

SECTION 400

CURB, GUTTER, DRIVEWAY, SIDEWALK & ACCESS RAMP DETAILS

- 401 TYPE "A" ASPHALT CONCRETE BERM/EDGE
- 402 CURB & GUTTER
- 403 SIDEWALK
- 404 BRICK SIDEWALK - SANDED
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- 410 CROSS AND LONGITUDINAL GUTTER
- 411 CROSS GUTTERS AT T-INTERSECTIONS
- 412 GRAVITY RETAINING WALLS
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- 414 CHAIN LINK FENCE AND GATES

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CITY OF SOLVANG - STANDARD DETAILS

SECTION 400 - CURB DRIVEWAY SIDEWALK AND ACCESS RAMP DETAILS

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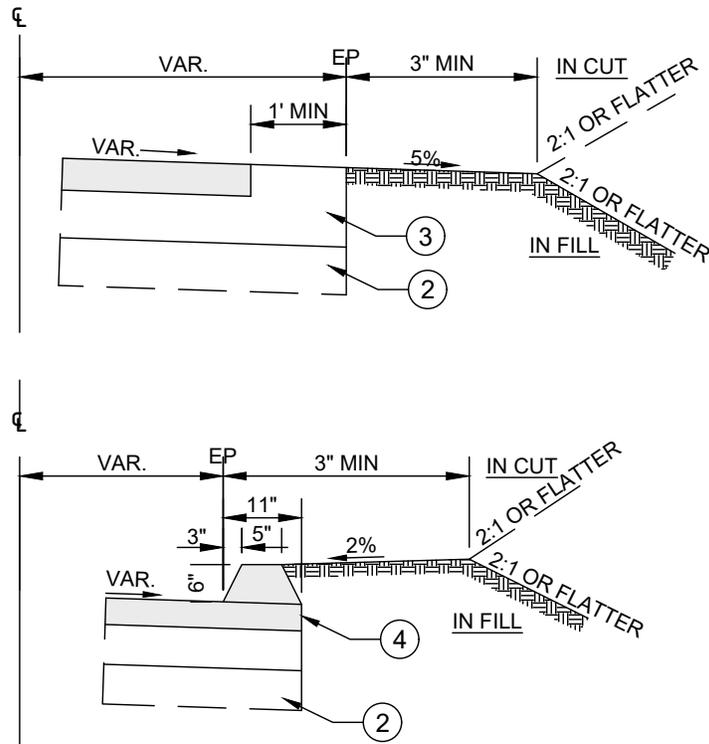
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EDGE OF PAVEMENT WITH A.C. DIKE

NOTES:

1. ASPHALT CONCRETE BERMS SHALL BE CONSTRUCTED UTILIZING A BERM EXTRUDING MACHINE.
2. COMPACT SUBGRADE TO 95% MAXIMUM DENSITY TO A DEPTH OF 0.75'.
3. CLASS 2 AGGREGATE BASE COMPACTED TO 95% MAXIMUM DENSITY 1' BEYOND THE EDGE OF PAVEMENT WHEN A. C. DIKE IS NOT PLACED.
4. THE ASPHALT PAVING SHALL BE EXTENDED 1' BEYOND THE EDGE OF PAVEMENT WHEN A. C. DIKES ARE PLACED.



CITY OF SOLVANG - STANDARD DETAILS

TYPE A ASPHALT CONCRETE BERM-EDGE

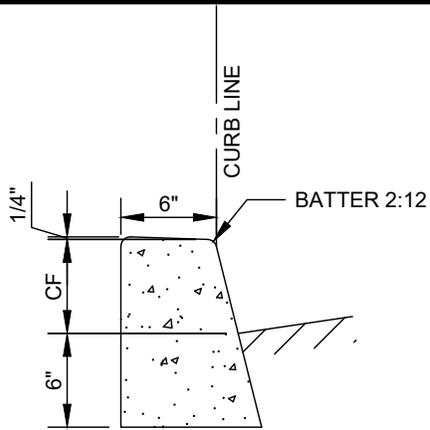
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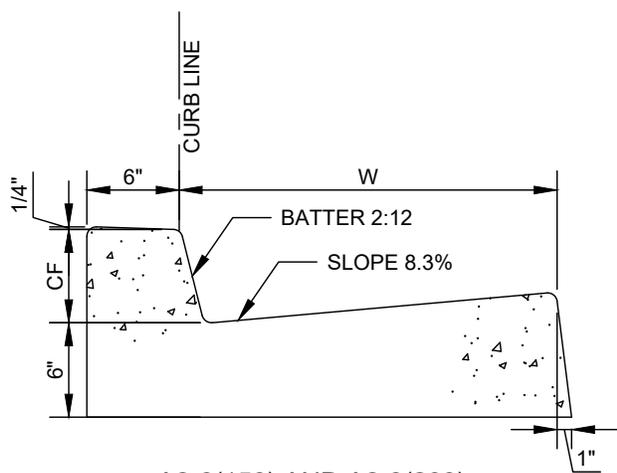
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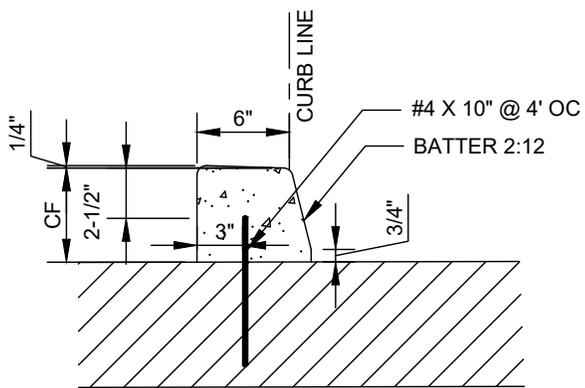
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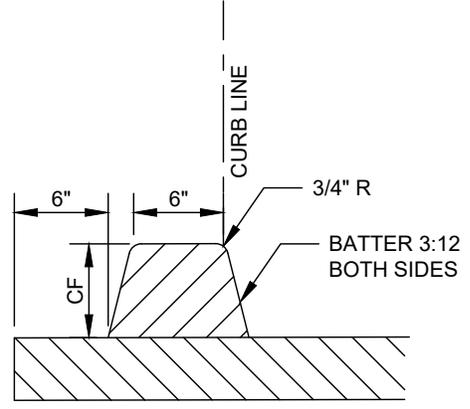
A1-6(150) AND A1-8(200)



A2-6(150) AND A2-8(200)



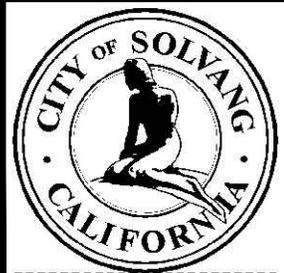
C1-6(150) AND C1-8(200)



D1-6(150) AND D1-8(200)

NOTES:

1. THE LAST NUMBER IN THE DESIGNATION IS THE CURB FACE (CF) HEIGHT, INCHES. IF SHOWN AS 'VAR' THE CURB FACE VARIES.
2. GUTTER WIDTH, W, IS 24" UNLESS OTHERWISE SPECIFIED.
3. TYPES A1, A2, A3 AND C1 SHALL BE CONSTRUCTED OF CONCRETE.
4. TYPE D1 CURB SHALL BE CONSTRUCTED OF ASPHALT CONCRETE.
5. TYPE C1 CURB SHALL BE ANCHORED WITH STEEL DOWELS AS SHOWN OR WITH AN EPOXY APPROVED BY THE ENGINEER.
6. ALL EXPOSED CORNERS ON CONCRETE CURBS AND GUTTERS SHALL BE ROUNDED WITH A 1/2" RADIUS.
7. ALL CONCRETE SHALL BE CLASS 560-C-3250.



CITY OF SOLVANG - STANDARD DETAILS

CURB & GUTTER

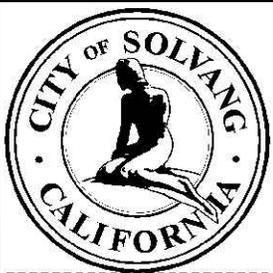
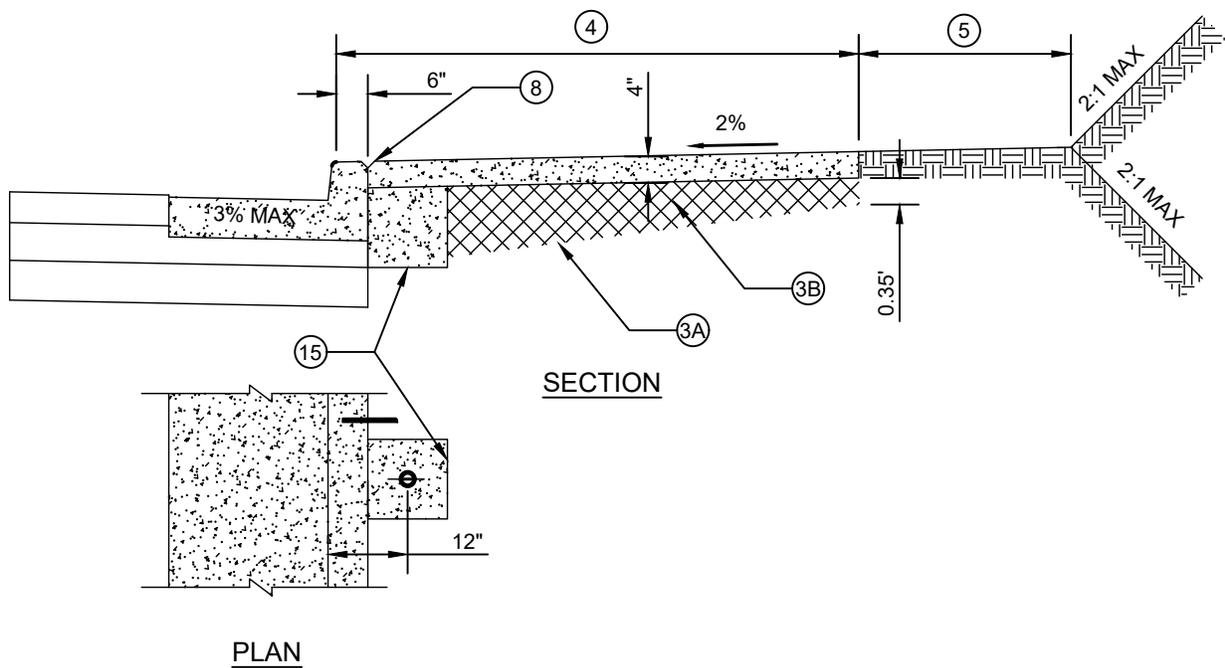
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SIDEWALK

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403
 1 OF 3

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NOTES:

1. ALL NEW SIDEWALK, CURB AND GUTTER SHALL BE CLASS 560-C-3250 CONCRETE. SEE STANDARD DETAIL #402 FOR GUTTER DETAILS.
2. WHEN EXTRUDED CURB IS PLACED, THE EXTRUDING MACHINE MUST BE CAPABLE OF PLACING CONCRETE IN ACCORDANCE WITH THE CALTRANS STANDARD SPECIFICATIONS.
3. A. 0.50' OF NATIVE SOIL SHALL BE COMPACTED TO 95% DENSITY UNDER ALL SIDEWALKS, CURB AND GUTTER.
B. A MINIMUM OF 0.35' OF CLASS 2 AGGREGATE BASE WILL BE REQUIRED UNDER THE SIDEWALK, CURB AND GUTTER, AND COMPACTED TO NOT LESS THAN 95% MAXIMUM DENSITY.
4. THE WIDTH OF THE SIDEWALK SHALL BE 5 FEET FOR RESIDENTIAL AREAS AND 10 FEET FOR COMMERCIAL AREAS UNLESS OTHERWISE DIRECTED BY THE CITY.
5. THE HINGE POINT IN CUT OR FILL SHALL BE A MINIMUM OF 3' FROM THE EDGE OF WALK.
6. CONTRACTION JOINTS 1-1/2" IN DEPTH SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 10'.
7. USE 12" NO. 4 DOWELS TO CONNECT TO EXISTING (2 EACH).
8. EXPANSION JOINT MATERIAL, 1/2" MAXIMUM IN THICKNESS AND PREMOLDED TO THE SECTION OF THE CURB-GUTTER, AND SIDEWALK, SHALL CONFORM TO THE SPECIFICATIONS OF ASTM DESIGNATION: D1715. THE JOINT MATERIAL SHALL BE PLACED AT THE BEGINNING AND END OF EACH CURVE, ON EACH SIDE OF STRUCTURES, AT DROP CURB MULTIDWELLING AND COMMERCIAL DRIVEWAYS AND AT OTHER LOCATIONS AS DIRECTED BY THE DIRECTOR OF PUBLIC WORKS. IN EXPANSIVE SOIL CONDITIONS, EXPANSION JOINT MATERIAL, AS SPECIFIED ABOVE, SHALL BE PLACED AT INTERVALS NOT TO EXCEED 20 FEET.
9. 1/4" TOOLED JOINT AT THE BACK OF THE CURB SHALL BE PROVIDED.
10. ALL DELETERIOUS MATERIAL, INCLUDING SAND AND MUD, SHALL BE ENTIRELY REMOVED FROM THE BACKSIDE OF THE CURB PRIOR TO THE PLACING OF CONCRETE IN THE SIDEWALK.
11. SIDEWALKS SHALL HAVE A MINIMUM THICKNESS OF 0.33'.
12. THE CONTRACTOR SHALL EXERCISE CAUTION AND PROTECT AND PRESERVE EXISTING PERMANENT SURVEY MONUMENTS. ALL SURVEY MONUMENTS DISTURBED SHALL BE REPLACED AND/OR REHABILITATED IN ACCORDANCE WITH STANDARDS BY A PROFESSIONAL LAND SURVEYOR.
13. UTILITY BOXES PLACED IN THE SIDEWALK SHALL BE PLACED ADJACENT TO CURB.
14. ALL SURFACES SHALL HAVE A SMOOTH TROWELLED SURFACE WITH A BROOMED FINISH TRANSVERSE TO THE DIRECTION OF TRAVEL.
15. ALL CONCRETE SHALL BE CLASS 560-C-3250.

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SIDEWALK

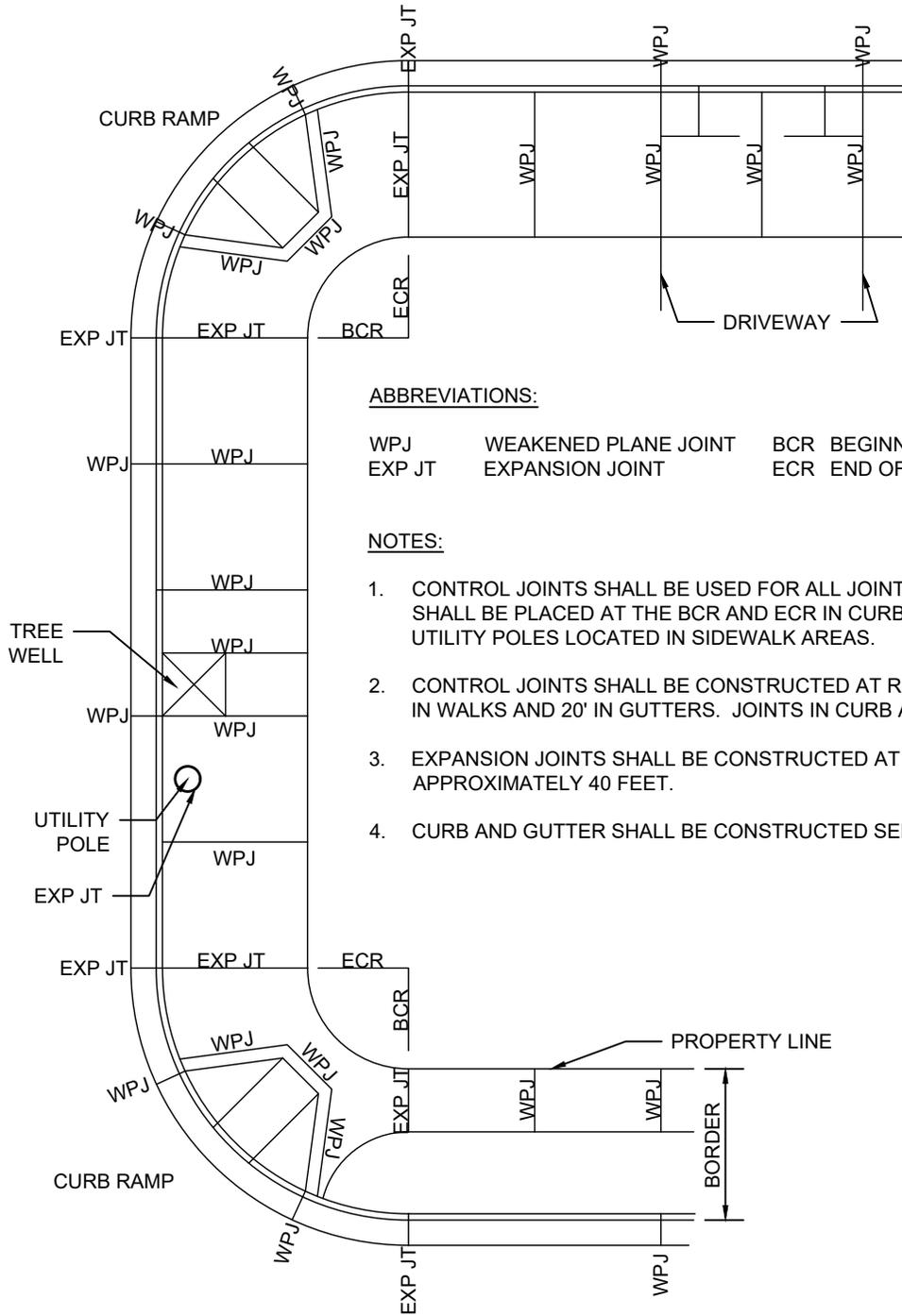
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ABBREVIATIONS:

WPJ WEAKENED PLANE JOINT BCR BEGINNING OF CURB RETURN
 EXP JT EXPANSION JOINT ECR END OF CURB RETURN

NOTES:

1. CONTROL JOINTS SHALL BE USED FOR ALL JOINTS, EXCEPT THAT EXPANSION JOINTS SHALL BE PLACED AT THE BCR AND ECR IN CURB, GUTTER AND SIDEWALK, AND AROUND UTILITY POLES LOCATED IN SIDEWALK AREAS.
2. CONTROL JOINTS SHALL BE CONSTRUCTED AT REGULAR INTERVALS NOT EXCEEDING 10' IN WALKS AND 20' IN GUTTERS. JOINTS IN CURB AND WALK SHALL BE ALIGNED.
3. EXPANSION JOINTS SHALL BE CONSTRUCTED AT REGULAR INTERVALS OF APPROXIMATELY 40 FEET.
4. CURB AND GUTTER SHALL BE CONSTRUCTED SEPARATELY FROM SIDEWALK.



CITY OF SOLVANG - STANDARD DETAILS

SIDEWALK

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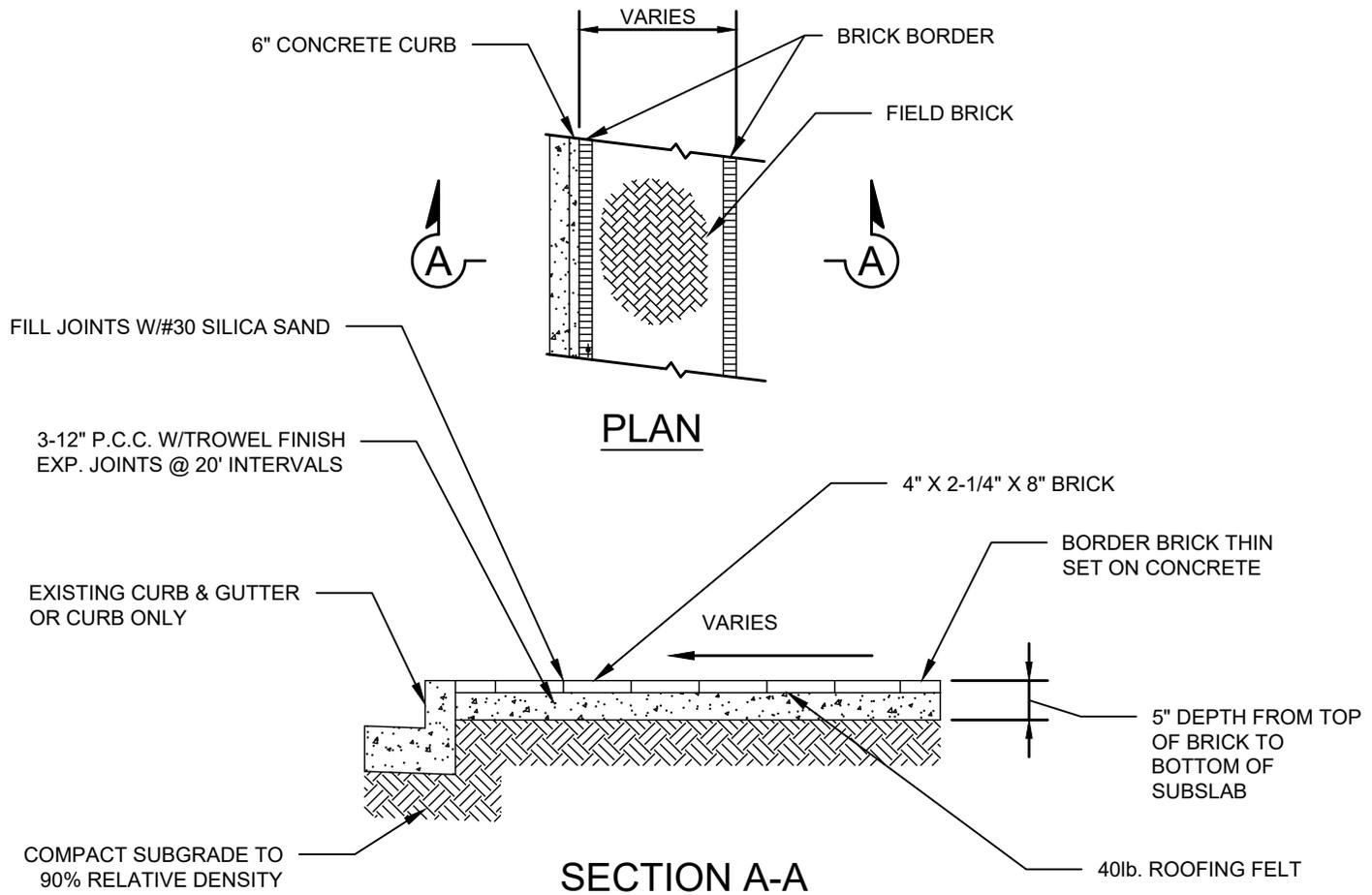
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NOTES:

1. PAVERS SHALL BE PACIFIC CLAY, MISSION PAVERS IN THE FOLLOWING COLOR. FIELD BRICK (90% SUNSET RED, 10% RED FLASHED) & BOARDER BRICK (100% RED FLASHED).
2. ALL BRICKS TO BE SEALED AFTER INSTALLATION WITH CONSOLIDECK SALTGUARD(C) PRODUCED BY PROSOCO,INC. OR APPROVED EQUAL.
3. THIS DETAIL SHALL ONLY BE AUTHORIZED BY SPECIAL APPROVAL OF THE PUBLIC WORKS DEPARTMENT. SOLVANG STANDARD DETAIL #310 IS STRONGLY RECOMMENDED FOR BRICK SIDEWALKS.
4. ALL CONCRETE SHALL BE CLASS 560-C-3250.



CITY OF SOLVANG - STANDARD DETAILS

BRICK SIDEWALK - SANDED

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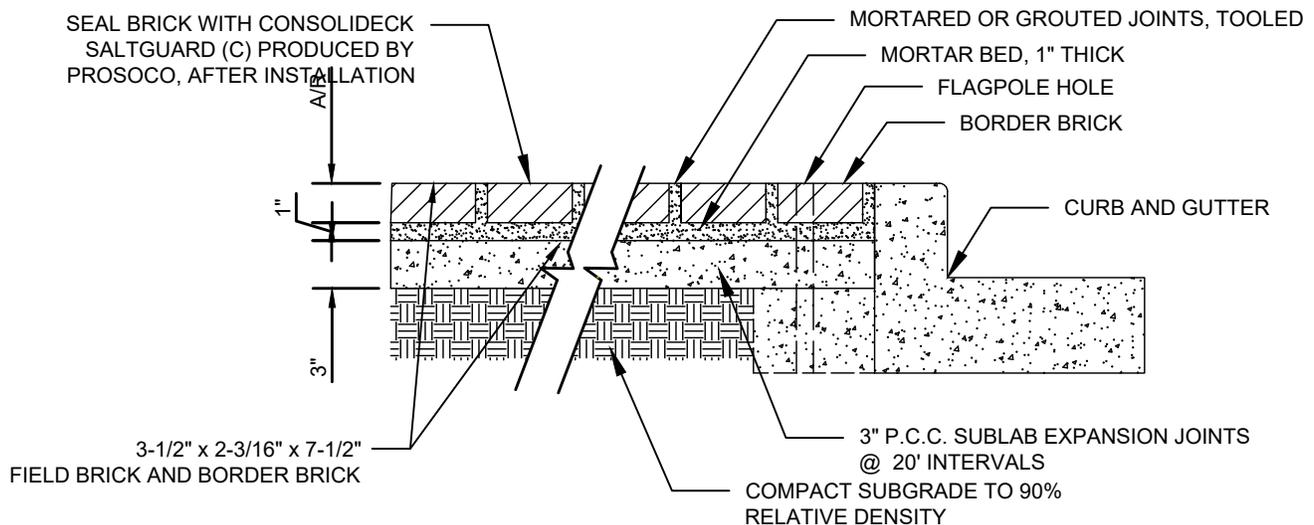
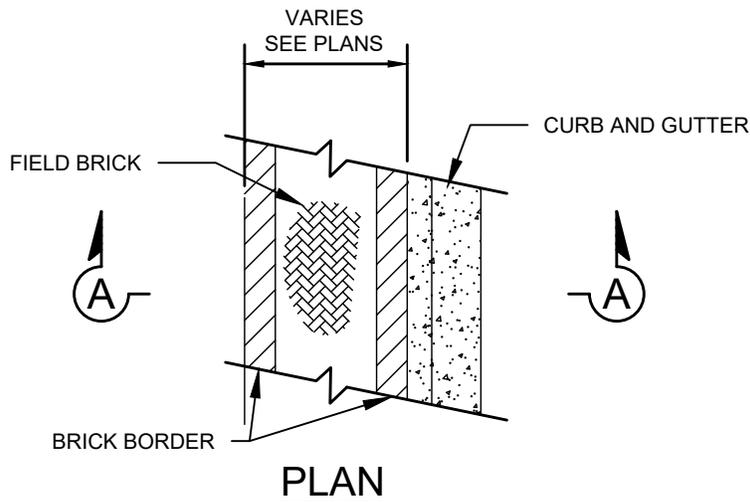
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NOTES:

1. PAVERS SHALL BE PACIFIC CLAY, COMBO PAVERS SUNSET RED COLORS.
2. ALL CONCRETE SHALL BE CLASS 560-C-3250.



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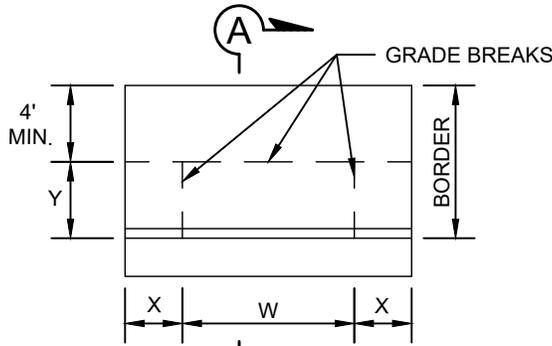
BRICK SIDEWALK- MORTARED

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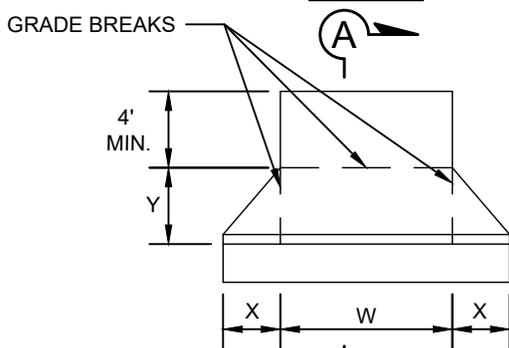
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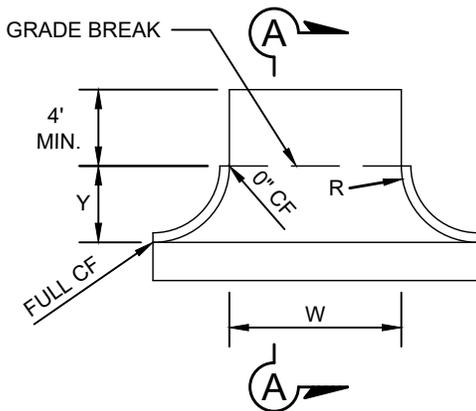
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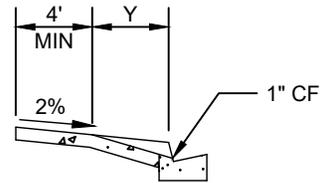
TYPE A



TYPE B



TYPE C



SECTION A-A

CURB FACE, INCHES	X, INCHES	Y, INCHES
6" OR LESS	3'-0"	4'-0"
7"	3'-6"	4'-9"
8"	4'-0"	5'-8"

NOTES:

1. RESIDENTIAL DRIVEWAYS SHALL BE 4" THICK PCC.
2. COMMERCIAL DRIVEWAYS SHALL BE 6" THICK PCC.
3. WEAKENED PLANE JOINTS SHALL BE INSTALLED AT BOTH SIDES OF A DRIVEWAY AND AT 10' INTERVALS.
4. CURB FOR TYPE C SHALL BE INTEGRAL AND MATCH ADJACENT CONSTRUCTION.
5. REFER TO LOCAL DEVELOPMENT REGULATIONS FOR AMERICAN WITH DISABILITIES ACCESS REQUIREMENTS AND MAXIMUM PERMITTED DRIVEWAY WIDTHS.
6. ALL CONCRETE SHALL BE CLASS 560-C-3250.
7. STANDARD GUTTER LIP SHALL BE 1".



CITY OF SOLVANG - STANDARD DETAILS

DRIVEWAY

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RESIDENTIAL DRIVEWAY NOTES:

1. A THICKNESS OF 6" CLASS 560-C-3250 CONCRETE SHALL BE USED, UNLESS DRIVEWAY SERVES FOUR OR MORE RESIDENCES, IN WHICH CASE A THICKNESS OF 8" SHALL BE USED.
2. WHEN DRIVEWAY SURFACING IS CONCRETE, A ½" MAXIMUM EXPANSION JOINT MATERIAL AT THE BACK OF SIDEWALK SHALL BE PROVIDED. WHEN DRIVEWAY SURFACING IS ASPHALT CONCRETE, A MINIMUM OF 0.20' A.C. AND 0.50' CLASS 2 AGGREGATE BASE COMPACTED TO NOT LESS THAN 95% MAXIMUM DENSITY SHALL BE PROVIDED.
3. ½" MAXIMUM WIDTH EXPANSION JOINT MATERIAL.
4. A 1-1/2" DEEP CONTRACTION JOINT SHALL BE PROVIDED AT THE CENTERLINE OF THE DRIVEWAY.
5. 0.75' NATIVE MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY.
6. WHERE DRIVEWAY WINGS, SIDEWALKS, APRONS, CURBS AND GUTTERS ARE NOT Poured MONOLITHICALLY AS SHOWN, DOWELING WILL BE REQUIRED AS SPECIFIED BY THE CITY.
7. WHEN UTILIZING EXISTING CURB OPENINGS, ½" x 2' STEEL DOWELS AT 4' CENTER TO CENTER SHALL BE PROVIDED.
8. THE DEPTH (FRONT TO BACK) OF THE DRIVEWAY APRON SHALL BE 4'-6".
9. DRIVEWAY OPENING WIDTH SHALL BE 10' MINIMUM AND 20' MAXIMUM. DRIVEWAY EXCEEDING THE MAXIMUM WIDTH MUST BE APPROVED BY THE PUBLIC WORKS DIRECTOR.
10. A ½" GUTTER LIP SHALL BE PROVIDED.
11. ALL SURFACES SHALL HAVE A SMOOTH TROWELED SURFACE WITH A BROOMED FINISH TRANSVERSE TO THE DIRECTION OF TRAVEL.

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DRIVEWAY

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COMMERCIAL DRIVEWAY NOTES:

1. A THICKNESS OF 8" CLASS 560-C-3250 CONCRETE SHALL BE USED.
2. IF DRIVEWAY SURFACING IS CONCRETE, A ½" MAXIMUM EXPANSION JOINT MATERIAL AT THE BACK OF SIDEWALK SHALL BE PROVIDED.
3. ½" MAXIMUM WIDTH EXPANSION JOINT MATERIAL.
4. THIS DETAIL IS TO BE USED FOR DRIVEWAYS THAT SERVE 4 OR MORE RESIDENCES.
5. A 1-1/2" DEEP CONTRACTION JOINT SHALL BE PROVIDED AT THE CENTERLINE OF THE DRIVEWAY.
6. 0.75' NATIVE MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY.
7. WHERE DRIVEWAY WINGS, SIDEWALKS, APRONS, CURBS AND GUTTERS ARE NOT POURED MONOLITHICALLY AS SHOWN, DOWELING WILL BE REQUIRED AS SPECIFIED IN NOTE 8 BELOW.
8. WHEN UTILIZING EXISTING CURB OPENINGS, ½" x 2' STEEL DOWELS AT 4' CENTER TO CENTER SHALL BE PROVIDED.
9. WHEN DRIVEWAY IS WITHING THE "VILLAGE" AREA, COLORED CONCRETE SHALL BE USED. THE MIX FOR ONE CUBIC YARD (1 C.Y.) SHALL BE:

PORTLAND CEMENT	564 LBS (6.0 SACKS)
C.R. SAND	1,381 LBS
¾" H. M. ROCK	1,569 LBS
WATER	40 GALLONS
SCOFIELD C-23	14 LBS
DAVIS 160	8 LBS

(STM-3601)

10. SCORING SHALL CONFORM TO CALTRANS STANDARDS.
11. THE DRIVEWAY APRON DEPTH (FRONT TO BACK) SHALL BE 9'-6".
12. A ½" HIGH GUTTER LIP AS SHOWN.
13. DRIVEWAY OPENING WIDTH SHALL BE 12' MIN. AND 34' MAX. ALL PROPOSED COMMERCIAL DRIVEWAYS EXCEEDING THE MAXIMUM WIDTH MUST BE APPROVED BY THE PUBLIC WORKS DIRECTOR.
14. CLEAR CURING SEAL (WITH RED PIGMENT) SHALL BE APPLIED TO ALL EXPOSED SURFACES IMMEDIATELY AFTER FINISHING.

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DRIVEWAY

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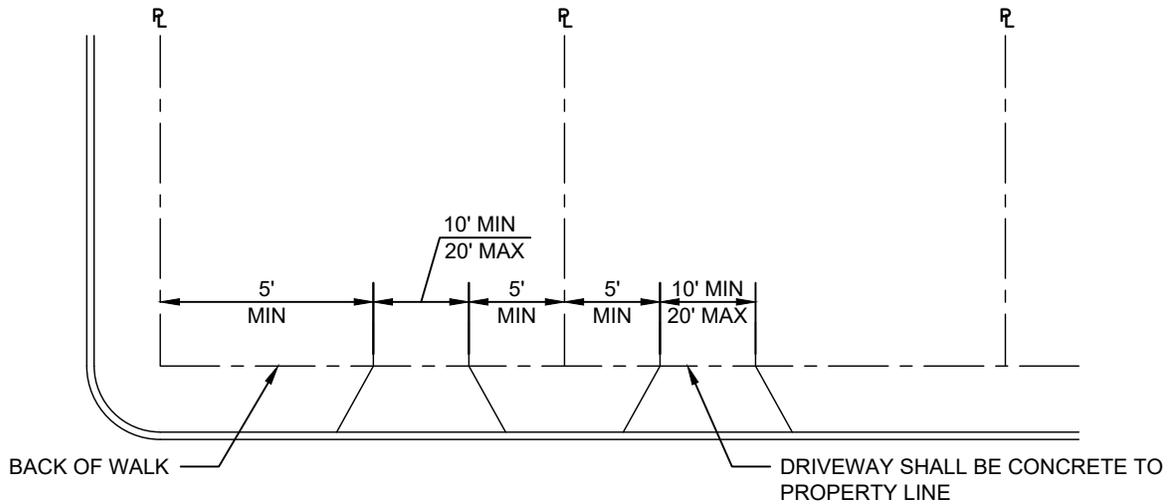
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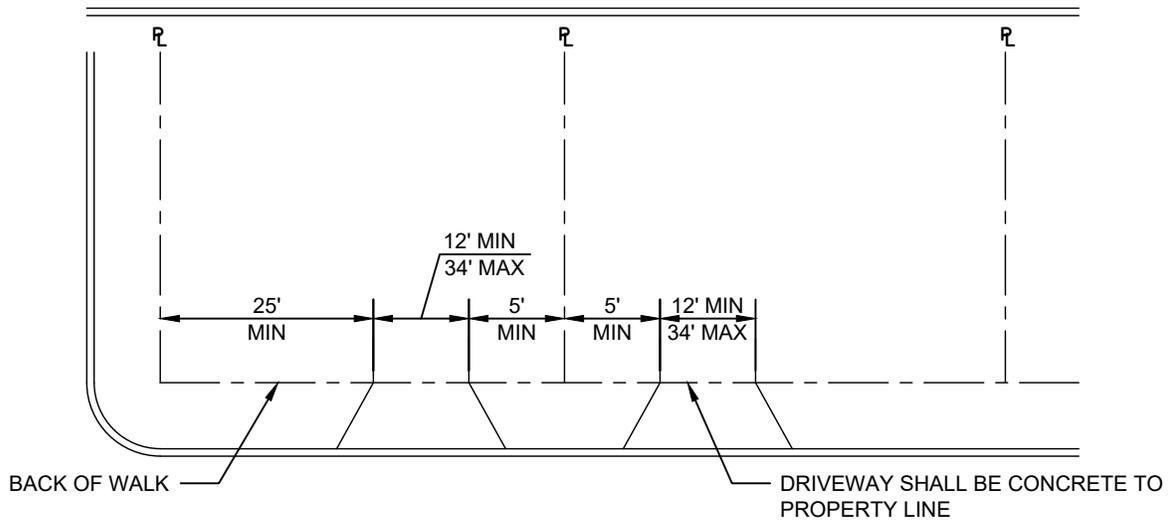
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SINGLE FAMILY RESIDENCE

THIS STANDARD APPLIES TO SINGLE FAMILY RESIDENTIAL ACCESSES ON LOCAL STREETS



NON-SINGLE FAMILY RESIDENCE

THIS STANDARD APPLIES TO ALL TYPES OF ACCESSES EXCEPT SINGLE FAMILY RESIDENTIAL ACCESSES ON LOCAL STREETS

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CITY OF SOLVANG - STANDARD DETAILS

DRIVEWAY SPACING

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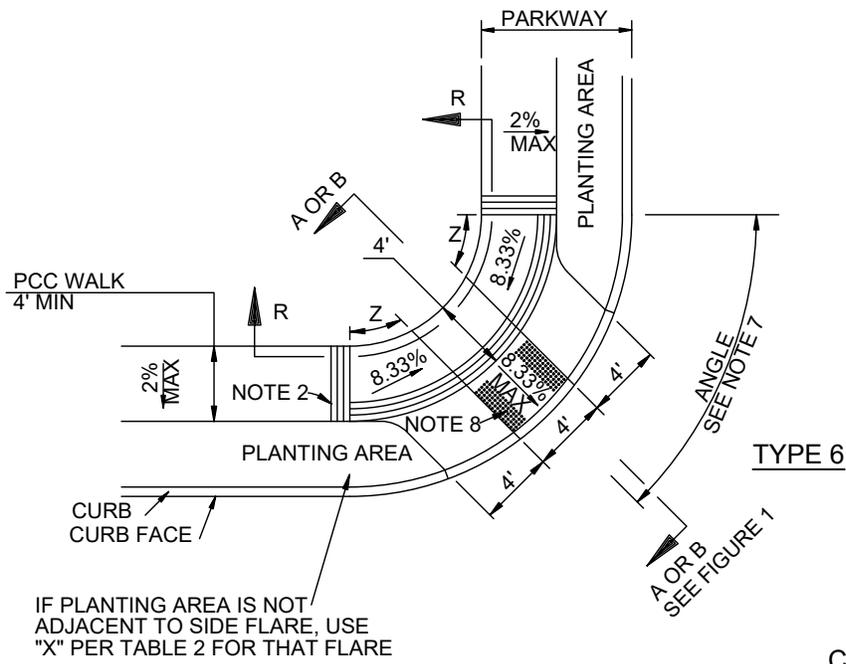
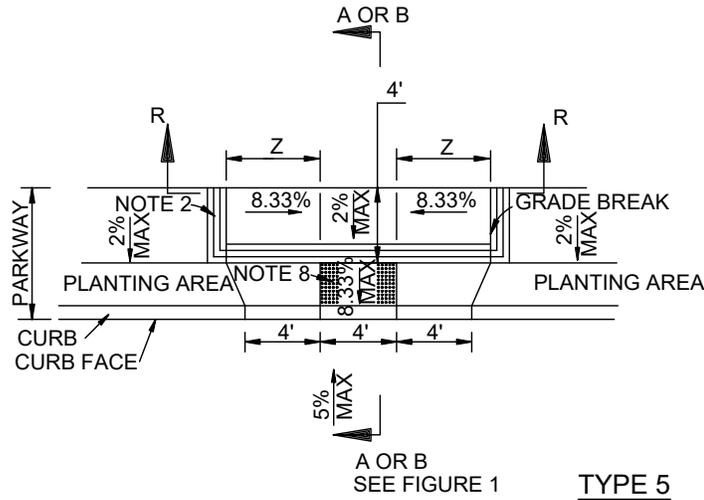
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ACCESS RAMPS

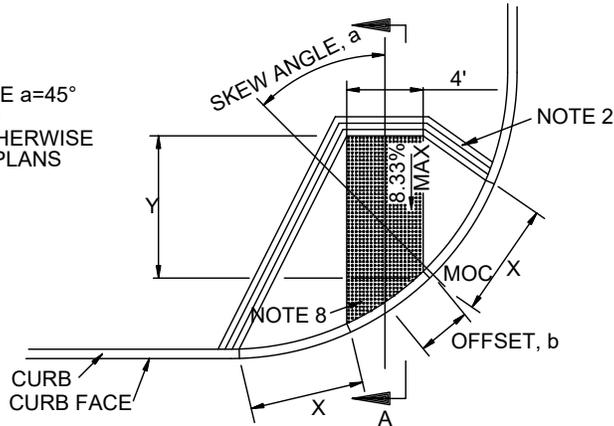
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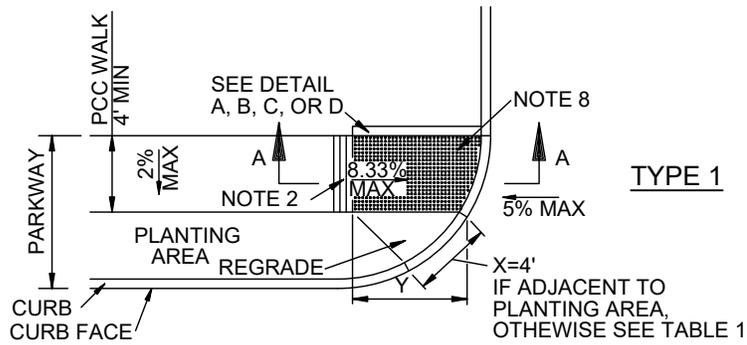
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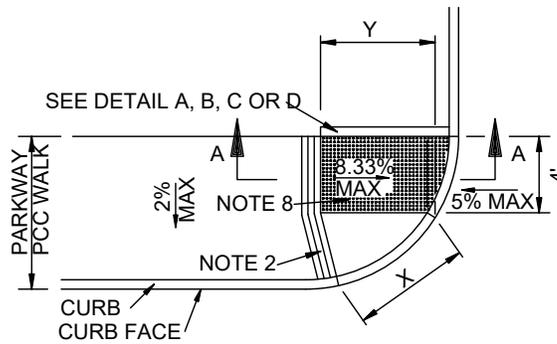
SKEW ANGLE $a=45^\circ$
 OFFSET $b=0$
 UNLESS OTHERWISE
 NOTED ON PLANS



CASE C



TYPE 1



TYPE 2

CASE D



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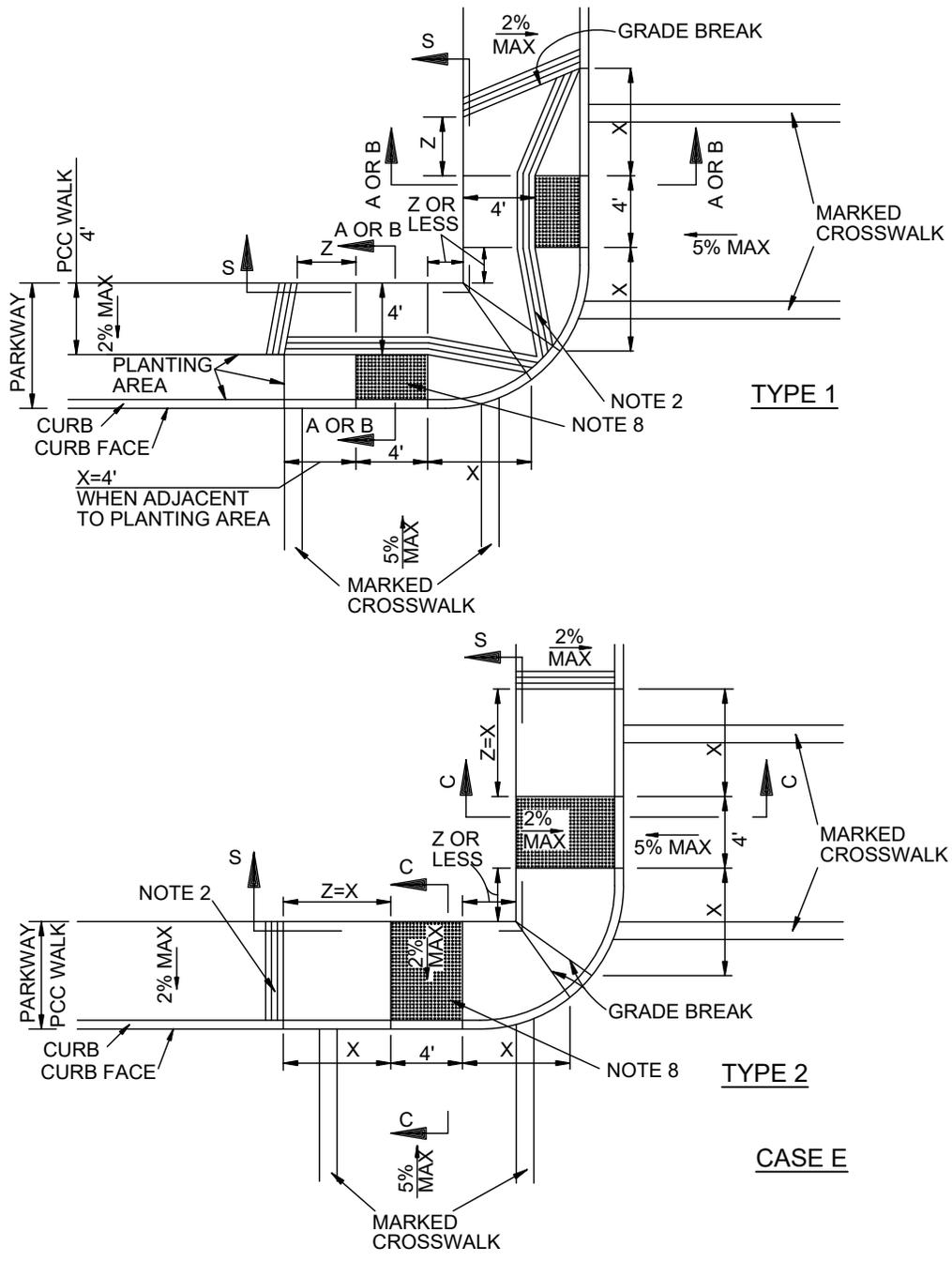
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ACCESS RAMPS

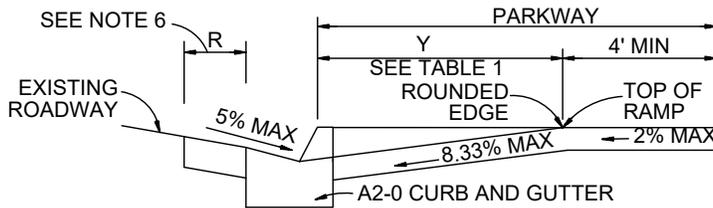
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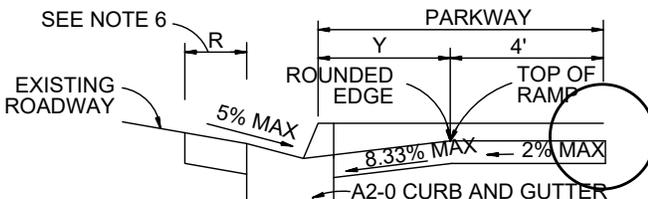
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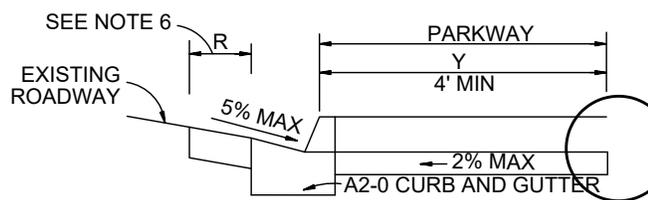
SECTION A-A



SECTION B-B

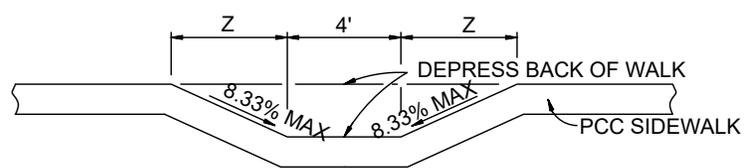
USE FIGURE 1 TO DETERMINE WHICH OF SECTIONS A-A, B-B OR C-C IS APPROPRIATE.

DEPRESS BACK OF WALK SEE DETAIL A, B, C OR D, SHEET 10.

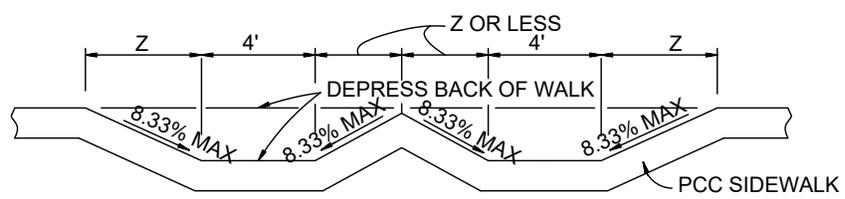


SECTION C-C

DEPRESS BACK OF WALK SEE DETAIL A, B, C OR D, SHEET 10.



SECTION R-R



SECTION S-S

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CITY OF SOLVANG - STANDARD DETAILS

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ACCESS RAMPS

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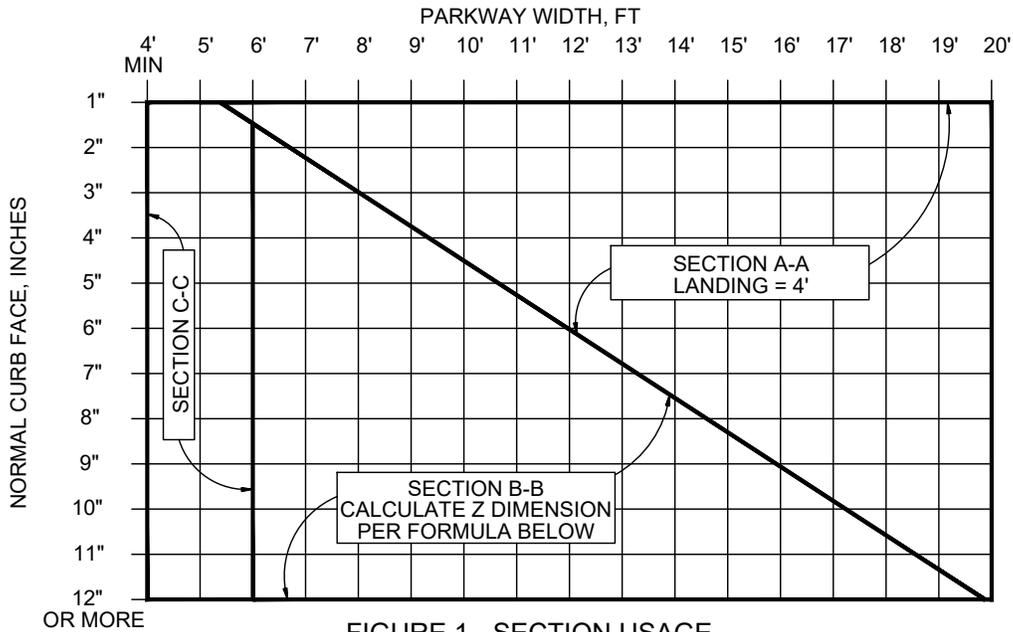


FIGURE 1 - SECTION USAGE

NORMAL CURB FACE, INCHES	X	SECTION Y-Y Y, FT
2"	4.00' MIN	2.63'
3"	4.00' MIN	3.95'
4"	4.00' MIN	5.26'
5"	4.17'	6.58'
6"	5.00'	7.90'
7"	5.83'	9.21'
8"	6.67'	10.53'
9"	7.50'	11.84'
10"	8.33'	13.16'
11"	9.17'	14.47'
12"	10.00'	15.79'

WHERE FIGURE 1 SHOWS USE OF SECTION B-B, FIGURE Z DIMENSION AS FOLLOWS:

W = PARKWAY WIDTH
L = LANDING WIDTH, 4' TYP
Z = [(Y+L)-W] x 0.760

IF (Y+L) < W, THEN Z = 0

SEE SHEET 9 FOR STREET SLOPE ADJUSTMENT FACTORS, ALL STREETS

TABLE 1 - X AND Y VALUES

TABLE 1 REFERENCE FORMULAS:

X = CF / 8.333%

Y = CF / (8.333% - 2% WALK CROSS SLOPE)

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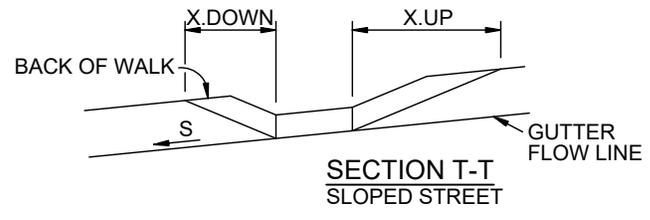
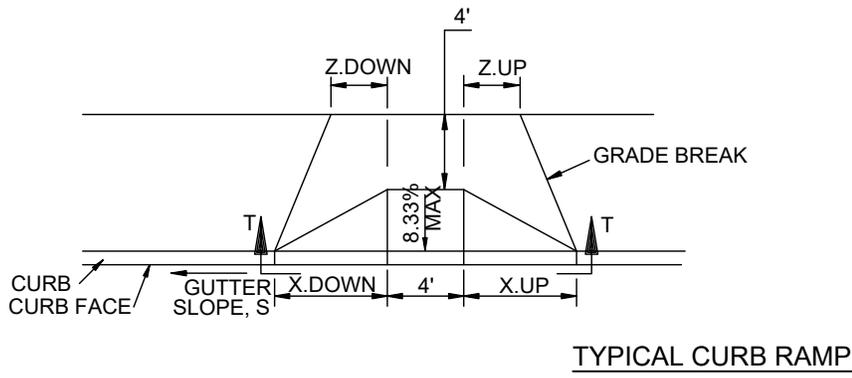
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FOR SLOPED STREETS, MULTIPLY THE DIMENSIONS PARALLEL TO THE STREET, X AND Z, UPSTREAM AND DOWNSTREAM OF THE RAMP, BY THE FACTORS IN THE FOLLOWING TABLE.

FOR EXAMPLE, X.DOWN = X x K.DOWN

S	K.DOWN	K.UP
0%	1.000	1.000
0.2%	0.977	1.025
0.5%	0.943	1.064
1%	0.893	1.136
2%	0.806	1.316
3%	0.735	1.563
4%	0.676	1.923
5%	0.625	2.500

TABLE 2 - SLOPE ADJUSTMENTS

TABLE 2 REFERENCE FORMULAS:
 K.DOWN = 8.333% / (8.333% + S)
 K.UP = 8.333% / (8.333% - S)

STREET SLOPE ADJUSTMENTS

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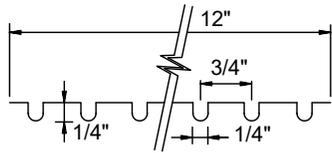
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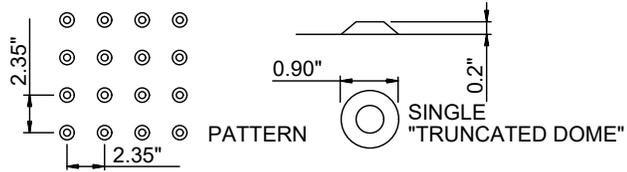
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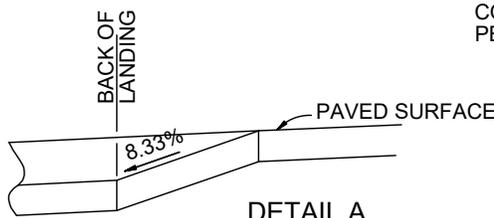
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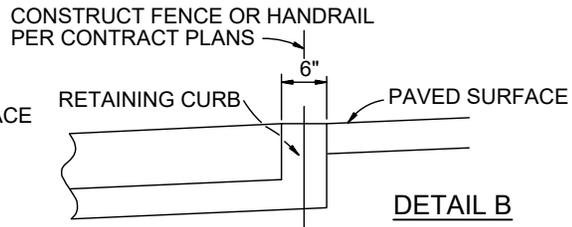
GROOVING DETAIL



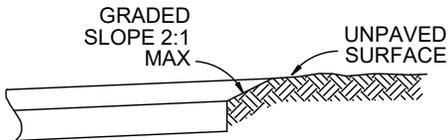
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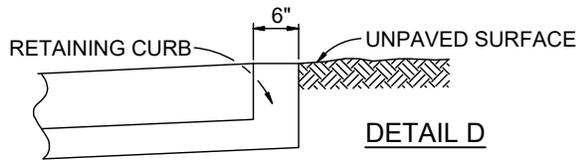
DETAIL A



DETAIL B



DETAIL C



DETAIL D

GENERAL NOTES:

1. CONCRETE SHALL BE CLASS 520-C-2500 CONFORMING TO SSPWC 201-1.1.2 AND SHALL BE 4" THICK.
2. THE RAMP SHALL HAVE A 12" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" OC. SEE GROOVING DETAIL.
3. THE RAMP SURFACE SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE CONFORMING TO SSPWC 303-1.9.
4. USE DETAIL "A" OR "B" IF EXISTING SURFACE BEHIND LANDING IS PAVED.
5. USE DETAIL "C" OR "D" IF EXISTING SURFACE BEHIND LANDING IS UNPAVED.
6. R = 3' UNLESS OTHERWISE SHOWN ON PLAN. SEE SHEET 7.
7. ANGLE = $\Delta/2$ UNLESS OTHERWISE SHOWN ON PLAN.
8. CONSTRUCT DETECTABLE WARNING SURFACE PER DETAIL THIS SHEET. MATERIALS SHALL BE PER CONTRACT DOCUMENTS.

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CITY OF SOLVANG - STANDARD DETAILS

ACCESS RAMPS

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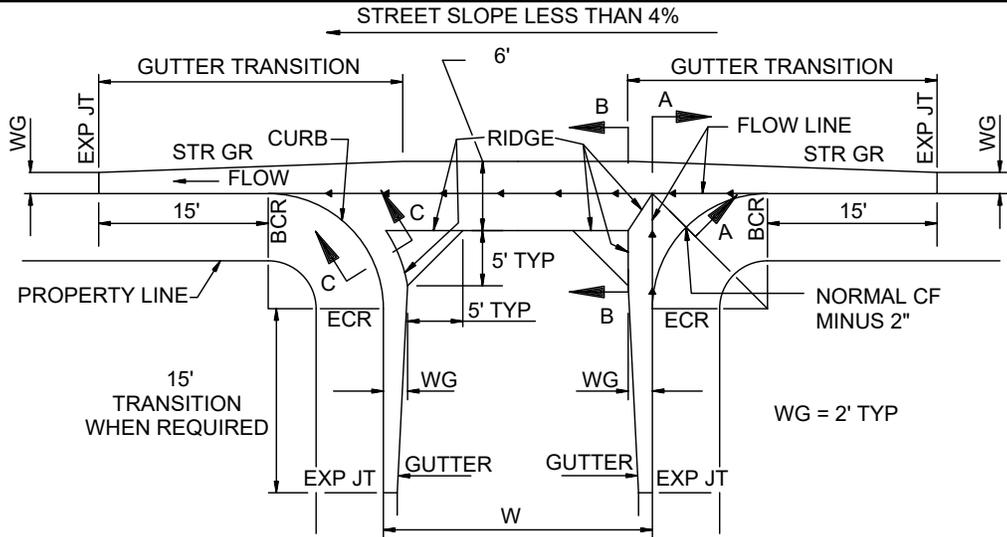
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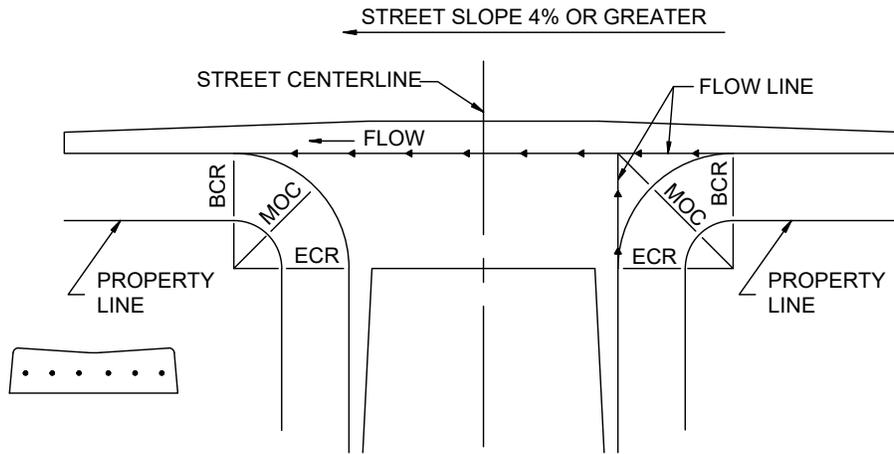
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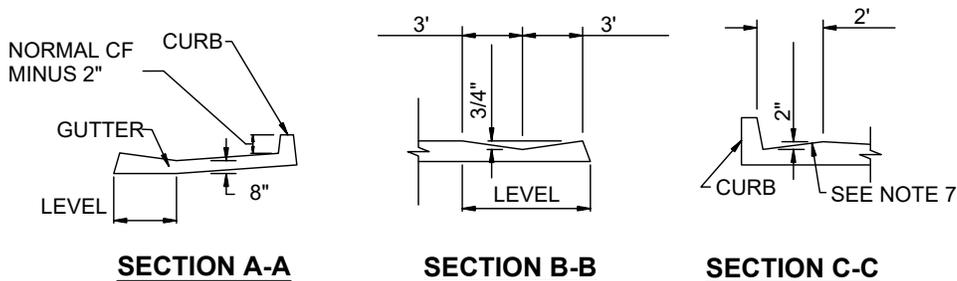
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**TYPICAL CROSS GUTTER PLAN
STREET SLOPE LESS THAN 4%**



**TYPICAL CROSS GUTTER PLAN
STREET SLOPE 4% OR GREATER**



SECTION A-A

SECTION B-B

SECTION C-C



CITY OF SOLVANG - STANDARD DETAILS

CROSS AND LONGITUDINAL GUTTER

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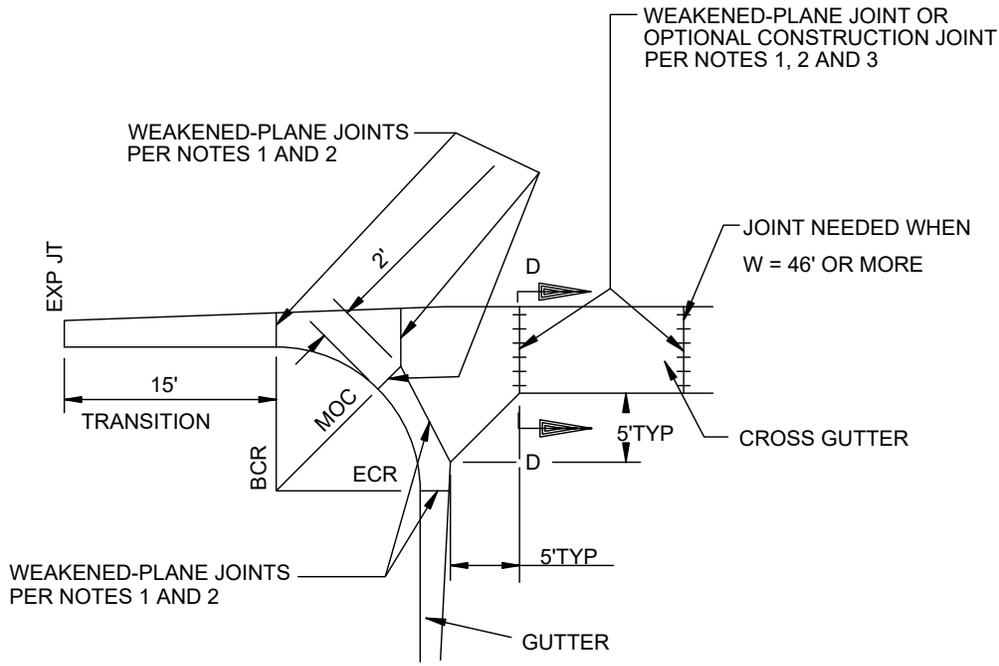
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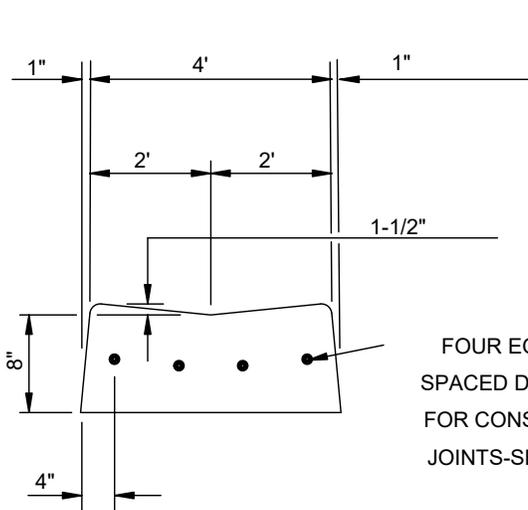
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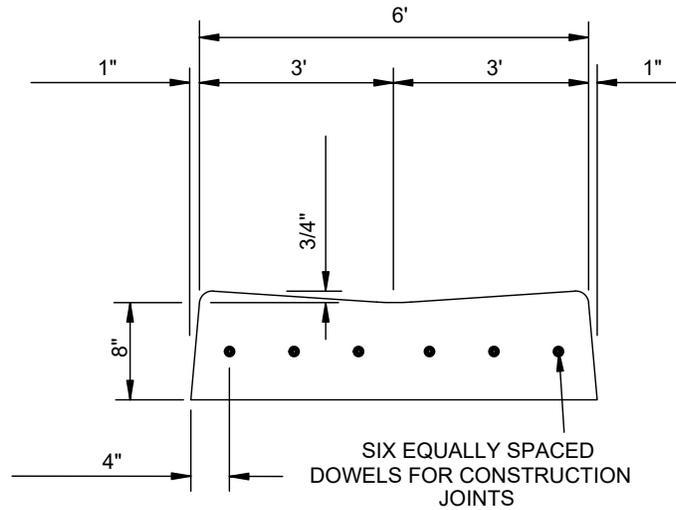
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TYPICAL JOINT PLAN



LONGITUDINAL GUTTER



SECTION D-D



CITY OF SOLVANG - STANDARD DETAILS

CROSS AND LONGITUDINAL GUTTER

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NOTES:

1. WEAKENED-PLANE AND/OR CONSTRUCTION JOINTS SHALL BE PLACED IN CURB AND GUTTER AT LOCATIONS SHOWN ON THE TYPICAL JOINT PLAN HEREON.
2. WEAKENED-PLANE JOINTS SHALL BE PLASTIC CONTROL JOINTS OR 1-1/2" DEEP SAW CUTS. CONCRETE SAWING SHALL TAKE PLACE WITHIN 24 HOURS AFTER CONCRETE IS PLACED.
3. DOWELS FOR CONSTRUCTION JOINTS SHALL BE #4 BARS 18" LONG.
4. PLACE A WEAKENED-PLANE OR CONSTRUCTION JOINT WHERE LONGITUDINAL ALLEY GUTTER JOINS CONCRETE ALLEY INTERSECTION.
5. ALL EXPOSED CORNERS ON PCC CURBS AND GUTTERS SHALL BE ROUNDED WITH 1/2" RADIUS.
6. CONCRETE SHALL BE INTEGRAL WITH CURB UNLESS OTHERWISE SPECIFIED.
7. ADJACENT TO CURB RAMPS, CONCRETE SLOPE SHALL BE 5% MAXIMUM FOR A DISTANCE OF 5 FEET FROM THE CURB FACE FOR THE WIDTH OF THE WIDTH OF THE RAMP, NOT INCLUDING SIDE TRANSITION CURBS.
8. ALL CONCRETE SHALL BE CLASS 560-C-3250.

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CITY OF SOLVANG - STANDARD DETAILS

CROSS AND LONGITUDINAL GUTTER

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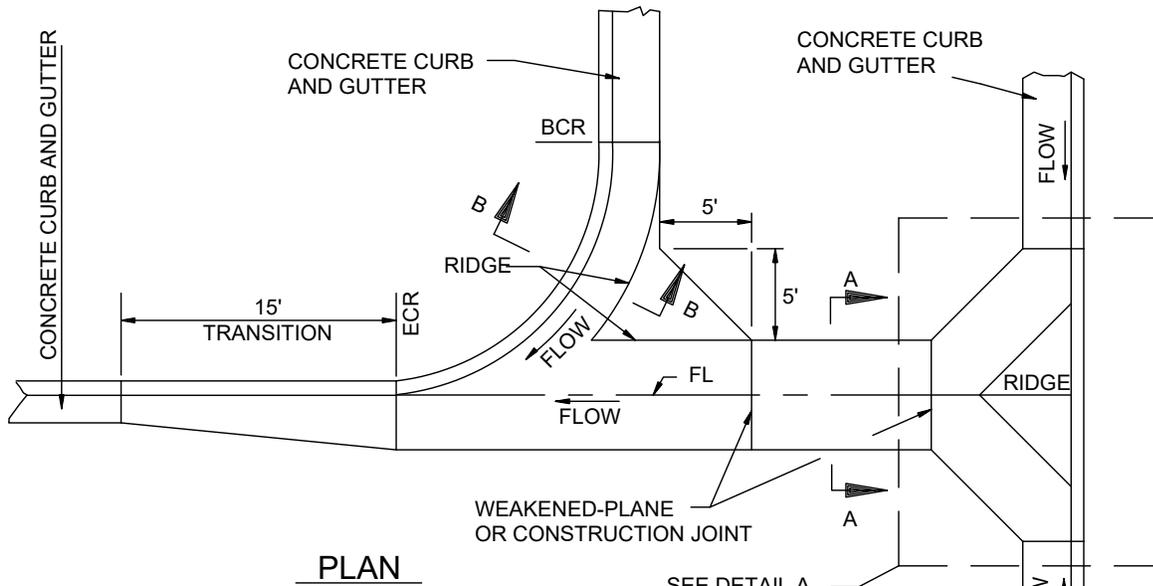
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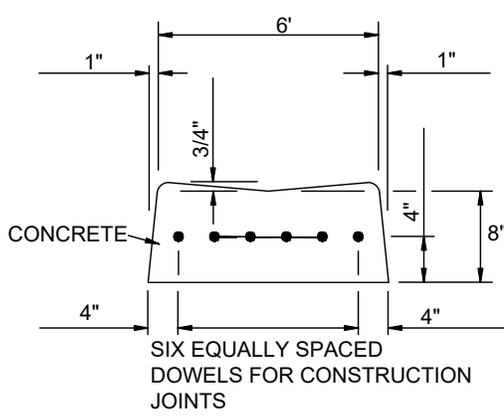
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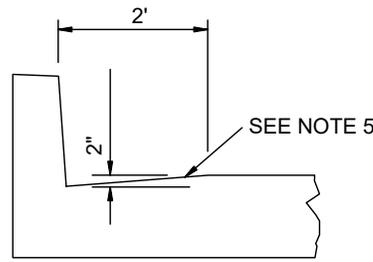
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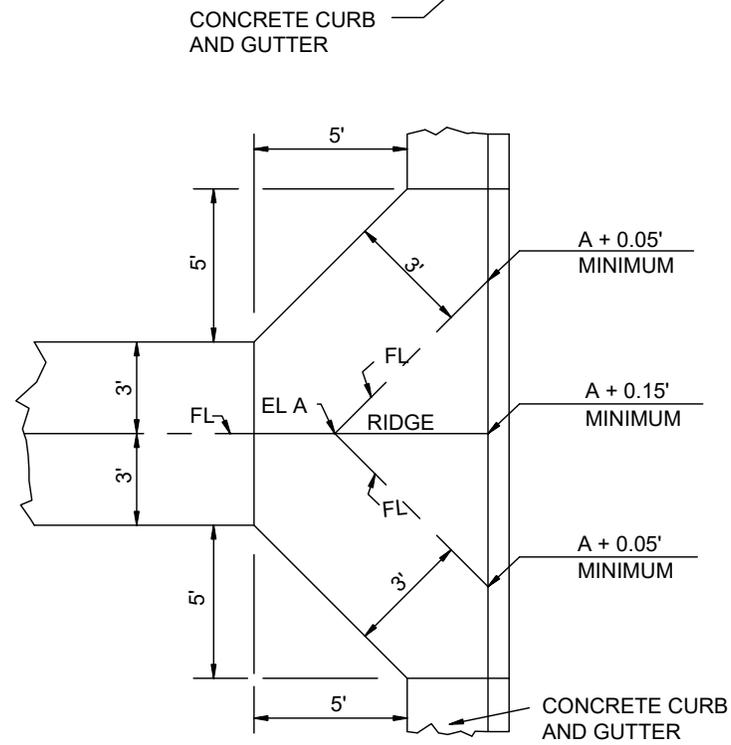
PLAN



SECTION A-A



SECTION B-B



DETAIL A



CITY OF SOLVANG - STANDARD DETAILS

CROSS GUTTER AT T-INTERSECTION

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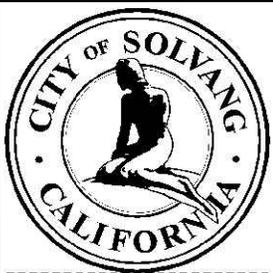
411
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NOTES:

1. WEAKENED-PLANE JOINTS SHALL BE PLASTIC CONTROL JOINTS OR 1-1/2" DEEP SAW CUTS. CONCRETE SAWING SHALL TAKE PLACE WITHIN 24 HOURS AFTER CONCRETE IS PLACED.
2. DOWELS FOR CONSTRUCTION JOINTS SHALL BE #4 BARS 18" LONG (#13M BARS).
3. ALL EXPOSED CORNERS ON CONCRETE CURBS AND GUTTERS SHALL BE ROUNDED WITH 1/2" RADIUS.
4. CONCRETE SHALL BE INTEGRAL WITH CURB UNLESS OTHERWISE SPECIFIED.
5. ADJACENT TO CURB RAMPS, CONCRETE SLOPE SHALL BE 5% MAXIMUM FOR A DISTANCE OF 5 FEET FROM THE CURB FACE FOR THE WIDTH OF THE WIDTH OF THE RAMP, NOT INCLUDING SIDE TRANSITION CURBS.

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CITY OF SOLVANG - STANDARD DETAILS

CROSS GUTTER AT T-INTERSECTION

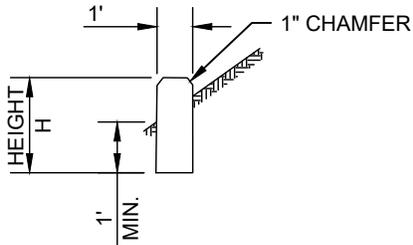
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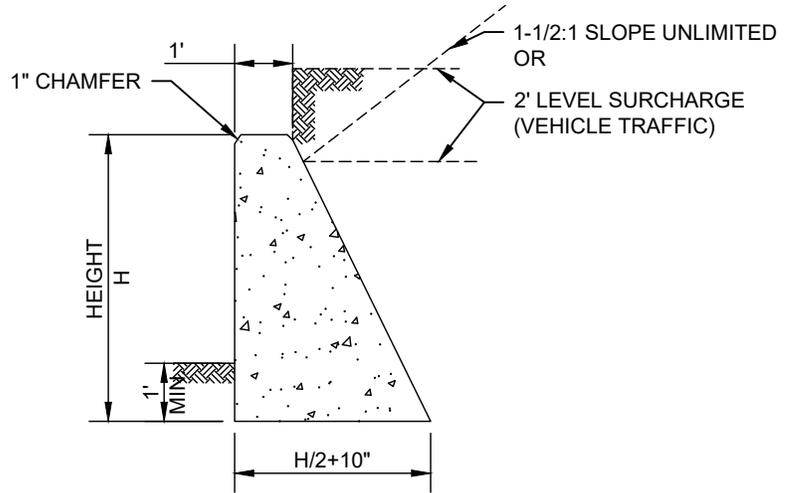
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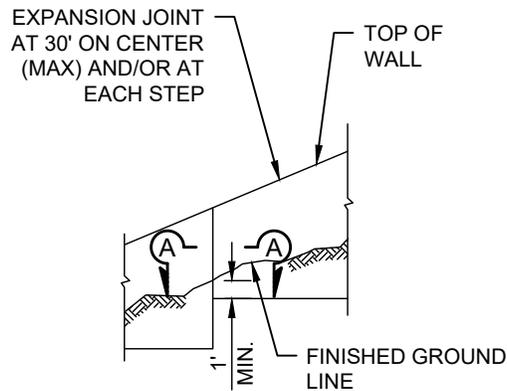


TYPE-A WALL
(APPLICABLE FOR ALL TYPES OF BACKFILL LOADINGS)



TYPE-B WALL

WALL TYPE	HEIGHT	BASE	CONCRETE, FT ³ PER FT
A	1'-6"	1'-0"	1.50
	2'-0"	1'-0"	2.00
B	3'-0"	2'-4"	4.99
	4'-0"	2'-10"	7.66



ELEVATION

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CITY OF SOLVANG - STANDARD DETAILS

GRAVITY RETAINING WALLS

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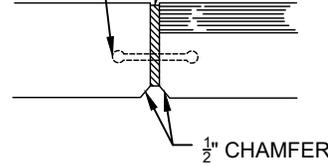
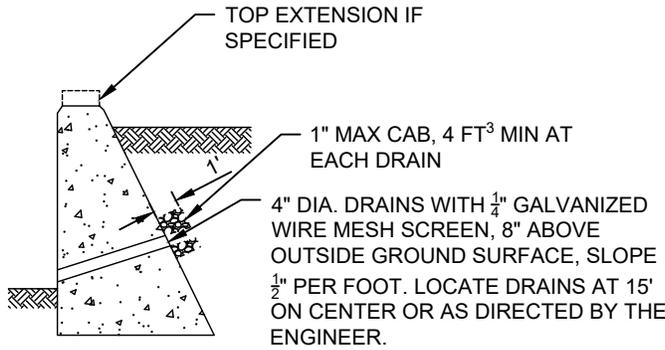
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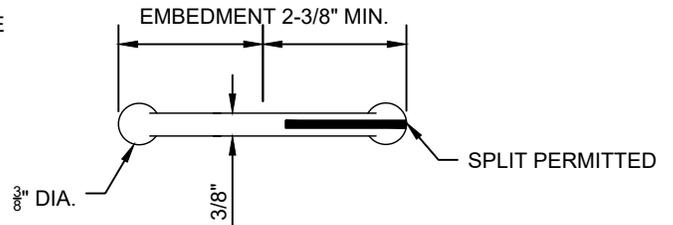
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WATER STOP, USE ONLY WHEN WATERTIGHT JOINT IS REQUIRED, SEE WATER STOP DETAIL.

$\frac{1}{2}$ " EXPANSION JOINT, FILL WITH PREMOLDED EXPANSION JOINT FILLER. LOCATE AT 30' ON CENTER OR AS DIRECTED BY ENGINEER.



SECTION A-A



RUBBER WATERSTOP
ONLY USED WHEN WATERTIGHT JOINT IS REQUIRED.

TYPICAL DRAINAGE
WHEN H IS GREATER THAN 4'

NOTES:

1. CONCRETE SHALL BE 560-C-3250.
2. WALLS ARE TO BE USED FOR THE LOADING CONDITIONS SHOWN FOR EACH TYPE OF WALL. DESIGN H MAY BE EXCEEDED BY 6-INCHES BEFORE GOING TO NEXT SIZE.
3. WALLS SHOWN FOR 1-1/2:1 UNLIMITED SLOPING SURCHARGE ARE DESIGNED IN ACCORDANCE WITH RANKINE'S FORMULA FOR UNLIMITED SLOPING SURCHARGE WITH $\phi=42^\circ$. NOTE: MAXIMUM TOE PRESSURE UNDER WALL FOOTING = 1-1/2 TONS/FT². SPECIAL DESIGN REQUIRED WHERE FOOTING MATERIAL IS INCAPABLE OF SUPPORTING THIS PRESSURE.

DESIGN DATA: $F_c = 1200$ PSI, $F'_c = 3000$ PSI, EARTH = 120 PCF, EQUIVALENT FLUID PRESSURE = 36 PSF PER FOOT OF WALL.

4. COMPACTION OF BACKFILL MATERIAL BY JETTING OR PONDING WITH WATER WILL NOT BE PERMITTED.

EACH LAYER OF BACKFILL SHALL BE MOISTENED AS DIRECTED BY THE ENGINEER AND THOROUGHLY TAMPED, ROLLED, OR OTHERWISE COMPACTED UNTIL RELATIVE COMPACTION IS NOT LESS THAN 90 PERCENT.

NO BACKFILL MATERIAL SHALL BE DEPOSITED AGAINST CONCRETE RETAINING WALLS UNTIL THE CONCRETE HAS DEVELOPED A STRENGTH OF 2500 PSI IN COMPRESSION AS DETERMINED BY TEST CYLINDERS, OR UNTIL 28 DAYS AFTER WALL HAS BEEN PLACED.

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CITY OF SOLVANG - STANDARD DETAILS

GRAVITY RETAINING WALLS

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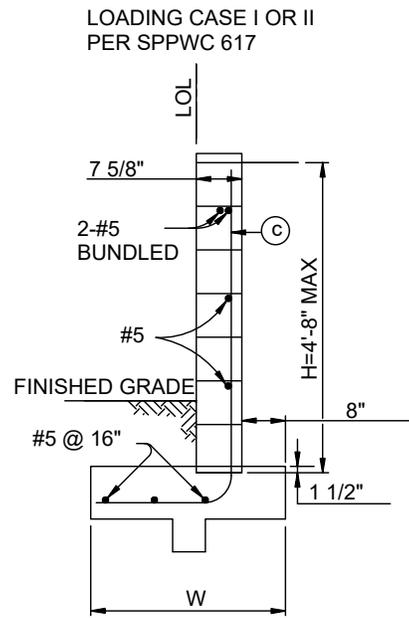
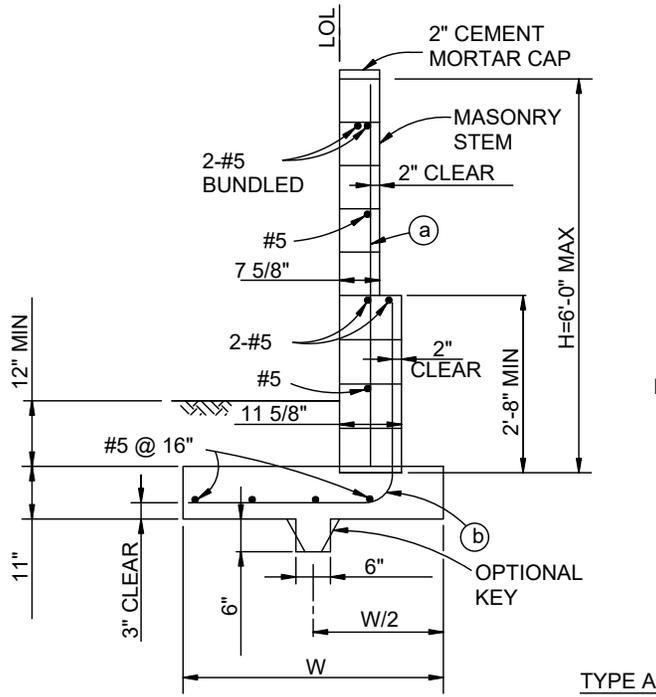
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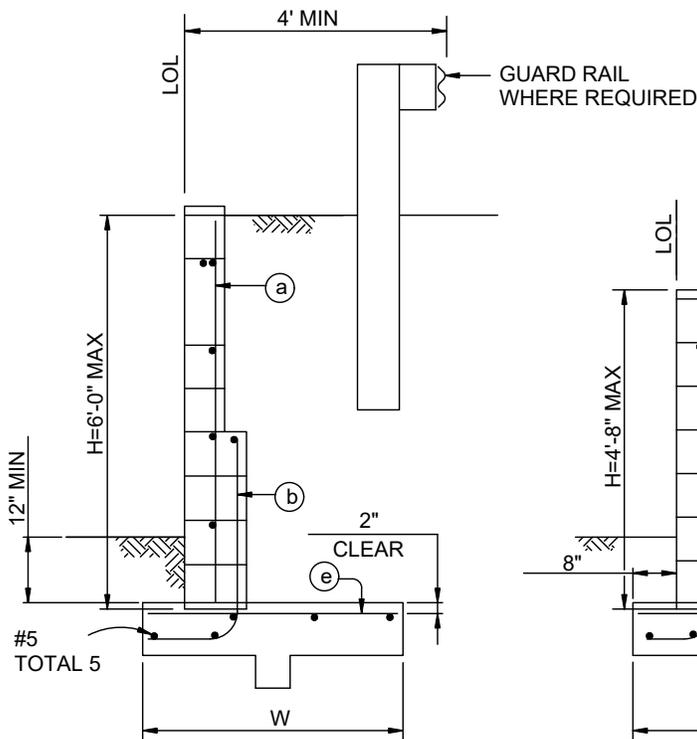
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TYPE A



NO SPLICES ALLOWED IN (A), (B), OR (C) BARS

TYPE B

SIMILAR TO CALTRANS TYPE 6



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MASONRY RETAINING WALLS

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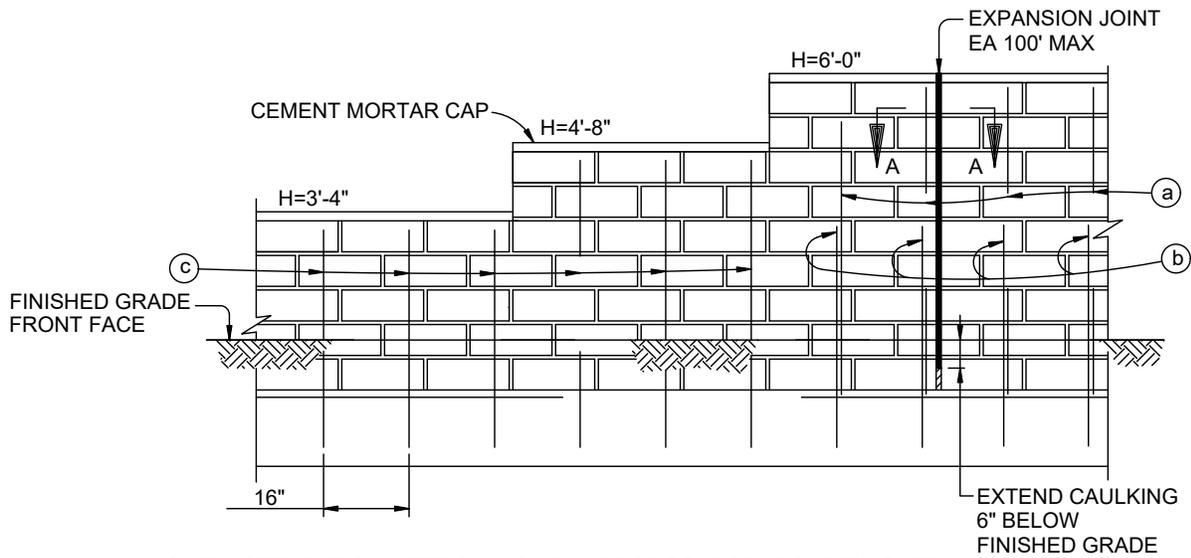
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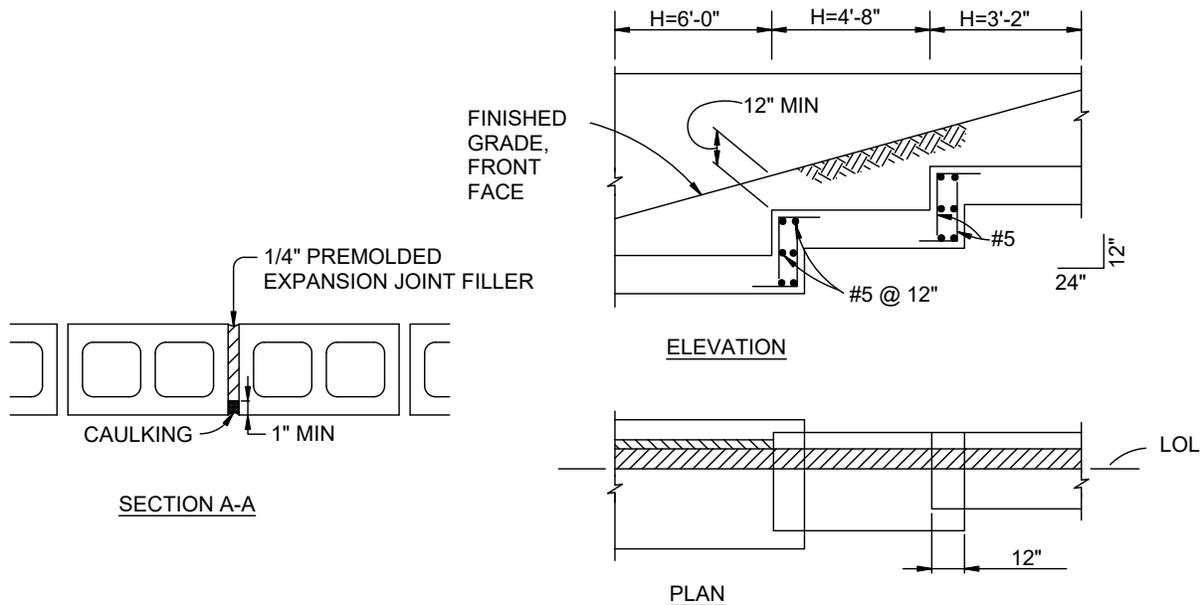
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OMIT MORTAR FROM VERTICAL JOINT IN FIRST COURSE ABOVE FINISHED GRADE AT 2'-8" CENTERS FOR WEEP HOLES. FILL ALL CELLS WITH GROUT.

ELEVATION



FOOTING STEP DETAILS



CITY OF SOLVANG - STANDARD DETAILS

MASONRY RETAINING WALLS

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TYPE A WALL

DESIGN H	3'-4"	4'-0"	4'-8"	5'-4"	6'-0"
W	3'-2"	3'-6"	3'-10"	4'-2"	4'-6"
(a)BARS	_____	_____	_____	#5 @ 16"	#5 @ 16"
(b)BARS	_____	_____	_____	#5 @ 16"	#5 @ 16"
(c)BARS	#5 @ 16"	#5 @ 16"	#5 @ 16"	_____	_____

TYPE B WALL

DESIGN H	3'-4"	4'-0"	4'-8"	5'-4"	6'-0"
W	2'-8"	3'-0"	3'-4"	3'-8"	4'-0"
(a)BARS	_____	_____	_____	#5 @ 15"	#5 @ 15"
(b)BARS	_____	_____	_____	#5 @ 15"	#5 @ 15"
(c)BARS	#5 @ 15"	#5 @ 15"	#5 @ 15"	_____	_____
(e)BARS	#5 @ 15"	#5 @ 15"	#5 @ 15"	#5 @ 15"	#5 @ 12"

DESIGN DATA (SEE SPPWC 617 FOR PCC, STEEL, AND OTHER SOIL DATA)

$f'_m = 500 \text{ psi}$ $f'_m = 1500 \text{ psi}$

REQUIRED SOIL BEARING CAPACITY 2000 psf

NOTES:

1. SEE SPPWC 617 FOR STANDARD WALL DETAILS.



CITY OF SOLVANG - STANDARD DETAILS

MASONRY RETAINING WALLS

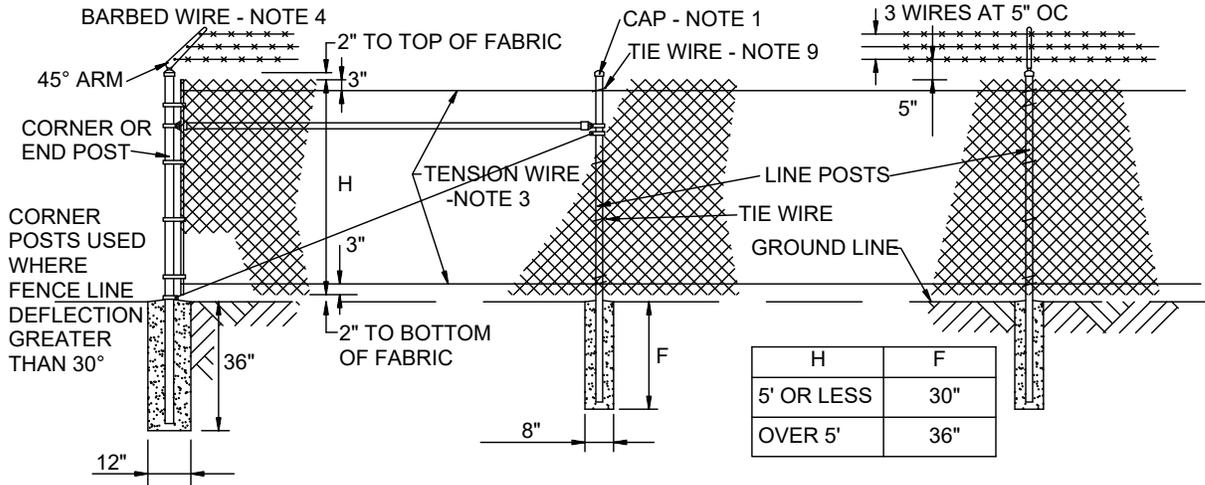
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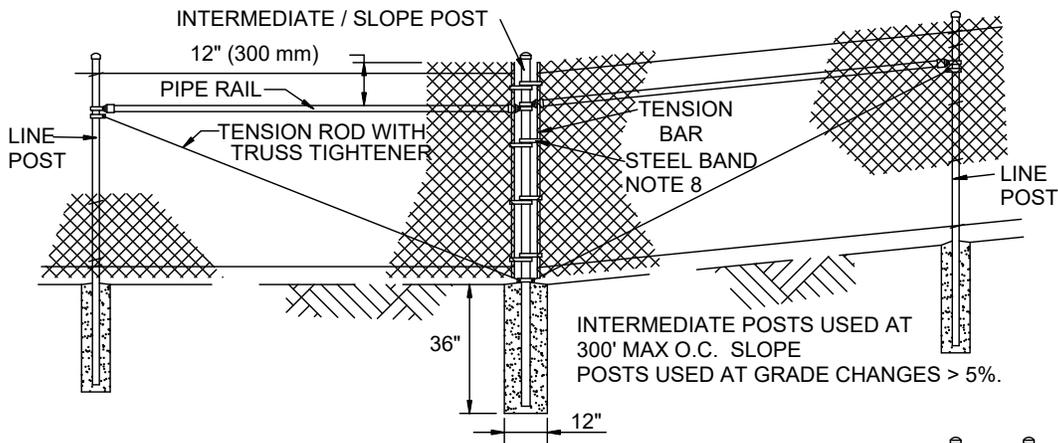
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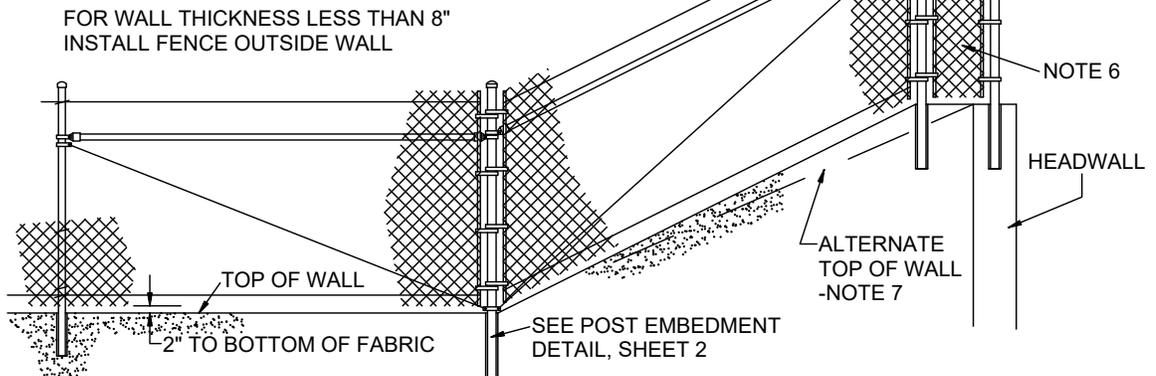


H	F
5' OR LESS	30"
OVER 5'	36"

TYPICAL FENCE



INTERMEDIATE / SLOPE POST



CHANNEL WALL AND WINGWALL AT HEADWALL

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CITY OF SOLVANG - STANDARD DETAILS

CHAIN LINK FENCE AND GATES

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MATT VAN DER LINDEN, PE *Matt van der Linden*

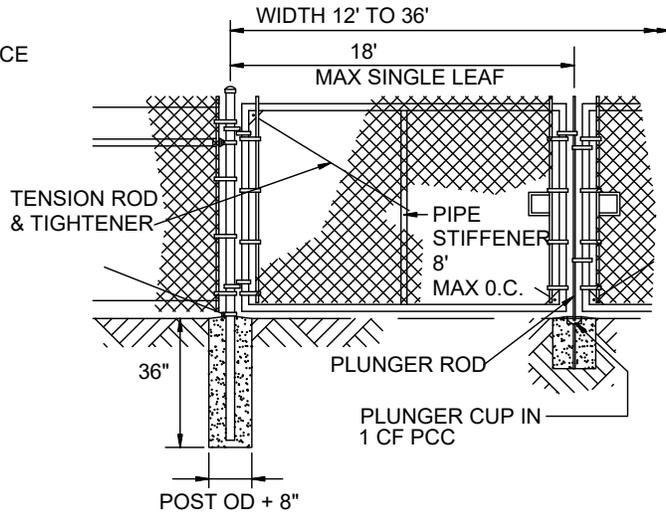
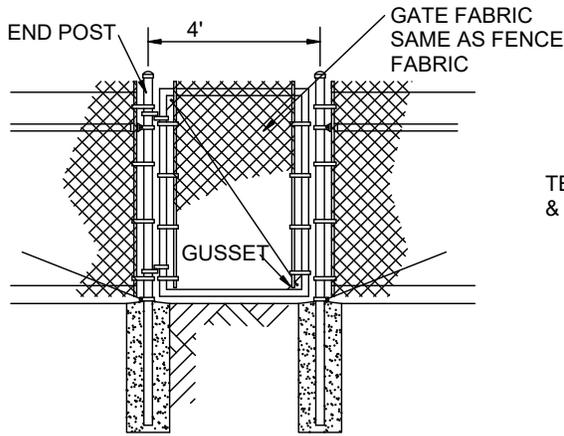
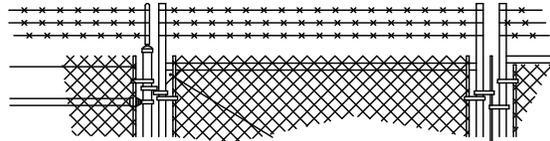
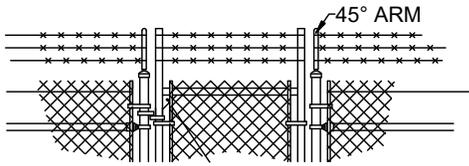
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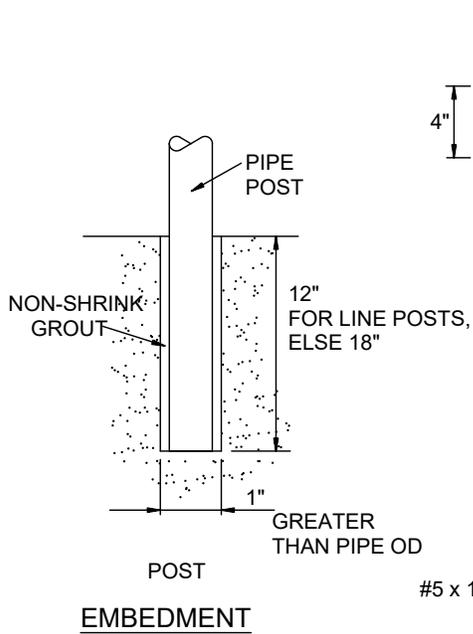
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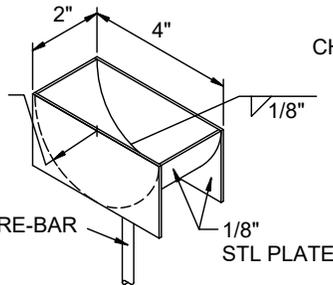
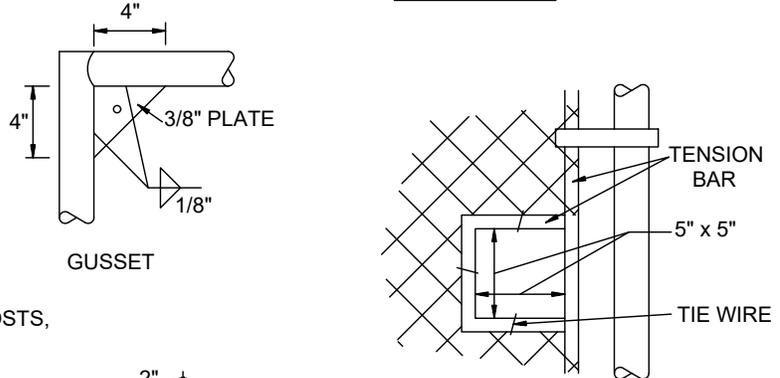
BARBED WIRE - NOTE 4



WALK GATE



DRIVE GATE



PLUNGER CUP

ISOMETRIC

CHAIN AND LOCK CUT-OUT



CITY OF SOLVANG - STANDARD DETAILS

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NOTES:

1. SECURE DRIVE-FIT GALVANIZED CAP TO POST WITH 1/4" ROUND-HEAD RIVET.
2. H DENOTES FABRIC WIDTH AND NOMINAL FENCE HEIGHT. H = 5' UNLESS OTHERWISE NOTED.
3. IF FENCE WITH TOP RAIL IS SPECIFIED, DELETE STEEL TENSION WIRE AT TOP, AND PIPE RAILS AT INTERMEDIATE, SLOPE, END AND CORNER POSTS. EXTEND TENSION ROD TO TOP RAIL.
4. BARBED WIRE SHALL BE USED ONLY WHEN SPECIFIED.
5. POST SPACING IS MAXIMUM 10'.
6. FILL CLEAR OPENINGS GREATER THAN 3" WITH FABRIC. FOR OPENINGS LESS THAN 18", TIE FABRIC TO POSTS.
7. USE ONE POST FOR COMBINED SLOPE AND CORNER POST IF TOP OF CHANNEL WALL IS CONSTRUCTED AS SHOWN FOR "ALTERNATE".
8. STEEL BANDS AT TENSION BARS SHALL BE 1/8" x 1", MINIMUM, SPACED AT MAXIMUM 16".
9. SECURE TENSION WIRES TO EACH LINE POST WITH TIE WIRES.



CITY OF SOLVANG - STANDARD DETAILS

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