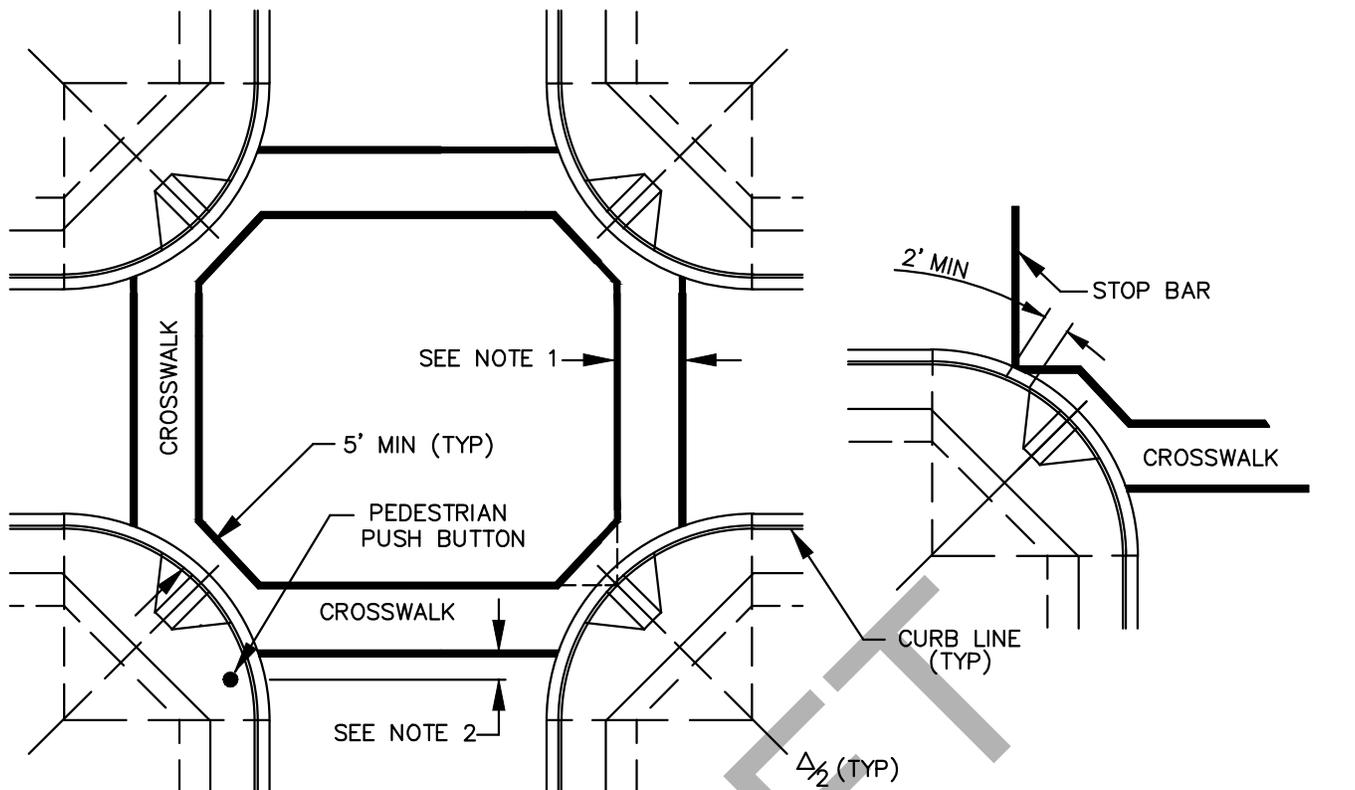
CITY ENGINEER REMON HABIB DATE \_\_\_\_\_

REVISION	BY:	APPROVED	DATE

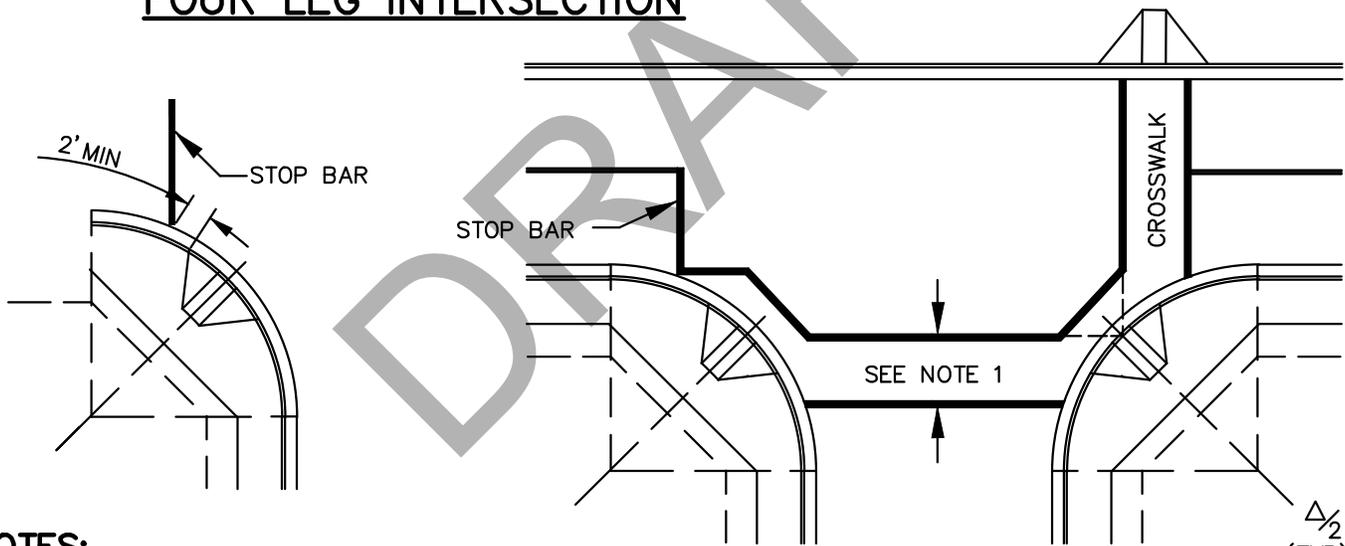


**CITY OF LAKE ELSINORE**

**STOP BAR LEGEND PLACEMENT**



**FOUR LEG INTERSECTION**



**"T" INTERSECTION**

**NOTES:**

- 1.) CROSSWALK WIDTHS:  
 10' (INSIDE TO INSIDE) CROSSWALK FOR ROAD WIDTH 44' OR LESS  
 12' (INSIDE TO INSIDE) CROSSWALK FOR ROAD WIDTH MORE THAN 44'.
- 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.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



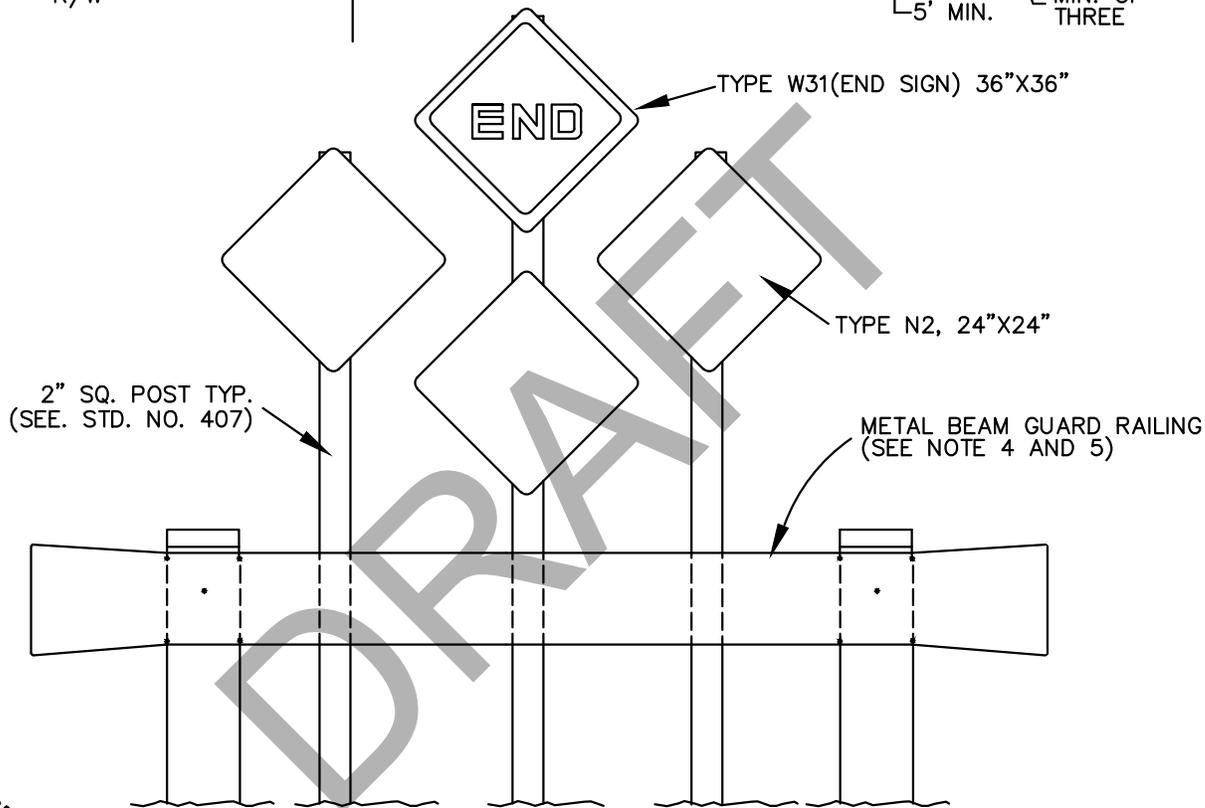
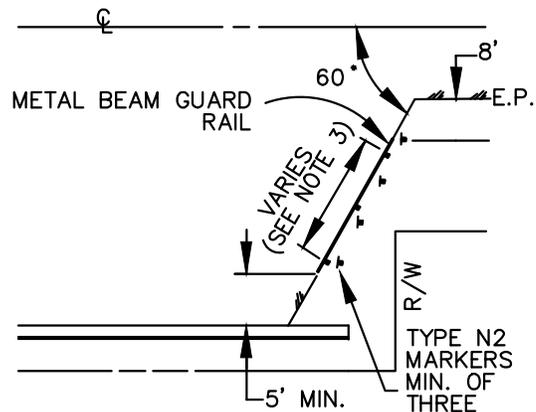
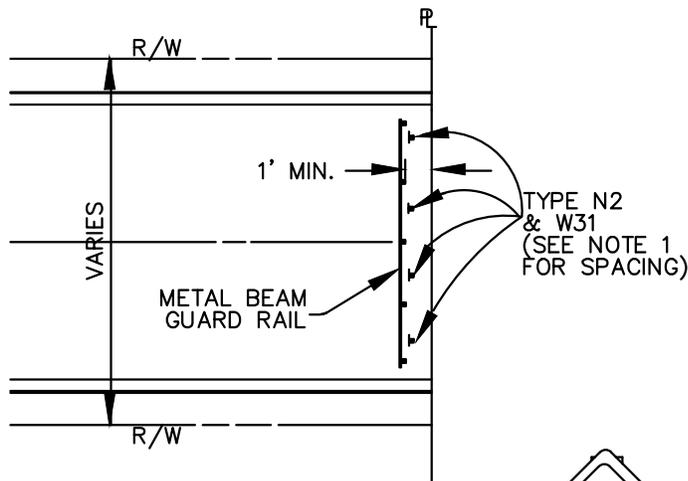
**CITY OF LAKE ELSINORE**

**CROSSWALK  
LOCATION**

STANDARD PLAN NO.

**411**

SHEET 1 OF 1



**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.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



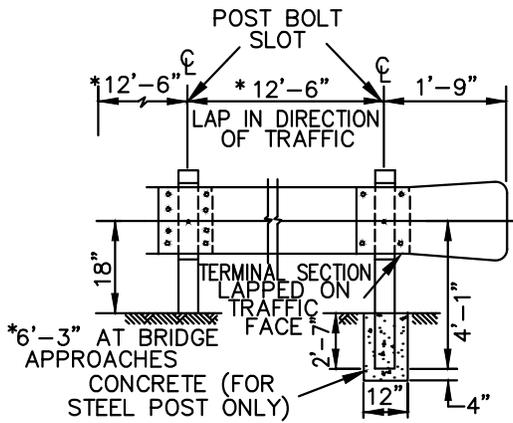
**CITY OF LAKE ELSINORE**

**METAL BEAM  
GUARD RAILING**

STANDARD PLAN NO.

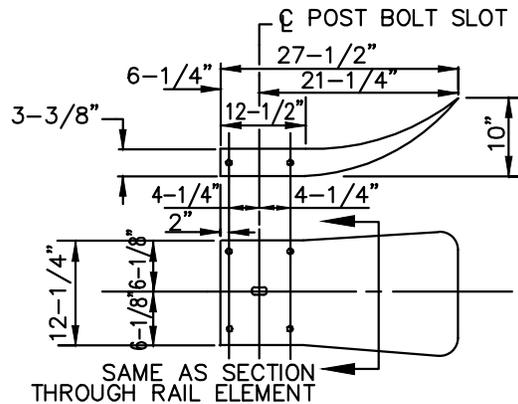
**413A**

SHEET 1 OF 1

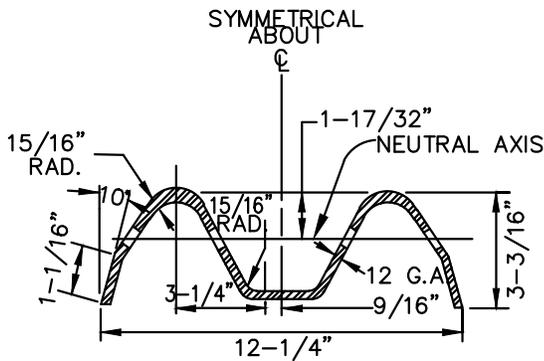


### INSTALLATION

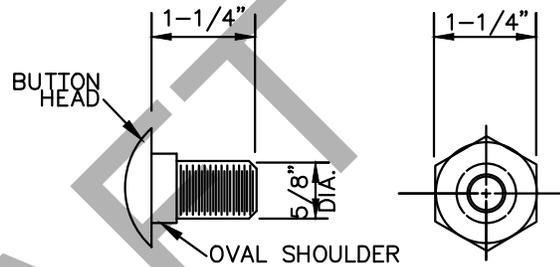
NOTE: GUARD RAILING FLARES AT BRIDGE APPROACHES SHALL HAVE A MINIMUM RADIUS OF 150'.



### TERMINAL SECTION

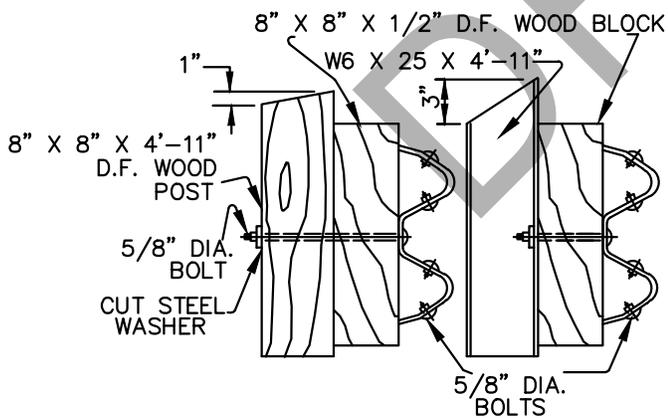


### SECTION THROUGH RAIL ELEMENT

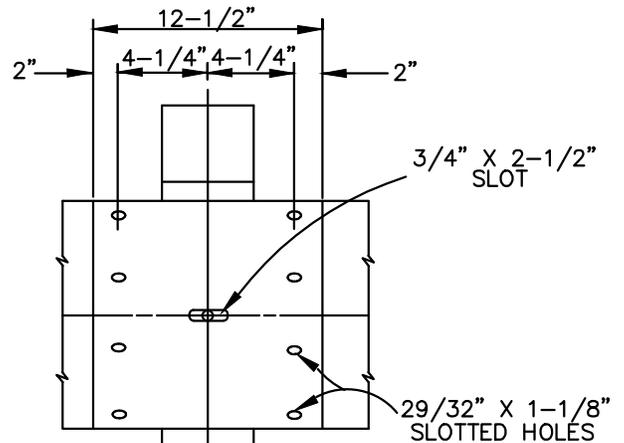


### SPLICE BOLT AND NUT

POST BOLT: SIMILAR EXCEPT LENGTH



### ARRANGEMENT OF POSTS



### RAIL SPLICE

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



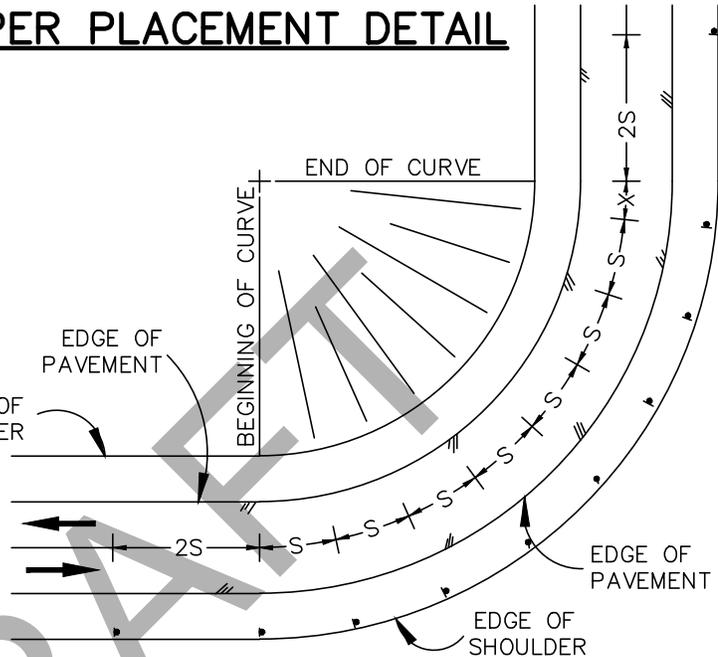
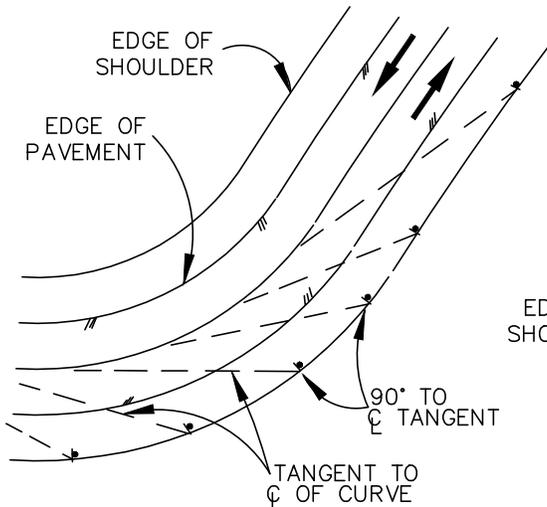
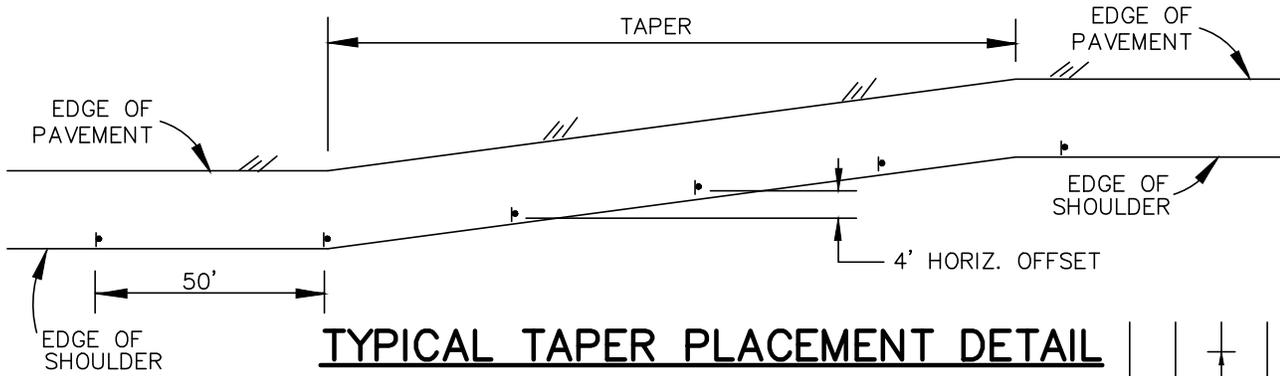
CITY OF LAKE ELSINORE

METAL BEAM GUARD  
RAILING DETAILS

STANDARD PLAN NO.

413B

SHEET 1 OF 1



**CURVE PLACEMENT DETAIL**

**SPACING DETAIL**

TABLE 1

R in feet	S in feet
50'	20'
75'	20'
100'	25'
150'	30'
200'	35'
300'	40'
400'	40'
500'	40'
600'	40'
700'	75'
800'	80'
900'	85'
1000'	90'
1200'	100'
1400'	110'
1600'	115'
1800'	125'
2000'	130'

**NOTES:**

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

**LEGEND:**

- S = DELINEATOR SPACING IN FEET.  $S = \sqrt[3]{30R - 50}$ .
- R = CENTERLINE CURVE RADIUS IN FEET.
- = ALTERNATING GUIDE MARKERS TYPE F CLASS I
- X = DISTANCE REMAINING WITHIN CURVE FROM LAST CALCULATED DELINEATOR TO END OF CURVE.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION BY: APPROVED DATE



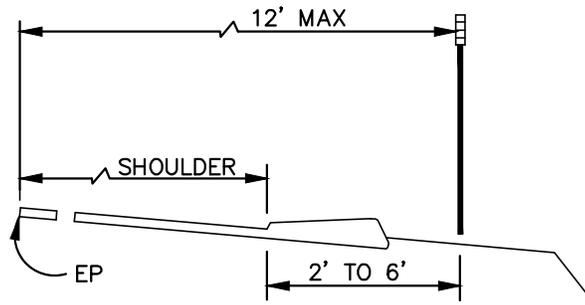
**CITY OF LAKE ELSINORE**

**GUARD MARKING  
PLACEMENT**

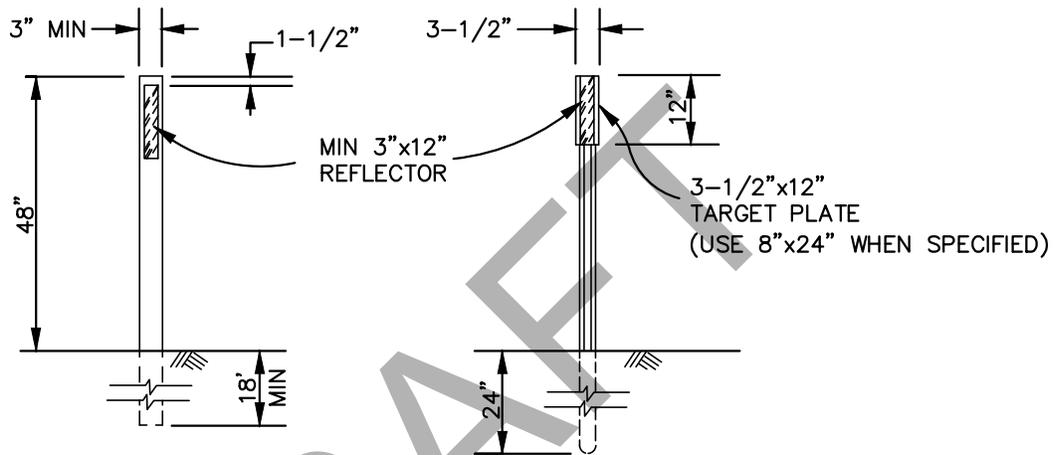
STANDARD PLAN NO.

**415**

SHEET 1 OF 1



**DELINEATOR POSITIONING**



**CLASS 1 FLEXIBLE POST      CLASS 2 METAL POST**  
**DELINEATORS**

**DELINEATOR REFLECTORIZATION**

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.

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REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

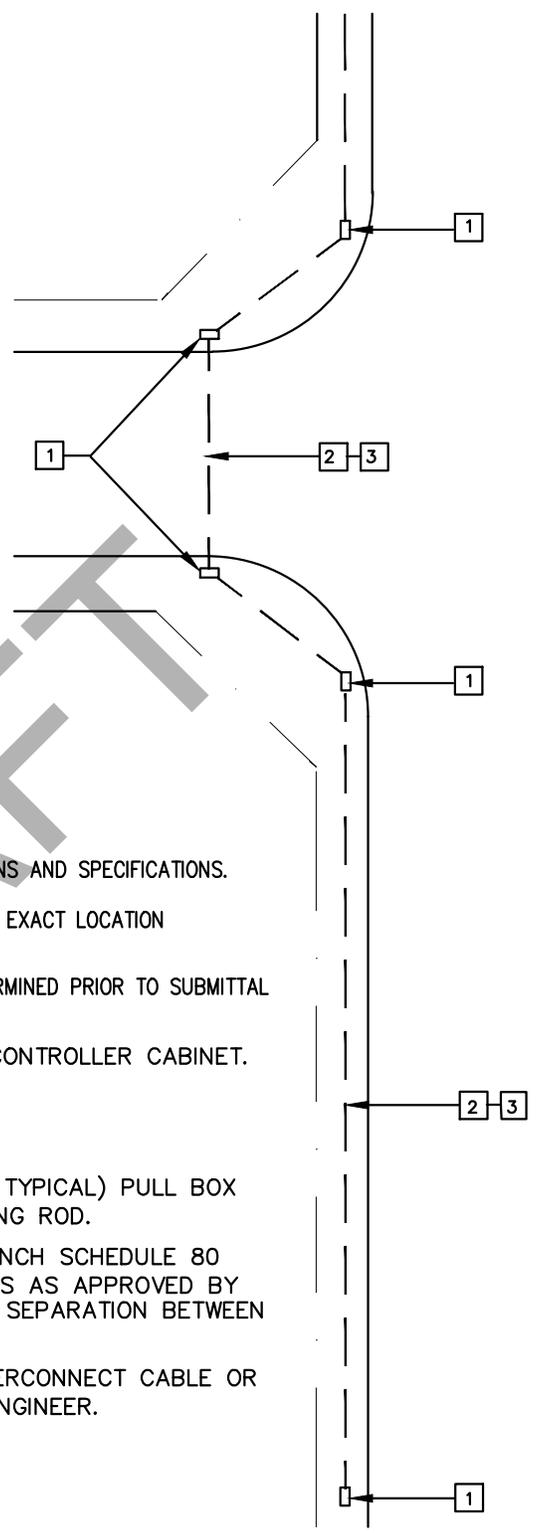
**DELINEATORS**

REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

**417**

SHEET 1 OF 1



**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. (200 FT SPACING TYPICAL) PULL BOX NEEDS TO BE GROUTED WITH A DRAIN HOLE AND GROUNDING ROD.
- 2 FURNISH AND INSTALL ONE NEW 4 INCH AND ONE NEW 3 INCH SCHEDULE 80 PVC OR HDPE CONDUIT, WITH 45° SWEEPS INTO PULL BOXES AS APPROVED BY CITY TRAFFIC ENGINEER OR HIS REPRESENTATIVE. 6" MIN. SEPARATION BETWEEN CONDUITS.
- 3 FURNISH AND INSTALL MULE TAPE OR 12 PAIR NO. 19 INTERCONNECT CABLE OR FIBER OPTIC CABLES AS DIRECTED BY THE CITY TRAFFIC ENGINEER.

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REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

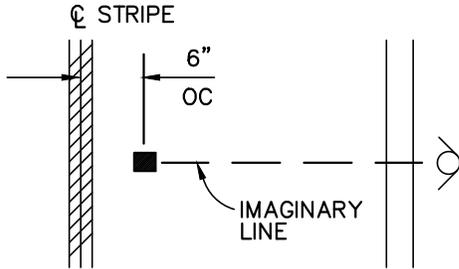
**TRAFFIC SIGNAL  
INTERCONNECT DETAIL**

STANDARD PLAN NO.

**421**

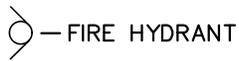
SHEET 1 OF 1

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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 OR MARKER ON HYDRANT SIDE.



**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 STD 422B OR 422C AS APPLICABLE. IF NO TRAFFIC LINE 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 STD 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 THE PROPERTY LINE, 6" ON CENTER FROM THE CENTER OF THE STREET LINE (SEE STD 422B, "STREET INTERSECTION").
- 6.) THE "BLUE DOT" SHALL BE APPLIED USING HOT MELT BITUMINOUS ADHESIVE. THE MARKER SHALL BE APPLIED TO A DRY, DIRT FREE STREET AND ENOUGH ADHESIVE SHALL BE APPLIED SO THAT SOME ADHESIVE OZZES OUT AROUND THE EDGES OF THE "BLUE DOT".

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REMON HABIB

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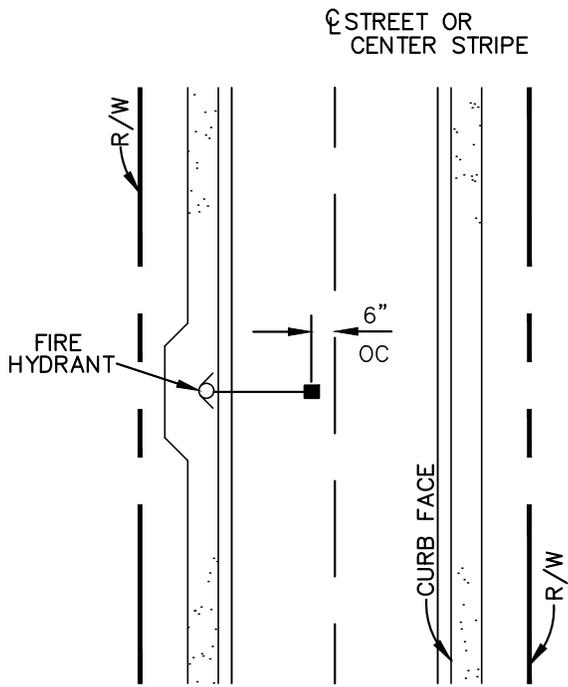
**CITY OF LAKE ELSINORE**

**"BLUE DOT" TYPE I  
MARKER PLACEMENT NOTES**

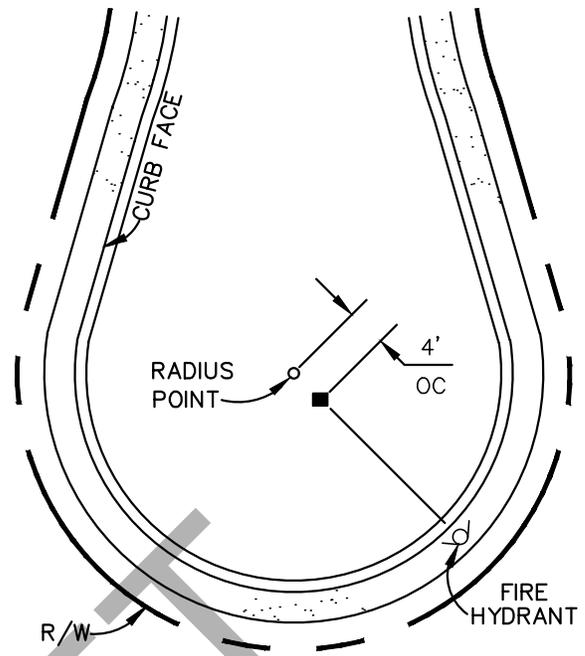
STANDARD PLAN NO.

**422A**

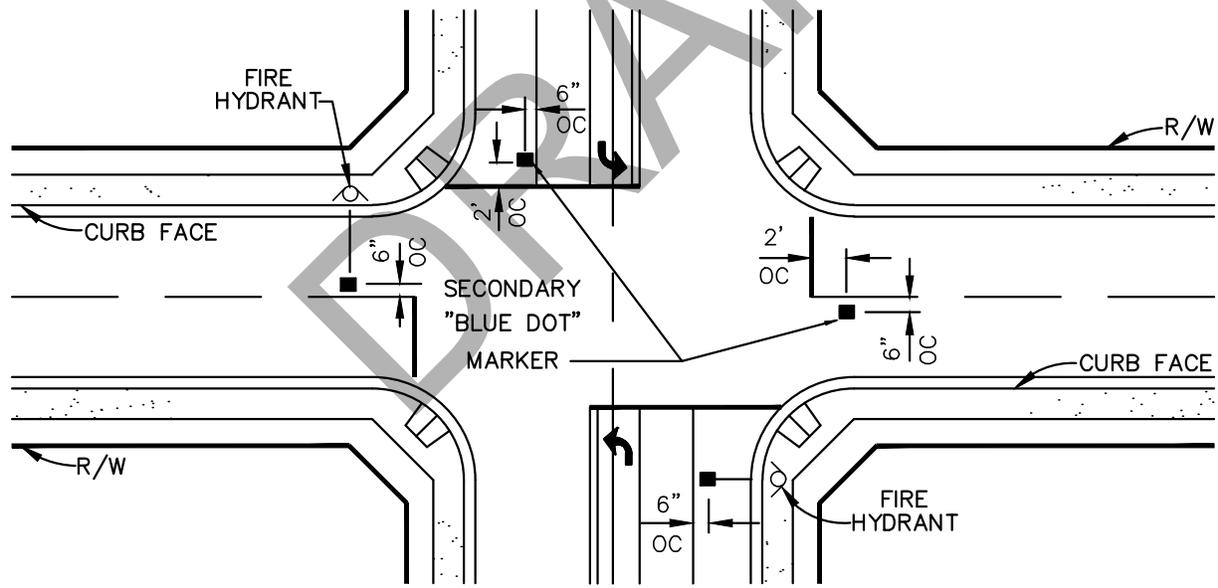
SHEET 1 OF 1



**TWO LANE STREET**



**CUL-DE-SAC**



**STREET INTERSECTION**

**NOTE:**

1.) FOR NOTES REGARDING "BLUE DOT" MARKER PLACEMENT, SEE STD PLAN 422A

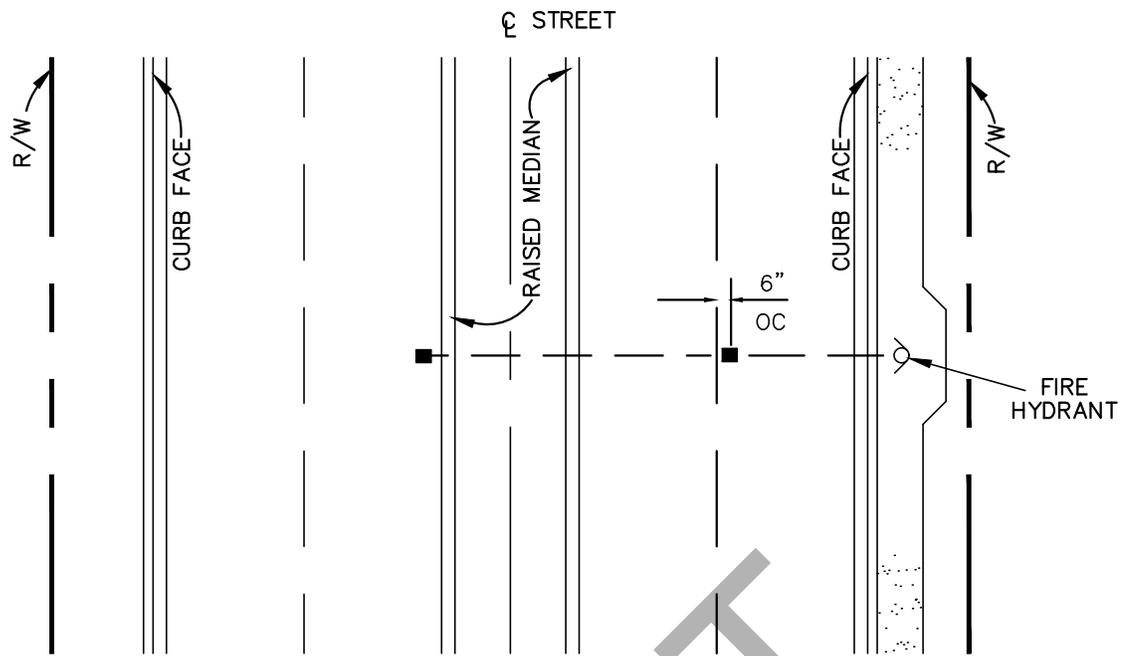
APPROVED BY:			
CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



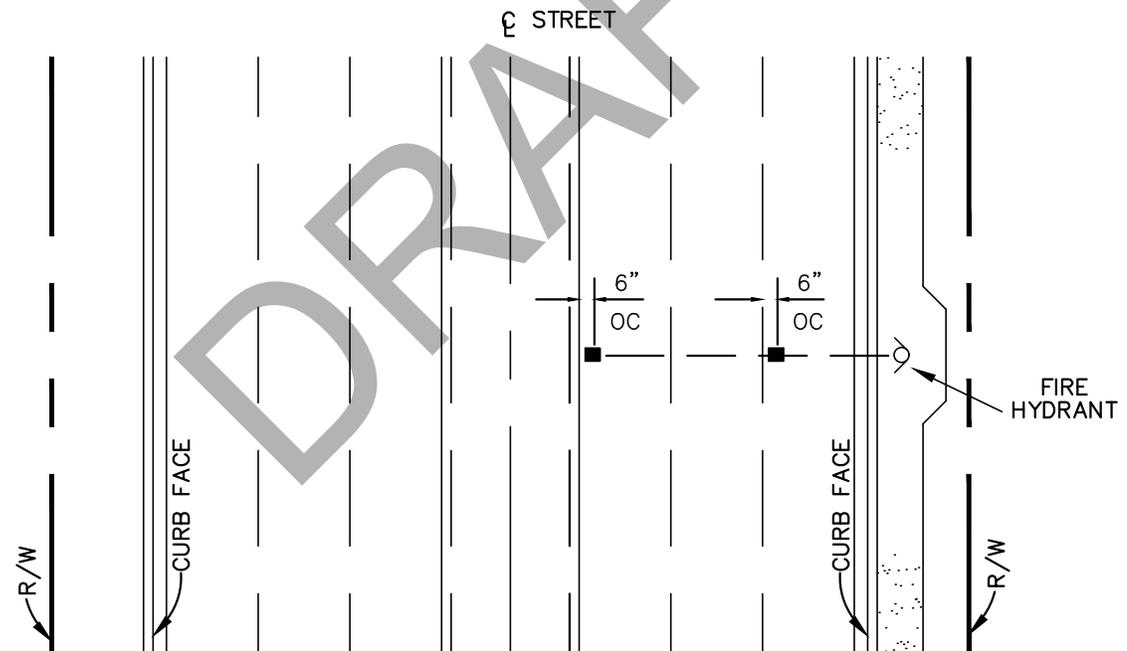
**CITY OF LAKE ELSINORE**

**"BLUE DOT" TYPE I MARKER  
PLACEMENT INTERSECTION  
AND CUL-DE-SAC**

STANDARD PLAN NO. **422B** SHEET 1 OF 1



**DIVIDED STREET**



**STREET WITH TURN LANE**

**NOTE:**

1.) FOR NOTES REGARDING "BLUE DOT" MARKER PLACEMENT, SEE STD PLAN 422A

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REMON HABIB

DATE

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**CITY OF LAKE ELSINORE**

**"BLUE DOT" TYPE I MARKER  
PLACEMENT DIVIDED STREET  
AND STREET WITH TURN LANE**

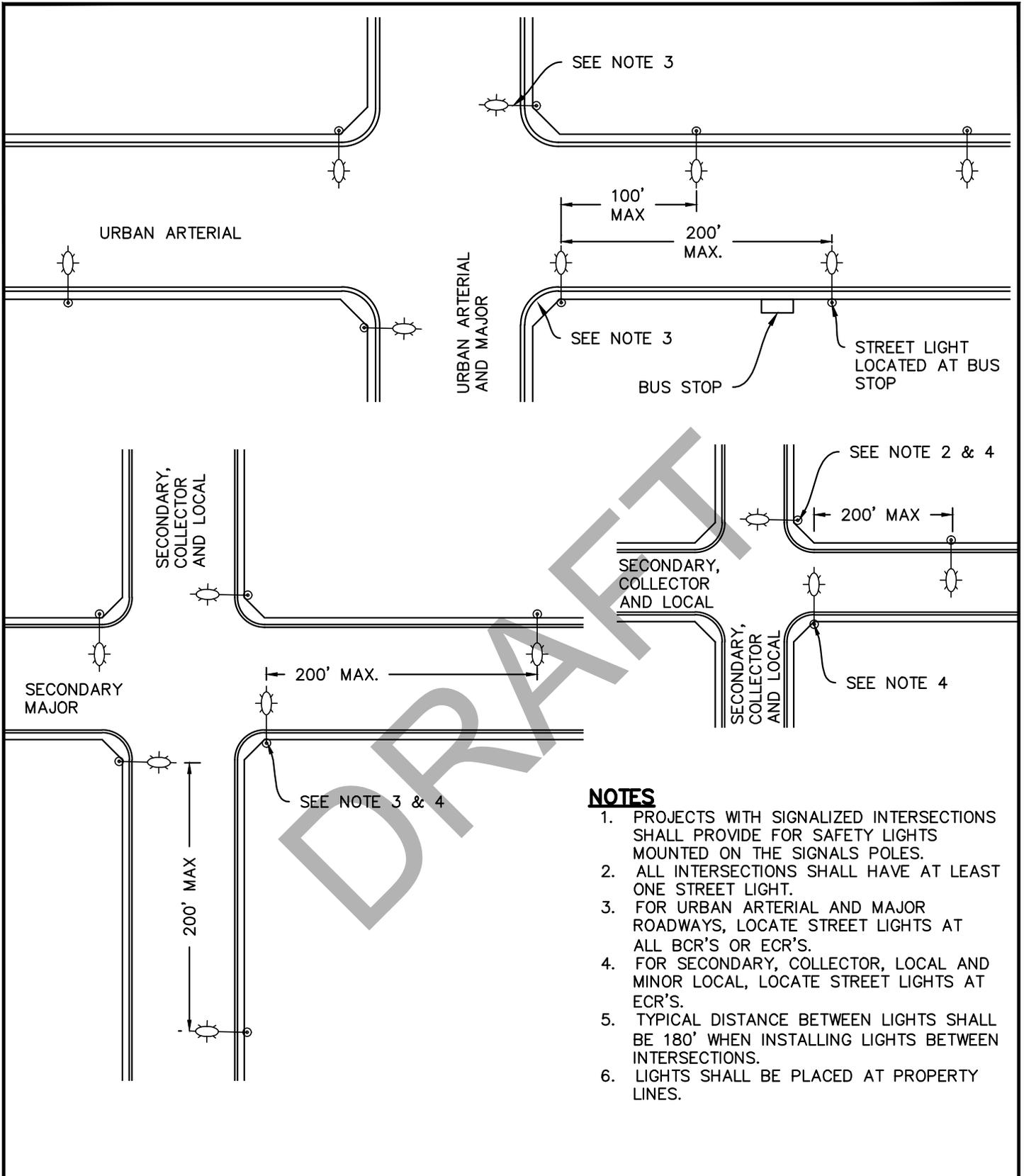
STANDARD PLAN NO.

**422C**

SHEET 1 OF 1

# CITY OF LAKE ELSINORE STANDARD PLANS

## SECTION 5: STREET LIGHTS, IRRIGATION AND PLANTING



**NOTES**

1. PROJECTS WITH SIGNALIZED INTERSECTIONS SHALL PROVIDE FOR SAFETY LIGHTS MOUNTED ON THE SIGNALS POLES.
2. ALL INTERSECTIONS SHALL HAVE AT LEAST ONE STREET LIGHT.
3. FOR URBAN ARTERIAL AND MAJOR ROADWAYS, LOCATE STREET LIGHTS AT ALL BCR'S OR ECR'S.
4. FOR SECONDARY, COLLECTOR, LOCAL AND MINOR LOCAL, LOCATE STREET LIGHTS AT ECR'S.
5. TYPICAL DISTANCE BETWEEN LIGHTS SHALL BE 180' WHEN INSTALLING LIGHTS BETWEEN INTERSECTIONS.
6. LIGHTS SHALL BE PLACED AT PROPERTY LINES.

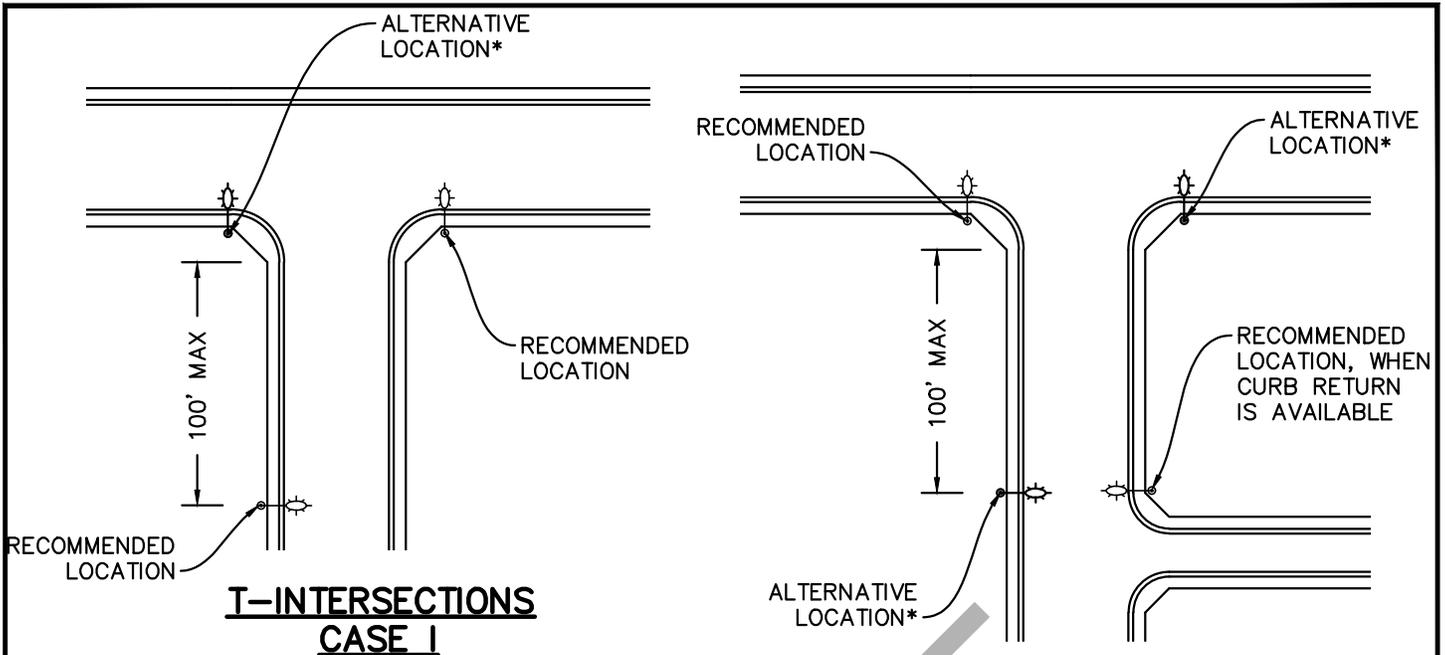
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CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

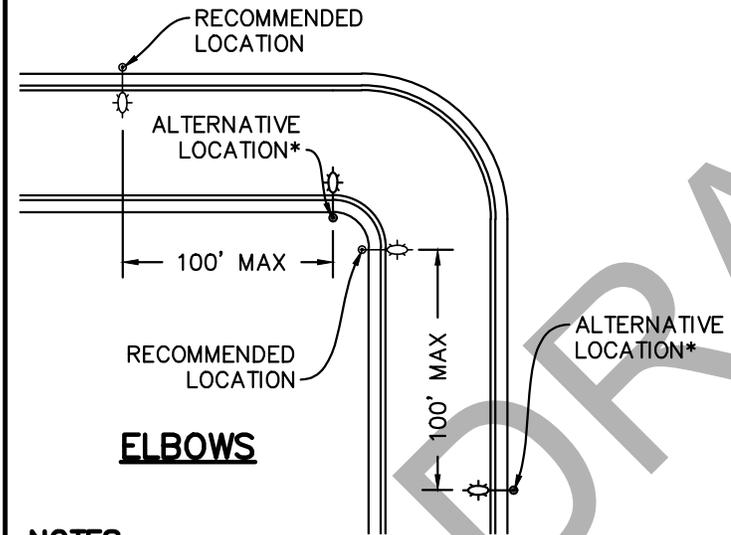
**TYPICAL STREET LIGHT  
PLACEMENT-INTERSECTIONS**

STANDARD PLAN NO. **501** SHEET 1 OF 1

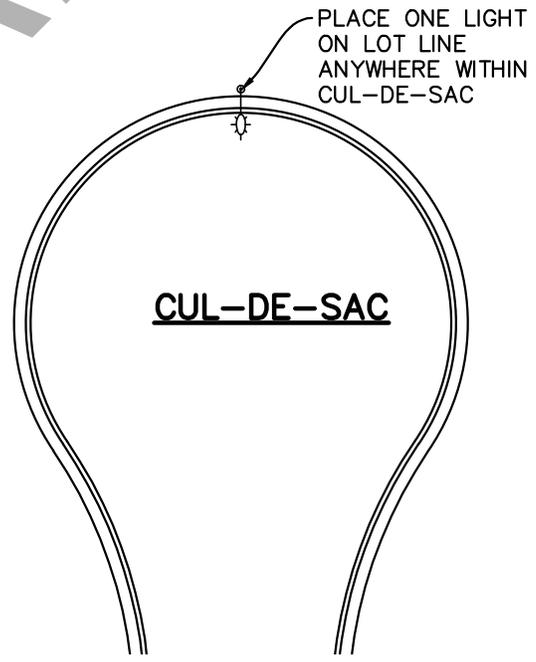


**T-INTERSECTIONS  
CASE I**

**T-INTERSECTIONS  
CASE II**



**ELBOWS**



**CUL-DE-SAC**

**NOTES**

1. PROJECTS WITH SIGNALIZED INTERSECTIONS SHALL PROVIDE FOR SAFETY LIGHTS MOUNTED ON THE SIGNALS POLES.
2. ALL INTERSECTIONS SHALL HAVE AT LEAST ONE STREET LIGHT.
3. STREET LIGHT LOCATIONS SHALL BE ADJUSTED TO MISS DRIVEWAYS, EXISTING UTILITIES AND OTHER OBSTRUCTION BY AT LEAST FIVE FEET (5').
4. STREET LIGHT LOCATIONS SHOWN HEREIN ARE FOR SECONDARY, COLLECTOR, LOCAL AND MINOR LOCAL STREETS
5. TYPICAL DISTANCE BETWEEN LIGHTS SHALL BE 180' WHEN INSTALLING LIGHTS BETWEEN INTERSECTIONS.
6. LIGHTS SHALL BE PLACED AT PROPERTY LINES.

\*CITY ENGINEER APPROVAL MAYBE REQUIRED

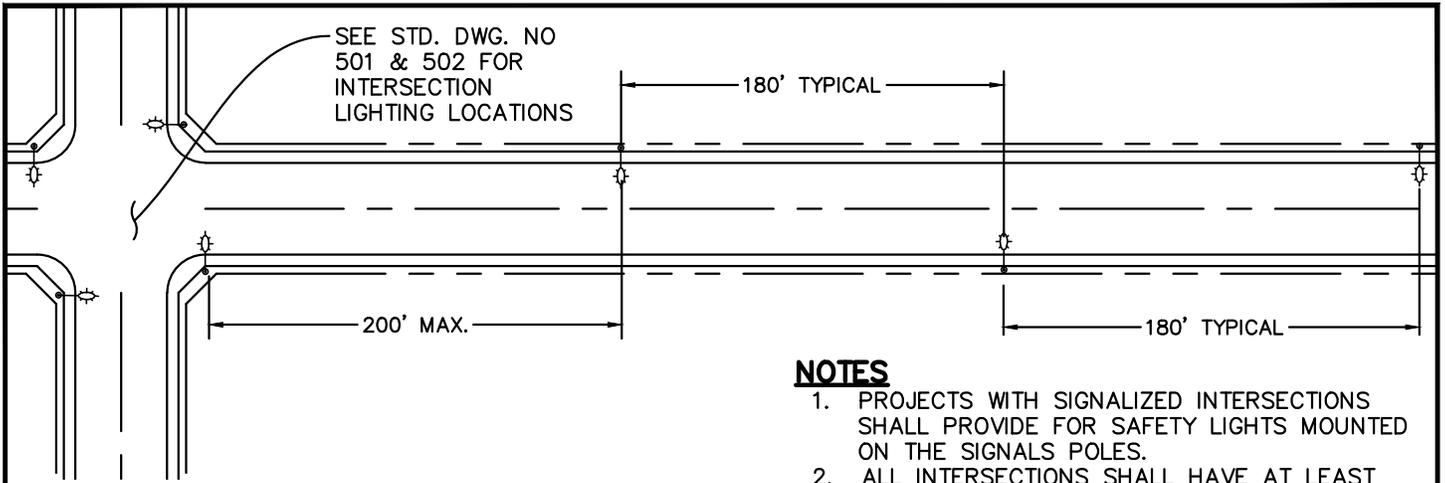
APPROVED BY:			
CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**TYPICAL STREET LIGHT  
PLACEMENT T-INTERSECTIONS,  
CUL-DE-SAC & ELBOWS**

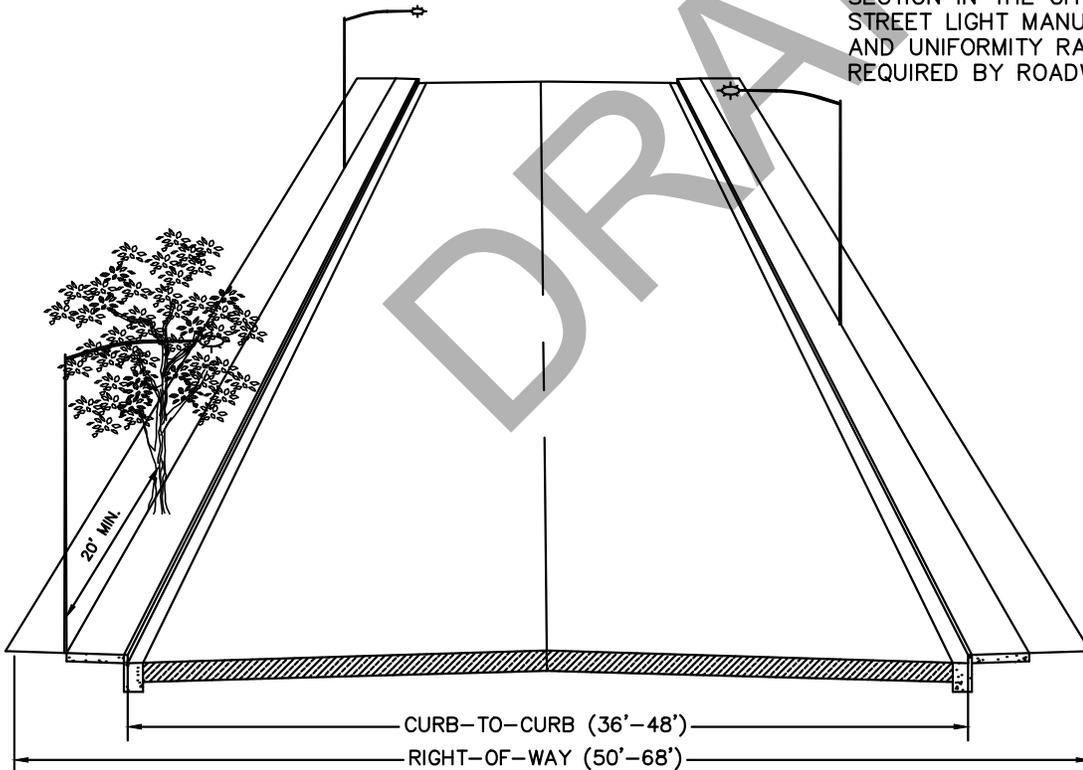
STANDARD PLAN NO. **502** SHEET 1 OF 1



**NOTES**

1. PROJECTS WITH SIGNALIZED INTERSECTIONS SHALL PROVIDE FOR SAFETY LIGHTS MOUNTED ON THE SIGNALS POLES.
2. ALL INTERSECTIONS SHALL HAVE AT LEAST ONE STREET LIGHT.
3. STREET LIGHT LOCATIONS SHALL BE ADJUSTED TO MISS DRIVEWAYS, EXISTING UTILITIES AND OTHER OBSTRUCTION BY AT LEAST FIVE FEET (5').
4. STREET LIGHTS SHALL BE LOCATED ON VERTICAL CURVES (CREST AND SAGE LOCATIONS)
5. TYPICAL DISTANCE BETWEEN LIGHTS SHALL BE 180' WHEN INSTALLING LIGHTS BETWEEN INTERSECTIONS.
6. LIGHTS SHALL BE PLACED AT PROPERTY LINES.
7. SEE "ILLUMINANCE LIGHTING LEVEL METHOD" SECTION IN THE CITY OF LAKE ELSINORE'S STREET LIGHT MANUAL FOR AVERAGE, MINIMUM AND UNIFORMITY RATIO OF ILLUMINANCE REQUIRED BY ROADWAY CLASSIFICATIONS

RECOMMENDED DESIGN STANDARDS	
POLE TYPE	AMERON 1C123, SEE STD. DWG. NO. 506
LUMINAIRE TYPE	GE EVOLVE # ERL1-0-05-B5-30-A
MAST ARM	8', SEE STD. DWG. NO. 506
SPACING	180' TYPICAL, 200' MAXIMUM
SPACING PATTERN	STAGGERED
ILLUMINATION LEVEL	SEE NOTE 7



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CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



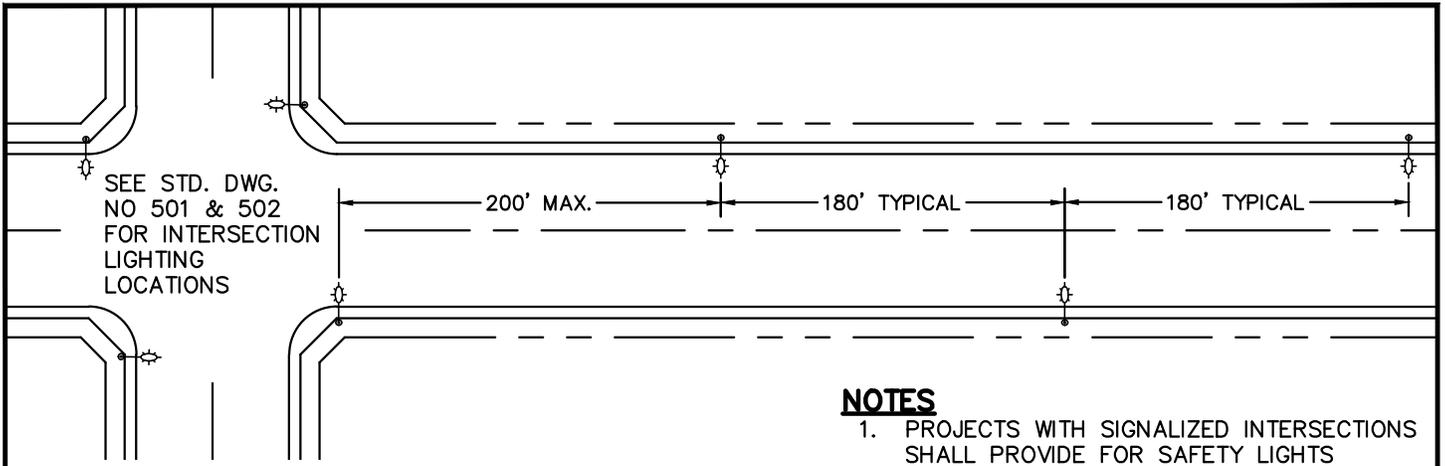
**CITY OF LAKE ELSINORE**

**TYPICAL STREET LIGHT  
PLACEMENT-MINOR LOCAL  
AND COLLECTOR**

STANDARD PLAN NO.

**503**

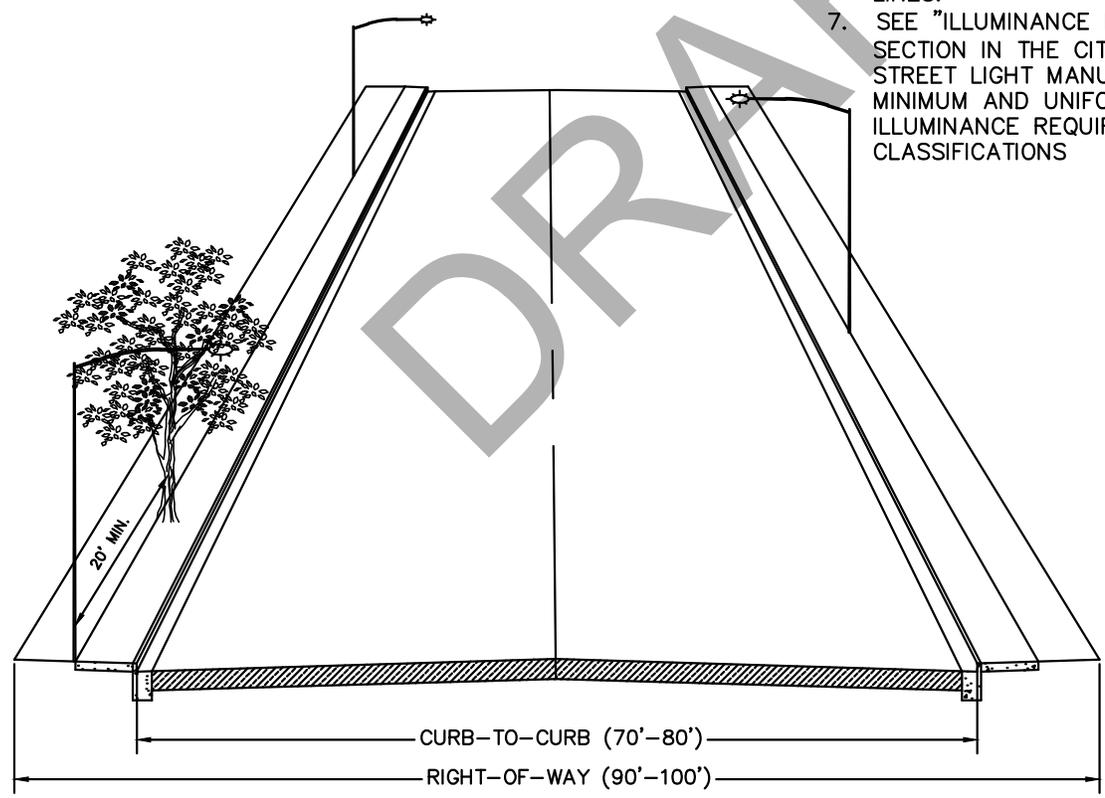
SHEET 1 OF 1



**NOTES**

1. PROJECTS WITH SIGNALIZED INTERSECTIONS SHALL PROVIDE FOR SAFETY LIGHTS MOUNTED ON THE SIGNALS POLES.
2. ALL INTERSECTIONS SHALL HAVE AT LEAST ONE STREET LIGHT.
3. STREET LIGHT LOCATIONS SHALL BE ADJUSTED TO MISS DRIVEWAYS, EXISTING UTILITIES AND OTHER OBSTRUCTION BY AT LEAST FIVE FEET (5').
4. STREET LIGHTS SHALL BE LOCATED ON VERTICAL CURVES (CREST AND SAGE LOCATIONS)
5. TYPICAL DISTANCE BETWEEN LIGHTS SHALL BE 180' WHEN INSTALLING LIGHTS BETWEEN INTERSECTIONS.
6. LIGHTS SHALL BE PLACED AT PROPERTY LINES.
7. SEE "ILLUMINANCE LIGHTING LEVEL METHOD" SECTION IN THE CITY OF LAKE ELSINORE'S STREET LIGHT MANUAL FOR AVERAGE, MINIMUM AND UNIFORMITY RATIO OF ILLUMINANCE REQUIRED BY ROADWAY CLASSIFICATIONS

RECOMMENDED DESIGN STANDARDS	
POLE TYPE	AMERON 1C125, SEE STD. DWG. NO. 506
LUMINAIRE TYPE	GE EVOLVE # ERL1-0-09-C5-30-A
MAST ARM	8', SEE STD. DWG. NO. 506
SPACING	180' TYPICAL, 200' MAXIMUM
SPACING PATTERN	STAGGERED
ILLUMINATION LEVEL	SEE NOTE 7



APPROVED BY: \_\_\_\_\_

CITY ENGINEER REMON HABIB

DATE \_\_\_\_\_

REVISION	BY:	APPROVED	DATE

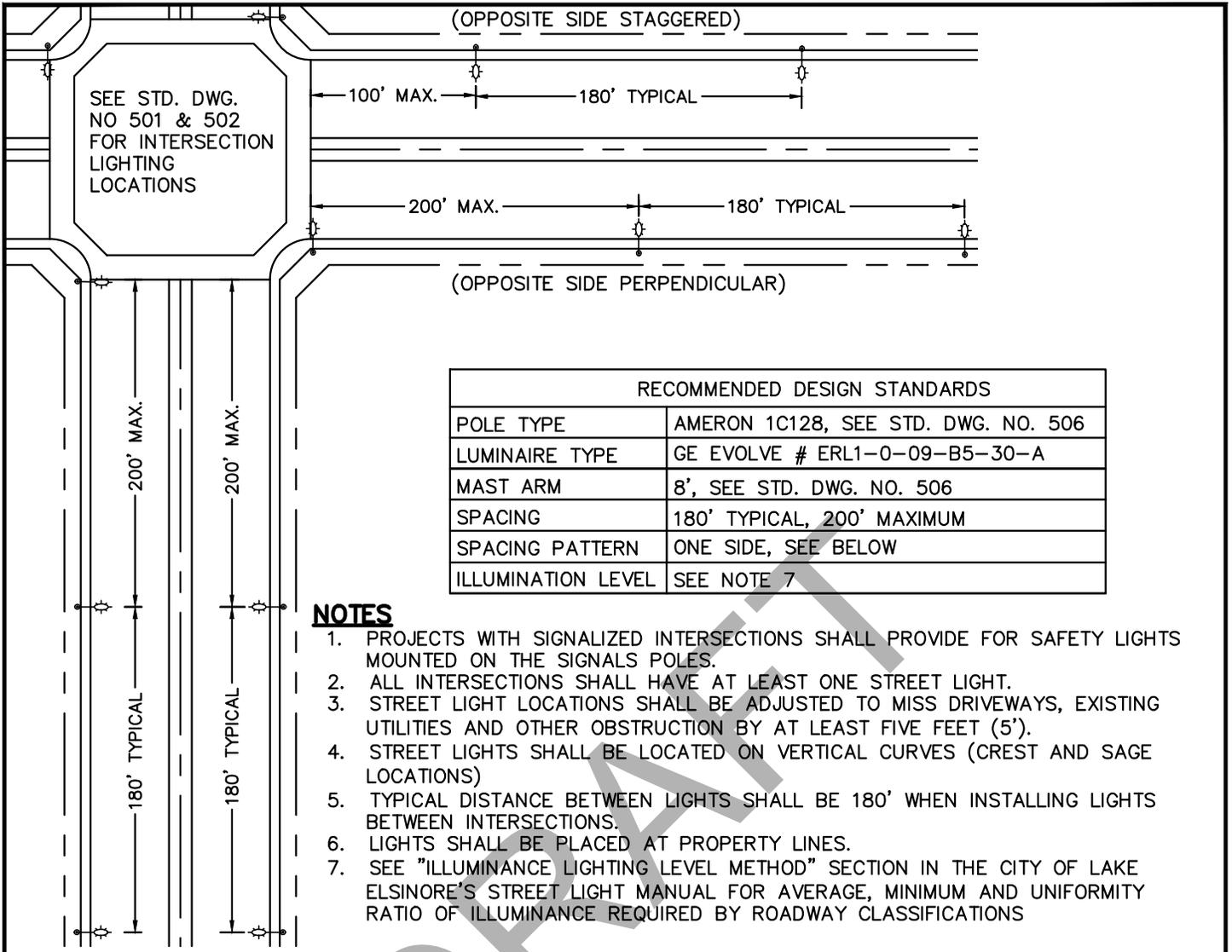


**CITY OF LAKE ELSINORE**

**TYPICAL STREET LIGHT PLACEMENT**

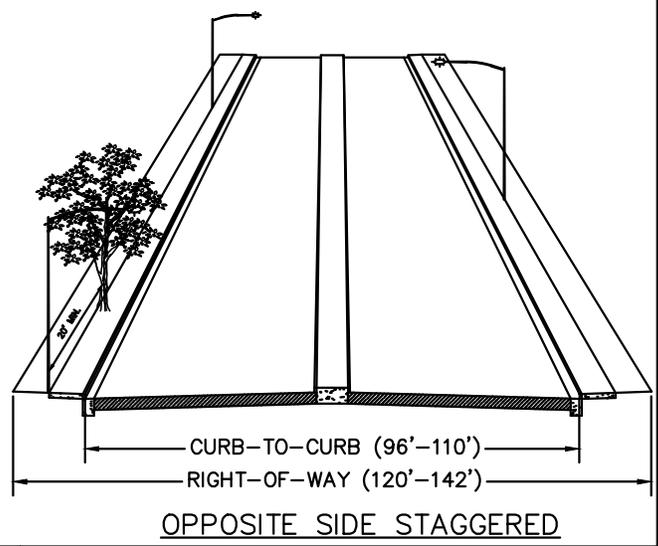
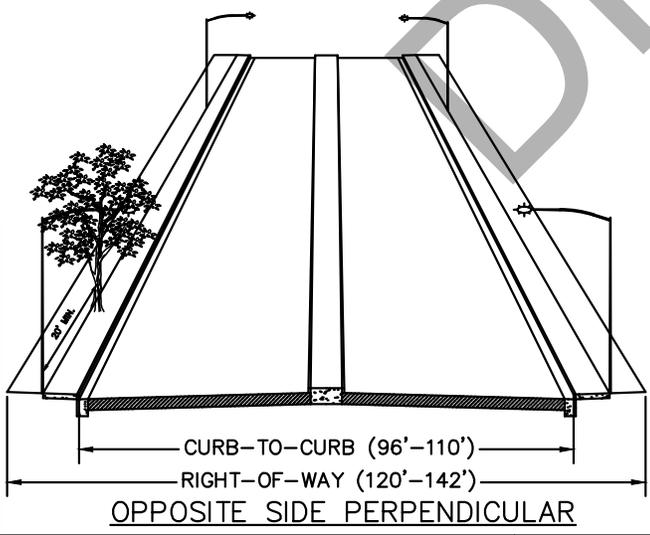
**SECONDARY AND MAJOR**

STANDARD PLAN NO. **504** SHEET 1 OF 1



RECOMMENDED DESIGN STANDARDS	
POLE TYPE	AMERON 1C128, SEE STD. DWG. NO. 506
LUMINAIRE TYPE	GE EVOLVE # ERL1-0-09-B5-30-A
MAST ARM	8', SEE STD. DWG. NO. 506
SPACING	180' TYPICAL, 200' MAXIMUM
SPACING PATTERN	ONE SIDE, SEE BELOW
ILLUMINATION LEVEL	SEE NOTE 7

- NOTES**
1. PROJECTS WITH SIGNALIZED INTERSECTIONS SHALL PROVIDE FOR SAFETY LIGHTS MOUNTED ON THE SIGNALS POLES.
  2. ALL INTERSECTIONS SHALL HAVE AT LEAST ONE STREET LIGHT.
  3. STREET LIGHT LOCATIONS SHALL BE ADJUSTED TO MISS DRIVEWAYS, EXISTING UTILITIES AND OTHER OBSTRUCTION BY AT LEAST FIVE FEET (5').
  4. STREET LIGHTS SHALL BE LOCATED ON VERTICAL CURVES (CREST AND SAGE LOCATIONS)
  5. TYPICAL DISTANCE BETWEEN LIGHTS SHALL BE 180' WHEN INSTALLING LIGHTS BETWEEN INTERSECTIONS.
  6. LIGHTS SHALL BE PLACED AT PROPERTY LINES.
  7. SEE "ILLUMINANCE LIGHTING LEVEL METHOD" SECTION IN THE CITY OF LAKE ELSINORE'S STREET LIGHT MANUAL FOR AVERAGE, MINIMUM AND UNIFORMITY RATIO OF ILLUMINANCE REQUIRED BY ROADWAY CLASSIFICATIONS



APPROVED BY: \_\_\_\_\_ DATE \_\_\_\_\_

CITY ENGINEER  
REMON HABIB

REVISION	BY:	APPROVED	DATE

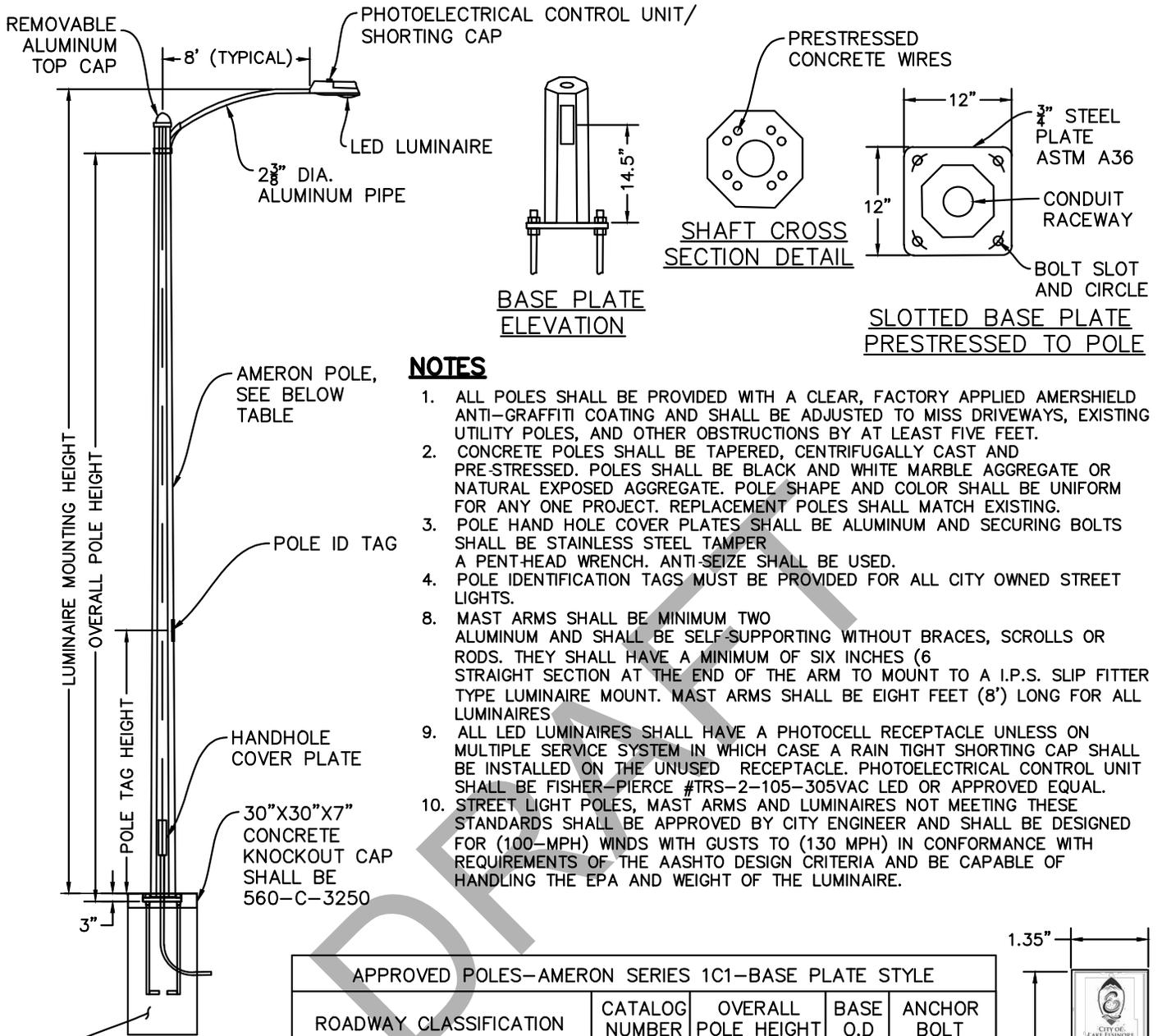


**CITY OF LAKE ELSINORE**

**TYPICAL STREET LIGHT PLACEMENT**

**URBAN ARTERIAL**

STANDARD PLAN NO. **505** SHEET 1 OF 1



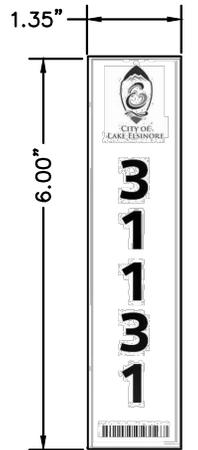
**NOTES**

1. ALL POLES SHALL BE PROVIDED WITH A CLEAR, FACTORY APPLIED AMERSHIELD ANTI-GRAFFITI COATING AND SHALL BE ADJUSTED TO MISS DRIVEWAYS, EXISTING UTILITY POLES, AND OTHER OBSTRUCTIONS BY AT LEAST FIVE FEET.
2. CONCRETE POLES SHALL BE TAPERED, CENTRIFUGALLY CAST AND PRE-STRESSED. POLES SHALL BE BLACK AND WHITE MARBLE AGGREGATE OR NATURAL EXPOSED AGGREGATE. POLE SHAPE AND COLOR SHALL BE UNIFORM FOR ANY ONE PROJECT. REPLACEMENT POLES SHALL MATCH EXISTING.
3. POLE HAND HOLE COVER PLATES SHALL BE ALUMINUM AND SECURING BOLTS SHALL BE STAINLESS STEEL TAMPER A PENT-HEAD WRENCH. ANTI-SEIZE SHALL BE USED.
4. POLE IDENTIFICATION TAGS MUST BE PROVIDED FOR ALL CITY OWNED STREET LIGHTS.
8. MAST ARMS SHALL BE MINIMUM TWO ALUMINUM AND SHALL BE SELF-SUPPORTING WITHOUT BRACES, SCROLLS OR RODS. THEY SHALL HAVE A MINIMUM OF SIX INCHES (6) STRAIGHT SECTION AT THE END OF THE ARM TO MOUNT TO A I.P.S. SLIP FITTER TYPE LUMINAIRE MOUNT. MAST ARMS SHALL BE EIGHT FEET (8') LONG FOR ALL LUMINAIRES
9. ALL LED LUMINAIRES SHALL HAVE A PHOTOCELL RECEPTACLE UNLESS ON MULTIPLE SERVICE SYSTEM IN WHICH CASE A RAIN TIGHT SHORTING CAP SHALL BE INSTALLED ON THE UNUSED RECEPTACLE. PHOTOELECTRICAL CONTROL UNIT SHALL BE FISHER-PIERCE #TRS-2-105-305VAC LED OR APPROVED EQUAL.
10. STREET LIGHT POLES, MAST ARMS AND LUMINAIRES NOT MEETING THESE STANDARDS SHALL BE APPROVED BY CITY ENGINEER AND SHALL BE DESIGNED FOR (100-MPH) WINDS WITH GUSTS TO (130 MPH) IN CONFORMANCE WITH REQUIREMENTS OF THE AASHTO DESIGN CRITERIA AND BE CAPABLE OF HANDLING THE EPA AND WEIGHT OF THE LUMINAIRE.

SEE STANDARD DRAWING NO. 507 FOR FOUNDATION DETAILS

APPROVED POLES-AMERON SERIES 1C1-BASE PLATE STYLE				
ROADWAY CLASSIFICATION	CATALOG NUMBER	OVERALL POLE HEIGHT	BASE O.D	ANCHOR BOLT
MINOR, LOCAL & COLLECTOR	1C123	23'-3"	8 <sup>3</sup> / <sub>8</sub> "	1"X36"X4"
SECONDARY AND MAJOR	1C125	25'-9"	8 <sup>3</sup> / <sub>8</sub> "	1"X36"X4"
URBAN ARTERIAL	1C128	28'-3"	9"	1"X36"X4"

APPROVED LED LUMINAIRES-GE EVOLVE LED ROADWAY LIGHTING		
ROADWAY CLASSIFICATION	GE EVOLVE CATALOG NO.	WATTAGE
CUL-DE-SACS AND STUB ENDS	ERL1-0-03-D5-27-A-GRAY-L	22w
MINOR, LOCAL & COLLECTOR	ERL1-0-05-B5-30-A-GRAY-L	39w
SECONDARY AND MAJOR	ERL1-0-09-C5-30-A-GRAY-L	84w
URBAN ARTERIAL	ERL1-0-09-B5-30-A-GRAY-L	84w
INTERSECTION SAFETY LIGHTS	ERL1-0-13-D5-40-A-GRAY-L	111w



POLE ID TAG

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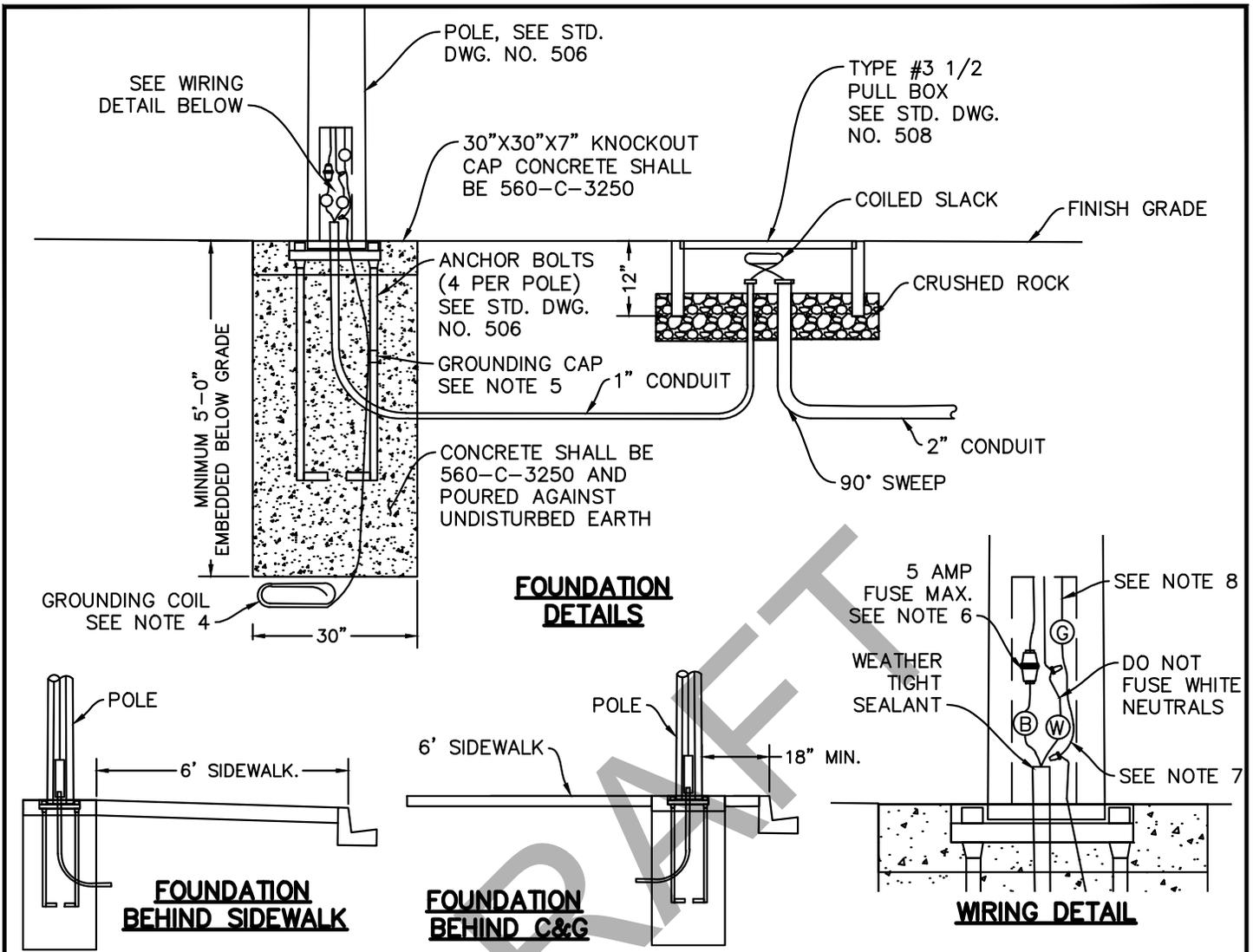
CITY ENGINEER REMON HABIB DATE

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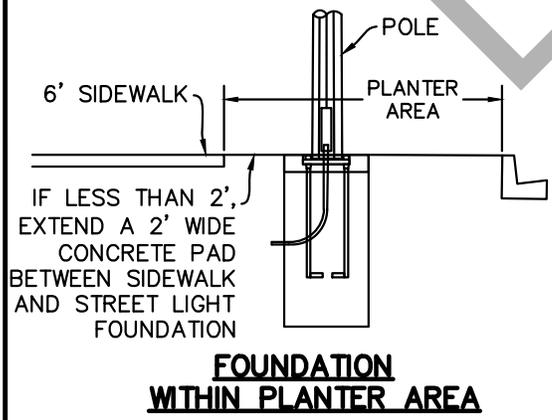
**CITY OF LAKE ELSINORE**

**STREET LIGHT POLE, POLE ID, MAST ARM AND LUMINAIRE**



**NOTES**

1. STREET LIGHT PULL BOX SHALL BE 5' MAX AWAY FROM STREET LIGHT POLE
2. STREET LIGHT WIRE INSULATION MARKINGS SHALL BE PER LATEST GREENBOOK SPECIFICATIONS
3. ALL CONNECTIONS SHALL BE TAPED WITH ELECTRICAL TAPE AND MADE WATER-TIGHT
4. OPEN COIL (PER N.E.C.), 15' NO. 4 BARE STRANDED WIRE-COILED 3" BELOW FOUNDATION AND SECURELY FASTENED TO ANCHOR BOLT FOR GROUNDING
5. ATTACH GROUND WIRE TO ANCHOR BOLT WITH BRASS/COPPER GROUNDING CLAMP
6. FUSE SHALL BE INSTALL IN ONE DIRECTION ONLY. FOR 240V SYSTEM USE 2 PULL FUSE HOLDER TYPE HEB-AA
7. CONNECT GREEN GROUNDING WIRE WITH 2' OF SLACK TO BARE NO. 4 STRANDED WIRE
8. SYSTEM NEUTRAL AND GROUND/BONDING WIRE MUST BE SECURED TOGETHER WITH BRASS/COPPER APPROVED CONNECTION



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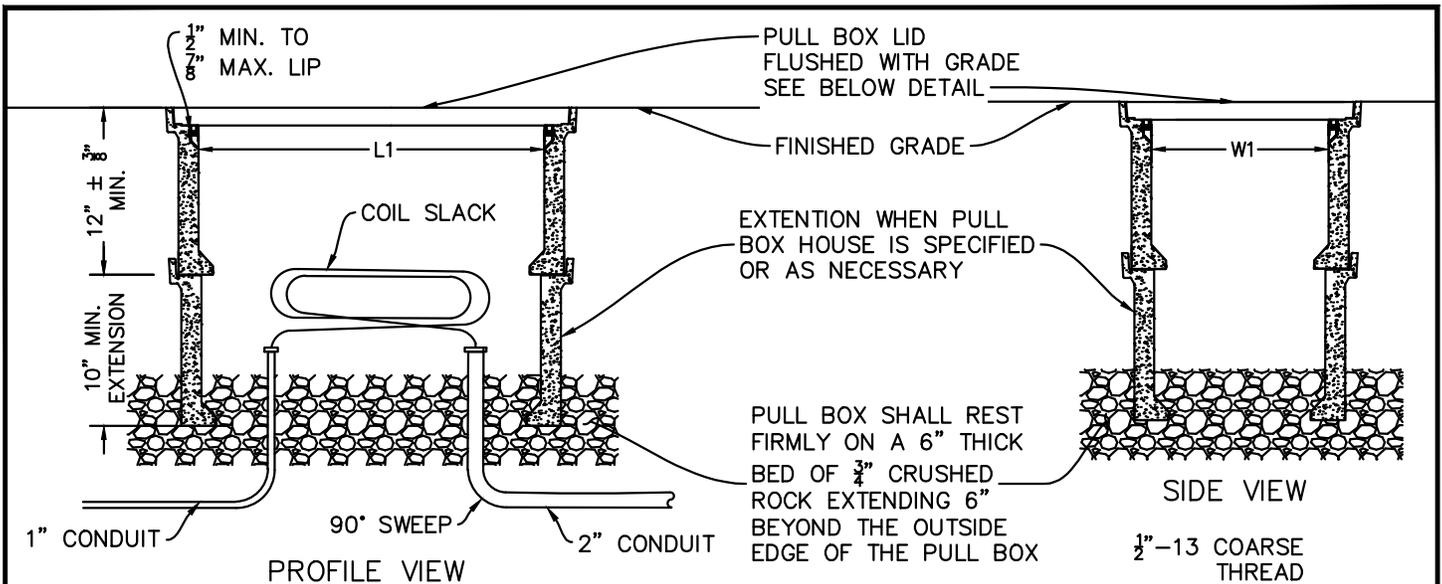
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**CITY OF LAKE ELSINORE**

**STREET LIGHT FOUNDATION DETAIL**

STANDARD PLAN NO. **507** SHEET 1 OF 1



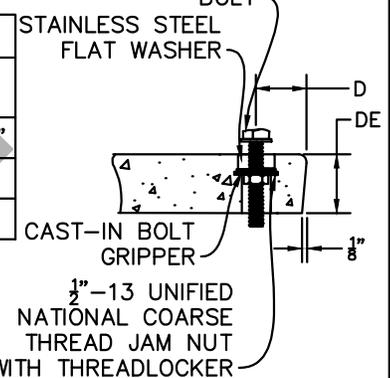
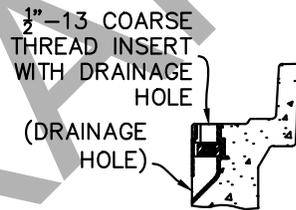
**PULL BOX DIMENSION TABLE**

**INSTALLATION DETAILS**

PULL BOX	PULL BOX				COVER			
	MIN. DEPTH BOX	MIN. DEPTH EXTENSION	L1 MIN.	W1 MIN.	TE	D	L	W
NO. 3 1/2	12"	N/A	1'-3"	9"	1 3/4"	1 3/4"	1'-3 1/4" - 1'-3 3/8"	10" - 10 5/8"
NO. 5	12"	10"	1'-8"	11"	2"	1 3/4"	1'-11 1/4"	1'-1 3/4"
NO. 6	12"	10"	2'-4 1/4"	1'-3 1/4"	2"	2"	2'-6 1/4"	1'-5 1/2"

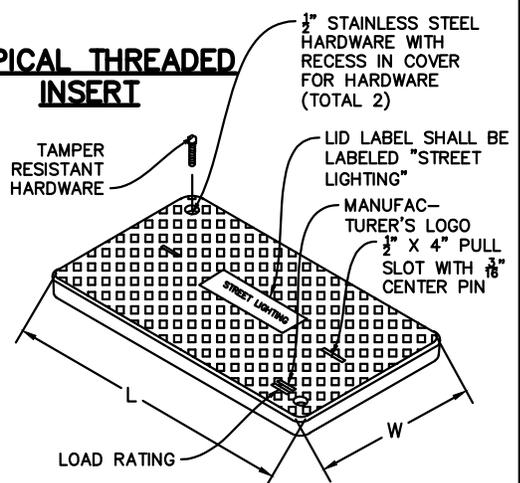
**NOTES**

1. FOR CONDUIT INSTALLATION SEE STD. DWG. NO. 421, CONDUIT TRENCH SHALL BE COMPACTED TO 90% RELATIVE COMPACTION
  - 1.1. NEW CONDUITS SHALL MINIMUM 2" PVC PIPE SCHEDULE 80
  - 1.2. CONDUITS SHALL BE ENCASED IN A MINIMUM OF THREE INCHES (3") OF SAND ON ALL SIDES
  - 1.3. CONDUITS SHALL BE LAIED TO A DEPTH OF NOT LESS THAN (30") UNLESS PLACED UNDER SIDEWALK IN WHICH CASE ONLY (18") SHALL BE REQUIRED. LOCATION TAPE SHALL BE INSTALLED ABOVE THE SAND LAYER ALONG THE LENGTH OF THE CONDUIT TRENCH
  - 1.4. CONDUIT RUNS SHALL HAVE A MAXIMUM LENGTH OF 200 FEET.
2. PULL BOX SHALL BE INSTALLED
  - 2.1. PULL BOX THAT FEEDS INTO SCE SERVICE POINT SHALL BE A #5 PULL BOX AND WITHIN 5' OF THE PEDESTAL
  - 2.2. WITHIN 5' OF EACH STREET LIGHT
  - 2.3. WHERE MORE THAN TWO CONDUIT RUNS INTERSECT
  - 2.4. WHERE CONDUIT RUNS ARE MORE THAN 200' LONG
  - 2.5. AT THE END OF CONDUIT RUN
  - 2.6. AT CRITICAL ANGLE POINTS AND AS ORDERED BY CITY ENGINEER
  - 2.7. PULL BOXES LOCATED IN DRIVEWAY OR WITHIN 5- FEET OF DRIVEWAY SHALL BE TRAFFIC RATED (SEE CALTRANS STANDARD FOR TRAFFIC RATED PULL BOX. NO PULL BOX SHALL BE PLACE IN THE PLANTER AREAS
  - 2.9. PULL BOX COVER SHALL BE ETCHED POLYPROPYLENE FACE ANCHORED IN CONCRETE WITH ULTRA-VIOLET INHIBITOR



**TYPICAL COVER CAPTIVE BOLT**

**TYPICAL THREADED INSERT**



**COVER DETAILS**

APPROVED BY: \_\_\_\_\_

CITY ENGINEER REMON HABIB DATE \_\_\_\_\_

REVISION	BY:	APPROVED	DATE

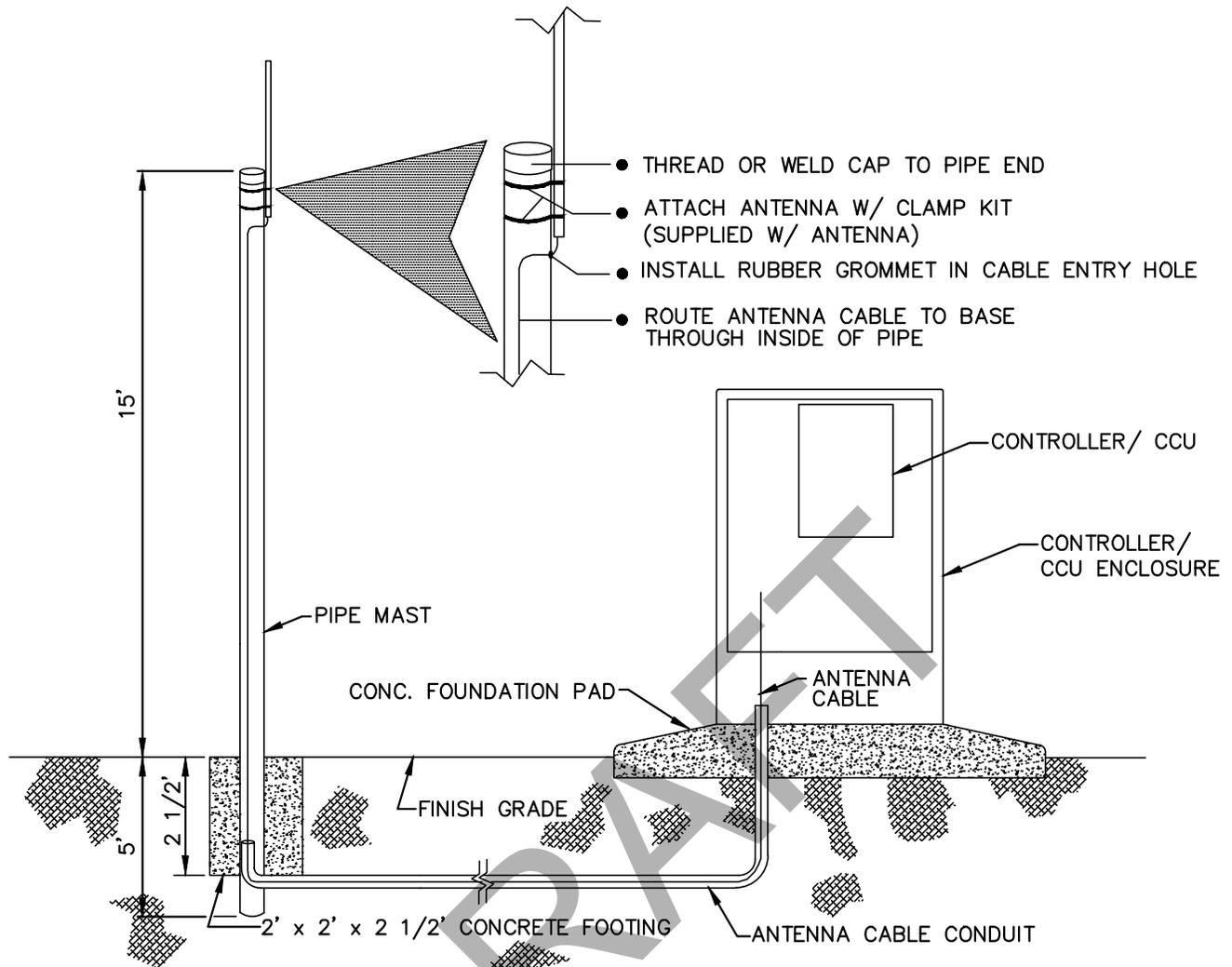


**CITY OF LAKE ELSINORE**

**PULL BOX AND CONDUIT INSTALLATION**

STANDARD PLAN NO. **508** SHEET 1 OF 1





**NOTES:**

- 1) RADIO ANTENNA MAST SHALL BE 2" THREADED STEEL PIPE STOCK & FITTINGS.
- 2) ANTENNA MAST SURFACE COATING SHALL BE GLYD-ZINC Y-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.
- 5) SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

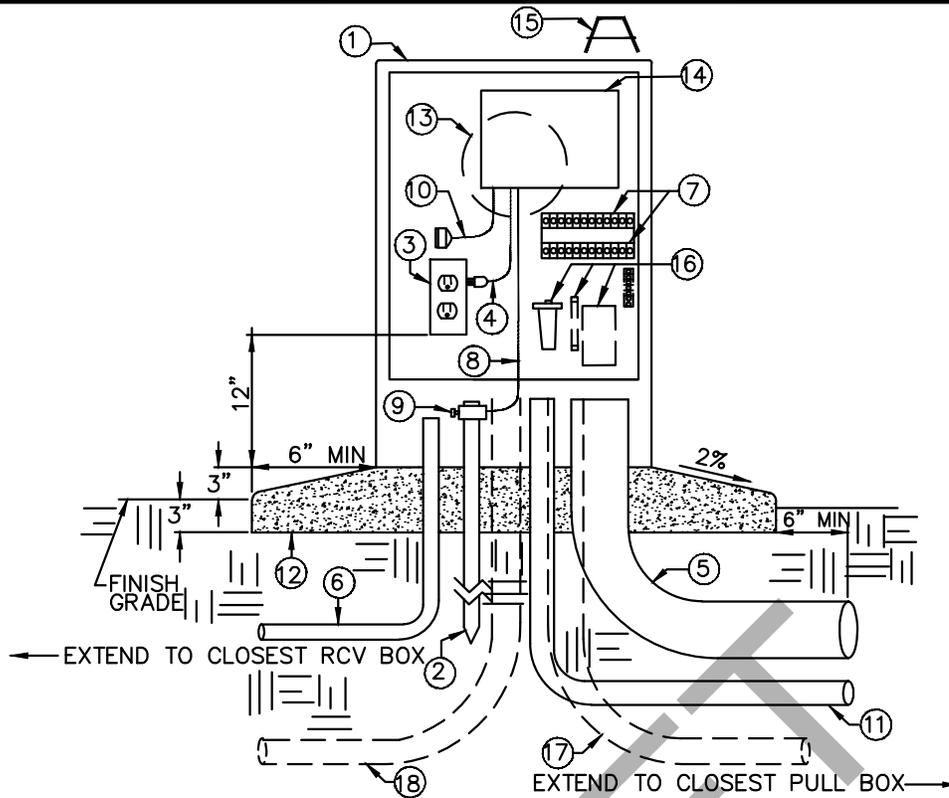
**CLUSTER CONTROL UNIT  
RADIO LINK ANTENNA AND  
ENCLOSURE DETAIL**

STANDARD PLAN NO.

**542**

SHEET 1 OF 1

REVISION	BY:	APPROVED	DATE



**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 ARRESTOR - ISOBAR ULTRABLOCK 428
- 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(S) FOR CONNECTION OF 14 GA. UF FIELD WIRE FROM SWEEP. USE 16 GA. UTILITY WIRE TO CONNECT
- ⑧ #10 SOLID COPPER WIRE FROM GROUNDING ROD TO CONTROLLER GROUND LUG
- ⑨ BRASS / BRONZE GROUND CLAMP
- ⑩ ETHERNET (RS232 PORT INCLUDED)
- ⑪ TELEMETRY CONDUIT - 1 1/2" SCH 40. 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 WITH REMOTE CONTROL ACCTUATOR INTERFACE—PER PLAN
- 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
- ⑰ 2 1/2" SCH 40 ELECTRICAL CONDUIT
- ⑱ 1" SCH 40 ELECTRICAL CONDUIT

**NOTES:**

- 1) COMMON WIRE TO BE 12 GA. WHITE. PILOT WIRES TO BE 14 GA. BLACK.
- 2) NO SPLICES ALLOWED BETWEEN TERMINAL STRIP AND RCV.
- 3) INSTALL ONE (1) EXTRA PILOT WIRE (RED) 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.

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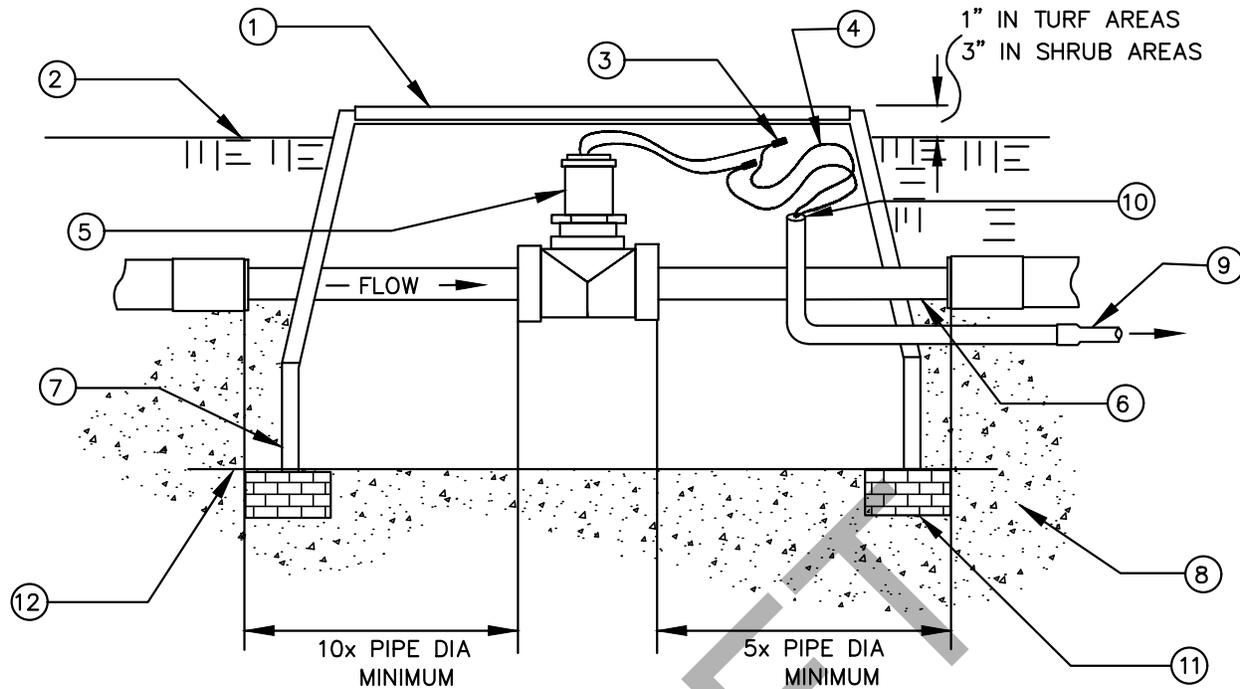
**CITY OF LAKE ELSINORE**

**CONTROLLER/SATELLITE  
ENCLOSURE DETAIL**

STANDARD PLAN NO.

**543**

SHEET 1 OF 1



**LEGEND:**

- ① JUMBO RECTANGULAR PLASTIC VALVE BOX & LOCKING COVER (PER PLAN AS SPECIFIED).
- ② FINISH GRADE
- ③ WATERPROOF CONNECTION (REFER TO STANDARD 551)
- ④ TWO CONDUCTOR SHIELDED CABLE – ROUTED TO CONTROLLER VIA CONDUIT.
- ⑤ FLOW SENSOR (PER PLAN AS SPECIFIED)
- ⑥ PIPE CHOKE – REDUCE TO NEXT SIZE BELOW MAINLINE PIPE SIZE
- ⑦ VALVE BOX EXTENSION (AS NECESSARY)
- ⑧ PEA GRAVEL DRAIN SUMP – 30" DIA x 6" DEEP MINIMUM
- ⑨ 3/4" E.C. WIRE PATH FROM SENSOR BOX TO MASTER VALVE AND/OR IRRIGATION CONTROLLER
- ⑩ PLUMBERS PUTTY IN HOLE
- ⑪ CONCRETE BRICK, TYPICAL OF 4
- ⑫ 1/4" GALVANIZED WIRE MESH

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CITY ENGINEER  
REMON HABIB

DATE

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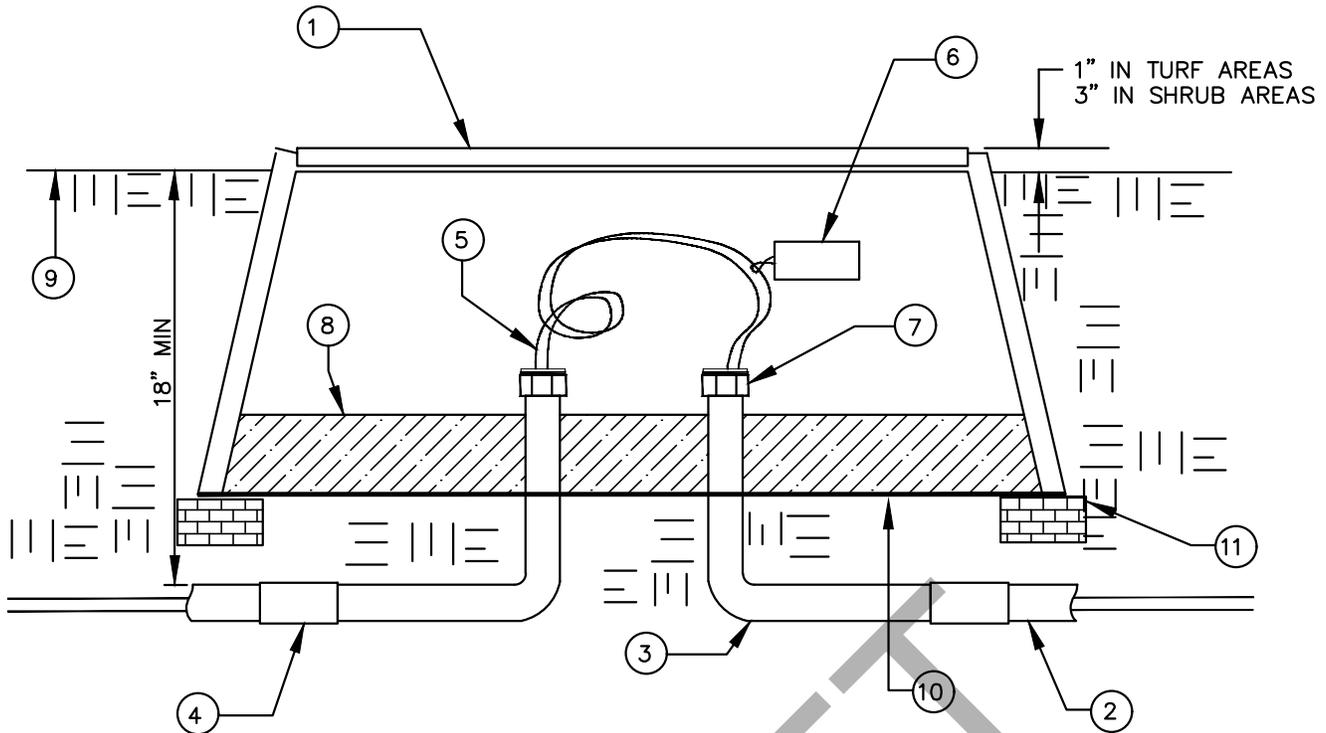
**CITY OF LAKE ELSINORE**

**FLOW SENSOR  
ASSEMBLY DETAIL**

STANDARD PLAN NO.

**544**

SHEET 1 OF 1



**LEGEND:**

- ① STANDARD RECTANGULAR VALVE BOX (PER PLAN AS SPECIFIED)  
INSTALL @ INTERVALS NOT TO EXCEED 200 FT.
- ② PVC SCH 40 CONDUIT – 1 1/2" NOM OD
- ③ PVC SCH 40, 90 DEG SWEEP ELL (TYP)
- ④ PVC SCH 40, SxS COUPLER (TYP)
- ⑤ POLY PULL ROPE – 500 LB TEST  
– INSTALL PULL ROPE ALONG WITH COMMUNICATION CABLE  
– LEAVE 2 FT LOOP IN BOX
- ⑥ COMMUNICATION CABLE W/ PERMANENT ID TAG (CHRISTY'S OR EQUAL)  
– LEAVE 18" MINIMUM LOOP IN BOX  
– COMMUNICATION CABLE TO BE "PE 39"
- ⑦ CONDUIT BUSHING – INSTALL ON PVC SCH 40 MALE ADAPTER  
– SEAL ALL CONDUIT ENDS W/ WATER PROOF SILICONE  
– SEALER AFTER CABLE/PULL ROPE IS INSTALLED
- ⑧ 3/4" WASHED CRUSHED AGGREGATE – 6" DEPTH
- ⑨ FINISH GRADE
- ⑩ 1/4" GALVANIZED WIRE MESH
- ⑪ CONCRETE BRICK, TYPICAL OF 4

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CITY ENGINEER  
REMON HABIB

DATE

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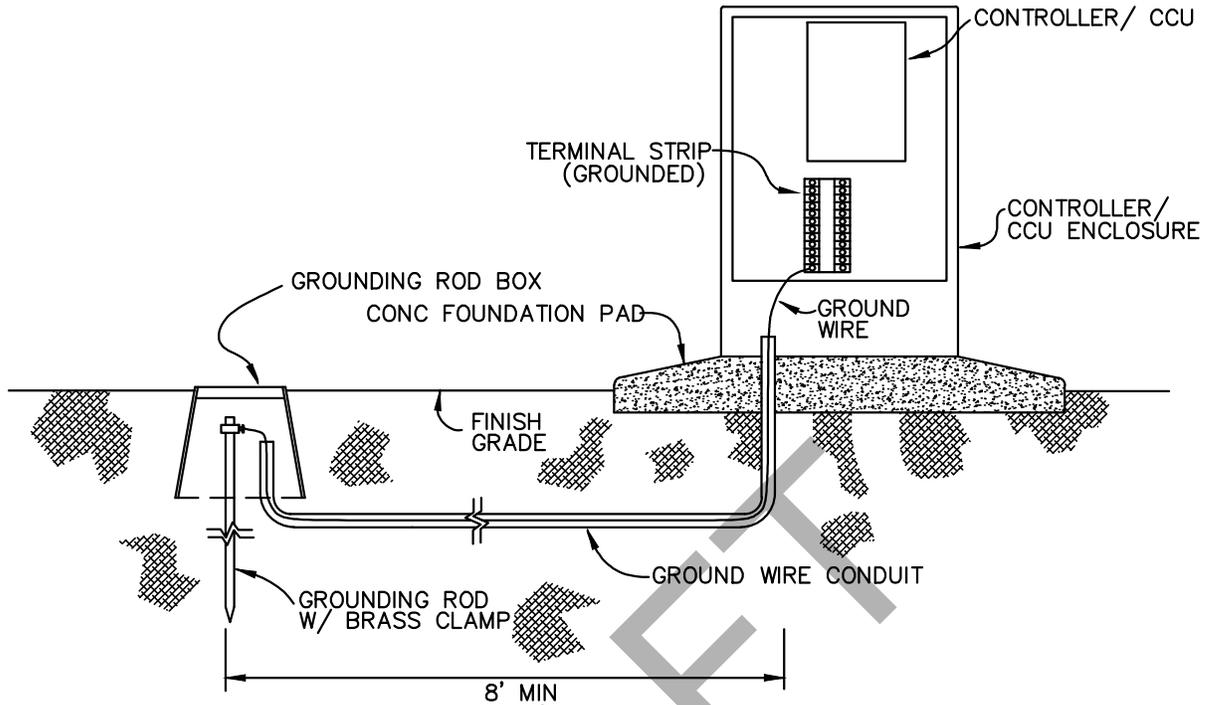
**CITY OF LAKE ELSINORE**

**TELEMETRY PULL-BOX  
ASSEMBLY DETAIL**

STANDARD PLAN NO.

**545**

SHEET 1 OF 1



**NOTES:**

- 1) GROUND WIRE SHALL BE No 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) SWEEPS / CONDUIT TO BE 1" SCH 80 PVC. ALL SWEEPS TO BE 1" MIN. DIAM. EXTEND CONDUIT ALONG THE ENTIRE REACH OF GROUND WIRE PATH, ENDING IN GROUND ROD BOX.

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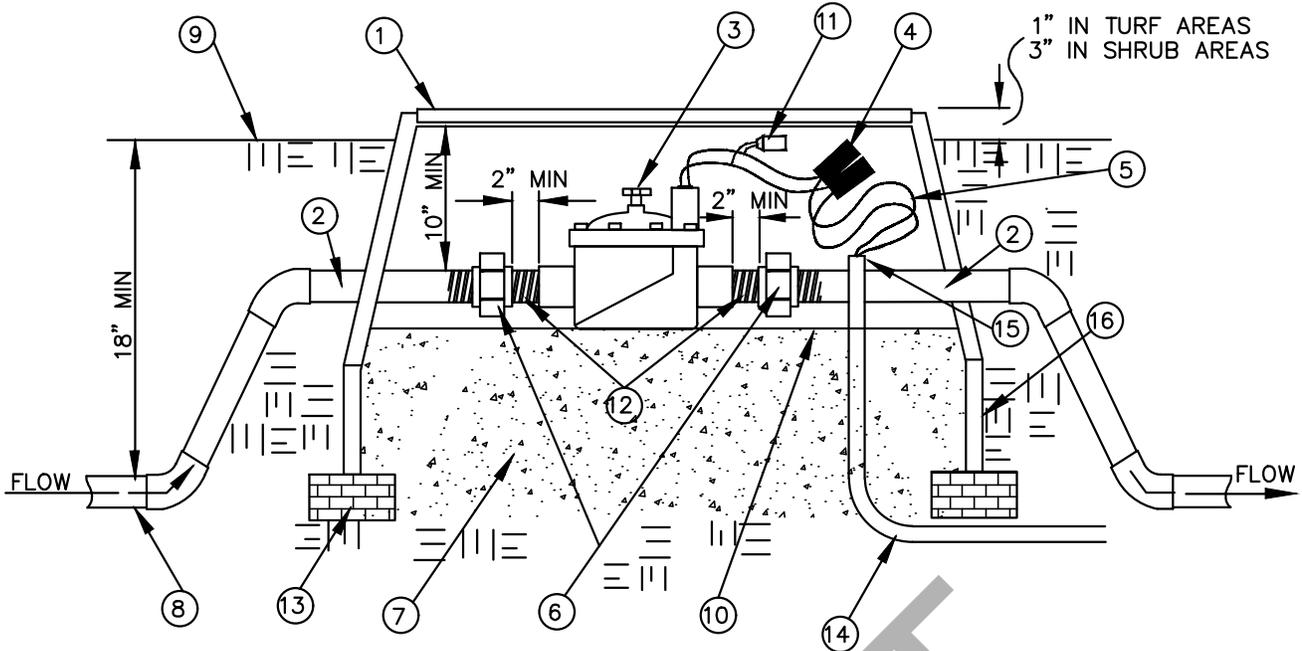
**CITY OF LAKE ELSINORE**

**EXTERNAL GROUND ROD  
ASSEMBLY DETAIL**

STANDARD PLAN NO.

**547**

SHEET 1 OF 1



**LEGEND:**

- ① JUMBO RECTANGULAR PLASTIC VALVE BOX WITH LOCKING LID (PER PLAN AS SPECIFIED)
- ② SCH 80 TOE NIPPLE ASSEMBLY – USE IN PLACE OF MIPT ADAPTERS (TYP) (REFER TO STD 549)
- ③ MASTER CONTROL VALVE (PER PLAN AS SPECIFIED)
- ④ WATERPROOF CONNECTION – SPEARS DS-100 OR APPROVED EQUAL. FILL W/ DS-300 SEALANT OR APPROVED EQUAL (REFER TO STANDARD 551)
- ⑤ PROVIDE 24" MIN EXPANSION LOOP
- ⑥ SCH 80 PVC UNION (FIPT x FIPT)
- ⑦ 3/4" WASHED CRUSHED AGGREGATE – 6" DEPTH
- ⑧ MAINLINE FROM POC/BACKFLOW PREVENTER ASSEMBLY
- ⑨ FINISH GRADE
- ⑩ 1/4" GALVANIZED WIRE MESH SCREEN
- ⑪ CHRISTY ID TAG WITH CONTROLLER NUMBER
- ⑫ SCH 80 CLOSE NIPPLE
- ⑬ CONCRETE BRICK TYP OF 4
- ⑭ 3/4" ELEC CONDUIT TO FLOW SENSOR AND/OR IRRIGATION CONTROLLER
- ⑮ PLUMBERS PUTTY IN HOLE
- ⑯ VALVE BOX EXTENSION (AS NECESSARY)

**NOTES:**

- 1) INSTALL MASTER VALVE MINIMUM 3 FT DOWNSTREAM OF POC / BACKFLOW ASSEMBLY.
- 2) INSTALL MASTER VALVE MINIMUM 12" FROM STRUCTURES / HARDSCAPE.
- 3) INSTALL THRUST BLOCKS OR BRACE PER SPECIFICATIONS.

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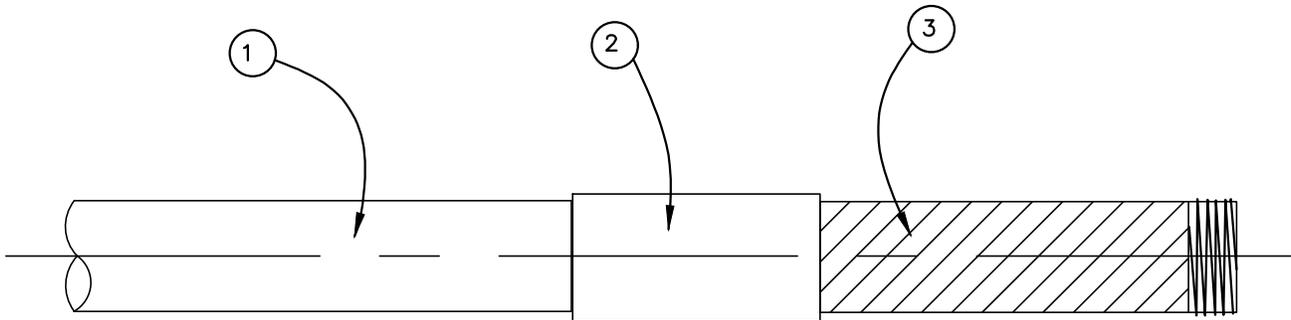
**CITY OF LAKE ELSINORE**

**MASTER VALVE  
ASSEMBLY DETAIL**

STANDARD PLAN NO.

**548**

SHEET 1 OF 1



**LEGEND:**

- ① PVC MAIN / LATERAL LINE PIPE
- ② SCH 80 PVC COUPLING SLIP x SLIP
- ③ SCH 80 PVC NIPPLE – THREADED ONE END
  - 6” MIN LENGTH
  - CUT THREADS ONLY – NO MOLDED NIPPLES

**NOTES:**

- 1) USE TOE NIPPLE ASSEMBLY IN PLACE OF MIPT ADAPTERS

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CITY ENGINEER  
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**CITY OF LAKE ELSINORE**

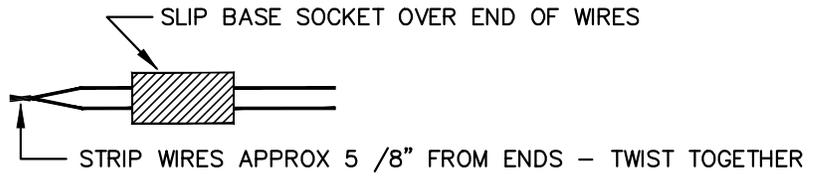
**TOE NIPPLE  
ASSEMBLY**

STANDARD PLAN NO.

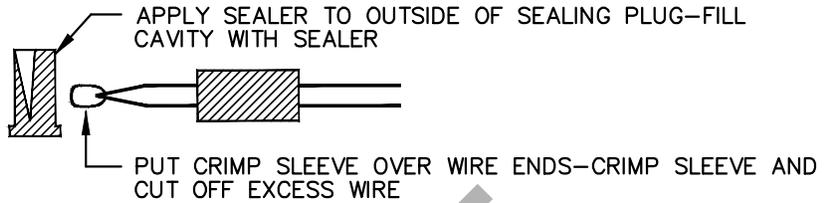
**549**

SHEET 1 OF 1

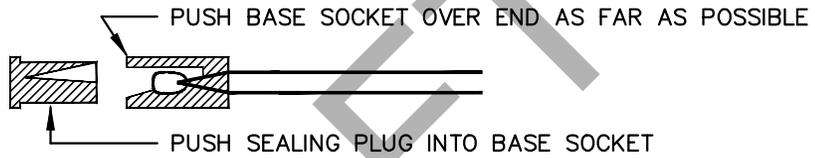
**STEP 1**



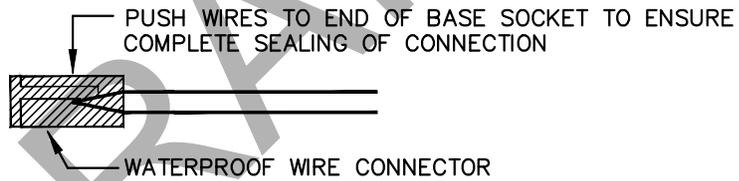
**STEP 2**



**STEP 3**



**STEP 4**



**NOTES:**

- 1.) DO NOT USE PREFILLED CONNECTORS ON FLOW SENSORS OR MASTER VALVES WITHOUT PRIOR APPROVAL OF CITY ENGINEER

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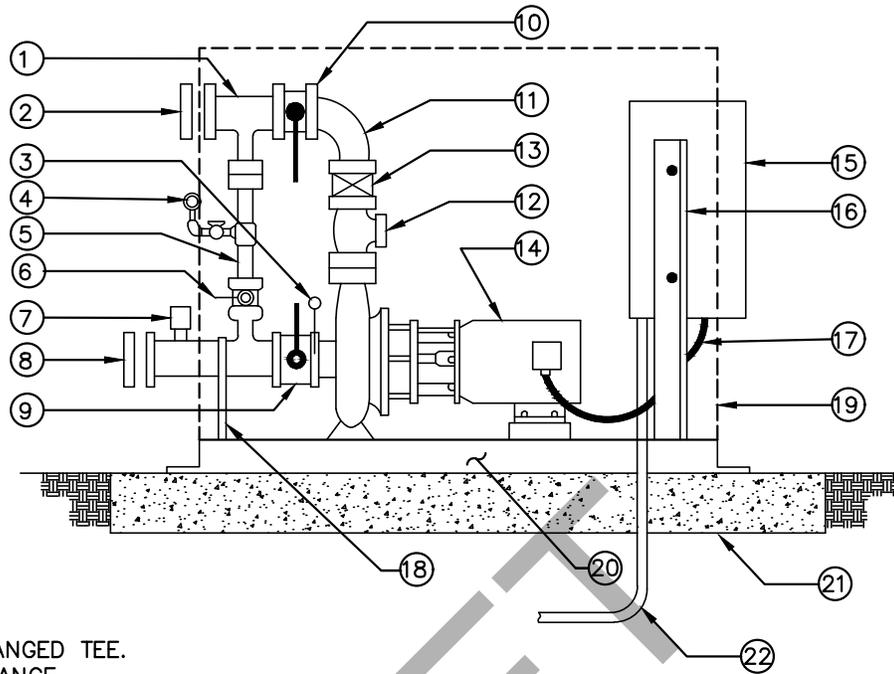
**CITY OF LAKE ELSINORE**

**IRRIGATION WIRE  
CONNECTOR**

STANDARD PLAN NO.

**551**

SHEET 1 OF 1



**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 No 400 ACP OR CLA-VAL No 91A.
- ⑬ FLANGED CONCENTRIC REDUCER.
- ⑭ PUMP AND MOTOR.
- ⑮ CONTROLLER ( 3 PHASE, 230 VOLT )
- ⑯ CONTROLLER SUPPORT.
- ⑰ SEALTITE 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.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



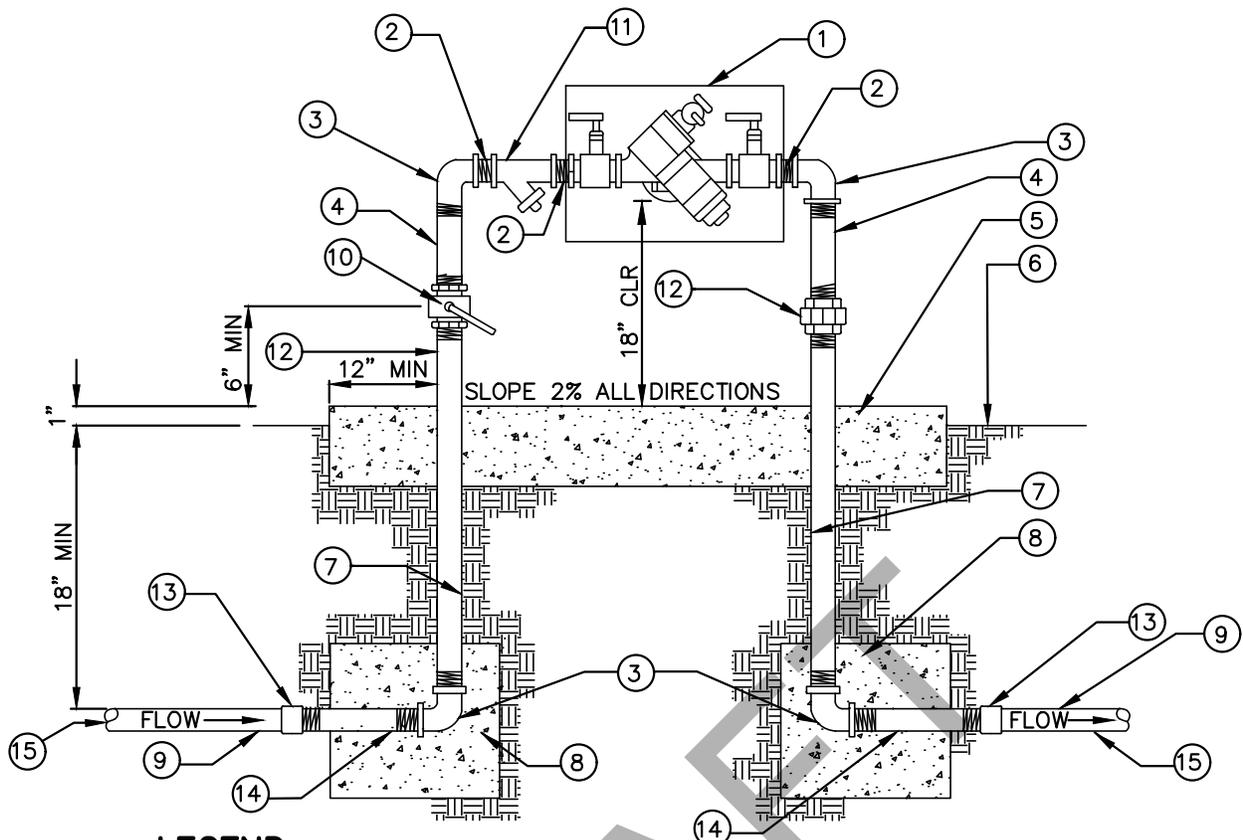
**CITY OF LAKE ELSINORE**

**IRRIGATION BOOSTER  
PUMP DETAIL**

STANDARD PLAN NO.

**552**

SHEET 1 OF 1



**LEGEND:**

- ① BACKFLOW PREVENTER ASSEMBLY
- ② BRASS CLOSE NIPPLE
- ③ BRASS 90 ELL—TYPICAL (4) PLACES
- ④ BRASS NIPPLE
- ⑤ 6" THICK CONCRETE PAD (SEE PAD SCHEDULE)  
SLOPE TO DRAIN AT MINIMUM 2%
- ⑥ FINISH GRADE
- ⑦ BRASS NIPPLE
- ⑧ 12" x 12" x 12" CONCRETE THRUST BLOCKS – TYPICAL (2) PLACES
- ⑨ SCHEDULE 80 TOE NIPPLE ASSEMBLY – TYPICAL (2) PLACES (REFER TO STANDARD 549)
- ⑩ LINE SIZED BRASS FULL PORT LOCKING BALL VALVE
- ⑪ BRASS WYE STRAINER WITH 60 MESH SCREEN AS SPECIFIED
- ⑫ BRASS UNION (OR PRESSURE REGULATOR WITH UNION IF REQUIRED)
- ⑬ BRASS COUPLING
- ⑭ BRASS NIPPLE – LENGTH AS NECESSARY TO EXTEND PAST CONCRETE PAD
- ⑮ PVC MAIN LINE

**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) REDUCED PRESSURE DEVICE MUST BE SAME SIZE AS WATER METER/SERVICE LINE PER EMWD.
- 4) IF PRESSURE REGULATING VALVE IS REQUIRED, INSTALL ON DOWNSTREAM LEG OF BACKFLOW PREVENTER.

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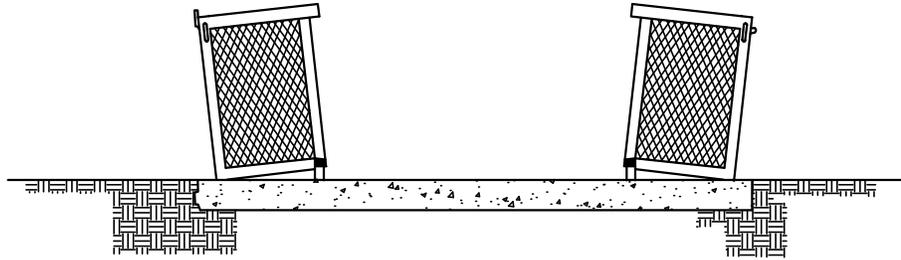
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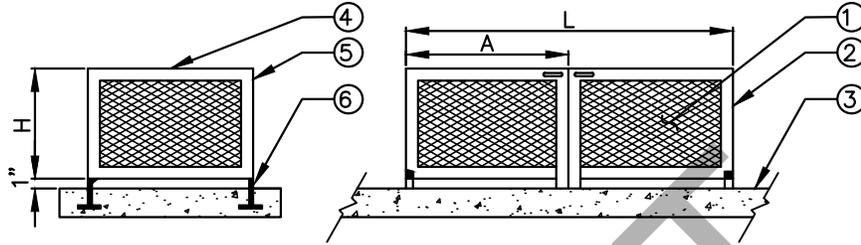
**CITY OF LAKE ELSINORE**

**REDUCED PRESSURE  
BACKFLOW PREVENTER**

STANDARD PLAN NO. **553** SHEET 1 OF 1



**ENCLOSURE IN OPEN POSITION**



**SIDE VIEW ENCLOSURE IN CLOSED POSITION**

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"– No 9 EXPANDED METAL (ANODIZED ALUMINUM OR STAINLESS STEEL)
- ② 1 1/2" x 1 1/2" x 3/16" ANGLE FRAME
- ③ CONCRETE PAD (SEE STANDARD 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, OR AS SPECIFIED ON PLANS.
- 2) FOR UNITS 2" AND UNDER USE SINGLE SWING HINGE MODEL.
- 3) IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE BACKFLOW PREVENTER ASSEMBLY FITS WITHIN SPECIFIED ENCLOSURE. ANY DISCREPANCY SHALL BE REPORTED TO THE CITY IMMEDIATELY.
- 4) SEE CITY STANDARD EQUIPMENT LIST FOR MANUFACTURER.

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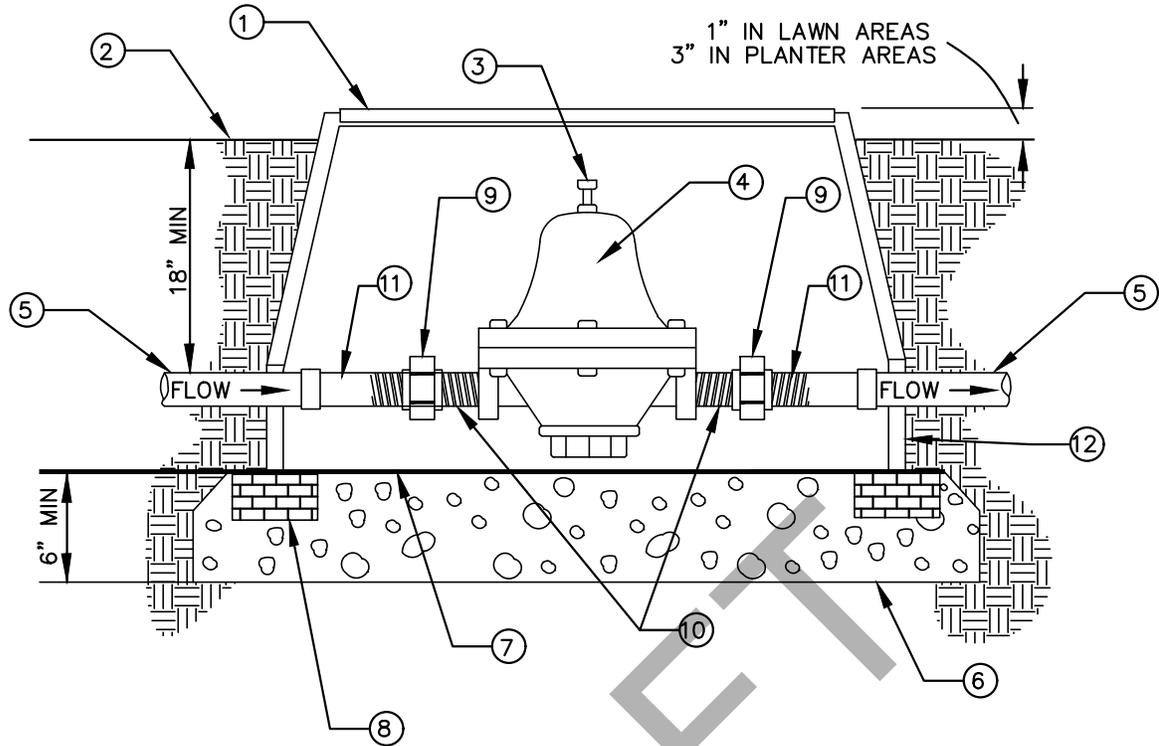
**CITY OF LAKE ELSINORE**

**BACKFLOW PREVENTER  
ENCLOSURE**

STANDARD PLAN NO.

**554**

SHEET 1 OF 1



**LEGEND:**

- ① JUMBO RECTANGULAR PLASTIC VALVE BOX WITH LOCKING LID (PER PLAN AS SPECIFIED), "PR" TO BE BRANDED ON LID
- ② FINISH GRADE
- ③ PRESSURE ADJUSTMENT SCREW
- ④ PRESSURE REGULATOR (PER PLAN AS SPECIFIED)
- ⑤ IRRIGATION MAIN-LINE
- ⑥ 3/4" WASHED CRUSHED AGGREGATE BASE
- ⑦ 1/4" GALVANIZED WIRE MESH
- ⑧ CONCRETE BRICK, TYPICAL OF 4
- ⑨ SCH 80 PVC UNION (FIPT x FIPT)
- ⑩ SCH 80 CLOSE NIPPLE
- ⑪ TOE NIPPLE ASSEMBLY (REFER TO STANDARD MVLI-544A-0)
- ⑫ VALVE BOX EXTENSION (AS NECESSARY)

**NOTES:**

1) PLACE AGGREGATE PRIOR TO INSTALLATION OF BOX.

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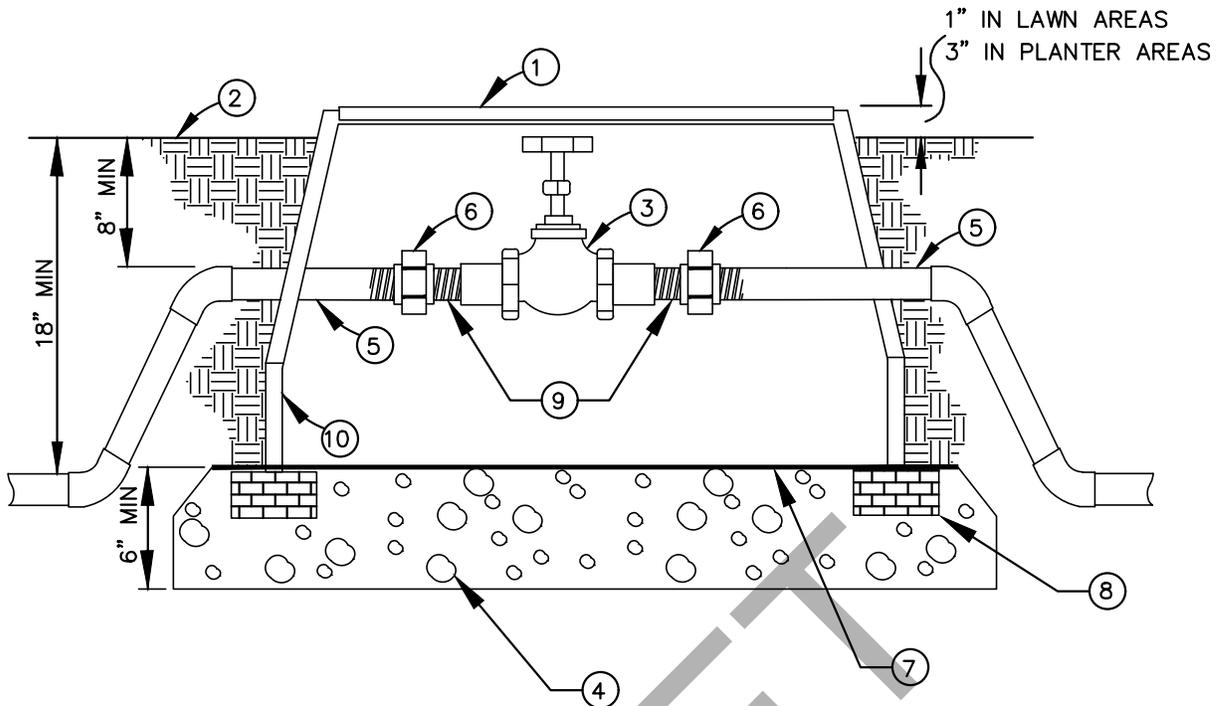
**CITY OF LAKE ELSINORE**

**PRESSURE REDUCING  
VALVE**

STANDARD PLAN NO.

**555**

SHEET 1 OF 1



**LEGEND:**

- ① JUMBO RECTANGULAR PLASTIC VALVE BOX WITH LOCKING LID (PER PLAN AS SPECIFIED), COVER SHALL BE MARKED "BV" OR "GV" VIA BRANDING (2")
- ② FINISH GRADE
- ③ LOCKING BALL VALVE OR GATE VALVE (PER PLAN AS SPECIFIED)
- ④ 3/4" WASHED CRUSHED AGGREGATE BASE
- ⑤ SCH 80 PVC TOE NIPPLE ASSEMBLY (REFER TO STANDARD MVL1-544A-0)
- ⑥ SCH 80 PVC UNION, FIPT x FIPT
- ⑦ 1/4" GALVANIZED WIRE MESH
- ⑧ CONCRETE BLOCK, TYPICAL OF 4
- ⑨ SCH 80 CLOSE NIPPLE
- ⑩ VALVE BOX EXTENSION (AS NECESSARY)

**NOTES:**

- 1) PLACE AGGREGATE PRIOR TO INSTALLATION OF VALVE BOX.
- 2) IF BALL VALVES ARE USED, A JUMBO RECTANGULAR BOX SHALL BE INSTALLED. BALL VALVES UNDER 2" TO HAVE HANDLE LOCATED VERTICALLY. BALL VALVES LARGER THAN 2" TO HAVE A 2" SQUARE NUT AND DELETE HANDLE.
- 3) CAST IRON AND / OR FLANGED VALVES WILL REQUIRE A Poured-IN-PLACE CONCRETE SUPPORT (NOT SHOWN).

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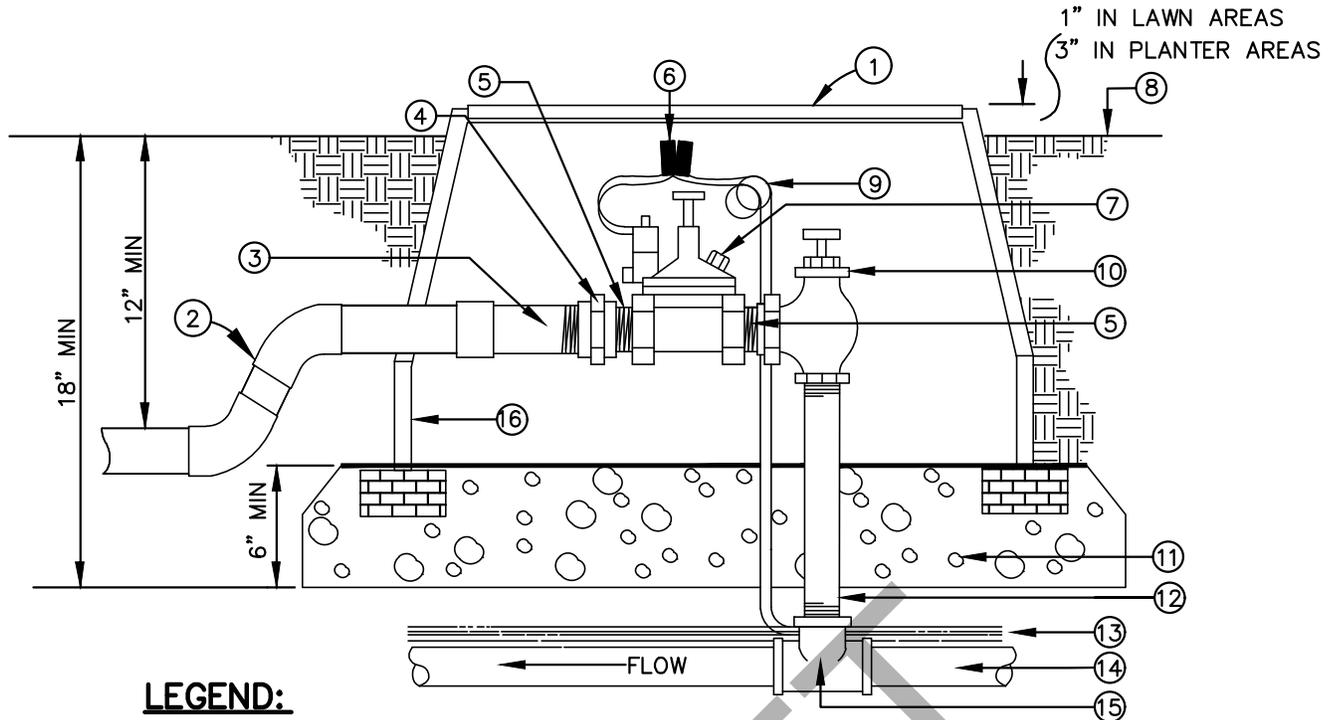
**CITY OF LAKE ELSINORE**

**BALL VALVE/GATE VALVE  
3" OR SMALLER**

STANDARD PLAN NO.

**556**

SHEET 1 OF 1



**LEGEND:**

- ① JUMBO RECTANGULAR PLASTIC VALVE BOX WITH LOCKING LID (PER PLAN AS SPECIFIED), SHALL BE "RCV" WITH STATION NUMBERS FOR CONTROL VALVES BRANDED ON LID
- ② PVC LATERAL LINE – ANGLE PIPE TO SPECIFIED DEPTH WITH 45 DEGREE ELLS AS NECESSARY
- ③ SCH 80 PVC TOE NIPPLE ASSEMBLY (REFER TO STANDARD 549)
- ④ SCH 80 PVC UNION (FIPT x FIPT)
- ⑤ SCH 80 PVC CLOSE NIPPLE
- ⑥ WATER PROOF CONNECTORS, (SEE STANDARD 551)
- ⑦ ELECTRIC CONTROL VALVE
- ⑧ FINISH GRADE
- ⑨ PIG TAIL EXPANSION LOOP (MIN 24" LONG)
- ⑩ BRASS ANGLE VALVE WITH UNION
- ⑪ WASHED CRUSHED AGGREGATE
- ⑫ SCH 80 PVC NIPPLE
- ⑬ CONTROL & COMMON WIRES (REFER TO STANDARD 561)
- ⑭ IRRIGATION MAIN-LINE
- ⑮ SCH 80 PVC S x S x T TEE
- ⑯ VALVE BOX EXTENSION (AS NECESSARY)

**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 PARALLEL 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) ONLY ONE VALVE PER BOX ALLOWED.

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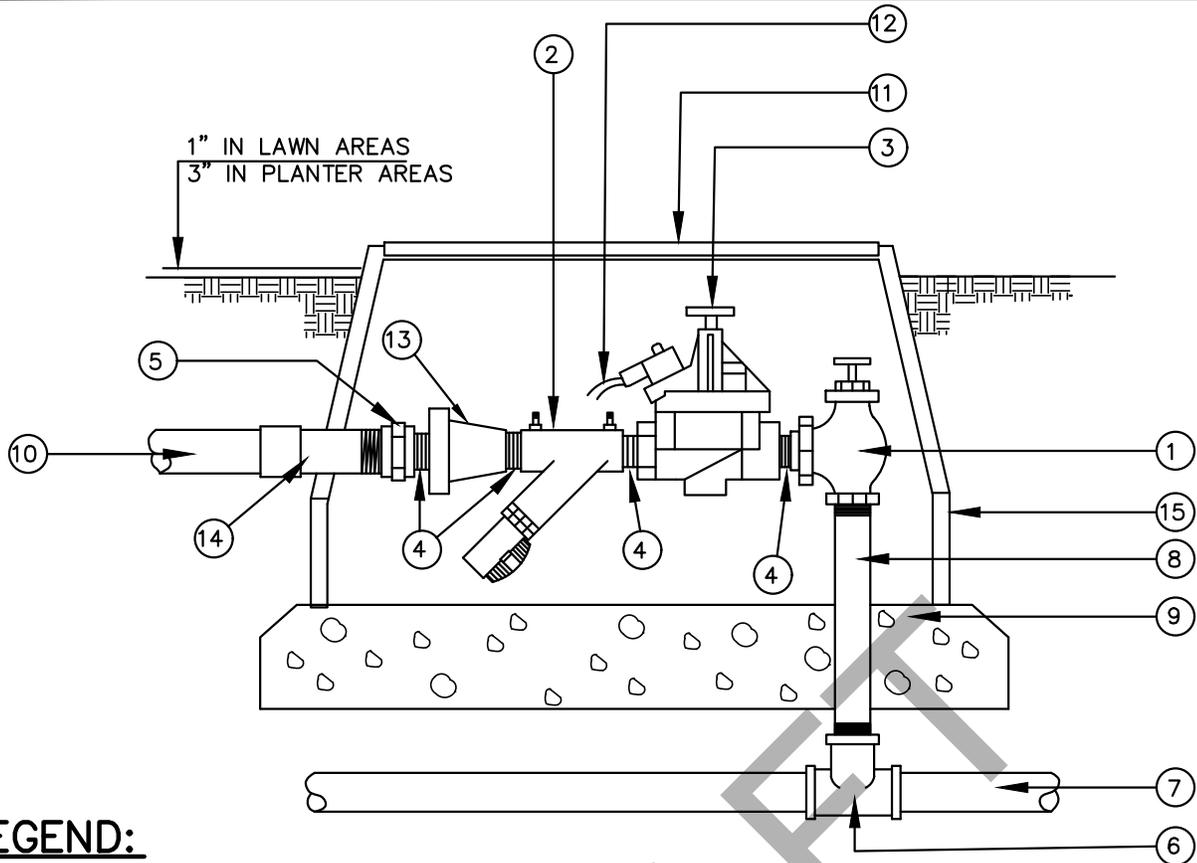
**CITY OF LAKE ELSINORE**

**REMOTE CONTROL  
VALVE WITH UNION**

STANDARD PLAN NO.

**557**

SHEET 1 OF 1



**LEGEND:**

- ① BRASS ANGLE VALVE WITH UNION – SAME SIZE AS RCV
- ② IN-LINE WYE FILTER (PER PLAN AS SPECIFIED)
- ③ REMOTE CONTROL VALVE (PER PLAN AS SPECIFIED)
- ④ SCH 80 PVC CLOSE NIPPLE
- ⑤ SCH 80 UNION (FIPT X FIPT)
- ⑥ SCH 80 PVC S x S x T TEE
- ⑦ IRRIGATION MAIN-LINE
- ⑧ SCH 80 PVC NIPPLE
- ⑨ 6" THICK 3/4" WASHED CRUSHED AGGREGATE
- ⑩ LATERAL LINE (PER PLAN AS SPECIFIED)
- ⑪ JUMBO RECTANGULAR PLASTIC VALVE BOX WITH LOCKING LID (PER PLAN AS SPECIFIED), SHALL BE BRANDED "RCV" WITH STATION NUMBERS FOR CONTROL VALVES
- ⑫ SOLENOID WIRES. PIG -TAIL EACH 24" LONG
- ⑬ PRESSURE REGULATOR (PER PLAN AS SPECIFIED)
- ⑭ SCH 80 TOE NIPPLE ASSEMBLY (REFER TO STANDARD 549)
- ⑮ VALVE BOX EXTENSION (AS NECESSARY)

**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 PARALLEL 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) ONLY ONE VALVE PER BOX ALLOWED.

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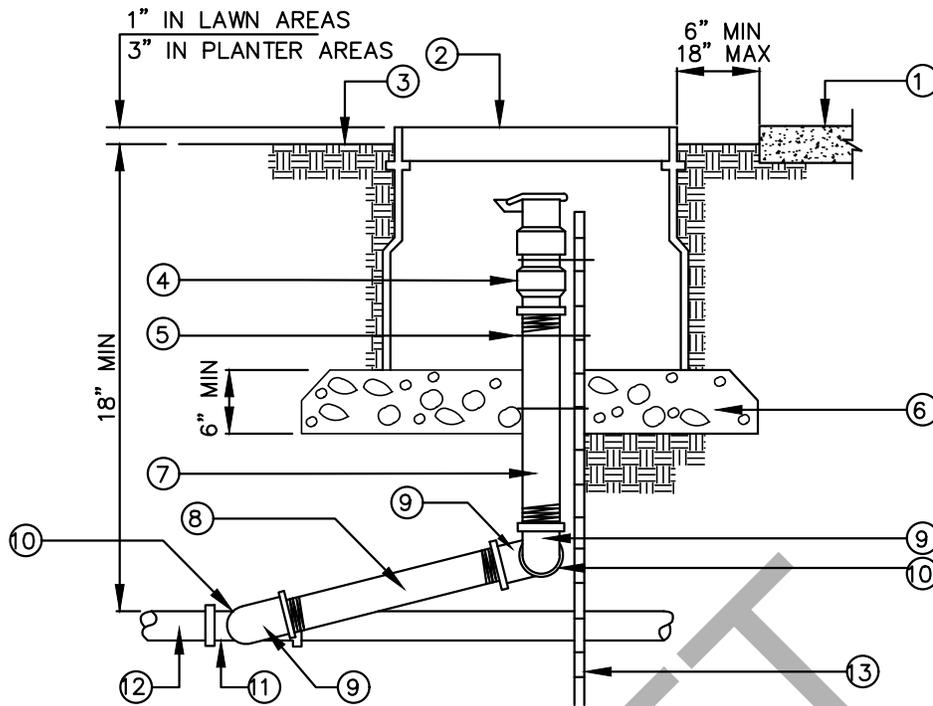
**CITY OF LAKE ELSINORE**

**REMOTE CONTROL VALVE  
ASSEMBLY FOR DRIP SYSTEMS**

STANDARD PLAN NO.

**558**

SHEET 1 OF 1



**LEGEND:**

- ① STRUCTURE OR HARDSCAPE
- ② 10" ROUND VALVE BOX WITH "QC" BRANDED ON LID
- ③ FINISH GRADE
- ④ QUICK COUPLING VALVE (PER PLAN AS SPECIFIED)
- ⑤ STAINLESS STEEL SCREW CLAMP MINIMUM (3) PLACES
- ⑥ 3/4" WASHED CRUSHED AGGREGATE BASE
- ⑦ SCH 80 NIPPLE - 10" LONG
- ⑧ SCH 80 NIPPLE - 12" LONG
- ⑨ SCH 80 (FIPT x FIPT) PVC 90 DEGREE ELL
- ⑩ SCH 80 PVC CLOSE NIPPLE
- ⑪ PRESSURE SUPPLY LINE FITTING, (LINE SIZE SCH 80 TEE - S x S x T, OR 90 DEGREE ELL WITH SCH 80 REDUCER BUSHING - SPIG x FIPT)
- ⑫ IRRIGATION MAIN-LINE
- ⑬ No 4 REBAR STAKE (24" LONG)

**NOTES:**

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

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CITY OF LAKE ELSINORE

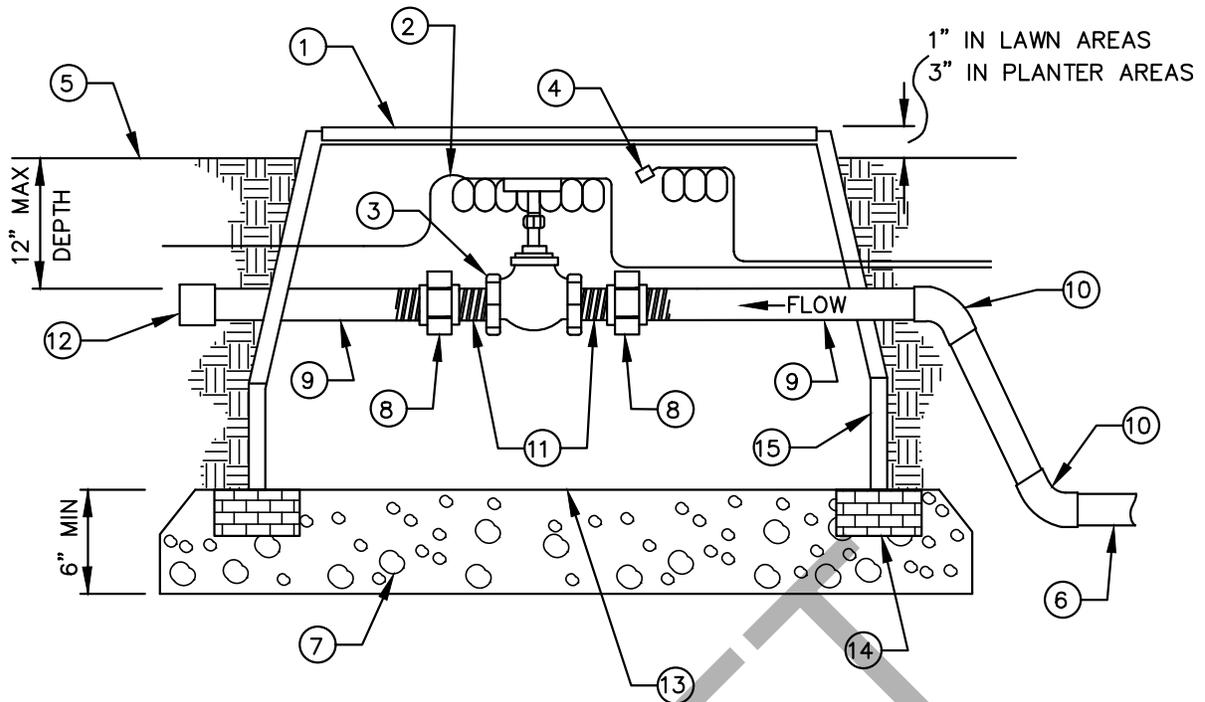
QUICK COUPLING VALVE

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STANDARD PLAN NO.

**559**

SHEET 1 OF 1



**LEGEND:**

- ① JUMBO RECTANGULAR PLASTIC VALVE BOX WITH LOCKING LID (PER PLAN AS SPECIFIED) BRANDED WITH "GV" OR "BV"
- ② PIG-TAIL COMMON WIRE (CONTINUOUS LOOP)
- ③ BALL VALVE OR GATE VALVE (PER PLAN AS SPECIFIED)
- ④ PIG-TAIL PILOT WIRE AND WATERPROOF END (REFER TO STANDARD MVLI-545A-0)
- ⑤ FINISH GRADE
- ⑥ IRRIGATION MAIN-LINE
- ⑦ 3/4" WASHED CRUSHED AGGREGATE BASE
- ⑧ SCH 80 UNION (FIPT x FIPT)
- ⑨ SCH 80 TOE NIPPLE ASSEMBLY (REFER TO STANDARD MVLI-544A-0)
- ⑩ SCH 80 45° ELBOWS
- ⑪ SCH 80 PVC CLOSE NIPPLES
- ⑫ SCH 80 PVC CAP
- ⑬ 1/4" GALVANIZED WIRE MESH
- ⑭ CONCRETE BRICK, TYPICAL OF 4
- ⑮ VALVE BOX EXTENSION (AS NECESSARY)

**NOTES:**

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

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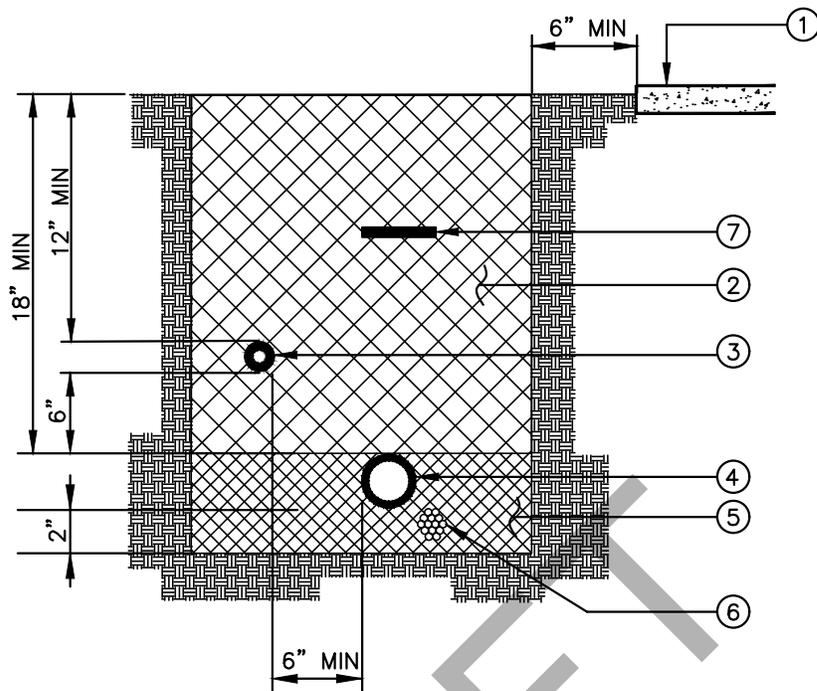
**CITY OF LAKE ELSINORE**

**IRRIGATION STUB-OUT BOX**

STANDARD PLAN NO.

**560**

SHEET 1 OF 1



**LEGEND:**

- ① ADJACENT WALK OR FINISHED SURFACE
- ② CLEAN BACKFILL – SEE SPECIFICATIONS FOR MATERIAL, 90% COMPACTION REQUIRED
- ③ NON-PRESSURE LATERAL LINE
- ④ IRRIGATION MAIN-LINE
- ⑤ PROVIDE WASHED SAND BACKFILL
- ⑥ CONTROL WIRES – BUNDLE AND TAPE AT 15' OC AND INSTALL BELOW AND OFFSET FROM IRRIGATION MAIN-LINE
- ⑦ WATER WARNING TAPE PER CITY LANDSCAPE GUIDELINES

**NOTES:**

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

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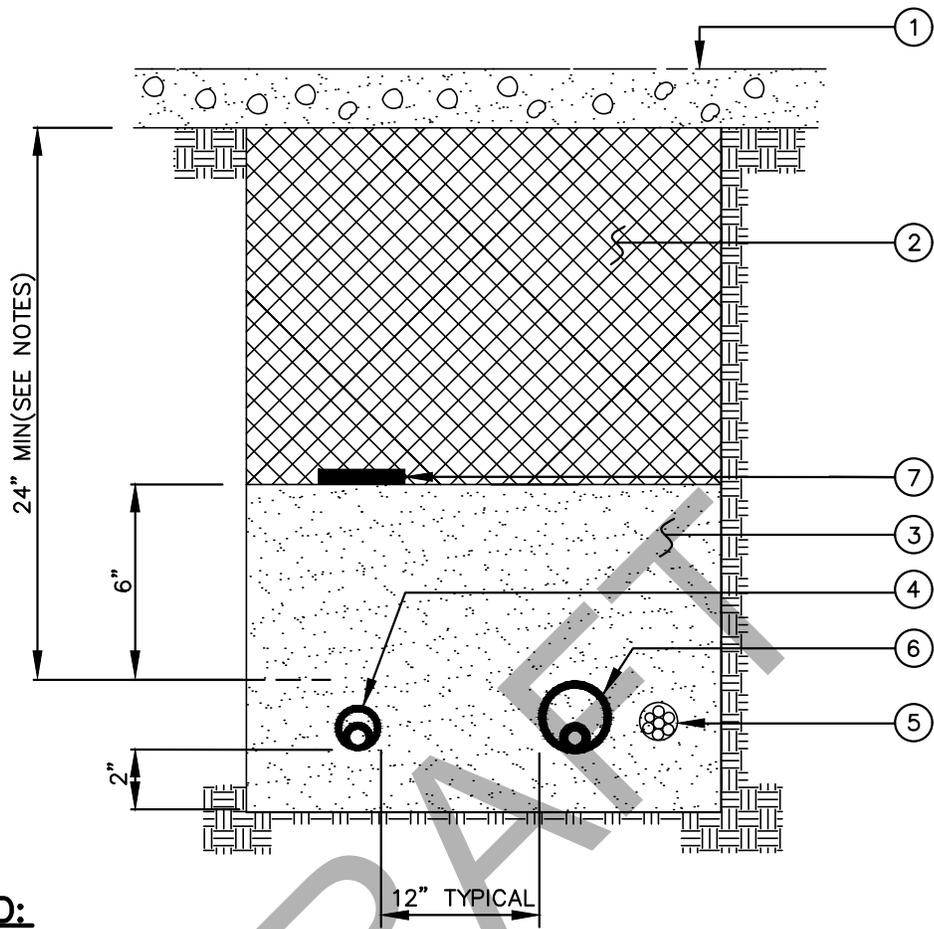
**CITY OF LAKE ELSINORE**

**TRENCH DETAIL**

STANDARD PLAN NO.

**561**

SHEET 1 OF 1



**LEGEND:**

- ① HARDSCAPING
- ② CLEAN BACKFILL – SEE SPECS. FOR MATERIAL, 90% COMPACTION REQUIRED
- ③ WASHED 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 IRRIGATION MAIN-LINE
- ⑥ IRRIGATION MAIN-LINE SLEEVE – SIZE TWICE DIAMETER OF IRRIGATION MAIN-LINE
- ⑦ WATER WARNING TAPE, 6" ABOVE WATER PIPE

**NOTES:**

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

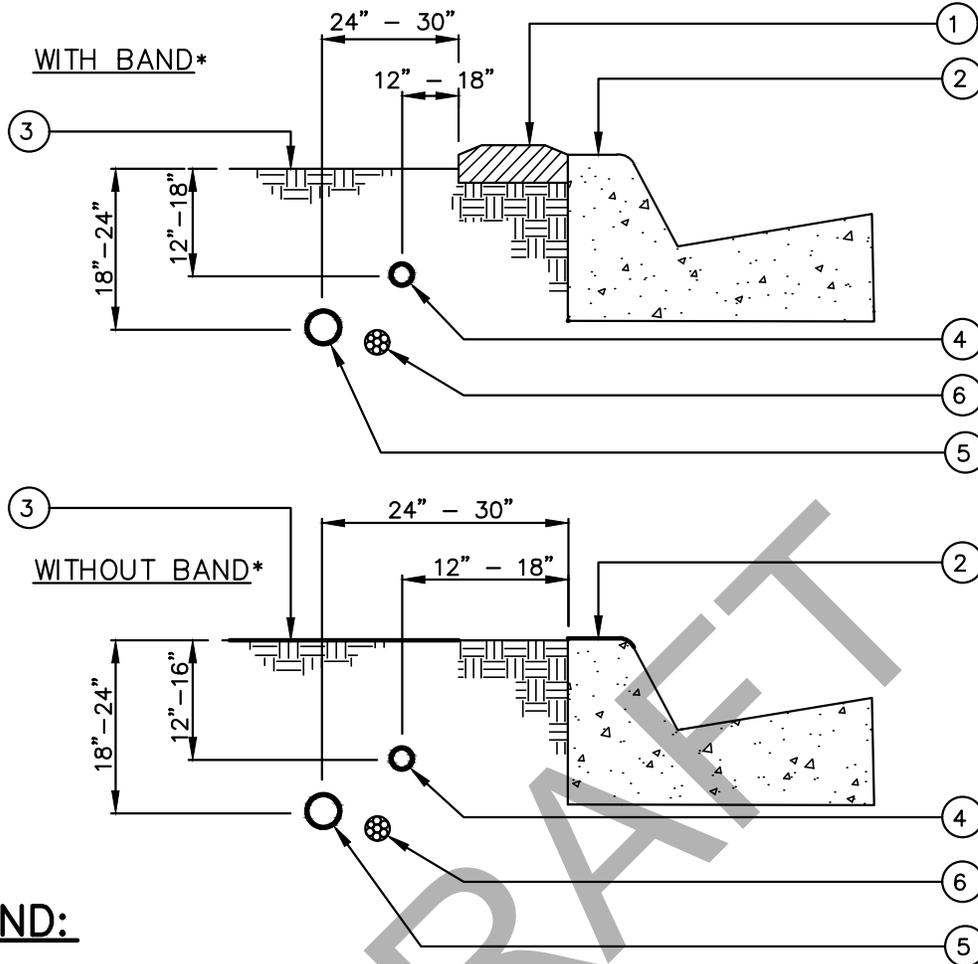
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**CITY OF LAKE ELSINORE**

**SLEEVING DETAIL**

STANDARD PLAN NO. **562** SHEET 1 OF 1



**LEGEND:**

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

**NOTE:**

1) PIPES PLACED IN A COMMON TRENCH SHALL HAVE A VERTICAL & HORIZONTAL OFFSET OF 4" MINIMUM.

\* FOR MEDIANS LESS THAN 18' WIDE, HORIZONTAL OFFSET FROM CURB/HARDSCAPE SHALL BE AS DETERMINED BY CITY ENGINEER.

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**CITY OF LAKE ELSINORE**

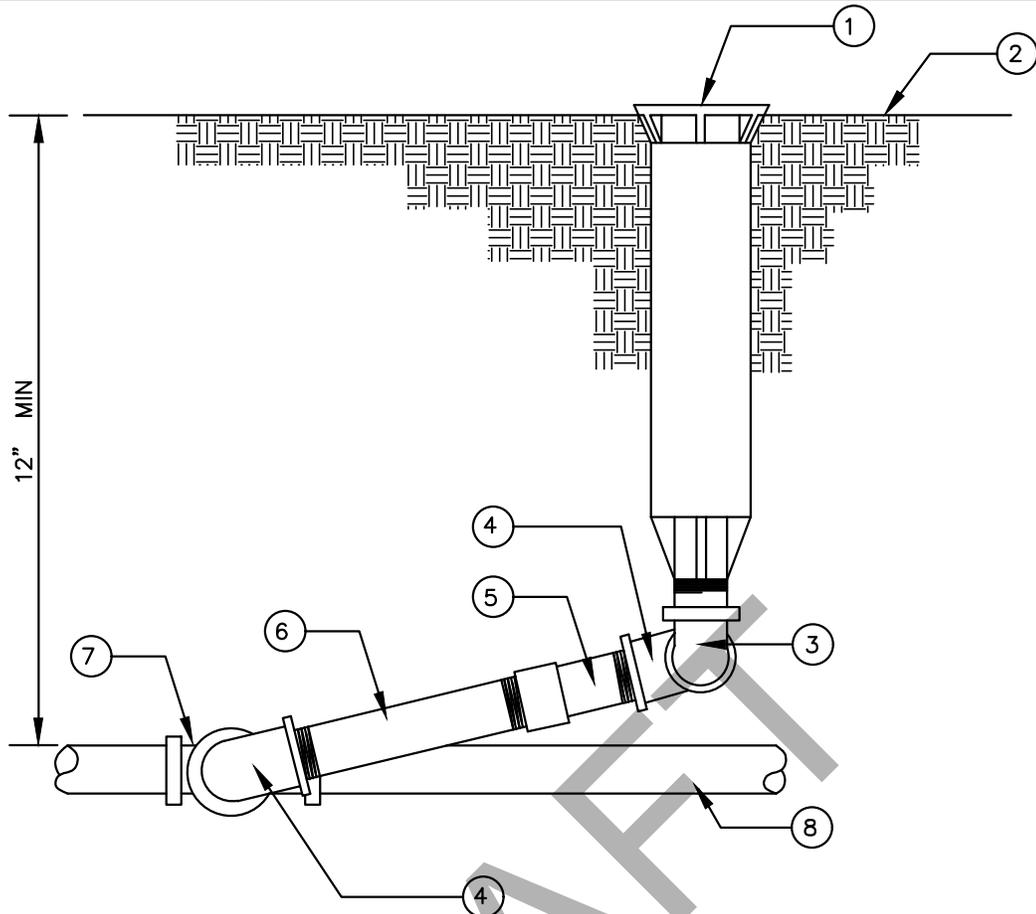
**MEDIAN AND PARKWAY  
IRRIGATION LINE  
INSTALLATION**

STANDARD PLAN NO.

**563**

SHEET 1 OF 1

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**LEGEND:**

- ① POP-UP HEAD
- ② FINISH GRADE
- ③ SCH 40 PVC 90 DEGREE STREET ELL (MIPT x FIPT)
- ④ MARLEX 90 DEGREE STREET ELL (MIPT x FIPT)
- ⑤ ANTI-DRAIN VALVE-ALL DOWN SLOPE HEADS-IF NOT INSTALLED IN HEADS
- ⑥ SCH 80 PVC NIPPLE (6" LONG)
- ⑦ SCH 40 PVC TEE (S x S x T TEE OR S x T 90° ELL)
- ⑧ NON-PRESSURE LATERAL LINE

**NOTES:**

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

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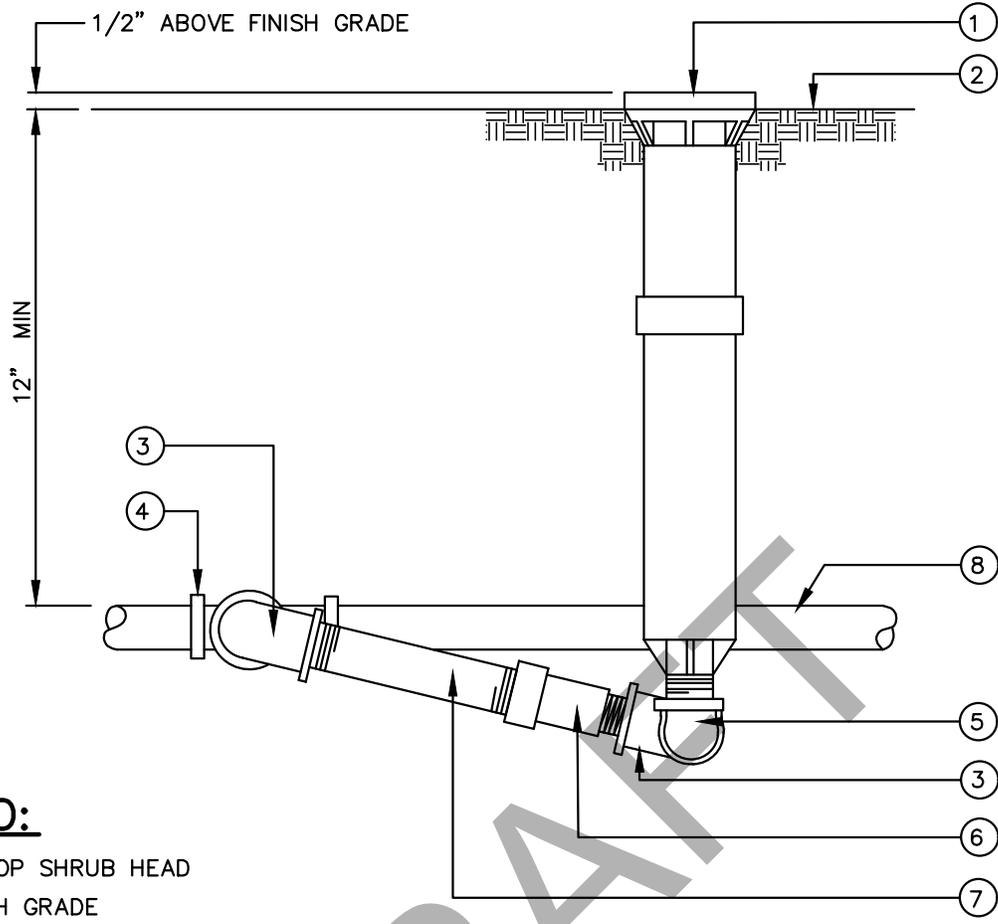
**CITY OF LAKE ELSINORE**

**6" POP-UP SPRAY HEAD**

STANDARD PLAN NO.

**564**

SHEET 1 OF 1



**LEGEND:**

- ① HI-POP SHRUB HEAD
- ② FINISH GRADE
- ③ MARLEX 90 DEGREE STREET ELL
- ④ SCH 40 PVC TEE (S x S x T)
- ⑤ SCH 40 PVC 90 DEGREE STREET ELL (MIPT x FIPT)
- ⑥ ANTI-DRAIN VALVE-ALL DOWN SLOPE HEADS-IF NOT INSTALLED IN HEAD
- ⑦ SCH 80 PVC NIPPLE - 12" LONG
- ⑧ NON-PRESSURE LATERAL LINE

**NOTES:**

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

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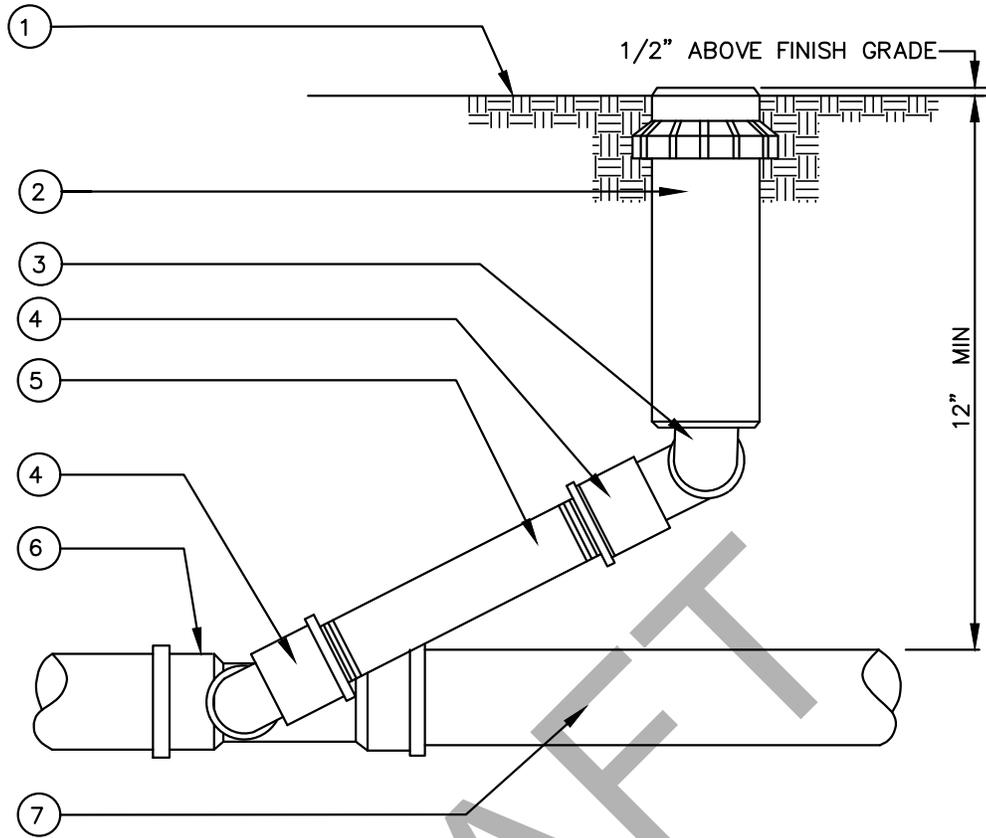
**CITY OF LAKE ELSINORE**

**12" POP-UP SPRAY HEAD**

STANDARD PLAN NO.

**565**

SHEET 1 OF 1



**LEGEND:**

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

**NOTES:**

- 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 AREAS - 12" IN PLANTER AREAS.  
(THESE MINIMUMS MAY BE INCREASED PER SPECIFICATIONS).

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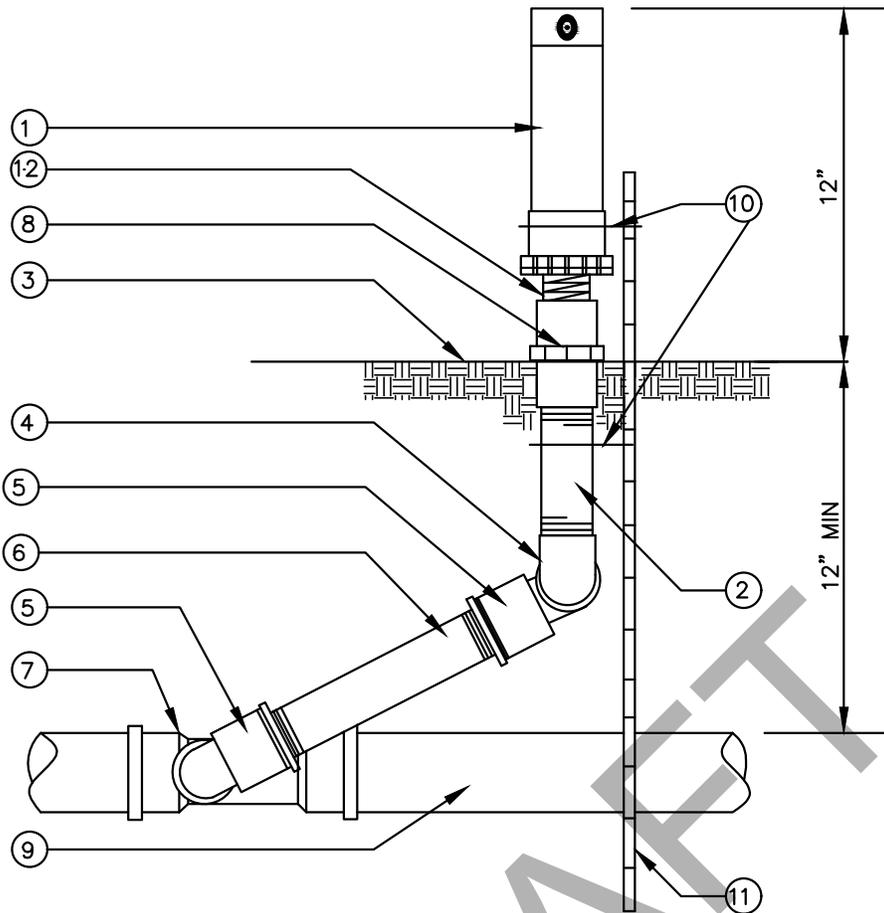
**CITY OF LAKE ELSINORE**

**POP-UP ROTARY HEAD**

STANDARD PLAN NO.

**566**

SHEET 1 OF 1



**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 ELL (FIPT X FIPT)
- ⑤ 3/4" MARLEX 90 DEGREE STREET ELL (MIPT X FIPT)
- ⑥ 3/4" x 8" SCH 80 NIPPLE
- ⑦ SCH 40 PVC TEE (S x S x T)
- ⑧ ANTI DRAIN VALVE ON DOWN SLOPE ROTORS IF NOT FITTED IN BY MFG.
- ⑨ NON-PRESSURE LATERAL LINE
- ⑩ STAINLESS STEEL SCREW, CLAMP MIN. (2) PLACES
- ⑪ No 4 REBAR STAKE (24" LONG)
- ⑫ SCH 80 CLOSE NIPPLE

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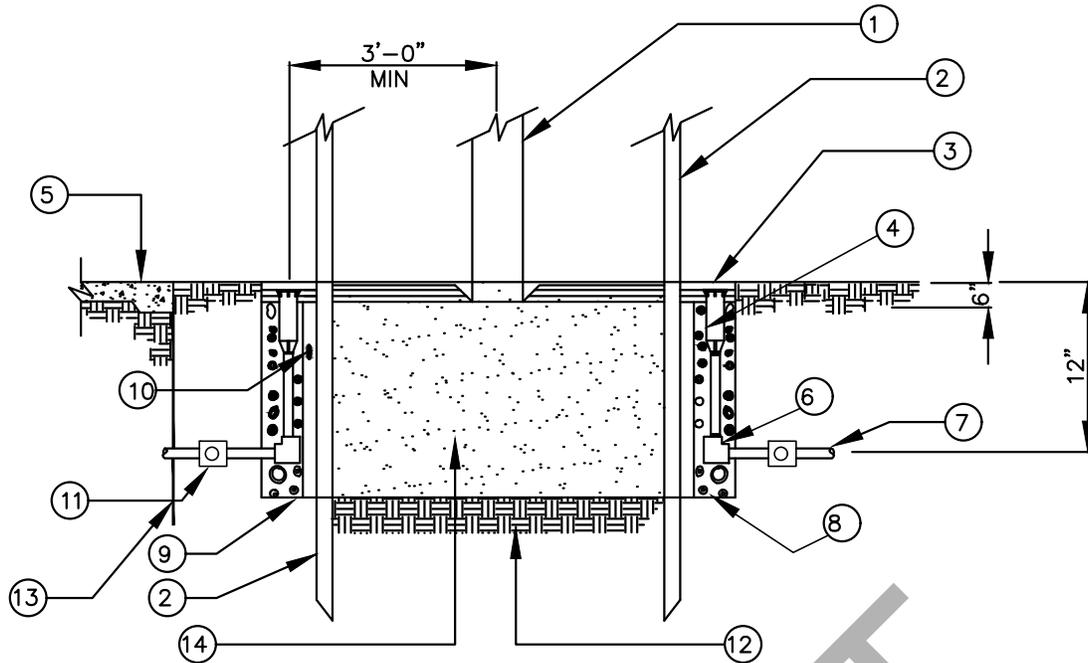
**CITY OF LAKE ELSINORE**

**ROTOR INSTALLATION ON  
FIXED RISER**

STANDARD PLAN NO.

**567**

SHEET 1 OF 1



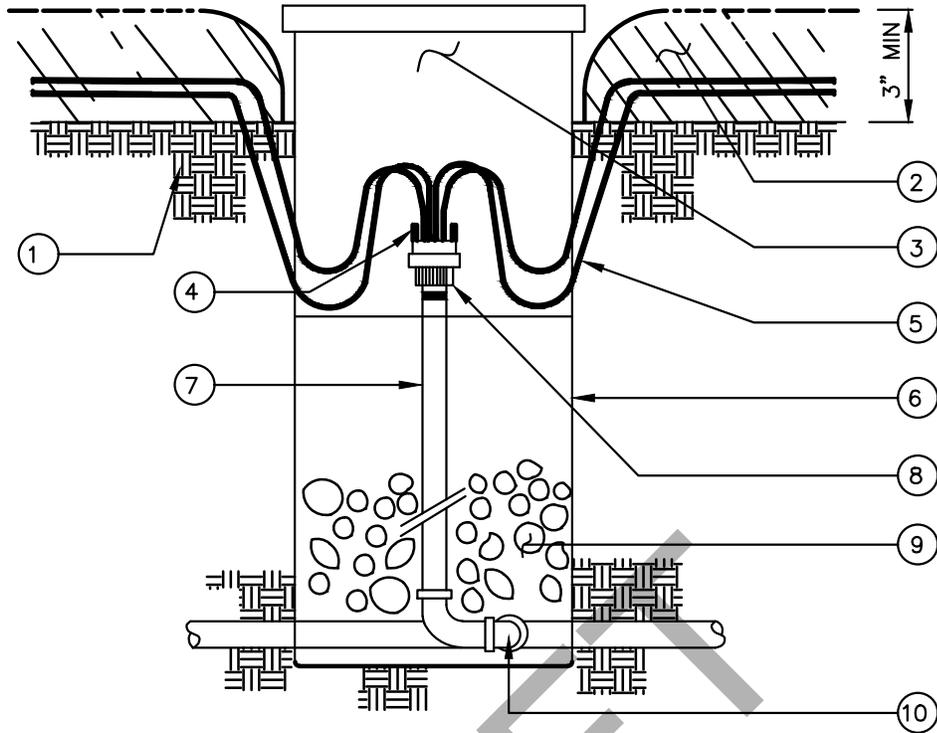
**LEGEND:**

- 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 NON-PRESSURE LATERAL LINE, CL200 PVC-THRU "CHIMNEY", BOTH SIDES.
- ⑧ 6" DIAMETER X 24" LONG PERFORATED ABS DRAIN WITH 1/2" AGGREGATE FILLED TO TOP OF SPRINKLER
- ⑨ PLANTING PIT: 4 TIMES WIDTH OF ROOTBALL AND SAME DEPTH AS ROOTBALL
- ⑩ PLANT TABLETS PER MANUFACTURER'S RECOMMENDATIONS (DISTRIBUTED AROUND ROOTBALL)
- ⑪ TEE AROUND PERIMETER OF THE TREE WELL.
- ⑫ UNDISTURBED NATIVE SOIL
- ⑬ INSTALL VERTICAL ROOT BARRIER PER MFG. INSTRUCTIONS (WHERE SPECIFIED)
- ⑭ ROOTBALL

**NOTES:**

1) SUPPLEMENTAL TREE IRRIGATION: 1 RWS FOR 5 GALLON TREES. 2 RWS FOR 15 GALLON TREES AND LARGER.

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB		DATE			<b>DEEP WELL TREE IRRIGATION DRIP AND/OR BUBBLER</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>568</b>	
				SHEET 1 OF 1		



**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 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 DOUBLE STREET ELLS BETWEEN LATERAL LINE AND RISER.

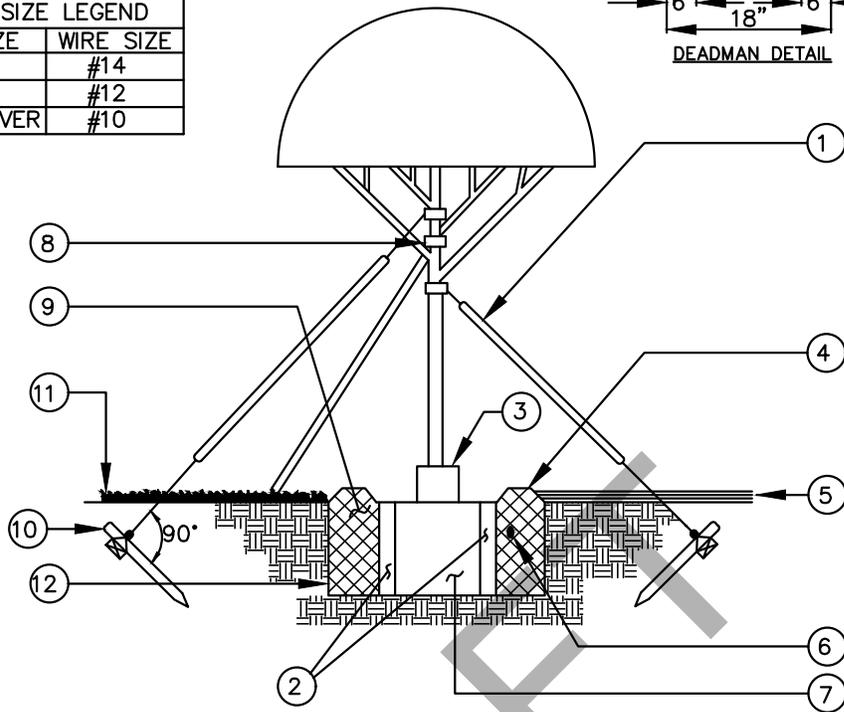
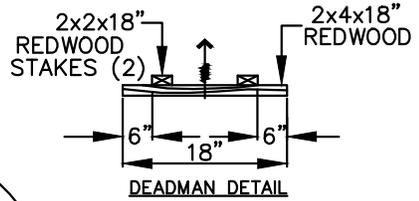
**NOTES:**

- 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).

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB		DATE			<b>DRIP EMITTER INSTALLATION</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>569</b> SHEET 1 OF 1	



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



**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 STANDARD PLAN NO. 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 PLANTING PIT TO BE 2 TIMES THE WIDTH OF ROOT BALL & SAME DEPTH AS THE ROOT BALL

**NOTES:**

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

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



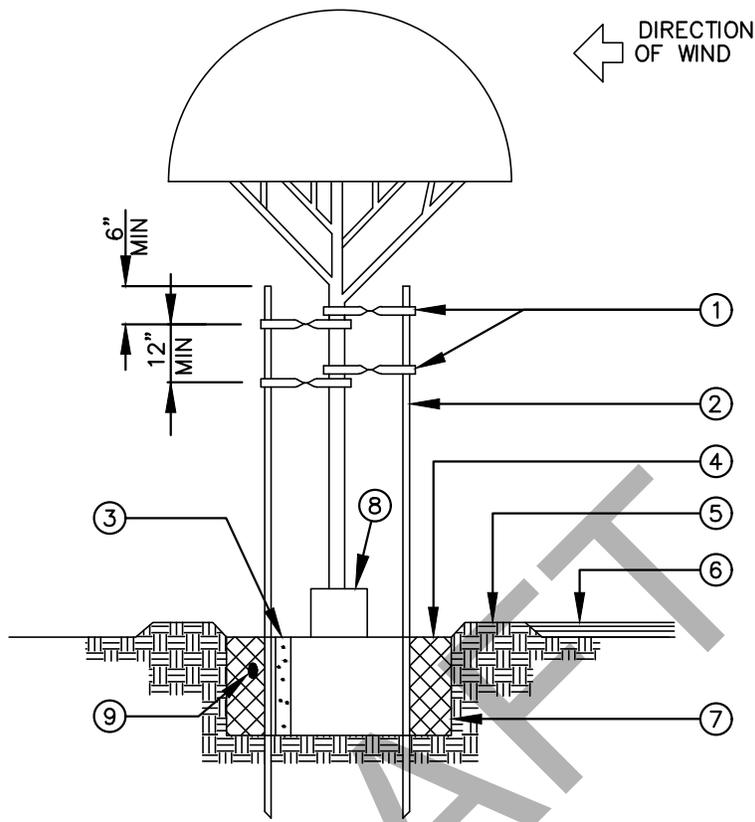
**CITY OF LAKE ELSINORE**

**TREE GUYING DETAIL  
36" BOX OR LARGER**

STANDARD PLAN NO.

**581**

SHEET 1 OF 1



**LEGEND:**

- ① TREE TIES 4 REQUIRED
- ② 2" LODGEPOLE PINE STAKE
- ③ REFER TO CITY STANDARD PLAN 568 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 PLANTING 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

**NOTES:**

1) INSTALL STAKES 12" MINIMUM FROM TREE TRUNK AND/OR OUTSIDE OF ROOTBALL.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

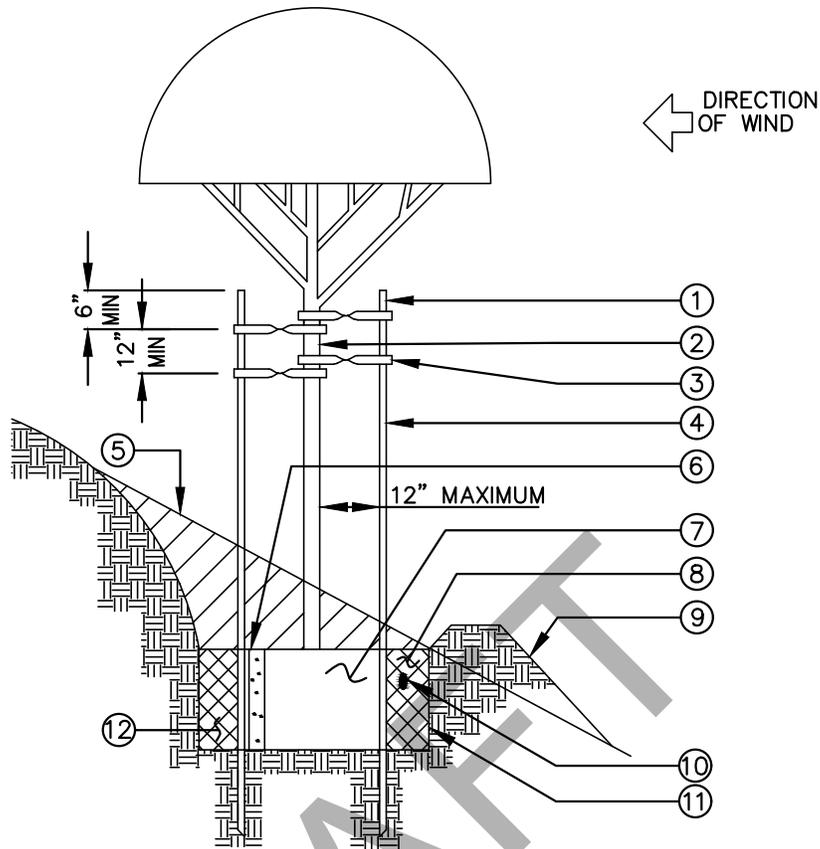
**TYPICAL DOUBLE  
STAKE TREE  
(15 GAL.-24" BOX)**

STANDARD PLAN NO.

**582**

SHEET 1 OF 1

REVISION	BY:	APPROVED	DATE



**LEGEND:**

- ① TOP OF STAKES
- ② MAIN TRUNK
- ③ TREE TIES (4 REQUIRED) 12" APART MIN NAILED TO STAKES
- ④ APPROVED 10' TREE STAKES (2) PER SPECIFICATIONS
- ⑤ ORIGINAL GRADE
- ⑥ REFER TO STANDARD PLAN NO. 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 PLANTING TABS PER MANUFACTURERS RECOMMENDATIONS
- ⑪ PLANTING PIT TO BE 2 TIMES WIDTH OF ROOT BALL & SAME DEPTH AS THE ROOT BALL
- ⑫ NATIVE SOIL BACKFILL (COMPACTED)

**NOTES:**

1) INSTALL STAKES 12" MINIMUM FROM TREE TRUNK AND/OR OUTSIDE OF ROOT BALL.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



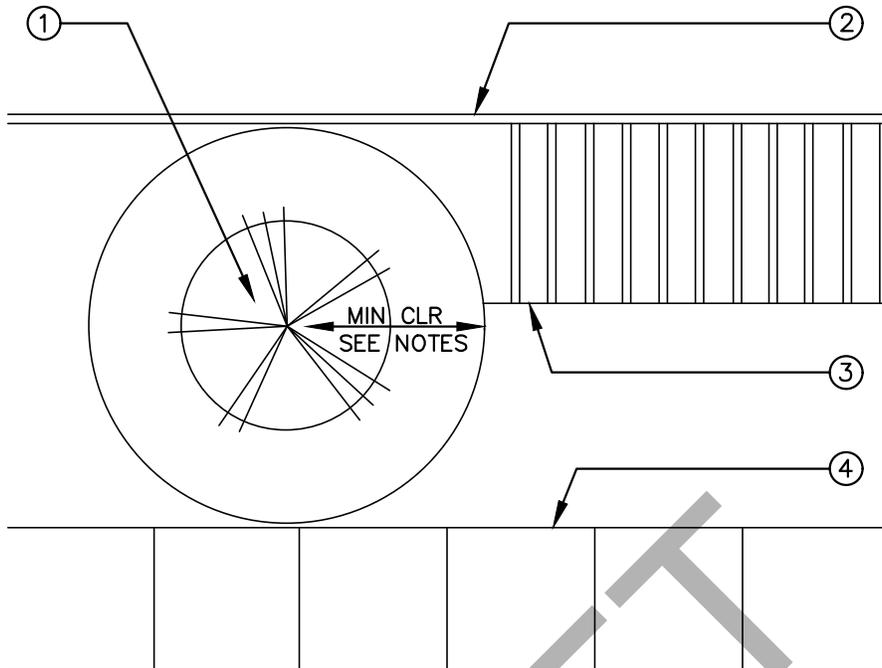
**CITY OF LAKE ELSINORE**

**DOUBLE STAKED  
TREE ON SLOPE**

STANDARD PLAN NO.

**583**

SHEET 1 OF 1



**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.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

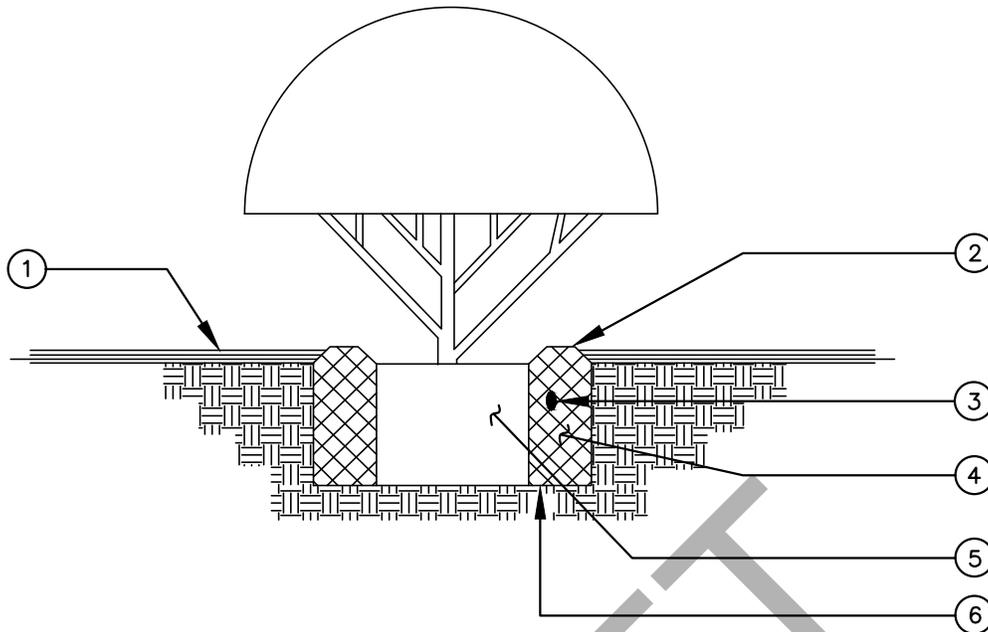
**TREE SPACING  
REQUIREMENTS**

STANDARD PLAN NO.

**584**

SHEET 1 OF 1

REVISION	BY:	APPROVED	DATE



**LEGEND:**

- ① 3" THICK (MINIMUM) SHREDDED MULCH (PER PLAN AS SPECIFIED).
- ② 4" BERM TO FORM WATERING BASIN (BERM TO BE REMOVED PRIOR TO MULCH APPLICATION PER THE DISCRETION OF SPECIAL DISTRICTS).
- 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 COVER IN PLANTER AREAS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

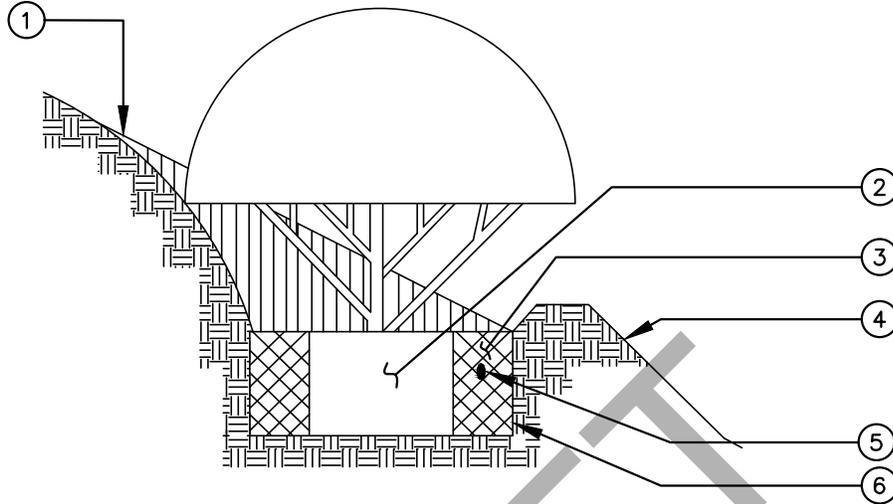
**CONTAINER PLANTING**

REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

**585**

SHEET 1 OF 1



**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 PLANTING 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 COVER IN PLANTER AREAS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

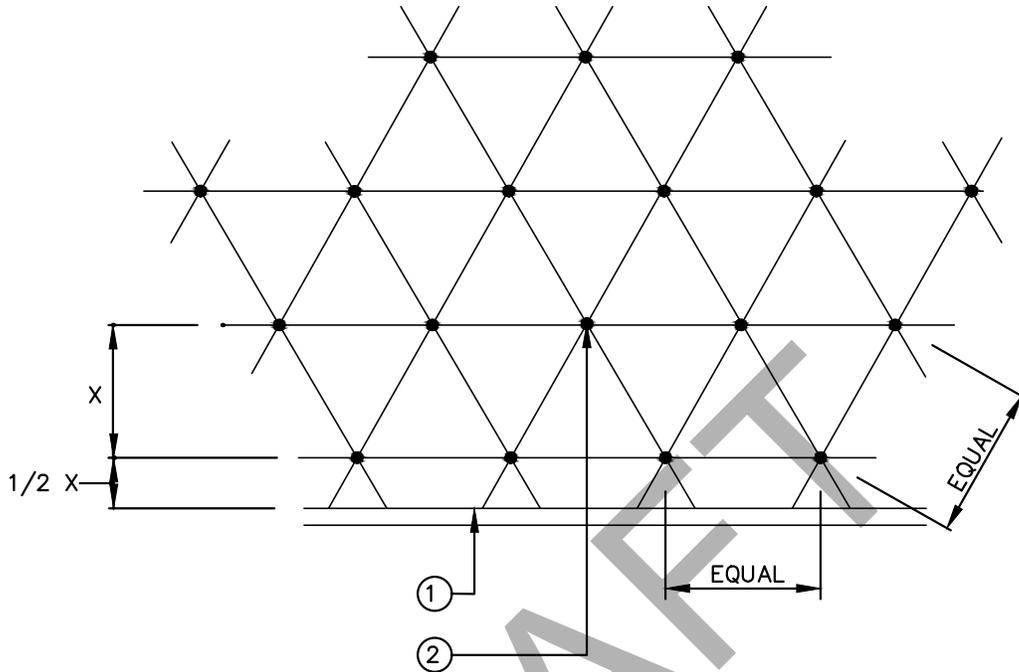
**CONTAINER PLANTING  
ON SLOPE**

STANDARD PLAN NO.

**586**

SHEET 1 OF 1

REVISION	BY:	APPROVED	DATE



**LEGEND:**

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

**NOTES:**

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

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CITY ENGINEER  
REMON HABIB

DATE

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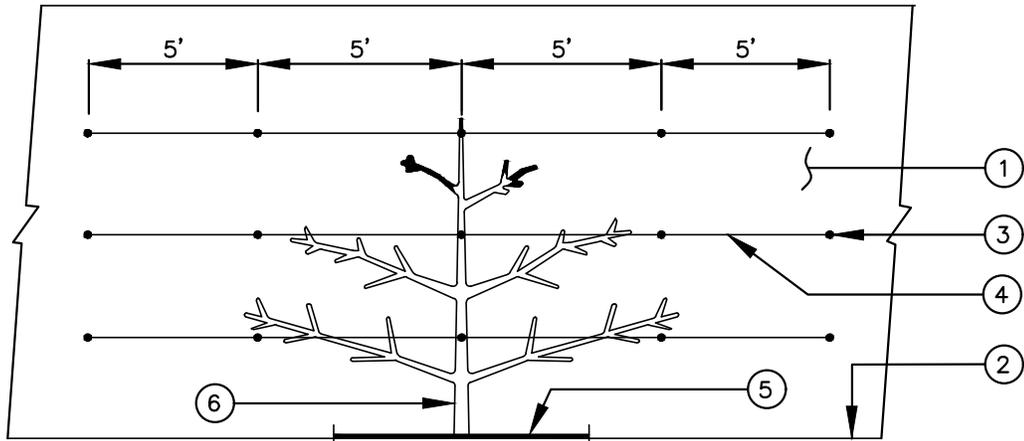
**CITY OF LAKE ELSINORE**

**SHRUB / GROUND COVER  
SPACING**

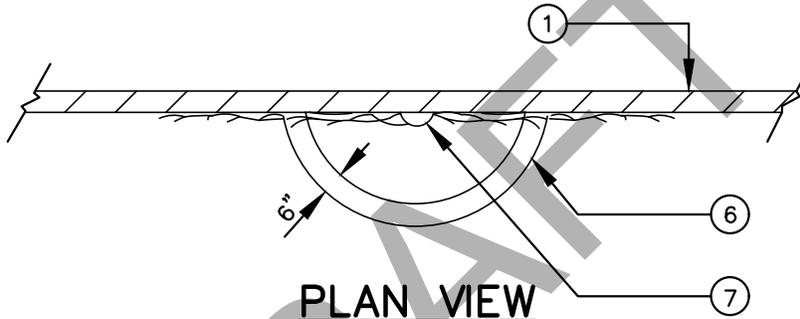
STANDARD PLAN NO.

**587**

SHEET 1 OF 1



**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 6" x 8" CONCRETE VINE COLLARS IN TURF AREAS ONLY. INSIDE RADIUS OF COLLAR TO BE TWO TIMES THE DIAMETER OF ROOTBALL MINIMUM
- ⑥ VINE (PER PLAN AS SPECIFIED)
- ⑦ ANGLE TRUNK OF VINE VINE BACK TO WALL, REMOVE NURSERY STAKE, AND SECURE VINE TO WIRES WITH NURSERYMAN'S TAPE.

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CITY ENGINEER  
REMON HABIB

DATE

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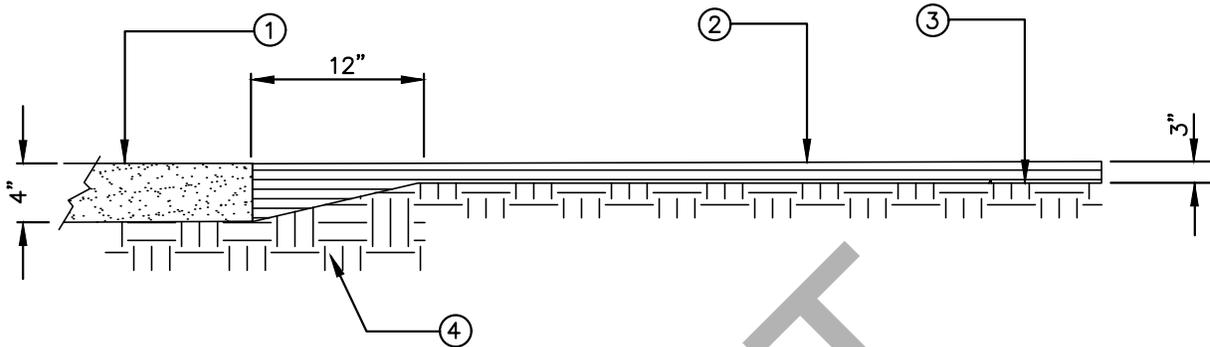
**CITY OF LAKE ELSINORE**

**VINE DETAIL  
NON-ADHERING TYPE**

STANDARD PLAN NO.

**588**

SHEET 1 OF 1



**LEGEND**

- ① HARDCAPING/ HEADERBOARD
- ② SHREDDED MULCH (MEDIUM GRIND) DO NOT USE BARK USE 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 (3" TO 4")

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CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

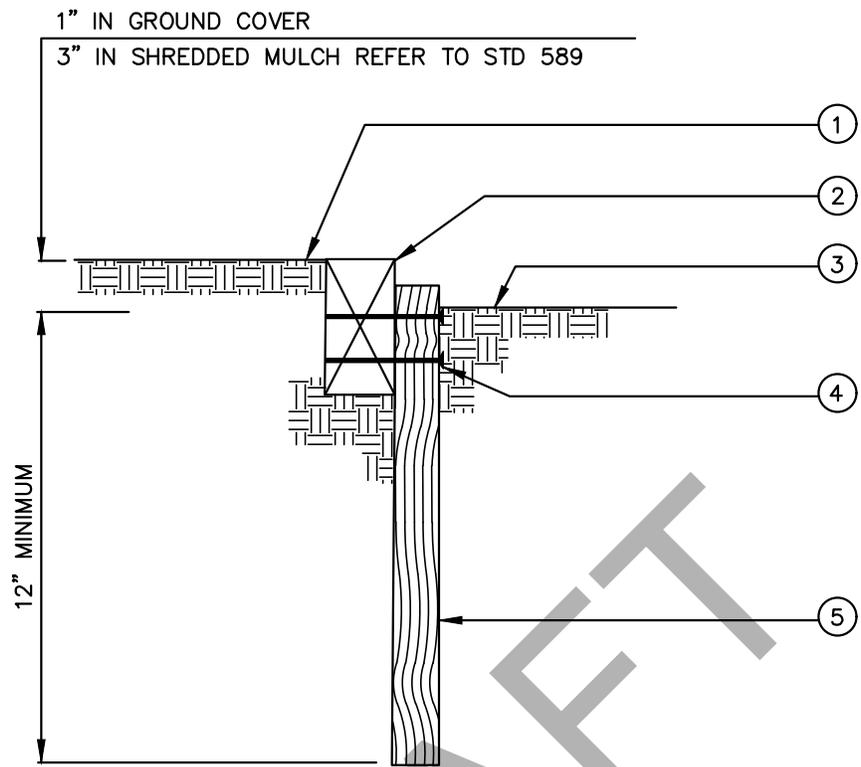
**MULCH INSTALLATION**

REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

**589**

SHEET 1 OF 1



**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

APPROVED BY:			
CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



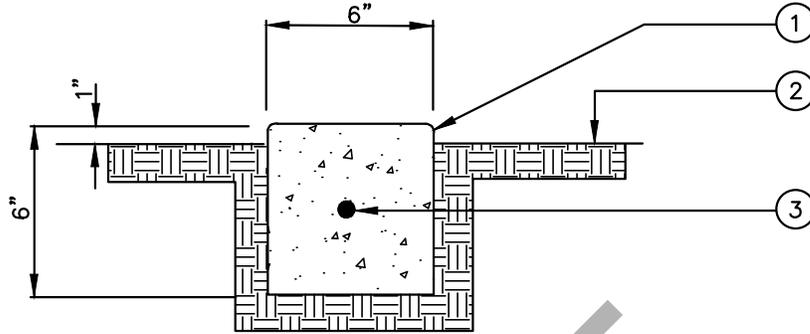
**CITY OF LAKE ELSINORE**

**2 X 4 REDWOOD HEADER**

STANDARD PLAN NO. **590** SHEET 1 OF 1

**NOTE:**

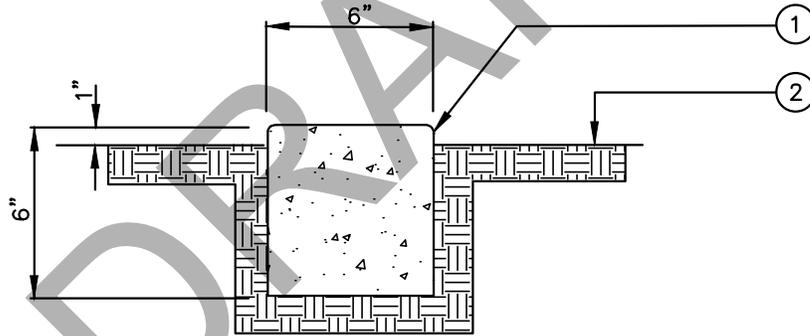
- 1.) PROVIDE SOURCEJOINTS AT 10'-0" O.C. AND 3/8" BITUMINOUS FELT EXPANSION JOINTS AT 20'-0" O.C.



TYPICAL FOR MOW CURBS OVER 20' IN LENGTH

**NOTE:**

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

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CITY ENGINEER  
REMON HABIB

DATE



CITY OF LAKE ELSINORE

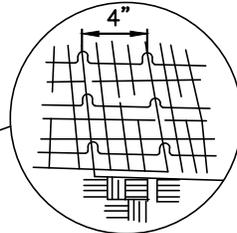
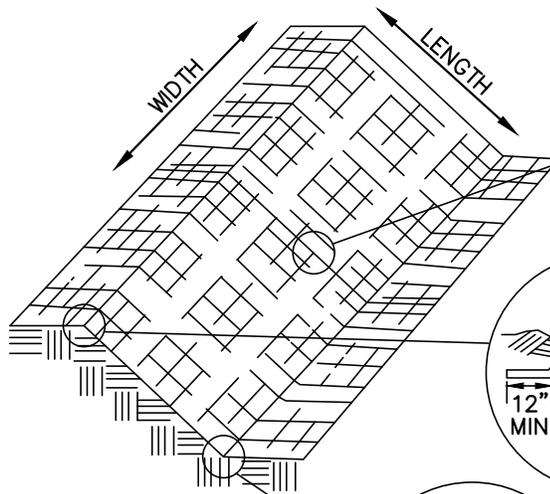
CONCRETE MOW CURB

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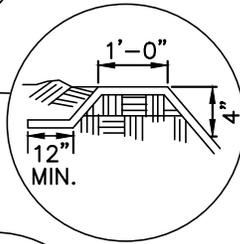
STANDARD PLAN NO.

**591**

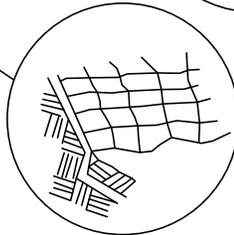
SHEET 1 OF 1



DOUBLE LAP JOINT.  
MINIMUM 4" OVERLAP AT THE SEAMS. WITH DOUBLE ROW OF STAPLES.



CROWN ANCHOR TRENCH  
MATERIAL SHALL BE COVERED WITH SOIL AND TAMPED.



TOE ANCHOR TRENCH  
SEE 'CROWN' NOTE.

DRAFT

**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 PER MANUFACTURES SPECIFICATIONS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

**EROSION CONTROL NETTING**

STANDARD PLAN NO.

**592**

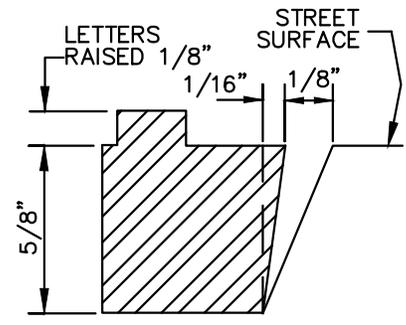
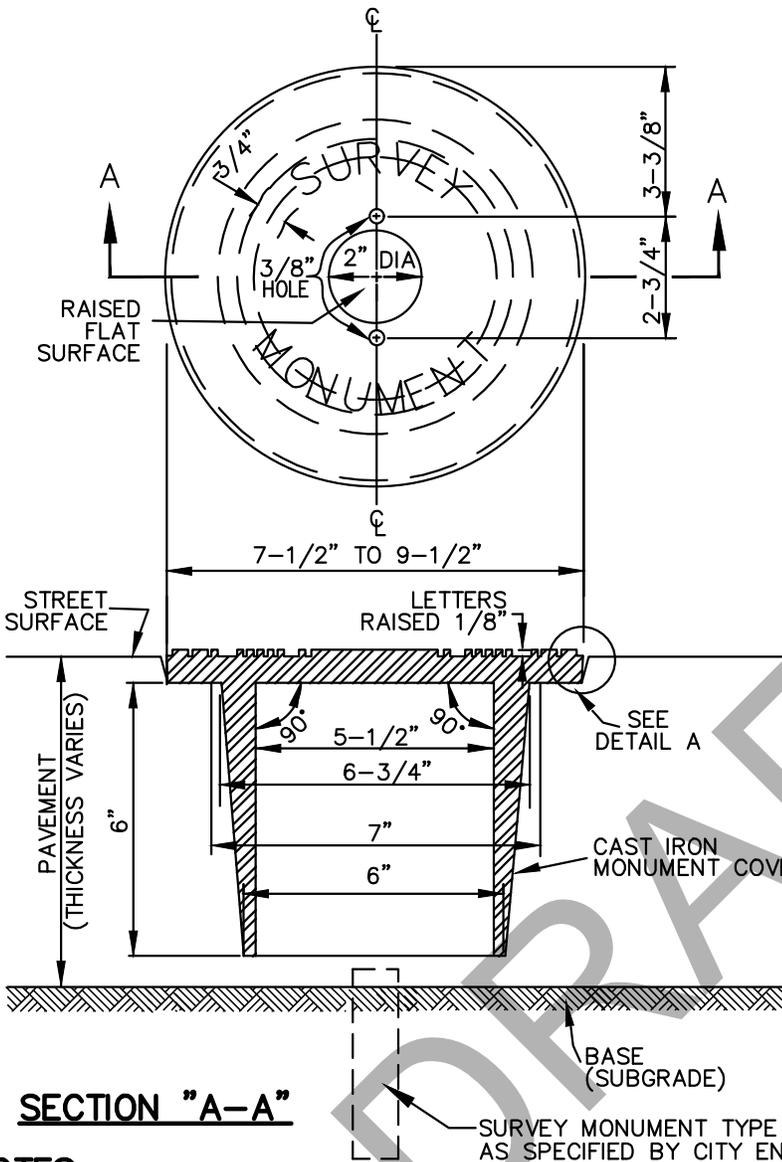
SHEET 1 OF 1

REVISION	BY:	APPROVED	DATE

# CITY OF LAKE ELSINORE STANDARD PLANS

## SECTION 6: MISCELLANEOUS

DRAFT



**DETAIL A**

**SECTION "A-A"**

SURVEY MONUMENT TYPE "A" OR "B" AS SPECIFIED BY CITY ENGINEER. SEE STD DETAIL 601B.

**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 IT DOES NOT EXTEND INTO THE BASE. APPLY A COAT OF ASPHALTIC COATING OR ASPHALT PAINT TO ANY UNCOATED SURFACE OR CUTEDGE.
- 6.) MONUMENTS AT STREET INTERSECTIONS, STANDARD KNUCKLE INTERSECTIONS, AND CUL-DE-SAC RADIAL POINTS SHALL HAVE MONUMENT COVERS.

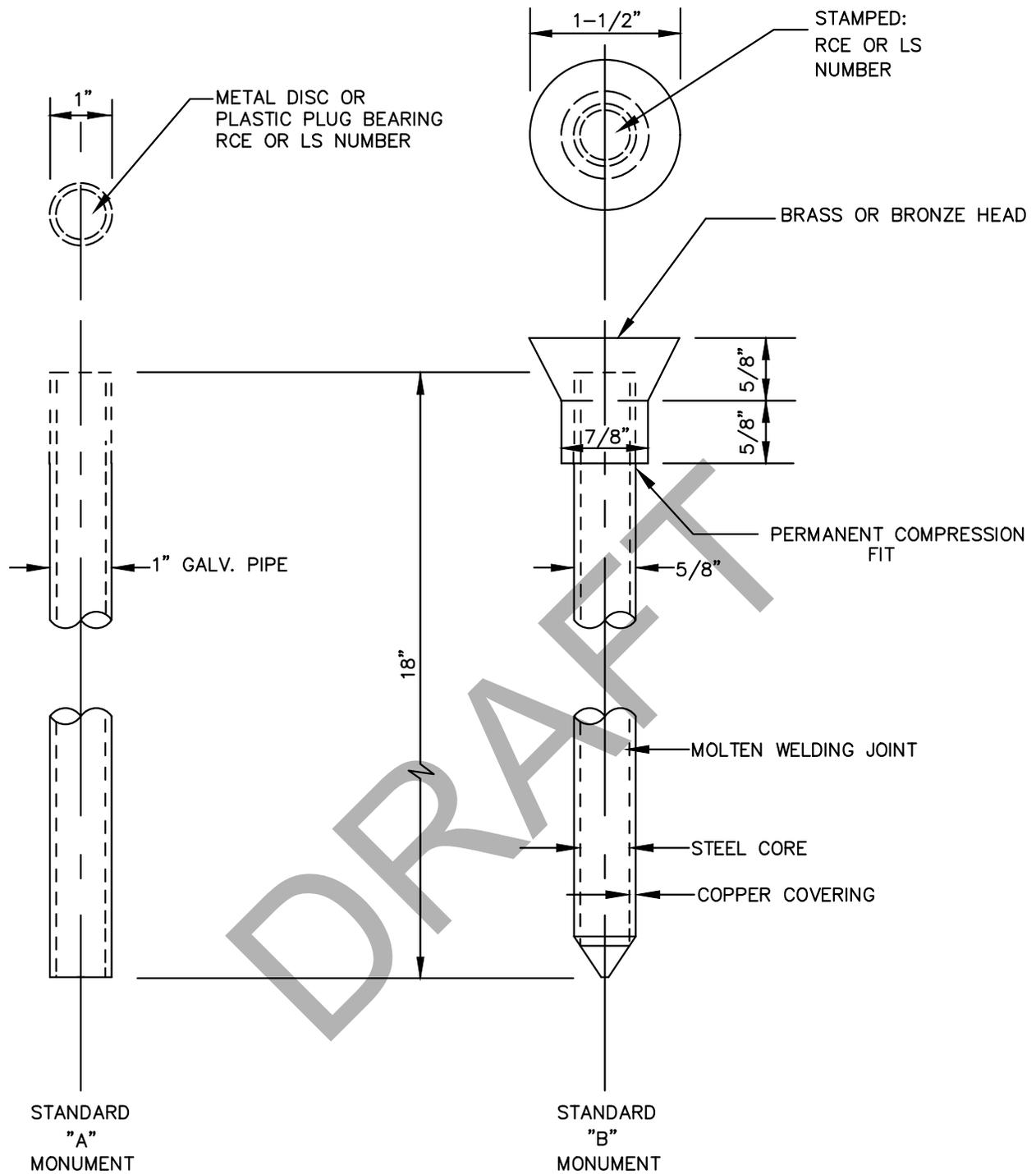
APPROVED BY:			
CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**MONUMENT COVER**

STANDARD PLAN NO. **601A** SHEET 1 OF 1



**NOTES:**

- 1.) SEE STD No 601E FOR TIE-OUT/MONUMENT NOTES.
- 2.) MONUMENTS AT STREET INTERSECTIONS, STANDARD KNUCKLE INTERSECTION, AND CUL-DE-SAC RADIAL POINTS SHALL HAVE MONUMENT COVERS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



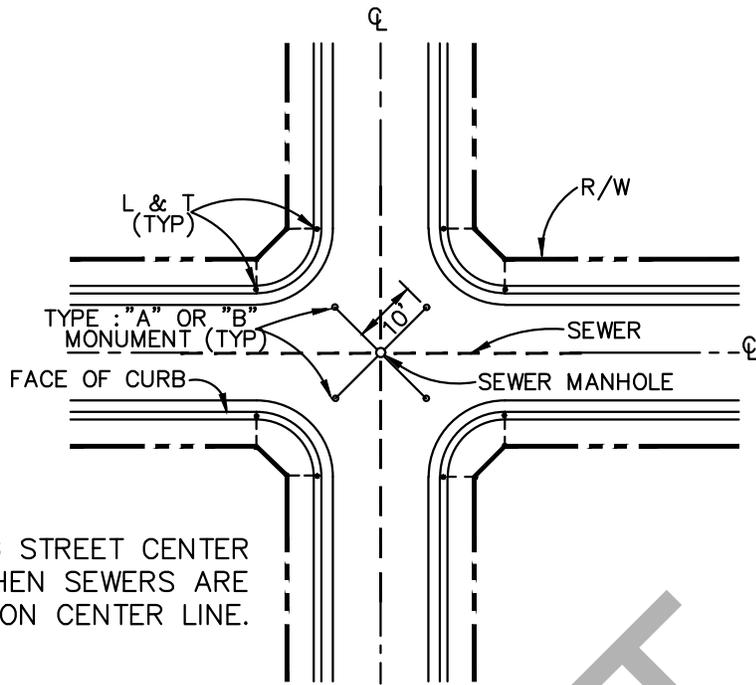
**CITY OF LAKE ELSINORE**

**SURVEY MONUMENT**

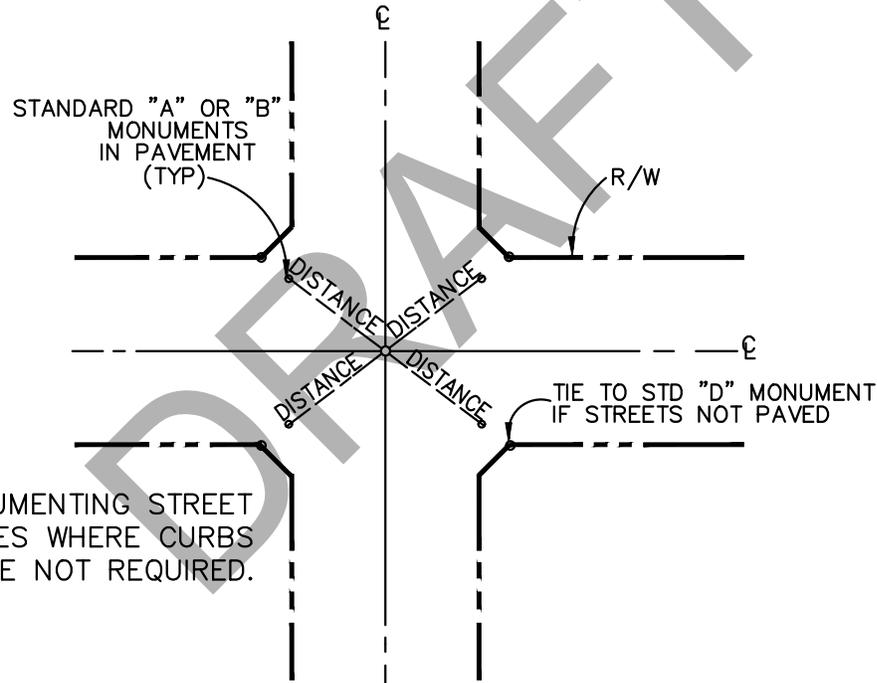
STANDARD PLAN NO.

**601B**

SHEET 1 OF 1



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



MONUMENTING STREET CENTER LINES WHERE CURBS ARE NOT REQUIRED.

**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
- 4.) SEE STD No 601B FOR TYPE "A" AND TYPE "B" MONUMENT.
- 5.) SEE STD No 601E FOR TIE-OUT/MONUMENT NOTES.

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CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

**TIE-OUT STANDARDS**

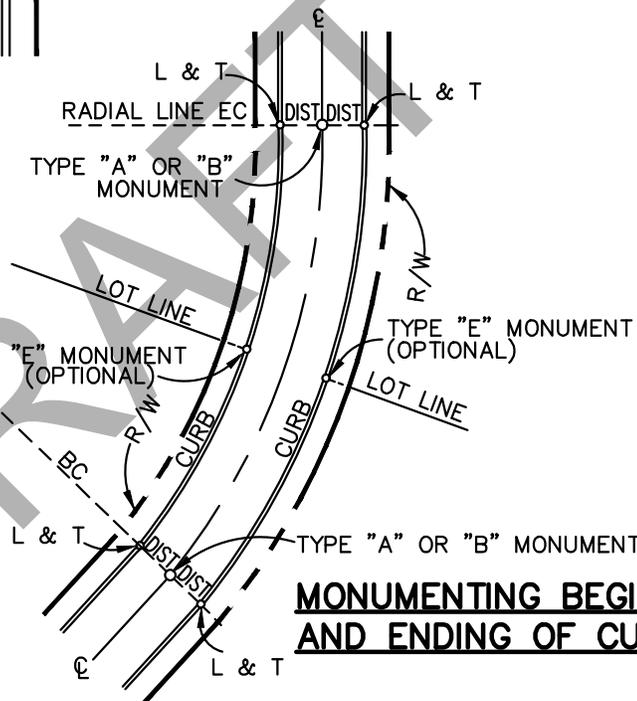
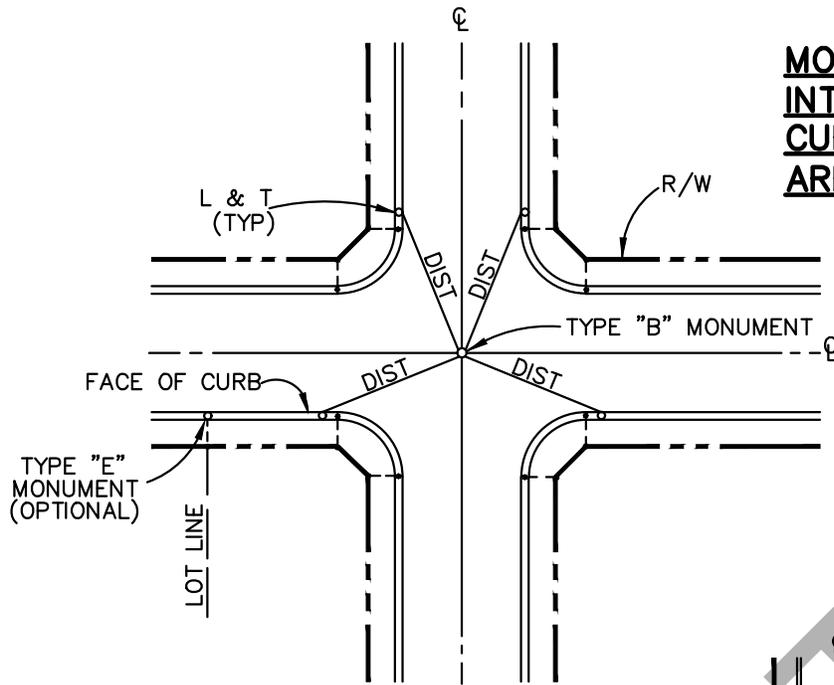
REVISION	BY:	APPROVED	DATE

STANDARD PLAN NO.

**601C**

SHEET 1 OF 1

**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 PI OF THE CURVE C OF A STREET MAY BE MONUMENTED IN LIEU OF EC AND BC IF THE PI FALLS WITHIN THE TRAVELED WAY. IT SHALL BE REFERENCED WITH L & T'S IN CURB.
- 4.) SEE STD 601B AND 601E FOR TIE-OUT/MONUMENT NOTES.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**STREET CENTERLINE  
MONUMENT**

STANDARD PLAN NO.

**601D**

SHEET 1 OF 1

**NOTES:**

- 1.) GENERAL REQUIREMENTS THE SUBDIVISION BOUNDARIES, LOT CORNERS, CITY LIMITS, ROAD, STREET, HIGHWAY CENTERLINE, ANGLE POINTS IN ALL LINES, BEGINNING AND END OF ALL CURVED LINES, SHALL BE MONUMENTED IN ACCORDANCE WITH THE HEREINAFTER DESCRIBED STANDARD MONUMENTS AND PROCEDURES. ANY MONUMENT HAVING CHARACTERISTICS OTHER THAN THE HEREINAFTER DESCRIBED MAY BE USED ONLY UPON WRITTEN APPROVAL OF THE CITY ENGINEER. IF AN EXISTING RECORD AND IDENTIFIED MONUMENT IS FOUND ON THE GROUND AT THE LOCATION OF A SUBDIVISION CORNER, THIS MONUMENT MAY BE USED IN LIEU OF REPLACEMENT WITH A NEW MONUMENT PROVIDED THE EXISTING MONUMENT IS A TYPE CONSIDERED TO BE DURABLE.
- 2.) STANDARD "A" MONUMENTS THIS MONUMENT IS TO BE ONE INCH ( INSIDE DIAMETER ) GALVANIZED IRON PIPE EIGHTEEN (18") INCHES LONG. A METAL DISC OR PLASTIC PLUG BEARING THE REGISTERED CIVIL ENGINEER OR LAND SURVEYOR NUMBER SHALL BE SECURELY AFFIXED TO THE TOP OF THE PIPE. THE TOP SURFACE OF THE MONUMENT SHALL BE FLUSH WITH THE NATURAL GROUND, BELOW THE PAVED STREET SURFACE WITH MONUMENT COVER, AND TWELVE (12") DOWN IN PAVED STREETS. SEE STD. PLANS NO 601A AND 601B.
- 3.) STANDARD "B" MONUMENTS THIS MONUMENT IS TO BE AN EIGHTEEN (18") INCH COPPER CLAD STEEL PIN WITH ONE-HALF (1- 1/2") INCH CONICAL BRASS CAP. THE MONUMENT MAY BE USED AS AN ALTERNATIVE TO THE TYPE "A" MONUMENT TO MARK CENTERLINE CONTROL IN PAVED STREETS. THE MONUMENT IS TO BE DRIVEN 2" MINIMUM BELOW THE STREET SURFACE WITH MONUMENT COVER. AFTER SETTING THE MONUMENT, THE REGISTERED CIVIL ENGINEER OR LAND SURVEYOR NUMBER SHALL BE STAMPED INTO THE SURFACE OF THE BRASS CAP. SEE STANDARD PLAN NO. 601A AND 601B.
- 4.) STANDARD "C" MONUMENTS: THIS MONUMENT TO CONSIST OF A 1/2" REBAR, 18" LONG WITH APPROPRIATE STAMPED CAP. SEE MONUMENT SCHEDULE BELOW FOR USE OF THIS MONUMENT.
- 5.) STANDARD "D" MONUMENTS: THIS MONUMENT TO CONSIST OF A 3/4" INSIDE DIAMETER x 18" LONG GALVANIZED IRON PIPE DRIVEN TO A POINT NOT TO EXCEED 1" ABOVE THE NATURAL GROUND SURFACE. THE EXACT POINT OF INTERSECTION OF THE LINES SHALL BE MARKED AS SHOWN ON STANDARD 601C, AND ON THE TOP CENTER OF THE PIPE BY A SUITABLE TACK OR NAIL, WHICH IN TURN SHALL BE USED TO SECURE TO THE STAKE THE METAL DISK BEARING THE REGISTERED CIVIL ENGINEER OR LAND SURVEYOR NUMBER OR PLASTIC PLUG WITH RCE OR LS NUMBER. SEE MONUMENT SCHEDULE BELOW FOR USE OF THIS MONUMENT.
- 6.) STANDARD "E" MONUMENTS THIS MONUMENT TO CONSIST OF LEAD PLUG OR STEEL PIN WITH METAL IDENTIFICATION DISK SET IN CONCRETE CURB. SEE MONUMENT SCHEDULE BELOW FOR USE OF THIS MONUMENT.
- 7.) MONUMENT SCHEDULE:

**STANDARD USE OF MONUMENT**

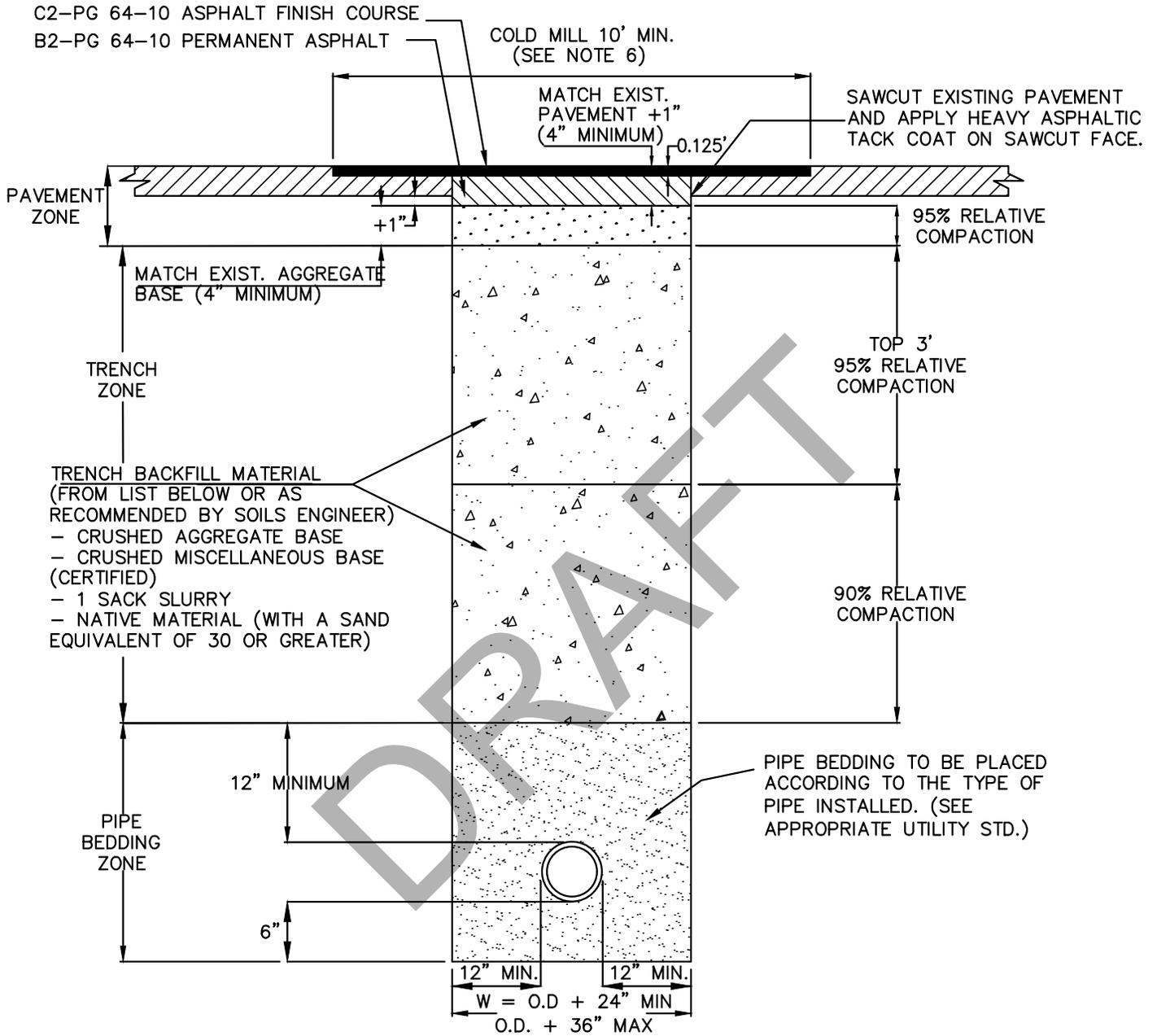
**REMARKS**

"A"	TRACT BOUNDARY CONTROL: STREET CENTERLINE CONTROL--UNPAVED AND PAVED	AS SPECIFIED BY THE CITY ENGINEER.
"B"	STREET CENTERLINE CONTROL	MAY BE USED IN LIEU OF TYPE "A" MONUMENT IN PAVED STREETS.
"C"	LOT CORNER ANGLE POINT IN LOT LINE, EC AND BC, LOT LINE, RIGHT-OF-WAY LINE	
"D"	SAME AS "C"	
"E"	SAME AS "C"	ALL LOT CORNER MONUMENT EXCEPT WHEN LOT CORNER IS COINCIDENT WITH BOUNDARY CORNER MAY BE SET IN THE FACE OF THE CURB ON THE PROLONGATION OF THE LOT LINE. IN THE EVENT IMPROVEMENTS IN A SUBDIVISION INCLUDE A BLOCK WALL ALONG THE REAR LOT LINES, A STANDARD "E" MONUMENT MAY BE SET ON BOTH SIDES OF THE BLOCK WALL TO INDICATE DIRECTION OF THE SIDE LOT LINES. SUCH POINTS SHALL BE NOTED ON THE FINAL MAP AS "POINTS ON LINE".

**MONUMENTS TIES:**

UPON COMPLETION OF THE TRACT MONUMENTATION, THE ENGINEER OR LICENSED LAND SURVEYOR SHALL FURNISH TO THE CITY ENGINEER TIES TO ALL STREET CENTERLINE MONUMENTS. SUCH TIES ARE TO BE PERMANENT PHYSICAL OBJECTS, THERE BEING NOT LESS THAN 3 AND PREFERABLY 4 TIES TO EACH MONUMENT. WHENEVER CURB AND GUTTER IS INSTALLED, STREET CENTERLINE MONUMENTS ARE TO BE TIED TO PERMANENT POINTS SET IN THE CURB. THESE PERMANENT POINTS TO CONSIST OF EITHER OF THE FOLLOWING: LEAD AND TACK OR STEEL PIN DRIVEN INTO THE CONCRETE. USE OF A CROSS CUT INTO THE CONCRETE WILL NOT BE ACCEPTABLE. CROSS OVER TIES ARE PREFERRED WHEN MADE WITH TRANSIT AND TAPE. THE TIES FURNISHED TO THE CITY ENGINEER ARE TO BE PREPARED ON 8-1/2" x 11" SHEETS OF MYLAR. SKETCH TO BE CLEAR AND LEGIBLE AND SPACED TO AVOID CONFUSION OR MISINTERPRETATION.

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB		DATE			<b>MONUMENT NOTES</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>601E</b> SHEET 1 OF 1	



**NOTE:**

SEE STANDARD PLAN NO. 602C FOR ADDITIONAL NOTES AND REQUIREMENTS.

APPROVED BY:

CITY ENGINEER  
 REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



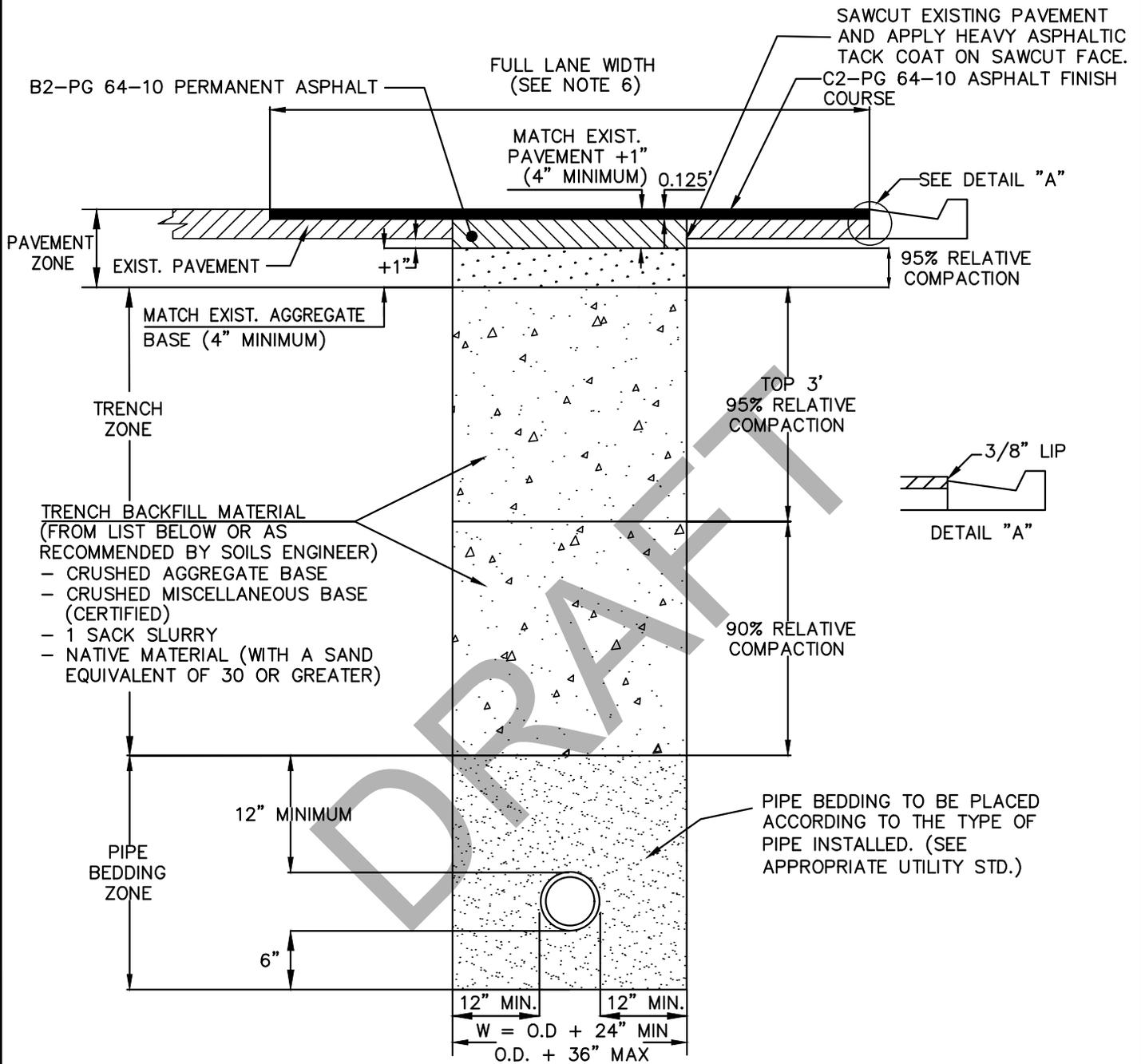
**CITY OF LAKE ELSINORE**

**PERPENDICULAR  
 TRENCH BACKFILL AND  
 ROADWAY REPAIR**

STANDARD PLAN NO.

**602A**

SHEET 1 OF 1



**NOTE:**

SEE STANDARD PLAN NO. 602C FOR ADDITIONAL NOTES AND REQUIREMENTS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**PARALLEL  
TRENCH BACKFILL AND  
ROADWAY REPAIR**

STANDARD PLAN NO.

**602B**

SHEET 1 OF 1

# CITY OF LAKE ELSINORE REQUIREMENTS FOR TRENCHES OR OTHER EXCAVATIONS WITHIN PUBLIC RIGHTS-OF-WAY OR EASEMENTS

**NOTES:**

1. ALL TRENCH EXCAVATIONS SHALL BE COMPLETED BY FIRST SAW-CUTTING THE PAVEMENT BEFORE EXCAVATION. ALL SAW CUT LINES SHALL BE CLEAN AND FREE OF ROUGH EDGES. ADDITIONAL SAW-CUTTING WILL BE REQUIRED BY THE PUBLIC WORKS INSPECTOR IF THE EDGES OF THE TRENCH ARE DAMAGED DURING EXCAVATION OR BACKFILLING OPERATIONS.
2. ALL COMPACTION OF TRENCH BACKFILL MATERIAL SHALL BE ACCOMPLISHED BY MECHANICAL METHODS. JETTING, PONDING OR FLOODING IN LIEU OF MECHANICAL METHODS SHALL NOT BE ALLOWED.
3. ALL TRENCHES SHALL BE BACKFILLED AND A MINIMUM OF 3" OF TEMPORARY ASPHALT PAVEMENT INSTALLED AT THE END OF EACH WORKDAY. THE PUBLIC WORKS INSPECTOR MAY AUTHORIZE STEEL PLATE BRIDGING IN ACCORDANCE WITH STANDARD 602D IN LIEU OF TEMPORARY ASPHALT PAVEMENT.
4. ALL TRAFFIC STRIPING OR MARKINGS REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED USING THERMOPLASTIC COATINGS OR AS DIRECTED BY THE ENGINEERING DEPARTMENT INSPECTOR. PARTIALLY REMOVED STRIPING SHALL BE REPLACED IN WHOLE.
5. PERMANENT PAVEMENT REPAIR SHALL BE ACCOMPLISHED WITHIN 14 DAYS OF TEMPORARY REPAIR BY REMOVAL OF ALL TEMPORARY AC PAVEMENT, INSTALLATION OF PERMANENT ASPHALT PAVEMENT AS NOTED ON THIS STANDARD, AND COLD MILLING WITH FINISH PAVEMENT.
6. COLD MILLING OF 0.125' SHALL BE REQUIRED FOR ALL TRENCHES. THE ENGINEERING DEPARTMENT INSPECTOR WILL REQUIRE ADDITIONAL COLD MILLING IF FIELD CONDITIONS SO WARRANT.
7. ADDITIONAL COLD MILLING SHALL BE REQUIRED FOR TRENCHES THAT ARE 2' TO 4' FROM THE CURB & GUTTER.
8. REMOVE AND REPLACE ASPHALT PAVEMENT FULL DEPTH FOR TRENCHES THAT ARE 2' OR LESS FROM CURB & GUTTER.
9. TACK COAT OF PG 64-10 PAVING ASPHALT SHALL BE UNIFORMLY APPLIED TO EXISTING ASPHALT SURFACES PRECEDING PLACEMENT OF NEW ASPHALT CONCRETE. THE SURFACE SHALL BE FREE OF WATER, FOREIGN MATERIAL, OR DUST WHEN THE TACK COAT IS APPLIED.
10. FOR WATER AND SEWER PIPE BEDDING REQUIREMENTS REFER TO ELSINORE VALLEY WATER MUNICIPAL WATER DISTRICT (EVMWD) STANDARDS.
11. TESTING: COMPACTION REPORTS SHALL BE SUBMITTED TO THE CITY ENGINEER.
12. PROHIBITION OF PAVEMENT CUTTING: ASPHALT CONCRETE PAVEMENT LESS THAN THREE (3) YEARS OLD SHALL NOT BE CUT EXCEPT FOR EMERGENCY REPAIRS OR AS SPECIFICALLY APPROVED IN WRITING BY THE CITY ENGINEER. SPECIAL REQUIREMENTS WILL BE IMPOSED FOR REPAVING.
13. SHORING: A SHORING PLAN SHALL BE SUBMITTED TO THE CITY ENGINEER WHEN TRENCH DEPTH IS MORE THAN 10 FEET. ALL TRENCH EXCAVATIONS SHALL BE IN COMPLIANCE WITH CAL/OSHA'S STANDARDS AND REGULATIONS FOR CONSTRUCTION TRENCHES, SHORING, AND SHIELDS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

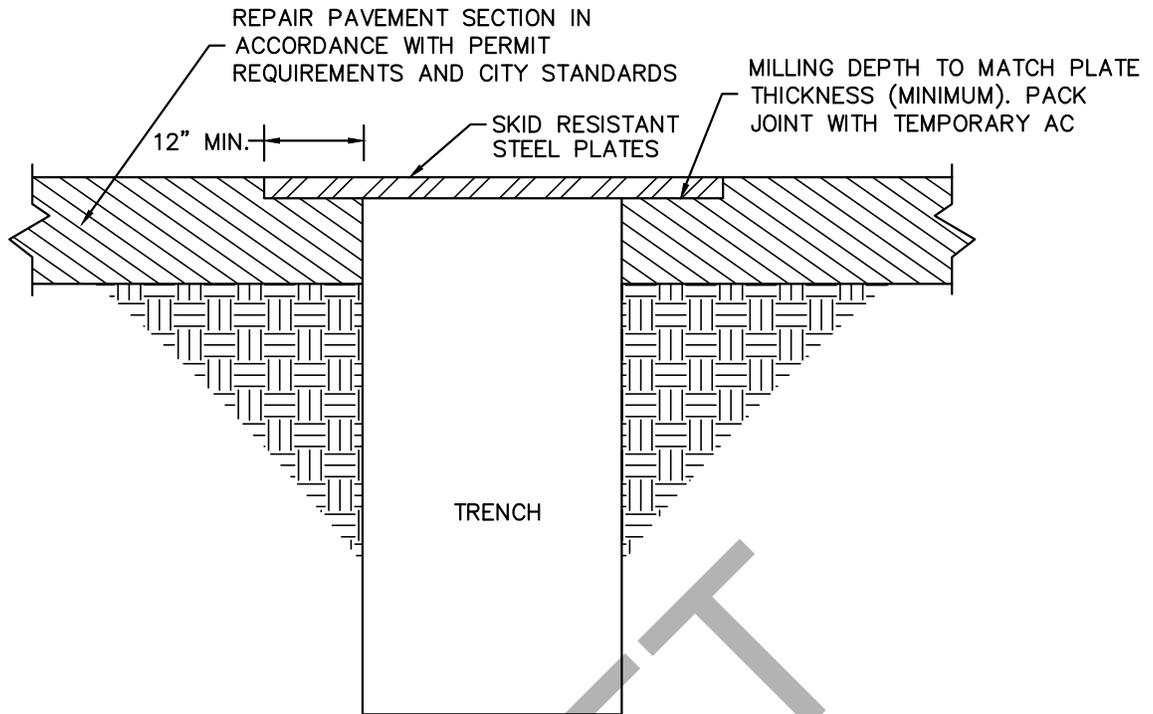
**TRENCH BACKFILL AND  
ROADWAY REPAIR NOTES**

STANDARD PLAN NO.

**602C**

SHEET 1 OF 1

REVISION	BY:	APPROVED	DATE



## TYPICAL TRENCH PLATE DETAIL

N.T.S.

### NOTES:

1. A MINIMUM 12" LAP OF STEEL PLATE SHALL BE PROVIDED ON EACH SIDE OF TRENCH TO ASSURE NO SLIPPING OF PLATE OR COLLAPSING OF TRENCH WALL. WHERE 12" LAP CANNOT BE MET, ENGINEERING DESIGN IS REQUIRED AND SHALL BE APPROVED BY THE CITY ENGINEER. THE TRENCH SHALL BE ADEQUATELY SHORED IF NECESSARY TO SUPPORT THE BRIDGING AND TRAFFIC. FOR SPANS GREATER THAN FOUR FEET A SHORING PLAN AND A TRAFFIC CONTROL PLAN, ENGINEERED BY A REGISTERED CIVIL ENGINEER, SHALL BE SUBMITTED FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO START OF CONSTRUCTION WORK.
2. STEEL PLATE MUST FIT SNUG WITHIN THE RECESSED AREA AND INSTALLED TO OPERATE WITH MINIMUM NOISE.
3. THE PAVEMENT SHALL BE COLD PLANED TO A DEPTH EQUAL TO THE THICKNESS OF THE PLATE, AND TO A WIDTH AND LENGTH EQUAL TO THE DIMENSIONS OF THE PLATE.
4. THIS STANDARD SHALL BE IMPLEMENTED ON ALL PROJECTS WITHIN VEHICULAR TRAVEL WAY UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. MULTIPLE PLATES MUST BE PINNED OR TACK WELDED AS NEEDED TO SECURE PLATES, 6" MINIMUM.
6. ALL PLATES MUST MEET REQUIRED TRAFFIC LOADS, AND BE SKID-RESISTANT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE SELECTION AND MAINTENANCE OF THE STEEL PLATES.
7. STEEL PLATES MUST BE REMOVED AND PERMANENT PAVEMENT SHALL BE PLACED WITHIN FOURTEEN (14) CALENDAR DAYS OR AS APPROVED BY THE CITY ENGINEER.
8. THE CONTRACTOR WILL BE REQUIRED TO PUT "STEEL PLATES AHEAD" WARNING SIGNS IN PLACE.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

**EMERGENCY PLATE  
BRIDGING FOR  
EXCAVATIONS**

STANDARD PLAN NO.

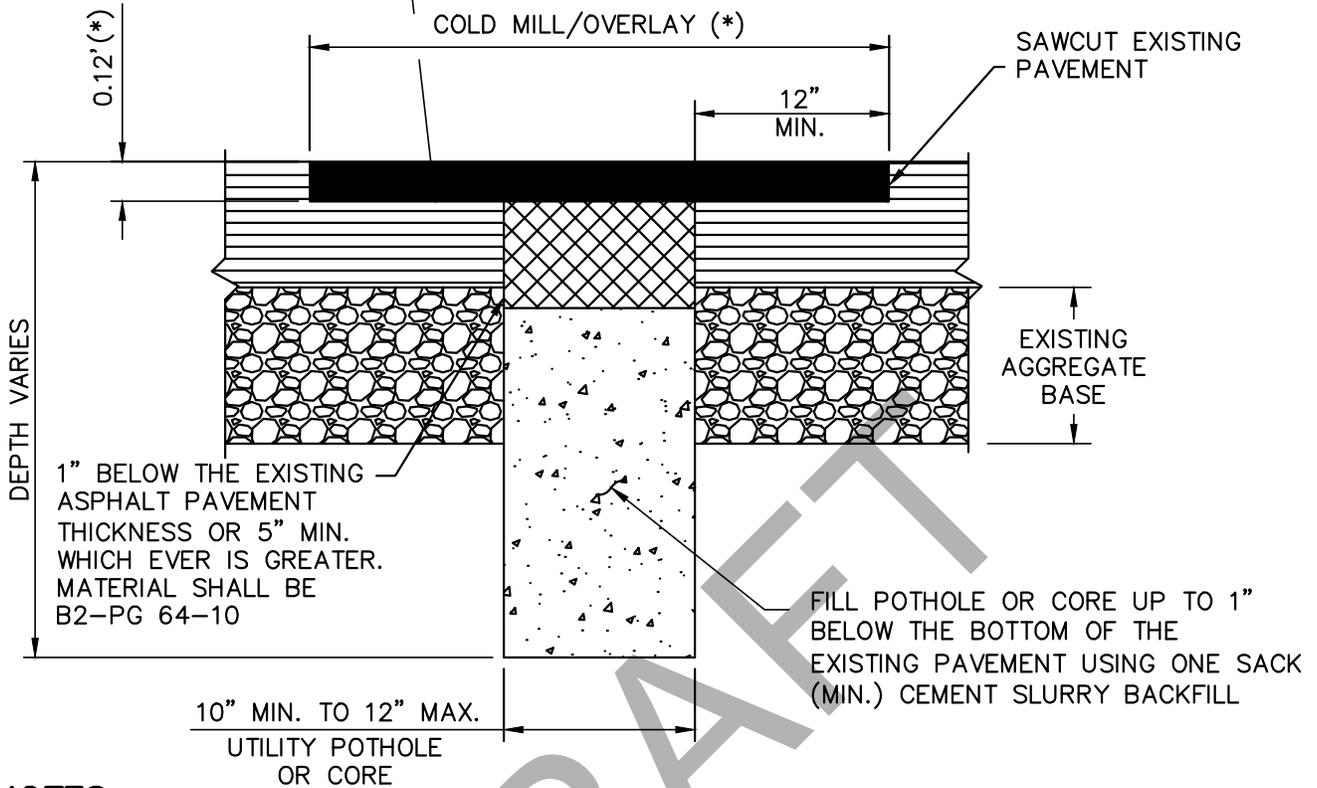
**602D**

SHEET 1 OF 1

REVISION	BY:	APPROVED	DATE

APPLY TACK (AR4000) ON  
GRINDED SURFACES  
(VERTICAL & HORIZONTAL)  
MATERIAL SHALL BE  
C2-PG 64-10

(\* IF THE CONTRACTOR IS UNABLE TO COMPLETE THE INITIAL  
COLD MILL AND OVERLAY IN AN ACCEPTABLE MANNER, AN  
ADDITIONAL COLD MILL MAY BE REQUIRED TO A DEPTH OF  
0.15' TO ACHIEVE THE DESIRED QUALITY OF THE WORK, AT  
THE DISCRETION OF THE ENGINEER.



**NOTES:**

1. UTILITY POT HOLE WORK SHALL BE COMPLETED UTILIZING SAWCUT OR CORE DRILLING METHODS. WHEN SAWCUTTING METHODS ARE USED, ALL SAWCUT LINES SHALL BE CLEAN AND FREE OF ROUGH EDGES.
2. IF POT HOLE/CORE WORK REMOVES/DAMAGES EXISTING TRAFFIC STRIPING, REPLACEMENT STRIPING SHALL BE REPLACED IN KIND.
3. WHEN UTILITY POT HOLE/CORE WORK IS COMPLETED WITHIN CONCRETE AREAS, THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE FULL CONCRETE PANELS OR SECTIONS PER THE ASSOCIATED CITY STANDARD.
4. WHEN TRENCH BACKFILL AND ROADWAY REPAIR WORK IS PERFORMED, REFER TO THE NOTES INDICATED IN CITY STANDARD 602C.
5. WHEN MULTIPLE POT HOLES ARE COMPLETED PARALLEL TO THE TRAFFIC LANE WITH A SPACING OF 24' OR LESS, COLDMILL AND OVERLAY REQUIREMENTS SHALL ADHERE TO CITY STANDARD 602C OR AS DIRECTED BY THE CITY ENGINEER.
6. NO UTILITY POT HOLE/CORE WORK WILL BE ALLOWED ON STREETS THAT HAVE BEEN PAVED/RESURFACED WITHIN THREE YEARS, EXCEPT FOR EMERGENCY SITUATIONS OR IN CONJUNCTION WITH PROVIDING UTILITY SERVICE CONNECTIONS, OR APPROVED BY THE CITY ENGINEER.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION

BY:

APPROVED

DATE



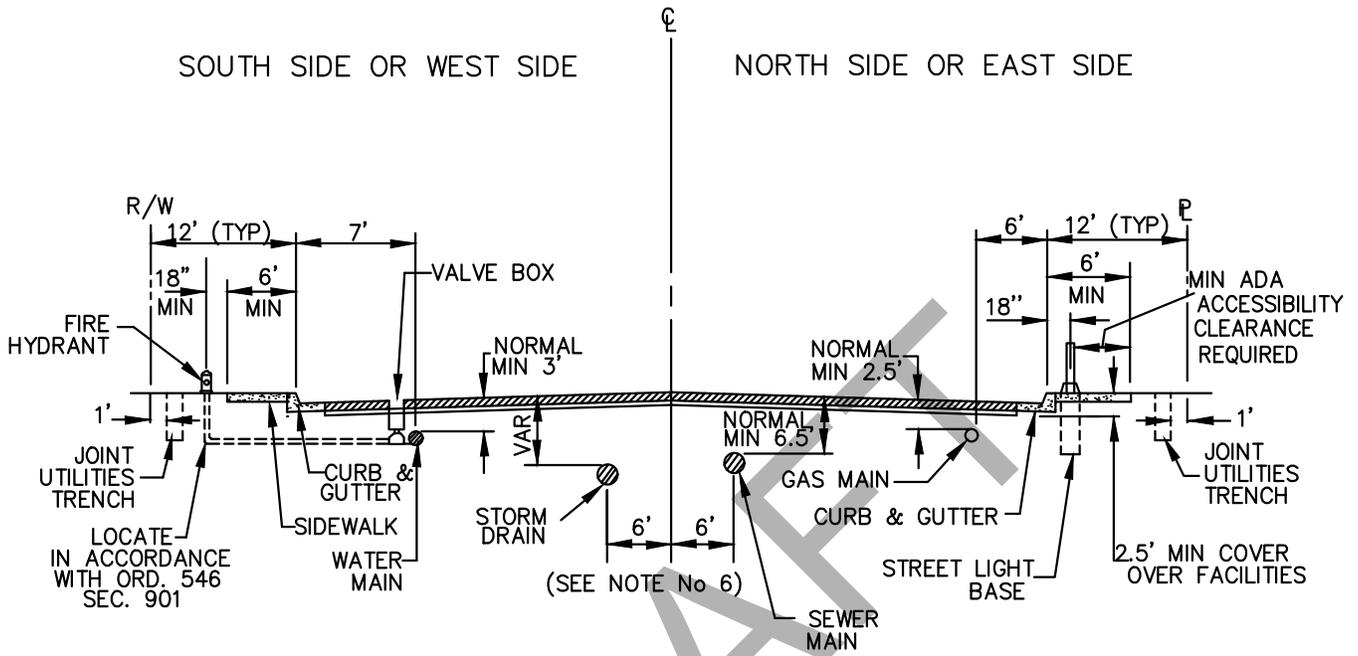
**CITY OF LAKE ELSINORE**

**UTILITY POT HOLE/  
CORE REPAIR**

STANDARD PLAN NO.

**602E**

SHEET 1 OF 1



**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.) FOR STREETS WITH RAISED MEDIANS, THE OFFSET DISTANCES OF STORM DRAIN AND SEWER MAIN FROM THE STREET CENTERLINE SHALL BE PER THE CITY ENGINEER'S REVIEW AND APPROVAL.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



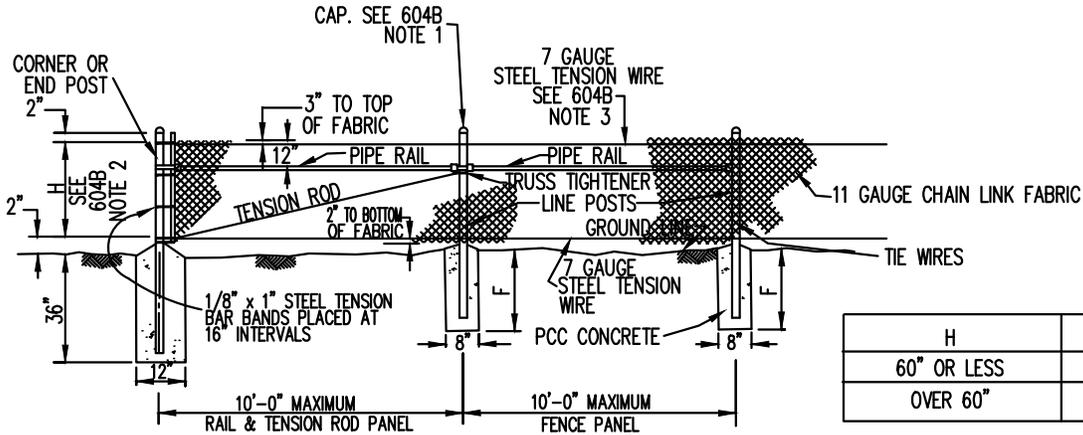
**CITY OF LAKE ELSINORE**

**TYPICAL LOCATION OF UNDERGROUND UTILITIES**

STANDARD PLAN NO.

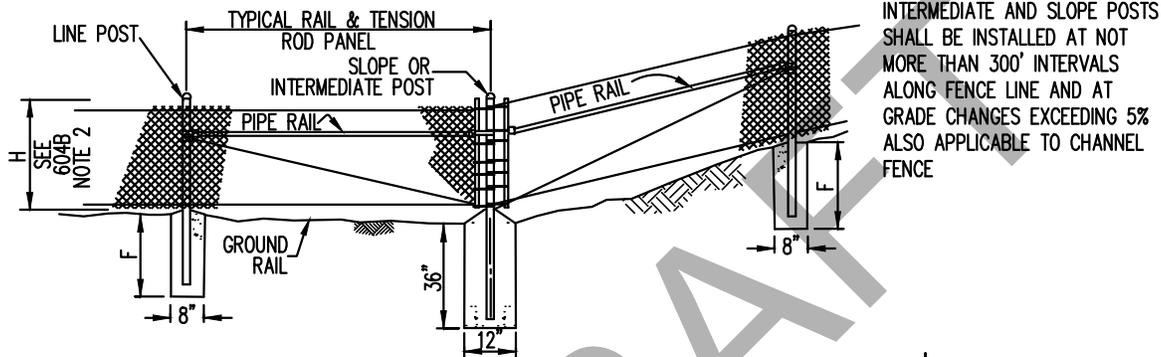
**603**

SHEET 1 OF 1

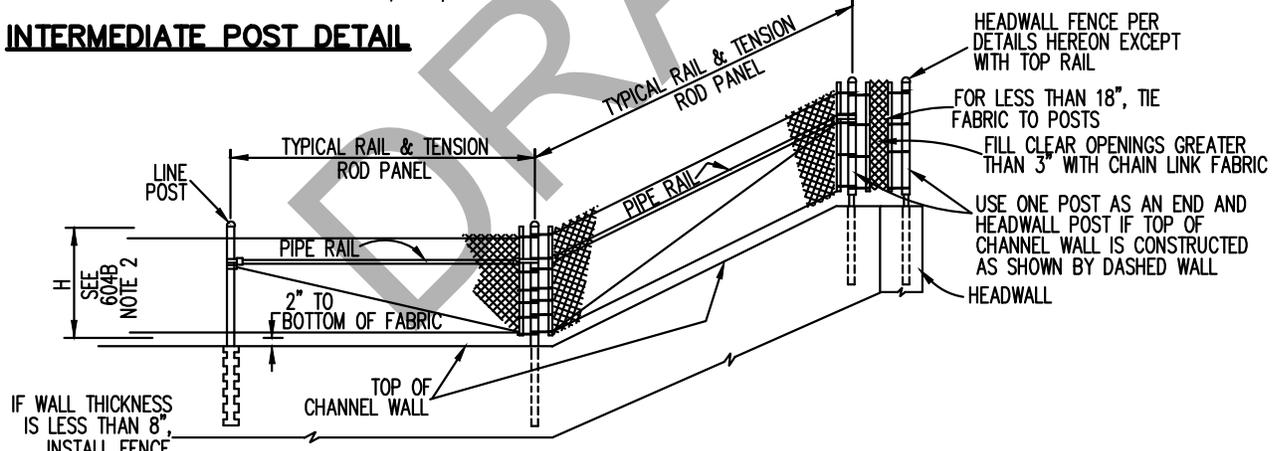


H	F
60" OR LESS	30"
OVER 60"	36"

**TYPICAL FENCE ELEVATION**



**INTERMEDIATE POST DETAIL**



**CHANNEL WALL AND WINGWALL DETAIL AT HEADWALL**

APPROVED BY: \_\_\_\_\_

CITY ENGINEER REMON HABIB

DATE \_\_\_\_\_

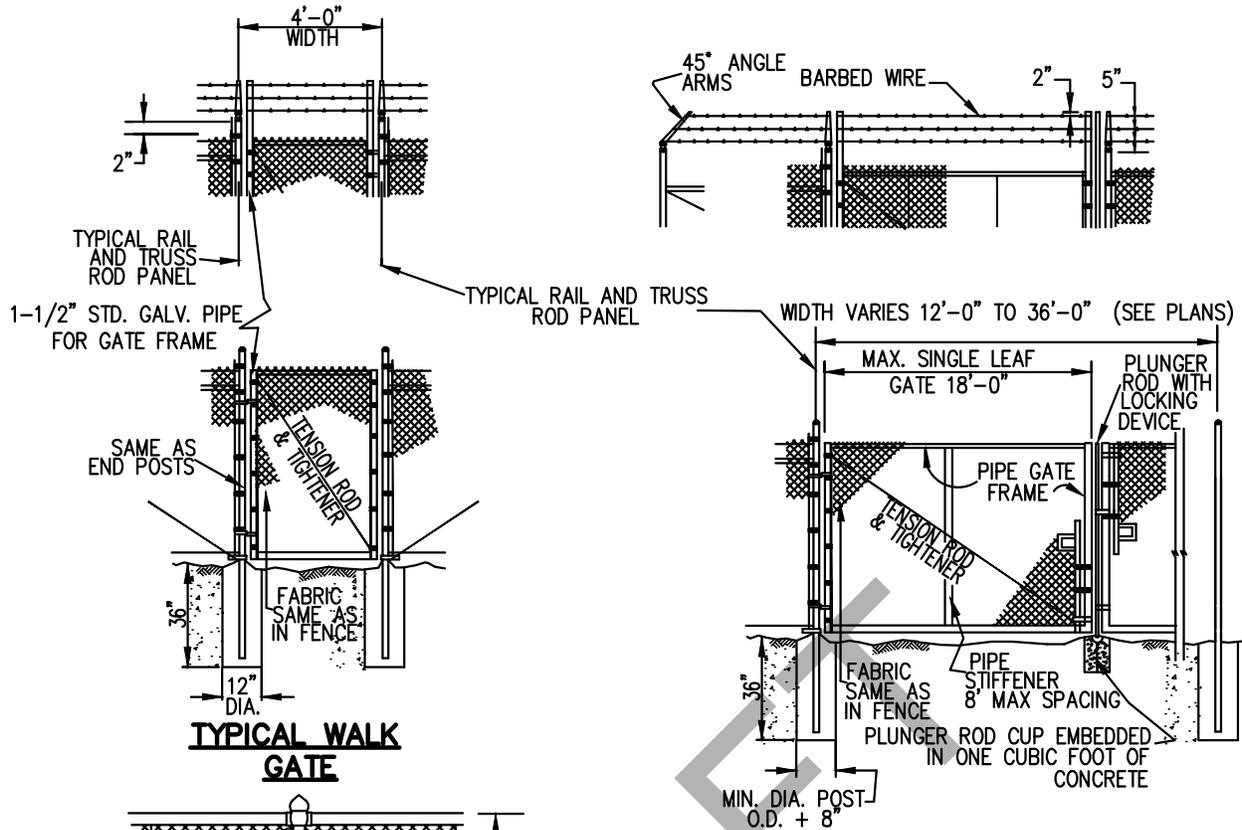
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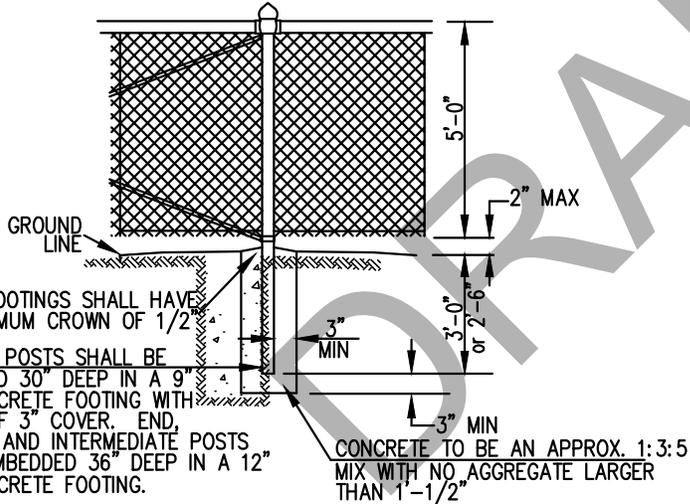
**CITY OF LAKE ELSINORE**

**FENCE AND GATES FOR WALL AND CHANNEL**

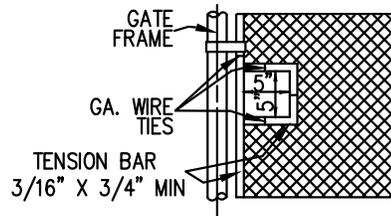
STANDARD PLAN NO. **604A** SHEET 1 OF 1



**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 NORMAL 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.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

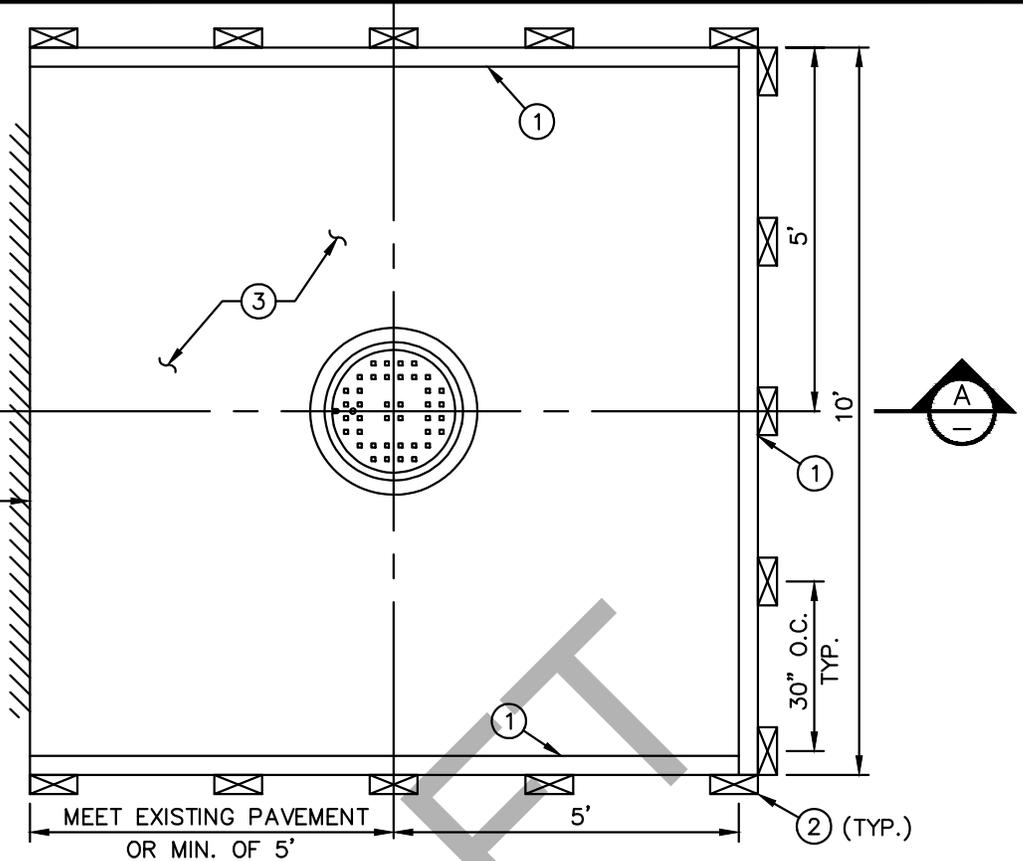
**HIGHWAY  
CHAINLINK FENCE  
AND GATES**

STANDARD PLAN NO.

**604B**

SHEET 1 OF 1

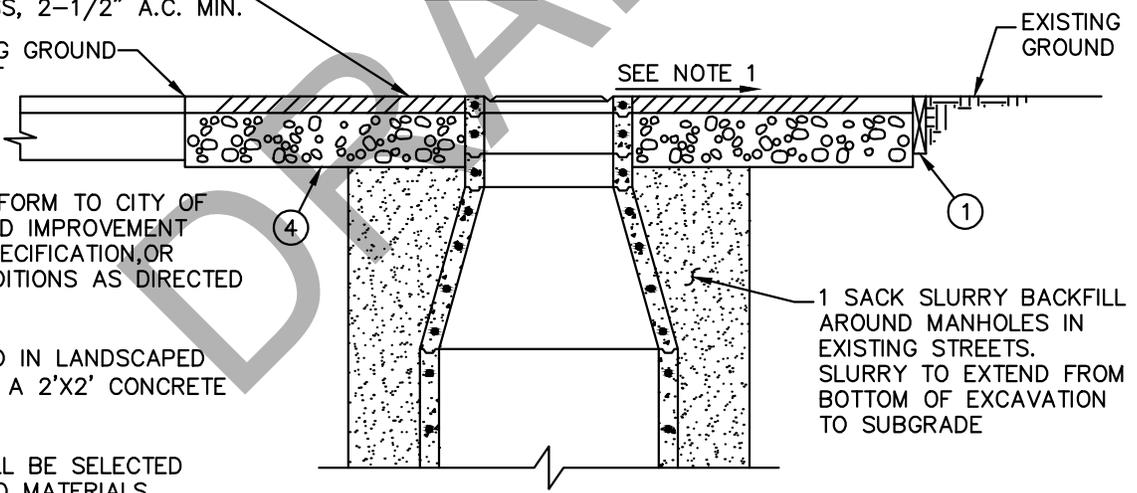
PLACE 2"X6" REDWOOD HEADER IF MORE THAN 5' TO EXISTING PAVEMENT, OTHERWISE CONSTRUCT MATCH UP BASE & PAVING TO EXISTING EDGE OF PAVEMENT



MEET EXISTING PAVEMENT OR MIN. OF 5'

**PLAN**

MATCH EXISTING CONCRETE OR A.C. THICKNESS, 2-1/2" A.C. MIN.  
MEET EXISTING GROUND OR PAVEMENT



**SECTION A-A**

1 SACK SLURRY BACKFILL AROUND MANHOLES IN EXISTING STREETS. SLURRY TO EXTEND FROM BOTTOM OF EXCAVATION TO SUBGRADE

**NOTES:**

- 1.) SLOPE WILL CONFORM TO CITY OF LAKE ELSINORE ROAD IMPROVEMENT STANDARDS AND SPECIFICATION, OR MEET EXISTING CONDITIONS AS DIRECTED BY ENGINEER.
- 2.) VALVES LOCATED IN LANDSCAPED AREAS SHALL HAVE A 2'X2' CONCRETE PAD INSTALLED.
- 3.) MATERIALS SHALL BE SELECTED FROM THE ACCEPTED MATERIALS GUIDELINE.

**LEGEND**

- ① 2"X6" REDWOOD HEADERS IF REQUIRED BY ENGINEER OR AS DIRECTED
- ② 2"X4"X18" STAKES (3 PER SIDE) AT 30" O.C.
- ③ AREA TO BE PAVED
- ④ 6" OF 3/4" CLASS 2 CRUSHED AGGREGATE BASE

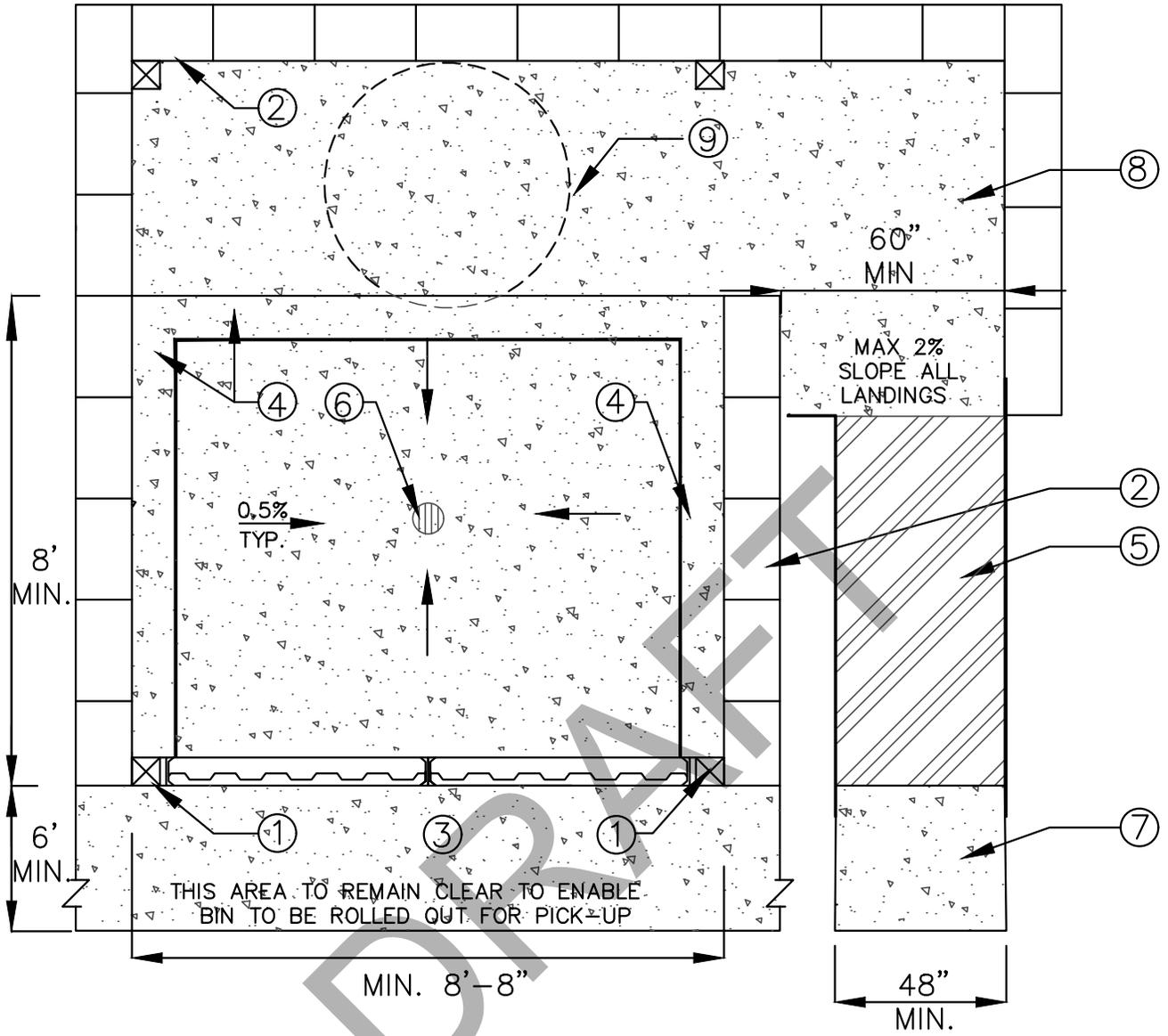
APPROVED BY:			
CITY ENGINEER REMON HABIB		DATE	
REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**PAVING DETAIL  
AROUND STORM DRAIN  
MANHOLES**

STANDARD PLAN NO. **605** SHEET 1 OF 1



**NOTE:**  
SEE SHEET 2 FOR KEYNOTES.

**PLAN**  
**NO SCALE**

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**TRASH ENCLOSURE  
PLAN VIEW**

STANDARD PLAN NO.

**606**

SHEET 1 OF 7

**LEGEND**

- ① 4-INCH X 4-INCH TUBULAR STEEL POST (4). SET POST FLUSH TO WALL. GROUT FILL POST SOLID. PAINT WITH (2) COATS ZINC PRIMER & (2) COATS SATIN FINISH PAINT – COLOR TO BE SELECTED
- ② TRASH ENCLOSURE WALLS / 8-INCH X 8-INCH X 16 INCHES CMU WALL / SPLIT-FACE WITH CAP, INTEGRAL COLOR AS APPROVED BY THE CITY. REFER TO STRUCTURAL ENGINEER’S SPECIFICATIONS FOR REINFORCEMENT. CONFIGURATION MAY VARY.
- ③ 6-INCH P.C.C. PAVING IN FRONT OF ENCLOSURE / 6-FOOT MIN. WIDTH
- ④ 6-INCH WIDE X 6-INCH HIGH CONCRETE CURB
- ⑤ MINIMUM 48-INCH WIDE RAMP @ MAX 1:12 SLOPE OR 8.33% (HANDRAILS REQUIRED IF RAMP EXCEEDS 6 FT IN LENGTH OR 6 INCHES IN HEIGHT)
- ⑥ SANITARY SEWER CONNECTION SHALL BE APPROVED BY EVMWD
- ⑦ LANDING @ LOWER LEVEL (MIN. 4’-0” L.)
- ⑧ LANDING AT UPPER LEVEL (MIN. 5’-0” L.)
- ⑨ WHEELCHAIR TURNING CIRCLE (MIN. 60” DIA.)

**NOTES:**

- A. CONCRETE FOOTING TO ACHIEVE 4300 PSI @ 28 DAYS.
- B. TRASH BINS – SIZE AND NUMBER AS REQUIRED BY CITY AND CALRECYCLE REQUIREMENTS FOR MANDATORY COMMERCIAL RECYCLING AND ORGANICS RECYCLING. (SINGLE BIN SHOWN)

DRAFT

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>		
CITY ENGINEER REMON HABIB			DATE		<b>TRASH ENCLOSURE PLAN VIEW (KEY NOTES)</b>		
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>606</b>		
				SHEET 2 OF 7			

## TRASH ENCLOSURES STANDARDS AND SPECIFICATIONS:

STORM RUNOFF RESULTING IN DIRECT CONTACT WITH TRASH ENCLOSURE, OR WASTEWATER RUNOFF FROM TRASH ENCLOSURE ARE PROHIBITED FROM RUNNING OFF A SITE ONTO THE CITY MS4 WITHOUT PROPER TREATMENT. TRASH ENCLOSURES IN NEW DEVELOPMENTS AND REDEVELOPMENT PROJECTS SHALL MEET NEW STORM WATER QUALITY STANDARDS INCLUDING:

- a) PROVISION OF A SOLID IMPERMEABLE ROOF WITH A MINIMUM CLEARANCE HEIGHT TO ALLOW THE BIN LID TO COMPLETELY OPEN.
- b) CONSTRUCTED OF REINFORCED MASONRY WITHOUT WOODEN GATES. WALLS SHALL BE AT LEAST 6 FEET HIGH.
- c) PROVISION OF CONCRETE SLAB FLOOR, GRADED TO COLLECT ANY SPILL WITHIN THE ENCLOSURE.
- d) ALL TRASH BINS IN THE TRASH ENCLOSURE SHALL BE LEAK PROOF WITH LIDS THAT ARE CONTINUOUSLY KEPT CLOSED.
- e) THE ENCLOSURE AREA SHALL BE PROTECTED FROM RECEIVING DIRECT RAINFALL OR RUN-ON FROM COLLATERAL SURFACES.

ANY STANDING LIQUIDS WITHIN THE TRASH ENCLOSURES WITHOUT FLOOR DRAIN MUST BE CLEANED UP AND DISPOSED OF PROPERLY USING A MOP AND A BUCKET OR A WET/DRY VACUUM MACHINE. ALL NON-HAZARDOUS LIQUIDS WITHOUT SOLID TRASH MAY BE PUT IN THE SANITARY SEWER AS AN OPTION, IN ACCORDANCE WITH ELSINORE VALLEY MUNICIPAL WATER DISTRICT (EVMWD) CRITERIA.

AN ALTERNATE FLOOR DRAIN FROM THE INTERIOR OF THE ENCLOSURE THAT DISCHARGES TO THE SANITARY SEWER MAY BE CONSTRUCTED ONLY AFTER OBTAINING APPROVAL FROM EMVWD. THIS OPTION REQUIRES THE FOLLOWING:

- a) THE TRASH ENCLOSURE SHALL BE LOCKABLE AND LOCKED WHEN NOT IN USE WITH A 2-INCH OR LARGER BRASS RESETTABLE COMBINATION LOCK. ONLY EMPLOYEES AND STAFF AUTHORIZED BY THE ENCLOSURE PROPERTY OWNER SHALL BE GIVEN ACCESS. THIS REQUIREMENT MAY NOT BE APPLICABLE TO COMMERCIAL COMPLEXES WITH MULTIPLE TENANTS.
- b) A WATERLESS TRAP PRIMER SHALL BE PROVIDED TO PREVENT ESCAPE OF GASSES FROM THE SEWER LINE AND SAVE WATER.
- c) HOT AND COLD RUNNING WATER SHALL BE PROVIDED WITH A CONNECTION NEARBY WITH AN APPROVED BACKFLOW PREVENTER. THE SPIGOT SHALL BE PROTECTED AND LOCATED AT THE REAR OF THE ENCLOSURE TO PREVENT DAMAGE FROM BINS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE



**CITY OF LAKE ELSINORE**

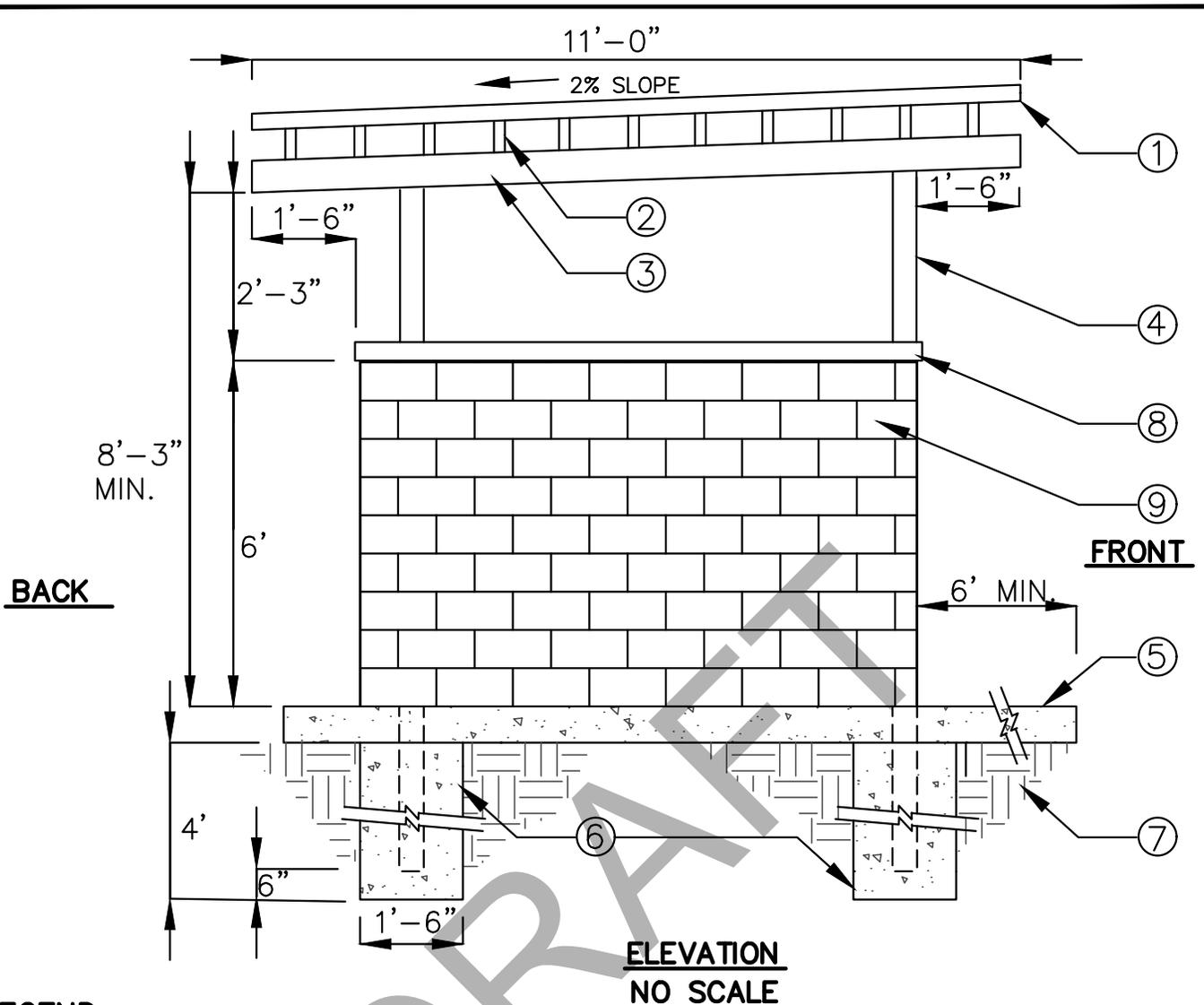
**TRASH ENCLOSURE  
STANDARDS  
AND SPECIFICATION**

STANDARD PLAN NO.

**606**

SHEET 3 OF 7

REVISION	BY:	APPROVED	DATE



**LEGEND**

- ① METAL ROOF: CORRUGATED STEEL – BERRIDGE LEAD–COPE STRAIGHT S–DECK / INSTALL PER MANUFACTURER’S SPECIFICATIONS
- ② METAL TRELLIS POWDER COATED (OR (2) COATS ZINC AND PRIMER & (2) COATS SATIN FINISH PAINT); COLOR TO BE SELECTED / REFER TO MANUFACTURER’S DETAILS AND SPECIFICATIONS FOR ROOF FRAMING
- ③ 4–INCH X 6–INCH METAL BEAM POWDER COATED – COLOR TO BE SELECTED
- ④ 4–INCH X 4–INCH TUBULAR STEEL POST. SET POST FLUSH TO WALL. GROUT FILL POST SOLID. PAINT WITH (2) COATS ZINC PRIMER & (2) COATS SATIN FINISH PAINT – COLOR TO BE SELECTED
- ⑤ 6–INCH P.C.C. PAVING IN FRONT OF ENCLOSURE / 6–FOOT MIN. WIDTH
- ⑥ CONCRETE FOOTING / REFER TO STRUCTURAL ENGINEER’S SPECIFICATIONS FOR FOOTING AND REINFORCEMENTS
- ⑦ COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
- ⑧ 8–INCH X 2–INCH X 16 INCHES WALL (CMU) CAP TO MATCH WALL COLOR
- ⑨ WALL – SEE NOTE A

**NOTES:**

- A. 8–INCH X 8–INCH X 16–INCH CMU / REFER TO STRUCTURAL ENGINEER’S SPECIFICATIONS FOR REINFORCEMENT.
- B. CONCRETE FOOTING TO ACHIEVE 4300 PSI @ 28 DAYS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



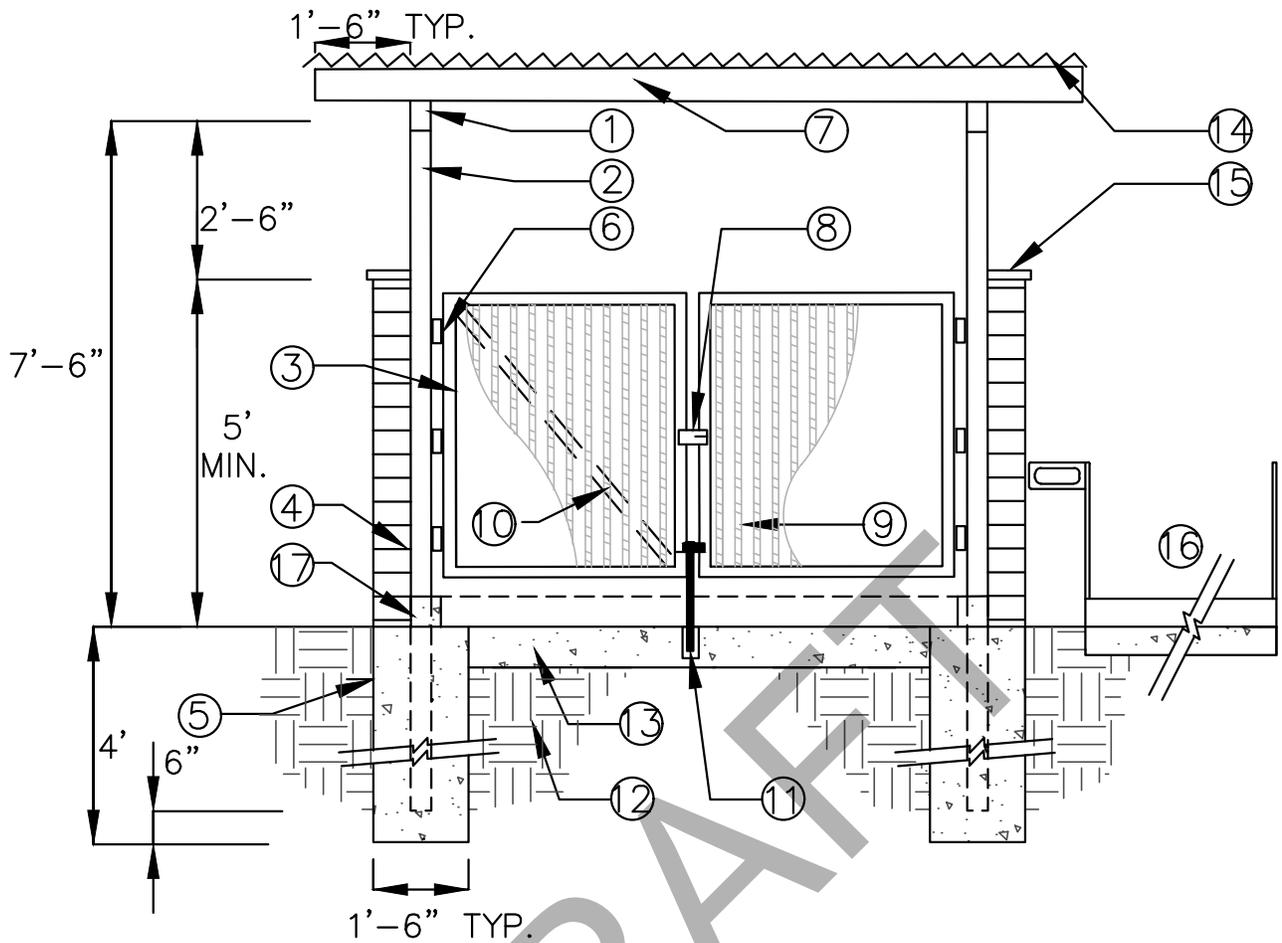
**CITY OF LAKE ELSINORE**

**TRASH ENCLOSURE  
SIDE ELEVATION**

STANDARD PLAN NO.

**606**

SHEET 4 OF 7



**NOTES:**

SEE SHEET 6 FOR KEYNOTES.

**ELEVATION**  
NO SCALE

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**TRASH ENCLOSURE  
FRONT ELEVATION**

STANDARD PLAN NO.

**606**

SHEET 5 OF 7

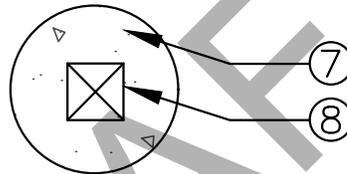
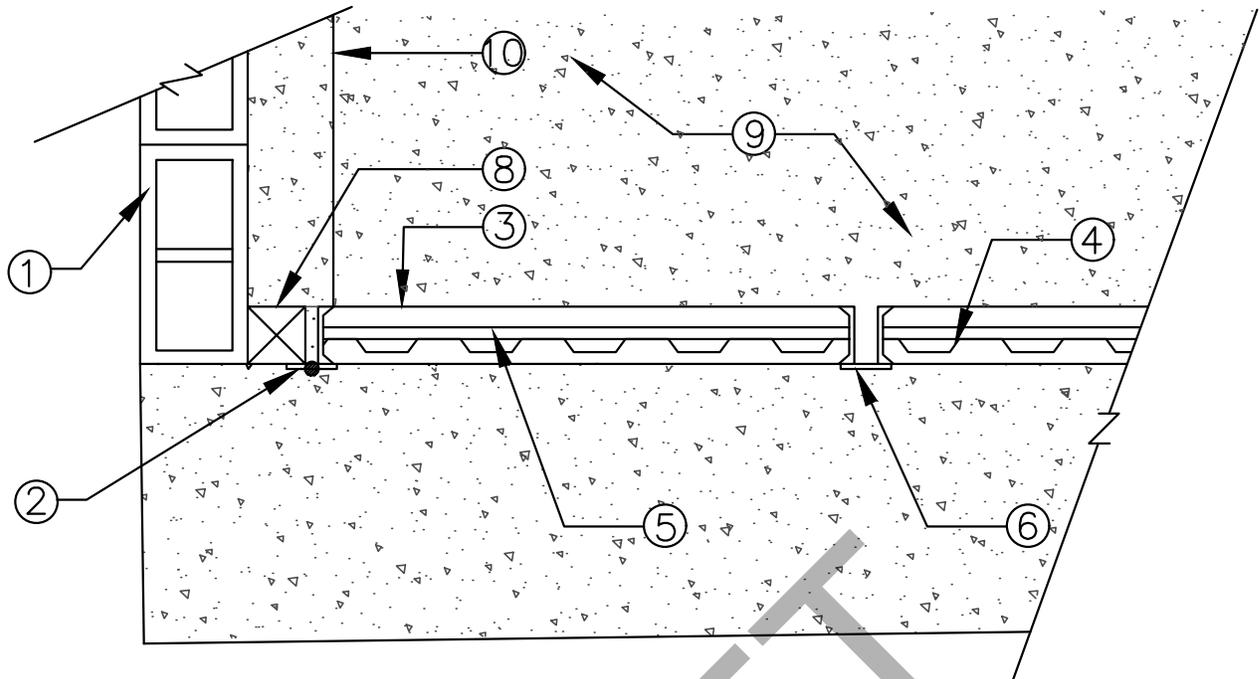
**LEGEND**

- ① 4-INCH X 6-INCH METAL BEAM POWDER COATED – COLOR TO BE SELECTED
- ② 4-INCH X 4-INCH TUBULAR STEEL POST. SET POST FLUSH TO WALL. GROUT FILL POST SOLID. PAINT WITH (2) COATS ZINC PRIMER & (2) COATS SATIN FINISH PAINT – COLOR TO BE SELECTED
- ③ GATE FRAME CONTINUOUS, ATTACH GATE FRAME TO STEEL POST WITH 3 HEAVY DUTY HINGES. CONTRACTOR SHALL SUPPLY SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION
- ④ CMU WALL / REFER TO STRUCTURAL ENGINEER’S SPECIFICATIONS FOR REINFORCEMENT
- ⑤ CONCRETE FOOTING / REFER TO STRUCTURAL ENGINEER’S SPECIFICATIONS FOR REINFORCEMENT
- ⑥ HEAVY DUTY HINGES
- ⑦ METAL TRELLIS POWDER COATED (OR (2) COATS ZINC AND PRIMER & (2) COATS SATIN FINISH PAINT); COLOR TO BE SELECTED / REFER TO SHOP DRAWINGS FOR ROOF FRAMING
- ⑧ 3-INCH X 8-INCH X 1/4-INCH THICK GALVANIZED STEEL STOP PLATE AND LOCKABLE KEEPER. WELD TO GATE FRAME – AS SHOWN / CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL
- ⑨ MINI-V-BEAM 26 GAUGE WITH ENDURA CLAD FINISH AS MANUFACTURED BY ASC PACIFIC INC. OR APPROVED EQUAL. SPOT WELD TO ANGLE FRAME (CONTRACTOR TO SUBMIT SHOP DRAWINGS)
- ⑩ 9-INCH X 1/2-INCH GALVANIZED STEEL DIAGONAL CROSS BRACE / FILLET WELD TO FRAME AND SPOT WELD TO MINI-V-BEAM (AT BACK OF GATE)
- ⑪ HEAVY DUTY DROP CANE BOLT. ATTACH TO GATE FRAME. SET 1 – 6 INCHES LONG X 1-INCH O.D. GALVANIZED PIPE SLEEVE TO ACCEPT BOLT. ‘STANLY’ CD 10009-18 INCHES OR APPROVED EQUAL
- ⑫ COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
- ⑬ 6-INCH THICK P.C.C. CONCRETE PAD WITH 6 X 6 X 10 WWM
- ⑭ METAL ROOF: CORRUGATED STEEL – BERRIDGE LEAD-COPE STRAIGHT S-DECK /INSTALL PER MANUFACTURER’S SPECIFICATIONS
- ⑮ 8-INCH X 2-INCH X 16-INCH CMU CAP TO MATCH WALL COLOR
- ⑯ DISABLED ACCESSIBLE RAMP & HANDRAIL IF REQUIRED – REFER TO STANDARD PLAN NO. 1301.11
- ⑰ CONCRETE CURB

**NOTES:**

- A. CONCRETE FOOTING TO ACHIEVE 4300 PSI @ 28 DAYS.
- B. TRASH BINS – SIZE AND NUMBER AS REQUIRED BY CITY. (SINGLE BIN SHOWN)

APPROVED BY:					<b>CITY OF LAKE ELSINORE</b>	
CITY ENGINEER REMON HABIB			DATE		<b>TRASH ENCLOSURE FRONT ELEVATION (KEY NOTES)</b>	
REVISION	BY:	APPROVED	DATE		STANDARD PLAN NO. <b>606</b> SHEET 6 OF 7	



**PLAN**  
**NO SCALE**

**LEGEND**

- ① CMU WALL – SEE NOTE A
- ② HEAVY DUTY GATE HINGE (3)
- ③ 3-INCH GALVANIZED STEEL ANGLE FRAME
- ④ MINI-V-BEAM 26 GAUGE WITH ENDURA CLAD FINISH AS MANUFACTURED BY ASC PACIFIC INC. OR APPROVED EQUAL. SPOT WELD TO ANGLE FRAME (CONTRACTOR TO SUBMIT SHOP DRAWINGS)
- ⑤ GALV. STEEL DIAGONAL CROSS BRACE
- ⑥ GALVANIZED STEEL STOP PLATE
- ⑦ CONCRETE FOOTING (18-INCH DIA. X 48-INCH DEPTH) / REFER TO STRUCTURAL ENGINEER'S SPECIFICATIONS FOR REINFORCEMENT
- ⑧ 4-INCH X 4-INCH TUBULAR STEEL GATE POST. SET POST FLUSH TO WALL, GROUT FILL POST SOLID. PAINT WITH (2) COATS ZINC PRIMER & (2) COATS SATIN FINISH PAINT – COLOR TO BE SELECTED
- ⑨ CONCRETE FLOOR
- ⑩ CONCRETE CURB

**NOTES:**

- A. 8-INCH X 8-INCH X 16-INCH CMU / REFER TO STRUCTURAL ENGINEER'S SPECIFICATIONS FOR REINFORCEMENT.
- B. CONCRETE FOOTING TO ACHIEVE 4300 PSI @ 28 DAYS.

APPROVED BY:

CITY ENGINEER  
REMON HABIB

DATE

REVISION	BY:	APPROVED	DATE



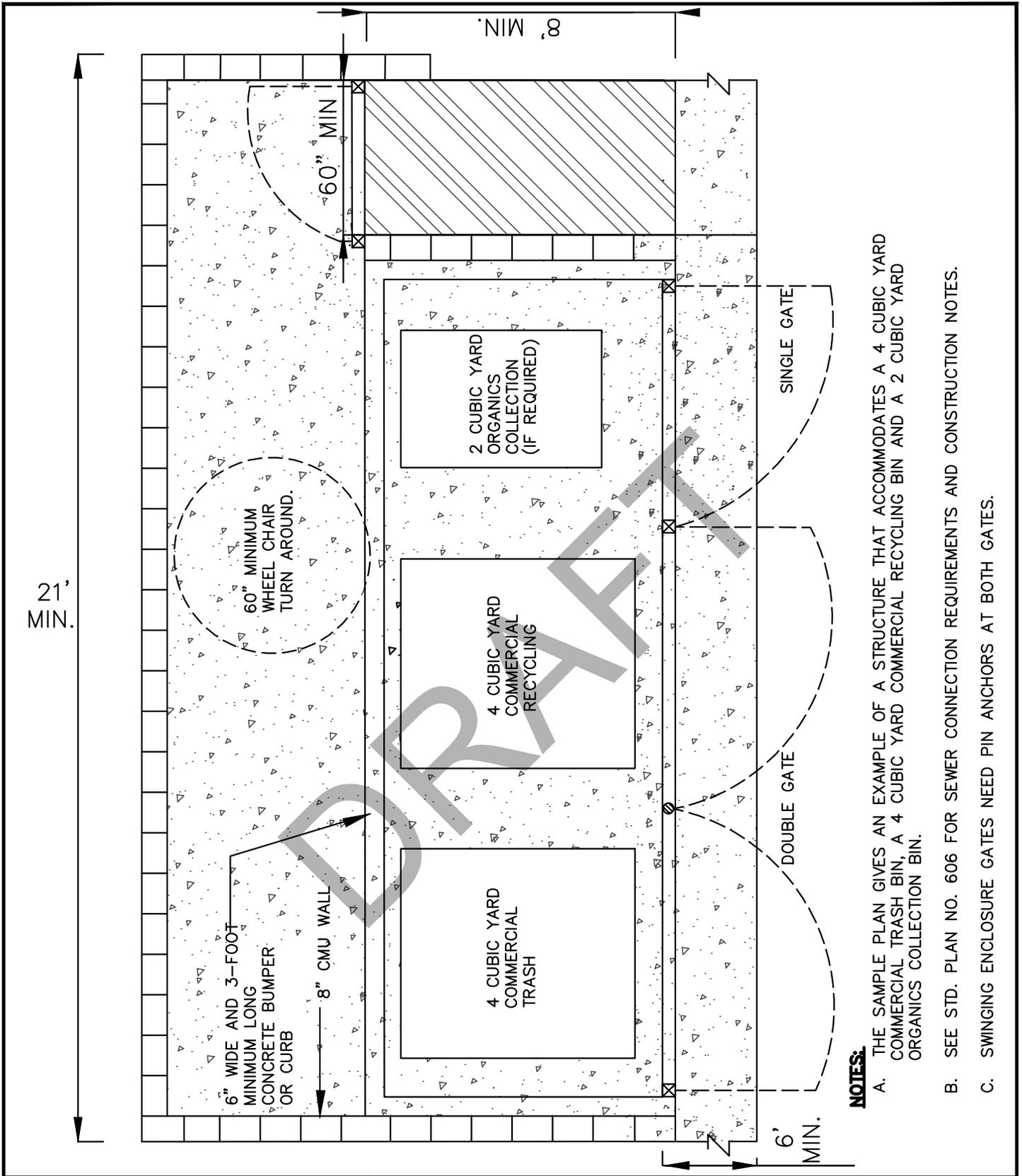
**CITY OF LAKE ELSINORE**

**TRASH ENCLOSURE  
DOOR ENLARGEMENT**

STANDARD PLAN NO.

**606**

SHEET 7 OF 7



**NOTES:**

- A. THE SAMPLE PLAN GIVES AN EXAMPLE OF A STRUCTURE THAT ACCOMMODATES A 4 CUBIC YARD COMMERCIAL TRASH BIN, A 4 CUBIC YARD COMMERCIAL RECYCLING BIN AND A 2 CUBIC YARD ORGANICS COLLECTION BIN.
- B. SEE STD. PLAN NO. 606 FOR SEWER CONNECTION REQUIREMENTS AND CONSTRUCTION NOTES.
- C. SWINGING ENCLOSURE GATES NEED PIN ANCHORS AT BOTH GATES.

APPROVED BY: \_\_\_\_\_

CITY ENGINEER REMON HABIB \_\_\_\_\_ DATE \_\_\_\_\_

REVISION	BY:	APPROVED	DATE



**CITY OF LAKE ELSINORE**

**3 BIN ENCLOSURE SAMPLE PLAN**

STANDARD PLAN NO. **607** SHEET 1 OF 1