

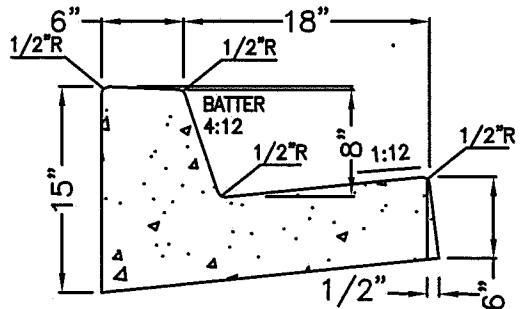


## CITY OF FONTANA DESIGN STANDARDS

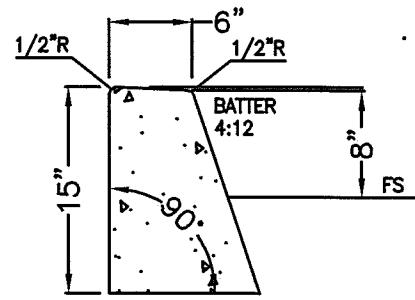
Link to Location on City Website:

<https://www.fontanaca.gov/3483/Design-and-Construction-Standards>

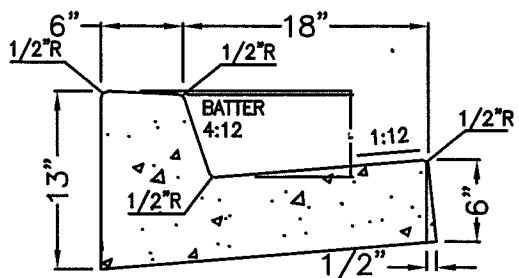
STD #	SHEETS	SECTION 1000 - STREETS	DATE APPROVED
1000	4	Curb & Gutter	9/7/2023
1001	4	Residential, Commercial, Industrial Driveway Approach	10/3/2023
1002	N/A	Not Used	
1003	3	Curb Return Access Ramp	10/23/2023
1004	N/A	Not Used	
1005	2	Standard Bus Bay	4/7/2021
1006	2	Sidewalks	7/18/2022
1007	1	Hot Mix Asphalt Concrete Dike	4/7/2021
1008	3	Roadway Repair and Trench Backfill	4/7/2021
1009	3	Trench Plate Bridging	4/7/2021
1010	1	Typical Undivided Street Sections	2/6/2024
1011	1	Typical Divided Street Sections	10/23/2023
1012	1	Street Design Requirements	2/6/2024
1013	2	Cross Gutter and Spandrel	10/23/2023
1014	1	Cul-De-Sac	10/18/2006
1015	1	Offset Cul-De-Sac	10/18/2006
1016	1	Standard Knuckle (Intersection and "L" Shape Design)	10/18/2006
1017	4	Street Lights	11/30/2022
1018	1	Access Management Requirements	2/6/2024



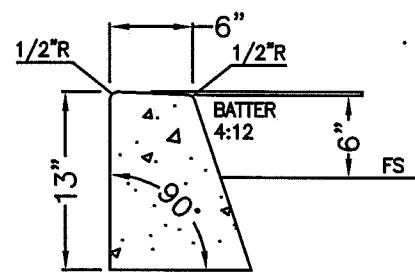
8" CURB & GUTTER



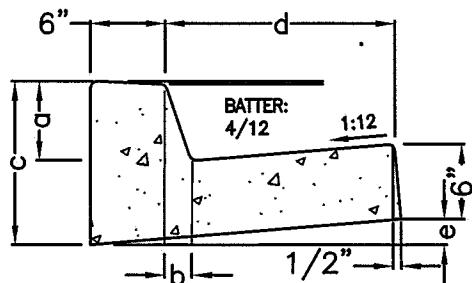
8" CURB



6" CURB & GUTTER



6" CURB



DIMENSIONS OF CURB			DIMENSIONS OF GUTTER	
Face (a)	Batter (b)	Back (c)	Width (d)	Rise (e)
6"	2"	13"	18"	1-1/2"
8"	2-5/8"	15"	18"	2"

NOT TO SCALE



APPROVED BY:

9/1/23  
DATE

CITY ENGINEER  
GIA LAM KIM

DRAWN BY: DT

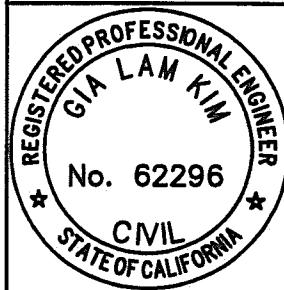
CITY OF FONTANA

CURB & GUTTER

STD. PLAN NO. 1000 DWG. 1/2

## NOTES:

1. RELATIVE COMPACTION REQUIREMENT FOR TOP 12" OF SUBGRADE IS 95%. WHEN BASE MATERIAL IS REQUIRED TO BE USED UNDER STREET PAVEMENT, THE SAME BASE MATERIAL SHALL ALSO BE PLACED UNDER CURB AND GUTTER.
2. NO FORMS SHALL BE PLACED UNTIL THE RELATIVE COMPACTION HAS BEEN TESTED AND APPROVED, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
3. ALL FORMWORK SHALL BE INSPECTED AND APPROVED PRIOR TO PLACEMENT OF CONCRETE.
4. THE CONTRACTOR SHALL USE 560-C-3250 CONCRETE UNLESS OTHERWISE APPROVED.
5. CURBS AND CURB AND GUTTERS SHALL HAVE WEAKENED PLANE JOINTS SPACED AT 10 FOOT INTERVALS. EXPANSION JOINTS SHALL BE PLACED AT 60 FOOT INTERVALS UTILIZING 1/2 INCH EXPANSION JOINT MATERIAL.
6. IMMEDIATELY AFTER FINISHING OPERATIONS ARE COMPLETE, THE CONTRACTOR SHALL PROVIDE BROOM FINISH AND APPLY WHITE CURING COMPOUND. ALL GUTTERS MUST HAVE 4" WIDE SHINER AT FLOW LINE.
7. THE CONTRACTOR SHALL PROTECT THE CONCRETE WORK FROM ALL TRAFFIC AND CONSTRUCTION EQUIPMENT FOR AT LEAST SEVEN DAYS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
8. FOR ABRUPT CURB TERMINATIONS, 3 FT. CURB TRANSITIONS SHALL BE PROVIDED, SEPARATED WITH A WEAKENED PLANE JOINT.
9. FOR NEW DEVELOPMENT, UTILITY LOCATIONS SHALL BE STAMPED ON CURBS.

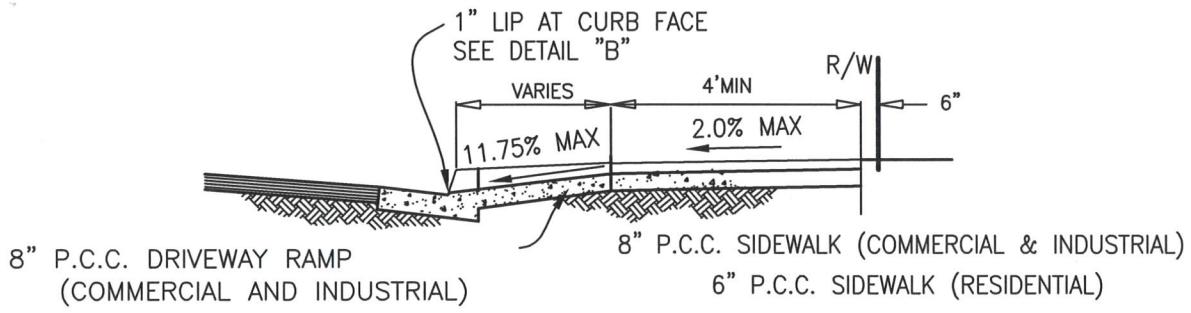
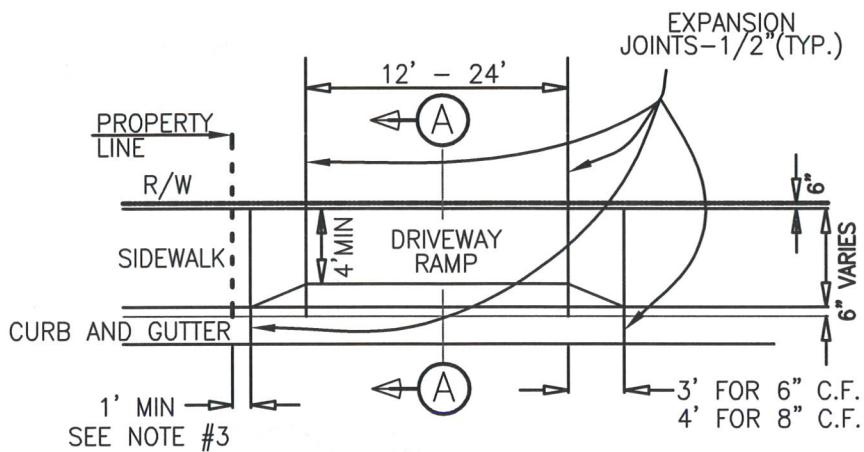


APPROVED BY:  
9/11/23  
CITY ENGINEER  
GIA LAM KIM  
DRAWN BY: \_\_\_\_\_ DT

CITY OF FONTANA

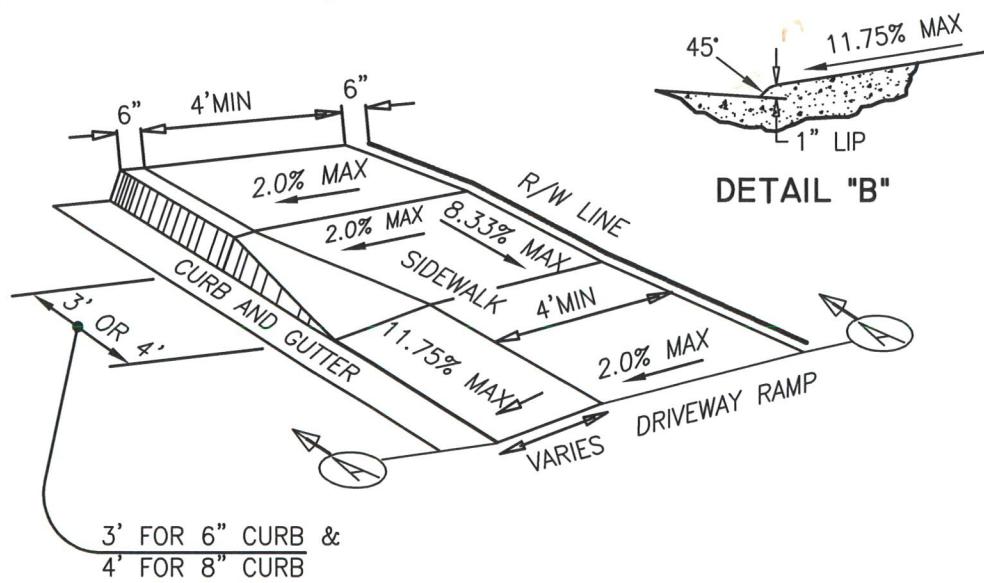
CURB & GUTTER

STD. PLAN NO. 1000 DWG. 2/2



SECTION 'A-A' 560-C-3250

560-C-3250



APPROVED BY:

*J. M. Kim*  
CITY ENGINEER  
GIA LAM KIM

10/03/03

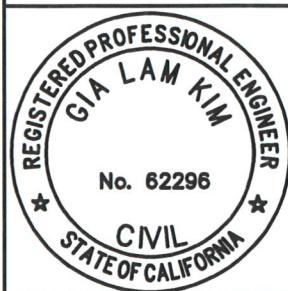
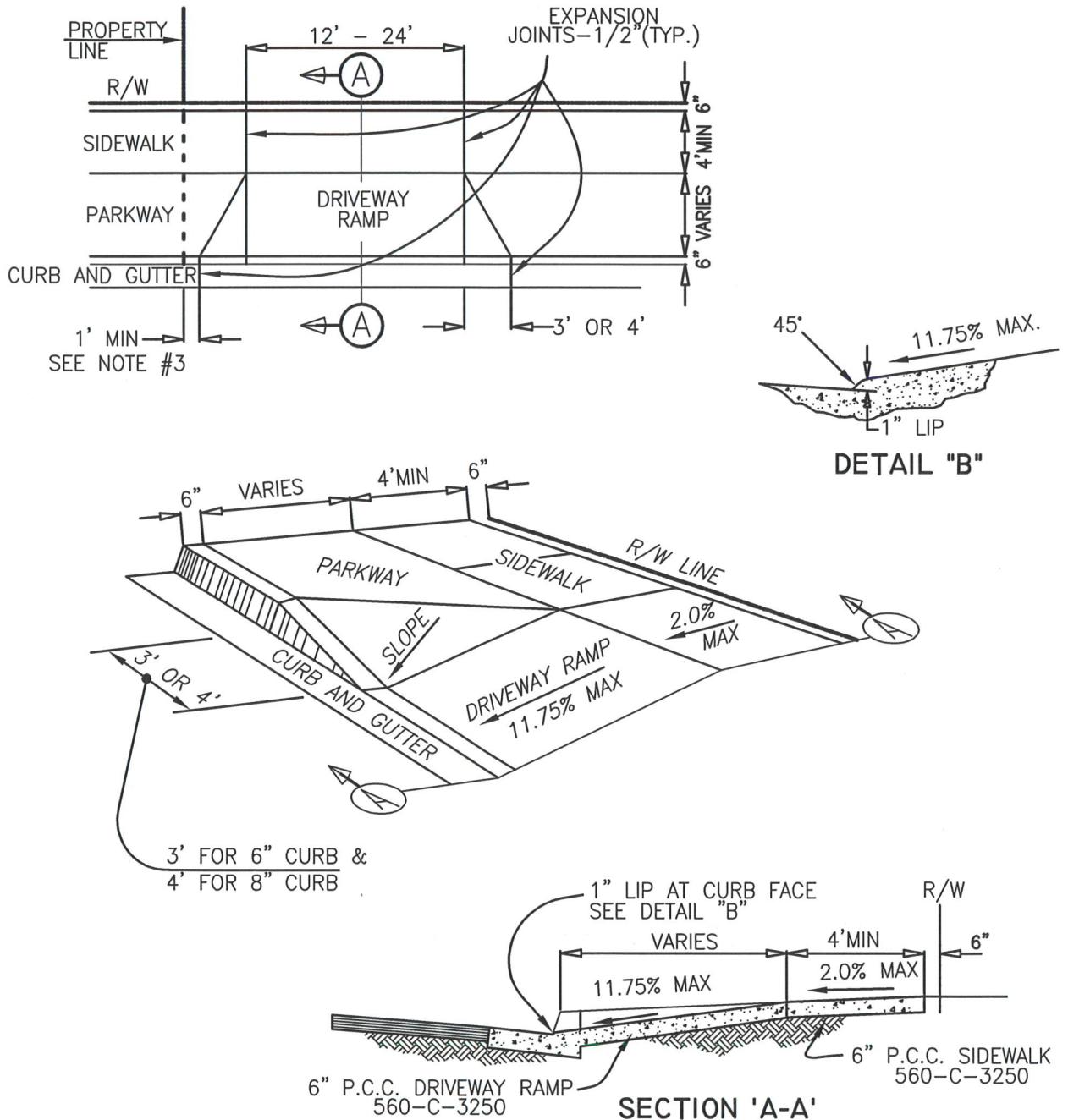
DATE

DRAWN BY: DT

CITY OF FONTANA

RESTRICTED RIGHT OF WAY DRIVEWAY

STD. PLAN NO. 1001 DWG. 1/5



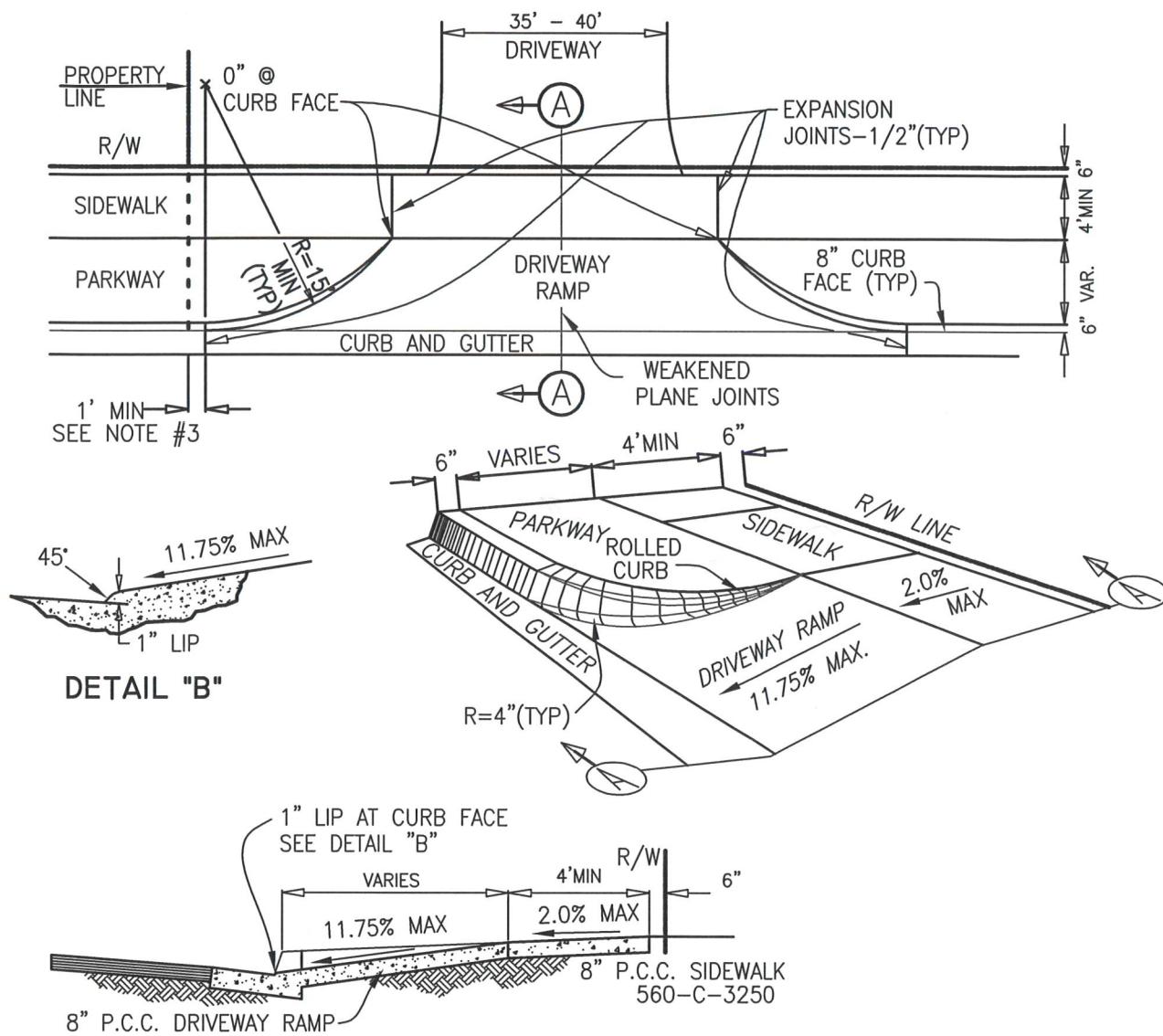
APPROVED BY:

*Gia Lam Kim*  
CITY ENGINEER  
GIA LAM KIM  
DRAWN BY: \_\_\_\_\_ DT  
10/03/03  
DATE

CITY OF FONTANA

RESIDENTIAL DRIVEWAY  
APPROACH WITH  
PARKWAY ADJACENT  
SIDEWALKS

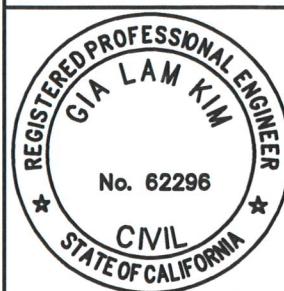
STD. PLAN NO. 1001 DWG. 2/5



### SECTION "A-A"

#### NOTES EXCLUSIVE TO COMMERCIAL-INDUSTRIAL DRIVEWAYS WITH PARKWAY ADJACENT SIDEWALKS:

1. BOTTOM OF CURB SHALL BE ROLLED WITH A 4" RADIUS AT CURB AND TAPER TO A 0" RADIUS AT SIDEWALK.
2. TOP OF CURB SHALL BE ROLLED WITH A 4" RADIUS AT SIDEWALK AND TAPER TO A 0" RADIUS AT CURB.



APPROVED BY:

*JL* *Kim* 10/03/23  
CITY ENGINEER  
GIA LAM KIM  
DRAWN BY: \_\_\_\_\_ DT

CITY OF FONTANA

COMMERCIAL-  
INDUSTRIAL DRIVEWAY  
PARKWAY ADJACENT  
SIDEWALKS

STD. PLAN NO. 1001 DWG. 3/5

DRIVEWAY CONSTRUCTION NOTES:

1. CONSTRUCTION OF THE RESTRICTED RIGHT OF WAY DRIVEWAY REQUIRES APPROVAL OF THE CITY ENGINEER.
2. A CONSTRUCTION PERMIT IS REQUIRED PRIOR TO CONSTRUCTION OF A DRIVEWAY APPROACH.
3. THE RESIDENTIAL DRIVEWAY STANDARD SHALL BE USED WHEN THE DRIVEWAY SERVES AS AN ENTRANCE TO A SINGLE FAMILY RESIDENCE.
4. THE COMMERCIAL DRIVEWAY STANDARD SHALL BE USED WHEN THE DRIVEWAY SERVES AS AN ENTRANCE TO RETAIL, COMMERCIAL, APARTMENTS, HIGH-DENSITY RESIDENTIAL OR A GOVERNMENT/COMMUNITY SERVICE BUILDING.
5. NO PORTION OF A DRIVEWAY APPROACH SHALL BE LOCATED WITHIN A CURB RETURN.
6. DRIVEWAY APPROACHES SERVING ADJOINING LOTS SHALL BE SEPARATED BY AT LEAST ONE FOOT OF FULL HEIGHT CURB.
7. UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER, THERE SHALL BE AT LEAST 20' OF FULL HEIGHT CURB BETWEEN DRIVEWAYS SERVING THE SAME LOT.
8. WHEN A JOINT DRIVEWAY APPROACH IS PERMITTED, A RECORDED EASEMENT ALLOWING FOR MUTUAL ACCESS TO THE ADJOINING PROPERTIES IS REQUIRED.
9. CONCRETE FOR CURB, GUTTER, DRIVEWAY APPROACHES AND SIDEWALKS SHALL BE CLASS 560-C-3250.
10. RELATIVE COMPACTION REQUIREMENT FOR TOP 12" OF SUBGRADE IS 95%. WHEN BASE MATERIAL IS REQUIRED TO BE USED UNDER STREET PAVEMENT, THE SAME BASE MATERIAL SHALL ALSO BE PLACED UNDER THE DRIVEWAY RAMP.
11. RESIDENTIAL DRIVEWAY APPROACHES AND SIDEWALK AT RESIDENTIAL DRIVEWAY APPROACHES SHALL BE 6" THICK.
12. COMMERCIAL AND INDUSTRIAL DRIVEWAY APPROACHES AND SIDEWALK AT COMMERCIAL AND INDUSTRIAL DRIVEWAY APPROACHES SHALL BE 8" THICK.

	APPROVED BY:  CITY ENGINEER GIA LAM KIM DRAWN BY: _____ DT	CITY OF FONTANA  DRIVEWAY CONSTRUCTION NOTES AND WIDTHS  STD. PLAN NO. 1001 DWG. 4/5
		10/4/23

DRIVEWAY CONSTRUCTION NOTES (CONTINUED):

13. CURB, GUTTER AND DRIVEWAY APPROACHES FOR COMMERCIAL AND INDUSTRIAL DRIVEWAYS SHALL BE POURED MONOLITHICALLY.
14. GRADE BREAK LINES SHALL BE PRECISE AND STRAIGHT. SCREEDS AND/OR FALSE FORMS SHALL BE USED TO ACHIEVE PRECISE CONSTRUCTION.
15. WHEN A DRIVEWAY APPROACH IS TO JOIN AN ALLEY, THE APPROACH AND ALLEY SHALL BE CONSTRUCTED TO ALLOW FOR PROPER DRAINAGE.
16. CONTRACTOR SHALL INSTALL  $\frac{1}{2}$ " EXPANSION JOINT FILLER AT LIMITS OF DRIVEWAY APPROACH.
17. NO PORTION OF A DRIVEWAY SHALL EXTEND IN FRONT OF AN ADJOINING LOT.
18. CONTRACTOR SHALL PROVIDE A MEDIUM BROOM FINISH ON RAMP AND SIDEWALK.
19. IMMEDIATELY AFTER FINISHING OPERATIONS ARE COMPLETE, WHITE CURING COMPOUND SHALL BE APPLIED.

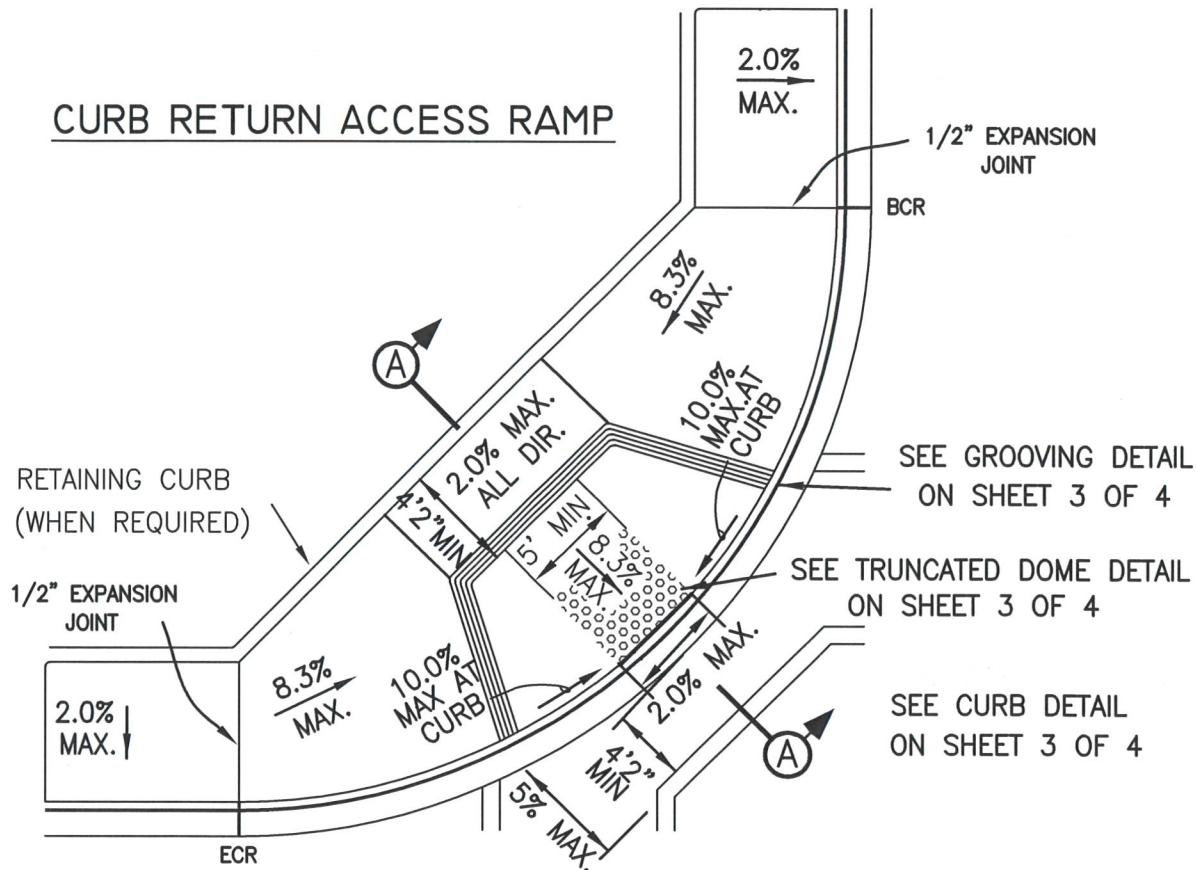
DRIVEWAY WIDTHS:

SINGLE FAMILY DWELLING OR DUPLEX:	12' TO 24'
SINGLE FAMILY DWELLING WITH DETACHED GARAGE:	12'
COMMERCIAL DRIVEWAY, TWO WAY TRUCK ACCESS:	35'
INDUSTRIAL DRIVEWAY, TWO WAY TRUCK ACCESS:	40'

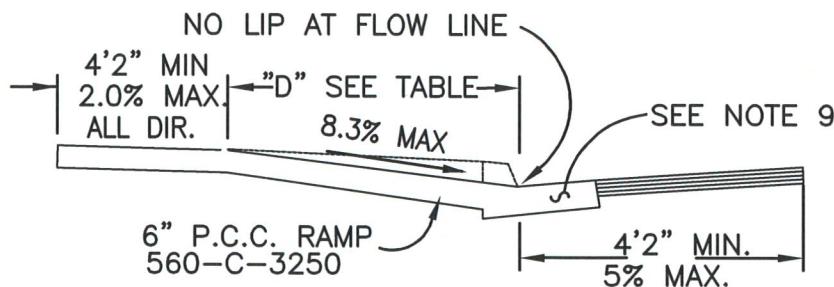
NOTE: THIS SPECIFICATION REPLACES CITY  
STANDARD PLAN 1002.

	APPROVED BY:  CITY ENGINEER GIA LAM KIM DRAWN BY: _____ DT	CITY OF FONTANA  DRIVEWAY CONSTRUCTION NOTES AND WIDTHS  STD. PLAN NO. 1001   DWG. 5/5
		DATE 10/4/23

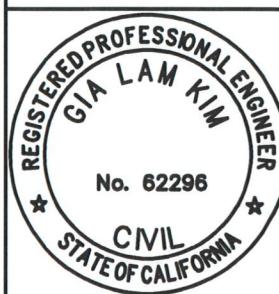
## CURB RETURN ACCESS RAMP



DEPTH OF RAMP		
	6" CURB FACE	8" CURB FACE
"D"	6'-8" MIN.	8'-11" MIN.



SECTION "A-A"



APPROVED BY:

*JK* 10/23/23  
CITY ENGINEER  
GIA LAM KIM

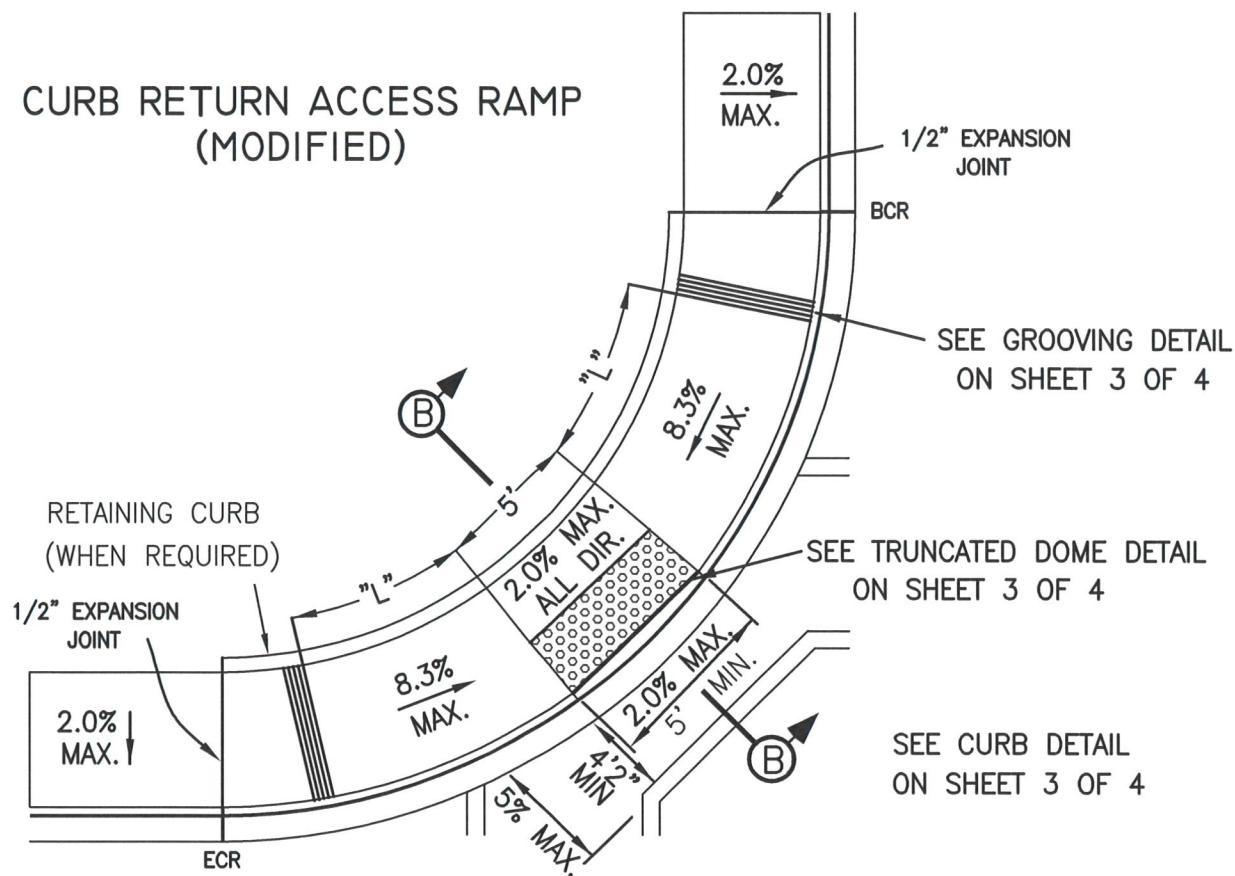
DRAWN BY: \_\_\_\_\_ DT

CITY OF FONTANA

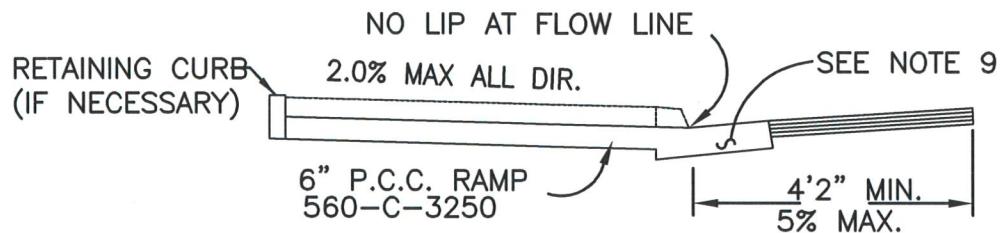
CURB RETURN  
ACCESS RAMP

STD. PLAN NO. 1003 DWG. 1/5

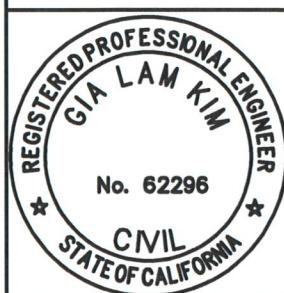
CURB RETURN ACCESS RAMP  
(MODIFIED)



LENGTH OF RAMP		
	6" CURB FACE	8" CURB FACE
"L"	6'-8" MIN.	8'-11" MIN.



SECTION "B-B"

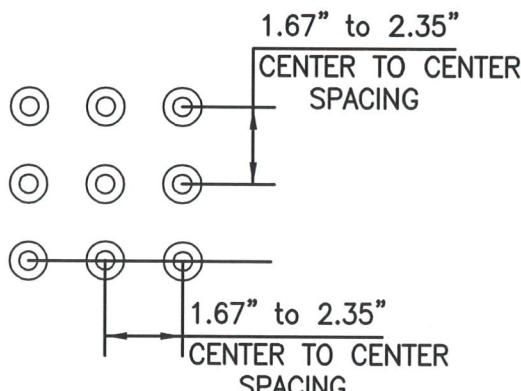


APPROVED BY:  
  
 CITY ENGINEER  
 GIA LAM KIM  
 DRAWN BY: \_\_\_\_\_ DT  
 DATE: 10/23/23

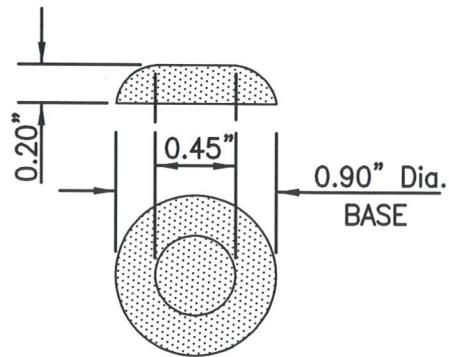
CITY OF FONTANA

MODIFIED CURB  
RETURN ACCESS  
RAMP

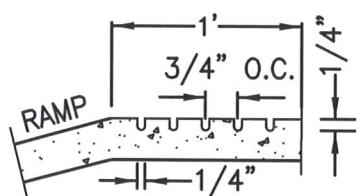
STD. PLAN NO. 1003 DWG. 2/5



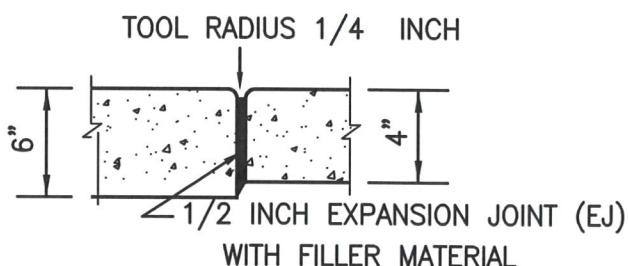
TRUNCATED  
DOME PATTERN



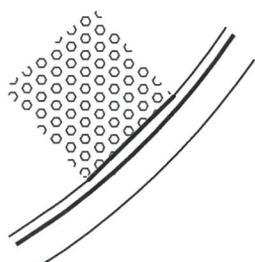
TRUNCATED  
DOME DETAIL



GROOVING DETAIL



EXPANSION JOINT DETAIL



EDGE OF CURB AT TRUNCATED DOME TO BE POURED  
SQUARE TO SET FLUSH WITH TRUNCATED DOMES

CURB DETAIL



APPROVED BY:

  
10/23/23  
CITY ENGINEER  
GIA LAM KIM  
DATE

DRAWN BY: \_\_\_\_\_ DT

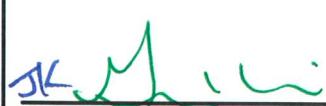
CITY OF FONTANA

TRUNCATED DOMES,  
GROOVE AND  
EXPANSION JOINT  
DETAILS

STD. PLAN NO. 1003 DWG. 3/5

NOTES:

1. RAMP GRADES SHALL BE STAKED FOR INSPECTION PRIOR TO PLACEMENT OF CONCRETE.
2. IF THE DIFFERENCE IN ELEVATION BETWEEN THE BCR AND THE ECR IS GREATER THAN 1.5' THAN AN ENGINEERED PLAN INCLUDING ELEVATIONS IS REQUIRED.
3. RELATIVE COMPACTION REQUIREMENT FOR TOP 12" OF SUBGRADE IS 95%. WHEN BASE MATERIAL IS USED UNDER STREET PAVEMENT, THE SAME BASE MATERIAL SHALL ALSO BE PLACED UNDER THE RAMP.
4. RAMP SHALL BE CONSTRUCTED OF CLASS 560-C-3250 CONCRETE WITH A MINIMUM THICKNESS OF 6".
5. CONCRETE THICKNESS SHALL BE 6 INCHES FROM ECR TO BCR UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
6. RAMP SHALL BE CONSTRUCTED WITH NO LIP AT THE FLOW LINE.
7. RAMP SURFACE SHALL HAVE A BROOMED FINISH TRANSVERSE TO THE DIRECTION OF TRAVEL.
8. THE DETECTABLE WARNING SURFACE SHALL BE PREFABRICATED SURFACE, RIGID, COLORFAST AND UV STABLE, YELLOW COLOR COMPLYING WITH FEDERAL STANDARD 595B, COLOR No. 33538 "ADA REPLACEABLE (WET SET) COMPOSITE TACTILE UNITS" AS MANUFACTURED BY ADA SOLUTIONS, ARMOR-TILE, OR APPROVED EQUAL. THE EDGE OF THE DETECTABLE WARNING SURFACE ADJACENT TO THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOW LINE.
9. CONTRACTOR SHALL INSTALL  $\frac{1}{2}$ " EXPANSION JOINT FILLER AT BCR AND ECR.
10. COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO AND WITHIN 2' OF THE CURB RAMP SHALL NOT BE STEEPER THAN 5%. GUTTER PAN SLOPE SHALL NOT EXCEED 1" OF DEPTH FOR EACH 2'-0" OF WIDTH.
11. RETAINING CURBS ARE REQUIRED WHEN EXISTING LANDSCAPE IS 2" OR HIGHER AT ANY POINT ABOVE THE NEWLY CONSTRUCTED RAMP. CURBS SHALL HAVE A 4"MINIMUM HEIGHT AND BE AT LEAST 2" ABOVE EXISTING LANDSCAPE.
12. FOR DIMENSIONS NOT SHOWN, REFER TO CALTRANS STANDARD A88A, A88B AND ADA SECTION 4.29 OF 28 CFR PART 36.

	APPROVED BY:  CITY ENGINEER GIA LAM KIM DRAWN BY: _____ DT	10/23/23 DATE	CITY OF FONTANA CURB RETURN ACCESS RAMP CONSTRUCTION NOTES STD. PLAN NO. 1003 DWG. 4/5	
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## CURB RETURN RADII

### INTERSECTION OF:

### MINIMUM RADIUS:

LOCAL/LOCAL 25'

LOCAL/COLLECTOR 30'

LOCAL/PRIMARY 30'

LOCAL/MAJOR 35'

LOCAL/TRUCK ROUTE 35'

COLLECTOR/COLLECTOR 35'

COLLECTOR/PRIMARY 35'

COLLECTOR/MAJOR 35'

COLLECTOR/TRUCK ROUTE 50'

PRIMARY/PRIMARY 35'

PRIMARY/MAJOR 50'

PRIMARY/TRUCK ROUTE 50'

MAJOR/MAJOR 50'

MAJOR/TRUCK ROUTE 50'

TRUCK ROUTE/TRUCK ROUTE 50'



APPROVED BY:

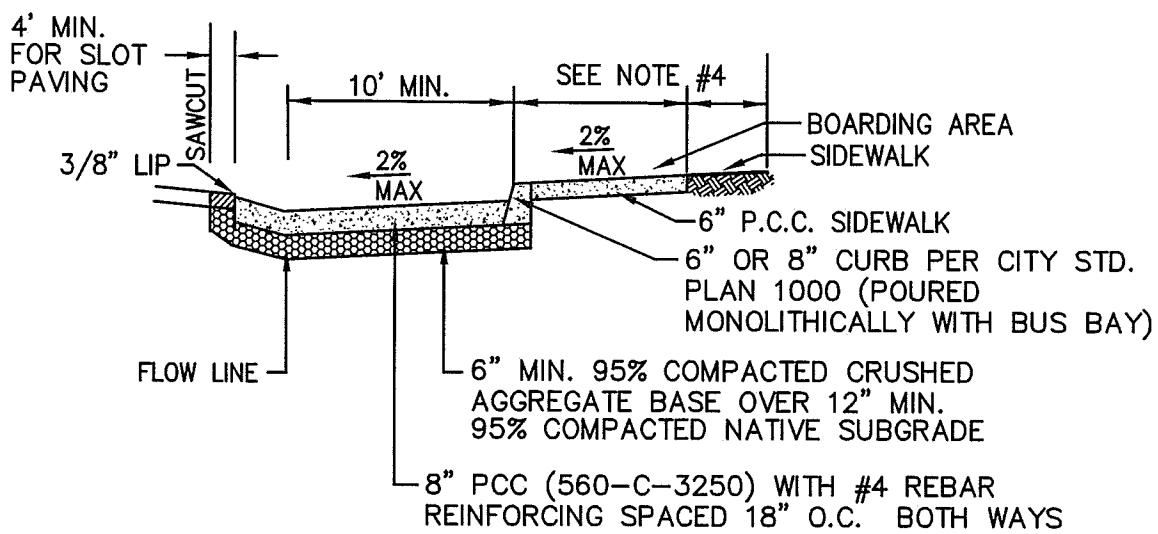
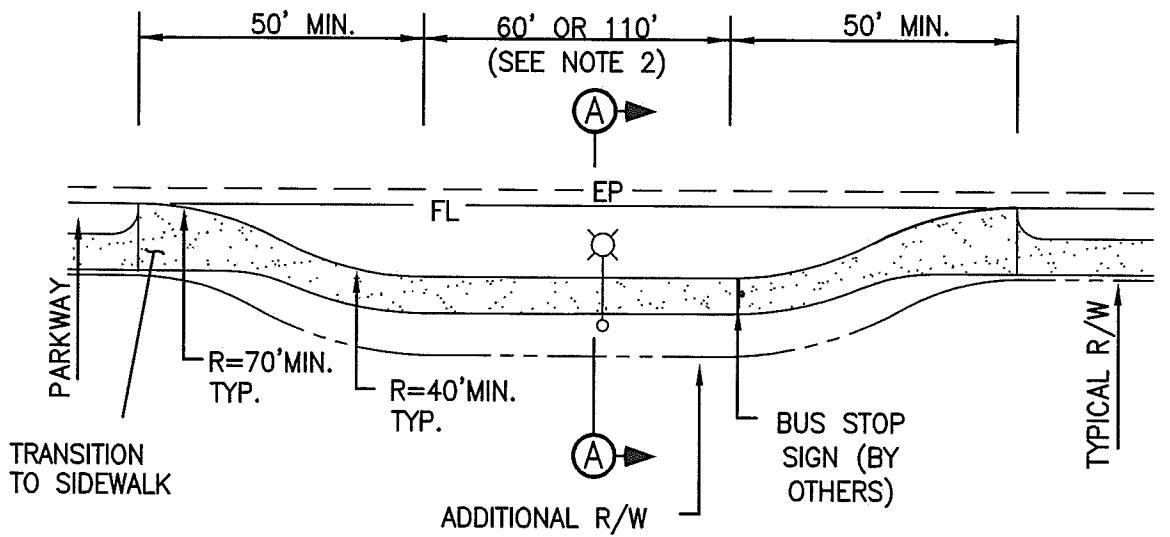
 10/23/23  
CITY ENGINEER  
GIA LAM KIM

DRAWN BY: \_\_\_\_\_ DT

CITY OF FONTANA

CURB RETURN  
RADII

STD. PLAN NO. 1003 DWG. 5/5

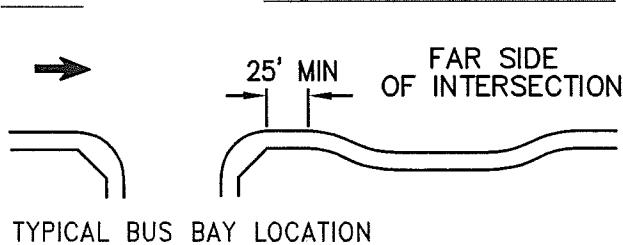


SECTION A-A

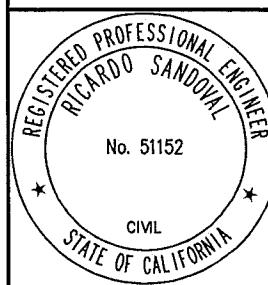
	APPROVED BY:	CITY OF FONTANA	
	 <u>JL Sandoval 7-7-2</u> CITY ENGINEER RICARDO SANDOVAL		DATE
DRAWN BY: _____	DT	STANDARD BUS BAY	
		STD. PLAN NO. 1005	DWG. 1/2

NOTES:

1. BUS BAYS SHALL BE CONSTRUCTED ONLY AT LOCATIONS APPROVED BY THE CITY ENGINEER
2. STORAGE LENGTH SHALL BE DETERMINED BY THE SERVING BUS AGENCY AND THE CITY ENGINEER
3. FAR SIDE OF INTERSECTION BUS BAY LOCATION IS PREFERRED, PER THE BELOW DETAIL.
4. BOARDING AREA AND SIDEWALK WIDTHS SHALL BE PER PLAN
5. ADDITIONAL LIGHTING MAY BE REQUIRED AS DETERMINED BY THE CITY ENGINEER.
6. CONCRETE SHALL BE REINFORCED WITH GRADE 60 #4 REBAR PLACED IN A GRID PATTERN (OC), SPACED 18" C-C
7. BUS BAY, CURB & GUTTER SHALL BE CONSTRUCTED OF CLASS 560-C-3250 CONCRETE
8. CURB, BUS BAY AND GUTTER SHALL BE POURED MONOLITHICALLY.
9. THE FINISHED SURFACE SHALL NOT VARY FROM A STRAIGHT EDGE MORE THAN  $\frac{1}{8}$ ".



TYPICAL BUS BAY LOCATION



APPROVED BY:

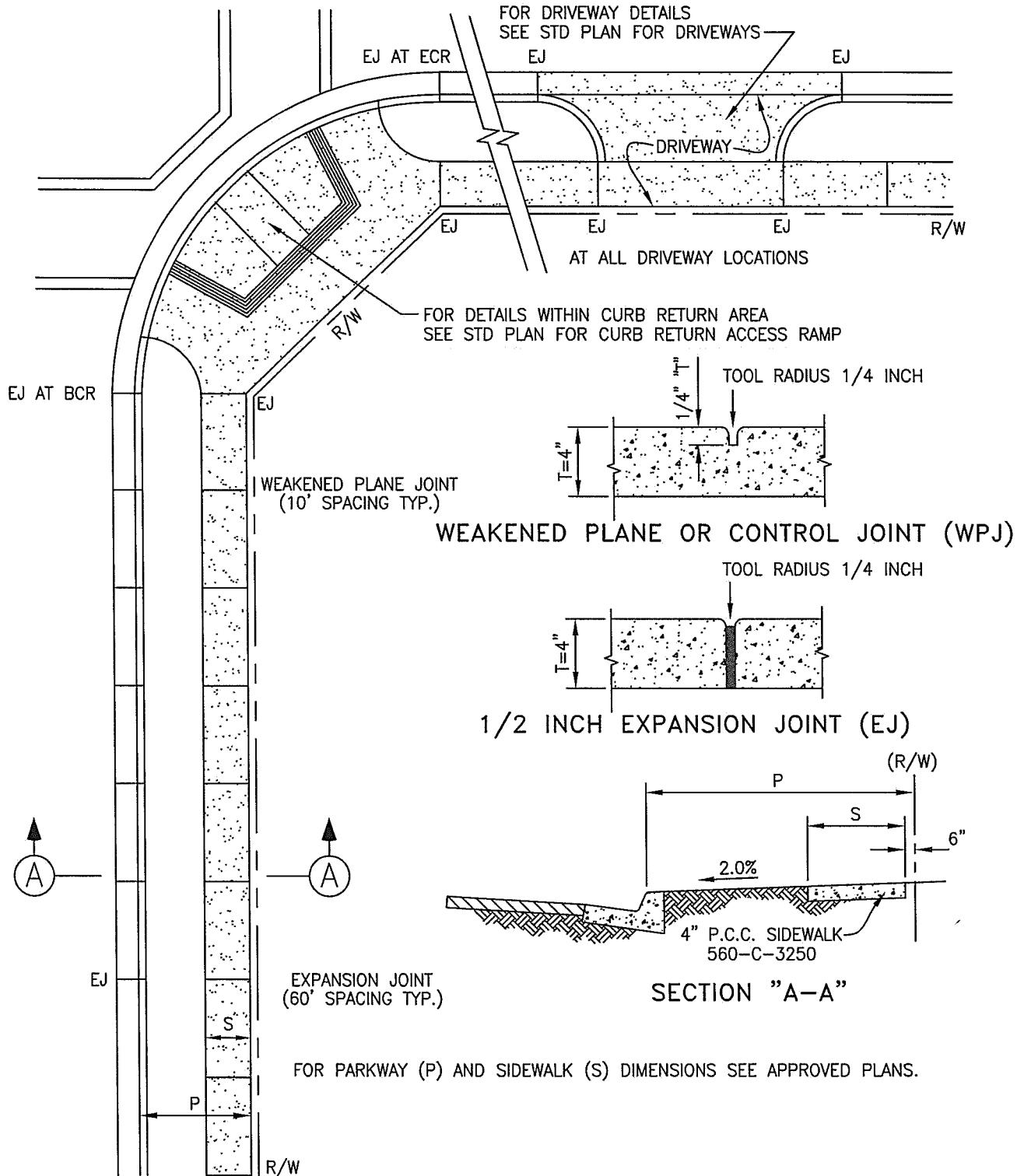
*Ricardo Sandoval*  
CITY ENGINEER  
RICARDO SANDOVAL

DRAWN BY: DT

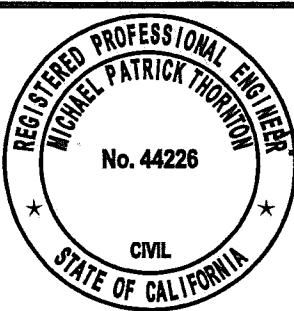
CITY OF FONTANA

BUS BAY  
CONSTRUCTION  
NOTES

STD. PLAN NO. 1005 DWG. 2/2



NOT TO SCALE



APPROVED BY:

INTERIM CITY ENGINEER  
MICHAEL THORNTON

DRAWN BY: JP

CITY OF FONTANA

DATE

SIDEWALKS

STD. PLAN NO. 1006 SHT 1 OF 2

## SIDEWALK CONSTRUCTION NOTES

1. ALL SIDEWALKS SHALL BE CONSTRUCTED AS SPECIFIED IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK), UNLESS OTHERWISE NOTED.
2. ALL SUBGRADE SHALL BE CONSTRUCTED TO GRADE AND CROSS SECTION PER CITY STANDARD PLANS FOR APPLICABLE STREET SECTION. TOLERANCES FOR SIDEWALKS AND CURBS AND GUTTERS SHALL BE PER THE GREEN BOOK.
3. SUBGRADE SHALL BE SCARIFIED AND COMPACTED TO A MINIMUM DEPTH OF 12 INCHES. 90% COMPACTION IS REQUIRED BEHIND THE CURB AND IN PARKWAY AREA. AFTER COMPACTION, THE SUBGRADE SHALL BE FREE OF UNSUITABLE MATERIALS.
4. ALL CONCRETE SHALL BE 560-C-3250 UNLESS OTHERWISE SPECIFIED.
5. CONCRETE SHALL BE OF THE SPECIFIED SLUMP AND WITHIN THE REQUIRED WATER/CEMENT RATIO.
6. ALL SIDEWALKS SHALL HAVE WEAKENED PLANE JOINTS SPACED AT 10 FOOT MAXIMUM INTERVALS. EXPANSION JOINTS SHALL BE PLACED AT 60 FOOT INTERVALS UTILIZING 1/2 INCH PREFORMED EXPANSION JOINT FILLER (BITUMINOUS) CONFORMING TO ASTM D994 AND SSPWC "GREENBOOK" SECTION 201-3.2.
7. A NORMAL EXPANSION JOINT MAY BE OMITTED IF IT FALLS WITHIN 10 FEET OF AN ADDITIONAL EXPANSION JOINT.
8. WEAKENED PLANE JOINTS SHALL BE 1/4 OF THE DEPTH OF THE CONCRETE BUT NOT LESS THAN 1 INCH.
9. TRANSIT MIXED CONCRETE DELIVERY TICKETS SHALL BE PROVIDED TO THE INSPECTOR PRIOR TO PLACING CONCRETE TO INSURE THAT THE CONCRETE MEETS SPECIFICATIONS.
10. ALL SURFACES SHALL BE TRUE AND STRAIGHT AND OF UNIFORM WIDTH, FREE OF HUMPS, SAGS, IRREGULARITIES AND IMPERFECTIONS. UNIFORM SURFACES SHALL NOT VARY MORE THAN 0.01 FOOT WHEN MEASURED WITH A 10 FOOT STRAIGHT EDGE.
11. ALL SURFACES SHALL RECEIVE A BROOM FINISH.
12. UPON COMPLETION OF FINISHING OPERATIONS ALL SURFACES SHALL BE SPRAYED WITH WHITE CURING COMPOUND.
13. CONCRETE REPAIRS SHALL BE MADE BY SAW CUTTING AND REMOVING THE ENTIRE PANEL.
14. SIDEWALKS WITHIN DRIVEWAYS SHALL BE CONSTRUCTED PER CITY STANDARD PLANS FOR DRIVEWAYS.

NOT TO SCALE



APPROVED BY:

*Michael P. Thornton* 7/18/22  
INTERIM CITY ENGINEER  
MICHAEL THORNTON

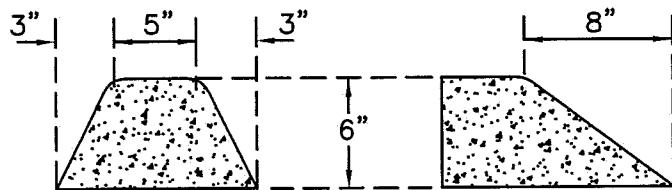
DRAWN BY: JP

CITY OF FONTANA

SIDEWALKS

STD. PLAN NO. 1006 SHT 2 OF 2

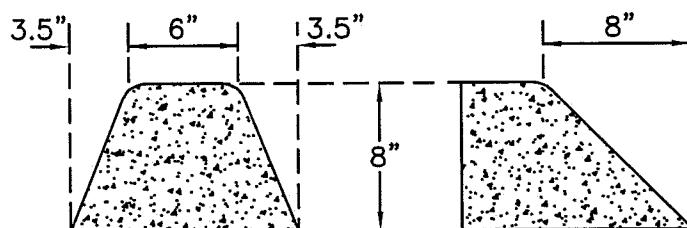
## 6" DIKE



CROSS SECTION

END TREATMENT

## 8" DIKE



CROSS SECTION

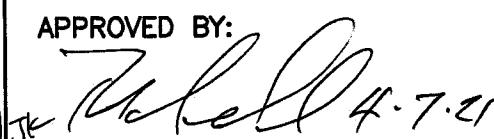
END TREATMENT

### NOTES:

1. DIKE SHALL BE CONSTRUCTED OF TYPE D2 PG 70-10 ASPHALT CONCRETE.
2. TACK COAT BINDER (SS1H) SHALL BE PLACED ON EXISTING ASPHALT PAVING PRIOR TO DIKE INSTALLATION.
3. DIKES SHALL BE PLACED ON A 2" SECTION OF A.C. SURFACING, EXTENDING THROUGHOUT THE WIDTH OF THE DIKE.
4. DEPRESS DIKE AT DRIVEWAYS (4" C.F.) AND TERMINATE (0" C.F.) AT CROSSWALKS PER PLAN AND AS DIRECTED BY THE ENGINEER.
5. DIKES SHALL BE SHAPED AND COMPACTED WITH AN EXTRUSION MACHINE OR OTHER EQUIPMENT CAPABLE OF SHAPING AND COMPACTING THE MATERIAL TO THE REQUIRED CROSS SECTION.



APPROVED BY:



JK Sandoval 4-7-21

CITY OF FONTANA

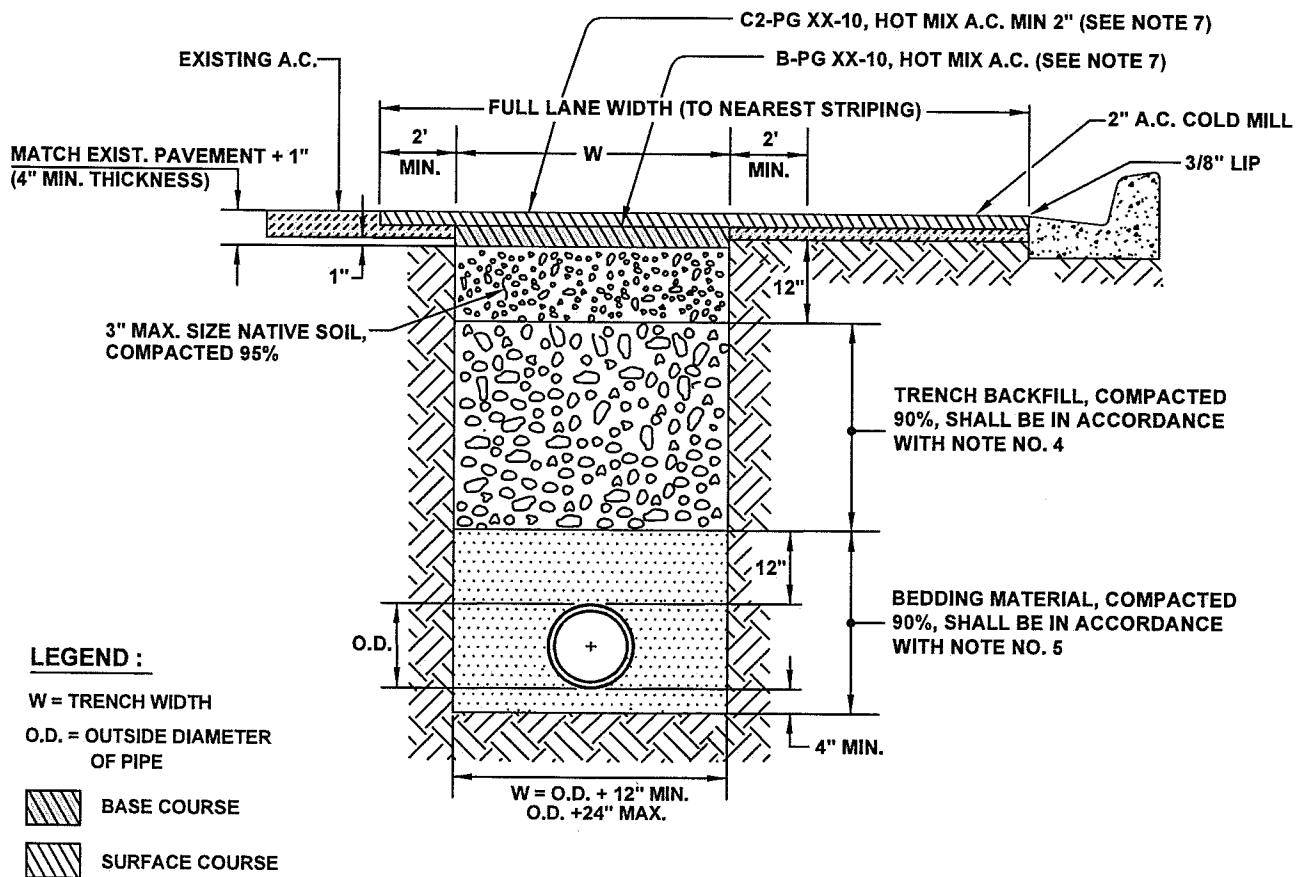
CITY ENGINEER  
RICARDO SANDOVAL

DATE

HOT MIX  
ASPHALT  
CONCRETE DIKE

DRAWN BY: DT

STD. PLAN NO. 1007 DWG. 1/1



SEE SHEET 3 OF 3 FOR NOTES

NOT TO SCALE



APPROVED BY:

JK   
CITY ENGINEER  
RICARDO SANDOVAL

DATE

REVIEWED BY:

DRAWN BY: JP

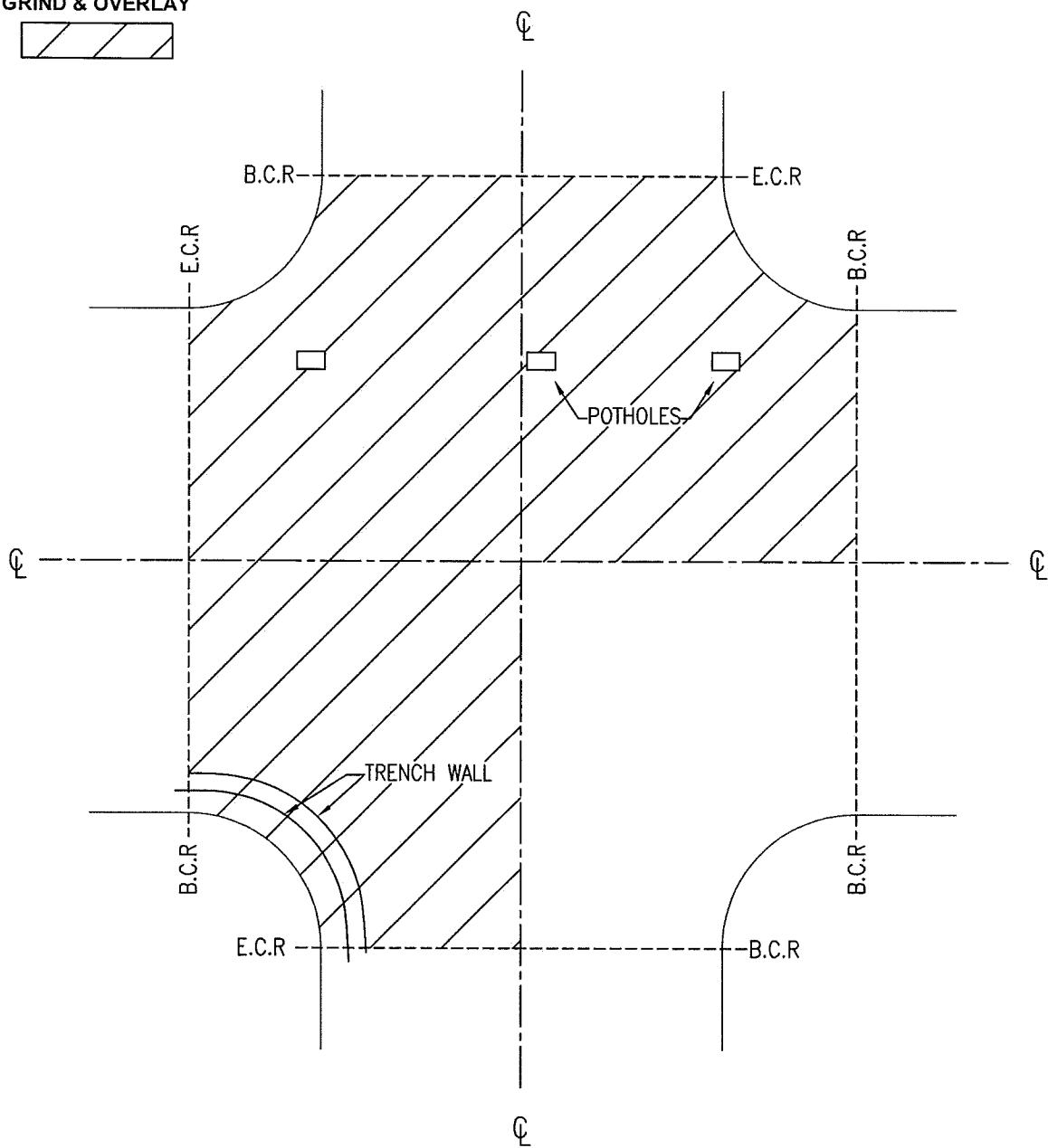
**CITY OF FONTANA**

**ROADWAY REPAIR  
AND  
TRENCH BACKFILL**

STD. PLAN NO. 1008 SHT 1 OF 3

## PAVEMENT REPAIRS AT INTERSECTIONS

GRIND & OVERLAY



NOT TO SCALE



APPROVED BY:

*Ricardo Sandoval* 4.7.24  
CITY ENGINEER  
RICARDO SANDOVAL

DATE

REVIEWED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_ JP

CITY OF FONTANA

ROADWAY REPAIR  
AND  
TRENCH BACKFILL

STD. PLAN NO. 1008 SHT 2 OF 3

**GENERAL NOTES :**

1. THIS STANDARD DRAWING SHALL APPLY TO ANY AND ALL ROADWAY PAVING REPAIRS INCLUDING, BUT NOT LIMITED TO, THOSE RESULTING FROM SUBSURFACE UTILITY LOCATING SERVICES.
2. PRIOR TO PLACEMENT OF PERMANENT PAVING, THE EXISTING PAVEMENT SHALL BE CUT TO A NEAT STRAIGHT LINE. ALL PAVEMENT JOINTS/CRACKS WITHIN 4' OF THE TRENCH, OR AS DIRECTED BY THE CITY ENGINEER, SHALL BE REMOVED AND REPLACED. ANY LOOSE OR UNSTABLE ASPHALT ADJACENT TO THE NEW PAVEMENT SHALL BE REMOVED AND REPLACED.
3. ALL EXCAVATION SHALL BE MADE, PROTECTED AND SUPPORTED AS REQUIRED FOR SAFETY AND IN A MANNER SET FORTH IN OPERATIONS, RULES, ORDERS, AND REGULATIONS PRESCRIBED BY THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY. A COPY OF THE CAL OSHA EXCAVATION PERMIT, IF APPLICABLE, SHALL BE FURNISHED TO THE PROJECT INSPECTION PRIOR TO BEGINNING THE WORK. STEEL PLATE BRIDGING SHALL BE IN ACCORDANCE WITH CITY STD. NO. 1009.
4. PRIOR TO PLACEMENT OF PERMANENT PAVEMENT, BACKFILL COMPACTION REPORTS, FOR 6" MAX. NATIVE SOIL, SHALL BE VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER AND SUBMITTED TO THE CITY ENGINEER FOR APPROVAL. IN LIEU OF COMPACTION TESTING, CONTRACTOR MAY USE 1-SACK PCC SLURRY BACKFILL OR CONCRETE CLASS 100-E-100.
5. BEDDING MATERIAL SHALL BE SAND, GRAVEL, CRUSHED MISCELLANEOUS BASE OR NATIVE FREE-DRAINING GRANULAR MATERIAL HAVING A MIN. SAND EQUIVALENT OF 30.
6. PERMANENT PAVEMENT SHALL BE REPLACED WITHIN 30 DAYS OF THE EXCAVATION. TEMPORARY ASPHALT, MIN. 2" THICK, SHALL BE COMPACTED AND PLACED FLUSH, USING A STEEL WHEEL ROLLER OR OTHER COMPACTION DEVICE, TO PROVIDE A SMOOTH TRAVEL SURFACE UNTIL THE PERMANENT REPAIR, OR AS DIRECTED BY THE CITY ENGINEER. TEMPORARY ASPHALT PAVEMENT SHALL BE MAINTAINED UNTIL PERMANENT PAVEMENT IS IN PLACE.
7. PG 64-10 HOT MIX A.C. IS TO BE USED ON RESIDENTIAL STREETS AND PG 70-10 HOT MIX A.C. SHALL BE USED ON MAJOR AND COLLECTOR STREETS.
8. ANY TRENCH THAT EXTENDS INTO ANY LANE, TRANSVERSELY OR LONGITUDINALLY, SHALL REQUIRE A COMPLETE GRIND AND OVERLAY FOR THE WIDTH OF THE AFFECTED LANE(S). ALL TRENCHES EXTENDING INTO THE LANE(S) TRANSVERSELY SHALL REQUIRE A GRIND AND OVERLAY EXTENDING 10 FEET IN BOTH DIRECTIONS FROM THE CENTERLINE OF THE TRENCH.
9. IF THE NEW TRENCH REPAIR LIMITS LIE WITHIN A PREVIOUSLY REPAIRED AREA OF PAVEMENT, THE PROPOSED REPAIR LIMITS WILL NEED TO BE EXTENDED TO COVER THE PREVIOUSLY REPAIRED AREA, OR AS DIRECTED BY THE CITY ENGINEER.
10. ADDITIONAL COLD MILLING WILL BE REQUIRED TO CONNECT MULTIPLE TRENCHES THAT ARE SERVING THE SAME PARCEL.
11. IF TRENCH FAILURE SHOULD OCCUR, THE CONTRACTOR/PERMITTEE WILL BE NOTIFIED AND DIRECTED TO REMOVE, REPLACE AND REMEDY THE WORK. UPON FAILURE OF THE CONTRACTOR/PERMITTEE TO PROMPTLY COMPLY, UNDER ORDER OF THE CITY ENGINEER, THE TRENCH SHALL BE REMEDIED, REMOVED, REPLACED AT PERMITTEE'S SOLE EXPENSE.
12. POTHOLE REPAIRS RESULTING FROM SUBSURFACE UTILITY LOCATING SERVICES SHALL BE REPAIRED IN ACCORDANCE WITH THIS STANDARD.
13. ALL POTHOLE / SERVICE CUTS / ETC. SHALL BE BACK FILLED WITH A 1-SACK SLURRY, 100-E-100, OR AS SPECIFIED BY THE CITY ENGINEER.
14. ALL EDGES OF EXISTING PAVEMENT BEING JOINED AND SURFACE BEING OVERLAID SHALL RECEIVE A TACK COAT OF ASPHALT EMULSION.
15. CONTRACTOR SHALL AVOID TRACKING TACK MATERIAL ONTO EXISTING PAVEMENT SURFACES. ANY TACK MARKINGS LEFT ON THE STRIPING AND/OR PAVEMENT SHALL BE CLEANED UP AT THE CONTRACTOR'S EXPENSE. ALL TACK AND USA MARKINGS SHALL BE REMOVED WITHIN 30 DAYS OF COMPLETION OF CONSTRUCTION. CLEANUP SHALL NOT SCAR THE PAVEMENT. IF CONTRACTOR FAILS TO CLEAN UP THE MARKINGS, A TYPE II SLURRY SEAL SHALL BE USED.
16. ALL DISTURBED/DAMAGED STRIPING AND MARKINGS SHALL BE REPLACED IN KIND AS DIRECTED BY THE CITY ENGINEER.



APPROVED BY:

*JK* *REC* *4-7-14*

CITY ENGINEER  
RICARDO SANDOVAL

DATE

REVIEWED BY:

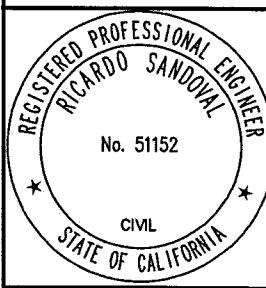
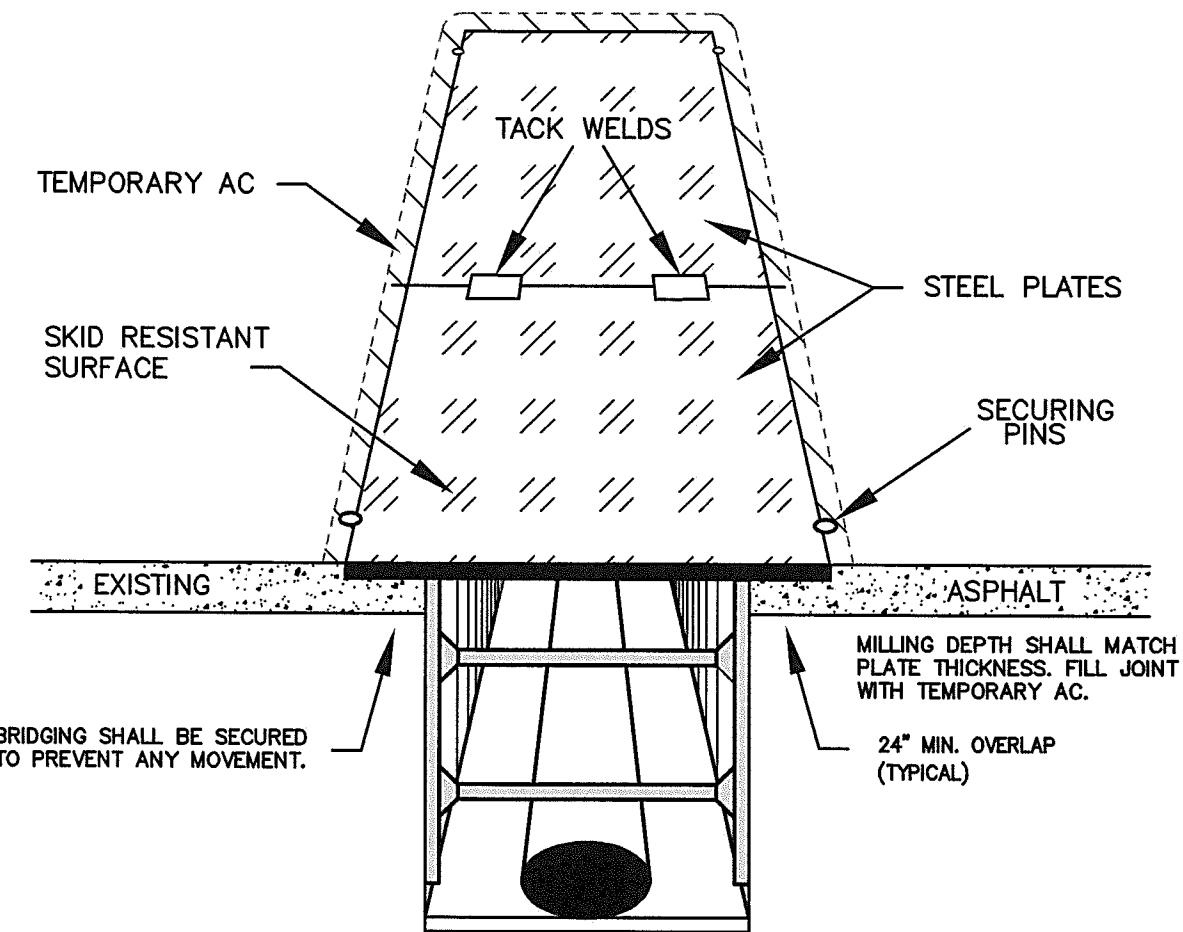
DRAWN BY: *JP*

**CITY OF FONTANA**

**ROADWAY REPAIR  
AND  
TRENCH BACKFILL**

**STD. PLAN NO. 1008 SHT 3 OF 3**

## STEEL PLATE BRIDGING



APPROVED BY:  
*Ricardo Sandoval* 7-21  
CITY ENGINEER  
RICARDO SANDOVAL

DRAWN BY: DT

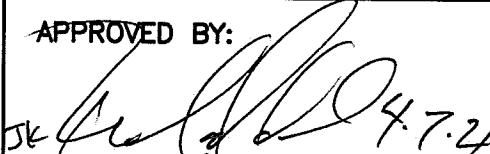
CITY OF FONTANA

TRENCH PLATE  
BRIDGING

STD. PLAN NO. 1009 DWG. 1/3

NOTES:

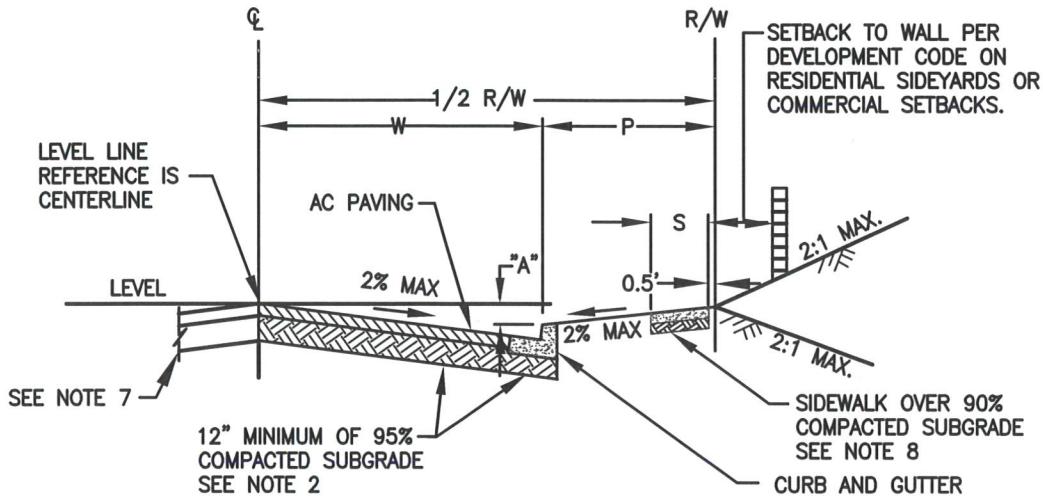
1. THE STEEL FOR STEEL PLATE BRIDGING SHALL BE MANUFACTURED IN ACCORDANCE WITH ONE OF THE FOLLOWING STANDARDS: ASTM A 36 GRADE 36 (YIELD STRENGTH 36,000 PSI) OR ASTM A 572 GRADE 50 (YIELD STRENGTH OF 50,000 PSI).
2. THE MINIMUM PLATE SIZE SHALL BE 8 FEET BY 10 FEET AND THE MINIMUM PLATE THICKNESS SHALL BE ONE (1.0) INCH.
3. STEEL PLATE(S), WHEN INSTALLED, SHALL EXTEND BEYOND THE EDGE OF THE TRENCH WALL TO ADEQUATELY SUPPORT TRAFFIC LOADS. PLATE(S) SHALL BE LARGE ENOUGH TO ALLOW MINIMUM OF 2 FOOT OF BEARING ON EACH SIDE OF THE EXCAVATION. PLATES SHALL BE PLACED PERPENDICULAR OR PARALLEL TO THE DIRECTION OF TRAVEL. LONGITUDINAL EDGES SHALL NOT BE IN THE WHEEL PATH.
4. FOR TRENCHES AND EXCAVATIONS WITH SPANS LESS THAN OR EQUAL TO FOUR (4.0) FEET AS MEASURED IN THE DIRECTION OF TRAVEL, STEEL PLATES SHALL HAVE A MINIMUM THICKNESS OF ONE INCH. FOR TRENCHES AND EXCAVATIONS WITH SPANS GREATER THAN FOUR (4.0) FEET AS MEASURED IN THE DIRECTION OF TRAVEL, A STRUCTURAL DESIGN, TO INCLUDE PLATE DIMENSIONS, THICKNESS, ASTM A 36 OR ASTM A 572 GRADE STEEL AND MINIMUM SHORING OR BRACING REQUIREMENTS, SHALL BE PREPARED BY A PROFESSIONAL STRUCTURAL ENGINEER AND APPROVED BY THE CITY ENGINEER.
5. ALL PLATING USED SHALL BE WITHOUT DEFORMATIONS (WARPING, CRACKING, ETC.) AND SHALL BE SUBJECT TO STRAIGHTEDGE TESTING. PLATE REPLACEMENT SHALL BE REQUIRED IF THE PLATE IS PERMANENTLY DEFORMED. STEEL TRENCH PLATE DEFORMATION MAY OCCUR DURING LOADING, BUT IF A STEEL PLATE IS DEFORMED WITHOUT LOADING TO AT LEAST 0.5 INCH PER 10 FEET IN LENGTH THE PLATE SHALL BE REPLACED.
6. TO HOLD MULTIPLE PLATES TOGETHER, PLATES SHALL REQUIRE A 6" LONG TACK WELD FOR STABILITY. WHEN THE STEEL IS TO BE WELDED, A WELDING PLATE PROCEDURE SUITABLE FOR THE GRADE OF STEEL AND INTENDED USE SHALL BE UTILIZED. WELDING SHALL BE PERFORMED BY A STATE CERTIFIED WELDER.
7. THE CONTRACTOR SHALL MAINTAIN A NON-SKID SURFACE ON THE PLATE. PLATE(S) WITHOUT THE REQUIRED SKID-RESISTANCE SURFACING SHALL BE REPLACED. EPOXY-COATED PLATES ARE NOT APPROVED FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERIODICALLY MONITORING SKID RESISTANCE, REPORTING RESULTS TO THE ENGINEER, AND REPLACING ANY DEFICIENT PLATES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT THE STEEL PLATE(S), SHORING, AND TRENCH PLATE SECURING SYSTEMS MEET MINIMUM SPECIFICATIONS AND ARE PROPERLY INSTALLED AND MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CLAIMS THAT MAY BE ASSOCIATED WITH THE USE OF STEEL PLATING.
9. ADVANCE WARNING TRAFFIC CONTROL SIGNS SHALL BE IN PLACE PRIOR TO TRENCH EXCAVATION AND WHILE PLATES ARE INSTALLED. SIGNS INCLUDE "ROAD WORK AHEAD" (W20-1) AND "STEEL PLATE AHEAD" (W8-1) SIGNS. SIGNS SHALL BE IN GOOD WORKING ORDER AND RETRO-REFLECTIVE.
10. THE MAXIMUM LENGTH OF OPEN TRENCH ALLOWED TO BE COVERED WITH STEEL PLATES SHALL BE A TOTAL OF FIFTY (50) LINEAL FEET OR AS APPROVED BY THE ENGINEER.
11. TRENCHES AND EXCAVATIONS SHALL BE ADEQUATELY SHORED AND BRACED TO WITHSTAND HIGHWAY TRAFFIC LOADS.

	APPROVED BY:	CITY OF FONTANA	
	 JK 4.7.24	DATE	
	CITY ENGINEER RICARDO SANDOVAL	TRENCH PLATE BRIDGING	
	DRAWN BY: DT	STD. PLAN NO. 1009	DWG. 2/3

NOTES:

12. PLATES SHALL BE SECURED TO PREVENT ANY MOVEMENT. TRENCH PLATES SHALL NOT BE OVERLAPPED OR STACKED ON TOP OF ANOTHER PLATE. STEEL PLATE BRIDGING SHALL BE SECURED AGAINST DISPLACEMENT BY USING ADJUSTABLE CLEATS, SHIMS OR OTHER DEVICES. SECURING DEVICES SHALL NOT EXTEND ABOVE THE WEARING SURFACE OF THE PLATE. WHEN STEEL PLATES ARE REMOVED, THE DOWEL HOLES IN THE PAVEMENT SHALL BE BACKFILLED WITH GRADED FINES OF AN ASPHALT CONCRETE MIX (ASPHALT PAVEMENT) OR A PRE-APPROVED PRE-MIX NON-SHRINK RAPID SET CONCRETE MATERIAL (CONCRETE PAVEMENT).
13. THE PAVEMENT SURROUNDING THE TRENCH 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(S). THE APPROACH AND ENDING PLATES SHALL BE ATTACHED TO THE ROADWAY WITH A MINIMUM OF TWO GRADE 60 NO. 4 OR EQUIVALENT DOWELS PRE-DRILLED INTO THE CORNERS OF THE PLATE AND DRILLED 3 INCHES INTO THE PAVEMENT; SUBSEQUENT PLATES SHALL BE BUTTED TO EACH OTHER. THE GAP BETWEEN THE EDGE OF THE PLATE(S) AND THE ADJACENT PAVEMENT SHALL BE FILLED WITH TYPE D BITUMINOUS OR COMMERCIAL ASPHALT PAVEMENT. "STEEL PLATE AHEAD" SIGNS SHALL BE INSTALLED IN ADVANCE OF RECESSED STEEL PLATES.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING AND MAINTAINING STEEL PLATE BRIDGING 24 HOURS A DAY/7 DAYS A WEEK. THE CONTRACTOR SHALL MAINTAIN RECORDS THAT THE PLATE(S) HAVE BEEN CHECKED A MINIMUM OF TWO TIMES A DAY BY THE CONTRACTOR. RECORDS SHALL INCLUDE THE LOCATION, DATE AND TIME INSPECTED AND THE INSPECTOR'S NAME, TITLE AND COMPANY CONTACT INFORMATION AND ANY ACTION TAKEN. UPON REQUEST, RECORDS SHALL BE SUBMITTED TO THE ENGINEER WITHIN 48 HOURS AFTER REMOVAL OF TEMPORARY BRIDGING.
15. THE MAXIMUM AMOUNT OF TIME STEEL TRENCH PLATING CAN REMAIN IN PLACE IS SEVEN (7) DAYS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL WORK ZONE TRAFFIC CONTROL DEVICES 24-HOURS A DAY/7 DAYS A WEEK AND SHALL DESIGNATE A SINGLE POINT OF CONTACT RESPONSIBLE FOR THIS EFFORT. AFTER NOTIFICATION OF ANY PROBLEMS, THE CONTRACTOR HAS THREE (3) HOURS TO MAKE ANY NECESSARY REPAIRS OR REPLACE ANY DEFECTIVE WORK, MATERIALS OR EQUIPMENT TO THE SATISFACTION OF THE ENGINEER. IF THE CONTRACTOR IS UNABLE TO MAKE NECESSARY REPAIRS OR ADJUSTMENTS WITHIN THIS TIME PERIOD, THE ENGINEER WILL ORDER CITY PERSONNEL OR ANY OTHER QUALIFIED PERSONNEL TO MAKE IMMEDIATE REPAIRS AND/OR ADJUSTMENTS. THE CONTRACTOR WILL BE CHARGED FOR ALL LABOR (INCLUDING OVERHEAD), MATERIALS AND EQUIPMENT USED. WORK PERFORMED BY CITY OR OTHER QUALIFIED PERSONNEL WILL IN NO WAY WAIVE THE CONTINUED MAINTENANCE RESPONSIBILITY OF THE CONTRACTOR.
17. STORAGE OF UNUSED PLATES IN THE ROADWAY IS NOT PERMITTED.

	APPROVED BY:  CITY ENGINEER RICARDO SANDOVAL DRAWN BY: _____ DT	CITY OF FONTANA  TRENCH PLATE BRIDGING  STD. PLAN NO. 1009 DWG. 3/3
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Roadway Designation	W	Parkway P	Sidewalk S	"A" 6" CURB	"A" 8" CURB	MIN. AC
Local	20'	12'	5'	-0.03'	0.14'	4"
Collector	22'	12'	5'	N/A	0.10'	4.5"
Industrial Collector	28'	12'	5'	N/A	-0.02'	5.5"
Secondary	34'	12'	6'	N/A	-0.14'	6.5"

NOTES:

1. THE LEVEL LINE OFFSETS ARE BASED UPON A STRAIGHT GRADE CROSSFALL OF 2% EXCEPT AS OTHERWISE APPROVED BY THE CITY ENGINEER. "A" CALCULATION INCLUDES 3/8" ASPHALT LIP.
2. ACTUAL THICKNESS OF A.C. PAVEMENT AND/OR BASE COURSE MATERIAL FOR STRUCTURAL STREET SECTION SHALL BE RECOMMENDED BY A GEOTECHNICAL ENGINEERING REPORT AND SUBMITTED TO THE CITY OF FONTANA FOR APPROVAL UPON COMPLETION OF ROUGH GRADING UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER. SEE STANDARD DETAIL 1012 FOR ADDITIONAL DESIGN PARAMETERS.
3. PG 64-10 HOT MIX A.C. IS TO BE USED ON RESIDENTIAL STREETS AND PG 70-10 HOT MIX A.C. SHALL BE USED ON COLLECTOR, PRIMARY AND MAJOR STREETS.
4. IF USED, CRUSHED MISCELLANEOUS BASE SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK - LATEST EDITION). RELATIVE COMPACTION REQUIREMENT FOR TOP 12" OF SUBGRADE IS 95%. WHEN BASE MATERIAL IS REQUIRED TO BE USED UNDER STREET PAVEMENT, THE SAME BASE MATERIAL SHALL ALSO BE PLACED UNDER CURB AND GUTTER.
5. INTERSECTION CROSS-SECTIONS/GEOMETRY SHALL BE BASED UPON AN ALIGNMENT STUDY.
6. FOR INFILL AND COMMUNITY/SPECIFIC PLAN AREAS OTHER STREET CROSS-SECTIONS MAY APPLY AS APPROVED BY THE CITY ENGINEER.
7. ADDITIONAL IMPROVEMENTS BEYOND JOIN LINE MAY BE REQUIRED BY THE CITY ENGINEER WHEN MATCHING EXISTING IMPROVEMENTS.
8. EXACT LOCATION/WIDTH OF SIDEWALK MAY VARY AND SHALL BE DETERMINED AT PLAN REVIEW AS APPROVED BY THE CITY ENGINEER.



APPROVED BY:

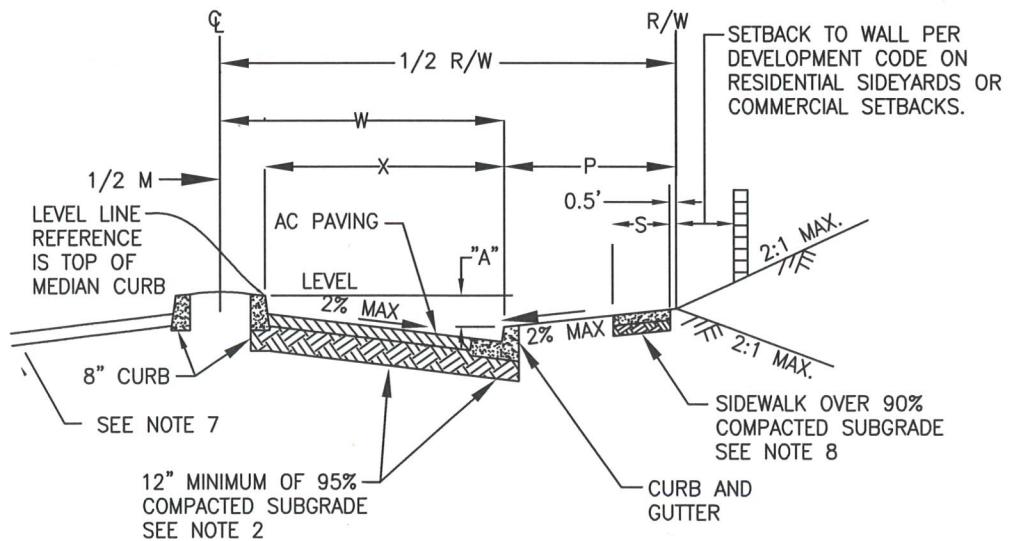
*St. L. Kim* 2.6.24  
CITY ENGINEER  
GIA LAM KIM  
DATE

CITY OF FONTANA

STREET CROSS  
SECTIONS  
UNDIVIDED

DRAWN BY: \_\_\_\_\_ DT

STD. PLAN NO. 1010 DWG. 1/1



TYPICAL MID-BLOCK 1/2 WIDTH STREET SECTION

Roadway Designation	R/W	W	Parkway P	Sidewalk S	Median M	X	"A" 8" CURB	MIN. AC
Primary	104'	40'	12'	6'	14'	33'	-0.79'	6.5"
Major	132'	54'	12'	6'	20'	44'	-1.01'	6.5"

NOTES:

1. THE LEVEL LINE OFFSETS ARE BASED UPON A STRAIGHT GRADE CROSSFALL OF 2% EXCEPT AS OTHERWISE APPROVED BY THE CITY ENGINEER. "A" CALCULATION INCLUDES 3/8" ASPHALT LIP.
2. ACTUAL THICKNESS OF A.C. PAVEMENT AND/OR BASE COURSE MATERIAL FOR STRUCTURAL STREET SECTION SHALL BE RECOMMENDED BY A GEOTECHNICAL ENGINEERING REPORT AND SUBMITTED TO THE CITY OF FONTANA FOR APPROVAL UPON COMPLETION OF ROUGH GRADING UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER. SEE STANDARD DETAIL 1012 FOR ADDITIONAL DESIGN PARAMETERS.
3. PG 64-10 HOT MIX A.C. SHALL BE USED ON RESIDENTIAL STREETS AND PG 70-10 HOT MIX A.C. SHALL BE USED ON COLLECTOR, PRIMARY AND MAJOR STREETS. FINISH COURSE SHALL BE 2"/.17' MINIMUM OR AS DIRECTED BY THE CITY ENGINEER. BASE COURSE THICKNESS SHALL BE PER PLAN OR AS DIRECTED BY THE CITY ENGINEER.
4. IF USED, CRUSHED MISCELLANEOUS BASE SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK - LATEST EDITION). RELATIVE COMPACTION REQUIREMENT FOR TOP 12" OF SUBGRADE IS 95%. WHEN BASE MATERIAL IS REQUIRED TO BE USED UNDER STREET PAVEMENT, THE SAME BASE MATERIAL SHALL ALSO BE PLACED UNDER CURB AND GUTTER.
5. INTERSECTION CROSS-SECTIONS/GEOMETRY SHALL BE BASED UPON AN ALIGNMENT STUDY.
6. FOR INFILL AND COMMUNITY/SPECIFIC PLAN AREAS OTHER STREET CROSS-SECTIONS MAY APPLY AS APPROVED BY THE CITY ENGINEER.
7. ADDITIONAL IMPROVEMENTS BEYOND JOIN LINE MAY BE REQUIRED BY THE CITY ENGINEER WHEN MATCHING EXISTING IMPROVEMENTS.
8. EXACT LOCATION/WIDTH OF SIDEWALK MAY VARY AND SHALL BE DETERMINED AT PLAN REVIEW AS APPROVED BY THE CITY ENGINEER.

	<p>APPROVED BY:              CITY ENGINEER            GIA LAM KIM            DRAWN BY: _____ DT         </p>	CITY OF FONTANA  STREET CROSS SECTIONS DIVIDED	
		10/23/23	DATE
		STD. PLAN NO. 1011	DWG. 1/1

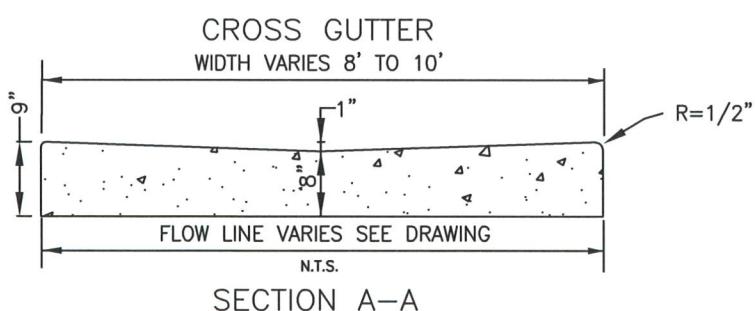
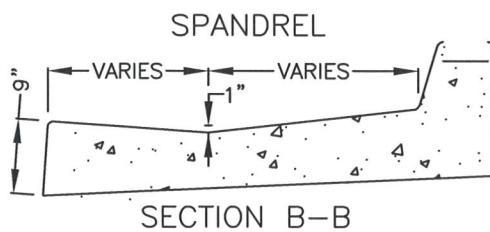
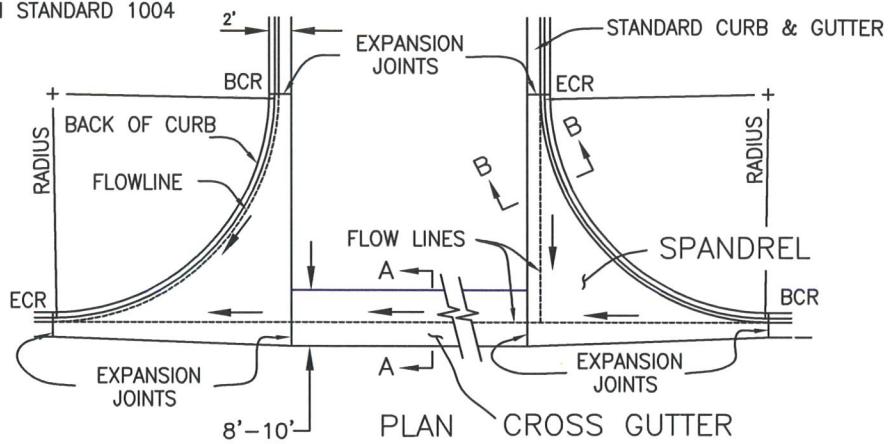
	STREET CLASSIFICATION					
	LOCAL	COLLECTOR	INDUSTRIAL COLLECTOR	SECONDARY HIGHWAY	PRIMARY HIGHWAY	MAJOR HIGHWAY
TRAFFIC INDEX (TI) (SEE NOTE 2) (BASED UPON MIN. 20 YEAR DESIGN LIFE)	5.5	6.5	9.0	9.0	10.0	11.0
RIGHT-OF-WAY (FT)	64	68	80	92	104	132
CURB TO CURB WIDTH (FT)	SEE STANDARDS 1010 & 1011					
MEDIAN CURB TO PARKWAY CURB WIDTH (FT)	N/A	N/A	N/A	N/A	33	44
PREFERRED HORIZONTAL CENTERLINE RADIUS (FT)	375 *	825	825	1400	1750	2200
	* OR AS APPROVED BY THE CITY ENGINEER (R=200' MINIMUM)					
MINIMUM DESIGN SPEED (MPH)	30	40	40	50	55	60
RESIDENTIAL ACCESS PROHIBITED	REFER TO ACCESS MANAGEMENT REQUIREMENTS STD. PLAN NO. 1018					
COMMERCIAL/INDUSTRIAL DRIVEWAY ACCESS						
INTERSECTION INTERVALS						

## NOTES:

1. STREET GRADES AND GEOMETRICAL DESIGN CRITERIA SHALL CONFORM TO STANDARD DESIGN PRACTICES. CRITERIA SHOWN ARE SUBJECT TO CHANGE AS REQUIRED BY THE CITY ENGINEER. MINIMUM GRADE-0.50% MAXIMUM GRADE-10% SEE STANDARD DETAILS 1010 & 1011 FOR ADDITIONAL DESIGN PARAMETERS.
2. THE DESIGN ENGINEER SHALL OBTAIN APPROVAL FROM THE CITY ENGINEER FOR THE PROPOSED TRAFFIC INDEX, PRIOR TO DESIGN SUBMITTAL FOR STREET STRUCTURAL SECTION.
3. ACTUAL THICKNESS OF A.C. PAVEMENT AND/OR BASE COURSE MATERIAL FOR STRUCTURAL STREET SECTION SHALL BE RECOMMENDED BY A GEOTECHNICAL ENGINEERING REPORT AND SUBMITTED TO THE CITY OF FONTANA FOR APPROVAL UPON COMPLETION OF ROUGH GRADING UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER. FOR THE PURPOSE OF CALCULATING A STRUCTURAL SECTION, THE MAXIMUM PERMISSIBLE R-VALUE SHALL BE 70. FOR AC OVER AG BASE STRUCTURAL SECTIONS, THE MINIMUM THICKNESS OF A.C. PAVEMENT IS 4 INCHES.

	APPROVED BY:	CITY OF FONTANA	
	 CITY ENGINEER GIA LAM KIM DRAWN BY: _____ DT _____	DATE	STREET DESIGN
		STD. PLAN NO. 1012	DWG. 1/1

CURB RETURN RADIUS VARIES  
PER CITY DESIGN STANDARD 1004



APPROVED BY:

*JK* 10/23/23  
CITY ENGINEER  
GIA LAM KIM

DRAWN BY: DT

CITY OF FONTANA

CROSS GUTTER  
AND SPANDREL

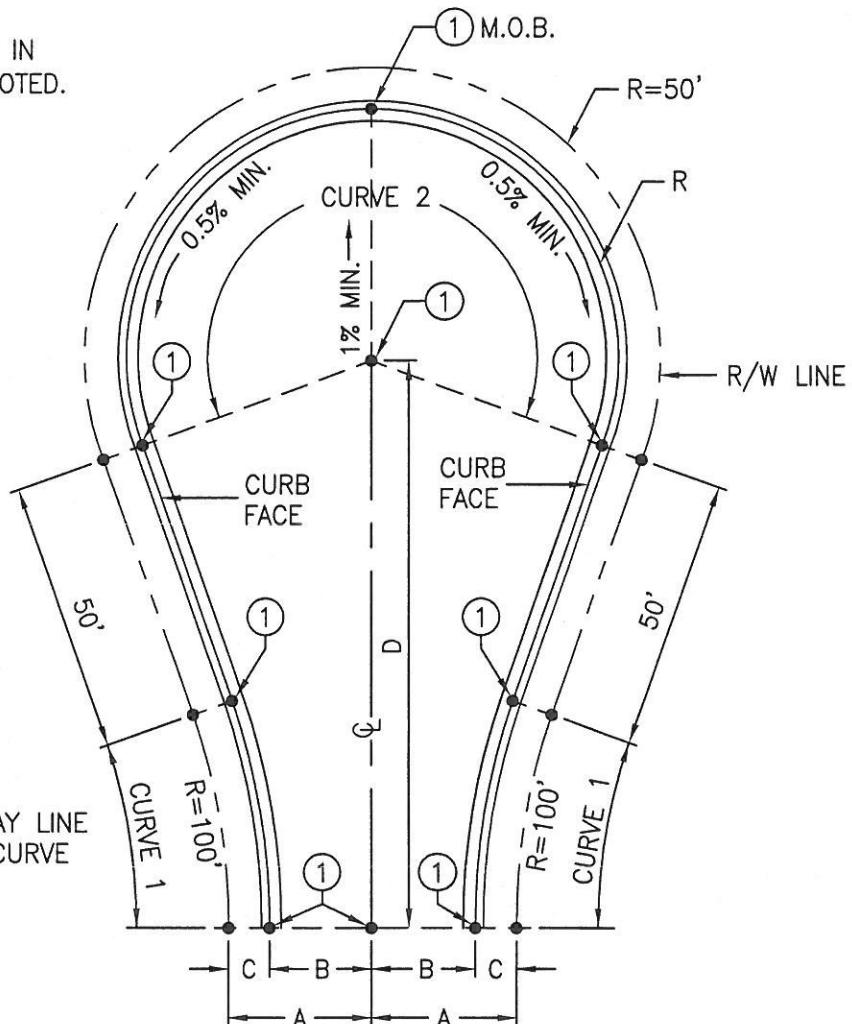
STD. PLAN NO. 1013 DWG. 1/2

## CROSS GUTTER AND SPANDREL NOTES:

1. CROSS GUTTERS AND SPANDRELS SHALL BE POURED MONOLITHICALLY.
2. CONCRETE FOR CROSS GUTTERS AND SPANDRELS SHALL BE CLASS 560-C-3250.
3. EXPANSION JOINTS AT BCR'S AND ECR'S SHALL BE SEALED AND FORMED WITH FILLER. SEALANT SHALL BE PER GREENBOOK 201-3.4 TYPE 'A' SEALANT AND FILLER SHALL BE PER GREENBOOK 201-3.2 'PREMOLDED JOINT FILLER.'
4. FOR LOCAL STREETS, EIGHT FOOT CROSS GUTTERS SHALL BE USED.

	APPROVED BY:	CITY OF FONTANA	
	 CITY ENGINEER GIA LAM KIM	10/23/27 DATE	CROSS GUTTER AND SPANDREL NOTES
DRAWN BY: _____ DT	STD. PLAN NO. 1013 DWG. 2/2		

NOTE:  
 ① ELEVATION REQUIRED IN  
 PLAN VIEW WHERE NOTED.



LEGEND:

R/W = RIGHT OF WAY LINE  
 R = RADIUS OF CURVE

LOCAL COLLECTOR STREET				CURVE 1				CURVE 2						
				△	CURB		R/W		△	CURB		R/W		
R/W	A	B	C		R	L	R	L		R	L	R	L	
50'	25'	18'	7'	96.82'	19°19'35"	107'	36.09'	100'	33.73'	218°39'09"	43'	164.09'	50'	190.81'
54'	27'	20'	7'	94.18'	18°07'35"	107'	33.85'	100'	31.64'	216°15'11"	43'	162.30'	50'	188.72'
60'	30'	18'	12'	90.00'	16°15'37"	112'	31.78'	100'	28.38'	212°31'13"	38'	140.95'	50'	185.46'
64'	32'	20'	12'	87.04'	14°57'57"	112'	29.25'	100'	26.12'	209°55'53"	38'	139.23'	50'	183.20'
68'	34'	22'	12'	83.93'	13°37'31"	112'	26.63'	100'	23.78'	207°15'02"	38'	137.45'	50'	180.86'
INDUSTRIAL STREET														
60'	30'	24'	6'	90.00'	16°15'37"	106'	30.08'	100'	28.38'	212°31'13"	44'	163.20'	50'	185.46'
68'	34'	28'	6'	83.93'	13°37'31"	106'	25.21'	100'	23.78'	207°15'02"	44'	159.16'	50'	180.86'

NOT TO SCALE



APPROVED BY:

CITY ENGINEER  
**RICARDO SANDOVAL**

REVIEWED BY: DL

DATE OF LAST REVISION: \_\_\_\_\_

CITY OF FONTANA

CUL-DE-SAC

07/10/06

STD. PLAN NO. 1014

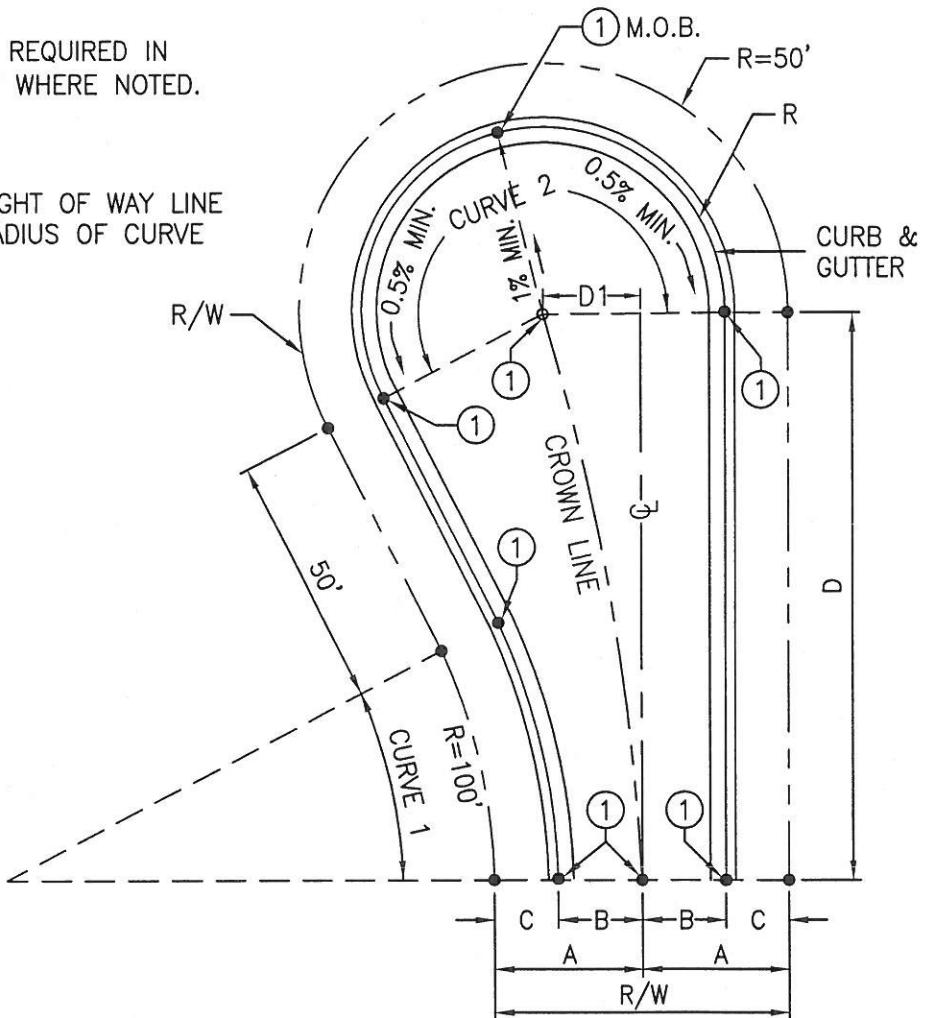
SHT 1 OF 1

NOTE:

① ELEVATION REQUIRED IN  
PLAN VIEW WHERE NOTED.

LEGEND:

R/W = RIGHT OF WAY LINE  
R = RADIUS OF CURVE



LOCAL COLLECTOR STREET					CURVE 1					CURVE 2					
					△	CURB		PROPERTY		△	CURB		PROPERTY		
R/W	A	B	C	D		R	L	R	L		R	L	R	L	
50'	25'	18'	7'	80.23'	25'	32°20'01"	107'	60.38'	100'	56.43'	212°20'01"	43'	159.35'	50'	185.30'
54'	27'	20'	7'	75.99'	23'	30°26'11"	107'	56.84'	100'	53.12'	210°26'11"	43'	157.93'	50'	183.64'
60'	30'	18'	12'	69.22'	20'	27°28'55"	112'	53.72'	100'	47.97'	207°28'55"	38'	137.61'	50'	181.06'
64'	32'	20'	12'	64.41'	18'	25°25'41"	112'	49.71'	100'	44.38'	205°25'41"	38'	136.25'	50'	179.27'
68'	34'	22'	12'	59.32'	16'	23°17'40"	112'	45.54'	100'	40.66'	203°17'40"	38'	134.83'	50'	177.41'
INDUSTRIAL STREET															
60'	30'	24'	6'	69.22'	20'	27°28'55"	106'	50.84'	100'	47.97'	207°28'55"	44'	159.33'	50'	181.06'
68'	34'	28'	6'	59.32'	16'	23°17'40"	106'	43.10'	100'	40.66'	203°17'40"	44'	156.12'	50'	177.41'

NOT TO SCALE



APPROVED BY:  
*Ricardo Sandoval* 10-18-06  
CITY ENGINEER  
**RICARDO SANDOVAL**

REVIEWED BY: *DG*

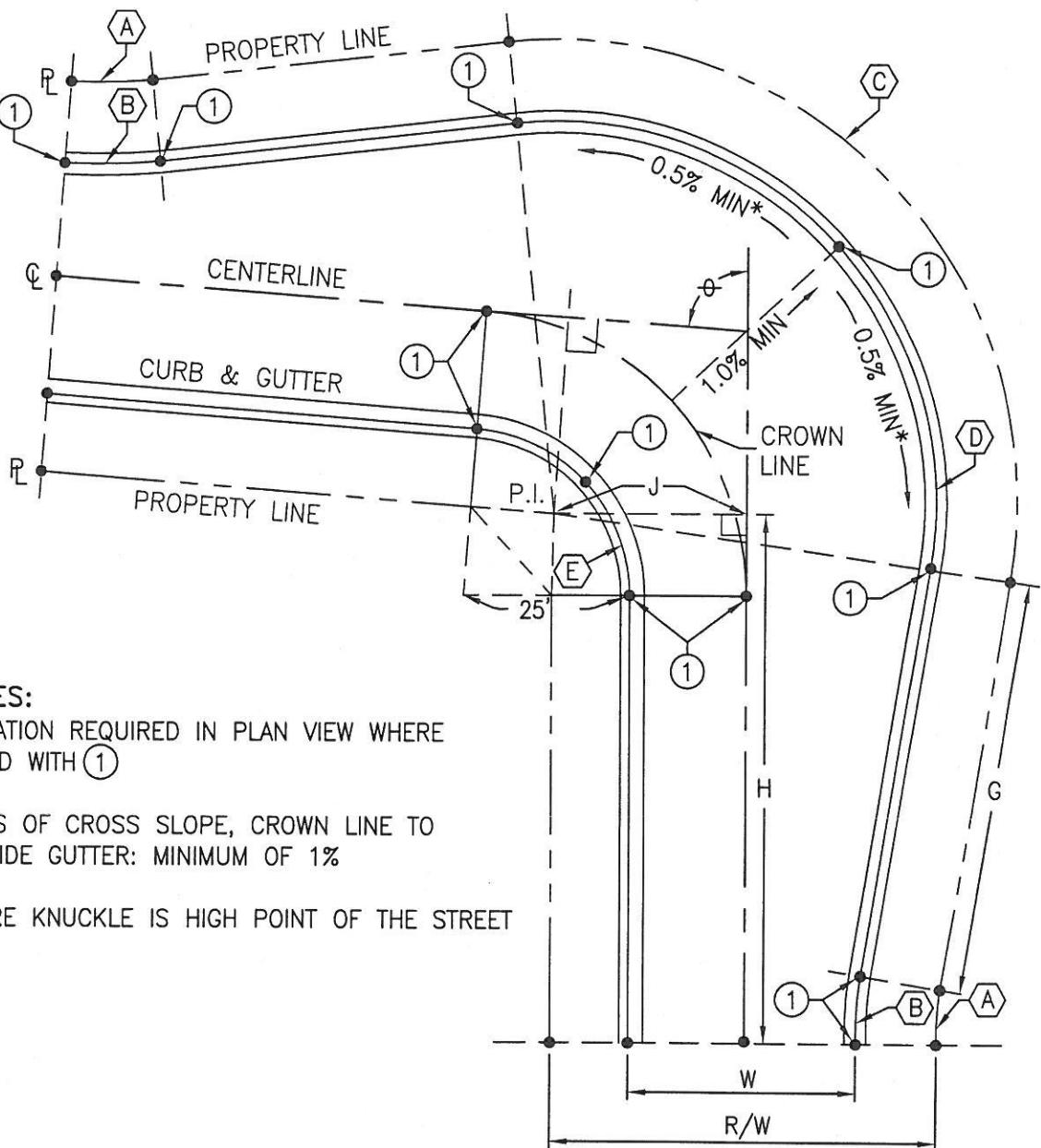
DATE OF LAST REVISION: \_\_\_\_\_

CITY OF FONTANA

OFFSET CUL-DE-SAC

07/10/06

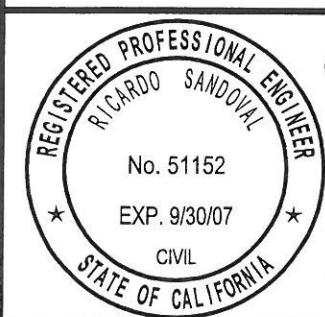
STD. PLAN NO. 1015 SHT 1 OF 1

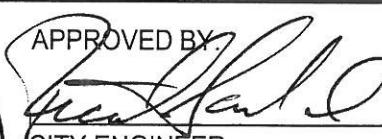


60' WIDE - LOCAL				
R/W=60'	W=36'	G=42.71'	H=71.59'	J=30'
CURVE	R	$\Delta$	L	T
(A)	100'	10°	17.45'	8.75'
(B)	112'	10°	19.55'	9.80'
(C)	70'	$\theta + 20^\circ$	-	-
(D)	58'	$\theta + 20^\circ$	-	-
(E)	25'	$\theta$	-	-

64' WIDE - LOCAL				
R/W=64'	W=40'	G=42.36'	H=71.94'	J=32'
CURVE	R	$\Delta$	L	T
(A)	100'	10°	17.45'	8.75'
(B)	112'	10°	19.55'	9.80'
(C)	74'	$\theta + 20^\circ$	-	-
(D)	62'	$\theta + 20^\circ$	-	-
(E)	25'	$\theta$	-	-

NOT TO SCALE



APPROVED BY  
  
 10.18.06  
 CITY ENGINEER  
**RICARDO SANDOVAL**  
 REVIEWED BY: DG

DATE OF LAST REVISION: \_\_\_\_\_

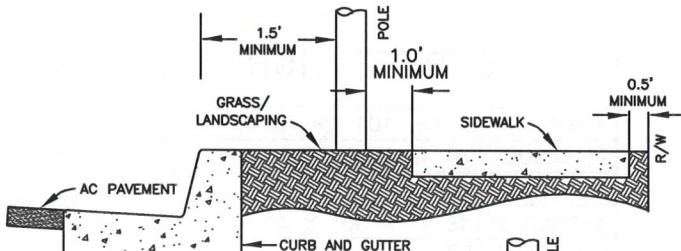
CITY OF FONTANA

STANDARD KNUCKLE  
 (INTERSECTION AND  
 "L" SHAPE DESIGN)

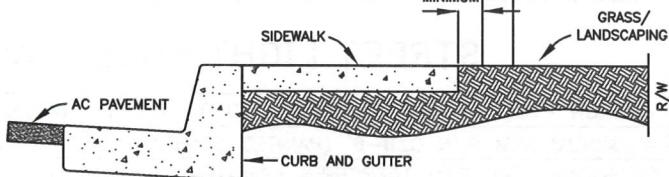
07/10/06

STD. PLAN NO. 1016 SHT 1 OF 1

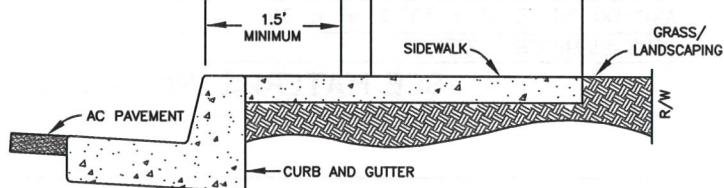
CASE 1  
LANDSCAPING ADJACENT TO CURB



CASE 2  
SIDEWALK ADJACENT TO CURB



CASE 3  
SIDEWALK ADJACENT TO CURB



### STREET LIGHT GENERAL NOTES

1. LIGHTING LAYOUT SHALL COMMENCE AT STREET INTERSECTIONS. STREET LIGHT SPACING BETWEEN INTERSECTIONS SHALL BE AS SPECIFIED IN THE TABLE ON SHEET 3 AND LOCATED AT THE PROLONGATION OF PROPERTY LINES. STREET LIGHT LAYOUTS SHALL BE REVIEWED FOR CONFLICTS WITH OTHER UTILITIES (CATCH BASINS, FIRE HYDRANTS, TRANSFORMERS, ETC.)
2. STREET LIGHTS SHALL BE PLACED AT ALL INTERSECTIONS AND CUL-DE-SACS.
3. STREET LIGHTS HAVE A MINIMUM 1' CLEARANCE FROM OTHER UTILITIES AND A MINIMUM 5' CLEARANCE FROM THE OUTSIDE EDGE OF DRIVEWAY WINGS.
4. USE OF BRAND NAMES IN THESE STANDARDS IS NOT INTENDED TO RESTRICT COMPETITION. EQUIVALENT PRODUCTS MAY BE SUBSTITUTED WITH THE APPROVAL OF THE CITY ENGINEER.
5. SIDEWALK WIDTHS TO BE PER APPROVED STREET IMPROVEMENT PLANS. A MINIMUM OF 4' UNOBSTRUCTED SIDEWALK CLEARANCE IS REQUIRED.
6. ANY CHANGE IN LOCATION OF STREET LIGHTS FROM THE APPROVED PLANS OR STANDARDS IS SUBJECT TO WRITTEN APPROVAL BY THE CITY ENGINEER.
7. ALL STREET LIGHTS SHALL HAVE AN ANTI-GRAFFITI COATING
8. MANHOLE COVERS AND PULLBOXES SHALL BE PLACED EITHER ENTIRELY WITHIN THE SIDEWALK OR PARKWAY. THERE SHALL BE NO OVERLAP.

	APPROVED BY:	CITY OF FONTANA	
	 CITY ENGINEER GIA LAM KIM DRAWN BY: _____ DT	DATE 11/30/22	STREET LIGHT INSTALLATION DETAIL, NOTES
			STD. PLAN NO. 1017 DWG. 1/4

## STREET LIGHT POLE, STANDARD

AMERON POLE No. 1C1-28 (01N)  
 ALUMINUM ARM ASSEMBLY P/N 1AP6A  
 OCTAGONAL CAP  
 ANCHOR BOLTS 1" X 30" X 4" A-307  
 BASE DIAMETER: 12"

SCE MATERIAL No.  
 SAP 10060993

## STREET LIGHT POLE, CARPINTERIA

AMERON POLE No. 5B1-29 (06N) COLOR: BROWN NATURAL  
 ALUMINUM ARM P/N CZA-6' (PAINTED STANDARD BLACK RAL 9017)  
 OCTAGONAL CAP P/N 1AZRC8PLA (PAINTED STANDARD BLACK RAL 9017)  
 ARM/SCROLL ASSY. P/N 1AZB6PJA (PAINTED STANDARD BLACK RAL 9017)  
 KING K804 'CARPINTERIA' TEARDROP PENDANT 75W:10184035 165W: 10184043  
 ANCHOR BOLTS 1" X 30" X 4" A-307  
 BASE DIAMETER: 25"

SCE MATERIAL No. SAP 10061144

## STREET LIGHT POLE, GOLETA

AMERON POLE No. 39CT29 COLOR BROWN NATURAL  
 AMERON ARM/SCROLL ASSY. P/N 1AZB6PJA (PAINTED STANDARD BLACK RAL 9017)  
 OCTAGONAL CAP P/N 1AZRC6PLA (PAINTED STANDARD BLACK RAL 9017)  
 AMERON BRACKET/ARM ASSY. P/N WBVTARSCEPLA (PAINTED STANDARD BLACK RAL 9017)  
 KING K804 'CARPINTERIA' TEARDROP PENDANT 75W:10184035 165W: 10184043  
 SIDEWALK LUMINAIRE 60W: 10184005  
 ANCHOR BOLTS 1" X 36" X 4" A-307  
 BASE DIAMETER: 28"

SCE MATERIAL No. SAP 10158759

## STREET LIGHT POLE, WASHINGTON

AMERON WASHINGTON POLE No. 26CT14 (SAP# 10061121) COLOR: BROWN NATURAL  
 KING K118 ACORN NOSTALGIC 75W: 10184006 100W: 10184010  
 ANCHOR BOLTS:  $\frac{3}{4}$ " x 18" x 4" BOLT CIRCLE: 24"  
 BASE DIAMETER: 24"

SCE MATERIAL No. SAP 10061121



APPROVED BY:

  
 CITY ENGINEER  
 GIA LAM KIM

DRAWN BY: \_\_\_\_\_ DT \_\_\_\_\_

CITY OF FONTANA

STREET LIGHT  
 PART NUMBERS

STD. PLAN NO. 1017 DWG. 2/4

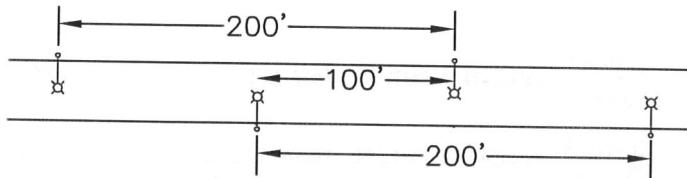
11/30/22  
 DATE

## LUMINAIRE PART NUMBERS & WATTAGES

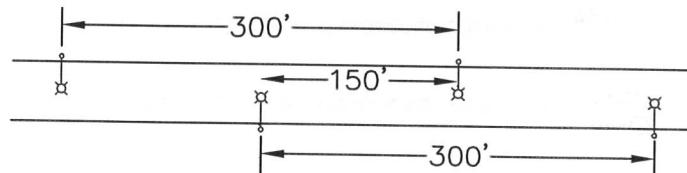
STREET CLASSIFICATION	LUMINAIRE, LED, COBRAHEAD		LUMINAIRE, LED, TEARDROP PENDANT		LUMINAIRE, LED, ACORN NOSTALGIC	
	SCE PART #	WATTAGE	SCE PART #	WATTAGE	SCE PART #	WATTAGE
LOCAL OR COLLECTOR	10205809	41W	10184035	75W	10184006	75W
PRIMARY OR MAJOR HIGHWAY	10205811	90W	10184043	165W	10184010	100W

## STREET LIGHT SPACING STANDARD, CARPINTERIA OR GOLETA

PRIMARY OR  
MAJOR HIGHWAY\*\*

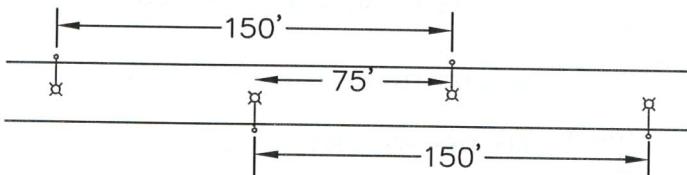


RESIDENTIAL  
OR COLLECTOR  
ROADWAY

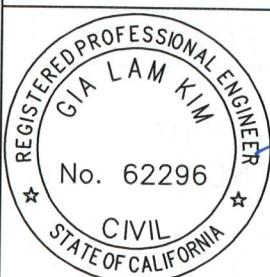


## STREET LIGHT SPACING, WASHINGTON

ALL ROADWAYS\*\*



\*\*WITHIN COMMERCIAL ZONES, STREET LIGHT SPACING SHALL BE A  
MAXIMUM OF 100'



APPROVED BY:

CITY ENGINEER  
GIA LAM KIM

DRAWN BY: \_\_\_\_\_ DT \_\_\_\_\_

CITY OF FONTANA

STREET LIGHT  
SPACING, MFG.  
NO'S, WATTAGES

STD. PLAN NO. 1017 DWG. 3/4

11/30/22

## LEGEND FOR STREET LIGHT PLANS

### STANDARD COBRA HEAD

- (F)41W INDICATES FUTURE 39W LED STANDARD STREET LIGHT
- (F)90W INDICATES FUTURE 90W LED STANDARD STREET LIGHT
- (N)41W INDICATES PROPOSED 41W LED STANDARD STREET LIGHT
- (N)90W INDICATES PROPOSED 90W LED STANDARD STREET LIGHT

### DECORATIVE TEARDROP PENDANT

- (F)75W INDICATES FUTURE 75W LED DECORATIVE STREET LIGHT
- (F)165W INDICATES FUTURE 165W LED DECORATIVE STREET LIGHT
- (N)75W INDICATES PROPOSED 75W LED DECORATIVE STREET LIGHT
- (N)165W INDICATES PROPOSED 165W LED DECORATIVE STREET LIGHT

### DECORATIVE ACORN NOSTALGIC

- (F)75W INDICATES FUTURE 75W LED STANDARD STREET LIGHT
- (F)100W INDICATES FUTURE 120W LED STANDARD STREET LIGHT
- (N)75W INDICATES PROPOSED 75W LED DECORATIVE STREET LIGHT
- (N)100W INDICATES PROPOSED 120W LED DECORATIVE STREET LIGHT

 <p>REGISTERED PROFESSIONAL ENGINEER GIA LAM KIM No. 62296 CIVIL STATE OF CALIFORNIA</p>	APPROVED BY:	CITY OF FONTANA	
	 CITY ENGINEER GIA LAM KIM	DATE 12/1/22	STREET LIGHT LEGEND
DRAWN BY: _____ DT _____	STD. PLAN NO. 1017 DWG. 4/4		

ACCESS MANAGEMENT CRITERIA	STREET CLASSIFICATION					
	LOCAL	COLLECTOR	INDUSTRIAL COLLECTOR	SECONDARY HIGHWAY	PRIMARY HIGHWAY	MAJOR HIGHWAY
DRIVEWAY SPACING (MEASURED FROM I/S Q TO D/W Q'S)	N/A	165'	165'	330'	330'	330'
MEDIAN BREAKS	N/A	N/A	N/A	N/A	1320'	2640' W/SIGNAL
RESIDENTIAL ACCESS PROHIBITED	NO	YES	N/A	YES	YES	YES
MINIMUM DRIVEWAY SPACING UPSTREAM OR DOWNSTREAM TO SIGNAL I/S (Q TO Q) <sup>1</sup>	N/A	300'	165'	330'	300'	500'
MINIMUM SPACING STREET CONNECTIONS (Q TO Q)	200'	300'	300'	660'	660'	660'

DRIVEWAY STACKING DISTANCE (MEASURED FROM R/W TO 1ST PARKING SPACE).

DRIVE AISLES	N/A	50'	50'	50'	50'	50'
SIGNALIZED DRIVE AISLES	N/A	N/A	N/A	200', <sup>1</sup>	200', <sup>1</sup>	200', <sup>1</sup>
GATED RESIDENTIAL ENTRANCES <sup>1</sup> (MEASURED FROM R/W TO CALL BOX)	MINIMUM = 50'					
GATED INDUSTRIAL ENTRANCES (MINIMUM STACKING).	NON TRUCK ENTRY			25'		
	TRUCK ENTRY <sup>2,3</sup>			140'		

SHARED DRIVEWAYS WITH ADJACENT PROPERTIES SHALL BE USED WHERE APPROPRIATE FOR THE PROPOSED SITE OR MASTER PLAN TO MEET SPACING REQUIREMENTS, OR WHERE LOCATED NEAR PROPERTY LINES.

BASED ON QUEUING ANALYSIS, ADDITIONAL DISTANCE BETWEEN DRIVEWAYS MAY BE REQUIRED.

1. ANY DEVIATION FROM REQUIREMENTS SHALL BE REVIEWED AND APPROVED BY CITY ENGINEER.
2. THE STACKING DISTANCE SHALL BE INCREASED BY 70' FOR EVERY 20 LOADING DOCKS BEYOND 50 DOCKS.
3. STACKING DISTANCE SHALL BE A MINIMUM OF 75' FOR NON-COMMERCE CENTER PROJECTS AS APPROVED BY THE CITY ENGINEER.

	APPROVED BY:		CITY OF FONTANA	
	 <span>2.6.24</span>		ACCESS MANAGEMENT REQUIREMENTS	
	CITY ENGINEER GIA LAM KIM DRAWN BY: _____ DT _____		STD. PLAN NO. 1018 DWG. 1/1	