

**STANDARD DRAWINGS
AND
DETAILED SPECIFICATIONS
FOR
PAVEMENT RESTORATION**



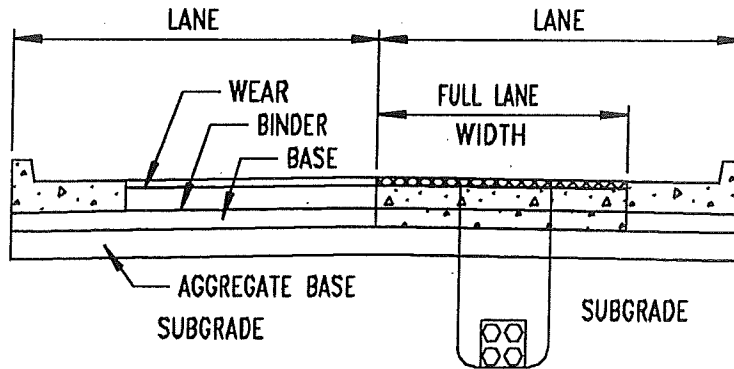
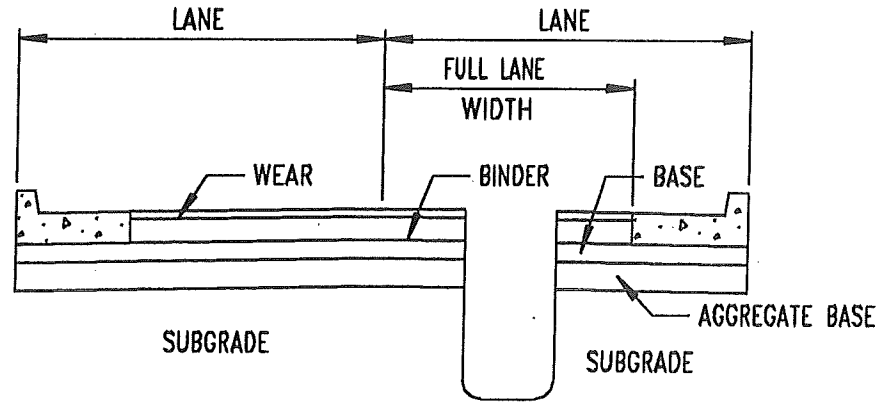
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NOTE: St. Louis County Department of Highways and Traffic details and specifications shall apply except as modified by the City Code and these standard drawings.

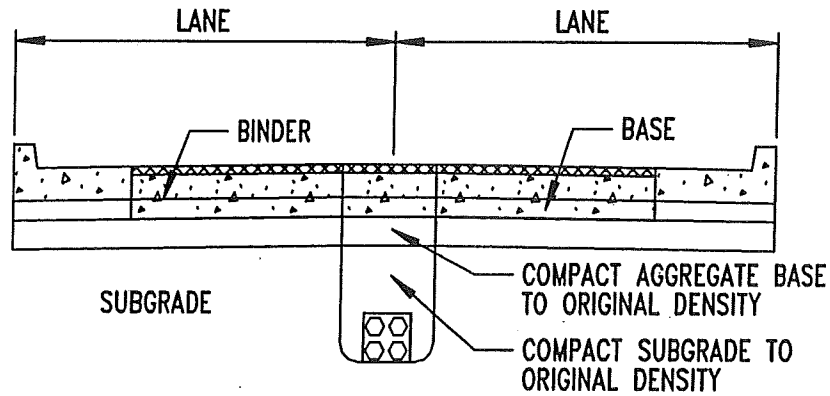
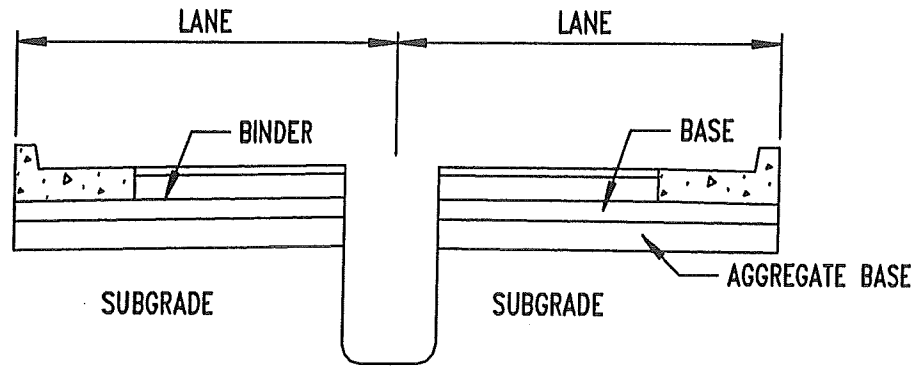
**CITY OF KIRKWOOD
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
(314) 822-5822**

October 27, 2003



NOTES:

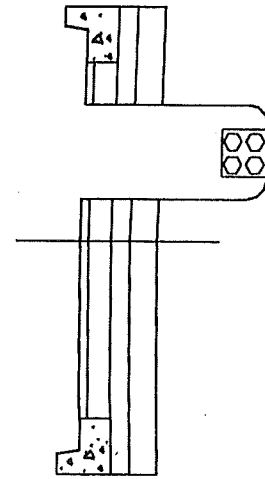
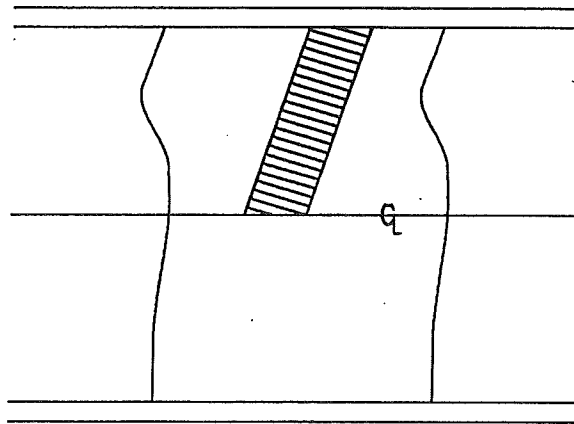
1. CONCRETE PAVEMENT: FULL PANEL REPLACEMENT IF ONE OR MORE OF THE FOLLOWING EXIST:
 - A. ANY ARTERIAL STREET LESS THAN 15 YEARS OLD OR ANY STREET LESS THAN 5 YEARS OLD.
 - B. ANY SLAB WHERE THE CUT REMOVES MORE THAN 40% OF THE SLAB.
 - C. ANY DIAGONAL CUT.
 - D. ANY SLAB WHERE THE PROPOSED CUT WILL LEAVE THE SLAB WITH 3 OR MORE PIECES.
 - E. ANY TRENCHING THAT TRANSVERSES ANY ARTERIAL.
2. ASPHALT PAVEMENT:
 - A. MINIMUM WIDTH OF REPLACEMENT OVERLAY SHALL BE TO THE CENTERLINE ON TWO LANE ROADS.
3. DOWEL BARS
 - A. 18" LONG, 1/2" DIAMETER
 - B. SHALL BE INSTALLED IN ALL TRANSVERSE JOINTS SPACED ON 24" CENTERS.



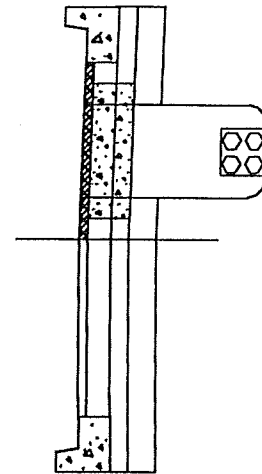
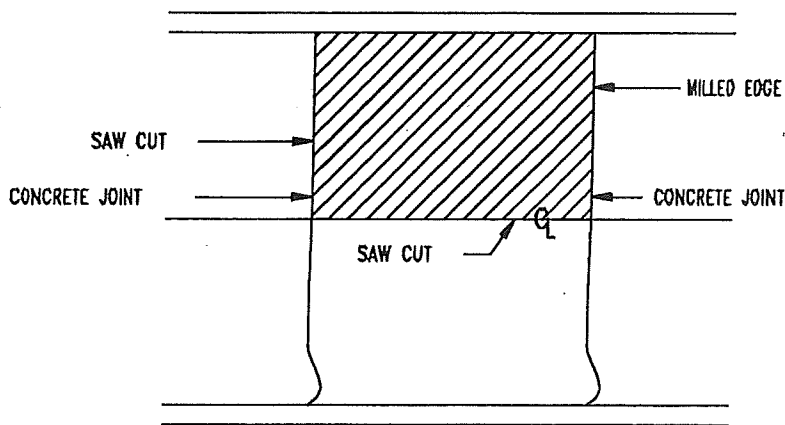
NOTES:

1. CONCRETE PAVEMENT: FULL PANEL REPLACEMENT IF ONE OR MORE OF THE FOLLOWING EXIST:
 - A. ANY ARTERIAL STREET LESS THAN 15 YEARS OLD OR ANY STREET LESS THAN 5 YEARS OLD.
 - B. ANY SLAB WHERE THE CUT REMOVES MORE THAN 40% OF THE SLAB.
 - C. ANY DIAGONAL CUT.
 - D. ANY SLAB WHERE THE PROPOSED CUT WILL LEAVE THE SLAB WITH 3 OR MORE PIECES.
 - E. ANY TRENCHING THAT TRANSVERSES ANY ARTERIAL.
2. ASPHALT PAVEMENT:
 - A. MINIMUM WIDTH OF REPLACEMENT OVERLAY SHALL BE THE FULL LANE WIDTH TO THE CENTERLINE ON TWO LANE ROADS.
3. DOWEL BARS
 - A. 18' LONG, 1/2" DIAMETER
 - B. SHALL BE INSTALLED IN ALL TRANSVERSE JOINTS SPACED ON 24' CENTERS.

TYPICAL HOLE EXCAVATION



TYPICAL FULL PANEL RESTORATION



1. CONCRETE PAVEMENT: WHERE PARTIAL PANEL REPLACEMENT IS ALLOWED, ADDITIONAL PAVEMENT REPLACEMENT BEYOND THE CUT OR TRENCH LINE WILL BE REQUIRED UNDER THE FOLLOWING CONDITIONS:

- A. CUTS LESS THAN 18 SQUARE FEET AND WHERE THE DEPTH OF THE EXCAVATION IS 6 FEET OR LESS BELOW GRADE AND NOT WITHIN IT'S INITIAL SIZE.
- B. MINIMUM RESTORATION SLAB SHALL BE 3 FEET WIDE IN THE LONGITUDIANL DIRECTION AND 5 FEET LONG IN TRANSVERSE DIRECTION.
- C. IF CUT IS LESS THAN 3 FEET FROM THE LONGITUDINAL OR 5 FEET FROM THE TRANSVERSE JOINT OR OTHER PATCHES OR CRACKS, THE INTERVENING PORTION OF THE SLAB MUST BE REMOVED.

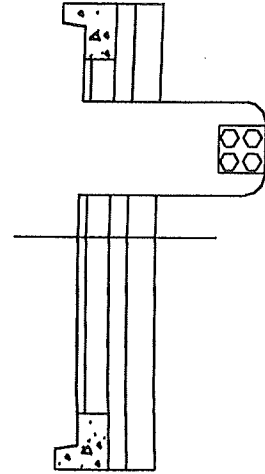
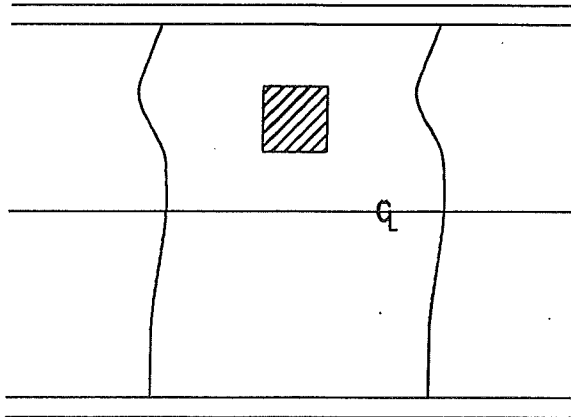
2. ASPHALT PAVEMENT:

- A. MINIMUM WIDTH OF REPLACEMENT OVERLAY SHALL BE THE FULL LANE WIDTH ON MULIPLE LANE ROADWAYS AND TO THE CENTERLINE ON TWO LANE ROADS.
- B. THE LENGTH OF REPLACEMENT SHALL BE THE LONGITUDINAL LENGTH OF THE CUT PLUS 24 INCHES AT BOTH ENDS. IN ALL CASES THE TOP OF BASE PAVEMENT MUST BE EXPOSED A MINIMUM 24 INCHES FROM ALL EDGES OF THE CUT.

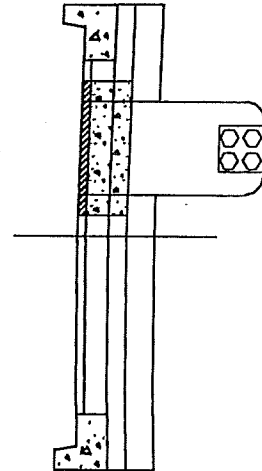
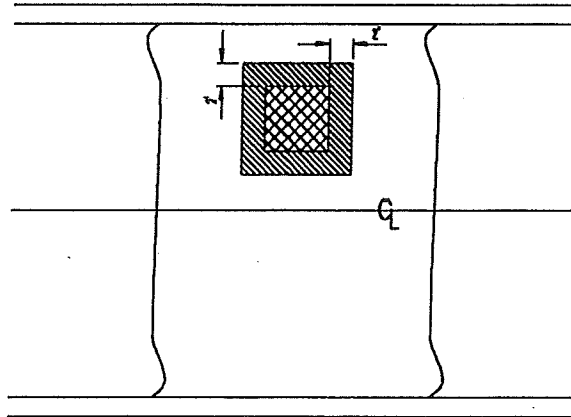
3. DOWEL BARS:

- A. 18' LONG, 1/2' DIAMETER
- B. DOWEL BARS SHALL BE INSTALLED IN ALL TRANSVERSE JOINTS SPACED 24' ON CENTER.

TYPICAL HOLE EXCAVATION



TYPICAL PARTIAL PANEL RESTORATION



1. CONCRETE PAVEMENT: WHERE PARTIAL PANEL REPLACEMENT IS ALLOWED, ADDITIONAL PAVEMENT REPLACEMENT BEYOND THE CUT OR TRENCH LINE WILL BE REQUIRED UNDER THE FOLLOWING CONDITIONS:

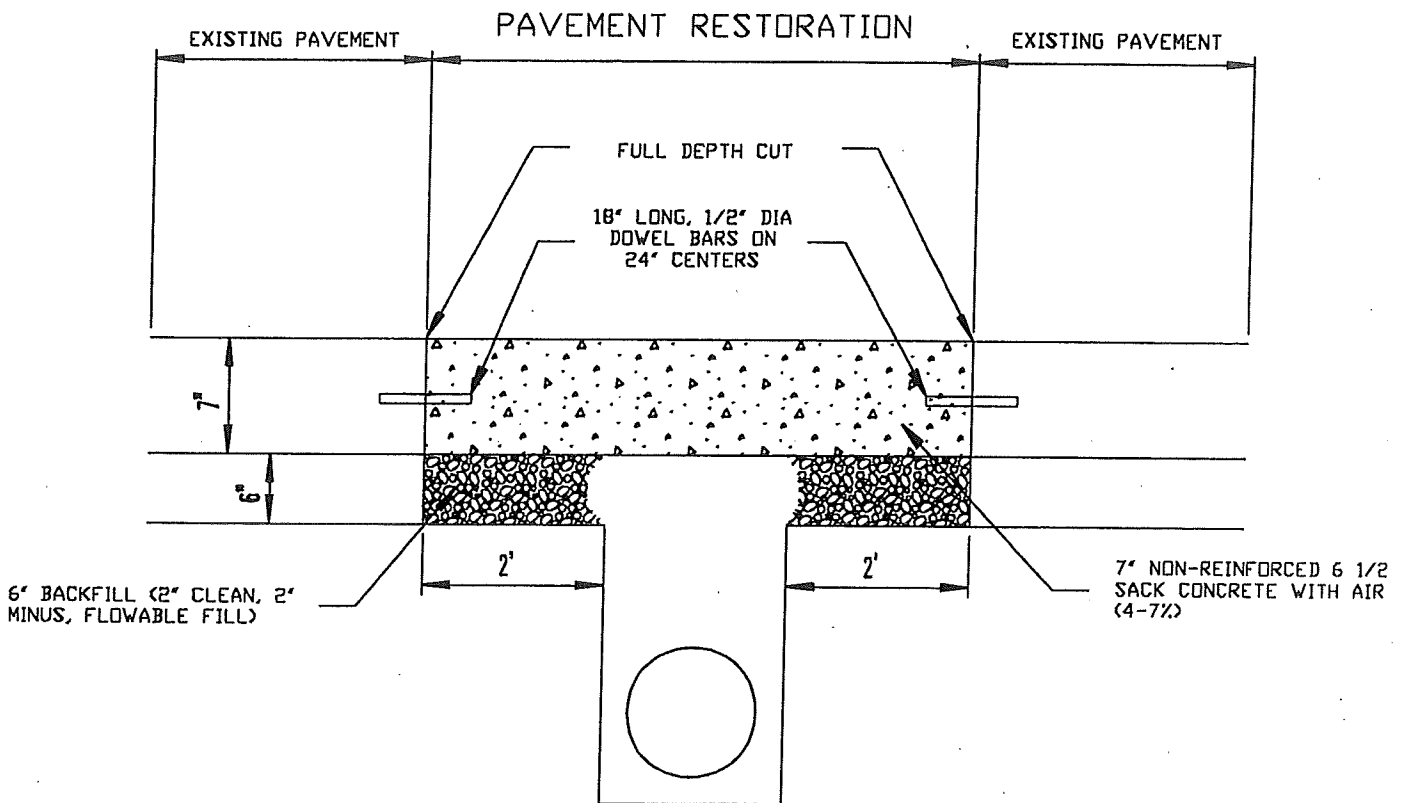
- A. CUTS LESS THAN 18 SQUARE FEET AND WHERE THE DEPTH OF THE EXCAVATION IS 6 FEET OR LESS BELOW GRADE AND NOT WITHIN IT'S INITIAL SIZE.
- B. MINIMUM RESTORATION SLAB SHALL BE 3 FEET WIDE IN THE LONGITUDIANL DIRECTION AND 5 FEET LONG IN TRANSVERSE DIRECTION.
- C. IF CUT IS LESS THAN 3 FEET FROM THE LONGITUDINAL OR 5 FEET FROM THE TRANSVERSE JOINT OR OTHER PATCHES OR CRACKS, THE INTERVENING PORTION OF THE SLAB MUST BE REMOVED.

2. ASPHALT PAVEMENT:

- A. MINIMUM WIDTH OF REPLACEMENT OVERLAY SHALL BE THE FULL LANE WIDTH ON MULTIPLE LANE ROADWAYS AND TO THE CENTERLINE ON TWO LANE ROADS.
- B. THE LENGTH OF REPLACEMENT SHALL BE THE LONGITUDINAL LENGTH OF THE CUT PLUS 24 INCHES AT BOTH ENDS. IN ALL CASES THE TOP OF BASE PAVEMENT MUST BE EXPOSED A MINIMUM 24 INCHES FROM ALL EDGES OF THE CUT.

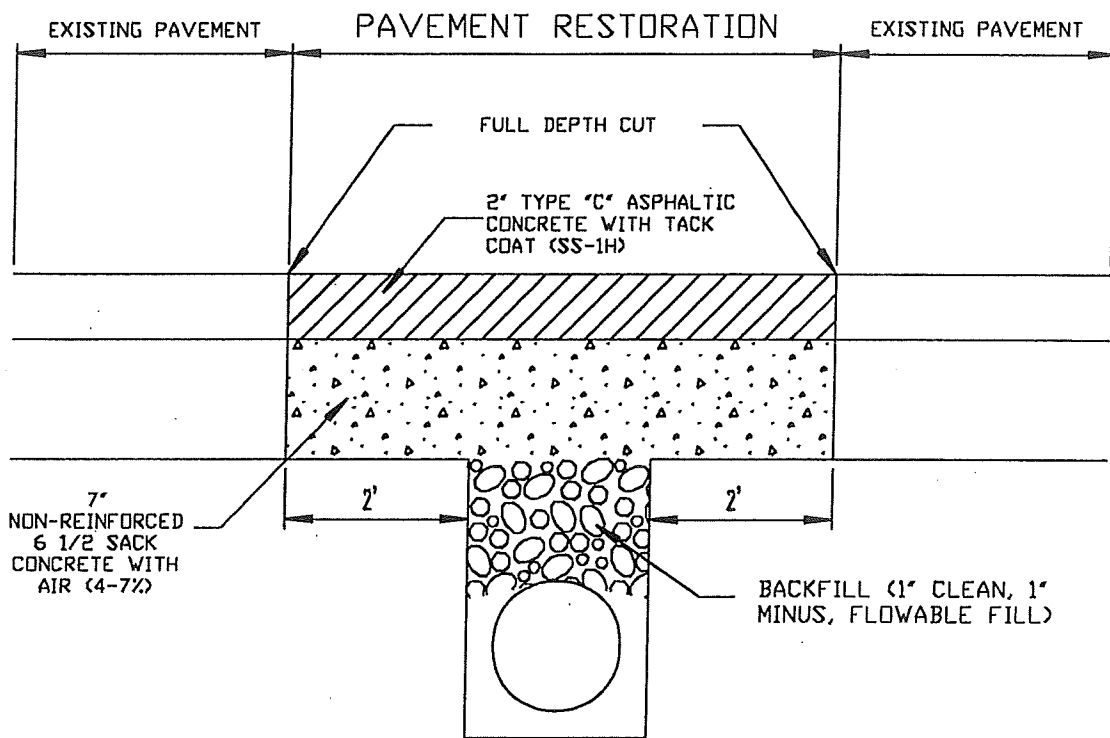
3. DOWEL BARS:

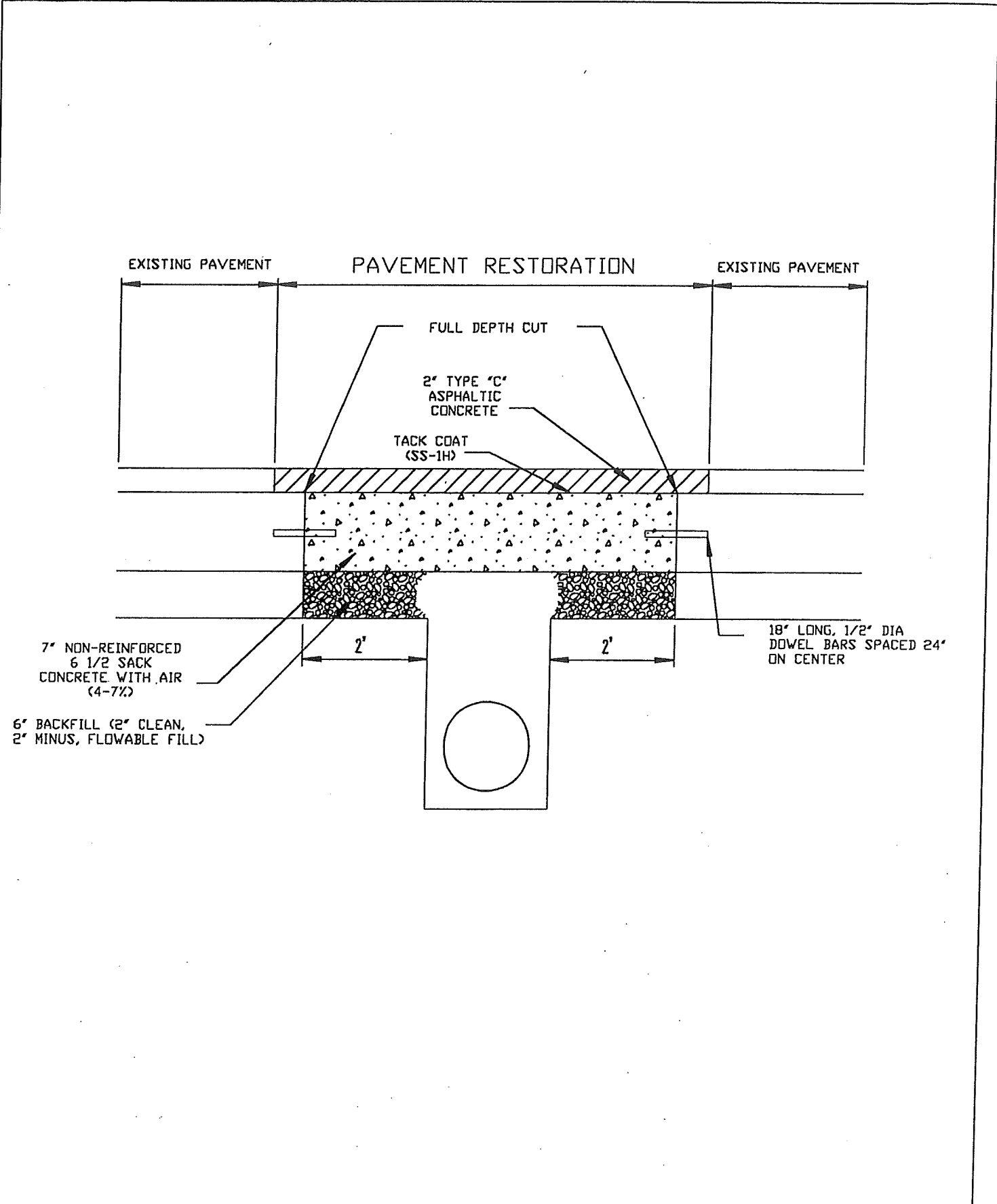
- A. 18" LONG, 1/2" DIAMETER
- B. DOWEL BARS SHALL BE INSTALLED IN ALL TRANSVERSE JOINTS SPACED 24" ON CENTER.

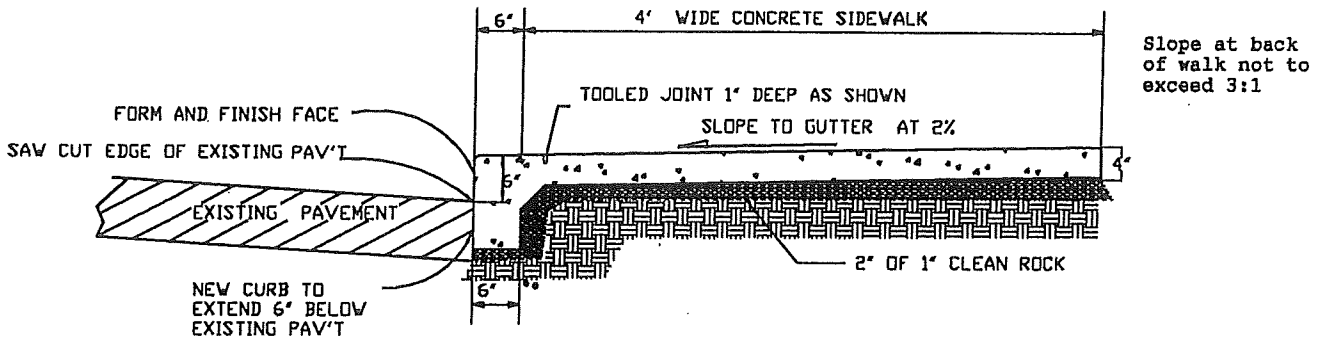


6" BACKFILL (2" CLEAN, 2" MINUS, FLOWABLE FILL)

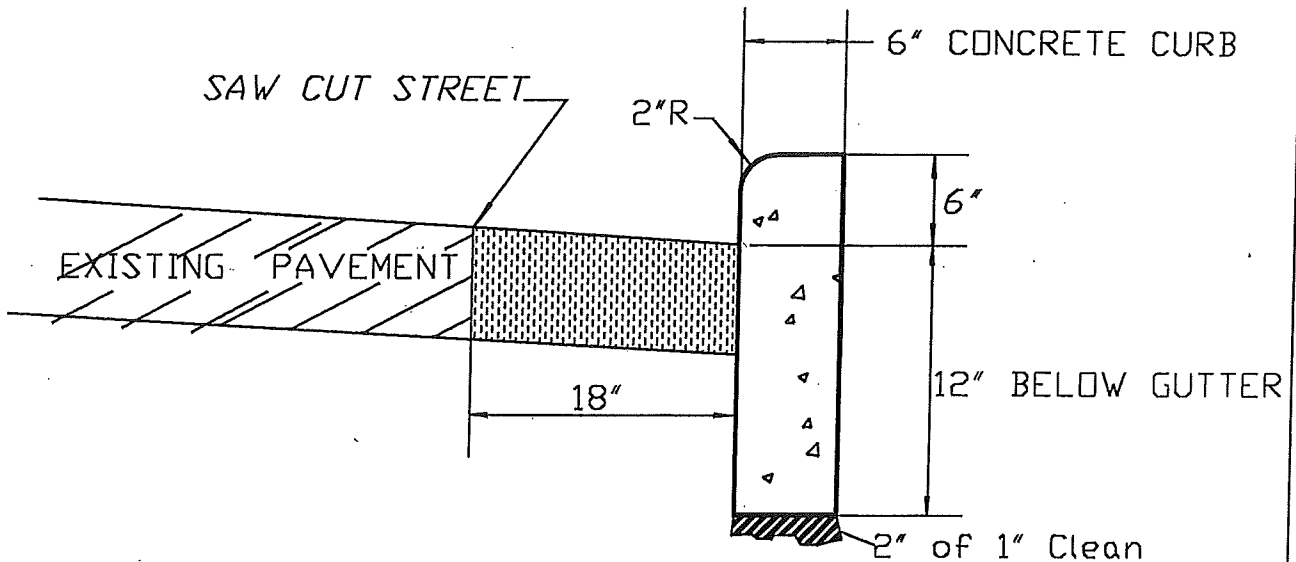
7" NON-REINFORCED 6 1/2 SACK CONCRETE WITH AIR (4-7%)



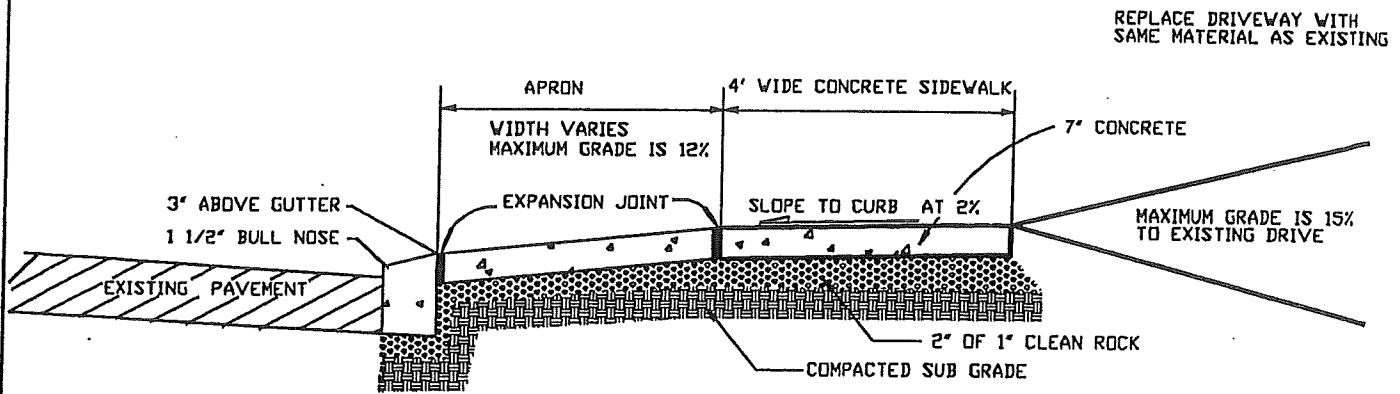




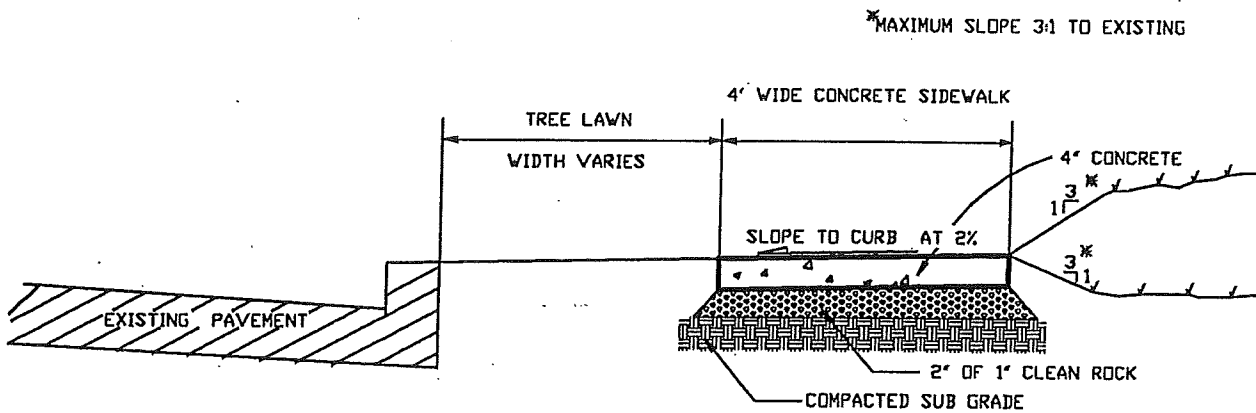
CURB AND INTEGRAL WALK



VERTICAL CURB



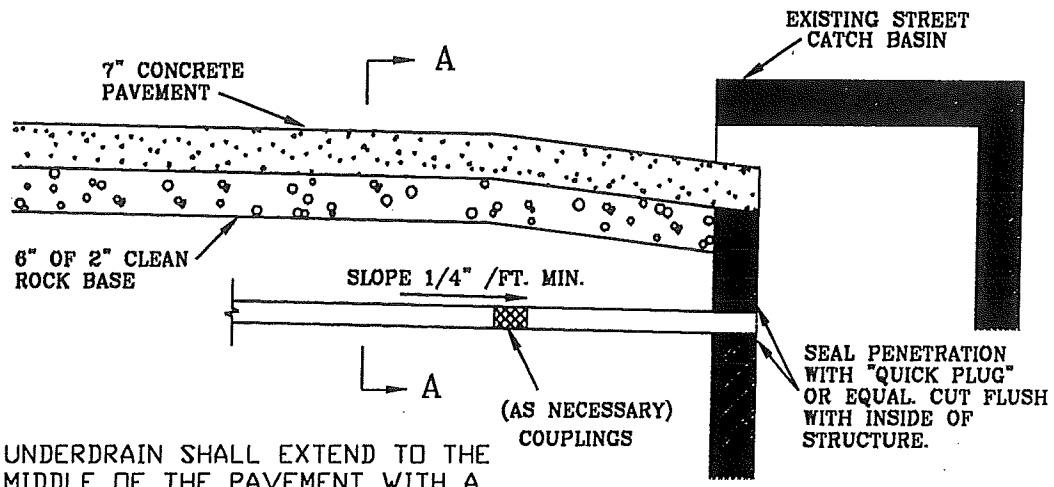
TYPICAL DRIVEWAY APRON



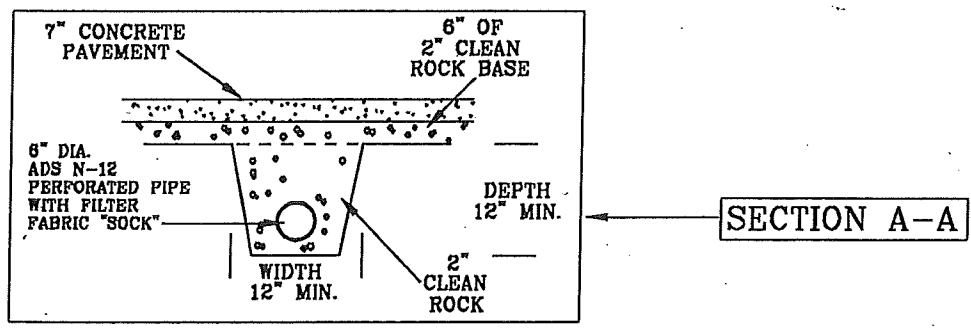
TYPICAL SIDEWALK WITH TREELAWN

TITLE:
DATE:

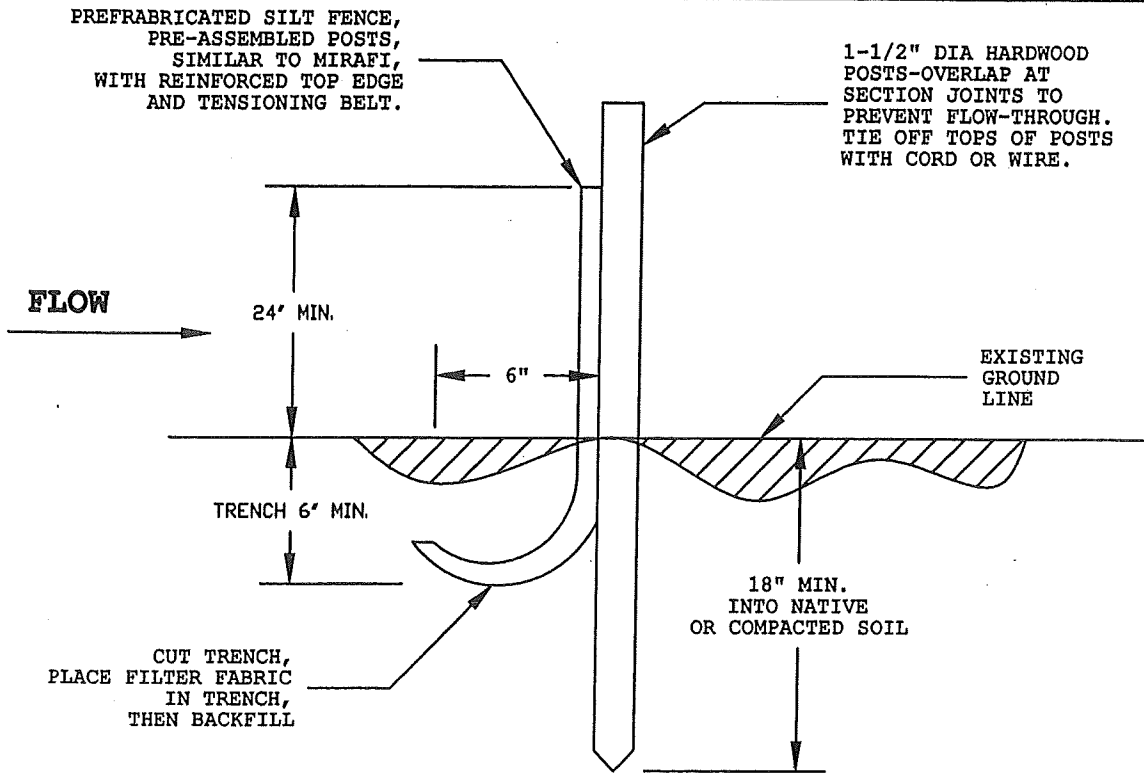
SHEET:
PAGE 9



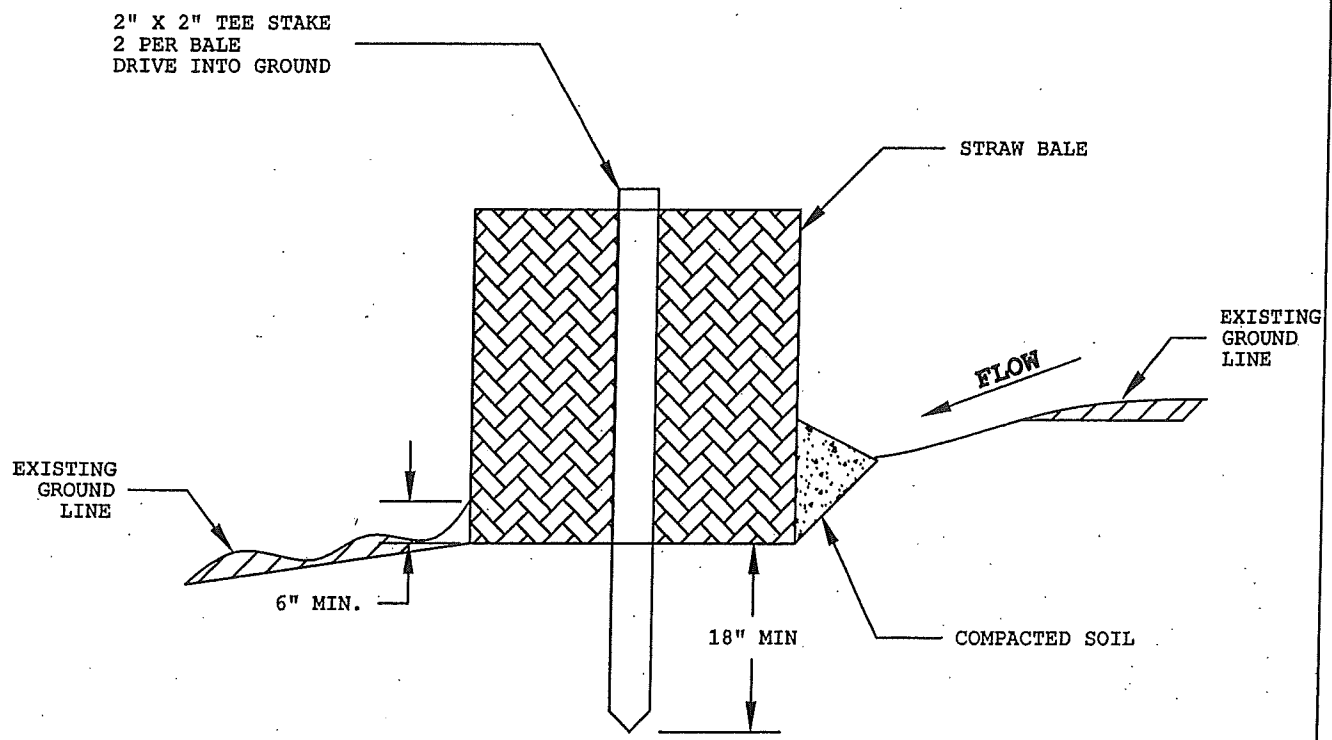
UNDERDRAIN SHALL EXTEND TO THE MIDDLE OF THE PAVEMENT WITH A TERMINUS CAP, OR ACROSS THE ENTIRE ROAD WITH A TERMINUS CAP IF IT IS THE LAST STORM INLET.



TRANSVERSE PAVEMENT UNDER DRAIN



SILTATION FENCE DETAIL



STRAW BALE DETAIL

GENERAL NOTES

1. DO NOT SCALE DRAWINGS. FOLLOW DIMENSIONS.
2. Sidewalks and sidewalk ramps shall be constructed in accordance with these specifications and the current approved American with Disabilities Act Accessibility Guidelines (ADAAG).
3. Provide a landing at the top of each straight ramp when the Grade Along Curb(s) is greater than +22 and less than +12. For other values of "0", landing is required.
4. Maximum sidewalk cross slope is 0.02%/ft.
5. Where curb ramp meets pavement, bull nose will not be permitted.
6. Construct a diagonal ramp when the radius for a straight ramp is exceeded.
7. If existing concrete curb is constructed, strike it at the bottom of ramp at the curb line. If concrete curb is down-on, block out pavement to provide full depth curb across ramp from outer point of curb taper to outer point of curb taper.
8. For sidewalk location on Curbside-Side, refer to "Pavement Construction Details".
9. Ramps within five(5) feet of street edge will be seven(7) inches thick.
10. Ramps will be flush with the gutter line.
11. A pre-manufactured detectable warning surface shall be used when it is approved by the Public Works Director.
12. Surface shall be a color approved by the Public Works Director.
13. Maximum slope allowed for ramps is 1:12.
14. Maximum cross slope allowed for ramps is 2%.

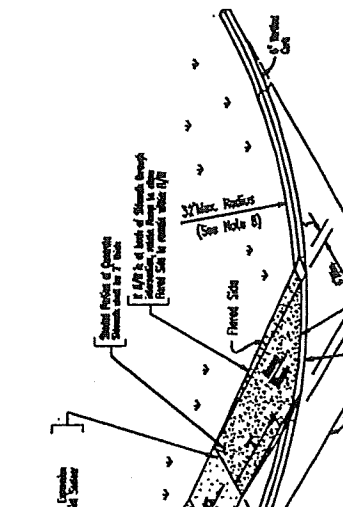
SAINT LOUIS COUNTY
DEPARTMENT OF HIGHWAYS AND TRAFFIC
CLAYTON, MISSOURI

PAVEMENT CONSTRUCTION DETAILS

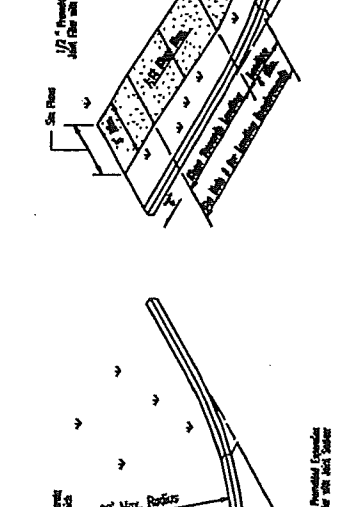
**CONCRETE SIDEWALK
AND CURB RAMPS**

REVISION DATE: March 2, 1998

DRAWING
CS08.10



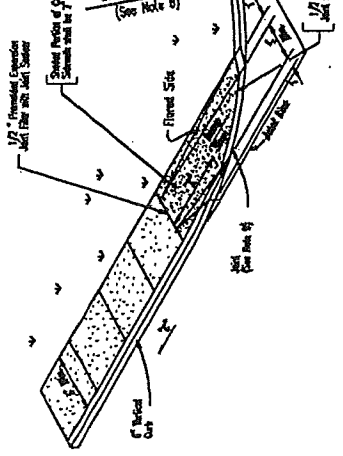
**STRAIGHT CURB RAMP - 6" VERTICAL CURB
(TYPE 1)**



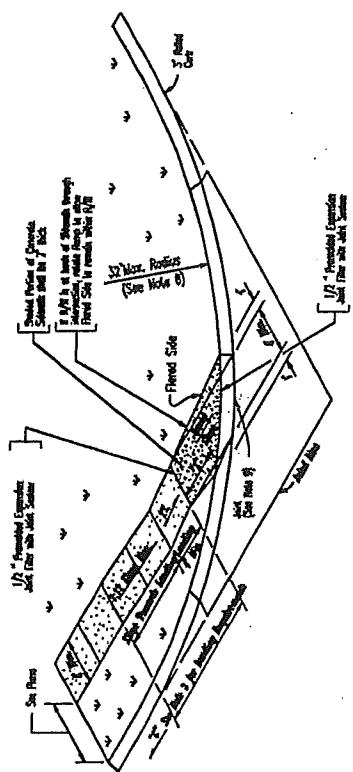
**STRAIGHT CURB RAMP - 6" VERTICAL CURB
(TYPE 2)**

TYPE 1 AND TYPE 2 CURB RAMPS	MIN. LENGTH OF RAMP (L.F.)
GRADE ALONG CURB (%)	
NEGATIVE (-) VALUES	
0 TO +1	6
+1.01 TO +2	7
+2.01 TO +3	8
+3.01 TO +4	10
GREATER THAN +4	12
NOTE: Positive (+)% - Proceeding away from intersection and up a grade.	15
Negative (-)% - Proceeding away from intersection and down a grade.	

TYPE 3 CURB RAMP	MIN. LENGTH OF RAMP (L.F.)
GRADE ALONG CURB (%)	
NEGATIVE (-) VALUES	
0 TO +2	3
+2.01 TO +3	4
+3.01 TO +4	5
+4.01 TO +5	6
+5.01 TO +6	8
GREATER THAN +6	11
NOTE: Positive (+)% - Proceeding away from intersection and up a grade.	15
Negative (-)% - Proceeding away from intersection and down a grade.	



**STRAIGHT CURB RAMP - 3" ROLLED CURB
(TYPE 3)**



GENERAL NOTES

1. IN NOT SCALE DRAWINGS. FOLLOW DIMENSIONS.

2. Sidewalks and sidewalk ramps shall be constructed in accordance with the current approved specifications and the current approved 'American with Disabilities Act Accessibility Guidelines' (ADAAG).

3. Provide a landing at the top of each straight ramp when the Grade Along (G.A.) is greater than +22 and less than +24. For other values of 'G', including all negative values, no landing is required.

4. Maximum sidewalk cross slope is 0.02'/ft.

5. Where curb ramp meets pavement, bull nose will not be permitted.

6. Construct a diagonal ramp when the radius for a straight ramp is exceeded.

7. If monolithic concrete curb is constructed, strike a dummy joint across bottom of ramp at the curb line. If concrete curb is dove-tail, block out pavement to provide full depth curb across ramp from outer point of curb taper to outer point of curb taper.

8. For sidewalk location on Curb-to-Street, refer to 'Pavement Construction Details'.

9. Ramps within five(5) feet of street edge will be seven(7) inches thick.

10. Ramps will be flush with the gutter line.

11. A pre-manufactured detectable warning surface shall be used that is approved by the Public Works Director.

12. Surface shall be a color approved by the Public Works Director.

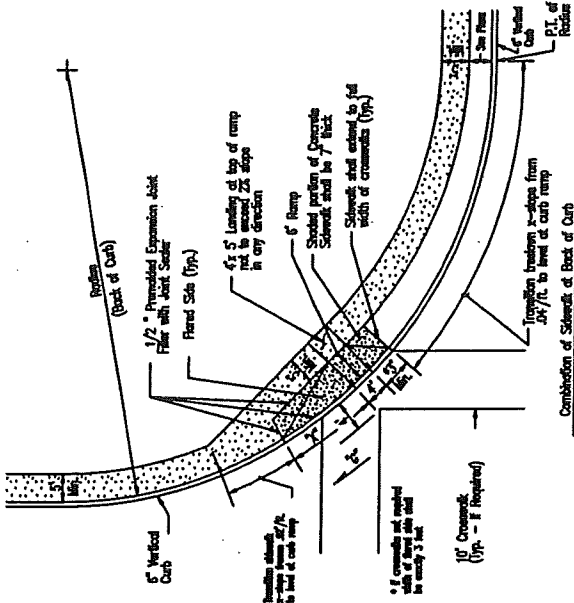
13. Maximum slope allowed for ramps is 1:12.

14. Maximum cross slope allowed for ramps is 2%.

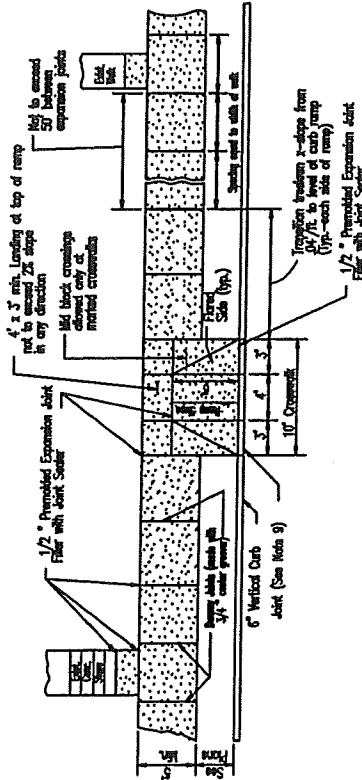
SAINT LOUIS COUNTY
DEPARTMENT OF HIGHWAYS AND TRAFFIC
CLAYTON, MISSOURI

**PAVEMENT CONSTRUCTION DETAILS
CONCRETE SIDEWALK
AND CURB RAMPS**

REVISION DATE: March 2, 1998
DRAWING: CS008.11



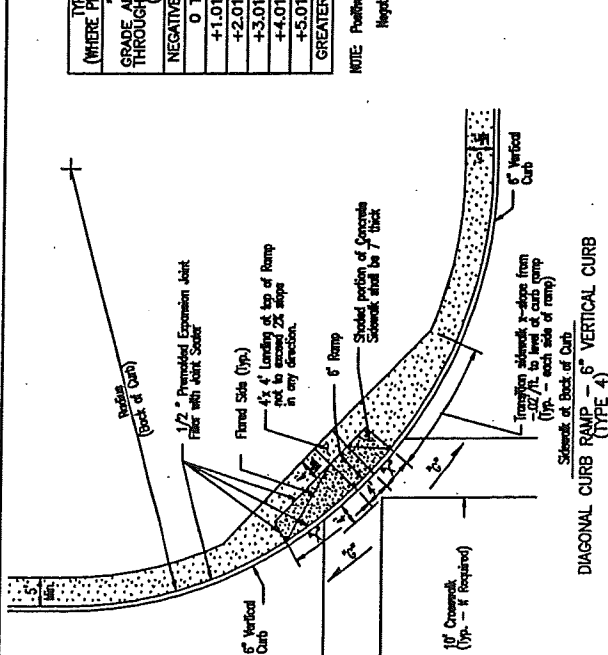
DIAGONAL CURB RAMP - 6" VERTICAL CURB (TYPE 5)



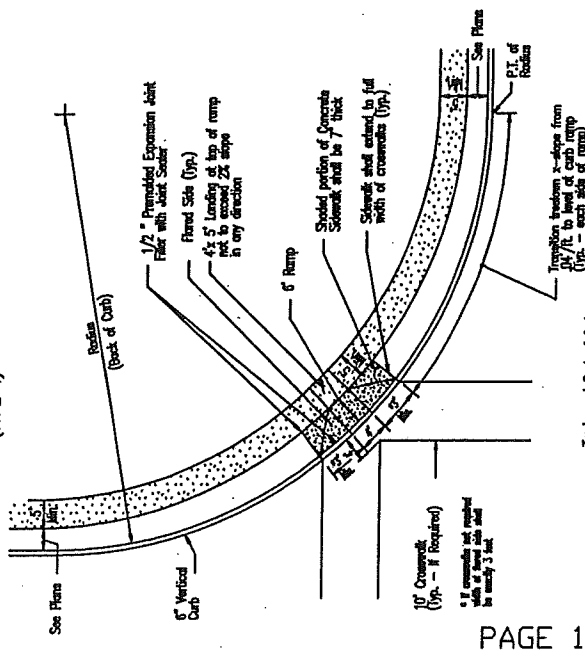
TYPICAL SIDEWALK INSTALLATION (WITH MIDDLEBLOCK CURB RAMP - TYPE 7)

TYPE 4 AND TYPE 5 CURB RAMPS (WHERE PEDESTRIANS CAN WALK ACROSS RAMPS)	
GRADE ALONG CURB THROUGH ROUNDING (%)	LENGTH OF FLARED SIDE ALONG CURB (L.F.)
0 TO +1	5
+1.01 TO +2	6
+2.01 TO +3	7
+3.01 TO +4	8
+4.01 TO +5	9
+5.01 TO +6	10
GREATER THAN +6	13

NOTE: Positive (+) "L.F." - Proceeding away from ramp and up a grade.
Negative (-) "L.F." - Proceeding away from ramp and down a grade.



DIAGONAL CURB RAMP - 6" VERTICAL CURB (TYPE 4)



DIAGONAL CURB RAMP - 6" VERTICAL CURB (TYPE 6)

GENERAL NOTES

1. DO NOT SCALE DRAWINGS. FOLLOW DIMENSIONS.
2. Sidewalks and sidewalk ramps shall be constructed in accordance with these specifications and the current approved "American with Disabilities Act Accessibility Guidelines" (ADAAG).
3. Provide a landing at the top of each straight ramp when the Grade Along Curb (GAC) is greater than +2% and less than +1%. For other values of GAC, including all negative (-) values, no landing is required.
4. Maximum sidewalk cross slope is 0.02'/ft.
5. Where curb ramp meets pavement, bull nose will not be permitted.
6. Construct a diagonal ramp when the radius for a straight ramp is exceeded.
7. If monolithic concrete curb is constructed, strike a dummy joint across bottom of ramp at the curb line. If concrete curb is dimensioned, block out pavement at curb line. Curb shall cross ramp from curb point. Curb shall taper to curb point of curb taper.
8. For sidewalk location on D&A-S&C, refer to "Pavement Construction Details,"
9. Ramps within five(5) feet of street edge will be seven(7) inches thick.
10. Ramps will be flush with the gutter line.
11. A pre-manufactured detectable warning surface shall be used that is approved by the Public Works Director.
12. Surfaces shall be a color approved by the Public Works Director.
13. Maximum slope allowed for ramps is 1'02".
14. Maximum cross slope allowed for ramps is 2%.

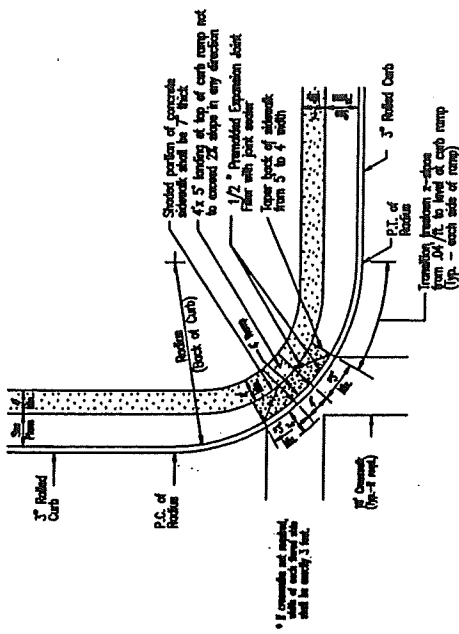
SAINT LOUIS COUNTY
DEPARTMENT OF HIGHWAYS AND TRAFFIC
CLAYTON, MISSOURI

PAVEMENT CONSTRUCTION DETAILS

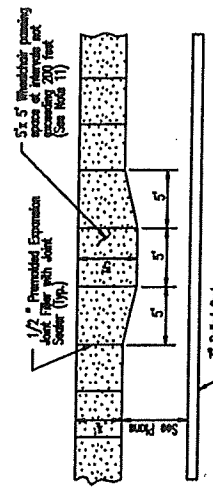
CONCRETE SIDEWALK AND CURB RAMPS

PERSON DATE: _____
March 2, 1988

DRAWING
C608.12



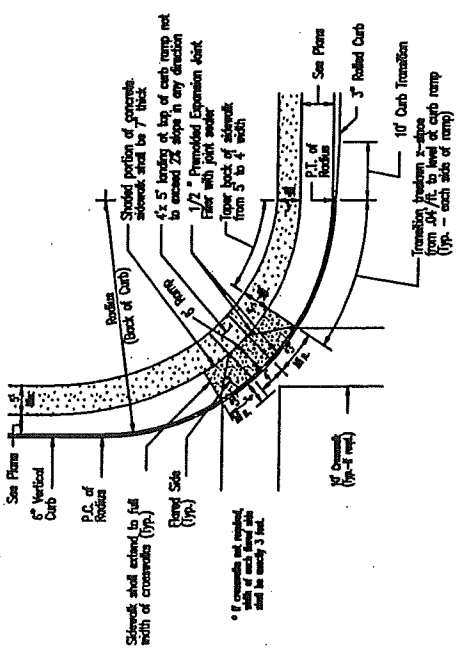
DIAGONAL CURB RAMP - 3" ROLLED CURB (TYPE 9)



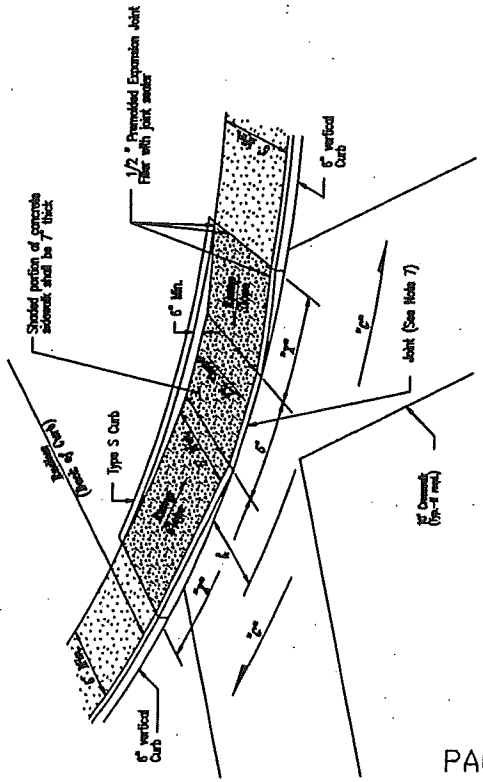
WHEELCHAIR PASSING SPACE - 4' SIDEWALK WITH 3" ROLLED CURB

TYPE 10 CURB RAMP	X
GRADE ALONG CURB THROUGH ROUNDING (G)	LENGTH OF FLARED SIDE ALONG CURB (L)
RESURF (-) VALUES	WALKS
0 TO +1	6
+1.01 TO +2	7
+2.01 TO +3	8
+3.01 TO +4	10
GREATER THAN +4	15

NOTE: Positive (+) "X" - Proceeding away from ramp and in direction of curb ramp
Negative (-) "X" - Proceeding away from ramp and down a grade.



DIAGONAL CURB RAMP - COMBINATION 6" VERTICAL CURB AND 3" ROLLED CURB (TYPE 8)



PARALLEL CURB RAMP (TYPE 10) 6" VERTICAL CURB (WHERE PASSAGE BEHIND RAMP CANNOT BE CONSTRUCTED DUE TO SITE INFESIBILITY)