

STANDARD PLANS

MARCH 1989

DEVELOPMENT SERVICES DEPARTMENT

510 La Gonda Way

MARCH 1989

TOWN OF DANVILLE STANDARD PLANS

| <u>PLAN NO.</u> | <u>STREET STANDARDS</u> |
|-----------------|---|
| 101 | Major Street Sections |
| 102 | Minor Street Sections |
| 103 | Width Alternatives Common Driveways/Residential |
| 104 | Width Alternatives Parking & Vehicular Lanes/Residential (Public/Private Streets) (2 shts.) |
| 105 | Typical Concrete Curbs |
| 106 | Typical Asphalt Dike |
| 107 | Typical Diveway |
| 108 | Pedestrian Ramp For The Handicapped |
| 109 | Sidewalk Drains |
| 110 | Sidewalk Doweling Details |
| 111 | Back Of Curb Flow Diverter |
| 112 | Valley Gutter |
| 113 | Street Barricade |
| 114 | Trench Backfill |
| 115 | Survey Monument |
| 116 | Sight Clearance At Intersections |
| 117 | Stop Sign Location |
| 118 | Street Name Sign Location |
| 119 | Typical Subdivision Signing Plan |
| 120 | Fire Hydrant Location |
| 121 | Street Name Sign Detail |

MARCH 1989

TOWN OF DANVILLE STANDARD PLANS

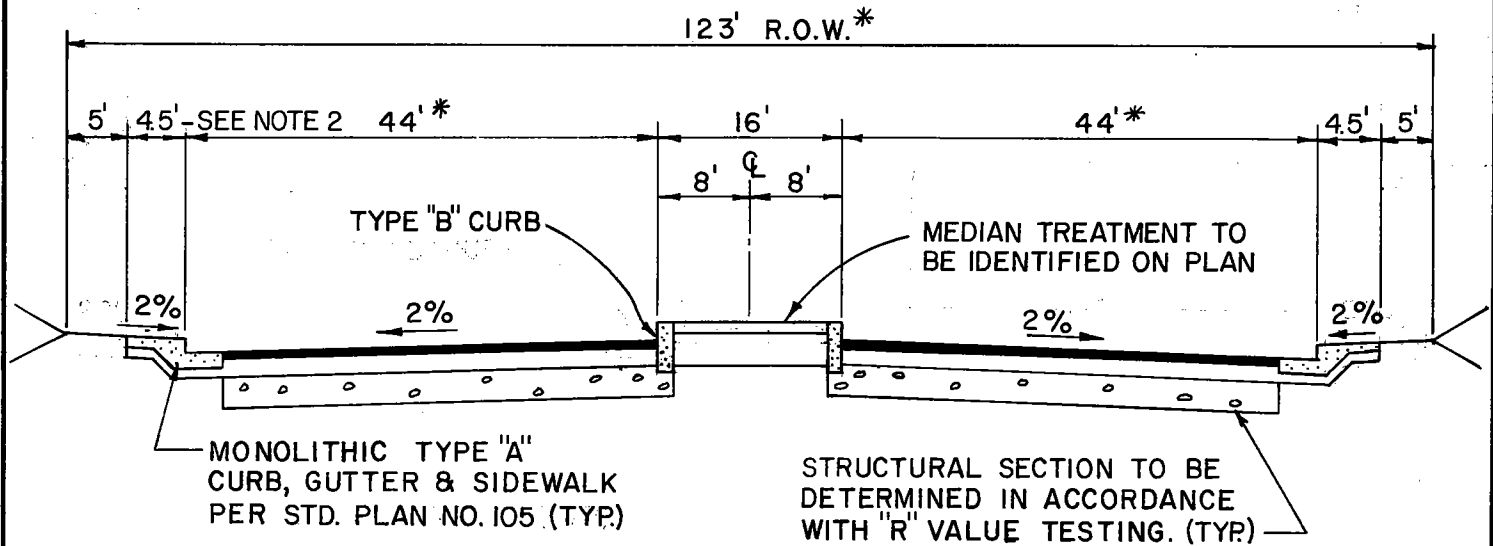
| <u>PLAN NO.</u> | <u>STORM DRAIN</u> |
|-----------------|---|
| 201 | Type "A" Inlet (2 shts.) |
| 202 | Type "B" Inlet (2 shts.) |
| 203 | Type "C" Inlet (2 shts.) |
| 204 | Precast Manhole & Type "I" Base |
| 205 | Type "II" Manhole Base (2 shts.) |
| 206 | Type "III" Manhole Base (3 shts.) |
| 207 | Manhole Frame and Cover |
| 208 | Type "A" & "L" Headwalls (3 shts.) |
| 209 | Standard Rock Riprap Pipe Spillway For Earth Channel |
| 210 | Hydrology and Hydraulics Criteria Summary (2 shts.) |
| 210A | Sample Hydrology Calculation Form |
| 210B | Runoff Factor ADjustment (3 shts.) |

MISCELLANEOUS

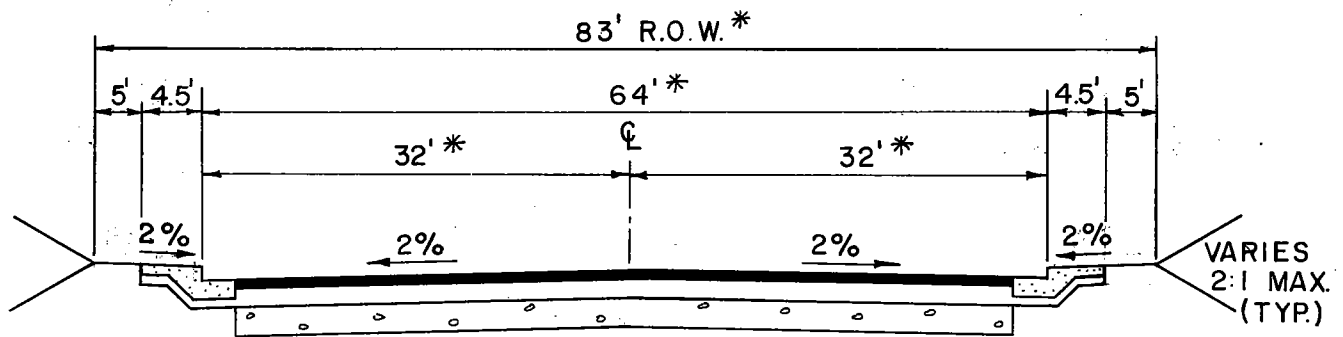
| | |
|-----|-------------------------------------|
| 301 | Standard Drafting Symbols (2 shts.) |
| 302 | Mailbox Standards |

DANVILLE

STANDARD PLAN



MAJOR ARTERIAL - 123' R.O.W.



MAJOR COLLECTOR - 83' R.O.W.

NOTES

* 1. WHEN BICYCLE LANES ARE REQUIRED WITHIN VEHICULAR WAY, ADD 10' TO CURB TO CURB WIDTH AND R/W. (ALLOWS TWO 5' WIDE BIKE LANES.)

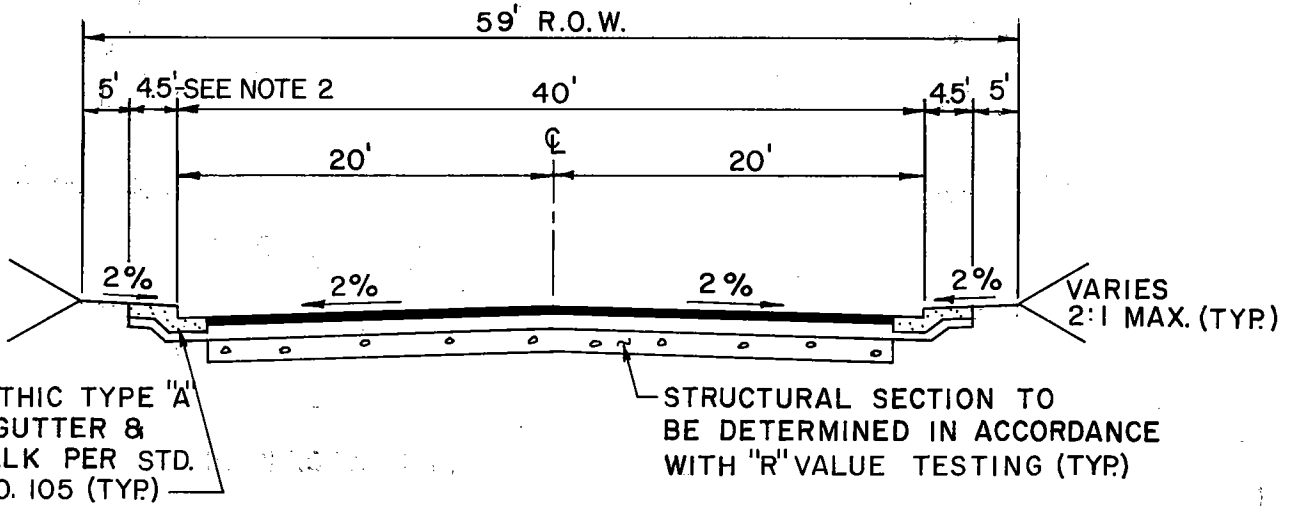
2. SIDEWALK WIDTH VARIES, DEPENDING UPON COMMERCIAL/RESIDENTIAL.

| No. | Rev. | By |
|-----|---------------------|-----------------------------|
| 1 | R.O.W. 10' EXTENDED | KD. <i>[Signature]</i> 1/89 |

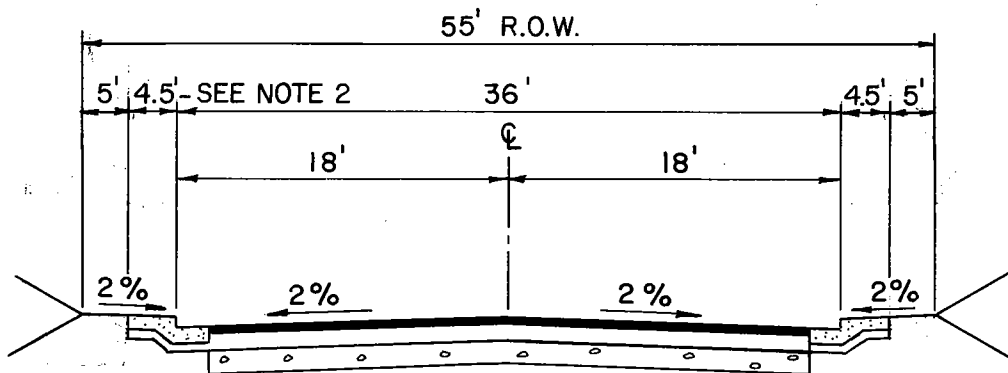
| | | |
|------------------------------|--|------------------------|
| Scale NOT TO SCALE | Drawn By <u>B.C.</u> Checked By <u>MZ</u> | |
| MAJOR STREET SECTIONS | Approved By <i>[Signature]</i> CITY ENGINEER RCE 31870 | DATE <u>6/09/87</u> |
| | 101 | |
| | | Sht. 1 of 1 |

DANVILLE

STANDARD PLAN



NEIGHBORHOOD COLLECTOR - 59' R.O.W.



LOCAL STREET - 55' R.O.W.

NOTES

1. WHEN BICYCLE LANES ARE REQUIRED WITHIN VEHICULAR WAY, ADD 8' TO CURB TO CURB WIDTH AND R/W. (ALLOWS TWO 4' WIDE BIKE LANES.)

2. SIDEWALK WIDTH VARIES, DEPENDING UPON COMMERCIAL/RESIDENTIAL.

| No. | Rev. | By |
|-----|--------------------|-----------|
| 1 | R.O.W. IS EXTENDED | K.V. 1/89 |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

MINOR STREET SECTIONS

Approved By

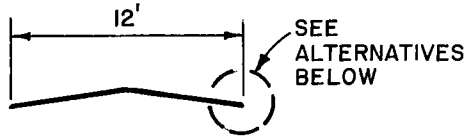
 CITY ENGINEER RCE 31870

6/09/87
 DATE

102
 Sht. 1 of 1

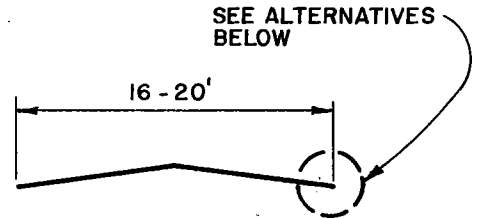
DANVILLE

STANDARD PLAN



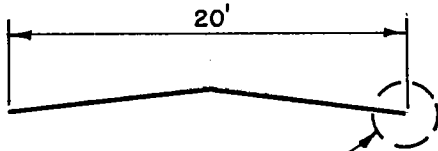
MAY BE MODIFIED DEPENDING ON GARAGE CAPACITY & LENGTH OF DRIVEWAY.

COMMON DRIVEWAY
(1 UNIT)



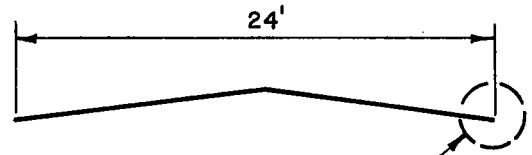
DRIVEWAY WIDTHS THAT ARE LESS THAN 19' REQUIRE A USE PERMIT.

COMMON DRIVEWAY
(2 - 4 UNITS)



SEE ALTERNATIVES BELOW

COMMON DRIVEWAY
(5-10 UNITS)



SEE ALTERNATIVES BELOW

COMMON DRIVEWAY
(11- 20 UNITS)

NOTES

1. COMMON DRIVEWAYS ARE TO BE USED PRIMARILY FOR ENTRANCES TO PARKING AREAS FROM A PUBLIC OR PRIVATE STREET. THEY ARE NOT A SUBSTITUTE FOR A STREET WHICH FUNCTIONS AS A CIRCULATION ELEMENT TO A DEVELOPMENT.
2. NO PARKING ALLOWED ON DRIVEWAY.
3. TWO WAY TRAVEL LANES - NO ONE WAY LOOPS.

ALTERNATIVES

1. CONCRETE CURB
2. A.C. DIKE
3. WOOD - FORM BOARD (RESIDENTIAL ONLY)

| No. | Rev. | By |
|-----|-----------------|-------------|
| 1 | 22 CHG. TO DIKE | K.D.P. 1/87 |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

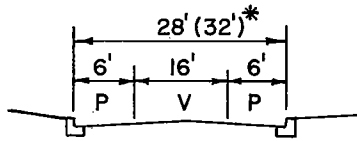
WIDTH ALTERNATIVES
COMMON DRIVEWAYS
RESIDENTIAL

Approved By 
CITY ENGINEER RCE 31870
DATE 6/09/87

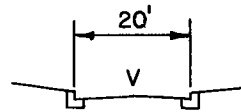
103
Sht. 1 of 1

DANVILLE

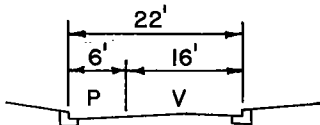
STANDARD PLAN



PARKING BOTH SIDES



NO PARKING

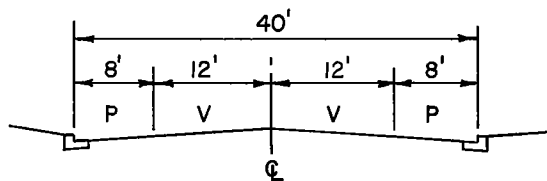


PARKING ONE SIDE

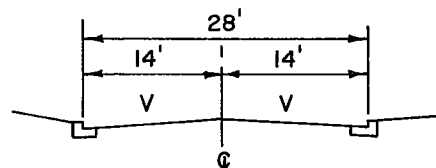
* MAY BE REQUIRED BY THE FIRE DEPT.
DEPENDING ON LENGTH OF STREET.

ONE WAY LOOP

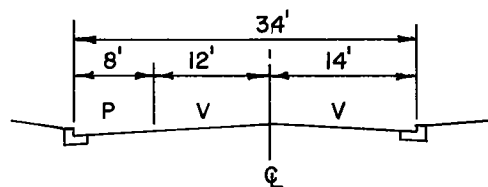
(1 to 15 UNITS)



PARKING BOTH SIDES



NO PARKING



PARKING ONE SIDE

LEGEND

- P = PARKING
- V = VEHICLES
- CL = CENTER LINE

COLLECTOR STREETS

(81 to 300 UNITS, & COMMERCIAL)

| No. | Rev. | By |
|-----|------|----|
| | | |
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

WIDTH ALTERNATIVES

PARKING & VEHICULAR LANES
RESIDENTIAL (PUBLIC/PRIVATE STREETS)

Approved By

Steel Lake
CITY ENGINEER RCE 31870

6/09/87

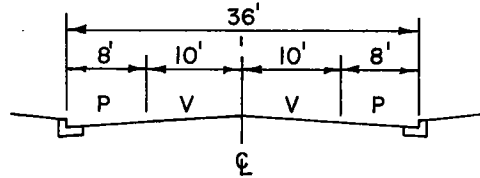
DATE

104a

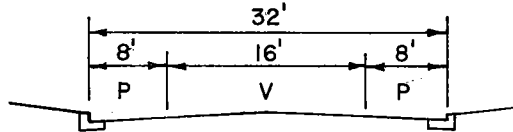
Sht. 1 of 2

DANVILLE

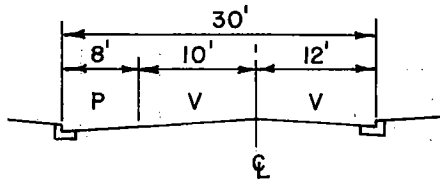
STANDARD PLAN



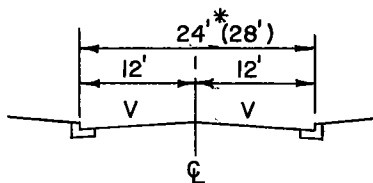
PARKING BOTH SIDES



2 WAY TRAFFIC
PARKING BOTH SIDES
PRIVATE STREET ONLY



PARKING ONE SIDE



NO PARKING
* PRIVATE STREET ONLY

LEGEND

- P = PARKING
- V = VEHICLES
- CL = CENTER LINE

CUL-DE-SAC, LANE, PLACE, MINOR STS.

(1 to 80 UNITS)

| No. | Rev. | By |
|-----|------|----|
| | | |
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

WIDTH ALTERNATIVES

PARKING & VEHICULAR LANES
RESIDENTIAL (PUBLIC/PRIVATE STREETS)

Approved By

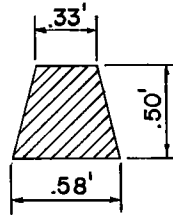
CITY ENGINEER RCE 31870

6/09/87
DATE

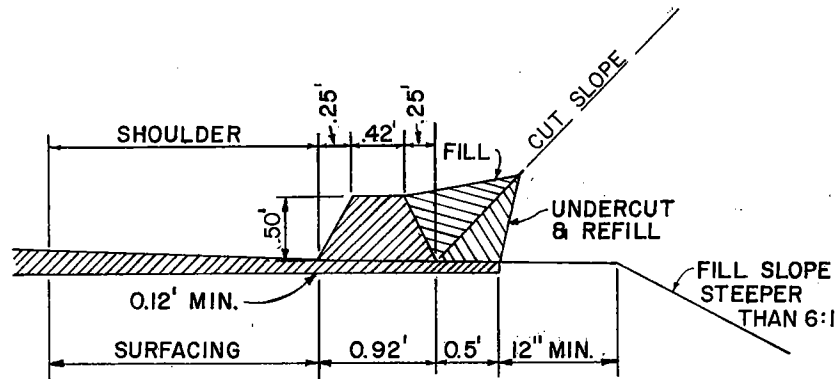
104b
Sht. 2 of 2

DANVILLE

STANDARD PLAN



0.5' DIKE - MODIFIED SECTION



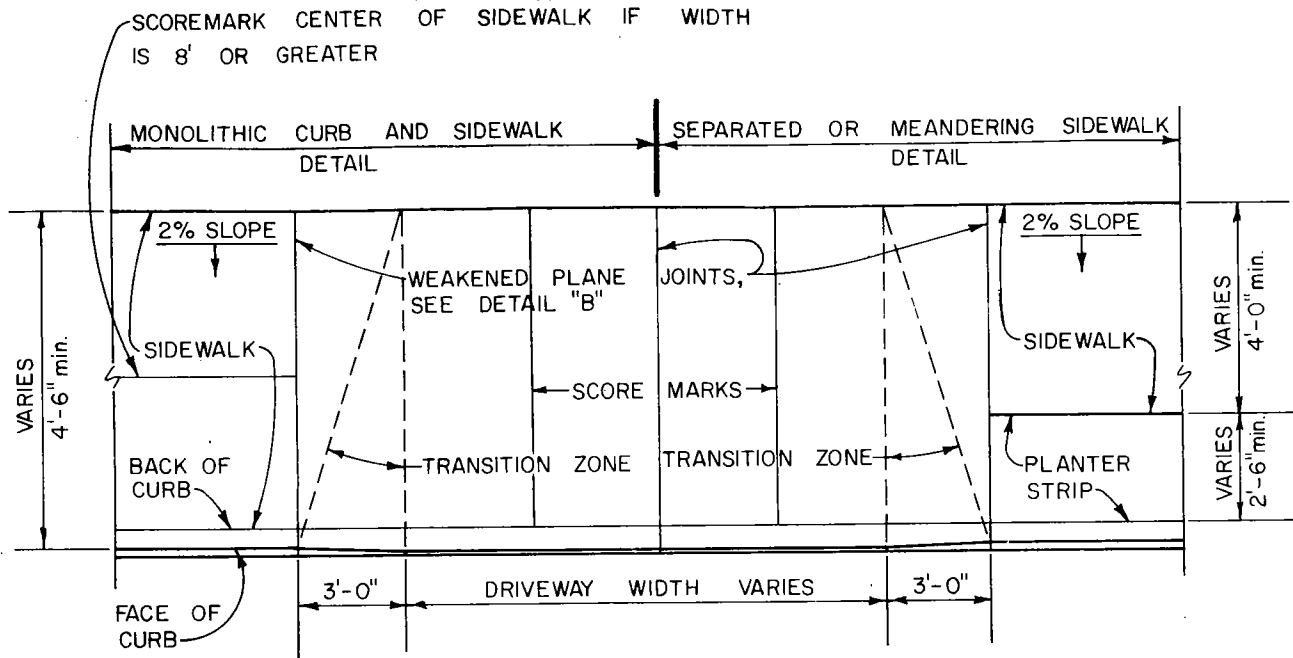
ASPHALT CONCRETE DIKES

| No. | Rev. | By |
|-----|-------------------------|-------------|
| 1 | 60' ADDED DIKE / 1/8/87 | [Signature] |

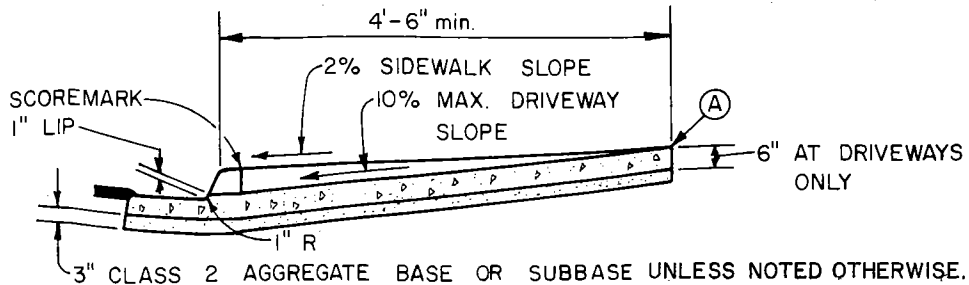
| | | |
|----------------------|---|---------------------|
| Scale NOT TO SCALE | Drawn By <u>B.C.</u> Checked By <u>MZ</u> | |
| TYPICAL ASPHALT DIKE | Approved By <u>[Signature]</u> | |
| | CITY ENGINEER RCE 31870 | DATE <u>6/09/87</u> |
| | | 106 Sht. 1 of 1 |

DANVILLE

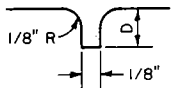
STANDARD PLAN



TYPICAL DRIVEWAY
(GUTTER NOT SHOWN)



POINT (A) TO BE ON A 2% SLOPE FROM TOP OF CURB UNLESS OTHERWISE APPROVED.



D=1" FOR WEAKENED PLANE JOINTS
D=1/4" FOR SCORE MARKS
JOINTS SHALL BE FORMED BY USE OF PLASTIC INSERTS

**SCOREMARKS AND
WEAKENED PLANE JOINTS
DETAIL "B"**

SECTION

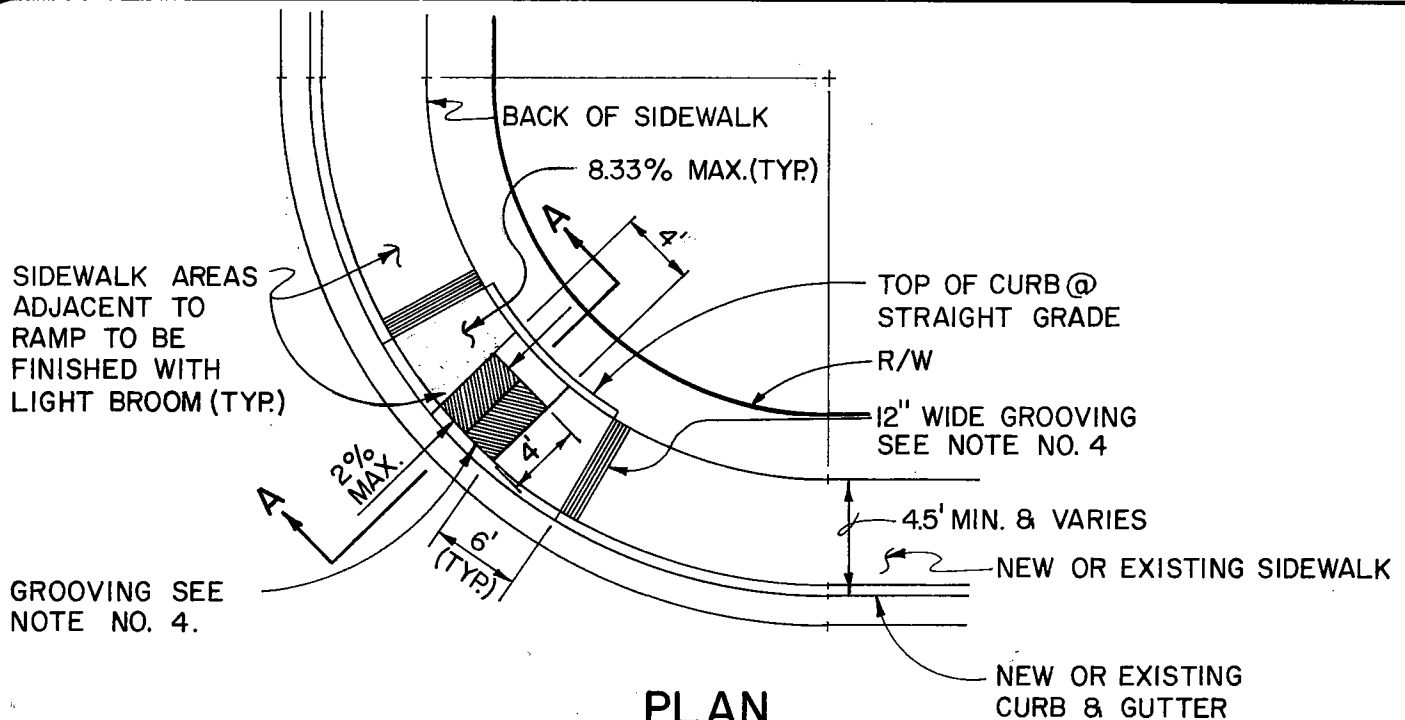
NOTE
I. ALL CONCRETE TO BE CLASS B.

| No. | Rev. | By |
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| | | |

| | | |
|-------------------------|--|---------------------------|
| Scale NOT TO SCALE | Drawn By <u>B.C.</u> Checked By <u>MZ</u> | |
| TYPICAL DRIVEWAY | Approved By CITY ENGINEER RCE 31870 | 6/09/87 DATE |
| | | 107 Sht. 1 of 1 |

DANVILLE

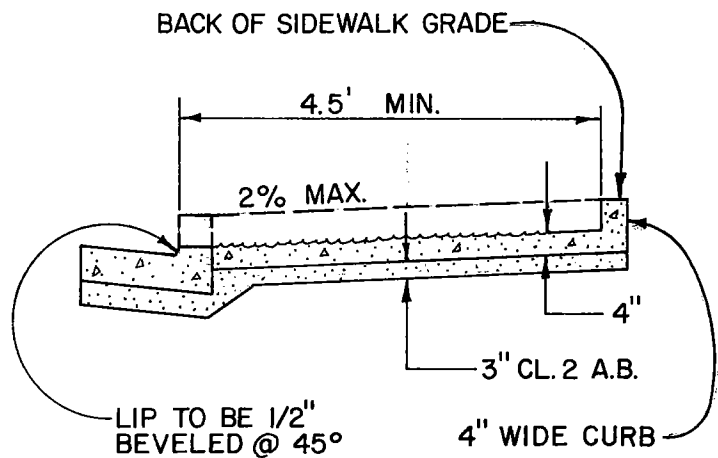
STANDARD PLAN



PLAN

NOTES

1. FINISH- ALL EDGES, CORNERS AND ENDS SHALL HAVE 1/2" RADIUS.
2. SCORING- EVENLY SPACED BOTH WAYS, FULL 1/4" DEEP, EVEN AND STRAIGHT.
3. ALL CONCRETE FLATWORK FOR CURB RAMP MIN. 4" THICK.
4. THE RAMP SHALL HAVE A 12" WIDE BORDER WITH 1/4" GROOVES APPROX. 3/4" O.C.
5. RAMP SHALL BE GROOVED IN A HERRINGBONE PATTERN WITH 1/4" GROOVE APPROXIMATELY 1 1/2" O.C. GROOVES SHOULD BE ALIGNED PARALLEL TO CROSSWALK STRIPES TO DIRECT BLIND PEDESTRIANS INTO APPROPRIATE CROSSWALK.
6. LOCATE RAMP IN MIDDLE OF RETURN OR AS DIRECTED BY THE CITY ENGINEER.
7. THE RELATIVE COMPACTION OF MATERIAL BELOW ALL CURB, GUTTER & SIDEWALK SHALL NOT BE LESS THAN 90%.
8. SPECIAL SITUATIONS SHALL BE SUBJECT TO APPROVAL BY THE CITY ENGINEER.



SECTION A - A

| No. | Rev. | By |
|-----|-----------|---------------------|
| 1 | R/W ADDED | [Signature] |
| 2 | NEW TITLE | [Signature] 3.15.93 |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

CURB RAMP

Approved By

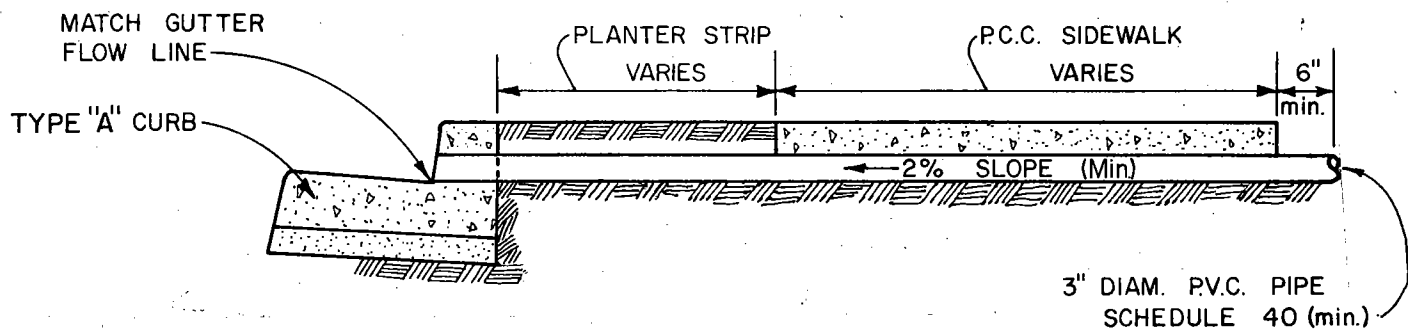
 CITY ENGINEER RCE 31870

6/09/87
 DATE

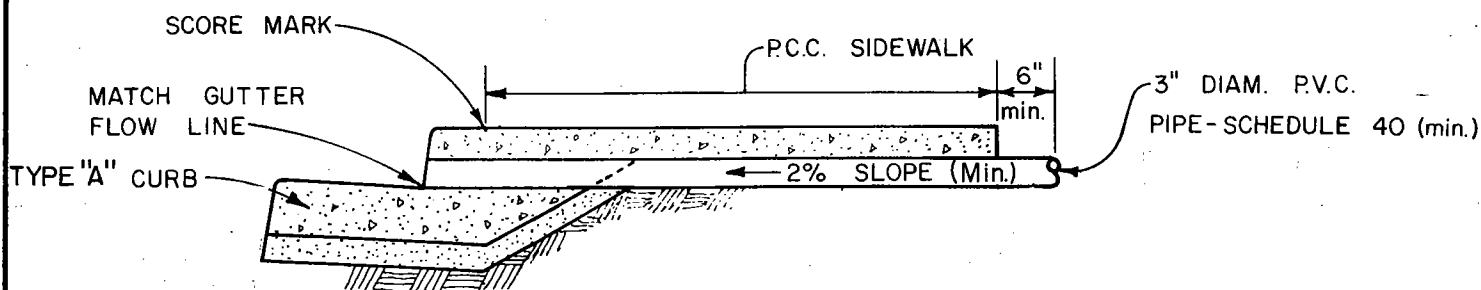
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 Sht. 1 of 1

DANVILLE

STANDARD PLAN



SIDEWALK DRAIN FOR SEPARATED SIDEWALK



SIDEWALK DRAIN FOR MONOLITHIC CURB AND SIDEWALK

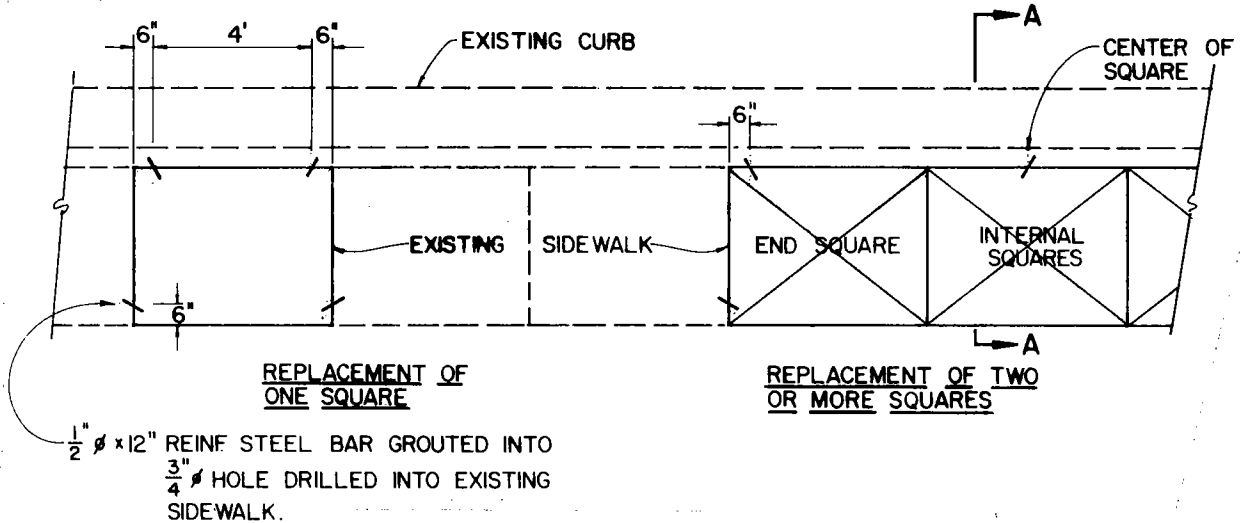
NOTES

1. SIDEWALK DRAIN SHALL BE INSTALLED AT WEAKENED PLANE JOINTS.
2. SIDEWALK DRAIN SHALL BE INSTALLED ON THE LOW SIDE OF THE DRIVEWAY OR LOT WHERE APPLICABLE.

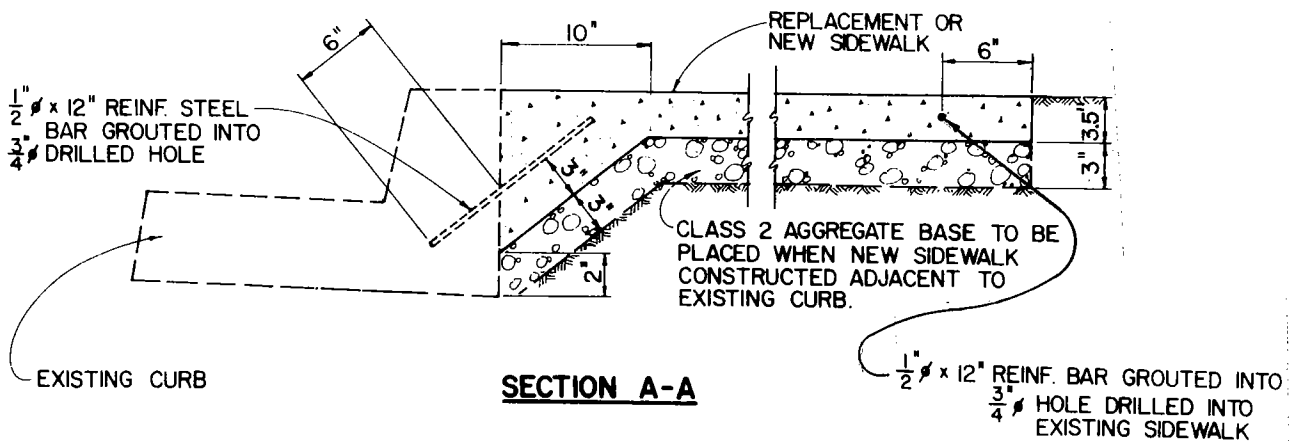
| Scale | Drawn By | Rev. | By |
|------------------------|---|------------|-------------|
| NOT TO SCALE | B.C. | | |
| SIDEWALK DRAINS | Approved By | | |
| | <i>[Signature]</i> CITY ENGINEER RCE 31370 | 6/09/87 | DATE |
| | | 109 | Sht. 1 of 1 |

DANVILLE

STANDARD PLAN



TYPICAL DOWEL INSTALLATION



NOTE:

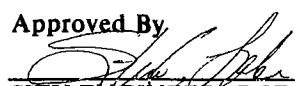
- I. DOWELS TO BE PLACED AT A 30° ANGLE TO THE PERPENDICULAR.

| No. | Rev. | By |
|-----|------|----|
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

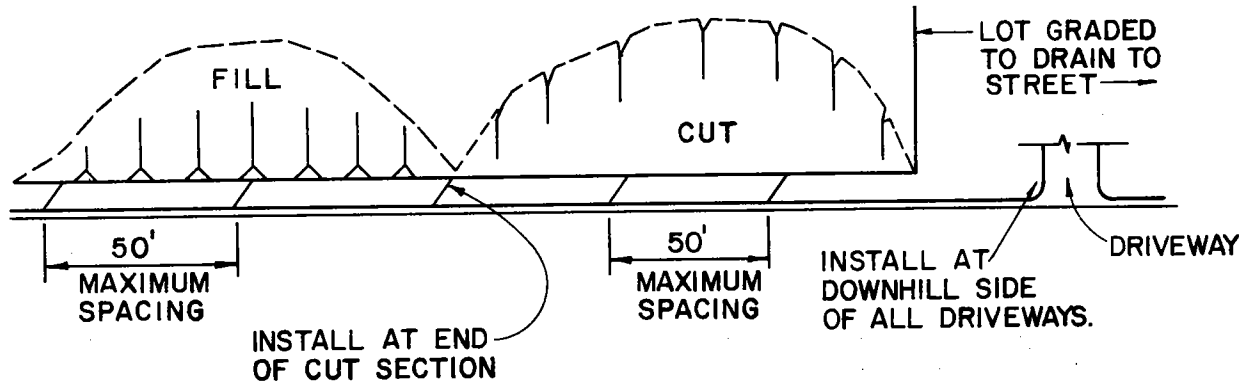
SIDEWALK DOWELING DETAILS

Approved By 
 CITY ENGINEER RCE 31870 6/09/87 DATE

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 Sht. 1 of 1

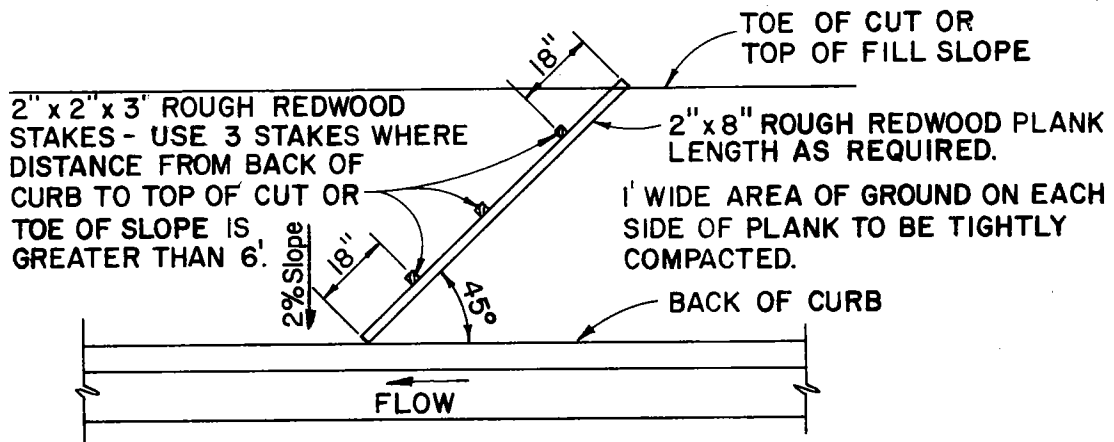
DANVILLE

STANDARD PLAN

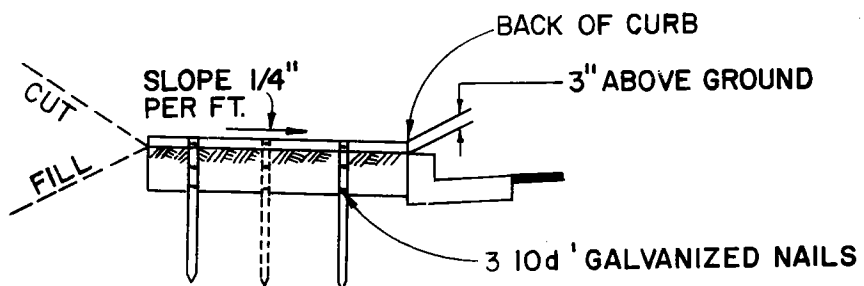


PLAN SHOWING LOCATION OF DIVERTERS

TO BE INSTALLED ON STREETS WHERE SLOPE EQUALS OR EXCEEDS 5%



PLAN



ELEVATION

| No. | Rev. | By |
|-----|------|----|
| | | |
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

**BACK-OF-CURB
FLOW DIVERTER**

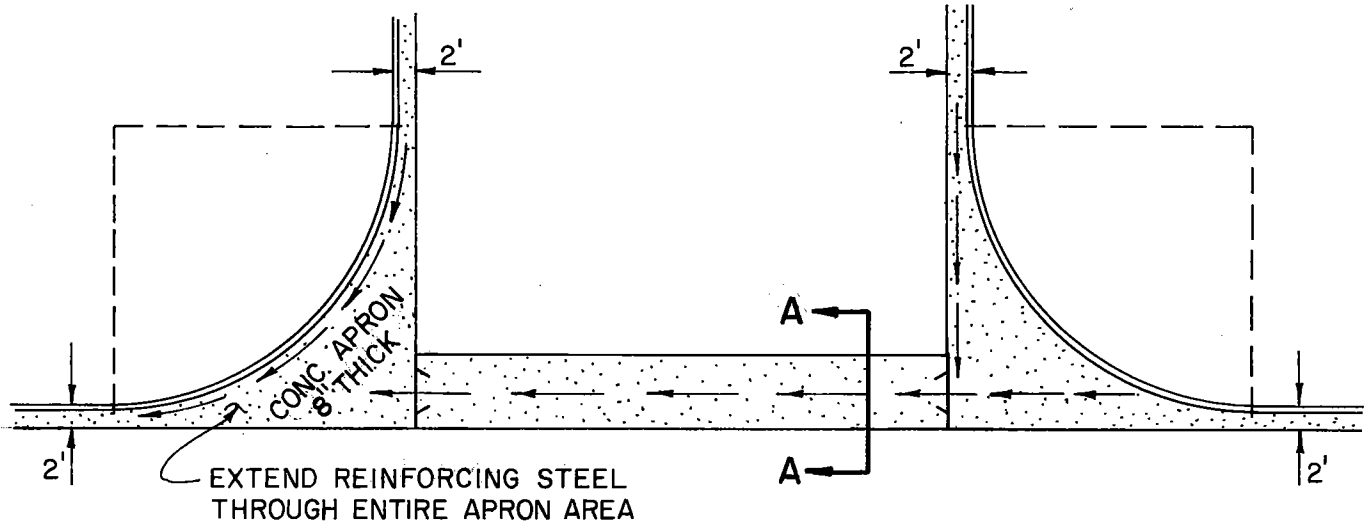
Approved By
[Signature]
CITY ENGINEER RCE 31870

6/09/87
DATE

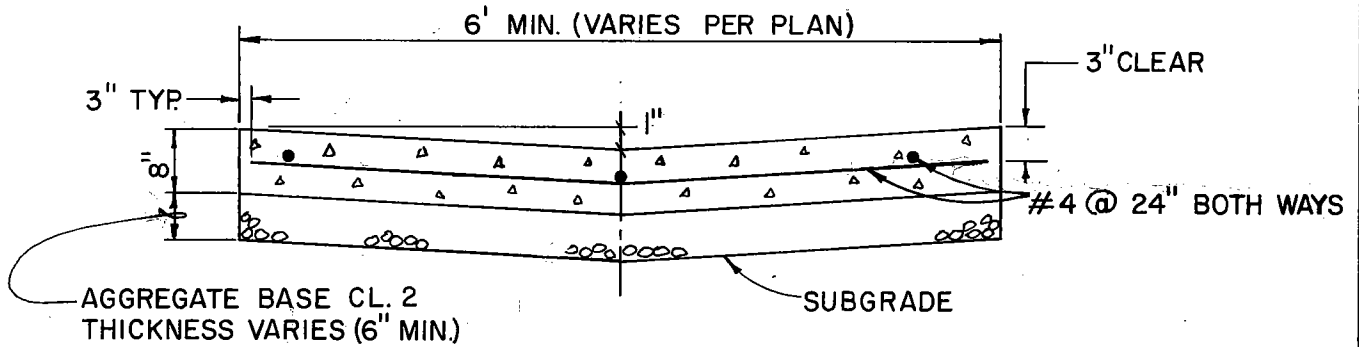
III
Sht. 1 of 1

DANVILLE

STANDARD PLAN



PLAN



SECTION A - A

NOTE

I. VALLEY GUTTERS TO BE USED ONLY WHERE SPECIFICALLY APPROVED.

| No. | Rev. | By |
|-----|--------------------|--------------------|
| 1 | 2% Decline Deleted | <i>[Signature]</i> |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

VALLEY GUTTER

Approved By *[Signature]*
 CITY ENGINEER RCE 31870

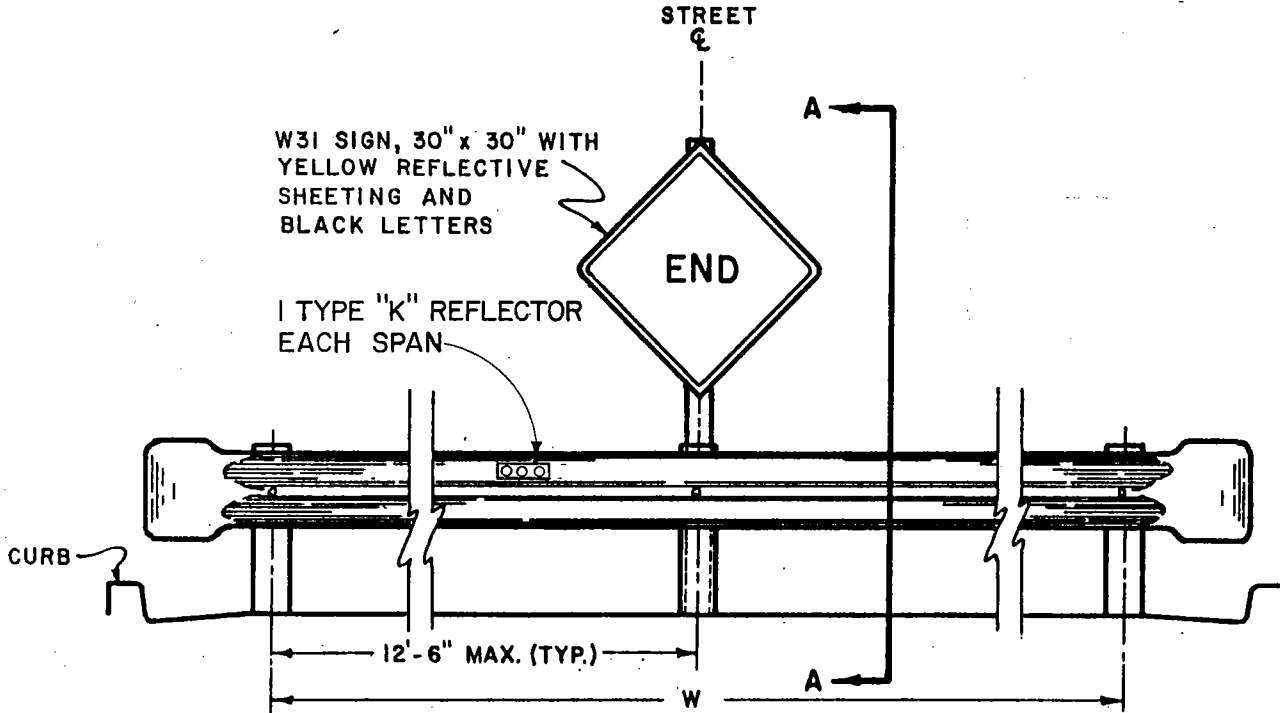
6/09/87
 DATE

112

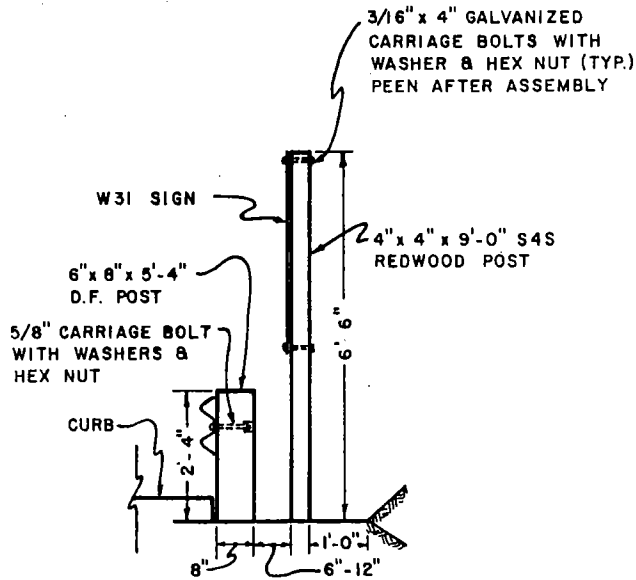
Sht. 1 of 1

DANVILLE

STANDARD PLAN



STREET BARRICADE



SECTION A-A

| ROAD WIDTH | W | NO. POSTS |
|------------|--------|-----------|
| 36' | 25'-0" | 3 |
| 40' | 37'-6" | 4 |
| 64' | 50'-0" | 5 |

NOTES

- POSTS & METAL BEAM GUARD RAILING TO BE TREATED WITH PRESERVATIVE AND MARKED IN ACCORDANCE WITH SECTION 83 OF THE CURRENT CALTRANS STANDARD SPECIFICATIONS.

| No. | Rev. | By |
|-----|------|----|
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

STREET BARRICADE

Approved By

 CITY ENGINEER RCE 31870

6/09/87
 DATE

113

Sht. 1 of 1

DANVILLE

STANDARD PLAN

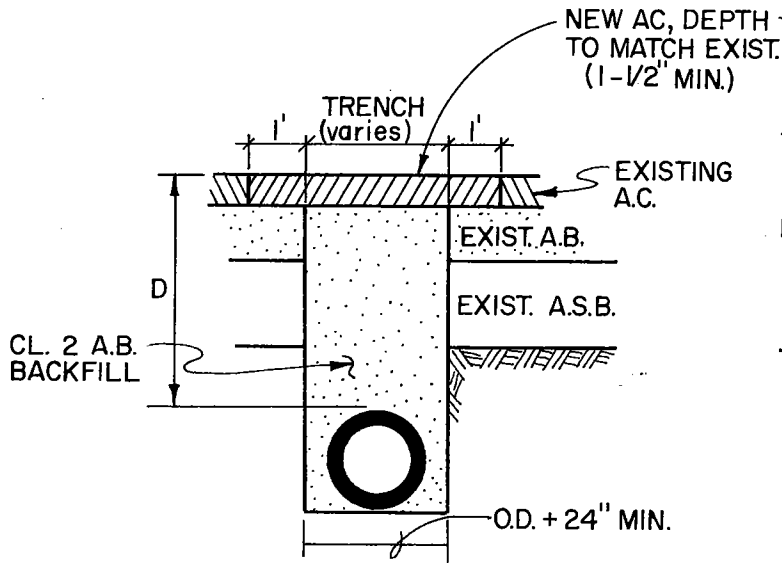


FIGURE 1

D=18" or GREATER

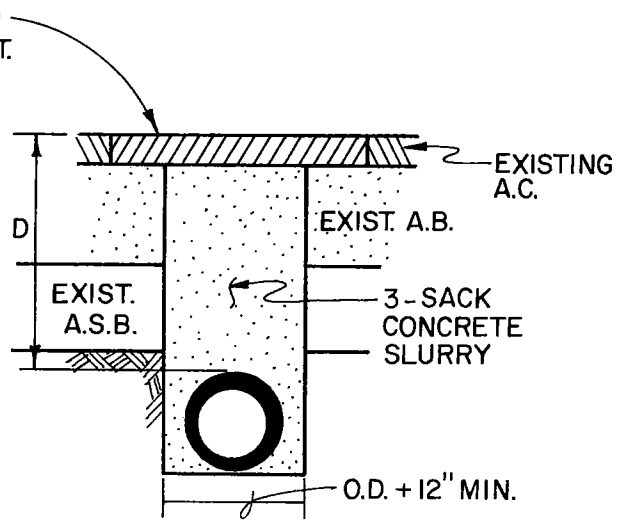


FIGURE 2

D=LESS THAN 18"

NOTES

1. ASPHALT OR CONCRETE STREETS SHALL BE OVERCUT ONE FOOT GREATER ON EACH SIDE THAN THE TRENCH WIDTH. (FIGURE 1)
2. REMOVE TO PROPER DEPTH, INSTALL UTILITY AND BACKFILL.
3. CONTRACTOR MAY BE REQUIRED TO PLACE SAND BEDDING MATERIAL ON THE TRENCH FLOOR DEPENDING ON SOIL CONDITION AND TYPE OF PIPE USED.
4. COMPACTION- THE RELATIVE COMPACTION OF ALL TRENCH BACKFILL AS FOLLOWS:
AB/ASB = 95% NATIVE = 90%
5. NO JETTING IS ALLOWED UNDER ANY PAVED ROADWAY OR WITHIN A DISTANCE OF FOUR FT. FROM THE EDGE OF EXISTING PAVEMENT. BACKFILL SHALL BE COMPACTED BY IMPACT, VIBRATION OR ANY COMBINATION OF THESE. JETTING WILL BE ALLOWED ONLY WHEN MORE THAN FOUR FT. FROM THE PAVEMENT & WHEN THE BACKFILL AND TRENCH ARE SUITABLE FOR JETTING AND SHALL BE SUPPLEMENTED WITH MECHANICAL COMPACTION IN FOUR FT. MAXIMUM LAYERS.

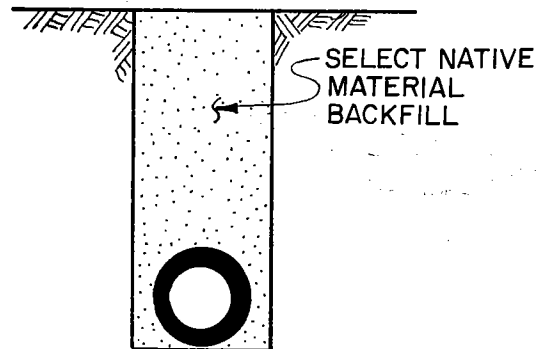


FIGURE 3

NON PAVEMENT AREAS

| No. | Rev. | By |
|-----|------|----|
| | | |
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

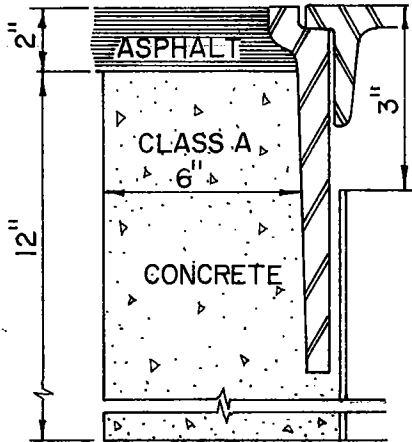
TRENCH BACKFILL

Approved By 
CITY ENGINEER RCE 31870 6/09/87
DATE

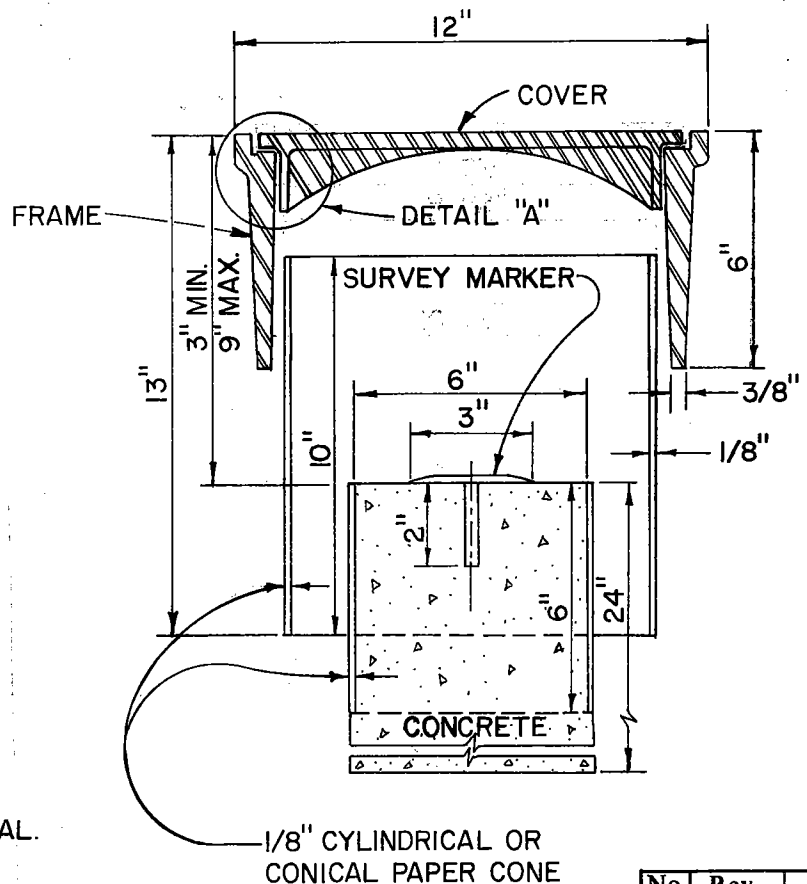
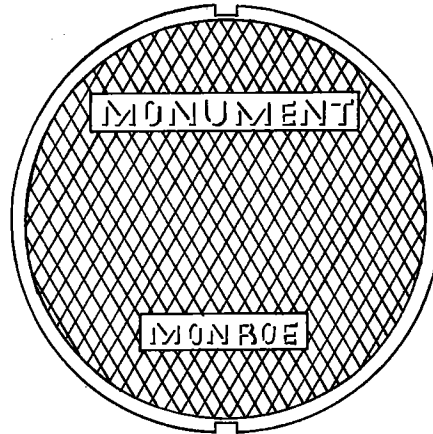
114
Sht. 1 of 1

DANVILLE

STANDARD PLAN



DETAIL "A"



NOTES

1. SURVEY MARKER TO BE "LIETZ" #8134-08 OR 8134-18 OR APPROVED EQUAL.
2. FRAME TO BE "MONROE" CASTING #9279 OR APPROVED EQUAL.
3. COVER TO BE "MONROE" CASTING MARKED "MONUMENT" #9277M OR APPROVED EQUAL.
4. WHERE OVERLAY IS REQUIRED USE RISER RING "MONROE" CASTING #9278 OR APPROVED EQUAL.

| No. | Rev. | By |
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| | | |
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

SURVEY MONUMENT

Approved By 
CITY ENGINEER RCE 31870

6/09/87
DATE

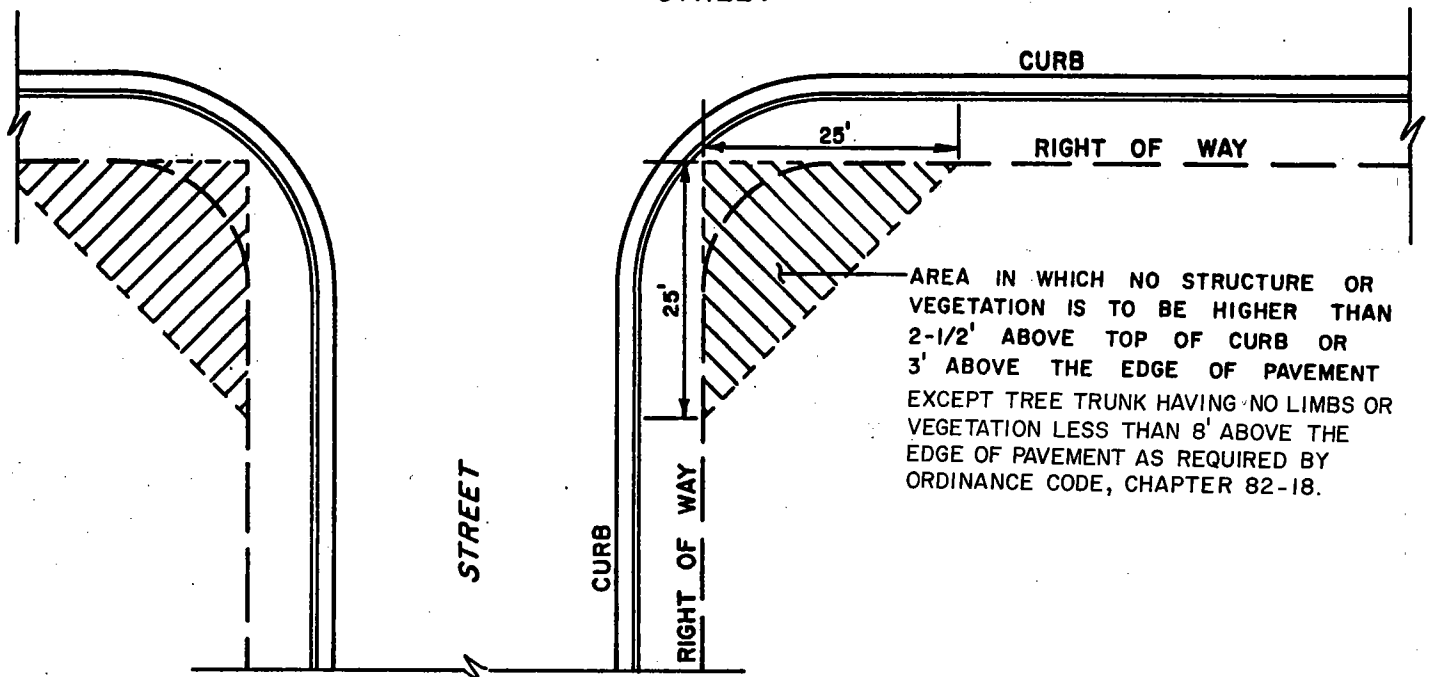
115
Sht. 1 of 1

DANVILLE

STANDARD PLAN



TYPICAL STREET INTERSECTION



AREA IN WHICH NO STRUCTURE OR VEGETATION IS TO BE HIGHER THAN 2-1/2' ABOVE TOP OF CURB OR 3' ABOVE THE EDGE OF PAVEMENT EXCEPT TREE TRUNK HAVING NO LIMBS OR VEGETATION LESS THAN 8' ABOVE THE EDGE OF PAVEMENT AS REQUIRED BY ORDINANCE CODE, CHAPTER 82-18.

| No. | Rev. | By |
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Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

**SIGHT CLEARANCE
AT INTERSECTION**

Approved By

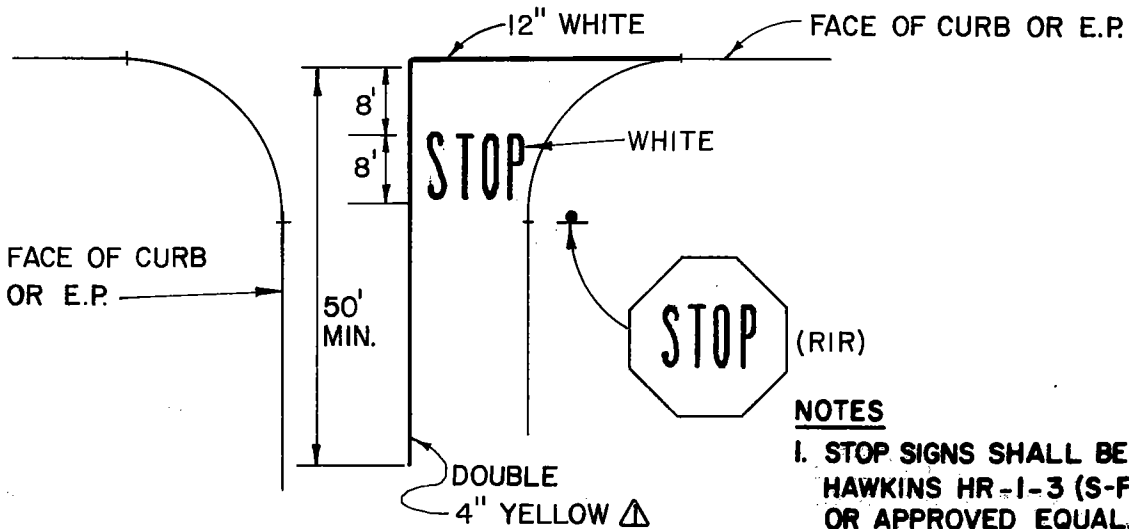
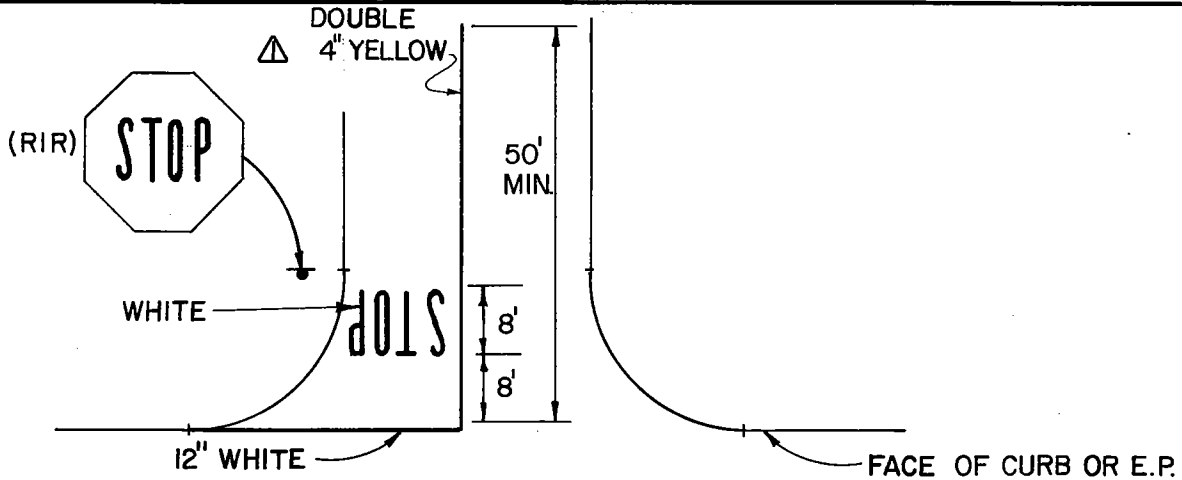
 CITY ENGINEER RCE 31870

6/09/87
 DATE

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 Sht. 1 of 1

DANVILLE

STANDARD PLAN



NOTES

1. STOP SIGNS SHALL BE HAWKINS & HAWKINS HR-1-3 (S-F) 30" x 30" OR APPROVED EQUAL.
2. STREET-SIDE EDGE OF SIGN SHALL BE NOT LESS THAN 24" FROM FACE OF CURB.
3. ALL PAVEMENT MARKINGS TO BE REFLECTIVE PAINT OR THERMO-PLASTIC AS SPECIFIED.
4. FOR POLE TYPE & INSTALLATION DETAIL, SEE CC 305I.

| No. | Rev. | By |
|-----|------|-----|
| 1 | 1-90 | KMD |
| | | |
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

STOP SIGN LOCATION

Approved By

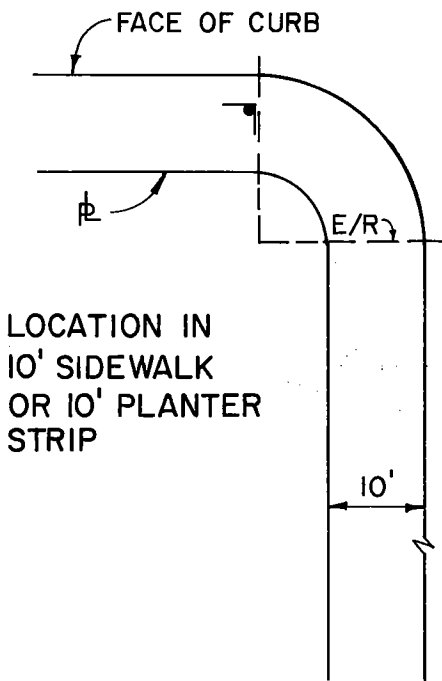
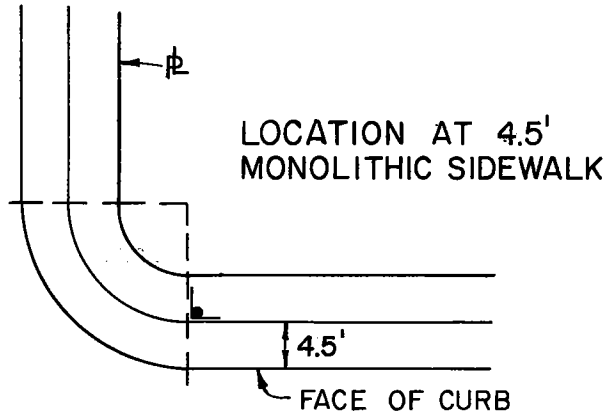
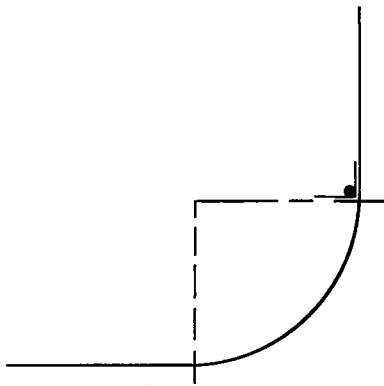
 CITY ENGINEER RCE 31870

6/09/87
 DATE

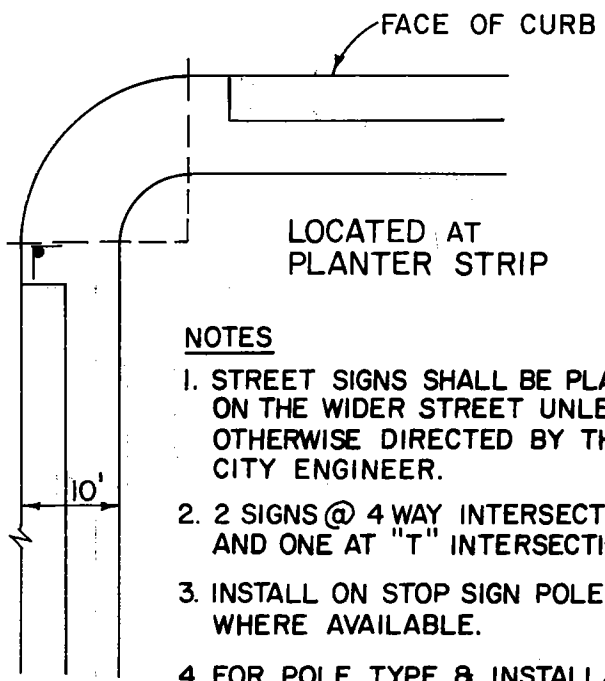
117
 Sht. 1 of 1

DANVILLE

STANDARD PLAN



LOCATION IN
10' SIDEWALK
OR 10' PLANTER
STRIP



LOCATED AT
PLANTER STRIP

NOTES

1. STREET SIGNS SHALL BE PLACED ON THE WIDER STREET UNLESS * OTHERWISE DIRECTED BY THE CITY ENGINEER.
2. 2 SIGNS @ 4 WAY INTERSECTION, AND ONE AT "T" INTERSECTION.
3. INSTALL ON STOP SIGN POLE WHERE AVAILABLE.
4. FOR POLE TYPE & INSTALLATION DETAIL SEE CC 3051.

* AT THE RETURN CLOSEST TO APPROACHING TRAFFIC.

| No. | Rev. | By |
|-----|--------------------|-----|
| 1 | CHG. (REV) PDR/MTJ | X B |
| | | |

Scale: NOT TO SCALE

Drawn By B.C. Checked By MZ

**STREET NAME SIGN
LOCATION**

Approved By

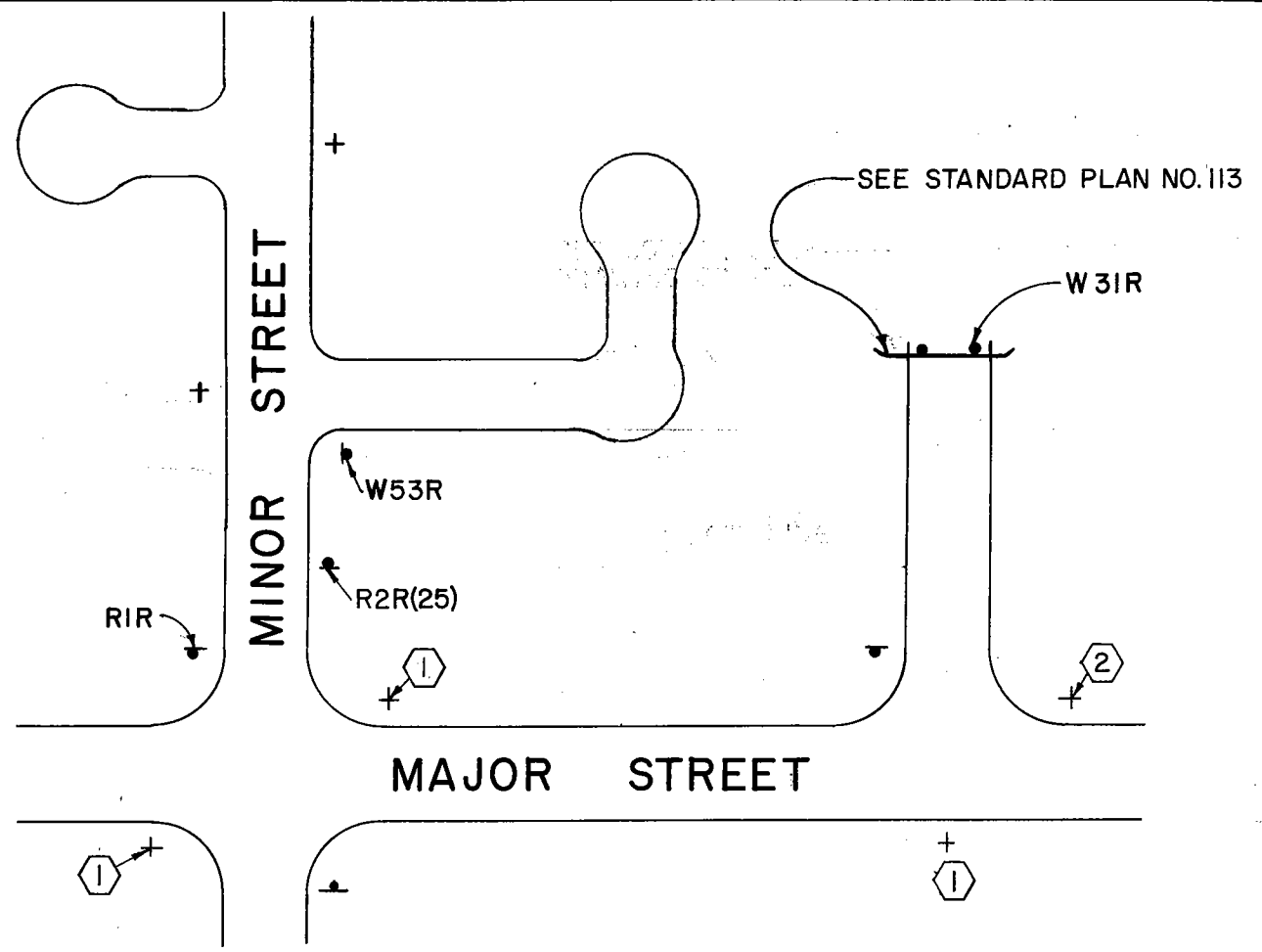
CITY ENGINEER RCE 31870

6/09/87
DATE

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Sht. 1 of 1

DANVILLE

STANDARD PLAN



- NOTES**
1. FOR FOUR WAY INTERSECTIONS- TWO STREET NAME SIGNS.
 2. FOR "T" INTERSECTIONS- ONE STREET NAME SIGN.
 3. SIGNS SHOULD BE INSTALLED AT ECR'S, BCR'S, & LOT LINES WHERE POSSIBLE.

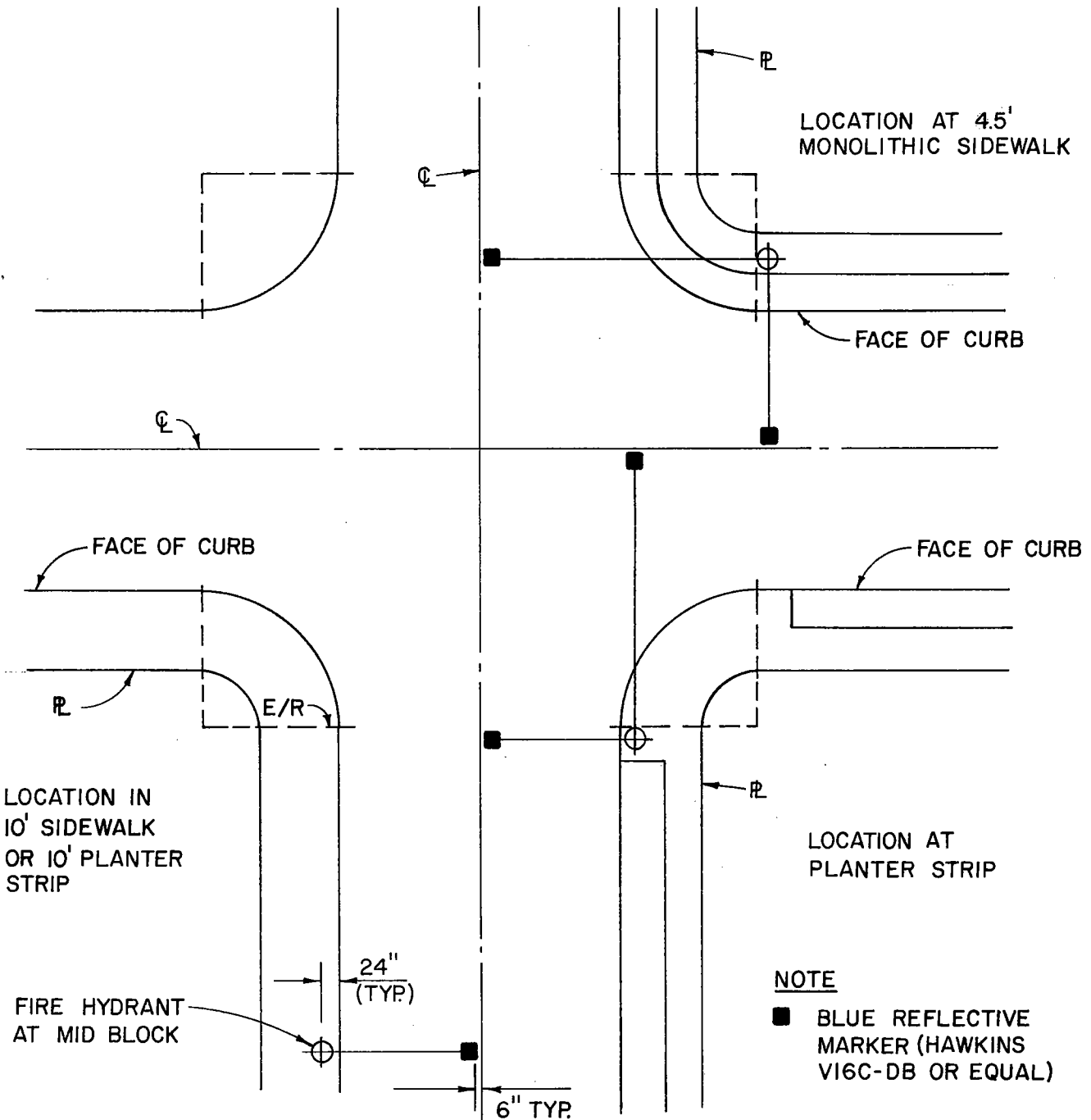
- LEGEND**
- TRAFFIC SIGN
 - + STREET NAME SIGN
 - ① PREFERRED LOCATION
 - ② ALTERNATE LOCATION

| No. | Rev. | By |
|-----|----------------|--------------------|
| 1 | CHG TO SP #113 | <i>[Signature]</i> |

| | | |
|---|--|-----------------|
| Scale NOT TO SCALE | Drawn By <u>B.C.</u> Checked By <u>MZ</u> | |
| TYPICAL SUBDIVISION SIGNING PLAN | Approved By <i>[Signature]</i> CITY ENGINEER RCE 31870 | 6/09/87 DATE |
| | 119 Sht. 1 of 1 | |

DANVILLE

STANDARD PLAN



| No. | Rev. | By |
|-----|-------------------|-------------|
| 1 | CHG FROM EN TO ST | [Signature] |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

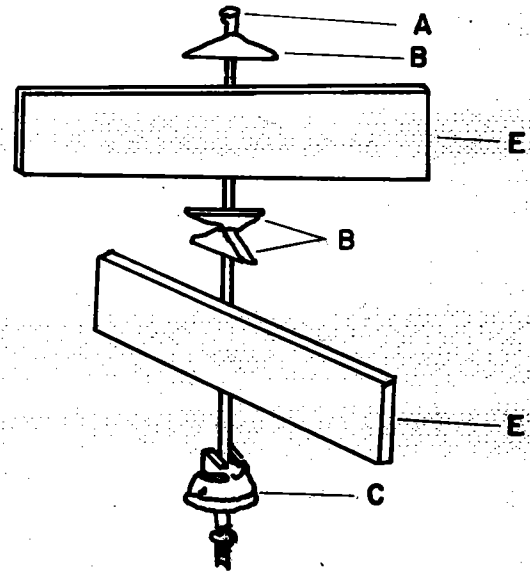
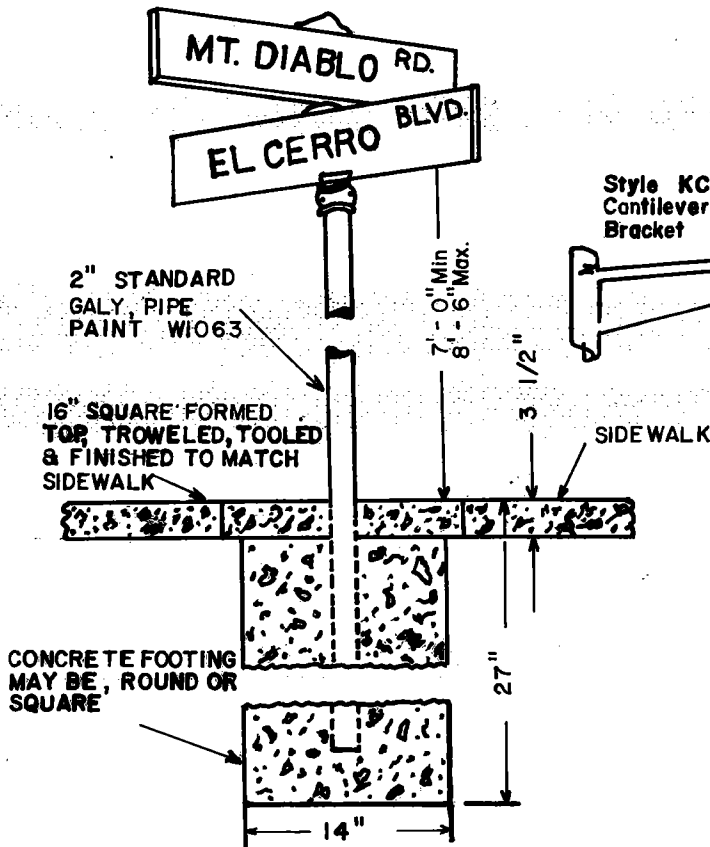
FIRE HYDRANT LOCATION

Approved By [Signature] 6/09/87
 CITY ENGINEER RCE 31870 DATE

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 Sht. 1 of 1

DANVILLE

STANDARD PLAN



- A. 5/8" X 15" CADMIUM PLATED CARRIAGE BOLT.
- B. CAST ALUMINUM TOP & CROSS SADDLE (ZUMAR PART SN9-1) OR SIMILAR.
- C. CAST ALUMINUM POST CAP, FOR 2" PIPE, WITH THREE 3/8" ALLEN HEAD SET SCREWS. (ZUMAR PART SN9-2) OR SIMILAR.
- D. CANTILEVER ARM BRACKET, FOR ELECTOLIER, ATTACHED WITH TWO 3/4" STAINLESS STEEL BANDS (ZUMAR PART ZI-KC-500) OR SIMILAR.
- E. SIGN BLANKS (ANODIZED ALUMINUM EXTRUSION OF 6063-T4 ALLOY), 1" w x 6" or 9" h VARIOUS LENGTHS.



OLDTOWN AREA: 6" TALL SIGNS. BLACK LETTERS, ALL CAPS. ON WHITE BACKGROUND.
 RESIDENTIAL: (OTHER THAN OLDTOWN): 6" SIGN. BLAIR-HOUSE GREEN LETTERS ON WHITE BACKGROUND. ALL CAPS, LENGTH VARIES.
 ARTERIALS: 9" TALL SIGNS. BLAIR-HOUSE GREEN LETTERS ON WHITE BACKGROUND. ALL CAPS, LENGTH VARIES.

THE FORMULATION OF BLAIR-HOUSE GREEN:

- a. THREE (3) QUARTS Kem-Lustral Dark Green, #F65G1
- b. ONE (1) QUART Kem-Lustral Gloss Black, #F65B1
- c. EIGHT (8) OUNCES Black Tint.

| No. | Rev. | By |
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Scale NOT TO SCALE

Drawn By K.D Checked By _____

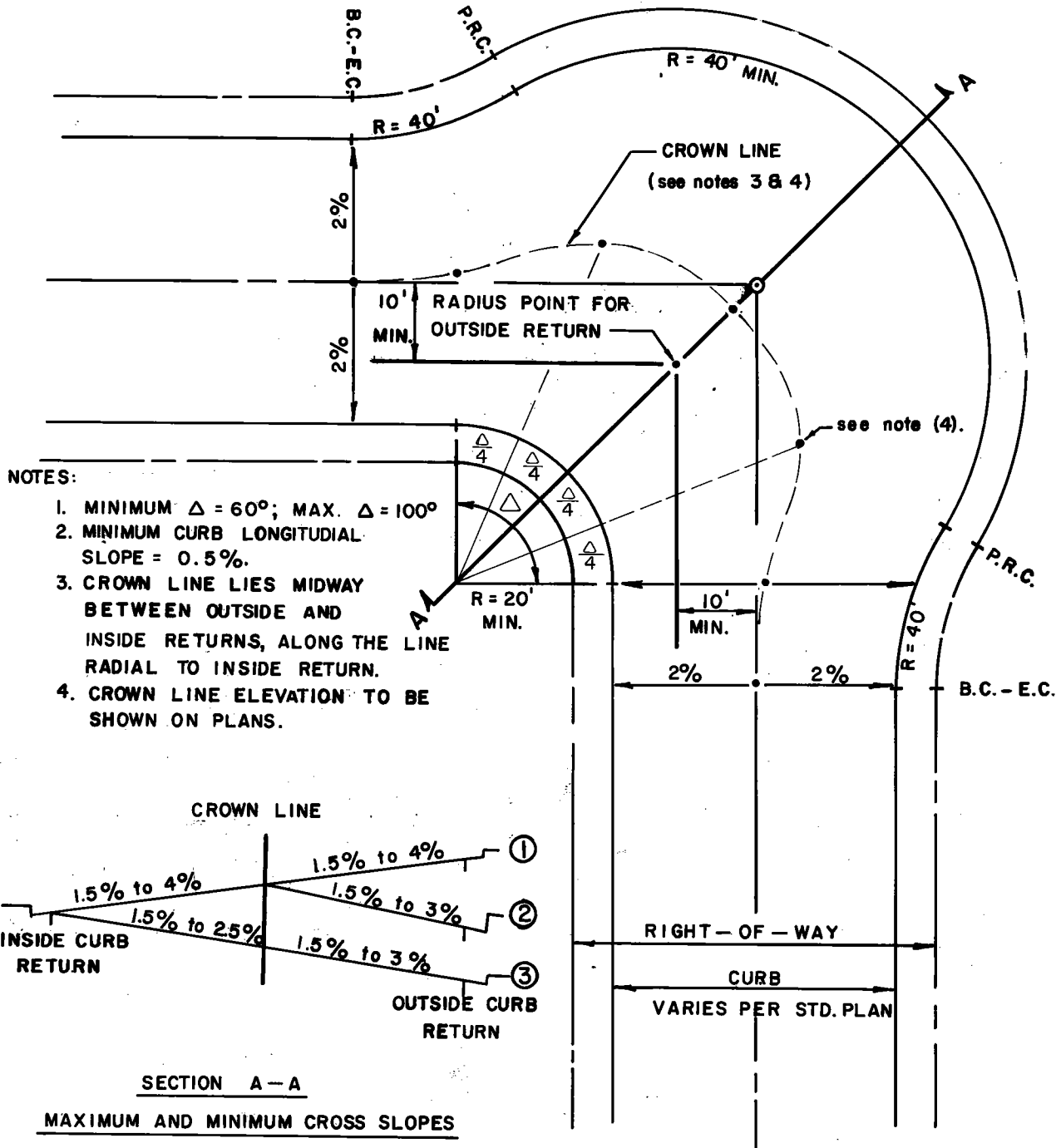
STREET NAME SIGN DETIAL

Approved By Sahn Kisenko RCE 27127 5/9/89
 Assst Engr
 CITY ENGINEER RCE 31870 DATE

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 of 1

DANVILLE

STANDARD PLAN



TYPICAL KNUCKLE DETAIL

Scale NOT TO SCALE

Drawn By RS Checked By [Signature]

Approved By [Signature]
CITY ENGINEER RCE 31870 4-5-91 DATE

| No. | Rev. | By |
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DANVILLE

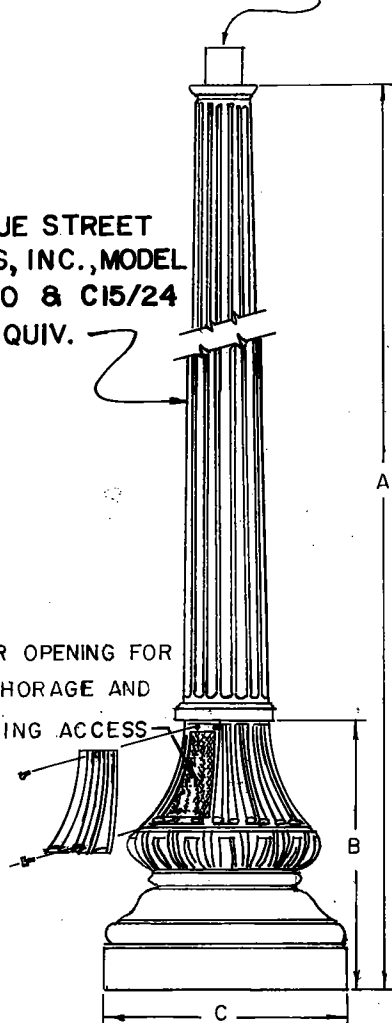
STANDARD PLAN



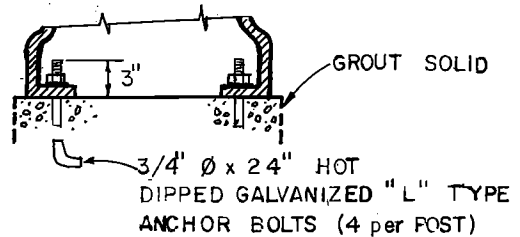
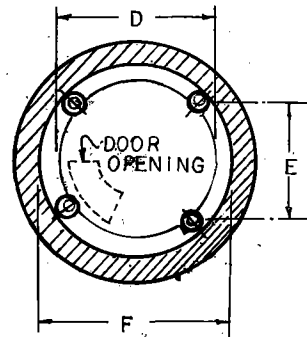
3" O.D. x 3" HIGH TENON

ANTIQUE STREET LAMPS, INC., MODEL C12-20 & C15/24 OR EQUIV.

DOOR OPENING FOR ANCHORAGE AND WIRING ACCESS



NOTE: POLE PLACEMENT LOCATION PER OLD TOWN BEAUTIFICATION PLAN. PAINT PER TOWN STD. DRWG. NO. 125.



BASE PLATE ANCHORAGE DETAIL

| POLE TYPE | POLE DATA | | | | BASE PLATE DATA | | | LUMINAIRE POLE ASSEMBLY |
|-----------|-----------|-----|--------------|---------|-------------------|--------|---------------|-------------------------|
| | A HEIGHT | B | C BASE WIDTH | WEIGHT | D DIA. OF OPENING | E | F BOLT CIRCLE | |
| C12-20 | 12'-0" | 22" | 20" | 321 LBS | 12" DIA. | 10.63" | 15" DIA. | SINGLE |
| C15/24 | 14'-6" | 22" | 24" | 475 LBS | 14" DIA. | 12" | 17" DIA. | DOUBLE |

NOTE: WEIGHT FIGURE FOR MODEL C15/24 INCLUDES DOUBLE LUMINAIRE ASSEMBLY

| <p>Scale NOT TO SCALE</p> | <p>Drawn By <u>RS</u> Checked By <u>MS</u></p> | <table border="1"> <tr> <th>No.</th> <th>Rev.</th> <th>By</th> </tr> <tr> <td>1</td> <td>3/94</td> <td>MS</td> </tr> </table> | No. | Rev. | By | 1 | 3/94 | MS |
|-----------------------------|--|---|-----|------|----|---|------|----|
| No. | Rev. | By | | | | | | |
| 1 | 3/94 | MS | | | | | | |
| <p>ANTIQUE POLES</p> | <p>Approved By <u>[Signature]</u> CITY ENGINEER RCE 31870</p> <p style="text-align: right;">4-19-91 DATE</p> | <p>123</p> | | | | | | |

DANVILLE

STANDARD PLAN



DATA CHART

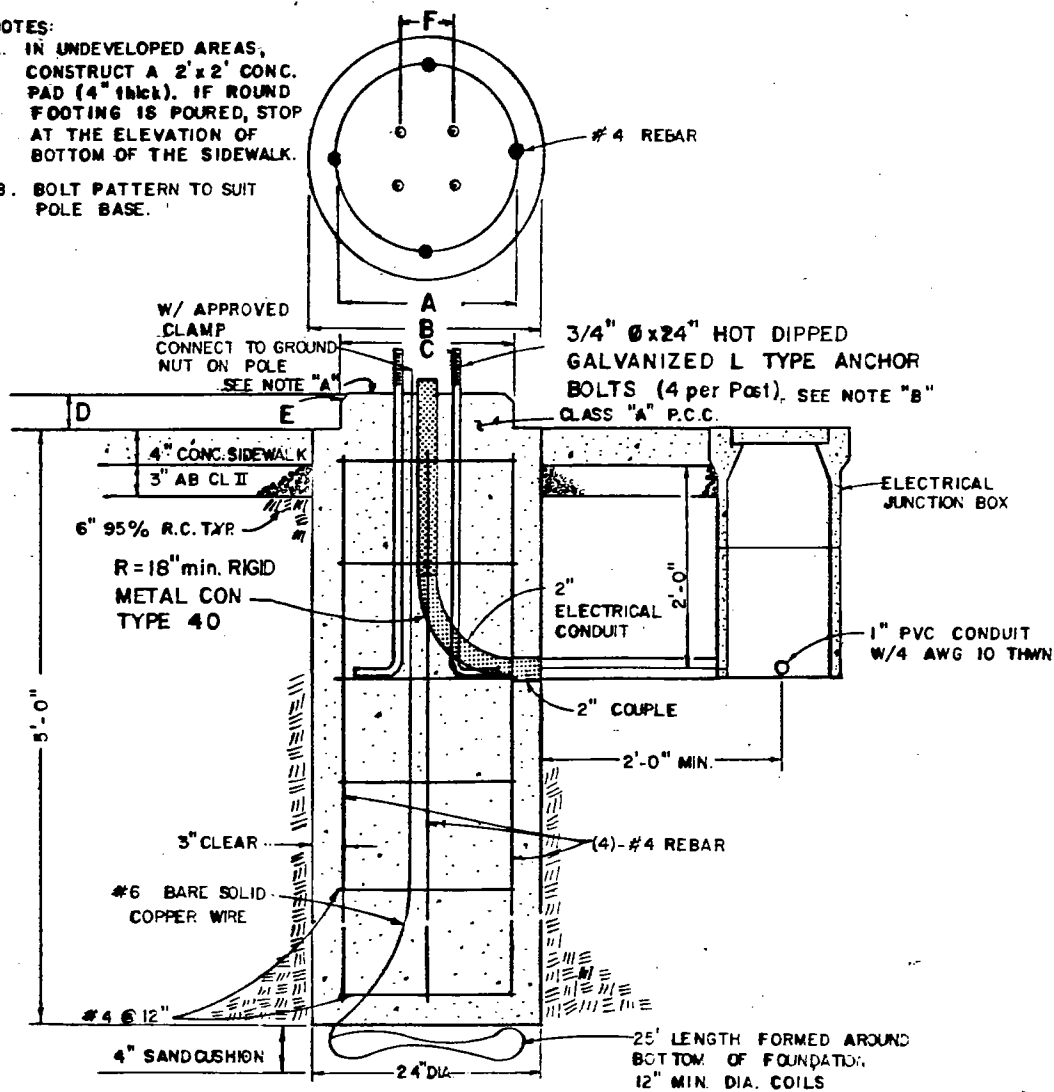
C12-20

C15/24

| | |
|-----------------------|--------------------|
| A) 36" DIA. | 36" DIA. |
| B) 24" DIA. | 34" DIA. |
| C) 12" DIA. | 14" DIA. |
| D) 3.5" | 3.5" |
| E) 3/4" CHAMFER | - |
| F) 15" DIA. BOLT CIR. | 17" DIA. BOLT CIR. |

NOTES:

- A. IN UNDEVELOPED AREAS, CONSTRUCT A 2' x 2' CONC. PAD (4" thk). IF ROUND FOOTING IS POURED, STOP AT THE ELEVATION OF BOTTOM OF THE SIDEWALK.
- B. BOLT PATTERN TO SUIT POLE BASE.



ELECTROLIER BASE FOR STREET LIGHTS

| No. | Rev. | By |
|-----|-------|------|
| 1 | 11/94 | H.P. |

Scale NOT TO SCALE

Drawn By R.S. Checked By M.S.

**LIGHT POLE:
ANCHORAGE**

Approved By

 CITY ENGINEER RCE 31870
 DATE 4-19-91

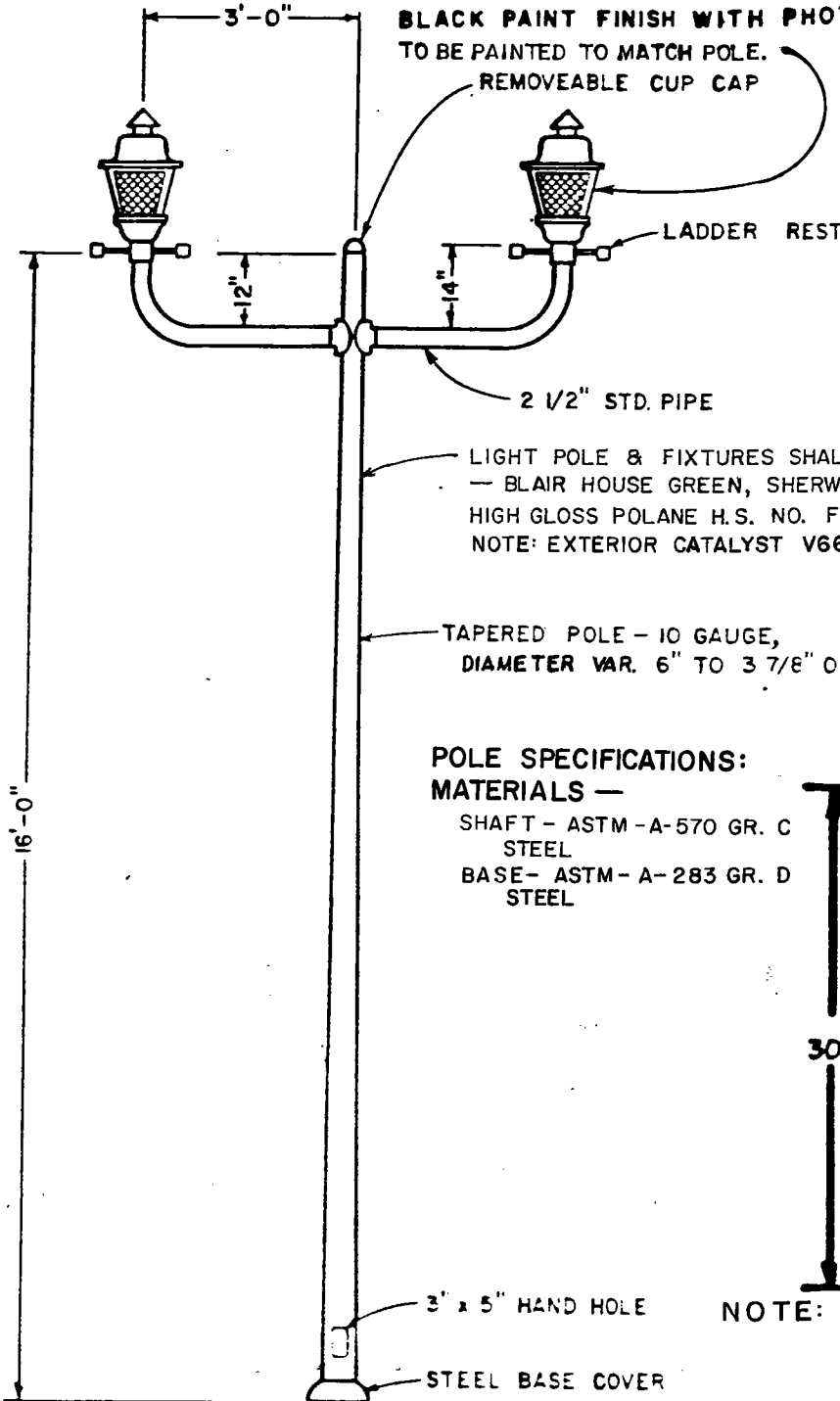
124

DANVILLE

STANDARD PLAN



FIXTURE - MCGRAW EDISON CO. # UTR 3292 - 120RV - BK,
 120V, 100W MPS, PRISMATIC CLEAR ACRYLIC LENS,
 BLACK PAINT FINISH WITH PHOTO CELL, (OR EQUIVALENT).
 TO BE PAINTED TO MATCH POLE.



REMOVEABLE CUP CAP

LADDER REST

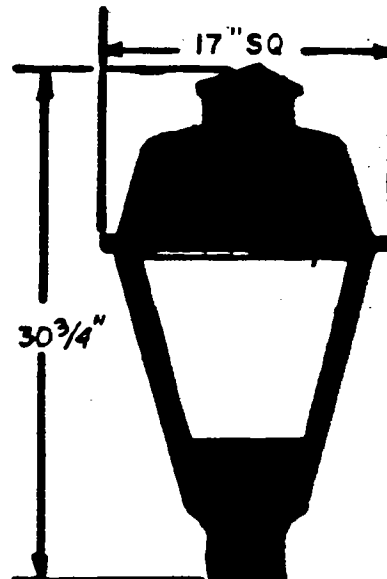
2 1/2" STD. PIPE

LIGHT POLE & FIXTURES SHALL BE PAINTED WITH 2 COATS, "WILLIAMSBURG"
 - BLAIR HOUSE GREEN, SHERWIN WILLIAMS (MARTIN - SENOUR),
 HIGH GLOSS POLANE H.S. NO. F63HXG1240-8127
 NOTE: EXTERIOR CATALYST V66V29 MUST BE USED.

TAPERED POLE - 10 GAUGE,
 DIAMETER VAR. 6" TO 3 7/8" O D

**POLE SPECIFICATIONS:
 MATERIALS -**

SHAFT - ASTM - A-570 GR. C
 STEEL
 BASE - ASTM - A-283 GR. D
 STEEL



NOTE: POLE PLACEMENT LOCATION PER
 OLD TOWN BEAUTIFICATION PLAN

3" x 5" HAND HOLE

STEEL BASE COVER

| No. | Rev. | By |
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Drawn By RB Checked By MS

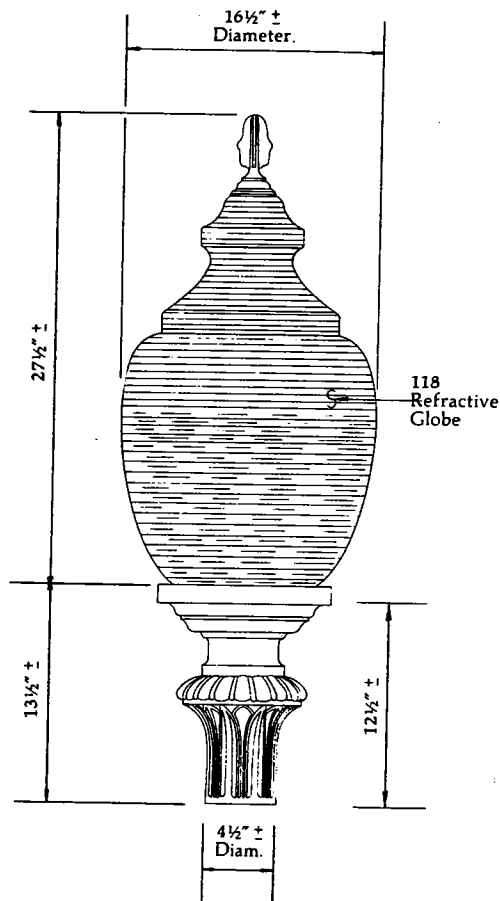
TRADITIONAIRE DOUBLE LUMINAIRE

Approved By Stan C. Lake 4-19-71
 CITY ENGINEER RCE 31870 DATE

125

DANVILLE

STANDARD PLAN



WASHINGTON CASING

WASHINGTON-118 REFRACTIVE GLOBE
W/REFLECTOR & HOUSESIDE SHIELD
AND FINIAL, TYPICAL FOR C12-20 &
C15/24 TYPE POLES.

MANUFACTURER: SPRING CITY
ELECTRICAL MFG. CO.

LUMINAIRE SPECS.

VOLTAGE: 120

DISTRIBUTION: ASYMMETRIC — TYPE III

WATTAGE: C12-20 = HPS/70

C15/24 = HPS/100

LAMP: HIGH PRESSURE SODIUM

WEIGHT: 60 LBS.

| No. | Rev. | By |
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| 1 | 11/94 | H.P. |
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Drawn By RS Checked By WKS

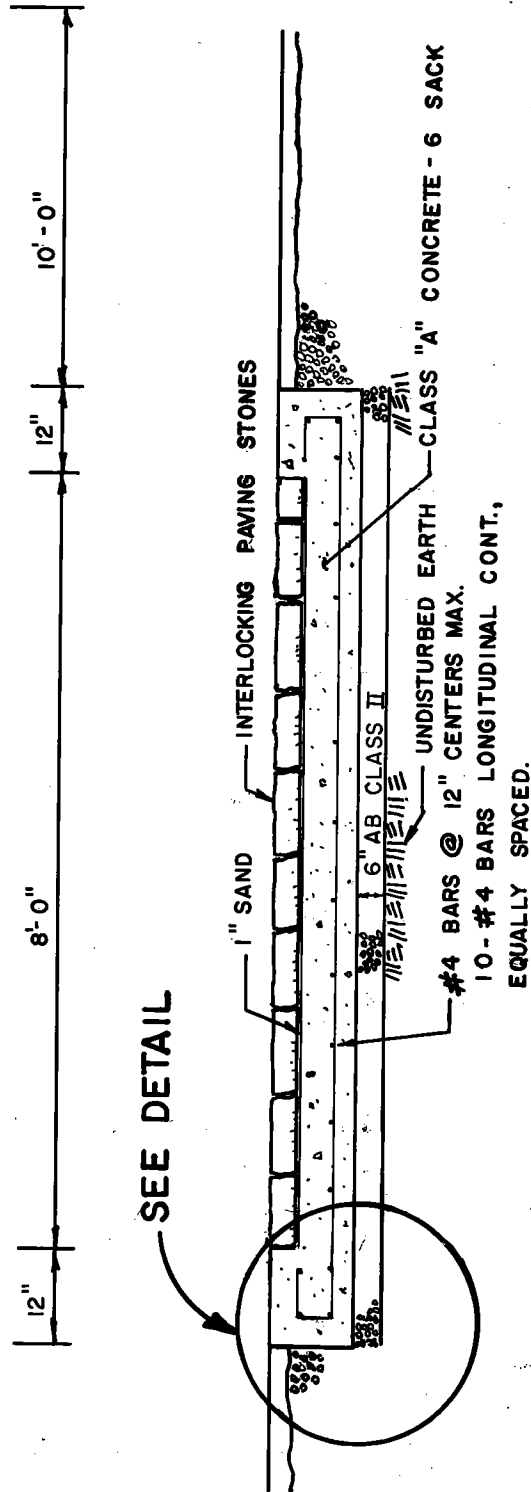
**WASHINGTON
LUMINAIRE**

Approved By
Steve L. Lake 4-19-91
CITY ENGINEER RCE31870 DATE

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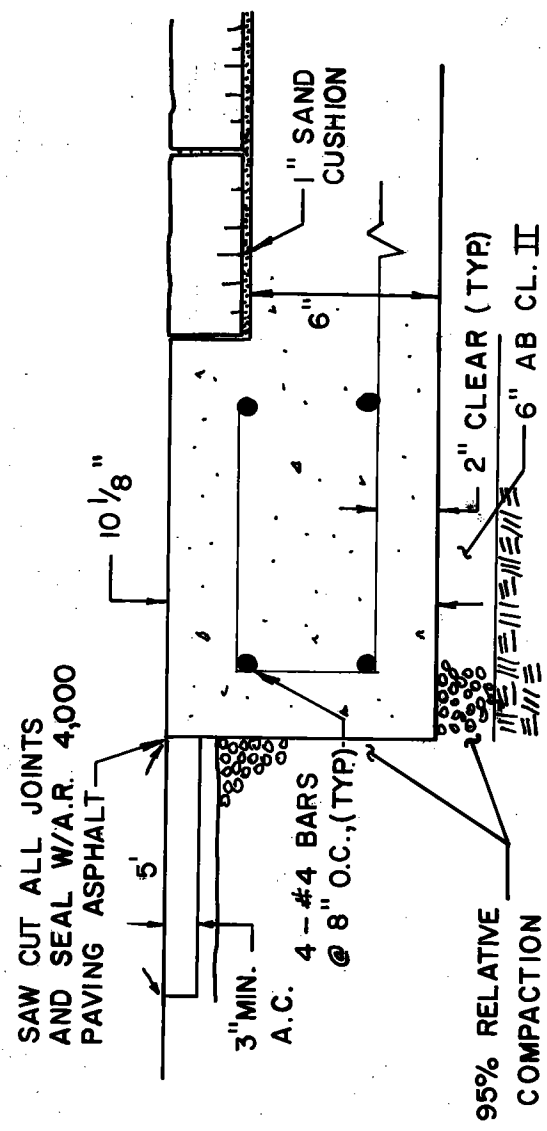
DANVILLE

STANDARD PLAN



INTERLOCKING PAVING STONE CROSSWALK ON P.C.C. BASE

N.T.S.



DETAIL

N.T.S.

Scale NOT TO SCALE

Drawn By RS. Checked By MB

| No. | Rev. | By |
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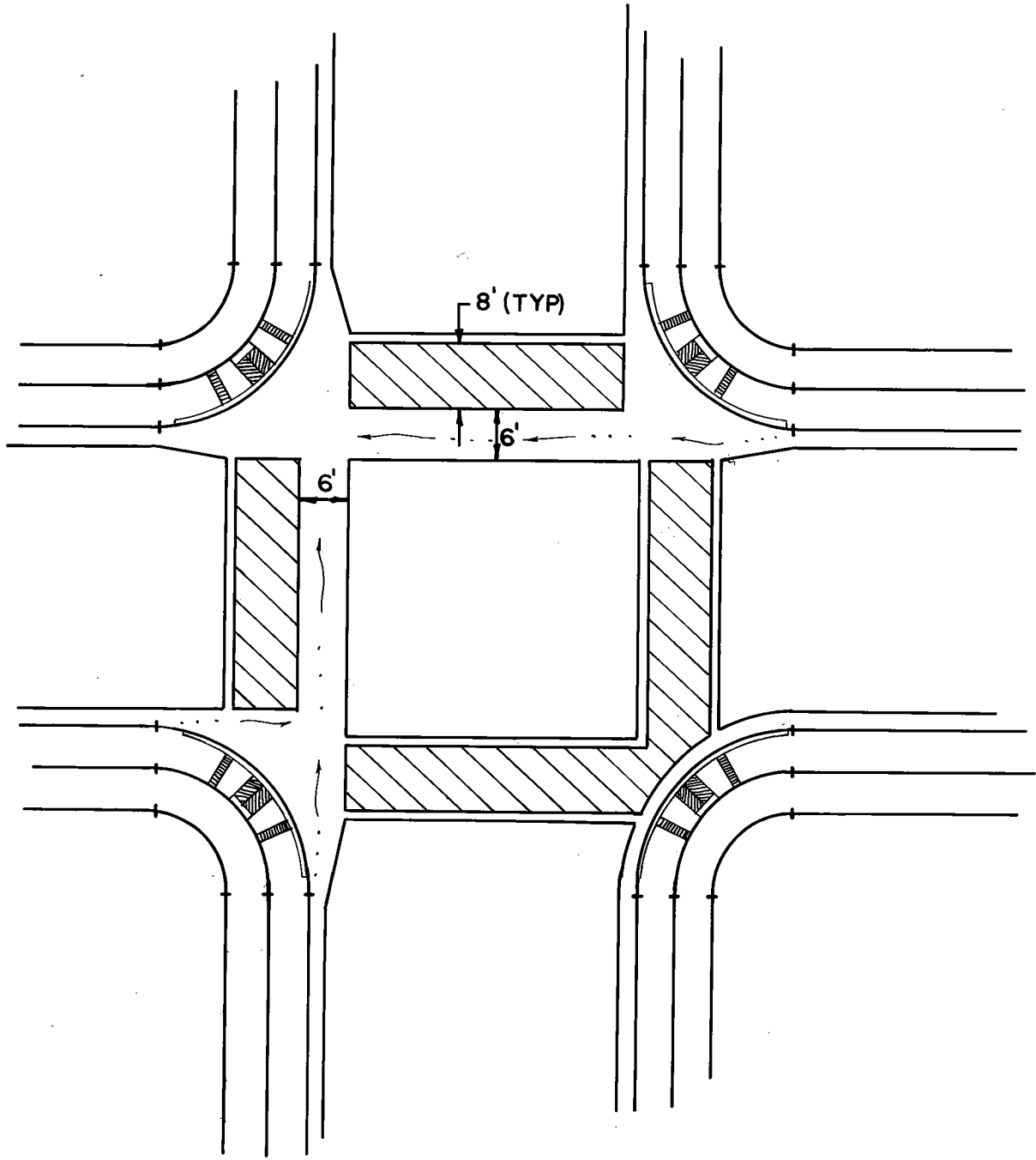
CROSSWALK PAVERS

Approved By [Signature]
 CITY ENGINEER RCE 31870 DATE 4-17-91

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DANVILLE

STANDARD PLAN



PAVER LAYOUT AT INTERSECTION

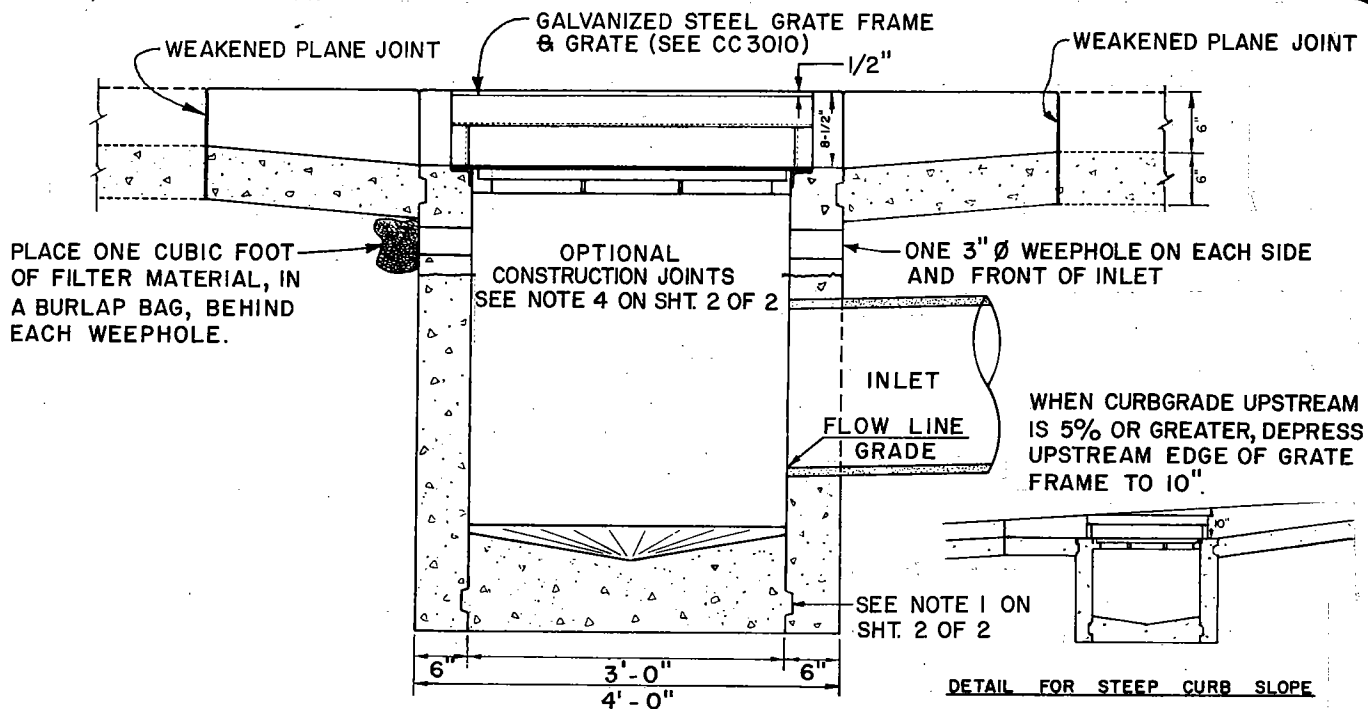
NOTE: TYP. LAYOUT FOR CROSSDRAINS



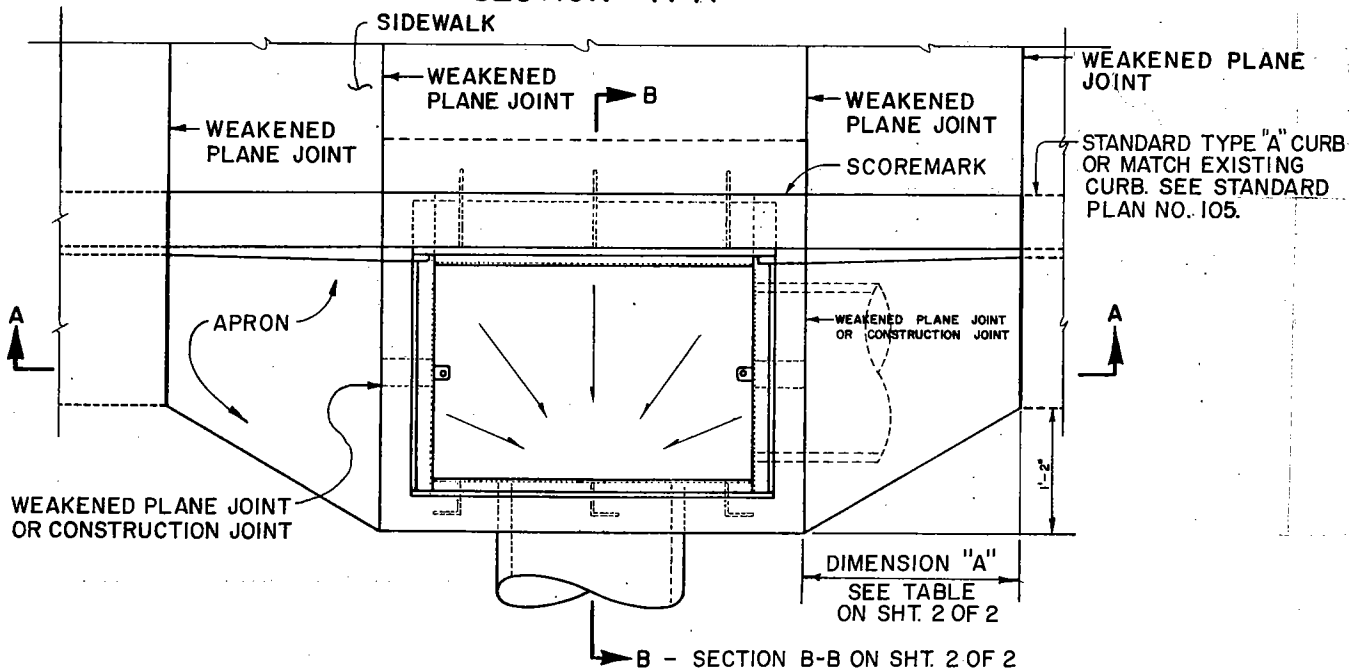
| Scale: 1" = 20' | Drawn By <u>RS</u> Checked By <u>WJ</u> | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="font-size: small;">No.</th> <th style="font-size: small;">Rev.</th> <th style="font-size: small;">By</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> | No. | Rev. | By | | | | | | |
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| No. | Rev. | By | | | | | | | | | |
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| Approved By <u><i>[Signature]</i></u> CITY ENGINEER RCE 31870 | | DATE <u>4-17-91</u> 128 | | | | | | | | | |

DANVILLE

STANDARD PLAN



SECTION A-A



PLAN
GRATE NOT SHOWN

| No. | Rev. | By |
|-----|------|----|
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

TYPE "A" INLET

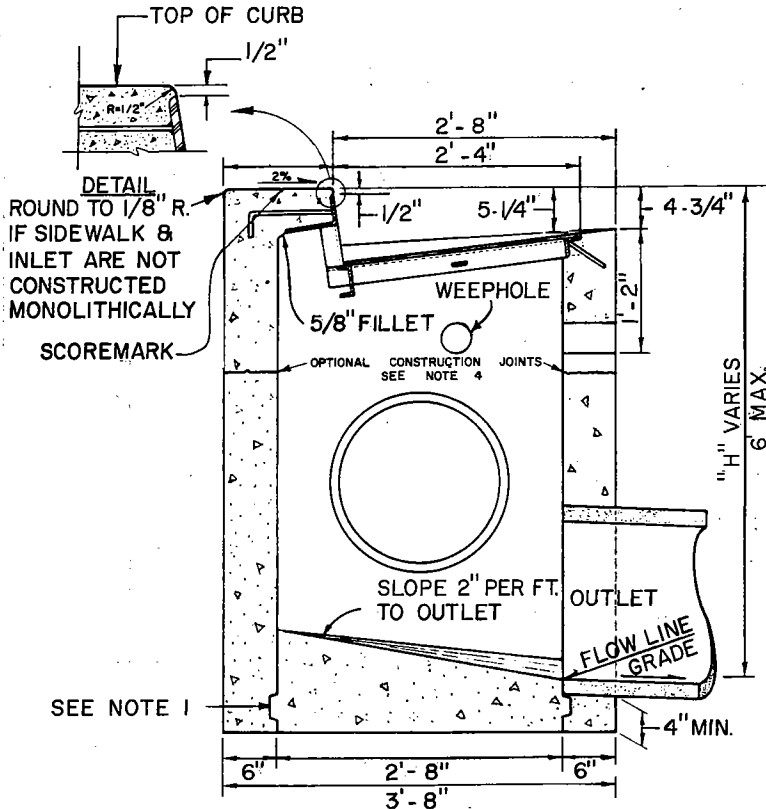
Approved By
[Signature]
CITY ENGINEER RCE 31870

6/09/87
DATE

201a
Sht. 1 of 2

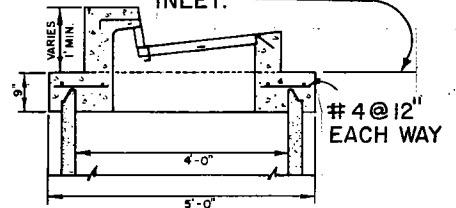
DANVILLE

STANDARD PLAN



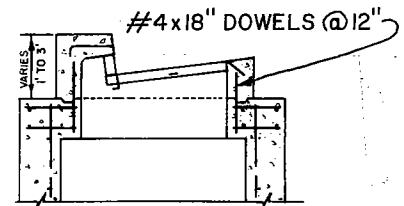
SECTION B-B
GRATE NOT SHOWN

ALL DIMENSIONS ABOVE THIS LINE ARE IDENTICAL TO A TYPE 'A' STANDARD INLET.



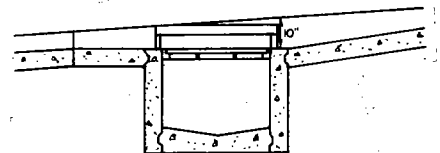
SECTION OF
TYPE "A" OPENING
ON PRECAST MANHOLE BARREL

REFER TO STANDARD PLAN NO. 204



SECTION OF
TYPE "A" OPENING
ON MANHOLE BASE

REFER TO STANDARD PLAN NO. 205
WHEN CURBGRADE UPSTREAM IS 5%
OR GREATER, DEPRESS UPSTREAM
EDGE OF GRATE FRAME TO 10"



DETAIL FOR STEEP CURB SLOPE

NOTES

1. CONSTRUCTION JOINTS ARE OPTIONAL WHERE SHOWN. OTHER LOCATIONS ARE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER. KEY DIMENSIONS - 34" x 2 1/2"
2. WHEN DIMENSION "H" EXCEEDS 6', USE MANHOLE WITH A TYPE "A" INLET OPENING ON TOP.
3. INLET AND OUTLET PIPES SHALL NOT INTERCEPT A BOX THROUGH A CORNER. IF THE PIPE IS TOO LARGE OR IF THE SKEW ANGLE IS TOO GREAT TO PERMIT THE OPENING TO BE MADE IN A SINGLE WALL, USE A MANHOLE BASE WITH A TYPE "A" INLET OPENING ON TOP.
4. CONSTRUCTION JOINTS SHOWN ARE PERMITTED WHEN TOP PORTION OF INLET IS TO BE CONSTRUCTED MONOLITHICALLY WITH CURB AND SIDEWALK, IN WHICH CASE THE FOLLOWING SHALL APPLY:
 - a. CONCRETE ABOVE CONSTRUCTION JOINT SHALL BE CLASS B (5 SACKS PER CU. YD.)
 - b. CONCRETE BELOW CONSTRUCTION JOINT SHALL BE CLASS A (6 SACKS PER CU. YD.)
 - c. CONSTRUCTION JOINT SHALL BE LOCATED AT PAVEMENT SUBGRADE.
 WHEN INLET IS CONSTRUCTED AS A SINGLE UNIT, ALL CONCRETE SHALL BE CLASS A.

| DIMENSION "A" | | |
|--------------------|--------------|----------------|
| UPSTREAM CURBGRADE | "A" UPSTREAM | "A" DOWNSTREAM |
| 2% AND LESS | 2' | 2' |
| 3% | 3' | 2' |
| 4% | 4' | 2' |
| 5% | 5' | 2' |
| 6% | 6' | 2' |
| 7% | 7' | 1' |
| 8% | 8' | 1' |
| 9% | 9' | 1' |
| 10% AND GREATER | 10' | 2' |

| No. | Rev. | By |
|-----|-----------------|--------------------|
| 1 | REVISED WITH #2 | <i>[Signature]</i> |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

TYPE "A" INLET

Approved By
[Signature]
CITY ENGINEER RCE 31870

6/09/87
DATE

201b

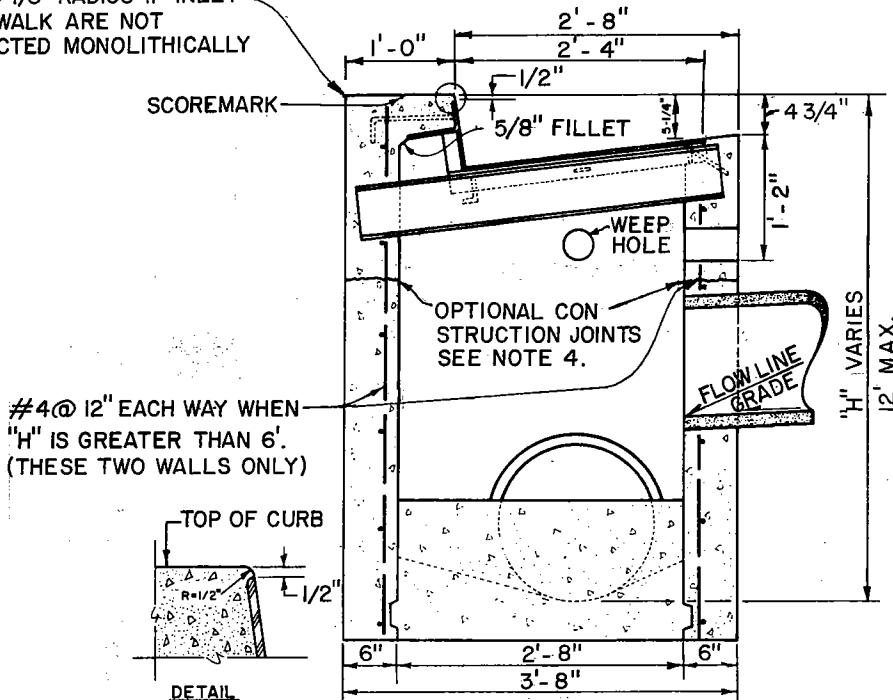
Sht. 2 of 2

DANVILLE

STANDARD PLAN

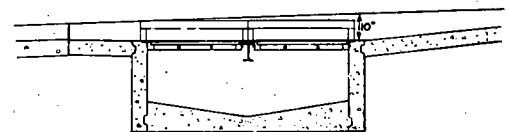


ROUND TO 1/8" RADIUS IF INLET AND SIDEWALK ARE NOT CONSTRUCTED MONOLITHICALLY



SECTION B-B
GRATE NOT SHOWN

WHEN CURBGRADE UPSTREAM IS 5% OR GREATER, DEPRESS UPSTREAM EDGE OF GRATE FRAMES TO 10".



DETAIL FOR STEEP CURB SLOPE

NOTES

- CONSTRUCTION JOINTS ARE OPTIONAL WHERE SHOWN. OTHER LOCATIONS ARE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER. KEY DIMENSIONS - 3/4" x 2 1/2".
- CLEARANCE SHALL BE 1-1/2" FOR ALL REINFORCING STEEL.
- THE TWO GRATE FRAMES SHALL BE SECURELY CLAMPED TO THE I BEAM DURING THE PLACEMENT OF CONCRETE.
- CONSTRUCTION JOINTS SHOWN ARE PERMITTED WHEN TOP PORTION OF INLET IS TO BE CONSTRUCTED MONOLITHICALLY WITH CURB AND SIDEWALK, IN WHICH CASE THE FOLLOWING SHALL APPLY:
 - CONCRETE ABOVE CONSTRUCTION JOINT SHALL BE CLASS B (5 SACKS PER CU. YD.)
 - CONCRETE BELOW CONSTRUCTION JOINT SHALL BE CLASS A (6 SACKS PER CU. YD.)
 - CONSTRUCTION JOINT SHALL BE LOCATED AT PAVEMENT SUBGRADE.
 WHEN INLET IS CONSTRUCTED AS A SINGLE UNIT, ALL CONCRETE SHALL BE CLASS A.

| UPSTREAM CURBGRADE | DIMENSION "A" | |
|--------------------|---------------|----------------|
| | "A" UPSTREAM | "A" DOWNSTREAM |
| 2% AND LESS | 2' | 2' |
| 3% | 3' | 2' |
| 4% | 4' | 2' |
| 5% | 5' | 2' |
| 6% | 6' | 2' |
| 7% | 7' | 1' |
| 8% | 8' | 1' |
| 9% | 9' | 1' |
| 10% AND GREATER | 10' | 2' |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

TYPE "B" INLET

Approved By
[Signature]
CITY ENGINEER RCE 31870

6/09/87
DATE

| No. | Rev. | By |
|-----|-------------------------|--------------------|
| 1 | ADD WIDTH V VARIES MAX. | <i>[Signature]</i> |

1/89

202b
Sht. 2 of 2

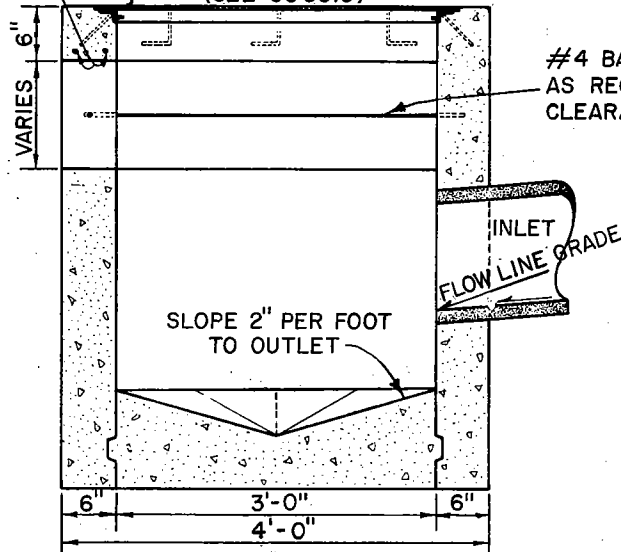
DANVILLE

STANDARD PLAN



TWO #4 x 2'-8"
ACROSS SIDE OPENINGS

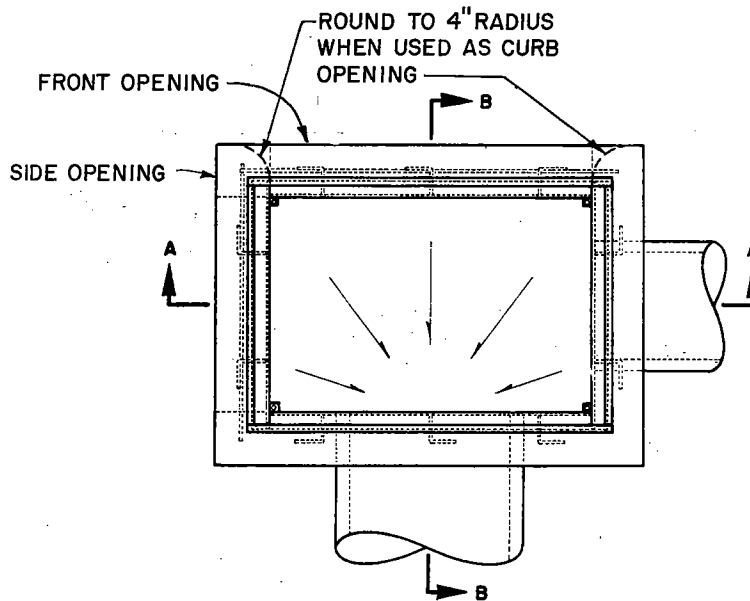
GALVANIZED STEEL COVERPLATE
AND COVERPLATE FRAME
SEE NOTE 6 ON SHT. 2 OF 2.
(SEE CC 3010)



#4 BARS ACROSS OPENINGS
AS REQUIRED FOR 6" VERTICAL
CLEARANCE. (MAX.)

INLET
FLOW LINE GRADE

SECTION A-A



PLAN

COVERPLATE NOT SHOWN

| No. | Rev. | By |
|-----|------|----|
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

TYPE "C" INLET

Approved By
Steve R. Kelly
CITY ENGINEER RCE 31870

6/09/87
DATE

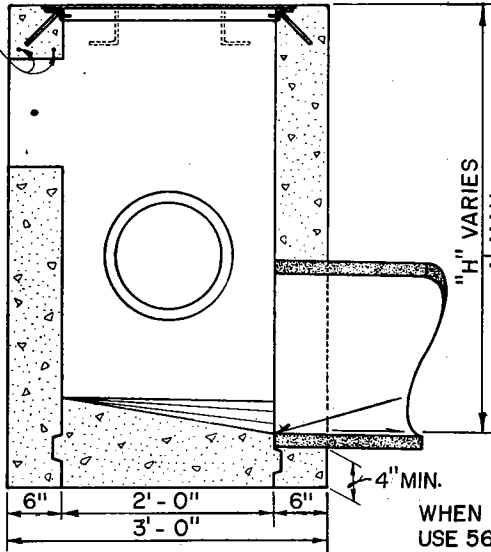
203a
Sht. 1 of 2

DANVILLE

STANDARD PLAN

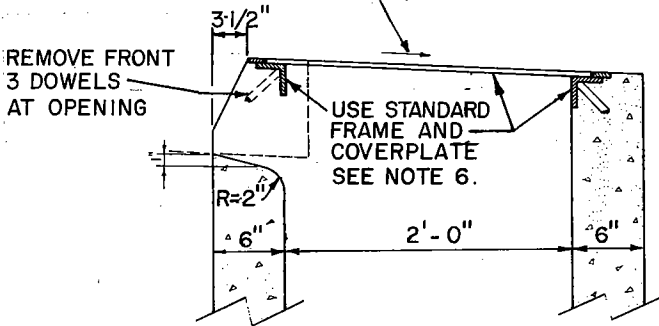


TWO #4x3'-8"
ACROSS FRONT
OPENINGS.



SECTION B-B

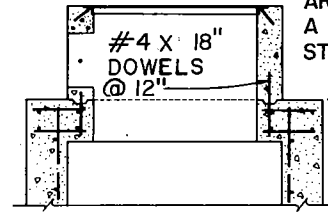
SET FRAME LEVEL, OR SLOPE
AS REQUIRED TO MATCH SLOPE
OF ISLAND PAVING.



SECTION B-B

CURB OPENING MODIFICATION

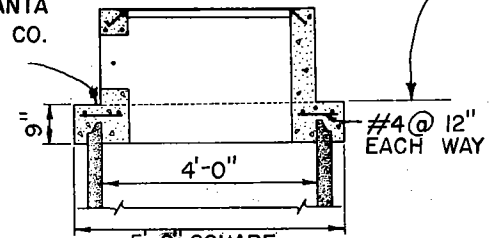
WHEN INLET IS PRECAST,
USE 56" DIA. PRECAST
TRANSITION SLAB, SANTA
ROSA CAST PRODUCTS CO.
DWG. NO. B46CC3 OR
EQUIVALENT



SECTION OF
TYPE "C" OPENING
ON MANHOLE BASE

ALL DIMENSIONS
ABOVE THIS LINE
ARE IDENTICAL TO
A TYPE "C"
STANDARD INLET

ALL DIMENSIONS ABOVE THIS
LINE ARE IDENTICAL TO A
TYPE "C" STANDARD INLET.



SECTION OF
TYPE "C" OPENING
ON PRECAST MANHOLE BARREL

NOTES:

- CONSTRUCTION JOINTS ARE OPTIONAL WHERE SHOWN. OTHER LOCATIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER. KEY DIMENSIONS - 3/4" x 2-1/2".
- CLEARANCE SHALL BE 1-1/2" FOR ALL REINFORCING STEEL.
- INLET AND OUTLET PIPES SHALL NOT INTERCEPT A BOX THROUGH A CORNER. IF THE PIPE IS TOO LARGE OR THE SKEW ANGLE IS TOO GREAT TO PERMIT THE OPENING TO BE MADE IN A SINGLE WALL, USE A MANHOLE BASE WITH A TYPE "C" INLET OPENING ON TOP.
- WHEN DIMENSION "H" EXCEEDS 4', USE A MANHOLE WITH A TYPE "C" INLET OPENING ON TOP.
- LOCATION AND SIZE OF OPENINGS TO BE AS SHOWN ON PLANS OR AS OTHERWISE DETERMINED BY ENGINEER.
- ALL INLETS SHALL BE CONSTRUCTED WITH GRATE UNLESS THE INLET IS TO BE IN PEDESTRIAN AREA, THEN A COVER SHALL BE USED.
- PRECAST INLET, CONFORMING TO SANTA ROSA CAST PRODUCTS CO. DRAWING NO. B46CCI, OR EQUIVALENT, CAN BE SUBSTITUTED FOR CAST-IN-PLACE INLET.

| No. | Rev. | By |
|-----|----------------|-------------|
| 1 | CHG @ TO X ADD | [Signature] |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

TYPE "C" INLET

Approved By
[Signature]
CITY ENGINEER RCE 31870
6/09/87
DATE

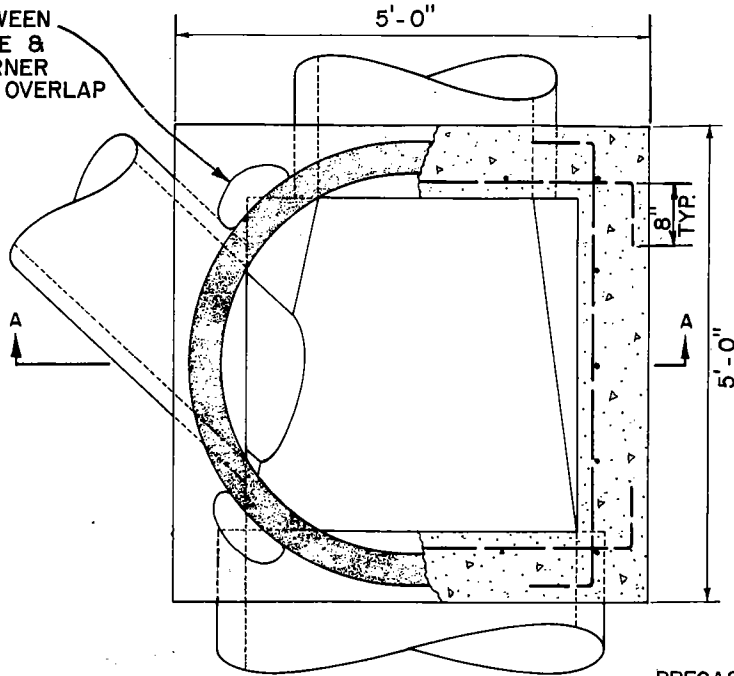
203b
Sht. 2 of 2

DANVILLE

STANDARD PLAN

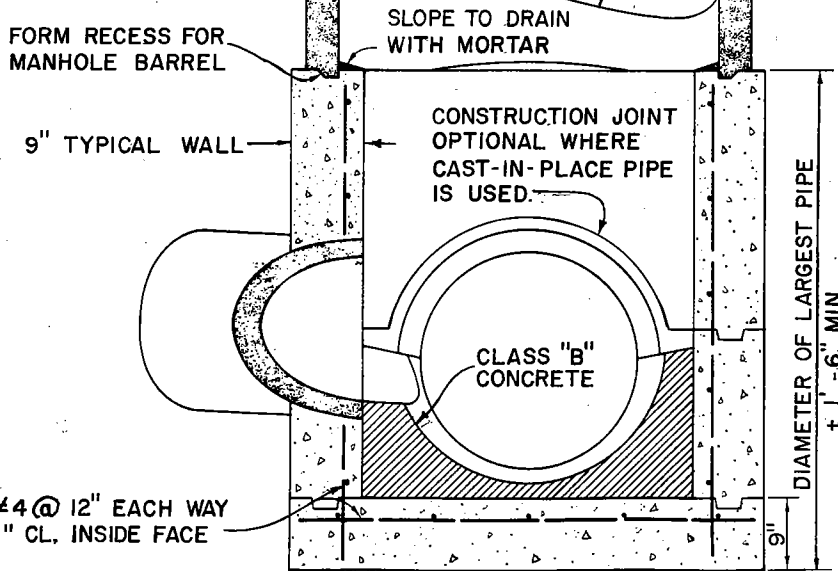


MORTAR GAP BETWEEN
PRECAST MANHOLE &
9" WALL AT 4 CORNER
OPENINGS. 5" MIN. OVERLAP



PLAN

PRECAST MANHOLE SECTION. WHERE THERE IS NOT SUFFICIENT CLEARANCE BETWEEN THE TOP OF THE MANHOLE BASE AND FINISH GRADE FOR PRECAST SECTION, USE TOP SLAB.



SECTION A-A

BOTTOM SLAB TO BE IN PLACE PRIOR TO CONSTRUCTION OF PIPE WHERE CAST-IN-PLACE PIPE IS USED.

| No. | Rev. | By |
|-----|--------------------|--------------------|
| 1 | CHG TYP WALL TO 9" | <i>[Signature]</i> |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

TYPE "II" MANHOLE BASE

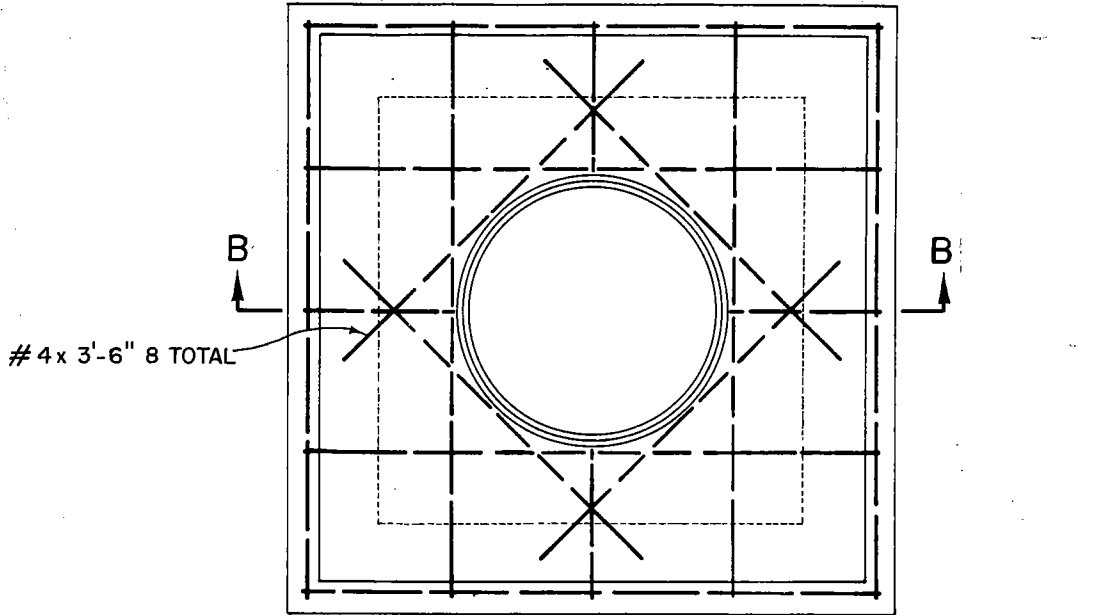
Approved By
[Signature]
CITY ENGINEER RCE 31870

6/09/87
DATE

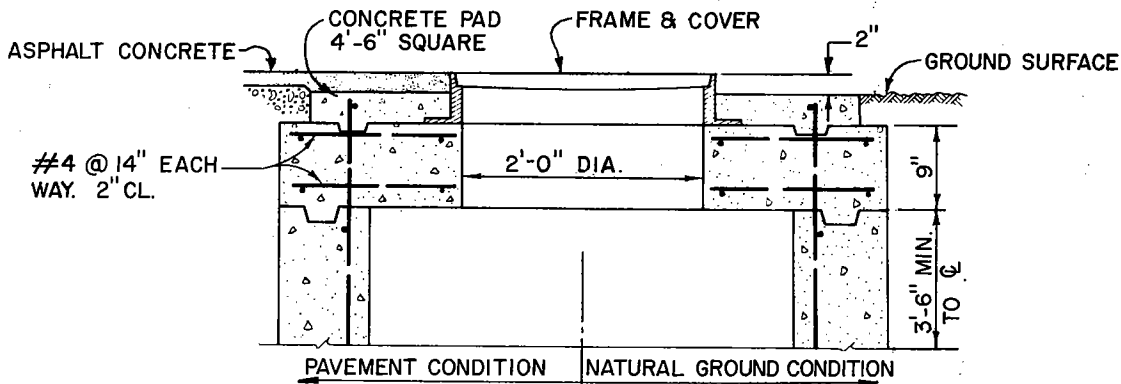
205a
Sht. 1 of 2

DANVILLE

STANDARD PLAN



PLAN



SECTION B-B
TOP SLAB

1. ALL REINFORCED CONCRETE SHALL BE CLASS "A".
2. CONSTRUCTION JOINTS ARE OPTIONAL WHERE SHOWN. OTHER LOCATIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER. KEY DIMENSIONS ARE $1\frac{1}{2}'' \times 3\frac{1}{2}''$.
3. INLET AND OUTLET PIPES SHALL NOT INTERCEPT A MANHOLE BASE THROUGH A CORNER. IF THE SKEW ANGLE IS TOO GREAT TO PERMIT THE OPENING TO BE MADE IN A SINGLE WALL, USE A TYPE "III" MANHOLE BASE STD. PLAN 206.
4. TYPE "I" MANHOLE BASES STD. PLAN 204 ARE FOR USE WITH PIPES TO 24" IN DIAMETER AND WHERE THERE IS SUFFICIENT COVER TO USE A MINIMUM LENGTH MANHOLE BARREL, ECCENTRIC CONE, AND COVER FRAME. TYPE "II" MANHOLE BASES ARE FOR PIPES TO 42" IN DIAMETER. TYPE "III" MANHOLE BASES ARE FOR USE WITH PIPES TO 60" IN DIAMETER. MANHOLE BASES FOR PIPES LARGER THAN 60" IN DIAMETER SHALL REQUIRE A SPECIAL DESIGN.
5. FOR DETAILS OF PRECAST MANHOLE, SEE STD. PLAN 204.
6. FOR DETAILS OF MANHOLE FRAME AND COVER, SEE STD. PLAN 207.

USE TOP SLAB:

1. WHERE THERE IS NOT SUFFICIENT CLEARANCE BETWEEN THE TOP OF THE MANHOLE BASE AND FINISH GRADE FOR A PRECAST SECTION AND MANHOLE COVER FRAME.
2. WHEN PLACING A TYPE "A" OR TYPE "C" INLET OPENING ON A TYPE "II" MANHOLE BASE, THE OPENING IN THE SLAB SHALL CONFORM TO THE INSIDE DIMENSIONS OF THE INLET TO BE USED.

| No. | Rev. | By |
|-----|------|----|
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

TYPE "II" MANHOLE BASE

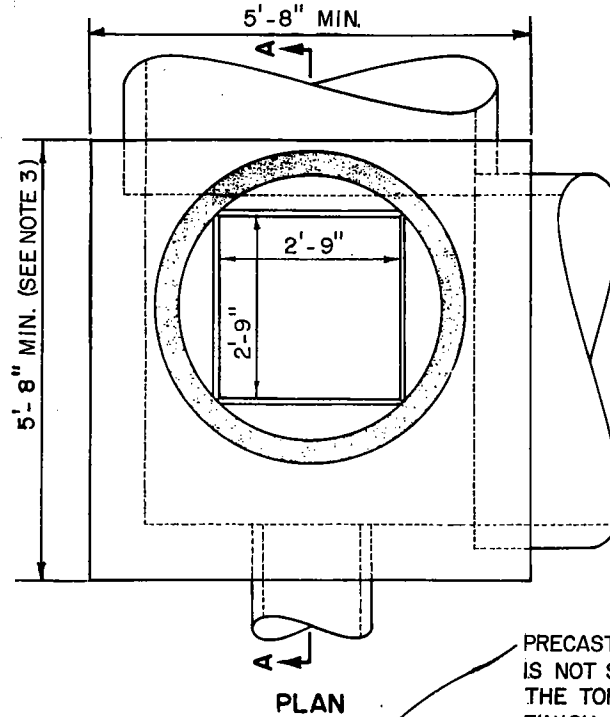
Approved By
Steve Lee
CITY ENGINEER RCE 31870

6/09/87
DATE

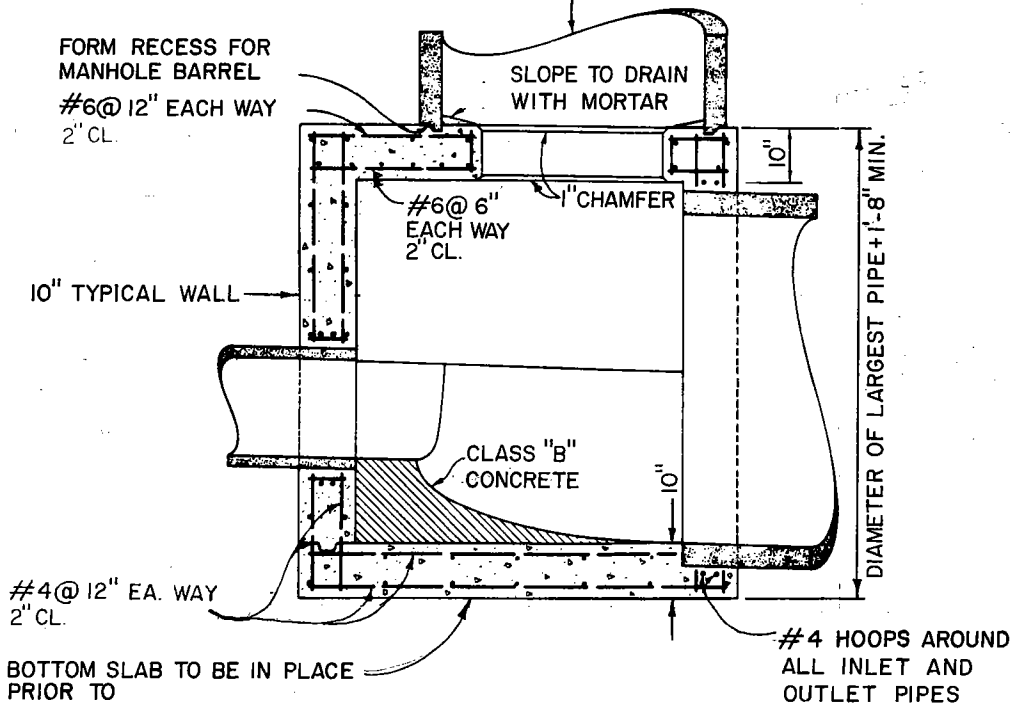
205b
Sht. 2 of 2

DANVILLE

STANDARD PLAN



PRECAST MANHOLE SECTION. WHERE THERE IS NOT SUFFICIENT CLEARANCE BETWEEN THE TOP OF THE MANHOLE BASE AND FINISH GRADE FOR A PRECAST SECTION AND MANHOLE COVER FRAME, USE A TOP SLAB.



| No. | Rev. | By |
|-----|-----------|----|
| 1 | ADD 2\"/> | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

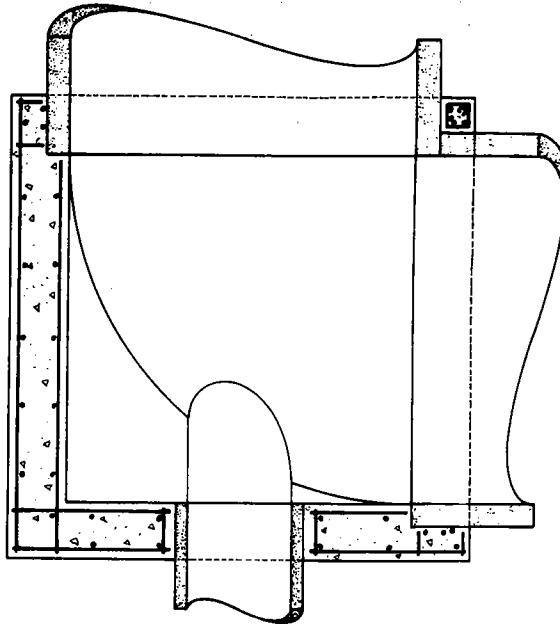
TYPE "III" MANHOLE BASE

Approved By [Signature]
 CITY ENGINEER RCE 31870
 DATE 6/09/87

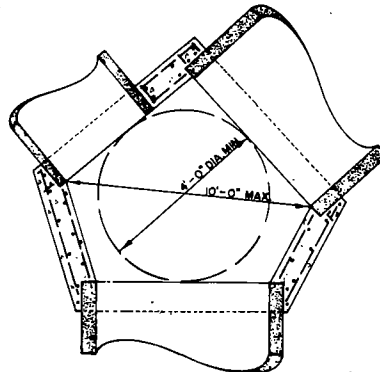
206a
 Sht. 1 of 3

DANVILLE

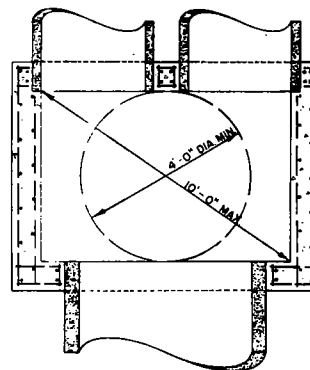
STANDARD PLAN



PLAN SECTION



PLAN SECTION
NO SCALE



PLAN SECTION
NO SCALE

SPECIAL APPLICATIONS OF TYPE "III" MANHOLE BASES

WHEN UNUSUAL CIRCUMSTANCES, SUCH AS EXCESSIVE SKEW OR PARALLEL PIPES, PREVENT THE USE OF A NORMAL TYPE "III" MANHOLE BASE, THE WALLS MAY BE LENGTHENED OR RELOCATED TO ACCOMMODATE THE PIPES, PROVIDING THE FOLLOWING CRITERIA ARE MET:

1. THE INSIDE DIMENSIONS OF THE BASE SHALL BE SUCH THAT A FOUR FOOT DIAMETER CIRCLE WILL LAY FLAT ON THE FLOOR, AS SHOWN.
2. THE MAXIMUM DISTANCE BETWEEN ANY TWO INSIDE CORNERS SHALL BE 10'-0", AS SHOWN.
3. REINFORCEMENT AND FLOOR, WALL, AND TOP THICKNESS SHALL REMAIN THE SAME AS FOR A NORMAL TYPE "III" MANHOLE BASE.
4. NO PIPE SHALL EXCEED 60" INSIDE DIAMETER.

IF ANY ONE OF THESE CRITERIA CANNOT BE MET, A SPECIAL DESIGN WILL BE REQUIRED.

| No. | Rev. | By |
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| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

TYPE "III" MANHOLE BASE

Approved By

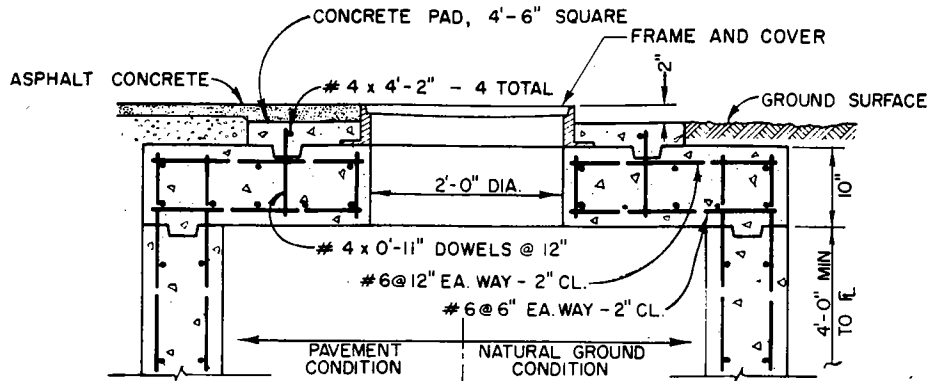
 CITY ENGINEER RCE 31870

6/09/87
 DATE

206b
 Sht. 2 of 3

DANVILLE

STANDARD PLAN



SECTION

TOP SLAB

USE TOP SLAB:

- 1 WHERE THERE IS NOT SUFFICIENT CLEARANCE BETWEEN THE TOP OF THE MANHOLE BASE AND FINISH GRADE FOR A PRECAST SECTION AND MANHOLE COVER FRAME.
- 2 WHEN PLACING A TYPE "A" OR TYPE "C" INLET OPENING ON A TYPE "III" MANHOLE BASE, THE OPENING IN THE TOP SLAB SHALL CONFORM TO THE INSIDE DIMENSIONS OF THE INLET TO BE USED.

NOTES:

1. ALL REINFORCED CONCRETE SHALL BE CLASS "A".
2. CONSTRUCTION JOINTS ARE OPTIONAL WHERE SHOWN. OTHER LOCATIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER. KEY DIMENSIONS ARE $1\frac{1}{2}$ " x $3\frac{1}{2}$ ".
3. INLET AND OUTLET PIPES SHALL NOT INTERCEPT A MANHOLE BASE THROUGH A CORNER. IF THE SKEW ANGLE IS TOO GREAT TO PERMIT THE OPENING TO BE MADE IN A SINGLE WALL, THE WALL MAY BE LENGTHENED OR RELOCATED AS EXPLAINED ON SHT. 2 OF 3.
4. TYPE "I" MANHOLE BASES STANDARD PLAN 204 ARE FOR USE WITH PIPES TO 24" IN DIAMETER AND WHERE THERE IS SUFFICIENT COVER TO USE A MINIMUM LENGTH MANHOLE BARREL, ECCENTRIC CONE, AND COVER FRAME. TYPE "II" MANHOLE BASES ARE FOR PIPES TO 42" IN DIAMETER. TYPE "III" MANHOLE BASES ARE FOR PIPES TO 60" IN DIAMETER. MANHOLE BASES FOR PIPES LARGER THAN 60" IN DIAMETER SHALL REQUIRE A SPECIAL DESIGN.
5. FOR DETAILS OF PRECAST MANHOLE, SEE STANDARD PLAN 204.
6. FOR DETAILS OF MANHOLE FRAME AND COVER, SEE STANDARD PLAN 207.

| No. | Rev. | By |
|-----|------|----|
| | | |
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

TYPE "III" MANHOLE BASE

Approved By

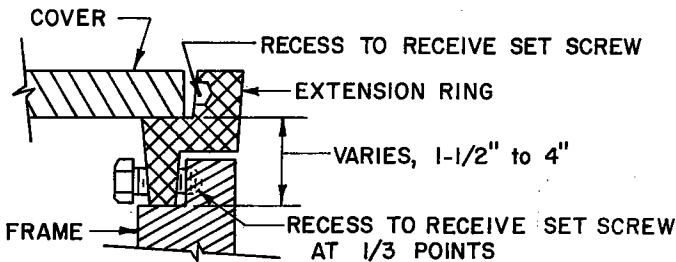
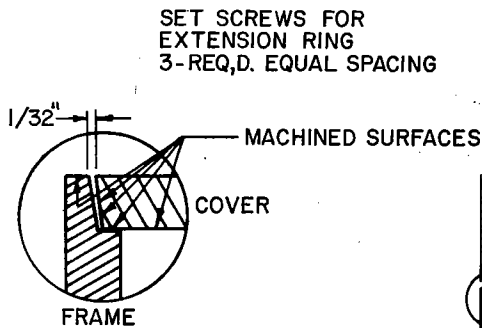
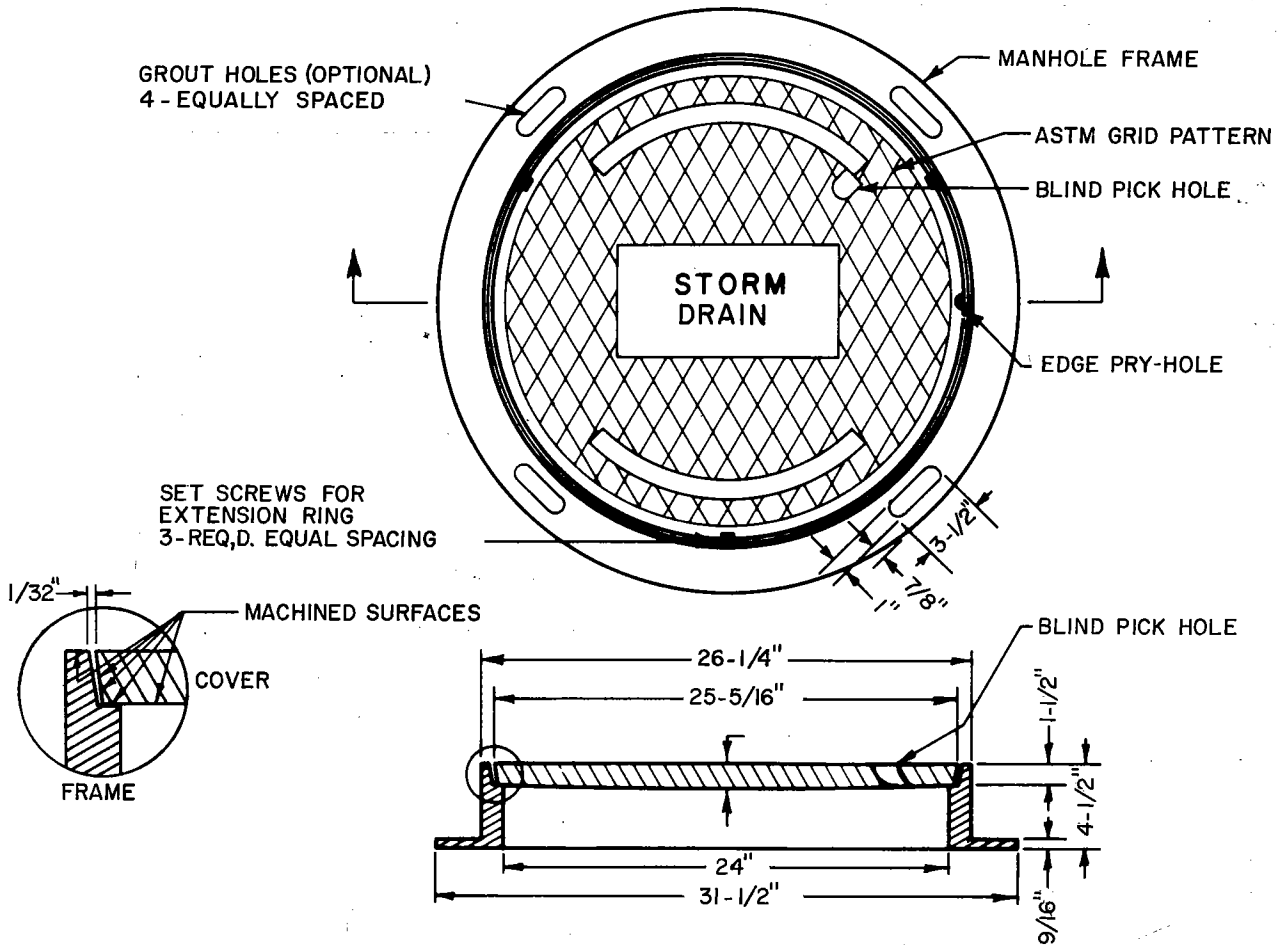
 CITY ENGINEER RCE 31870

6/09/87
 DATE

206c
 Sht. 3 of 3

DANVILLE

STANDARD PLAN



**TYPICAL CAST IRON
EXTENSION RING**

NOTES

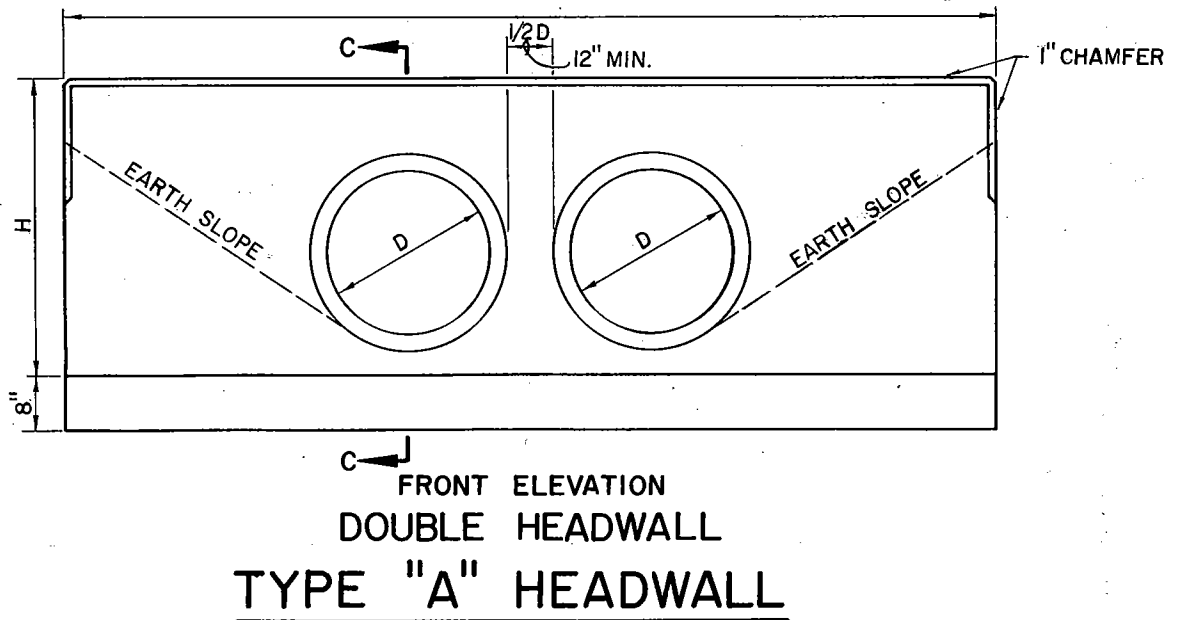
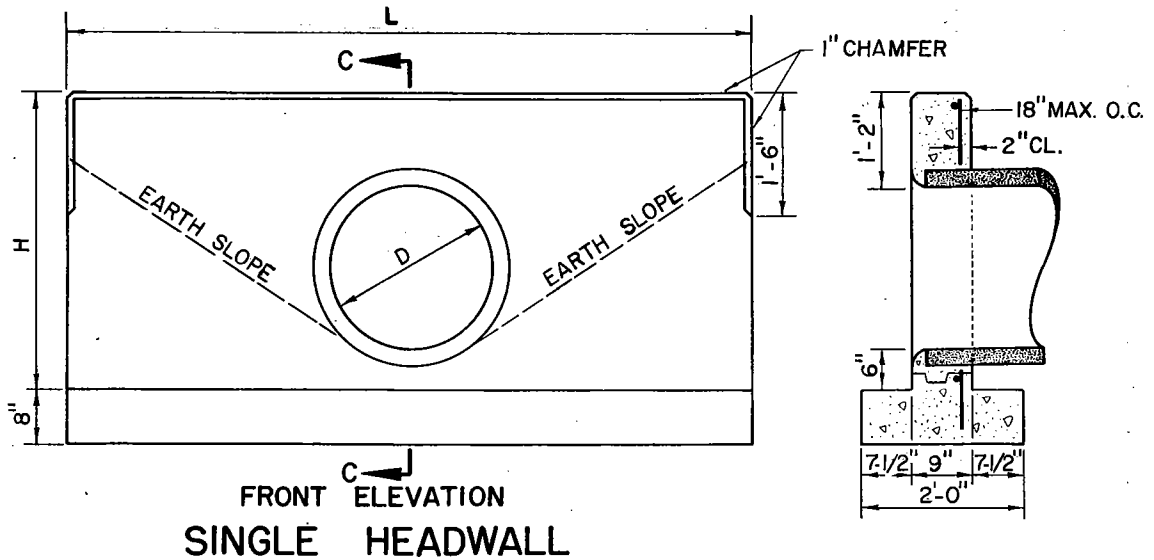
1. MANHOLE FRAME AND COVER SHALL BE PHOENIX IRON WORKS(OAKLAND) MODEL P-1090 OR PINKERTON FOUNDRY(LODI) MODEL A-640 OR APPROVED EQUAL.

| No. | Rev. | By |
|-----|-------------|--------------------|
| 1 | ADD IN SIGN | <i>[Signature]</i> |

| | | |
|----------------------------------|--|---------------------------|
| Scale NOT TO SCALE | Drawn By <u>B.C.</u> Checked By <u>MZ</u> | |
| MANHOLE FRAME & COVER | Approved By <i>[Signature]</i> CITY ENGINEER RCE 31870 | 6/09/87 DATE |
| | | 207 Sht. 1 of 1 |

DANVILLE

STANDARD PLAN

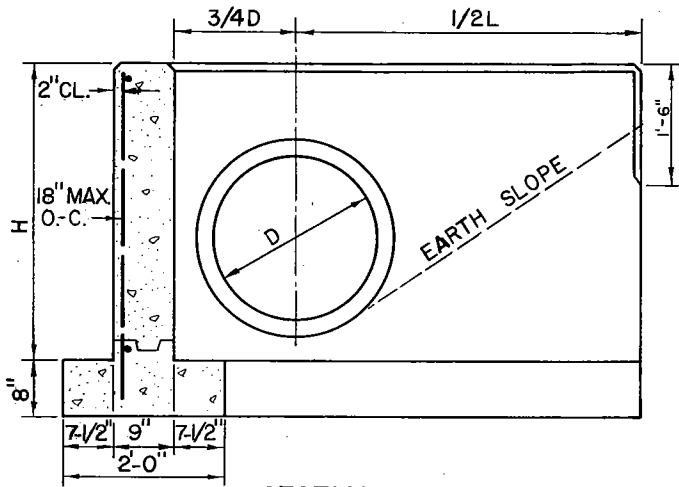


SEE NOTES AND HEADWALL DATA ON SHEET 3 OF 3.

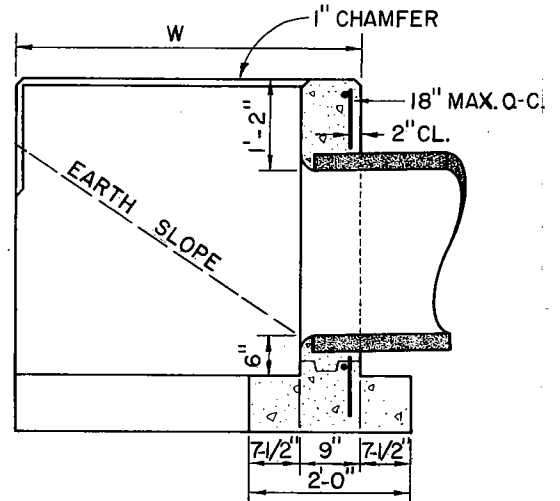
| | | No. | Rev. | By |
|--------------------|---|---------|-------------|----|
| Scale NOT TO SCALE | Drawn By <u>B.C</u> Checked By <u>MZ</u> | | | |
| TYPE "A" HEADWALL | Approved By <i>Shirley A. Roberts</i> CITY ENGINEER RCE 31870 | 6/09/87 | 208a | |
| | DATE | | Sht. 1 of 3 | |

DANVILLE

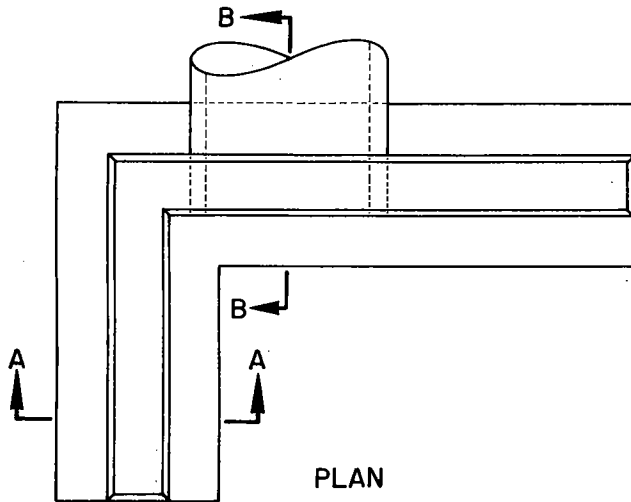
STANDARD PLAN



SECTION A-A



SECTION B-B



PLAN

TYPE "L" HEADWALL

SEE NOTES AND HEADWALL DATA
ON SHEET 3 OF 3.

| No. | Rev. | By |
|-----|--------------------------|-------------|
| 1 | ENG. (RCE) MD. (C.E.) | [Signature] |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

TYPE "L" HEADWALL

Approved By
[Signature]
CITY ENGINEER RCE 31870

6/09/87
DATE

208b
Sht. 2 of 3

DANVILLE

STANDARD PLAN



TYPE "A" HEADWALL DATA

| D | H | SINGLE | | DOUBLE | |
|-----|--------|--------|------------|--------|------------|
| | | L | VERT. BARS | L | VERT. BARS |
| 12" | 2'-8" | 5'-0" | 4 | 7'-0" | 6 |
| 15" | 2'-11" | 6'-0" | 6 | 8'-6" | 8 |
| 18" | 3'-2" | 7'-0" | 6 | 9'-6" | 8 |
| 21" | 3'-5" | 7'-6" | 6 | 10'-6" | 8 |
| 24" | 3'-8" | 8'-6" | 6 | 11'-6" | 8 |
| 27" | 3'-11" | 9'-6" | 6 | 13'-0" | 8 |
| 30" | 4'-2" | 10'-0" | 8 | 14'-0" | 9 |
| 33" | 4'-5" | 11'-0" | 8 | 15'-0" | 9 |
| 36" | 4'-8" | 12'-0" | 8 | 16'-6" | 9 |
| 39" | 4'-11" | 12'-6" | 8 | 17'-6" | 9 |
| 42" | 5'-2" | 13'-6" | 8 | 18'-6" | 9 |
| 45" | 5'-5" | 14'-6" | 10 | 20'-0" | 12 |
| 48" | 5'-8" | 15'-0" | 10 | 21'-0" | 12 |

TYPE "L" HEADWALL DATA

| D | H | L/2 | W | | | | |
|-----|--------|-------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | | 2'-0" TO 3'-4" | 3'-5" TO 4'-10" | 4'-11" TO 6'-4" | 6'-5" TO 7'-10" | 7'-11" TO 9'-4" |
| | | | VERT. BARS | VERT. BARS | VERT. BARS | VERT. BARS | VERT. BARS |
| 12" | 2'-8" | 2'-6" | 6 | 7 | 8 | 9 | 10 |
| 15" | 2'-11" | 3'-0" | 7 | 8 | 9 | 10 | 11 |
| 18" | 3'-2" | 3'-6" | 7 | 8 | 9 | 10 | 11 |
| 21" | 3'-5" | 3'-9" | 7 | 8 | 9 | 10 | 11 |
| 24" | 3'-8" | 4'-3" | 7 | 8 | 9 | 10 | 11 |
| 27" | 3'-11" | 4'-9" | 7 | 8 | 9 | 10 | 11 |
| 30" | 4'-2" | 5'-0" | 8 | 9 | 10 | 11 | 12 |
| 33" | 4'-5" | 5'-6" | 8 | 9 | 10 | 11 | 12 |
| 36" | 4'-8" | 6'-0" | 8 | 9 | 10 | 11 | 12 |
| 39" | 4'-11" | 6'-3" | 8 | 9 | 10 | 11 | 12 |
| 42" | 5'-2" | 6'-9" | 8 | 9 | 10 | 11 | 12 |
| 45" | 5'-5" | 7'-3" | 9 | 10 | 11 | 12 | 13 |
| 48" | 5'-8" | 7'-6" | 9 | 10 | 11 | 12 | 13 |

NOTES:

- ON HEADWALLS CONSTRUCTED AT A SKEW ANGLE TO THE PIPE $\text{\textcircled{C}}$, THE DIMENSION "L" SHALL BE INCREASED BY AN AMOUNT EQUAL TO THE INCREASE IN THE HORIZONTAL DIAMETER OF THE OPENING DUE TO THE SKEW ANGLE. QUANTITIES GIVEN IN TABLES ABOVE DO NOT ALLOW FOR INCREASES DUE TO SKEW.
- ALL REINFORCED CONCRETE SHALL BE CLASS "A".
- CONSTRUCTION JOINTS ARE OPTIONAL WHERE SHOWN. OTHER LOCATIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER. KEY DIMENSIONS ARE $1\frac{1}{2}" \times 3\frac{1}{2}"$.
- ALL REINFORCING STEEL SHALL BE NO. 4 BARS.

| No. | Rev. | By |
|-----|------|----|
| | | |
| | | |
| | | |

Scale NOT TO SCALE

Drawn By B.C. Checked By MZ

**TYPE "A" & "L"
HEADWALL DATA**

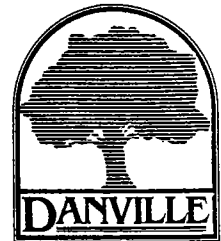
Approved By
Steve C. Soble
CITY ENGINEER RCE 31870

6/09/87
DATE

208c
Sht. 3 of 3

DANVILLE

STANDARD PLAN



HYDROLOGY AND HYDRAULICS CRITERIA SUMMARY

1. The overall watershed shall be broken down into smaller areas which contribute to local points of concentration. The boundaries shall be established based upon local topographic boundaries such as ridges, streets, existing drainage systems, etc, using good engineering practice.
2. Use Contra Costa County Flood Control Drawing B-166 to determine the average seasonal rainfall for the whole watershed in inches.
3. Select storm frequency based on size of watershed, such as, 10-year for an area less than one square mile, 25-year for an area larger than one but less than four square miles, and 50-year for an area larger than four square miles.
4. Select storm duration: use 3-hour storm if there is no detention basin involved.
5. Determine initial time of concentration. Initial time of concentration T_c will seldom be less than 3 minutes or more than 20 minutes.

a. Undeveloped Watersheds

$$T_c = \frac{2.14}{3} \sqrt{\frac{2Ln}{s}}$$

L = Length in feet (max. 400 feet)
 S = Slope in decimal form
 n = Retardance coefficient
 T_c = Time of concentration (min.)

Retardance Coefficient (n)

| Surface | (n) |
|------------------------------------|------|
| Smooth impervious | 0.02 |
| Smooth bare packed soil | 0.10 |
| Poor grass cultivated row crops | |
| Moderately rough bare surface | 0.20 |
| Pasture or average grass | 0.40 |
| Deciduous timberland | 0.60 |
| Conifer timberland, deciduous | |
| Timberland with deep forest | |
| Litter or dense grass | 0.80 |

| No. | Rev. | By |
|-----|------|----|
| | | |
| | | |

| | | |
|--|---|-----------------|
| Scale NOT TO SCALE | Drawn By <u>K.D.</u> Checked By <u>PK</u> | |
| HYDROLOGY AND HYDRAULIC CRITERIA SUMMARY | Approved By <u><i>Stan C. Fisher</i></u> CITY ENGINEER RCE 31870 | 3-13-69 DATE |
| | | 210 1 of 2 |

DANVILLE

STANDARD PLAN



b. Developed watersheds

| <u>Land Use</u> | <u>Runoff Coefficient</u> (C) | <u>Time of</u> <u>Concentration (min.)</u> (Roof to gutter) |
|-----------------|------------------------------------|---|
| R-6 | 0.50 - 0.70 | 3 - 5 |
| R-10 | 0.45 - 0.60 | 5 - 7 |
| R-20 | 0.40 - 0.50 | 6 - 8 |
| R-40 | 0.35 - 0.45 | 8 - 10 |
| Apartments | 0.60 - 0.80 | 3 - 10 |
| Business | 0.70 - 0.95 | 3 - 8 |
| Industrial | 0.60 - 0.90 | 3 - 10 |
| Open | 0.20 - 0.40 | |
| Streets | | |
| Asphalt | 0.75 - 0.95 | |
| Concrete | 0.80 - 0.95 | |
| Drive walks | 0.80 - 0.95 | |
| Roofs | 0.75 - 0.95 | |

6. a. For areas up to 200 acres use the Rational Method to determine the peak flow rate Q

Q = CIA

Q = Flow rate (cubic feet per second)

C = Runoff coefficient *

I = Intensity (inches/hours)

A = Area (Acres)

Tc = Roof to gutter +
overland flow
(overland flow not to
exceed 400 feet.)

* For sloped area use modified runoff coefficient C' (see page 210b). The modified runoff coefficient (C') will never exceed 0.80 when calculations are based on land use. When calculations are based on type of surface the basic runoff coefficient (C) shall be determined in accordance with sound engineering practice, and will often exceed 0.80.

b. For areas larger than 200 acres use the unit hydrograph method.

7. Use Contra Costa County Flood Control drawings B-158 to B-162 for Intensities (I).

8. All hydrology calculation using the Rational Method shall be entered in the format shown on sheet 210a. All hydrology and hydraulic calculations shall be accompanied by a detailed hydrology map showing all relevant information. (Same information shown on sheet 210A.)

9. The Town uses Mannings' equation to calculate friction losses, and the pressure-momentum method and energy equations to calculate major junction or section losses.

10. The elevation of the HGL shall be at least 1.25 feet below the top of any inlet grate or manhole.

| No. | Rev. | By |
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Scale: NOT TO SCALE

Drawn By K.D Checked By PK

**HYDROLOGY AND HYDRAULICS
CRITERIA SUMMARY**

Approved By

Steve Duke

CITY ENGINEER RCE 31870 DATE

3-10-89

210

DANVILLE

STANDARD PLAN



RUNOFF FACTOR SLOPE AND INTENSITY ADJUSTMENT CHART PG 2 OF 3

C = Initial Runoff Factor
 C+Cs = Runoff Factor + Slope Adjustment
 C' = Design Runoff Factor

To determine C' begin with the initial runoff factor C in the upper left of the chart. Draw a line to the right until you meet a ground slope greater than the average ground slope of the incremental drainage area. Next draw a line down until you reach a rainfall intensity greater than your design intensity. Next draw a line to the left to find your design runoff factor C'

| BEGIN | C + Cs | | | | | | | | | | | | | | | | | | | | | | |
|--------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|--|
| BELOW | .40 | .41 | .42 | .43 | .44 | .45 | .46 | .47 | .48 | .49 | .50 | .51 | .52 | .53 | .54 | .55 | .56 | .57 | .58 | .59 | .60 | | |
| .20 | 31 | 33 | 35 | 37 | 39 | 41 | 43 | 45 | | | | | | | | | | | | | | end S | |
| .30 | 17 | 19 | 21 | 23 | 25 | 27 | 29 | 32 | 34 | 36 | 39 | 41 | 44 | 45 | | | | | | | | end L | |
| .40 | 2 | 4 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 20 | 22 | 25 | 27 | 30 | 33 | 36 | 39 | 42 | 45 | | | end O | |
| C .50 | | | | | | | | | | | 2 | 4 | 6 | 9 | 11 | 14 | 17 | 20 | 24 | 27 | 31 | P | |
| .60 | | | | | | | | | | | | | | | | | | | | | 2 | E | |
| .70 | | | | | | | | | | | | | | | | | | | | | | next | |
| .80 | | | | | | | | | | | | | | | | | | | | | | next | |
| .40 | .00 | | | | | | | | | | | | | | | | | | | | | | |
| .41 | .68 | .00 | | | | | | | | | | | | | | | | | | | | | |
| .42 | .93 | .69 | .00 | | | | | | | | | | | | | | | | | | | | |
| .43 | 1.14 | .94 | .69 | .00 | | | | | | | | | | | | | | | | | | | |
| .44 | 1.33 | 1.15 | .95 | .70 | .00 | | | | | | | | | | | | | | | | | | |
| .45 | 1.51 | 1.35 | 1.17 | .97 | .71 | .00 | | | | | | | | | | | | | | | | | |
| C .46 | 1.70 | 1.54 | 1.37 | 1.19 | .98 | .72 | .00 | | | | | | | | | | | | | | | | |
| .47 | 1.88 | 1.73 | 1.56 | 1.39 | 1.20 | .99 | .73 | .00 | | | | | | | | | | | | | | | |
| C .48 | 2.08 | 1.92 | 1.76 | 1.59 | 1.41 | 1.22 | 1.01 | .74 | .00 | | | | | | | | | | | | | | |
| .49 | 2.28 | 2.12 | 1.95 | 1.79 | 1.62 | 1.44 | 1.24 | 1.02 | .75 | .00 | | | | | | | | | | | | | |
| Cs .50 | 2.49 | 2.32 | 2.16 | 1.99 | 1.82 | 1.65 | 1.46 | 1.26 | 1.04 | .76 | .00 | | | | | | | | | | | | |
| .51 | 2.71 | 2.54 | 2.37 | 2.20 | 2.03 | 1.86 | 1.68 | 1.49 | 1.28 | 1.05 | .77 | .00 | | | | | | | | | | | |
| Ci .52 | 2.96 | 2.78 | 2.60 | 2.43 | 2.25 | 2.08 | 1.90 | 1.71 | 1.51 | 1.31 | 1.07 | .78 | .00 | | | | | | | | | | |
| .53 | 3.22 | 3.04 | 2.85 | 2.67 | 2.49 | 2.31 | 2.12 | 1.94 | 1.74 | 1.54 | 1.33 | 1.09 | .79 | .00 | | | | | | | | | |
| .54 | 3.52 | 3.32 | 3.12 | 2.93 | 2.74 | 2.55 | 2.36 | 2.17 | 1.98 | 1.78 | 1.58 | 1.36 | 1.11 | .81 | .00 | | | | | | | | |
| .55 | 3.84 | 3.63 | 3.42 | 3.22 | 3.01 | 2.82 | 2.62 | 2.42 | 2.22 | 2.03 | 1.82 | 1.61 | 1.38 | 1.13 | .82 | .00 | | | | | | | |
| .56 | 4.21 | 3.98 | 3.75 | 3.53 | 3.32 | 3.11 | 2.90 | 2.69 | 2.49 | 2.28 | 2.08 | 1.86 | 1.65 | 1.41 | 1.15 | .84 | .00 | | | | | | |
| .57 | 4.63 | 4.38 | 4.13 | 3.89 | 3.66 | 3.43 | 3.21 | 2.99 | 2.77 | 2.56 | 2.35 | 2.13 | 1.91 | 1.68 | 1.44 | 1.18 | .85 | .00 | | | | | |
| .58 | 5.12 | 4.84 | 4.56 | 4.30 | 4.04 | 3.79 | 3.55 | 3.32 | 3.09 | 2.86 | 2.64 | 2.41 | 2.19 | 1.96 | 1.73 | 1.48 | 1.20 | .87 | .00 | | | | |
| .59 | 5.69 | 5.37 | 5.06 | 4.77 | 4.49 | 4.21 | 3.95 | 3.69 | 3.44 | 3.20 | 2.96 | 2.72 | 2.49 | 2.25 | 2.02 | 1.77 | 1.51 | 1.23 | .89 | .00 | | | |
| .60 | 6.37 | 6.01 | 5.66 | 5.32 | 5.00 | 4.70 | 4.40 | 4.12 | 3.84 | 3.58 | 3.32 | 3.06 | 2.82 | 2.57 | 2.32 | 2.08 | 1.82 | 1.55 | 1.26 | .91 | .00 | R | |
| .61 | 7.20 | 6.77 | 6.37 | 5.99 | 5.62 | 5.27 | 4.94 | 4.62 | 4.31 | 4.02 | 3.73 | 3.45 | 3.18 | 2.92 | 2.66 | 2.40 | 2.14 | 1.88 | 1.60 | 1.29 | .93 | | |
| .62 | 8.22 | 7.72 | 7.25 | 6.80 | 6.37 | 5.97 | 5.58 | 5.22 | 4.87 | 4.53 | 4.21 | 3.90 | 3.61 | 3.32 | 3.04 | 2.76 | 2.49 | 2.21 | 1.94 | 1.65 | 1.33 | | |
| .63 | 9.51 | 8.91 | 8.34 | 7.81 | 7.30 | 6.82 | 6.37 | 5.94 | 5.54 | 5.15 | 4.79 | 4.44 | 4.10 | 3.78 | 3.47 | 3.17 | 2.87 | 2.58 | 2.29 | 2.00 | 1.70 | | |
| .64 | **** | **** | 9.75 | 9.09 | 8.48 | 7.90 | 7.36 | 6.85 | 6.37 | 5.92 | 5.49 | 5.08 | 4.70 | 4.33 | 3.98 | 3.64 | 3.32 | 3.00 | 2.69 | 2.39 | 2.08 | | |
| .65 | **** | **** | **** | **** | **** | 9.31 | 8.64 | 8.02 | 7.43 | 6.89 | 6.37 | 5.89 | 5.43 | 5.00 | 4.60 | 4.21 | 3.84 | 3.49 | 3.15 | 2.82 | 2.49 | | |
| .66 | **** | **** | **** | **** | **** | **** | 9.55 | 8.83 | 8.15 | 7.51 | 6.92 | 6.37 | 5.86 | 5.37 | 4.92 | 4.49 | 4.08 | 3.69 | 3.32 | 2.96 | | | |
| .67 | **** | **** | **** | **** | **** | **** | **** | **** | **** | 9.85 | 9.05 | 8.30 | 7.61 | 6.97 | 6.37 | 5.82 | 5.30 | 4.81 | 4.36 | 3.93 | 3.52 | | |
| .68 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | 9.31 | 8.48 | 7.72 | 7.02 | 6.37 | 5.77 | 5.22 | 4.70 | |
| .69 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | 9.62 | 8.70 | 7.85 | 7.08 | 6.37 | 5.72 | 5.12 | |
| .70 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | |
| .71 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | |
| .72 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | |
| .73 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | |
| .74 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | |
| .75 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | |
| .76 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | |
| .77 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | |
| .78 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | |
| .79 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | |
| .80 | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | **** | |

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| Scale NOT TO SCALE | Drawn By <u>K.D.</u> Checked By <u>PK</u> | |
| RUNOFF FACTOR ADJUSTMENT | Approved By <u>[Signature]</u> CITY ENGINEER RCE 31870 | DATE <u>3-13-89</u> |
| | | 210b 2 of 3 |

