

GENERAL STREET SPECIFICATIONS

1. STANDARD SPECIFICATIONS AND STANDARD PLANS OF THE DEPARTMENT OF TRANSPORTATION, STATE OF CALIFORNIA, OF CURRENT DATE, NOT IN CONFLICT WITH DEPARTMENT OF PUBLIC WORKS PLANS AND SPECIFICATIONS, ARE INCLUDED AS DEPARTMENT OF PUBLIC WORKS STANDARD PLANS AND SPECIFICATIONS. IF THERE IS A CONFLICT BETWEEN STATE STANDARD PLANS AND SPECIFICATIONS, AND COUNTY STANDARD DETAILS, THE COUNTY STANDARD DETAILS SHALL GOVERN ON COUNTY ROADS AND THE STATE STANDARDS ON STATE HIGHWAYS.
2. CONSTRUCTION PLANS SHALL BE PREPARED IN ACCORDANCE WITH DEPARTMENT OF PUBLIC WORKS ENGINEERING DESIGN STANDARDS.
3. COMMENCEMENT OF CONSTRUCTION SHALL NOT BE AUTHORIZED UNTIL SUCH TIME THAT THE CONSTRUCTION PLANS HAVE BEEN APPROVED BY THE DIRECTOR OF PUBLIC WORKS OR HIS AUTHORIZED AGENT.
4. THE DIRECTOR OF PUBLIC WORKS SHALL BE INTERPRETED TO MEAN THE DIRECTOR OR HIS DELEGATED REPRESENTATIVES.
5. UNLESS PRIOR AUTHORIZATION HAS BEEN GRANTED BY THE DEPARTMENT OF PUBLIC WORKS, ALL ELEVATIONS AND GRADES SHALL BE BASED ON "U.S. COAST AND GEODETIC SURVEYS-SEA LEVEL DATUM ADJUSTMENT OF 1929".
6. THE ENGINEER FOR THE OWNER, DEVELOPER OR SUBDIVIDER SHALL BE HELD RESPONSIBLE FOR THE GRADE STAKES BEING PLACED AT THEIR CORRECT LOCATIONS AND ELEVATIONS, PROPERLY MARKED, FOR USE IN THE DETERMINATION OF THE PROPER LOCATION AND GRADE OF CONSTRUCTION.
7. INSPECTION AND APPROVAL BY THE DIRECTOR OF PUBLIC WORKS SHALL BE REQUESTED BY THE CONTRACTOR IMMEDIATELY PRIOR TO COMMENCING AND IMMEDIATELY AFTER COMPLETING EACH PHASE OF CONSTRUCTION.
8. UTILITIES CONSTRUCTED UNDERGROUND SHALL BE STUBBED OUT TO THE PROPERTY LINES AT EACH LOT, AND TO EACH TRACT LINE AT END OR STREET ENDS BEING CONSTRUCTED, OR THROUGH STREETS BEING CONSTRUCTED AND TRENCH BACK-FILL TESTED FOR COMPACTION AND APPROVED BEFORE BASE, PAVING AND OTHER PERMANENT SURFACE CONSTRUCTION MAY COMMENCE.
9. STORM DRAIN PIPE SHALL CONFORM TO THE REQUIREMENTS OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, OF CURRENT DATE AND SHALL BE OF THE CLASS INDICATED ON THE PLANS. THE CONTRACTOR SHALL SUBMIT TO THE DIRECTOR OF PUBLIC WORKS CERTIFIED COPIES OF STRENGTH TESTS FOR CULVERT PIPE, PRIOR TO THEIR INSTALLATION.

COUNTY OF SANTA BARBARA, CA. -- DEPARTMENT OF PUBLIC WORKS -- ROADS DIV.

Approved by

1-010

GENERAL STREET SPECIFICATIONS

*Charles J. Wagnon* 4/1/87  
DIRECTOR OF PUBLIC WORKS DATE

GENERAL STREET SPECIFICATIONS (CONTINUED)

10. TRENCH BACKFILL FOR ALL STORM DRAIN OR CULVERT TRENCHING SHALL COMPLY WITH STANDARD DETAIL 1-040. UTILITY TRENCH BACKFILL REQUIREMENTS SHALL COMPLY WITH STANDARD DETAIL 1-030.
11. GRADING SHALL BE COMPLETED TO WITHIN 0.05 FEET OF FINISH SUBGRADE, TESTED FOR COMPACTION AND APPROVED BEFORE BASE, PAVING, OR ANY OTHER PERMANENT SURFACE CONSTRUCTION MAY COMMENCE. THE PAVING SUBGRADE SHALL BE FIRM, HARD AND UNYIELDING IMMEDIATELY PRIOR TO PLACEMENT OF PERMANENT SURFACING. THE STANDARD TEST FOR MAXIMUM DENSITY AND OPTIMUM MOISTURE CONTENT SHALL BE ASTM D 1557-78 METHOD "A", "B", "C", OR "D". FIELD TEST FOR IN-PLACE DENSITY AND MOISTURE CONTENT SHALL BE ASTM D 2922-81 AND D 3017-78.
12. AGGREGATE SUB-BASE SHALL CONFORM TO THE PROVISIONS OF THE STANDARD SPECIFICATIONS, CALIFORNIA DEPARTMENT OF TRANSPORTATION, AND SHALL BE PLACED IN ACCORDANCE WITH THE APPROVED STRUCTURAL SECTIONS. CLASS 1, 2, AND 3 AGGREGATE SUB-BASE SHALL CONFORM WITH CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS OF CURRENT DATE.
13. AGGREGATE BASE SHALL CONFORM TO THE PROVISIONS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND SHALL HAVE A MINIMUM THICKNESS OF 0.50' ON ALL ROADS AND BE COMPACTED TO 95% MAXIMUM DENSITY.
14. THE STRUCTURAL SECTION FOR PUBLIC ROADS SHALL BE AS FOLLOWS: WHEN THE TRAFFIC INDEX IS LESS THAN 5.5, THE MINIMUM THICKNESS OF A.C. SHALL BE 0.20'. WHEN THE TRAFFIC INDEX IS 5.5 OR GREATER, THE MINIMUM THICKNESS OF A.C. SHALL BE 0.30'. THE ACTUAL THICKNESS OF THE STRUCTURAL SECTIONS SHALL BE DETERMINED FROM "R" VALUES BY TEST METHOD 301 CALIFORNIA DEPARTMENT OF TRANSPORTATION RESEARCH DEPARTMENT. FOR ALL PUBLIC ROADS, 0.75' OF NATIVE SOIL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY.
15. CURBS, GUTTERS, DRIVEWAYS, SIDEWALKS, ROADWAYS, ETC., SHALL BE CONSTRUCTED IN ACCORDANCE WITH DEPARTMENT OF PUBLIC WORKS STANDARD DETAILS AND SPECIFICATIONS OF CURRENT DATE.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

Approved by

1-010

GENERAL STREET SPECIFICATIONS

*Barbara Wagner* 4/1/87  
DIRECTOR OF PUBLIC WORKS DATE

GENERAL STREET SPECIFICATIONS (CONTINUED)

16. CURBS, GUTTERS, SIDEWALKS, STREETS AND OTHER CONCRETE CONSTRUCTION AREAS SHALL BE CLEARED OF ALL FORMS AND DELETERIOUS SUBSTANCES AND BACKFILLED PRIOR TO FINAL INSPECTION.
17. CLASS A AND CLASS B PORTLAND CEMENT CONCRETE SHALL CONFORM WITH CALIFORNIA DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS OF CURRENT DATE. CLASS A AND CLASS B PORTLAND CEMENT CONCRETE SHALL BE NOTED AS CLASS A AND CLASS B CONCRETE IN THESE DETAILS. MAXIMUM PENETRATION SHALL BE 2" FOR UNREINFORCED CONCRETE, AND 3" FOR REINFORCED CONCRETE PER CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
18. WHEN THE TOTAL COMPACTED THICKNESS OF ASPHALT CONCRETE IS SHOWN ON THE PLANS TO BE LESS THAN 0.25 FOOT, ASPHALT CONCRETE SHALL BE SPREAD AND COMPACTED IN ONE LAYER. ALL OTHER ASPHALT CONCRETE SHALL BE SPREAD AND COMPACTED IN LAYERS. THE TOP LAYER OF ASPHALT CONCRETE SHALL BE NOT MORE THAN 0.20 FOOT NOR LESS THAN 0.15 FOOT IN COMPACTED THICKNESS. THE NEXT LOWER LAYER SHALL BE NOT MORE THAN 0.25 FOOT NOR LESS THAN 0.15 FOOT IN COMPACTED THICKNESS UNLESS THE TOTAL THICKNESS IS SHOWN ON THE PLANS TO BE LESS THAN 0.30 FOOT, AND ANY LOWER LAYERS SHALL BE NOT LESS THAN 0.15 FOOT

19. NO MORE THAN 0.40 FOOT IN COMPACTED THICKNESS. ASPHALT CONCRETE BASE SHALL BE SPREAD AND COMPACTED IN ONE OR MORE LAYERS. EACH LAYER SHALL NOT EXCEED 0.40 FOOT IN COMPACTED THICKNESS. THE MINIMUM THICKNESS WHEN USING PAVEMENT REINFORCING FABRIC SHALL BE 0.15 FOOT. ASPHALT CONCRETE FOR OVERLAY SECTIONS SHALL BE CONSTRUCTED WITH 1/2 INCH MAXIMUM AGGREGATE WITH MEDIUM GRADING. PAINT BINDER (ASPHALT EMULSION) SHALL BE REQUIRED BETWEEN EACH COURSE OF ASPHALT CONCRETE EXCEPT AS MAY BE PERMITTED BY THE DEPARTMENT OF PUBLIC WORKS IN CONTINUOUS PAVING OPERATIONS.

ALL ASPHALT PAVING SHALL BE FOG SEALED IN CONFORMANCE WITH THE STATE STANDARD SPECIFICATIONS OF CURRENT DATE, MODIFIED TO CONFORM TO COUNTY SPECIFICATIONS USED FOR ITS FOG SEAL PROGRAM OF CURRENT DATE. SAID FOG SEALING SHALL EITHER BE: A) BONDED FOR AND CONSTRUCTED AFTER SIX MONTHS AND PRIOR TO ONE YEAR FROM DATE OF ACCEPTANCE, OR B) A PAYMENT SHALL BE MADE TO THE COUNTY BASED ON THE COUNTY'S COST TO CONSTRUCT THE FOG SEAL. PAYMENT TO BE MADE PRIOR TO ROAD EXCAVATION PERMIT ISSUANCE.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

Approved by

1-010

GENERAL STREET SPECIFICATIONS

*Charles J. Wagner* 4/1/87

DIRECTOR OF PUBLIC WORKS DATE

GENERAL STREET SPECIFICATIONS (CONTINUED)

20. ROADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL SECTIONS SHOWN ON DEPARTMENT OF PUBLIC WORKS STANDARD DETAILS OF CURRENT DATE, UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
21. STREET NAME SIGNS, BARRICADES, TRAFFIC CONTROL AND TRAFFIC WARNING SIGNS SHALL BE PLACED IN ACCORDANCE WITH DEPARTMENT OF PUBLIC WORKS STANDARD DETAILS OF CURRENT DATE, THE STATE TRAFFIC MANUAL WITH CURRENT REVISIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
22. ROUGH GRADE STAKES SHALL BE SET AS REQUIRED FOR ADEQUATE CONTROL OF PRIMARY ROADWAY GRADING OPERATIONS. FINAL GRADE STAKES SHALL BE SET AT NOT GREATER THAN 50' INTERVALS AND AT BC'S, EC'S, PI'S, CHANGES IN GRADE OR ALIGNMENT, AND AT OTHER POINTS OF CONTROL.
23. WATER FOR COMPACTION AND DUST CONTROL SHALL BE MADE AVAILABLE WITHIN THE BOUNDARIES OF THE TRACT PRIOR TO STARTING ANY EARTH MOVING OPERATIONS, OTHER THAN THAT NECESSARY FOR THE INSTALLATION OF SUBJECT WATER SOURCE.
24. PRIVATE IMPROVEMENTS OR CONSTRUCTION SHALL NOT COMMENCE UNTIL AN EXCAVATION PERMIT HAS BEEN ISSUED BY THE DIRECTOR OF PUBLIC WORKS.
25. WITH APPROVAL OF THE COUNTY MATERIALS ENGINEER, TEST METHOD ASTM D 1557-78 MAY BE MODIFIED TO ALLOW THE USE OF CALIFORNIA TEST METHOD 370, METHOD OF DETERMINING MOISTURE CONTENT OF ASPHALT MIXTURES OR MINERAL AGGREGATE USING MICROWAVE OVENS, WHEN DETERMINING MOISTURE CONTENT OF GRANULAR SOILS IN LIEU OF OVEN DRYING PER ASTM D 2216-80.
26. ALL REINFORCING STEEL SHALL BE ASTM A 615, GRADE 60 UNLESS OTHERWISE NOTED.
27. ALL STRUCTURE STEEL SHALL BE ASTM A 36 UNLESS OTHERWISE NOTED.
28. EXPANSIVE SOILS ARE DEFINED AS THOSE SOILS HAVING AN "R" VALUE OF LESS THAN 10. THEY ARE COMPOSED OF HIGH CLAY CONTENT AND EXPAND WITH MOISTURE.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

Approved by

1-010

GENERAL STREET SPECIFICATIONS

*Charles F. Wagner*

4/1/87

DIRECTOR OF PUBLIC WORKS

DATE

CLASS I BACKFILL

BACKFILL MATERIAL SHALL HAVE A SAND EQUIVALENT 20 OR GREATER, SHALL HAVE 100% PASSING THE 2" SIEVE AND 35% TO 100% PASSING THE #4 SIEVE. THIS MATERIAL SHALL NOT BE END DUMPED OR DOZED INTO THE TRENCH, THE MATERIAL SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF THE PIPE TO 1.00' ABOVE THE HIGHEST POINT OF THE PIPE. THIS MATERIAL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY TEST METHOD ASTM D 1557-78 METHOD "A", "B", "C", OR "D". JETTING, PONDING OR FLOODING WILL BE PERMITTED WHEN THE COUNTY DETERMINES THAT MATERIAL WILL BE SELF DRAINING WHEN COMPACTED EXCEPT ON EXISTING ROADS. THE THICKNESS OF EACH LAYER OF BACKFILL SHALL NOT EXCEED 1' BEFORE COMPACTION, EXCEPT WHEN COMPACTION IS DONE BY JETTING OR PONDING WHEN THE THICKNESS SHALL NOT EXCEED 4'.

CLASS II BACKFILL

BACKFILL MATERIAL SHALL CONTAIN NO STONES OR PAVEMENT PIECES IN EXCESS OF 6" IN GREATEST DIAMETER. JETTING, PONDING OR FLOODING WILL BE PERMITTED WHEN BACKFILL MATERIAL HAS A SAND EQUIVALENT GREATER THAN 10 AND THE COUNTY DETERMINES THAT MATERIAL WILL BE SELF DRAINING WHEN COMPACTED EXCEPT ON EXISTING ROADS. BACKFILL MATERIAL SHALL BE COMPACTED TO 90% MAXIMUM DENSITY, AS DETERMINED BY TEST METHOD ASTM 1557-78, METHOD "A", "B", "C", OR "D". THE THICKNESS OF EACH LAYER OF BACKFILL SHALL NOT EXCEED 1' BEFORE COMPACTION, EXCEPT WHEN COMPACTION IS DONE BY JETTING OR PONDING WHEN THE THICKNESS SHALL NOT EXCEED 4'.

TRENCH BACKFILL REQUIREMENTS

TESTING MAY BE REQUIRED AT VARIOUS TRENCH DEPTHS TO INSURE SPECIFIED COMPACTION. IF ACCESS TO DEEPER PORTIONS OF THE TRENCH MAKE TESTING OPERATIONS IMPOSSIBLE DUE TO THE METHODS OR SCHEDULES USED DURING THE ACTUAL OPERATION, THE COUNTY MAY REQUIRE THE CONTRACTOR TO EXCAVATE AND BACKFILL THE TEST PITS AT THE CONTRACTOR'S SOLE EXPENSE. BACKFILL UNDER THE PAVEMENT OR WITHIN 18" OF THE PAVEMENT SHALL BE CLASS II ON ALL MINOR ROADS AND CLASS I ON ALL OTHER ROADS IF TRAFFIC INDEX IS 5.5 OR GREATER.

CEMENT SLURRY BACKFILL

CEMENT SLURRY BACKFILL (1 SACK/CUBIC YARD) MAY BE REQUIRED ON ROADS WITH A TRAFFIC INDEX OF 5.5 OR GREATER. CEMENT SLURRY BACKFILL MAY BE REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS TO EXPEDITE CONSTRUCTION DUE TO TRAFFIC CONCERNS. CEMENT SLURRY BACKFILL MAY BE USED AT THE OPTION OF THE CONTRACTOR IF NOT REQUIRED BY THE COUNTY. NO COMPACTION TESTING WILL BE REQUIRED BY THE COUNTY FOR CEMENT SLURRY BACKFILL.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

Approved by

1-020

GENERAL TRENCH BACKFILL SPECIFICATIONS

*Sharon Dea F. Williams* 4/1/87  
DIRECTOR OF PUBLIC WORKS DATE

(CONTINUED)

TRENCH RESURFACING:

TRENCHES IN THE PAVEMENT AREA OR WITHIN 18" OF THE PAVEMENT, ON PARTIAL SECTIONS, SHALL BE REPAVED WITH A STRUCTURAL SECTION EQUIVALENT TO THE EXISTING SECTION, OR AS DESIGNATED BY THE DIRECTOR OF PUBLIC WORKS. SAW CUTTING EXISTING PAVEMENT SHALL BE A MINIMUM OF 1' OUTSIDE THE TRENCH LIMITS UNLESS AGAINST AN EXISTING CURB LIP OR AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

$W_S$  = WIDTH OF SURFACING

$W_T$  = WIDTH OF TRENCH

$W_R$  = WIDTH OF REMAINING PAVING

ROADWAY WITH NO CURB AND GUTTER

IF  $W_R$  IS GREATER THAN 3.0' THEN  $W_S = W_T + 2'$

IF  $W_R$  IS 3.0' OR LESS THEN  $W_S = W_T + W_R + 1'$

ROADWAYS WITH CURB AND GUTTER

IF  $W_R$  IS GREATER THAN 5.0' THEN  $W_S = W_T + 2'$

IF  $W_R$  IS 5.0' OR LESS THEN  $W_S = W_T + W_R + 1'$

ASPHALT CONCRETE PAVING SHALL BE PLACED USING A METHOD APPROVED BY THE DEPARTMENT OF PUBLIC WORKS. WHEN TRENCHES ARE BEYOND THE EDGE OF EXISTING PAVEMENT, ADDITIONAL PAVEMENT WIDENING MAY BE REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

I-020

GENERAL TRENCH BACKFILL SPECIFICATIONS

Approved by

*Charles J. DeGruy*  
DIRECTOR OF PUBLIC WORKS

DATE

*4/1/87*

**NOTES**

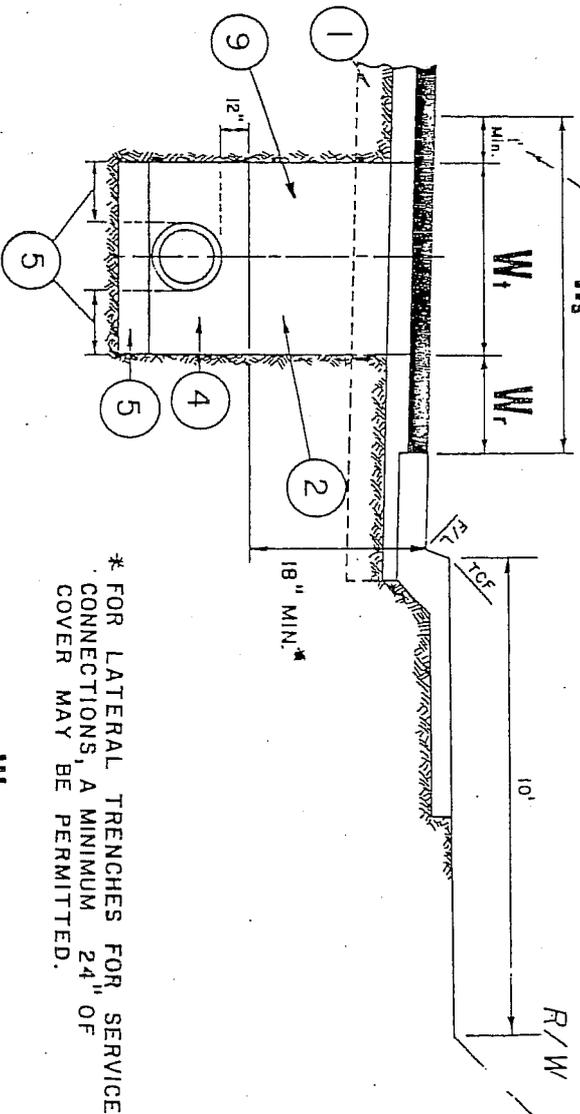
1. ALL NATIVE MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY TO A DEPTH OF 0.75' AS REQUIRED.
2. ON ROADS WITH A TRAFFIC INDEX OF LESS THAN 5.5, CLASS II BACKFILL SHALL BE REQUIRED AND COMPACTED TO 90% MAXIMUM DENSITY. ON ROADS WITH A TRAFFIC INDEX OF 5.5 OR GREATER CLASS I BACKFILL SHALL BE REQUIRED AND COMPACTED TO 95% MAXIMUM DENSITY. IN SHOULDER AREAS, REGARDLESS OF THE TRAFFIC INDEX VALUE, CLASS II BACKFILL WILL BE REQUIRED UNLESS THE SHOULDER WILL BE PART OF A FUTURE ROAD WIDENING PROJECT. IN SUCH CASES WHERE THE TRAFFIC INDEX IS 5.5 OR GREATER, CLASS I BACKFILL WILL BE REQUIRED.
3. THE STANDARD TEST FOR MAXIMUM DENSITY AND OPTIMUM MOISTURE CONTENT SHALL BE ASTM D 1557-78, METHOD "A", "B", "C", OR "D".
4. BACKFILL MATERIAL AND PIPELINE CLEARANCES SHALL BE PER UTILITY COMPANY STANDARDS. FOR COUNTY REQUIREMENTS, SEE NOTE 2.
5. BEDDING MATERIAL AND DIMENSIONS SHALL BE PER UTILITY COMPANY STANDARDS.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

1-030

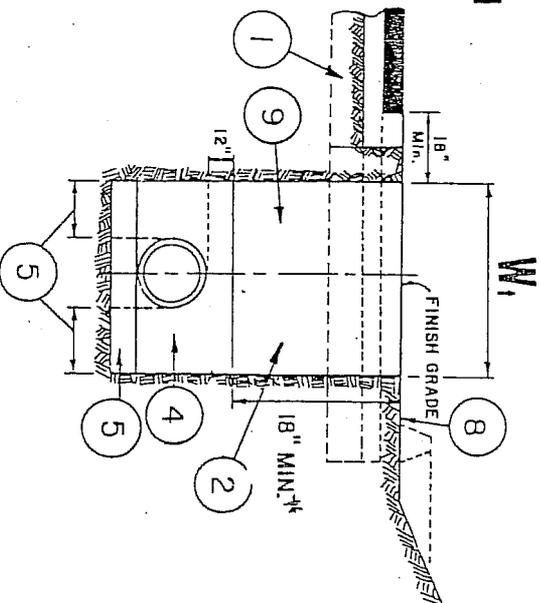
UTILITY TRENCH BACKFILL REQUIREMENTS

NOT REQUIRED FOR SLURRY, EXCEPT FOR TRENCHES SMALLER THAN 25 90. FT.



TYPICAL SECTION ALT. 1

\* FOR LATERAL TRENCHES FOR SERVICE CONNECTIONS, A MINIMUM 24" OF COVER MAY BE PERMITTED.



TYPICAL SECTION ALT. 2

Approved by

*Charles J. Wagner* 4/11/87  
DIRECTOR OF PUBLIC WORKS DATE

(CONTINUED)

- 6. ALL LATERAL TRENCHES SHALL BE BORED WHEREVER POSSIBLE.
- 7. SEE STANDARD DETAIL 1-020 FOR TRENCH RESURFACING REQUIREMENTS.
- 8. ADDITIONAL PAVEMENT WIDENING MAY BE REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS. SEE TRENCH BACK-FILL NOTE ON DETAIL 1-020. FOR LATERAL TRENCHES, NO ADDITIONAL PAVING WILL BE REQUIRED.
- 9. NO PONDING OR JETTING SHALL BE PERMITTED IN THE UPPER 4' OF THE FINISHED GRADE DURING COMPACTION. NO PONDING OR JETTING SHALL BE PERMITTED ON EXISTING ROADS.
- 10. CAL-OSHA TRENCH SAFETY REQUIREMENTS SHALL BE MET FOR ALL TRENCHES.
- 11. SAW CUTTING ANY EXISTING PAVEMENT SHALL BE A MINIMUM OF 1' OUTSIDE THE TRENCH LIMITS UNLESS AGAINST AN EXISTING CURB LIP OR AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

1-030

UTILITY TRENCH BACKFILL REQUIREMENTS

Approved by

*Charles Wagner*

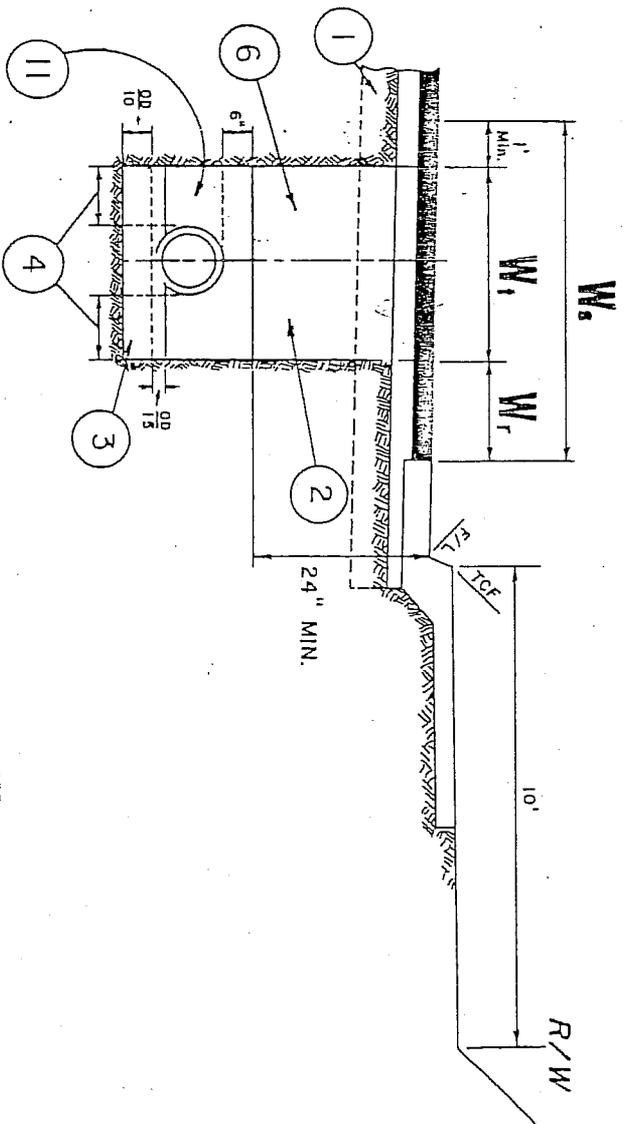
DIRECTOR OF PUBLIC WORKS

4/1/87

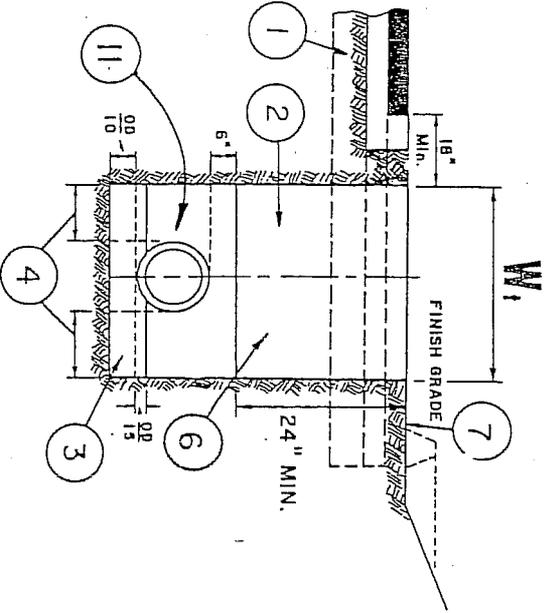
DATE

**NOTES**

1. ALL NATIVE MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY TO A DEPTH OF 0.75' AS REQUIRED.
2. ON ROADS WITH A TRAFFIC INDEX OF LESS THAN 5.5, CLASS II BACKFILL SHALL BE COMPACTED TO 90% MAXIMUM DENSITY. ON ROADS WITH A TRAFFIC INDEX OF 5.5 OR GREATER CLASS I BACKFILL SHALL BE REQUIRED AND COMPACTED TO 95% MAXIMUM DENSITY. IN SHOULDER AREAS, REGARDLESS OF THE TRAFFIC INDEX VALUE, CLASS II BACKFILL WILL BE REQUIRED UNLESS THE SHOULDER WILL BE PART OF A FUTURE ROAD WIDENING PROJECT. IN SUCH CASES WHERE THE TRAFFIC INDEX IS 5.5 OR GREATER, CLASS I BACKFILL WILL BE REQUIRED.
3. BEDDING MUST CONFORM TO CLASS I BACKFILL SPECIFICATIONS UNLESS WAIVED BY THE DIRECTOR OF PUBLIC WORKS. BEDDING SHALL BE A MINIMUM OF 0.33' BELOW THE PIPE FOR PIPES LESS THAN 39" IN DIAMETER AND 1/10 OF THE OUTSIDE DIAMETER OF THE PIPE FOR PIPES LARGER THAN 39" IN DIAMETER.
4. THE WIDTH SHALL BE MEASURED AT THE SPRING LINE OF THE PIPE AND SHALL BE A MINIMUM OF 1' EACH SIDE.



TYPICAL SECTION ALT. 1



TYPICAL SECTION ALT. 2

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

I-040

STORM DRAIN TRENCH BEDDING AND BACKFILL

Approved by

*Charles Wagner* 4/1/87

DIRECTOR OF PUBLIC WORKS DATE

NOTES (CONTINUED)

5. THE STANDARD TEST FOR MAXIMUM DENSITY AND OPTIMUM MOISTURE CONTENT SHALL BE ASTM D 1557-78, METHOD "A", "B", "C", OR "D".
6. NO PONDING OR JETTING SHALL BE ALLOWED IN THE UPPER 4' OF THE FINISHED GRADE DURING COMPACTION. NO PONDING OR JETTING SHALL BE PERMITTED ON EXISTING ROADS.
7. ADDITIONAL PAVEMENT WIDENING MAY BE REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS.
8. CAL-OSHA TRENCH SAFETY REQUIREMENTS SHALL BE MET FOR ALL TRENCHES.
9. SAW CUTTING ANY EXISTING PAVEMENT SHALL BE A MINIMUM OF 1' OUTSIDE THE TRENCH LIMITS UNLESS AGAINST AN EXISTING CURB LIP, OR AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
10. ALL LATERAL TRENCHES SHALL BE BORED WHEREVER POSSIBLE.
11. CLASS I BACKFILL COMPACTED TO 95% MAXIMUM DENSITY.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

1-04r STORM DRAIN TRENCH BEDDING AND BACKFILL

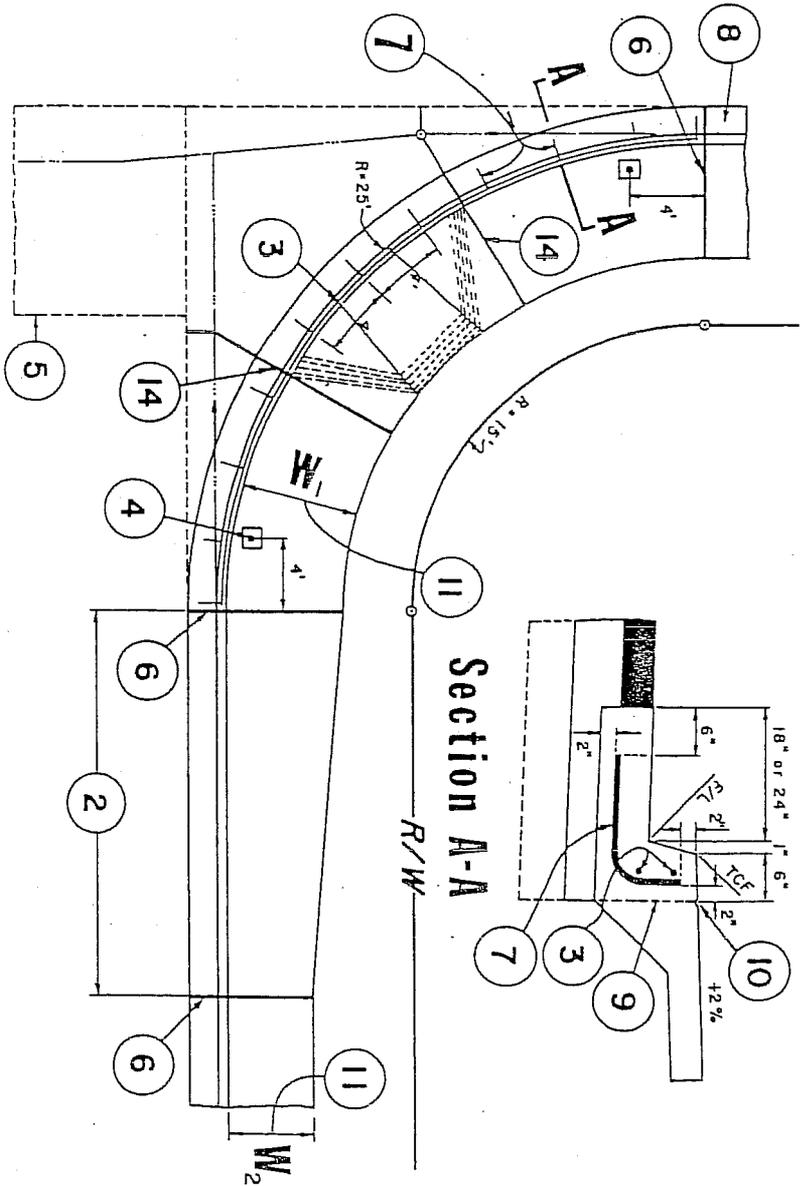
Approved by

*Charles W. Quinn*  
DIRECTOR OF PUBLIC WORKS

4/1/87  
DATE

**NOTES**

1. THIS DETAIL SHALL BE USED FOR ALL NEW CONSTRUCTION. SEE STANDARD DETAILS 4-060 AND 4-065 FOR WHEELCHAIR RAMP DETAILS.
2. SIDEWALKS WITHIN THE CURB RETURN AREAS SHALL BE A MINIMUM OF 7.25' WIDE. USE THE SIDEWALK TRANSITION, STANDARD DETAIL 4-050 WHEN ADJACENT SIDEWALKS ARE LESS THAN 6'. THE LENGTH SHALL BE 15' MINIMUM.
3. THE #4 BARS SHALL BE PLACED LONGITUDINALLY AS SHOWN IN SECTION A-A. LONGITUDINAL REINFORCING IS TO PASS THROUGH THE EXPANSION JOINTS IN ALL CONDITIONS. ALL LONGITUDINAL STEEL IS TO BE EXTENDED WITHIN 2" OF THE BCR AND ECR.
4. ALL SIGNS SHALL BE PLACED AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.
5. WHEN SPANDRELS AND CROSS GUTTERS ARE USED, SEE STANDARD DETAIL 3-020.



6. 1/2" MAXIMUM EXPANSION JOINT MATERIAL SHALL BE PLACED AT THE BCR, ECR, WHEELCHAIR RAMPS AND END OF SIDEWALK TRANSITIONS. SEE STANDARD DETAIL 4-040 FOR DETAILS.
7. #4 BARS SHALL BE PLACED AS SHOWN IN SECTION A-A FROM 4' EITHER SIDE OF  $\Delta/2$  AT 4' CENTER TO CENTER.
8. SEE STANDARD DETAIL 3-100 FOR CURB DETAILS.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

Approved by

4-010

SIDEWALK RETURN - TYPE 1

*Barbara Wagner* 4/1/87  
 DIRECTOR OF PUBLIC WORKS DATE

NOTES (CONTINUED)

- 9. WHERE SIDEWALK AND CURB ARE NOT POURED MONOLITHICALLY DOWELLING WILL BE REQUIRED AS SPECIFIED BY THE COUNTY. SEE STANDARD DETAIL 3-100 AND 3-110 FOR DETAILS.
- 10. 1/4" TOOLED JOINT AS SHOWN SHALL BE PROVIDED.
- 11. THE WIDTHS W<sub>1</sub> AND W<sub>2</sub> ARE VARIABLE. SEE STANDARD DETAIL 4-040.
- 12. ALL CONCRETE SHALL BE CLASS B.
- 13. FOR CURING, FINISHING, AND CLEANING OF CURBS, SEE THE STANDARD SPECIFICATIONS, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION.
- 14. 1-1/2" DEEP CONTRACTION JOINTS AT  $\Delta/3$  SHALL BE PROVIDED AS SHOWN. WHEN THE SPANDREL IS USED, 1/2" MAXIMUM EXPANSION JOINT MATERIAL AT  $\Delta/3$  SHALL BE PROVIDED. SEE STANDARD DETAIL 3-020.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

4-010

SIDEWALK RETURN - Type 1

Approved by

*Charles F. Wagner*

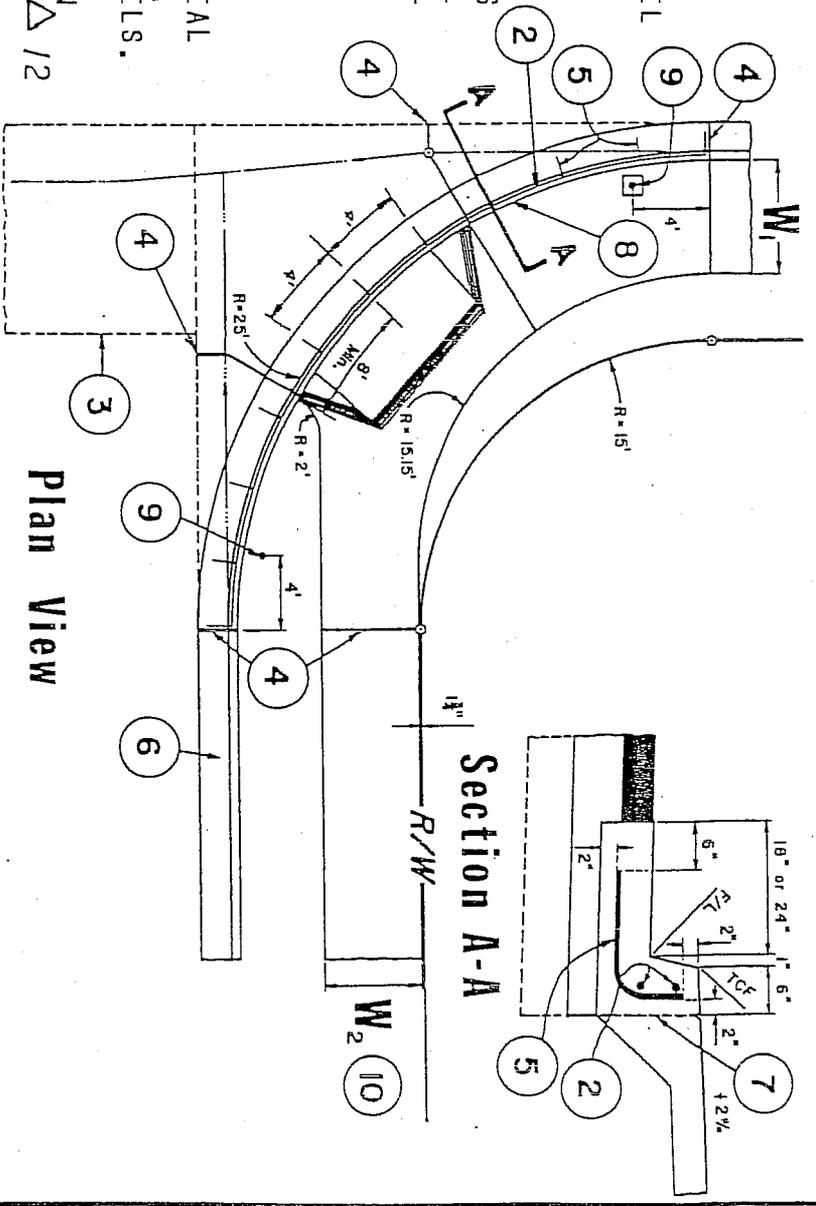
DIRECTOR OF PUBLIC WORKS

4/1/87

DATE

**NOTES**

1. THIS DETAIL SHALL BE USED FOR RE-PLACEMENT OR TO MATCH EXISTING FACILITIES ONLY. SEE STANDARD DETAIL 4-010 FOR ALL NEW CONSTRUCTION.
2. THE #4 BARS SHALL BE PLACED LONGITUDINALLY AS SHOWN IN SECTION A-A. LONGITUDINAL REINFORCING SHALL PASS THROUGH THE EXPANSION JOINTS IN ALL CONDITIONS. ALL LONGITUDINAL STEEL SHALL BE EXTENDED WITHIN 2" OF THE BCR AND ECR.
3. WHEN SPANDREL AND CROSS GUTTER ARE USED, SEE STANDARD DETAIL 3-020.
4. 1/2" MAXIMUM EXPANSION JOINT MATERIAL SHALL BE PLACED AT THE BCR AND ECR. SEE STANDARD DETAIL 4-040 FOR DETAILS.
5. #4 BARS SHALL BE PLACED AS SHOWN IN SECTION A-A FROM 4' EITHER SIDE OF  $\Delta$  1/2 AT 4' CENTER TO CENTER.
6. SEE STANDARD DETAILS 4-060 AND 4-065 FOR WHEELCHAIR RAMP DETAILS.
7. WHERE SIDEWALK AND CURB-GUTTER ARE NOT POURED MONOLITHICALLY, DOWELLING WILL BE REQUIRED AS SPECIFIED BY THE COUNTY. SEE STANDARD DETAIL 3-110 FOR DETAILS.
8. 1/4" TOOLED JOINT SHALL BE PROVIDED AS SHOWN.



9. ALL SIGNS WILL BE PLACED AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.
10. THE WIDTHS W<sub>1</sub> AND W<sub>2</sub> ARE VARIABLE. SEE STANDARD DETAIL 4-040.
11. ALL CONCRETE SHALL BE CLASS B.
12. FOR CURING, FINISHING, AND CLEANING OF CURBS, SEE THE STANDARD SPECIFICATIONS, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

Approved by

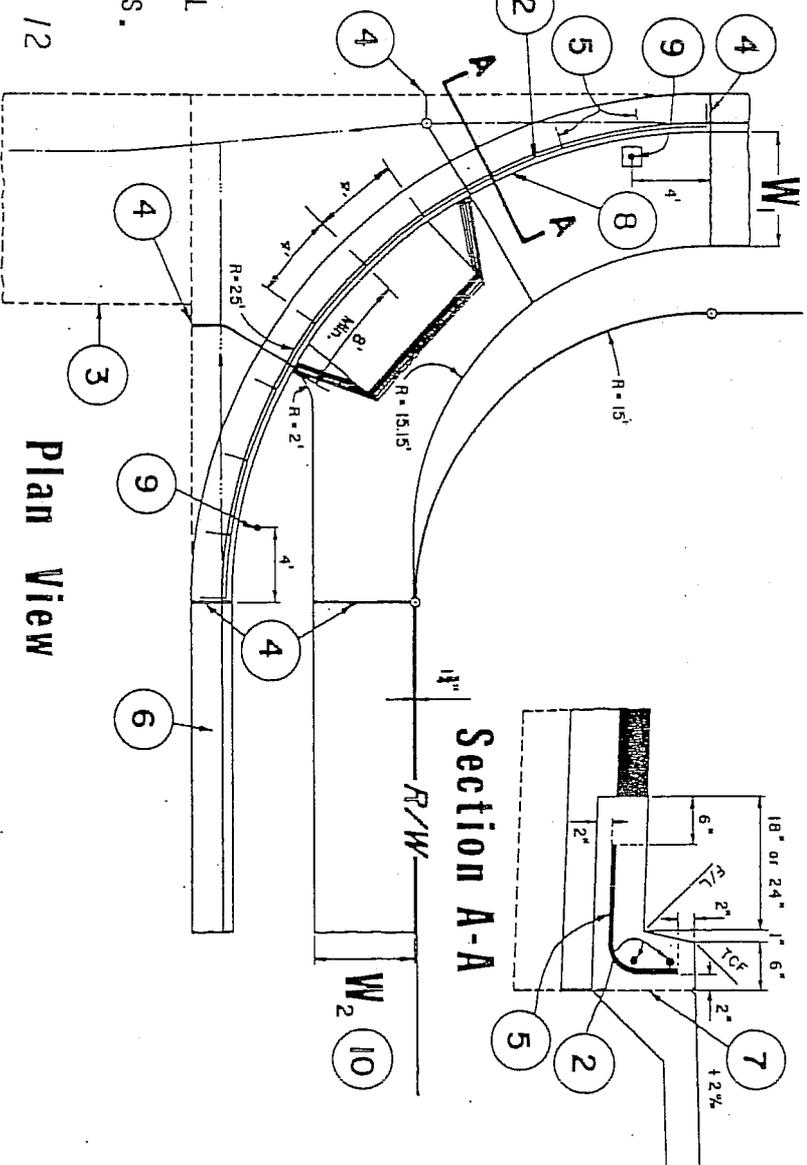
4-030

SIDEWALK RETURN - Type 3

*Charles Wagner* 4/11/87  
 DIRECTOR OF PUBLIC WORKS DATE

**NOTES**

1. THIS DETAIL SHALL BE USED FOR RE-PLACEMENT OR TO MATCH EXISTING FACILITIES ONLY. SEE STANDARD DETAIL 4-010 FOR ALL NEW CONSTRUCTION.
2. THE #4 BARS SHALL BE PLACED LONGITUDINALLY AS SHOWN IN SECTION A-A. LONGITUDINAL REINFORCING SHALL PASS THROUGH THE EXPANSION JOINTS IN ALL CONDITIONS. ALL LONGITUDINAL STEEL SHALL BE EXTENDED WITHIN 2" OF THE BCR AND ECR.
3. WHEN SPANDREL AND CROSS GUTTER ARE USED, SEE STANDARD DETAIL 3-020.
4. 1/2" MAXIMUM EXPANSION JOINT MATERIAL SHALL BE PLACED AT THE BCR AND ECR. SEE STANDARD DETAIL 4-040 FOR DETAILS.
5. #4 BARS SHALL BE PLACED AS SHOWN IN SECTION A-A FROM 4' EITHER SIDE OF  $\Delta$  /2 AT 4' CENTER TO CENTER.
6. SEE STANDARD DETAILS 4-060 AND 4-065 FOR WHEELCHAIR RAMP DETAILS.
7. WHERE SIDEWALK AND CURB-GUTTER ARE NOT POURED MONOLITHICALLY, DOWELLING WILL BE REQUIRED AS SPECIFIED BY THE COUNTY. SEE STANDARD DETAIL 3-110 FOR DETAILS.
8. 1/4" TOOLED JOINT SHALL BE PROVIDED AS SHOWN.



9. ALL SIGNS WILL BE PLACED AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.
10. THE WIDTHS  $W_1$  AND  $W_2$  ARE VARIABLE. SEE STANDARD DETAIL 4-040.
11. ALL CONCRETE SHALL BE CLASS B.
12. FOR CURING, FINISHING, AND CLEANING OF CURBS, SEE THE STANDARD SPECIFICATIONS, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

4-03n	SIDEWALK RETURN - Type 3	DATE
Approved by <i>Charles Wagner</i>		4/1/87
DIRECTOR OF PUBLIC WORKS		DATE

NEW CONSTRUCTION

NOTES

1. CONSTRUCTION OF SIDEWALK AND CURB-GUTTER SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION.
2. ALL CONCRETE SHALL BE CLASS B.
3. EXPANSION JOINTS 1/2 INCH MAXIMUM IN THICKNESS, PRE-MOLDED TO THE SECTION OF THE SIDEWALK, SHALL BE OF MATERIAL CONFORMING TO THE SPECIFICATIONS OF ASTM DESIGNATION: D1715, AND SHALL BE PLACED AT THE BEGINNING AND END OF EACH CURVE, ON EACH SIDE OF STRUCTURES, AT DROP CURB MULTIDWELLING AND COMMERCIAL DRIVEWAYS (SEE DETAILS 3-070, 3-080 AND 3-090), 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.
4. CONTRACTION JOINTS 1-1/4" IN DEPTH SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 10'. CONTRACTION JOINTS MAY BE "QUICK-JOINT" OR AN APPROVED EQUAL.
5. THE WIDTH OF THE SIDEWALK SHALL BE AS SHOWN IN TABLE "A" FOR THE VARIOUS STREET SECTIONS, WITH THE EXCEPTION OF SIDEWALKS FRONTING COMMERCIAL DEVELOPMENTS, WHERE THE SIDEWALK SHALL EXTEND FROM THE BACK OF THE CURB TO THE RIGHT OF WAY LINE.

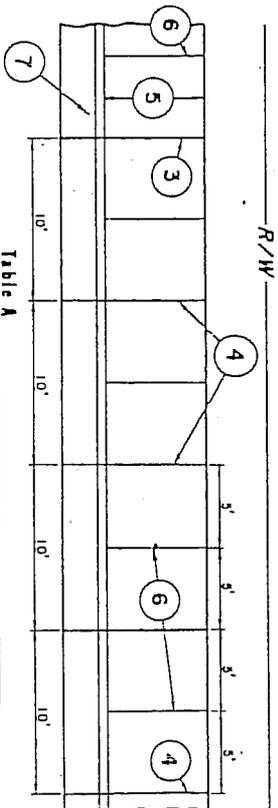


Table C

Width	Standard CY/LF	Nonreflective CY/LF
9.5'	0.116	0.124
8'	0.073	0.082
5'	0.081	0.089
4'	0.049	0.057

Table A

R/W Width	Sid. Dil. No.	Minimum Width	Commercial Width
104'	5-080	6'	9.5'
96'	5-070	6'	9.5'
84'	5-060	5'	9.5'
60'	5-050	5'	9.5'
56'	5-040	5'	9.5'
52'	5-030	4'	NONE

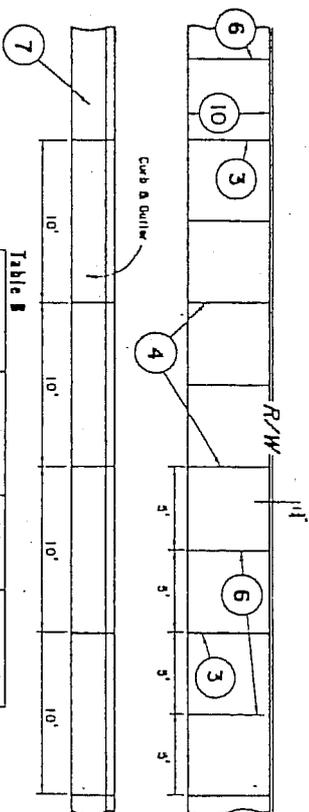


Table B

R/W Width	Sid. Dil. No.	Minimum Width	Commercial Width
104'	5-080	5'	9.5'
96'	5-070	5'	9.5'
84'	5-060	5'	9.5'
60'	5-050	5'	9.5'
56'	5-040	5'	9.5'
52'	5-030	4'	NONE

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

Approved by

4-040

SIDEWALK DETAILS

*Charles F. Wagner* 4/11/87  
DIRECTOR OF PUBLIC WORKS DATE

NOTES (CONTINUED)

6. 1/4" SCORE MARKS SHALL BE PROVIDED WITH A TOOL WHICH WILL LEAVE ROUNDED EDGES. WHEN THE WIDTH EXCEEDS 6', LONGITUDINAL SCORE AT THE CENTER OF THE SIDEWALK SHALL BE PROVIDED.
7. THE GUTTER DIMENSION VARIES. SEE STANDARD DETAIL 3-110, TABLE "A".
8. ADDITIONAL WIDTH TO MAINTAIN A MINIMUM OF 5' OF CLEAR SIDEWALK SHALL BE PROVIDED WHEN OBSTRUCTIONS SUCH AS UTILITIES EXIST.
9. ALL NEW SIDEWALKS CONSTRUCTED SHALL BE PLACED ADJACENT TO THE CURB IN ACCORDANCE WITH STANDARD DETAIL 3-110, EXCEPT WHEN REPLACING EXISTING FACILITIES. WHEN REPLACING EXISTING FACILITIES THE WIDTH OF THE SIDEWALK SHALL BE AS SHOWN IN TABLE "B" FOR THE VARIOUS STREET SECTIONS.
10. REMOVAL OF THE SIDEWALK MAY BE REQUIRED IF THE EXISTING SIDEWALK IS BROKEN OR NOT CONSTRUCTED TO THE CORRECT ELEVATION.
11. ALL SIDEWALKS SHALL HAVE A MINIMUM THICKNESS OF 0.33'.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

4-040

SIDEWALK DETAILS

Approved by

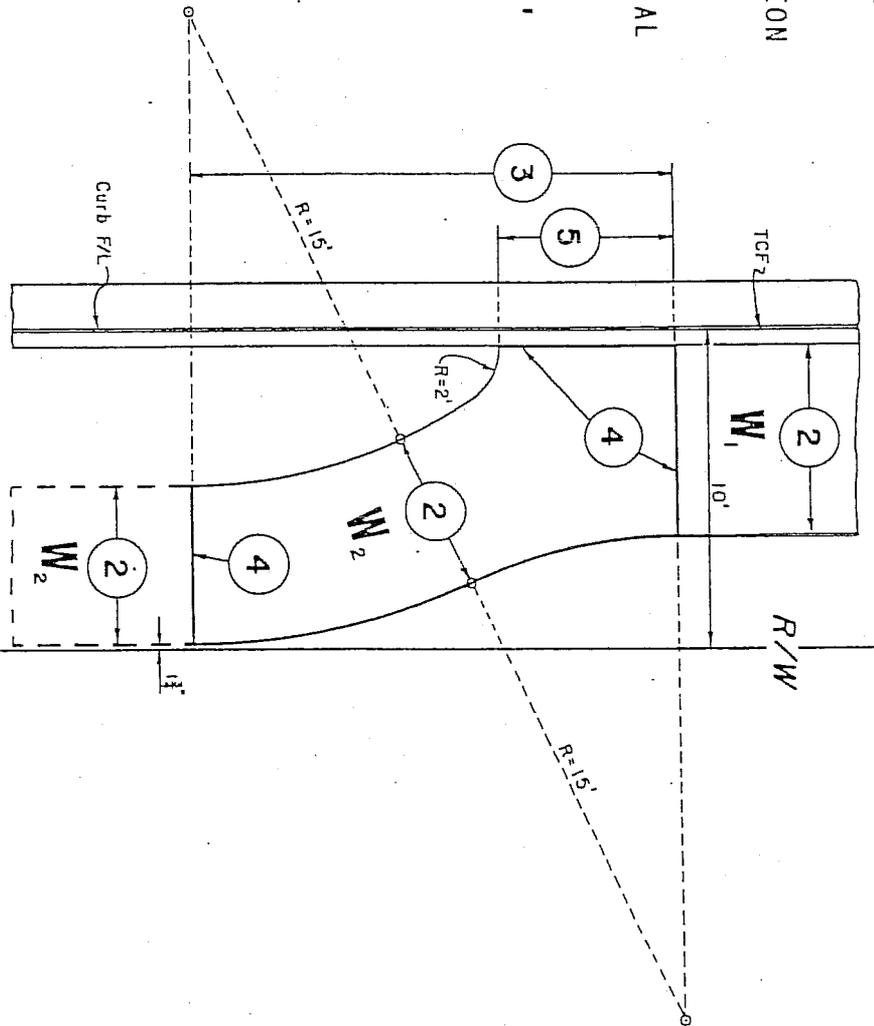
*Charles F. Wagner* 4/1/87

DIRECTOR OF PUBLIC WORKS

DATE

NOTES

1. ALL CONCRETE SHALL BE CLASS B.
2. THE WIDTH OF  $W_1$  IS DETERMINED FROM TABLE A STANDARD DETAIL 4-040. THE WIDTH  $W_2$  IS THE WIDTH OF THE EXISTING SIDEWALK.
3. THE LENGTH OF THE SIDEWALK TRANSITION SHALL BE A MINIMUM OF 15' AND A MAXIMUM OF 20'.
4. 1/2" MAXIMUM EXPANSION JOINT MATERIAL SHALL BE PROVIDED AS SHOWN. SEE STANDARD DETAIL 4-040.
5. THIS LENGTH SHALL BE A MINIMUM OF 5' AND A MAXIMUM OF 10'.



COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

Approved by

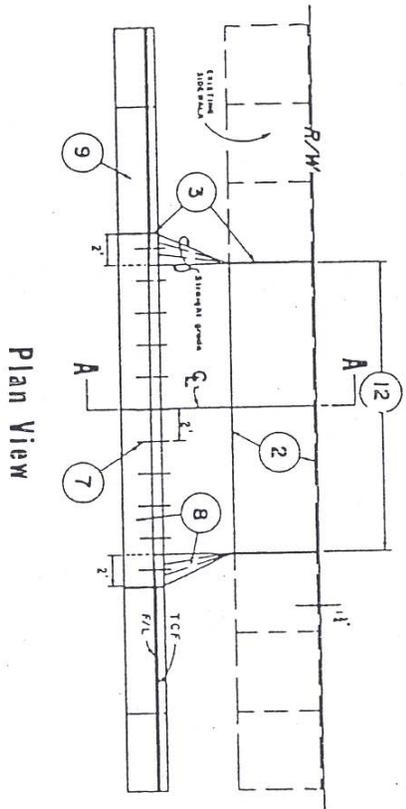
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SIDEWALK TRANSITION

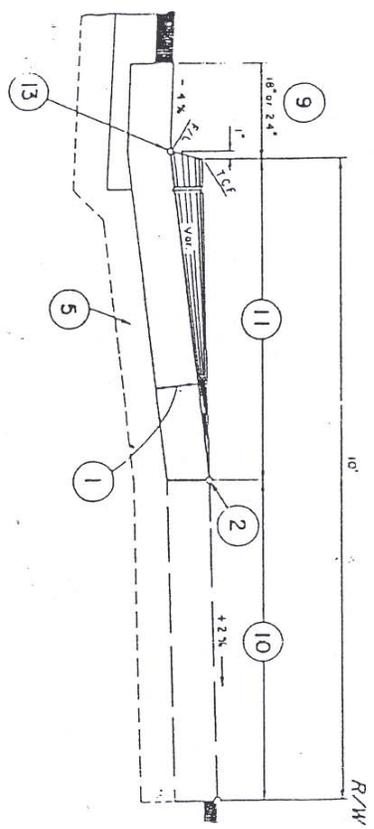
*Charles F. Wagner* 4/1/87

DIRECTOR OF PUBLIC WORKS

DATE



Plan View



Section A-A

- NOTES**
1. A MINIMUM THICKNESS OF 6" SHALL BE PROVIDED. IF THE DRIVEWAY IS USED BY MORE THAN 3 RESIDENCES OR USED FOR COMMERCIAL PROPERTIES, A MINIMUM THICKNESS OF 8" OF CLASS B CONCRETE SHALL BE PLACED.
  2. IF DRIVEWAY SURFACING IS CONCRETE, A 1/2" MAXIMUM EXPANSION JOINT MATERIAL AT THE BACK OF DRIVEWAY SHALL BE PROVIDED.
  3. 1/2" MAXIMUM EXPANSION JOINT MATERIAL AS SHOWN SHALL BE PROVIDED.
  4. A 1-1/2" DEEP CONTRACTION JOINT AT THE CENTERLINE OF THE DRIVEWAY SHALL BE PROVIDED.
  5. 0.75' NATIVE MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY.
  6. THIS DRIVEWAY SHALL BE USED ONLY IN EXISTING CONDITIONS WHERE SIDEWALK IS ADJACENT TO THE RIGHT OF WAY LINE. ~~STANDARD DETAIL 3-090 SHALL BE USED FOR ALL NEW CONSTRUCTION.~~
  7. ~~WHEN UTILIZING EXISTING CURB OPENINGS, 1/2" X 2" STEEL DOWELS AT 2' CENTER TO CENTER SHALL BE PROVIDED.~~
  8. ~~WHERE DRIVEWAY WINGS, SIDEWALK, APRONS, CURBS AND GUTTER ARE NOT POURED MONOLITHICALLY AS SHOWN, DOWELLING WILL BE REQUIRED AS SPECIFIED BY THE COUNTY STANDARD DETAILS 3-100, 3-110, AND 3-040.~~
  9. THE WIDTH OF THE GUTTER IS VARIABLE. SEE STANDARD DETAIL 3-100.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.		Approved by
3-090	DROP CURB DRIVEWAY TYPE 3	<i>Charles Wagner</i> 4/1/87
		DIRECTOR OF PUBLIC WORKS DATE

NOTES (CONTINUED)

10. THE WIDTH OF THE SIDEWALK SHALL BE IN ACCORDANCE WITH TABLE B, STANDARD DETAIL 4-040. ALL JOINTS AND MARKINGS SHALL BE IN ACCORDANCE WITH STANDARD DETAIL 4-040.
11. THE DIMENSION OF THE DRIVEWAY APRON IS VARIABLE.
12. FOR DRIVEWAY WIDTHS, REFER TO THE ENGINEERING DESIGN STANDARDS.
13. ~~1 1/2"~~ <sup>1 1/4"</sup> GUTTER AS SHOWN ON STANDARD DETAIL 4-065 SHALL BE PROVIDED.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

3-090

DROP CURB DRIVEWAY TYPE 3

Approved by

*Charles Wagner*

4/1/87

DIRECTOR OF PUBLIC WORKS

DATE



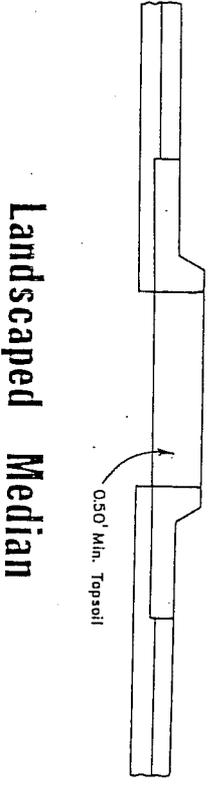
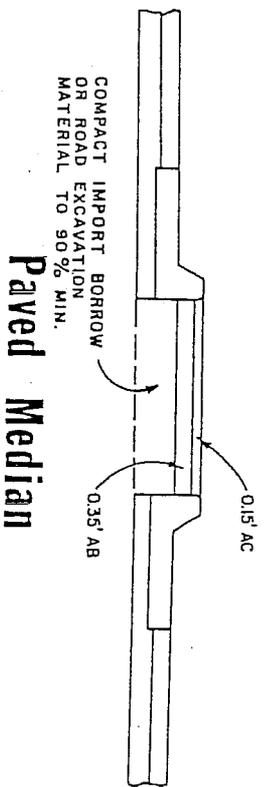
**NOTES (CONTINUED)**

8. ALL GUTTERS SHALL HAVE A MINIMUM THICKNESS OF 6" CLASS B CONCRETE.
9. ALL CROSS GUTTERS SHALL HAVE A MINIMUM THICKNESS OF 8" CLASS B CONCRETE.
10. SMOOTH STRUCTURAL STEEL DOWELS ARE TO BE LUBRICATED PRIOR TO PLACING CLASS B CONCRETE. PLACE DOWELS AT EXPANSION JOINTS AS SHOWN ON STANDARD DETAIL 3-020.
11. WHEN THE STRUCTURAL SECTION EXCEEDS 0.70', A MINIMUM OF 0.35' CLASS 2 AGGREGATE BASE SHALL BE PLACED UNDER THE CROSS GUTTERS AS SHOWN AND COMPACTED TO NOT LESS THAN 95% MAXIMUM DENSITY.
12. #4 BARS LONGITUDINALLY AS SHOWN IN ALL B-3 CURBS SHALL BE PROVIDED.
13. #4 DOWELS AT 4' CENTERS AS SHOWN SHALL BE PROVIDED.
14. THE TYPE OF CURB TO BE USED WITH EACH ROADWAY TYPICAL SECTION IS SHOWN IN TABLE A ON STANDARD DETAIL 3-110.
15. SEE STANDARD DETAIL 3-025 FOR BAR REINFORCING STEEL.
16. THE CONTRACTOR HAS THE OPTION OF USING EPOXY TO BOND B-3 CURB TO PAVEMENT IF SANDBLASTING IS COMPLETED PRIOR TO CURB PLACEMENT.

COUNTY OF SANTA BARBARA, CA. - DEPARTMENT OF PUBLIC WORKS - ROADS DIV.

3-100

CURB, GUTTER AND CROSS GUTTER



Approved by

*Barbara J. Wooten*  
 DIRECTOR OF PUBLIC WORKS  
 DATE 4/1/87