CITY OF ALHAMBRA
DEPARTMENT OF PUBLIC WORKS

SR-01 CURB & GUTTER, CURB ONLY & CROSS GUTTER
SR-02.1 SINGLE SLOTTED CROSS GUTTER
SR-02.2 DOUBLE SLOTTED CROSS GUTTER
SR-03 DRIVEWAY & SIDEWALK (PRIVATE PROPERTY)
SR-04 RETAINING WALL
SR-05 STANDARD SYMBOLS
SR-07 SIDEWALK CONSTRUCTION
SR-10 ALLEY & DRIVEWAY ENTRANCE
SR-11 DRIVEWAY APRON & APPROACHES
SR-12 BARRICADE
SR-13 CONCRETE BUS PAD
SR-14 COMMERCIAL ALLEY CONSTRUCTION
SR-15 ADA/ CURB RAMP
SR-21 & 22 T-TRENCH AND AC PAVEMENT RESTORATION
SR-23 & 24 T-TRENCH AND PCC PAVEMENT RESTORATION
SR-25 CURB DRAIN
SR-26 PARKWAY DRAIN
SR-27 GRATES
**P.C.C. Curb & Gutter**

<table>
<thead>
<tr>
<th>C.F.</th>
<th>END AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot;</td>
<td>1.64 sq.ft.</td>
</tr>
<tr>
<td>7&quot;</td>
<td>1.69 sq.ft.</td>
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<tr>
<td>8&quot;</td>
<td>1.74 sq.ft.</td>
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**P.C.C. Curb Only**

<table>
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<td>6&quot;</td>
<td>0.75 sq.ft.</td>
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<td>7&quot;</td>
<td>0.79 sq.ft.</td>
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<tr>
<td>8&quot;</td>
<td>0.83 sq.ft.</td>
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**P.C.C. Cross Gutter**

**NOTES**

- W = 5' unless otherwise specified on plans.
- Slope gutter from E.C.R. to P.I. or B.C.R. to conform with direction of flow.

**Section A-A**

<table>
<thead>
<tr>
<th>Rec. No.</th>
<th>Date</th>
<th>By Asp.</th>
<th>ITEM</th>
</tr>
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**CITY OF ALHAMBRA**

Department of Public Works

**STANDARD P.C.C. CURB & GUTTER, CURB ONLY, & CROSS GUTTER**
PLAN

"G" = 2' unless otherwise specified on plans.
"W" = 3' unless otherwise specified on plans.

PROFILE

"D" = 3" unless otherwise specified on plans.

SECTION A-A

Type "A" aggregate base as required by plans and specifications.

SECTION B-B

SLOT DETAIL

CITY OF ALHAMBRA
DEPARTMENT OF PUBLIC WORKS

STANDARD SINGLE-SLOTTED CROSS GUTTER
PLAN

B.C.R.

Finished Concrete Surface

Cross Gutter Flow Line

PROFILE

Pavement Surface

"G" = 2' unless otherwise specified on plans.
"W" = 3' unless otherwise specified on plans.
"D" = 3" unless otherwise specified on plans.

SECTION A-A

SECTION B-B

SLOT DETAIL

CITY OF ALHAMBRA
DEPARTMENT OF PUBLIC WORKS

STANDARD DOUBLE-SLOTTED CROSS GUTTER

NOTE:

Type 'A' aggregate base as required by plans and specifications.

CITY ENGINEER CIVIL ENG. NC #11549

M. Hawk 9/18/67

Change Rebar Length
Redrawn

DIR. OF PUB. WKS. CIVIL ENG. NR 11549

Scale: None

Date: 9/18/67

SHI 01 OR SH12

Orwg. No.

SR-02.2

Drawn

Design

Checked

E.C.R.

By

By

By

3/4/67
3/4/67
3/4/67
### Driveway Profile

- **Existing Driveway**
  - Not to Scale
- **Proposed Driveway**
- **Existing Curb Face**
- **Proposed Curb Face**
- **Max. grade change 10 deg.**
- **Remove & Replace portion of walk to match grade @ P**

### Walk Profile

- **Existing Private Walk**
- **Proposed Walk**
- **Slope 2/7**
- **New Curb Face**

### Plan

- **Construction Limits**
- **Existing A.C. Brick, R.C. Cor. Stone Walk**
- **Prop. Driveway**
- **Const. Limits**
- **Existing A.C. or R.C. Driveway**

---

**CITY OF ALHAMBRA**

**ENGINEERING AND STREET DEPARTMENT**

**DRIVEWAY AND SIDEWALK CONST. ON PRIVATE PROP.**

**RECOMMENDED FOR APPROVAL**

**TRAFFIC ENG.**

**DATE**

**AREN'T CITY ENGR. (B.C.E., NO.)**

**DESIGN**

**DRAWN**

**DRAWN NO.**

SR: 03

**CHECKED**

**CHECKED NO.**

**SCALE**

**NOTE**

**DATE**

**RJ: 10/64**

**RJ: 10/64**

**EXT. 1 OF 1**

---
## Block & Bar Schedule

<table>
<thead>
<tr>
<th>H' of Wall</th>
<th>No. of Cours</th>
<th>No. of Blks</th>
<th>C'ns H' of</th>
<th>&quot;A&quot; Bars</th>
<th>&quot;B&quot; Bars</th>
<th>&quot;C&quot; Bars</th>
<th>&quot;D&quot; Bars</th>
<th>&quot;VA&quot; Bars</th>
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<td>/</td>
<td>/</td>
<td>/</td>
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<td>4-4.3</td>
<td>#4@16&quot;</td>
<td>#5@16&quot;</td>
</tr>
</tbody>
</table>

**Block Quantities are Net.**

**No allowances for Breakage or Xtras.**

**Mortar Reg'd. per 100 sq. ft. = 2.9 cu. ft.**

"Quauntities Include 10% Waste"

### Typical Section

**Note:** Above table applies only to walls with no surcharge.

**Notes:**
- **Mortar Mix:** 15 1/4 : 3 - by Vol.
  - (Part Portland Cement)
  - (1/4 - Hydrolime or Lime Putty)
- **Grout Mix:** 1 : 3 : 2
  - (Part Portland Cement)
  - (3 - Sand)
  - (2 - Pea Gravel)
- **Footings:** Class "A" - (6 sack - 3000#) P.C.C.
- **Bars:** In Moto.
- **Grout Fill:** All cores containing "A" - "VA" bars at not greater than 5'-course intervals.

**Revised by:**
- **Date:** 10-20-99

**Scale:** None

**References:**
- **Drawn by:** E.C.
- **Checked by:** O.M.
- **Approved by:** S.K.

**DRWA. NO.:** SR-04
**STANDARD SYMBOLS**

- **Center Line**
- **Transit Line**
- **Existing Improvements**
- **Proposed Improvements**
- **PL or R/W**
- **Property or R/W Line**
- **Fence, Wire**
- **Fence, Wooden**
- **Sanitary Sewer**
- **Storm Drain**
- **Water Main**
- **Gas Main**
- **High Pressure Gas Main**
- **Sprinkler System**
- **Water Meter**
- **Gas Meter**
- **R.B. Pull Box**
- **Co. Clean-out**
- **SMH, Sanitary Sewer Manhole**
- **SDMH, Storm Drain Manhole**
- **T MH, Telephone Manhole**
- **G MH, Gas Manhole**
- **P.P., Power or Telephone Pole**
- **O.T.P., Telegraph Pole**
- **O.Lt., Light Standard**
- **O.Sig., Traffic Signal**
- **Parking Meter**
- **G Curb Drain**
- **Hedge**
- **Gas Valve**
- **Telephone Vault**
- **Fire Hydrant**
- **Tree**
- **R.R. Crossing Sign**
- **Pole with Deadman**
- **Valve (Additonal) Water Yard Drain**
- **C.B. Grating Basin**
- **Filling Inlet (Gasoline)**
- **Sign (Advertising)**
- **Light & Sign**
- **Palm Tree**

- **Gasoline Pump**
- **Sidewalk Water Tap**
- **C.B. Side Opening**
- **C.B. Side Opening & Grating Basin**
- **Underground Power Cable**
- **Underground Telephone Cable**
- **Fire Alarm Pedestal Type**
- **Power or Tele. Pole w/ Fire Alarm**
- **City Boundary Line**
- **Proposed Future Construction**
- **Chain Link Fence**
- **Block or Brick Wall**
- **Concrete Wall**
- **Rail Road - Double Track**
- **Rail Road - Single Track**
- **Building**
- **Rock Wall**
- **Survey Monument**
- **Traffic Signal Controller**
- **G.G. Guy Pole**

---

**CITY OF ALHAMBRA**

**STANDARD SYMBOLS**

---

**City Engineer:**

**Rev. No. Date**

**By/Am**

**ITEM**

**DRAWN**

**Checked**

**APPD.**

**DWG. NO.**

**SR-05**
Compact subgrade to 90% of max. density.

1 step: \( \text{Vol. (C.Y.)} = \frac{A \cdot W}{27} \)

\( W = \text{Width of Steps (ft.)} \)

\( \text{Vol. (C.Y.)} = \frac{W[A + B(n-1)]}{27} \)

Notes
1. P.C.C., 2500#6 min. C.S. @ 28 days.
3. Finish concrete with soft broom.

Recommended for Approval

Traffic Engr. [Date]

City of Alhambra
Engineering and Street Department

Standard P.C.C. Steps
Curb face

Roadway

13% max apron slope

Apron

parkway (soil)

curb & gutter

Sidewalk

2% slope

2% slope

2% 4' min. sidewalk width

DRIVEWAY PROFILE not to scale

sidewalk.

4' min. sidewalk width.

WALK PROFILE not to scale

"T" Drwy.

"T" Drwy.

4' min. sidewalk width.

Additional roadway dedication may be required to obtain 13% max apron slope.

Concrete Cement 520-C-2500

"T" = 8" concrete walk in commercial apron area.

"T" = 6" concrete in residential apron area.

All other sidewalk 4" thick.

Sidewalk to be replaced score line to score line.

90% relative compaction required on sub grade.

OTE: 2% slope includes parkway area as well as sidewalk, beginning at top of curb, extends to back of sidewalk or city p/l.

PLAN not to scale.

COMMENDED FOR APPROVAL

CITY OF ALHAMBRA
DEPARTMENT OF PUBLIC WORKS

SIDEWALK CONST.
Property Line  
(Normally back edge  
of sidewalk)  

Exp. Jt.  
Driveway  

PLAN  

4" MIN  

W  

1/4" per ft slope  

Exp. Jt.  

SECTION AT PROPERTY LINE  

1/4" SW.  

SECTION AT "A" "A"  

Portland Cement  
Concrete  

NOTES  

1. DIMENSIONS "W" & "R" SHOWN ON IMPROVEMENT PLANS.  
2. RADIUS CURBS & GUTTERS ARE PART OF DRIVEWAYS FOR PAY QUANTITIES.  
3. RESIDENTIAL DRIVEWAYS: "\( \frac{1}{2} \)" = 6"  ALL OTHER DRIVEWAYS: "\( \frac{1}{2} \)" = 8"  
4. ALL DRIVEWAYS TO BE PORTLAND CEMENT CONCRETE: 520-C-2500.  
5. WITH PRIOR APPROVAL OF THE CITY ENGINEER, THE CROSS SLOPE OF THE SIDEWALK MAY BE INCREASED TO 1/2" PER FOOT MAXIMUM FOR DISTANCES NOT TO EXCEED 20 FEET.  
6. ALL ARROWS SHALL BE POURING IN COMBINATION WITH GUTTER. AN ADDITIONAL 1" OF STREET SURFACE ASPHALT CONCRETE SHALL BE SAWN, CUT & REMOVED ALLOWING FOR PLACEMENT OF OUTSIDE GUTTER FORM. ASPHALT TO BE REPLACED WITH C-2-AR4000, 1" GREATER DEPTH THAN EXISTING A/C.  

ECCOMENDED FOR  
APPROVAL  

CHUCK KIRK  3/13/71  
City Engr.  22482  (DATE)  

City of Alhambra  
Department of Public Works  

STANDARD  
ALLEY & DRIVEWAY ENTRANCE  
for R, C, M. and P. Zones  

SUPERSEDES DRAWING SR-10 DATED 7/27/66
(REFER TO: TITLE 13 - CODE OF THE CITY OF ALHAMBRA)

-- NOTES --

1. CONCRETE MIX SHALL BE CLASS 520-C-2500
2. "W" FOR DRIVEWAY APRONS "C", "M", "B", "F" ZONES SHALL NOT BE LESS THAN 12" NOR GREATER THAN 35" WITHOUT AUTHORIZATION. LOCATION MUST BE APPROVED BY THE CITY ENGINEER.
3. "W" FOR DRIVEWAY APRONS IN "R" ZONES SHALL NOT BE LESS THAN 12 FT. NOR GREATER THAN 20 FT. IN "R1" & "R2" ZONES, NOR GREATER THAN 35 FT. IN "R3" & "R4" ZONES WITHOUT AUTHORIZATION.
4. AT DRIVEWAYS, IF EXISTING SIDEWALK IS LESS THAN 6" THICK OR BROKEN, OR OFF GRADE, IT SHALL BE REMOVED & REPLACED WITH 6" F.C. CONCRETE WITHIN LIMITS OF DRIVEWAY APRON APPROACH.
5. WITH PRIOR APPROVAL OF THE CITY ENGINEER THE CROSS SLOPE OF THE SIDEWALK MAY BE INCREASED 1" PER FOOT MAXIMUM FOR DISTANCES NOT TO EXCEED 20 FEET.
6. ALL APRONS SHALL BE Poured IN COMBINATION WITH GUTTER. AN ADDITIONAL 1" OF STREET SURFACE ASPHALT CONCRETE SHALL BE SAW CUT & REMOVED, ALLOWING FOR REPLACEMENT OF OUTSIDE GUTTER FORM. ASPHALT TO BE REPLACED WITH C-2-AM4000, 1" - GREATER DEPTH THAN EXISTING A/C.
7. A PERMIT SHALL BE OBTAINED BEFORE PERFORMING ANY WORK, & ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE CITY ENGINEER BEFORE AND DURING PLACING OF CONCRETE.

NOTE:
THIS DRAWING SUPERSEDES ALL OF 4-17-77

- CITY OF ALHAMBRA -
- STANDARD -
DRIVEWAY APRONS AND APPROACHES

T OF 2
Notes

1. Wooden post used to support the barricades shall be 8" x 8" x 6" S 4 S, Redwood or treated Douglas Fir, embedded to a depth of 2' 6".

2. Horizontal timbers shall be 2" x 12" x 12' S 4 S Douglas Fir (Select Structural).

3. All timbers and Redwood post surfaces shall receive one coat of Primer for Timber, State Specification No. 52-G-01 and one Finish coat of "Paint-Finish Coat, Wood" (Yellow).

4. W-21-R signs shall be set at 6' centers. Bolts shall be 1/2" carriage bolts with cut washers and nuts.
Type C
Tied Butt Longitudinal Construction Joint

Type E
Planned Transverse Construction Joint (used at normal joint spacing)

Joint Details
N.T.S.

Concrete Pavement

6" Concrete Pavement
Per 520-A-2500, 3% Air
Type D Joint at 10' Intervals
(Sawcut within 24 hrs. of Pouring)
6" Prepared Subgrade at 95% Relative Density or 6" Class A Aggregate Base at Direction of the Inspector.

Note:
1. Transverse Weakened Joints shall be constructed every 10' and C.
2. Type "D" Joint Sealant (hot poured rubber asphalt joint sealant) shall be used.

Recommended for Approval

<table>
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<tr>
<th>Item</th>
<th>Traffic Engr. (Date)</th>
<th>City Engr.</th>
<th>Civil Engr. No. (Date)</th>
<th>Rev. No.</th>
<th>Date</th>
<th>Sh./She.</th>
</tr>
</thead>
</table>

City of Alhambra
Department of Public Works

Commercial Alley Constr.
Standard Drawing

TURICH-POST CLEARPRINT 1000-H
CONSTRUCT 6" MIN. AC PAVEMENT. WHERE EXISTING AC PAVEMENT IS GREATER THAN 5", THE THICKNESS OF NEW AC PAVEMENT SHALL BE EXISTING AC THICKNESS PLUS 1". AC PAVEMENT SHALL CONSIST OF 2" AC WEARING COURSE, TYPE C2-MG 64-10, ON TYPE B-MG 64-10 AC BASE COURSE.

MATCH EXISTING, 6" MIN., OR 6" FOR RESIDENTIAL STREET 8" LOCAL STREET 10" FOR MAJOR STREET WHICHEVER IS GREATER

SPECIAL NATIVE MATERIAL COMPACTED TO 95% OF RELATIVE DENSITY

EXIST. AC PAVEMENT SECTION

TRENCH WIDTH

1' MIN.

1' MIN.

UTILITY PIPE/CONDUIT ZONE

BACKFILL ZONE

T-TRENCH AND AC PAVEMENT RESTORATION

NOT TO SCALE

In accordance with Resolution No. R2M16-11, as Public Works Director (Mary Chavez) and as City Engineer (Allen Cayir, PE, Registered Civil Engineer) for the City of Alhambra, we do hereby exercise the discretion delegated to us and approve the plan or design, or amendment or modification to the plan or design, of a construction of, or an improvement to the public facility, structure, or property to which this statement and our signatures are affixed. Executed on January 25, 2018.

CITY OF ALHAMBRA

DEPARTMENT OF PUBLIC WORKS

T-TRENCH AND AC PAVEMENT RESTORATION ASPHALT CONCRETE STREETS

APPROVED BY: Mary Chavez

DATE: 1-25-2018

SCALE: NOT TO SCALE

STANDARD PLAN 2018-01.01

SR-21

SHEET 1 OF 2
NOTES:

LIMITS OF REMOVAL, TRENCH WIDTH:

1. ALL PAVEMENT REMOVED SHALL HAVE STRAIGHT EDGES, CUTS SHALL BE MADE TO A MINIMUM DEPTH OF 1-1/2 INCHES. ALL CUTS SHALL BE NEAT, STRAIGHT, VERTICAL CUTS WITH NO BROKEN EDGES.
2. ALL LONGITUDINAL PAVEMENT CUTS SHALL BE UNINTERRUPTED AND APPROXIMATELY PARALLEL TO TRENCH (MAX: 1:6 LONGITUDINAL VARIANCE).
3. IF A SAW CUT IN PAVEMENT FALLS WITHIN 1 FOOT OF AN EXISTING CURB, GUTTER, OR EDGE OF PAVEMENT, THE ADDITIONAL PAVEMENT SECTION SHALL BE REMOVED AND RECONSTRUCTED.
4. WHEN SAW CUTTING PAVEMENT, THE MAXIMUM OVERRUN ALLOWED FOR ANY SAW CUT BEYOND THE BOUNDARY REMOVAL LIMITS OF EXISTING PAVEMENT SHALL BE 2 INCHES.
5. TRENCH WIDTH SHALL BE MINIMUM 24 INCHES, UNLESS SLURRY BACKFILL AND BEDDING IS USED, IN WHICH CASE MINIMUM TRENCH WIDTH SHALL BE 4 INCHES.

TRENCH BACKFILL:

6. ALL TRENCHES 24 INCHES OR WIDER SHALL BE BACKFILLED WITH SELECT NATIVE MATERIAL COMPACTED TO 95% RELATIVE DENSITY AND WHERE THE TRENCH WIDTH IS LESS THAN 24" SHALL BE BACKFILLED WITH APPROVED SLURRY MIX.
7. TRENCH BACKFILL WITH SLURRY MATERIAL SHALL BE PROPERLY CONSOLIDATED, SLURRY MATERIAL FOR TRENCHES DEEPER THAN 5 FEET AND/OR NARROWER THAN 12 INCHES MUST BE CONSOLIDATED WITH VIBRATION.
8. BACKFILL MATERIAL SHALL BE MADE SMOOTH AND LEVEL BEFORE PLACING BASE AND PAVEMENT.
9. JETTING IS NOT AN APPROVED DENSIFICATION METHOD.

TRENCH "T" SECTION ("T-CUT")

10. AFTER THE TRENCH HAS BEEN BACKFILLED, THE EXISTING AC PAVEMENT AND UNDERLYING BASE SHALL BE REMOVED TO A LINE AT LEAST 12 INCHES BACK OF THE FIRM BANKS OF THE TRENCH OR AS NOTED UNDER ITEM 3 ABOVE. REMOVAL OF UNDERLYING BASE SHALL BE TO A DEPTH NECESSARY TO ACCOMODATE THE NEW AC PAVEMENT SECTION. EXPOSED BASE OR SUBGRADE SHALL BE 6" SCARIFIED AND RECOMPACTED TO 95% RELATIVE DENSITY.

In accordance with Resolution No. R2M16–11, as Public Works Director (Mary Chavez) and as City Engineer (Allen Cayir, PE, Registered Civil Engineer) for the City of Alhambra, we do hereby exercise the discretion delegated to us and approve the plan or design, or amendment or modification to the plan or design, of a construction of, or an improvement to the public facility, structure, or property to which this statement and our signatures are affixed. Executed on January 25, 2018.
T-TRENCH AND PCC PAVEMENT RESTORATION

NOT TO SCALE

In accordance with Resolution No. R2M16–11, as Public Works Director (Mary Chavez) and City Engineer (Allen Cayır, PE, Registered Civil Engineer) for the City of Alhambra, we do hereby exercise the discretion delegated to us and approve the plan or design, or amendment or modification to the plan or design, of a construction of, or an improvement to the public facility, structure, or property to which this statement and our signatures are affixed. Executed on January 25, 2018.
NOTES:

LIMITS OF REMOVAL, TRENCH WIDTH:

1. THE EXACT LIMIT OF PCC PAVEMENT REMOVAL AND RESTORATION SHALL BE EXTENDED BASED ON THE FOLLOWING:
   
   A. CONSTRUCTION JOINT LINES SHALL NOT BE WITHIN 3' OF AN EXISTING PAVEMENT JOINT, EDGE OF GUTTER OR CURB, SCORE LINES, OR SIGNIFICANT CRACK. IF JOINT LINE IS WITHIN 3' AS DESCRIBED, THE REMOVAL AND RESTORATION SHALL BE EXTENDED AND CONTINUOUS TO THE EXISTING JOINT, SCORE LINE, EDGE OF GUTTER OR EDGE OF CURB. IF IT IS WITHIN 3' FROM SIGNIFICANT CRACKS, THE EXACT LIMITS SHALL BE DETERMINED BY THE CITY ENGINEER.
   
   B. AT PCC BUS PADS, THE LIMITS OF REMOVAL AND RESTORATION SHALL BE A RECTANGULAR AREA EXTENDING TO THE NEAREST CONSTRUCTION JOINT/PANEL.

2. REMOVAL OF PCC PAVEMENT SHALL BE FULL DEPTH BY SAWCUT, SHALL BE NEAT, STRAIGHT, AND VERTICAL CUT WITH NO BROKEN EDGES. ALL LONSDIGUAL PAVEMENT CUTS SHALL BE UNINTERRUPTED AND PARALLEL TO TRENCH.

3. TRENCH WIDTH SHALL BE MINIMUM 24 INCHES, UNLESS SLURRY BACKFILL AND BEDDING IS USED, IN WHICH CASE THE MINIMUM TRENCH WIDTH SHALL BE 4 INCHES.

4. THE UNDERLYING BASE BENEATH THE PCC PAVEMENT, BEYOND THE 1' BACK OF THE FIRM BANKS OF THE TRENCH, DOES NOT NEED TO BE REMOVED EXCEPT THAT PORTION OF UNDERLYING BASE TO ACCOMMODATE THE NEW PCC PAVEMENT.

5. ALL EXPOSED SUBGRADE AND BASE SHALL BE SCARIFIED 6 INCHES MINIMUM AND COMPACTED TO 95% RELATIVE DENSITY.

TRENCH BACKFILL:

6. ALL TRENCHES, 24 INCHES OR WIDER, SHALL BE BACKFILLED WITH SELECT NATIVE MATERIAL COMPACTED TO 95% RELATIVE DENSITY. TRENCHES LESS THAN 24 INCHES WIDE SHALL BE BACKFILLED WITH APPROVED SLURRY MIX.

7. TRENCH BACKFILL SLURRY MATERIAL SHALL BE PROPERLY CONSOLIDATED. SLURRY MATERIAL FOR TRENCHES DEEPER THAN 5 FEET AND/OR NARROWER THAN 12 INCHES MUST BE CONSOLIDATED WITH VIBRATION.

8. BACKFILL MATERIAL SHALL BE MADE SMOOTH AND LEVEL BEFORE PLACING BASE AND PAVEMENT.

9. JETTING IS NOT AN APPROVED DENSIFICATION METHOD.

TRENCH "T" SECTION ("T-CUT")

10. AFTER THE TRENCH HAS BEEN BACKFILLED, THE EXISTING PAVEMENT SECTION SHALL BE REMOVED TO A LINE AT LEAST 12 INCHES BACK OF THE FIRM BANKS OF THE TRENCH AND AS NOTED IN NOTE 1 ABOVE.

In accordance with Resolution No. R2M16–11, as Public Works Director (Mary Chavez) and as City Engineer (Allen Cayir, PE, Registered Civil Engineer) for the City of Alhambra, we hereby exercise the discretion delegated to us and approve the plan o’ design, or amendment or modification to the plan or design, of a construction of, or an improvement to the public facility, structure, or property to which this statement and our signatures are affixed. Executed on January 25, 2018.
AMERICAN PUBLIC WORKS ASSOCIATION - SOUTHERN CALIFORNIA CHAPTER

CURB DRAIN

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

METRIC

150 - 2

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOO COMMITTEE
1994
REV. 1992, 1995

SR-25
1 OF 2
NOTES

1. IF THE TOE OF SLOPE IS ALLOWED WITHIN THE R/W, INLET CASE I BEGINS AT THE TOE RATHER THAN THE R/W LINE.

2. FOR OPEN DITCH (CASE INLET III), THE 600 mm (24") EXTENSION BEYOND THE R/W LINE IS NOT REQUIRED WHEN BACK OF WALK IS 600 mm (24") OR MORE FROM THE R/W LINE; HOWEVER, PIPE SHALL EXTEND TO R/W LINE.

3. TOP OF INLET STRUCTURE (CASE I AND II) TO BE FLUSH WITH ADJACENT SURFACE WHERE PRACTICAL.

4. CONSTRUCT P.C.C. WALK WHEN SPECIFIED ON PLAN. THE CONTRACT PRICE PAID FOR P.C.C. WALK ITEM SHALL INCLUDE WALK CONSTRUCTED IN CONJUNCTION WITH PARKWAY CULVERT.

5. "N" EQUALS NUMBER OF PIPES (MAXIMUM OF THREE) AS SPECIFIED ON PLAN.

6. INLET CASE TO BE SPECIFIED ON IMPROVEMENT OR GRADING PLAN.

7. ANGLE A EQUALS 0°, UNLESS OTHERWISE SPECIFIED.

8. TYPE, DIMENSIONS AND ELEVATIONS OF P.C.C. CURB AND GUTTER PER IMPROVEMENT PLAN.

9. UNLESS OTHERWISE SPECIFIED, FRAME AND GRATE FOR CASE II INLET SHALL BE GALVANIZED CAST IRON. WEIGHT OF FRAME AND GRATE SHALL BE 36 kg (80 LBS).

10. AT LOCATIONS WITH LESS THAN 200 mm (8") CURB FACE, USE 152x152-MW9.1xMW9.1 (5x5-10/10) GALVANIZED WIRE FABRIC. WIRE FABRIC SHALL EXTEND 200 mm (8") BEYOND THE EDGE OF CAST IRON PIPES.

11. DIMENSIONS SHOWN ON THIS PLAN FOR METRIC AND ENGLISH UNITS ARE NOT EXACTLY EQUAL VALUES. IF METRIC UNITS ARE USED, ALL VALUES USED FOR CONSTRUCTION SHALL BE METRIC VALUES. IF ENGLISH UNITS ARE USED, ALL VALUES USED FOR CONSTRUCTION SHALL BE ENGLISH VALUES. HOWEVER, ASTM 615 REINFORCING STEEL MAY BE SUBSTITUTED FOR ASTM 615M STEEL.

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**GRATE FOR CASE II INLET**

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**Curb Drain**
SECTION INLET TYPE 2

DETAIL OF ANCHOR

SECTION INLET TYPE 1

RECTOR OF FRAME AND COVER PER STD. PLAN 152.

SECTION A-A

SECTION B-B

AMERICAN PUBLIC WORKS ASSOCIATION - SOUTHERN CALIFORNIA CHAPTER

PARKWAY DRAIN

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

METRIC

151 - 1

1 OF 2
NOTES

1. FLOOR OF BOX SHALL BE TROWLED SMOOTH.

2. IF THE TOE OF SLOPE IS ALLOWED WITHIN THE R/W, INLET TYPE 1 BEGINS AT THE TOE RATHER THAN AT THE R/W LINE.

3. FOR OPEN DITCH (TYPE 2), THE 600 mm (24") EXTENSION BEYOND THE R/W LINE IS NOT REQUIRED WHEN BACK OF WALK IS 600 mm (24") OR MORE FROM THE R/W LINE; HOWEVER, THE PIPE SHALL EXTEND TO THE R/W LINE IN ANY EVENT.

4. TOP OF INLET STRUCTURE (TYPE 1 & 2) SHALL BE FLUSH WITH ADJACENT SURFACE WHERE PRACTICAL.

5. A HEADED STEEL STUD 16 mm x 160 mm WITH A 25 mm HEAD (5/8" x 6-3/8", 1" HEAD) ATTACHED BY A FULL PENETRATION BUTT WELD MAY BE USED AS AN ALTERNATE ANCHOR.

6. NORMAL CURB FACE AT POINT M AND Q. CURB FACE IS B + 125 mm (5") AT POINT N AND P.

7. THE 75 mm (3") LEG OF THE 16 mm (5/8") DIA. ANCHORS SHALL BE PARALLEL TO THE TOP OF SIDEWALK.

8. SLOPE = 2.0%.

9. DIMENSIONS SHOWN ON THIS PLAN FOR METRIC AND ENGLISH UNITS ARE NOT EXACTLY EQUAL VALUES. IF METRIC UNITS ARE USED, ALL VALUES USED FOR CONSTRUCTION SHALL BE METRIC VALUES. IF ENGLISH UNITS ARE USED, ALL VALUES USED FOR CONSTRUCTION SHALL BE ENGLISH VALUES. HOWEVER, ASTM 615 REINFORCING STEEL MAY BE SUBSTITUTED FOR ASTM 615M STEEL.
CAST WITH 1/4" maximum slot openings to meet A.D.A. guidelines.

Tree opening can be expanded to accommodate growth or ordered with the larger opening.

Available in cast grey iron or cast aluminum these grates are designed to carry pedestrian loads only.

Aluminum grates should be installed with frame and pilfer proof bolts to prevent unauthorized removal.

For coating options, please see section on "Finishes".

IRONSMITH TREE GRATES FOR LANDSCAPE ARCHITECTURE

(800) 338-4766
4814-1
STARBURST TREE GRATE

48" x 48" tree grate in two sections.

1/4 Maximum slot opening for pedestrian safety and A.D.A Compliance.

Cast from 100% recycled Iron, Aluminum, or Bronze for pedestrian loads only.

Tree opening: 16", 18", 28". Grates can be ordered with or later expanded to these openings. Please specify when ordering.

Finish: unfinished or Black dip or Enamel paint or Polyurethane Paint or Powder coat. Specify finish and color.

Use frame model: 4800F

Weight:
Iron = 325 lb/148 Kg
Aluminum = 120 lb/55 Kg

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Coating Options:

All of our cast metal products look great and wear very well without any finish. But for those cases where a different color option is required we can finish any product to your specification.

Standard options:

Natural Unfinished (see images) All cast iron products have an as cast surface. This surface shows a light sand texture. Cast aluminum and copper alloy products have a 36 grit random orbital ground surface. This surface reflects light from multiple directions. It is not a linear brushed finish
Click here for a discussion of natural aging

Black Dip is an asphalt coating used only on cast iron.

Enamel Paint can be color matched to your specification. One coat primer one enamel color.
Polyurethane Paint can be color matched to your specification. One coat special primer one polyurethane color top coat.
SHARKGRIP® may be added to enamel or polyurethane paint to improve slip resistance.

Powder Coat can be supplied from any powder manufacturer's standard colors. Powder coat process includes; sand blast, multistage wash and rinse, epoxy primer, exterior rated polyester topcoat. We suggest Cardinal Powder coat: IRONSMITH standard black is Cardinal T241-BK59
Black texture semi gloss TGIC polyester.
We also provide Tiger Drylac RAL colors.

ZINC Undercoats
For premium finishes we offer zinc galvanizing in both hot dip and hot spray methods for steel and iron products.

Special Options:

Black Max rust conversion
A non toxic easily field applied product to turn rusty grates dark instantly.
Baked Oil
IRONSMITH discourages the use of this finish method. Click here for a full discussion.
Brass Patinas
We can provide Birchwood® Technologies M38 and M24 finishes.
IRONSMITH Finish and Material Options

Metal Selection

IRONSMITH cast products; tree grates, trench grates, drain grates and bollards, are available in:

Cast gray iron: Long a standard for gratings and bollards, gray iron offers the best balance of strength, durability and low cost. 100% post consumer recycled metal.

Cast ductile iron: Ductile iron is more malleable and less brittle than gray iron allowing for a greater strength to weight ratio. Best when higher strength and lower weight is needed. High percentage of post consumer metal but may include pre-consumer recycled metal still meeting L.E.E.D. standard for recycled content.

Cast aluminum from 100% post consumer recycled metal. Light weight (1/3 cast iron) yet still strong, does not rust. Unique look when left unfinished.

Cast Bronze/brass alloys. Standard material used is alloy C854 yellow brass for castings and C385 Architectural bronze for frame angles. Yellow brass contains app. 67% Copper, 29% Zinc, 3% Lead, and 1% Tin. Architectural Bronze contains app. 55 -60% copper,40% zinc, 2 - 3.8% lead. Due to their lead content C854 and C385 alloys may not be suitable for systems to provide water for human consumption. IRONSMITH copper alloy products are not ANSI/NSF 61 tested. Please check your local codes.

Click here for a discussion of bronze/brass

Fabricated Steel Products, frames, tree guards, paver suspension, from ASTM A36 carbon steel