CITY OF BEVERLY HILLS
CALIFORNIA

STANDARD DETAIL DRAWINGS

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
CIVIL ENGINEERING DIVISION

345 Foothill Road
Beverly Hills, CA 90210
Tel: 310-285-2452
Fax: 310-278-1838

http://www.beverlyhills.org/government/pwtrans/default.asp

February 2021
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DEPARTMENT OF PUBLIC WORKS

ENGINEERING DIVISION

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RECOMMENDED _[Signature]_ DATE 8/21/2020

APPROVED _[Signature]_ DATE 12/04/2020

STANDARD DRAWING BH-000

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Section I

Street Improvements
RESIDENTIAL DRIVEWAY APPROACH

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED

REVISIONS

MARK DATE DESCRIPTION

\[\text{11/4/2010 NO JOINT BETWEEN CURB AND GUTTER}\]

NOT TO SCALE
CITY OF BEVERLY HILLS
RESIDENTIAL DRIVEWAY APPROACH SPECIFICATIONS AND GENERAL REQUIREMENTS
IN REFERENCE TO BEVERLY HILLS MUNICIPAL CODE SEC. 8-4-4

Definition: An approach is located between the edge of the gutter and property line. It is composed of an apron and flairs (see sheet 1 of 2).

1. Any variation from this Driveway Approach Standard must be approved in writing by the City Director of Public Works or his designee. Permits are required for all activities on public right-of-way.

2. Proposal Plan: A drawing shall be provided by the applicant to include: Width of proposed apron(s), width of proposed transitional flair areas at side of apron(s), measurement to nearest trees, street lights, other curb cuts, location of property line extension at each side of the site, location of any adjacent neighboring approach, height of the street curb in front of the property, width of the sidewalk, width of the driveway (landscaped area) and any other useful information.

Note: If the project is part of a work to be performed on a private property, the drawing submitted must be stamped with the approval of the Building and Safety Department prior to issuance of an Engineering Driveway Approach permit.

3. Location: No portion of a driveway approach shall be closer than three feet (3') from any lighting standard, public utility, another driveway, or other device erected in the parkway. Except in single family residential zones, driveway approaches are restricted to access which lead directly to a carport, garage, or parking area located beyond the setback area. Two (2) driveway approaches authorized for any lot or parcel shall not be less than twenty eight feet (28') apart, and each such driveway approach shall be a minimum of two feet (2') from the side property line as measured at the beginning of the full height curb. Any circular driveway shall have a minimum outer radius of twenty six (26') feet. The transportation/engineering official may approve a driveway approach closer to the side property line, or closer to any tree, lighting standard, public utility, another driveway or a device erected in the parkway where necessary to accommodate existing topography or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. No portion of a proposed driveway approach shall be constructed closer than ten (10) feet from the center of any city tree without written approval of the City Arborist.

4. Concrete Finish: Approaches shall have a wood float, rotor finish. Sidewalk and curb face shall be troweled and light broom finished. Broken or defective public sidewalk, curb, and gutter adjacent to approaches shall be replaced if found necessary during the inspection of the work by Public Works Inspectors.

5. Adjacent Approach: No raised curb will be permitted between two approaches which are adjacent to a common property line and less than 4 feet apart. The approaches shall be continuous. A written consent of adjacent property owner is required to construct a joint approach. Construction of a joint approach includes the removal of the existing adjacent approach and reconstruction of the entire shared approach.

6. Width: The maximum overall width of any residential driveway approach shall not exceed twenty feet (20'), and the maximum width of two (2) adjacent residential driveway approaches which are combined shall not exceed twenty six feet (26'). The minimum overall width of any driveway approach shall be sixteen feet (16').

The transportation/engineering official may approve driveway approaches which vary from the widths designated herein to accommodate existing topography, or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. Driveway approach widths shall be the transition distance, measured along the curb, from the full height curb on one side to on the opposite side.

Number: Only one driveway approach shall be permitted in any residential zone on any lot or parcel with less than seventy five feet (75') of frontage, or with a front setback of less than twenty five feet (25'); with the exception that a circular driveway requiring two (2) driveway approaches shall be permitted where the parcel frontage is within four percent (4%) of the seventy five feet (75') minimum required for two (2) driveway approaches, and further, that no other deviation from the provisions of this code or discretionary action is required for such circular driveway.


RESIDENTIAL DRIVEWAY APPROACH

REVISIONS

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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY ENGINEER DATE 11-18-10
APPROVED BY PUBLIC WORKS DIRECTOR DATE 11-18-10

STANDARD DRAWING BH 101 SHEET 2 OF 2
NOTES:
1. **DRIVEWAY APPROACH, INCLUDING SIDEWALK SHALL BE CLASS 520-C-2500 PCC MONOLITHIC POUR.**
2. ANY EXISTING TRAFFIC OR ELECTRICAL BOXES SHALL BE RELOCATED OUTSIDE OF DRIVEWAY APPROACH.
3. NO PORTION OF A PROPOSED DRIVEWAY APPROACH SHALL BE CONSTRUCTED CLOSER THAN TEN (10) FEET FROM THE CENTER OF ANY CITY TREE WITHOUT A WRITTEN APPROVAL OF THE CITY ARBORIST.
4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. ("GREENBOOK")
5. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C6" CALIFORNIA CONTRACTOR'S LICENSE. NOT TO SCALE

**NON-RESIDENTIAL DRIVEWAY APPROACH**

**CITY OF BEVERLY HILLS, CALIFORNIA**
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

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**STANDARD DRAWING**

**BH 102**

**DATE**

RECOMMENDED: [Signature] 11-28-10

APPROVED: [Signature] 11-18-10

PUBLIC WORKS DIRECTOR
CITY OF BEVERLY HILLS
NON-RESIDENTIAL DRIVEWAY APPROACH SPECIFICATIONS AND GENERAL REQUIREMENTS
IN REFERENCE TO BEVERLY HILLS MUNICIPAL CODE SEC. 8-4-4

**Definition:** An approach is located between the edge of the gutter and property line. It is composed of an apron and flairs (see sheet 1 of 2).

1. Any variation from this Driveway Approach Standard must be approved in writing by the City Director of Public Works or his designee. Permits are required for all activities on public right-of-way.

2. **Proposal Plan:** A drawing shall be provided by the applicant to include: Width of proposed apron(s), width of proposed transitional flair areas at side of apron(s), measurement to nearest trees, street lights, other curb cuts, location of property line extension at each side of the apron, location of any adjacent neighboring approach, height of the street curb in front of the property, width of the sidewalk, width of the parkway (landscaped area) and any other useful information.

   **Note:** If the project is part of a work to be performed on a private property, the drawing submitted must be stamped with the approval of the Building and Safety Department prior to issuance of a Driveway Approach permit.

3. **Location:** No portion of a driveway approach shall be closer than three feet (3') from any lighting standard, public utility, another driveway, or other device erected in the parkway. Except in single family residential zones, driveway approaches are restricted to access which lead directly to a carport, garage, or parking area located beyond the setback area. Two (2) driveway approaches authorized for any lot or parcel shall not be less than twenty eight feet (28') apart, and each such driveway approach shall be a minimum of two feet (2') from the side property line as measured at the beginning of the full height curb. Any circular driveway shall have a minimum outer radius of twenty six (26') feet. The transportation/engineering official may approve a driveway approach closer to the side property line, or closer to any tree, lighting standard, public utility, another driveway or a device erected in the parkway where necessary to accommodate existing topography or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. No portion of a proposed driveway approach shall be constructed closer than ten (10) feet from the center of any city tree without written approval of the City Arborist.

4. **Concrete Finish:** Approaches shall have a wood float, rotor finish. Sidewalk and curb face shall be troweled and light broom finished. Broken or defective public sidewalk, curb, and gutter adjacent to approaches shall be replaced if found necessary during the inspection of the work by Public Works Inspectors.

5. **Adjacent Approach:** No raised curb will be permitted between two approaches which are adjacent to a common property line and less than 4 feet apart. The approaches shall be continuous. A written consent of adjacent property owner is required to construct a joint approach. Construction of a joint approach includes the removal of the existing adjacent approach and reconstruction of the entire shared approach.

6. **Width:** The maximum overall width of any non-residential driveway approach shall not exceed forty feet (40'). The minimum overall width of any driveway approach shall be sixteen feet (16'). The transportation/engineering official may approve driveway approaches which vary from the widths designated herein to accommodate existing topography, or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. Driveway approach widths shall be the transition distance, measured along the curb, from the full height curb on one side to on the opposite side.

7. **Materials and Workmanship:** Shall fully comply with the requirements of the "Standard Specifications for Public Works Construction", ("Greenbook"), latest edition, sections 201-1 and 303-5 respectively.

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### NON-RESIDENTIAL DRIVEWAY APPROACH

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**Sheet 2 of 2**
CASE 3

- 4' MIN.
- 8.33% MAX.
- PLANTING AREA
- SIDEWALK
- 0' CF (TYP.)
- 2% MAX.
- WPJ
- 6" RETAINING CURB (TYP.)

CASE 4

- 4' MIN.
- 8.33% MAX.
- PLANTING AREA
- RETAINING CURB
- SIDEWALK
- 0" CF (TYP.)
- FULL CF
- WPJ
- SEE NOTE 2
- CURB RAMPS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 9-22-20
APPROVED DATE 9-22-20

STANDARD DRAWING BH 103
SHEET 2 OF 4
CASE 5

5' MIN.
IF NECESSARY AT BACK OF WALK

8.33% MAX.
2% MAX.

WPJ
(TYP.)

RETAINING CURB
SIDEWALK

SEE NOTE 2

GUTTER

CURB FACE

CASE 5

CURB RAMPS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED
DATE 9-22-20

APPROVED
DATE 9-22-20

REVISIONS
MARK DATE DESCRIPTION

STANDARD DRAWING
BH 103
SHEET 3 OF 4
NOTES:
1. CONCRETE SHALL BE CLASS 560-C-3250 AND SHALL BE 4" THICK OVER 4" CRUSHED MISCELLANEOUS BASE AT 90% RELATIVE COMPACTION.

2. CURB RAMPS SHALL HAVE A RECESSED CAST IN PLACE YELLOW DETECTABLE WARNING SURFACE (PLATE) THAT EXTENDS THE FULL WIDTH AND 3' DEPTH OF THE RAMP. EDGES SHALL BE FLUSH WITH THE SURFACE OF THE RAMP. SEE DETECTABLE WARNING DETAIL FOR SIZE AND PATTERN. THE EDGE OF THE DETECTABLE WARNING NEAREST TO THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FL.

3. UTILITY PULL BOXES, MANHOLES, VAULTS AND OTHER UTILITY FACILITIES WITHIN THE BOUNDARIES OF THE CURB RAMP SHALL BE RELOCATED BY THE OWNER PRIOR TO, OR IN CONJUNCTION WITH, THE CONSTRUCTION OF THE RAMP.

4. TRANSITIONS FROM RAMPS AND LANDINGS TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.

5. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 48" OF THE TOP AND BOTTOM OF CURB RAMP.

6. IF DISTANCE FROM CURB TO BACK OF SIDEWALK IS TOO SHORT TO ACCOMMODATE RAMP AND 4' - 0" LANDING AS SHOWN IN CASE 1 AND CASE 2, THE SIDEWALK MAY BE DEPRESSED LONGITUDINALLY AS IN CASE 5.

7. AS SITE CONDITIONS DICTATE, THE RETAINING CURB SIDE AND THE FLARED SIDE OF CASE 4 RAMP MAY BE CONSTRUCTED IN REVERSE POSITION.

8. IF LOCATED ON A CURVE, THE SIDES OF THE RAMP NEED NOT BE PARALLEL, BUT THE MINIMUM WIDTH OF THE RAMP AT ANY POINT SHALL BE 4' - 0".

9. DOWEL SHALL BE USED AT EXISTING CURB AND GUTTER. DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPOXY WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12" IN LENGTH, WITH A 6" EMBEDMENT, OR AS DIRECTED BY INSPECTORS.

10. CURB RAMPS SHALL BE A MONOLITHIC POUR.

11. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

SECTION A-A

SECTION B-B

CURB RAMPS
**CURB AND SIDEWALK JOINTS**

**CITY OF BEVERLY HILLS, CALIFORNIA**

**DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION**

**CIVIL ENGINEERING DIVISION**

**RECOMMENDED**

**APPROVED**

**STANDARD DRAWING**

**BH 104**

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**ABBREVIATIONS:**

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

**NOTES:**

1. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT LOCATIONS SHOWN ON THE DETAIL AND/OR PLANS AND SHALL BE FORMED BY CUTTING A GROOVE IN THE PAVEMENT WITH A POWER DRIVEN SAW. THE GROOVE FOR A TRANSVERSE JOINT SHALL BE CUT TO A MINIMUM DEPTH OF 1-1/2" OR ONE-SIXTH OF THE PAVEMENT THICKNESS, WHICHEVER IS GREATER; THE GROOVE FOR A LONGITUDINAL JOINT SHALL BE CUT TO A MINIMUM DEPTH OF 1-1/2" OR ONE-FOURTH OF THE PAVEMENT THICKNESS, WHICHEVER IS GREATER; AND THE WIDTH SHALL BE THE MINIMUM WIDTH POSSIBLE WITH THE SAW BEING USED, BUT SHALL NOT EXCEED 1/4".

2. EXPANSION JOINTS SHALL BE CONSTRUCTED AT LOCATIONS SHOWN ON THE DETAIL AND/OR PLANS. EXPANSION JOINT FILLER MATERIAL SHALL HAVE A MINIMUM THICKNESS OF 1/2", A MAXIMUM THICKNESS OF 3/4", A DEPTH EQUAL TO THE THICKNESS OF THE PAVEMENT, AND SHALL BE COMPOSED OF MATERIALS AS SPECIFIED OR APPROVED BY THE ENGINEER. AFTER THE CONCRETE HAS BEEN FINISHED, AN EDGER OF 1/4" RADIUS SHALL BE USED ON EACH SIDE OF THE EXPANSION JOINT FILLER. THE EXPANSION JOINT FILLER SHALL BE CLEANED OF ALL CONCRETE MORTAR.

3. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT REGULAR INTERVALS NOT EXCEEDING 2.5' IN WALKS AND 20' IN GUTTERS. JOINTS IN CURB, GUTTER, AND WALK SHALL BE ALIGNED.

4. CURB AND GUTTER SHALL BE CONSTRUCTED SEPARATELY FROM SIDEWALK.

5. SIDEWALK AND CURBFACE SHALL BE TROWELED AND LIGHT BROOM FINISHED.

6. SIDEWALK, CURB AND GUTTER SHALL BE CONSTRUCTED OF CLASS 520-C-2500 PCC.

7. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

8. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C3" CALIFORNIA CONTRACTOR'S LICENSE.
1. SIDEWALK SHALL BE CONSTRUCTED OF CLASS 520-C-2500 PCC.
2. SEE BH 104 FOR JOINT LOCATION PLACEMENT.
3. CRUSHED MISCELLANEOUS BASE TO BE APPROVED BY THE CITY ENGINEER.
4. SIDEWALK SHALL BE TROWLED AND LIGHT BROOM FINISHED.
5. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
6. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

STANDARD SIDEWALK SECTION
RESIDENTIAL INTEGRAL CURB AND GUTTER SECTION
NOT TO SCALE

NOTES:

1. CURB AND GUTTER SHALL BE CONSTRUCTED OF CLASS 520-C-2500 PCC.

2. GUTTER WIDTH, W, SHALL MATCH EXISTING OR 24" MINIMUM, UNLESS OTHERWISE SPECIFIED.

3. AFTER THE CONCRETE HAS BEEN THOROUGHLY TAMPED TO FORCE THE LARGER AGGREGATE INTO THE CONCRETE AND BRING TO THE TOP SUFFICIENT FREE MORTAR FOR FINISHING, THE SURFACE SHALL BE WORKED TO A TRUE AND EVEN GRADE BY MEANS OF A FLOAT, TROWELED WITH A LONG HANDLED TROWEL OR "FRESNO", AND WOOD-FLOAT FINISHED. THE FLOWLINE OF THE GUTTER SHALL BE TROWELED SMOOTH FOR A WIDTH OF 4 INCHES FOR INTEGRAL CURB AND GUTTER. SIDE FORMS SHALL REMAIN IN PLACE FOR AT LEAST 24 HOURS AFTER COMPLETION OF THE GUTTER, BUT MUST BE REMOVED BEFORE THE WORK WILL BE ACCEPTED.

4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

5. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

RESIDENTIAL INTEGRAL CURB AND GUTTER DETAIL

<table>
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<th>REVISIONS</th>
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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY DATE 7-30-09
APPROVED BY DATE 7-31-09

STANDARD DRAWING BH 106
SHEET 1 OF 1
NON-RESIDENTIAL INTEGRAL CURB AND GUTTER SECTION
NOT TO SCALE

NOTES:
1. CURB AND GUTTER SHALL BE CONSTRUCTED OF CLASS 520-C-2500 PCC.
2. GUTTER WIDTH, W, SHALL MATCH EXISTING OR 24" MINIMUM, UNLESS OTHERWISE SPECIFIED.
3. AFTER THE CONCRETE HAS BEEN THOROUGHLY TAMPED TO FORCE THE LARGER AGGREGATE INTO THE CONCRETE AND BRING TO THE TOP SUFFICIENT FREE MORTAR FOR FINISHING, THE SURFACE SHALL BE WORKED TO A TRUE AND EVEN GRADE BY MEANS OF A FLOAT, TROWELED WITH A LONG HANDLED TROWEL OR "FRESNO", AND WOOD-FLOAT FINISHED. THE FLOWLINE OF THE GUTTER SHALL BE TROWELED SMOOTH FOR A WIDTH OF 4 INCHES FOR INTEGRAL CURB AND GUTTER. SIDE FORMS SHALL REMAIN IN PLACE FOR AT LEAST 24 HOURS AFTER COMPLETION OF THE GUTTER, BUT MUST BE REMOVED BEFORE THE WORK WILL BE ACCEPTED.
4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
5. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

NON-RESIDENTIAL INTEGRAL CURB AND GUTTER DETAIL

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<th>REVISIONS</th>
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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED: [Signature] DATE: 7-30-09
APPROVED: [Signature] DATE: 9-3-09

STANDARD DRAWING: BH 107
SHEET 1 OF 1
NOTES:
1. CURB RETURN RADIUS, R, SHALL BE 5' TYPICAL, UNLESS OTHERWISE SPECIFIED.
2. TOP OF CURB ELEVATIONS SHALL MATCH EXISTING SIDEWALK ELEVATIONS.
3. ALLEY APPROACH WITH A SLOPE EXCEEDING 16.88% SLOPE SHALL REQUIRE A SPECIAL PERMIT FROM THE TRANSPORTATION ENGINEERING OFFICIAL.
4. ACTUAL SHAPE AND LOCATION OF ALLEY APPROACH SHALL BE DETERMINED IN THE FIELD BY THE CITY ENGINEER.
5. ALLEY APPROACH AND NEW SIDEWALK WITHIN ALLEY APPROACH SHALL BE A CLASS 520-C-2500 8" THICK MONOLITHIC POUR OVER 6" CRUSHED MISCELLANEOUS BASE AT 95% RELATIVE COMPACTION.
6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
7. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.
NOTES:
1. MINIMUM CURB BREAK AND RECONSTRUCTION IS 3'-0" IN LENGTH.
2. CURB & GUTTER SHALL BE CLASS 520-C-2500 PCC MONOLITHIC POUR.
3. FOR MULTIPLE CURB DRAINS, SPACING BETWEEN C.I. PIPES SHALL BE A MINIMUM OF 6" O.C.
4. 3" PIPE IN 6" CURB IS ALLOWED BY CORING.
5. FOR OTHER CONDITIONS SEE APWA STANDARD PLAN 150-2.
6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
7. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

4" CURB DRAIN IN 6" CURB

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY CITY ENGINEER DATE: 7-30-09
APPROVED BY PUBLIC WORKS DIRECTOR DATE: 7-31-09

STANDARD DRAWING BH 109
SHEET 1 OF 1
### TABLE

<table>
<thead>
<tr>
<th>S</th>
<th>J BAR SPACING</th>
</tr>
</thead>
<tbody>
<tr>
<td>12&quot;</td>
<td>7&quot;</td>
</tr>
<tr>
<td>18&quot;</td>
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</tr>
<tr>
<td>24&quot;</td>
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<td>30&quot;</td>
<td>7&quot;</td>
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<td>7&quot;</td>
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<tr>
<td>42&quot;</td>
<td>6&quot;</td>
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<tr>
<td>48&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>54&quot;</td>
<td>6-12&quot;</td>
</tr>
<tr>
<td>60&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>66&quot;</td>
<td>4&quot;</td>
</tr>
<tr>
<td>72&quot;</td>
<td>3-1/2&quot;</td>
</tr>
</tbody>
</table>

FOR S = 30" AND LESS, USE 2 ANCHORS. OTHERWISE, USE 3 ANCHORS.

FOR S = 48" AND LESS, B=3" USE 2-1/2"X2"X1/2" GALVANIZED STEEL ANGLE.
OTHERWISE, B = 4".

USE 3-1/2"X3"X1/2" GALVANIZED STEEL ANGLE.

### NOTES:

1. FLOOR OF BOX SHALL BE TROWELED SMOOTH.
2. IF 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 24" EXTENSION BEYOND THE R/W LINE IS NOT REQUIRED WHEN BACK OF WALK IS 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, 5/8" x 6-3/6" WITH A 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 + 5" AT POINT N AND P.
7. THE 3" LEG OF THE 5/8" DIA. ANCHORS SHALL BE PARALLEL TO THE TOP OF SIDEWALK.
8. SLOPE = 2.0%
9. ANGLE 'A' SHALL BE 30" MINIMUM WHEN ROADWAY SLOPE IS GREATER THAN 5.0%.
10. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
11. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

---

### PARKWAY DRAIN

**CITY OF BEVERLY HILLS, CALIFORNIA**

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED [Signature] DATE 7-30-09

APPROVED [Signature] DATE 7-31-09

STANDARD DRAWING BH 110

SHEET 2 OF 2
LONGITUDINAL ALLEY GUTTER
NOT TO SCALE

CRUSHED MISCELLANEOUS BASE. MINIMUM 95% RELATIVE COMPACTION.

LONGITUDINAL ALLEY GUTTER

W | V
---|---
2' - 0" | 3/4"
4' - 0" | 1-1/2"

5.0' TRANSITION WARPS LONGITUDINAL GUTTER TO MATCH ALLEY APPROACH/ SIDEWALK

TRANSITION DETAIL A
BEGINNING OF LONGITUDINAL GUTTER

TRANSITION DETAIL B
END OF LONGITUDINAL GUTTER

NOTES:
1. LONGITUDINAL ALLEY GUTTER SHALL BE CLASS 520-C-2500 PCC.
2. CONTROL JOINTS SHALL BE PLACED AT 10' INTERVALS FOR FULL LENGTH OF LONGITUDINAL GUTTER.
3. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
4. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

LONGITUDINAL ALLEY GUTTER DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY: DATE: 11-18-10
APPROVED BY: DATE: 11-18-10

STANDARD DRAWING BH 111
SHEET 1 OF 1
LONGITUDINAL ALLEY GUTTER AT MANHOLE

CASE 1 (2'-0" LONGITUDINAL GUTTER)

CASE 2 (4'-0" LONGITUDINAL GUTTER)

NOTES:
1. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
2. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

LONGITUDINAL GUTTER PER CITY OF BEVERLY HILLS STD. DRAWING NO. BH 111

CRUSHED MISCELLANEOUS BASE. MINIMUM 95% RELATIVE COMPACTION

SECTION A-A

SECTION B-B

FLOW LINE

ALLEY C/L

DIRECTION OF FLOW

ALLEY SURFACE

MANHOLE

8" MIN.

1.00'

1.00'

1.00'

1.00'

1.00'

1.00'

LONGITUDINAL GUTTER PER CITY OF BEVERLY HILLS STD. DRAWING NO. BH 111

LONGITUDINAL GUTTER PER CITY OF BEVERLY HILLS STD. DRAWING NO. BH 111

CITY OF BEVERLY HILLS, CALIFORNIA

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED DATE 7-30-09

APPROVED DATE 7-31-09

STANDARD DRAWING BH 112

SHEET 1 OF 2
LONGITUDINAL GUTTER AT VAULT

CASE 3 (2'-0" LONGITUDINAL GUTTER)

CASE 4 (4'-0" LONGITUDINAL GUTTER)

NOTES:
1. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
2. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

LONGITUDINAL ALLEY GUTTER AT VAULT

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED
CITY ENGINEER
DATE 7-30-09

APPROVED
PUBLIC WORKS DIRECTOR
DATE 7-31-09
SURFACE

12" MIN. (TYP.)

W

STEEL PLATE WITH NON-SKID SURFACE TREATMENT

T

12" MIN. (TYP.)

MILL ALL AROUND TRENCH, 12" x "T"

TEMPORARY EXCAVATION

#4 x 12" PIN

<table>
<thead>
<tr>
<th>&quot;W&quot;</th>
<th>&quot;T&quot;</th>
<th>MINIMUM STEEL PLATE THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRENCH WIDTH</td>
<td>MINIMUM STEEL PLATE THICKNESS</td>
<td></td>
</tr>
<tr>
<td>=&lt;3'-0&quot;</td>
<td>1 INCH</td>
<td></td>
</tr>
<tr>
<td>&gt;3'-0&quot;, UP TO 4'-0&quot;</td>
<td>1-1/4 INCH</td>
<td></td>
</tr>
</tbody>
</table>

NOTES:

1. ALL STEEL TRENCH PLATES SHALL BE FULLY SUPPORTED AROUND THE PERIMETER TO PREVENT TIPPING.
2. TRENCHES AND EXCAVATIONS SHALL BE ADEQUATELY SHORED OR BRACED TO WITHSTAND HIGHWAY TRAFFIC LOADS.
3. WHEN TWO OR MORE PLATES ARE USED, THE PLATES SHALL BE TACK WELDED AT EACH CORNER OR AS REQUIRED BY THE CITY ENGINEER.
4. ALL TRENCH PLATES SHALL BE PINNED IN EACH CORNER WITH PINS MADE OF #4 REBAR, OR EQUIVALENT DIAMETER STEEL ROD, WITH A MINIMUM LENGTH OF 12".
5. ALL TRENCH PLATING SHALL BE DESIGNED FOR HS20-44 TRUCK LOADING.
6. FOR TRENCHES AND EXCAVATIONS WITH SPANS GREATER THAN FOUR FEET (4'), A STRUCTURAL DESIGN SHALL BE PREPARED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER AND REVIEWED BY THE CITY.
7. TRENCH PLATES SHALL BE USED WHEN TRENCH WORK CAN NOT BE COMPLETED WITHIN THE SAME WORKING DAY TO MAINTAIN ALL VEHICULAR, BICYCLE AND PEDESTRIAN TRAFFIC FLOW.
8. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

STEEL PLATE FOR OPEN TRENCH DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED ______________________________ DATE 7-30-09
APPROVED ______________________________ DATE 7-30-09

STANDARD DRAWING 
BH 113

SHEET 1 OF 1
CASE I - EXISTING SECTION: ASPHALT CONCRETE

1. CONSTRUCT NEW ASPHALT CONCRETE BASE COURSE, TYPE B, PG 64-10, 1" THICKER THAN THE EXISTING SECTION.

2. CONSTRUCT NEW ASPHALT CONCRETE WEARING COURSE:

<table>
<thead>
<tr>
<th>TYPES OF STREETS</th>
<th>DEPTH</th>
<th>ASPHALT CONCRETE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESIDENTIAL STREETS/ALLEYS</td>
<td>2&quot;</td>
<td>TYPE D2, PG-64-10 (HMA)</td>
</tr>
<tr>
<td>MAJOR STREETS/ALLEYS</td>
<td>2&quot;</td>
<td>TYPE C2, OR 3C3, PG-64-10 (HMA)</td>
</tr>
<tr>
<td>STREET WITH ASPHALT RUBBER HOT MIX (A.R.H.M.)</td>
<td>2&quot;</td>
<td>TYPE C2, PG-64-16</td>
</tr>
</tbody>
</table>

1 AND 2: THE TOTAL THICKNESS OF 1 + 2 SHALL BE 6" MINIMUM FOR ALL STREETS AND ALLEYS
TRENCH BACKFILL SHALL BE EITHER:

A. TWO SACK CEMENT SAND SLURRY
B. 150 P.S.I. CLSM
C. CRUSHED AGGREGATE BASE
D. NATIVE MATERIAL

THE CONTRACTOR IS TO SUPPLY COMPACTION TEST RESULTS AT NO COST TO THE CITY (PER ASTM METHOD 1557) UNLESS SLURRY OR CLSM IS USED.

CONSTRUCT NEW CRUSHED AGGREGATE BASE TO MATCH EXISTING THICKNESS OR 4" THICKNESS, WHICHERVER IS GREATER. COMPACT TO 95% OF RELATIVE DENSITY.

SAWCLUTING WILL BE REQUIRED AROUND THE PERIMETER OF THE T-CUT TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES.

T-CUTS ARE 12" WIDE AS MEASURED FROM THE FINAL EDGE OF TRENCH (AFTER SLUFFING).


REMOVAL BY COLD MILLING OR PNEUMATIC HAMMER IS ACCEPTABLE.

IF THE REMOVALS ARE LESS THAN 5' APART OR LESS THAN 2' FROM A CONCRETE CURB, GUTTER, CROSS GUTTER, OR PROPERTY LINE THE T-CAP SHALL BE CONTINUOUS BETWEEN EXCAVATIONS AND/OR THE EDGE OF THE CONCRETE.

CONSTRUCT NEW CRUSHED AGGREGATE BASE TO MATCH EXISTING THICKNESS OR 4" THICKNESS, WHICHERVER IS GREATER. COMPACT TO 95% OF RELATIVE DENSITY.

TRENCH BACKFILL SHALL BE EITHER:

A. TWO SACK CEMENT SAND SLURRY
B. 150 P.S.I. CLSM
C. CRUSHED AGGREGATE BASE
D. NATIVE MATERIAL

THE CONTRACTOR IS TO SUPPLY COMPACTION TEST RESULTS AT NO COST TO THE CITY (PER ASTM METHOD 1557) UNLESS SLURRY OR CLSM IS USED.

CONSTRUCT NEW CRUSHED AGGREGATE BASE TO MATCH EXISTING THICKNESS OR 4" THICKNESS, WHICHERVER IS GREATER. COMPACT TO 95% OF RELATIVE DENSITY.

SAWCLUTING WILL BE REQUIRED AROUND THE PERIMETER OF THE T-CUT TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES.

T-CUTS ARE 12" WIDE AS MEASURED FROM THE FINAL EDGE OF TRENCH (AFTER SLUFFING).


REMOVAL BY COLD MILLING OR PNEUMATIC HAMMER IS ACCEPTABLE.

IF THE REMOVALS ARE LESS THAN 5' APART OR LESS THAN 2' FROM A CONCRETE CURB, GUTTER, CROSS GUTTER, OR PROPERTY LINE THE T-CAP SHALL BE CONTINUOUS BETWEEN EXCAVATIONS AND/OR THE EDGE OF THE CONCRETE.

FINAL T-CUT AND T-CAP MAY BE ALTERED AT THE CITY ENGINEER'S DISCRETION BASED ON THE EXISTING STREET OR ALLEY CONDITION.

ALL TRAFFIC STRIPING AND/OR MARKINGS DAMAGED DURING RESTORATION WORK SHALL BE REPLACED.

WHEN WORK REQUIRES REMOVAL OF EXISTING CONCRETE STREET FEATURES, SUCH AS DRIVEWAY APPROACH, ALLEY APPROACH, DRIVEWAYS, CURB RAMPS, OR PORTION(S) THEREOF, RESTORATION OF CONCRETE STREET FEATURES SHALL CONFORM TO THE LATEST CITY STANDARDS. CONCRETE POUR SHALL BE MONOLITHIC AND CONCRETE SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

WHEN ROADWAY WORK REQUIRES REMOVAL OF EXISTING CONCRETE BUS PAD OR PORTION(S) THEREOF, CONTRACTOR SHALL RESTORE CONCRETE BUS PAD IN KIND MATCHING EXISTING PCC THICKNESS OR 8-IN MINIMUM WHICHERVER IS GREATER. CONCRETE POUR SHALL BE MONOLITHIC AND RESTORATION OF BUS PAD SHALL CONFORM TO THE LATEST STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION. CONCRETE BUS PAD SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY OR OTHERWISE APPROVED BY THE CITY ENGINEER.

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS ("GREENBOOK").

CONTRACTOR SHALL HAVE A VALID CLASS "A" OR APPROVED CALIFORNIA SPECIALTY CONTRACTOR'S LICENSE.
CONSTRUCT NEW PCC PAVEMENT 1" THICKER THAN THE EXISTING CONCRETE, 6" MINIMUM USING 560-C-3250.

THE EXACT LIMITS FOR REMOVAL SHALL BE DETERMINED BY THE CITY ENGINEER SUCH THAT JOIN LINES ARE NOT WITHIN 2'-6" OF EXISTING PAVEMENT JOINTS OR SIGNIFICANT CRACKS. IF THE EXCAVATIONS ARE LESS THAN 5' APART OR LESS THAN 2'-6" FROM A CONCRETE CURB, GUTTER OR EXPANSION JOINT, THE RESTORATION SHALL BE CONTINUOUS BETWEEN EXCAVATIONS AND/OR THE EDGE OF CONCRETE.

FOR PCC STREETS OR INTERSECTIONS THE LIMITS OF THE RESTORATION SHALL BE A RECTANGULAR AREA EXTENDING TO THE NEAREST CONSTRUCTION JOINT. THE STRUCTURAL SECTION OUTSIDE THE UTILITY TRENCH AREA SHALL BE EQUAL TO 1 + 5.

TRENCH BACKFILL SHALL BE EITHER:

A. TWO SACK CEMENT SAND SLURRY
B. 150 P.S.I. CLSM
C. CRUSHED AGGREGATE BASE
D. NATIVE MATERIAL

THE CONTRACTOR IS TO SUPPLY COMPACTION TEST RESULTS AT NO COST TO THE CITY (PER ASTM TEST METHOD 1557), UNLESS SLURRY OR CLSM IS USED.

CONSTRUCT NEW CRUSHED AGGREGATE BASE TO MATCH EXISTING THICKNESS OR 4" THICKNESS, WHICHER IS GREATER, COMPACT TO 95% OF RELATIVE DENSITY.
6. SAWCUTTING WILL BE REQUIRED AROUND THE PERIMETER OF THE T-CUT TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES.

7. DOWEL SIZE, SPACING, AND EMBEDMENT SHOULD BE AS FOLLOWS:

<table>
<thead>
<tr>
<th>CONCRETE THICKNESS</th>
<th>SIZE AND SPACING</th>
<th>EMBEDMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5&quot;</td>
<td>SEE KEY DETAIL CBH 105</td>
<td>NONE</td>
</tr>
<tr>
<td>5&quot; TO 7&quot;</td>
<td>#4 @ 16&quot; O.C.</td>
<td>4&quot;</td>
</tr>
<tr>
<td>7.1 TO 9&quot;</td>
<td>#5 @ 16&quot; O.C.</td>
<td>6&quot;</td>
</tr>
<tr>
<td>&gt; 9&quot;</td>
<td>#6 @ 16&quot; O.C.</td>
<td>8&quot;</td>
</tr>
</tbody>
</table>

DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPOXY WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12" IN LENGTH, WITH A 6" EMBEDMENT, OR AS DIRECTED BY INSPECTORS.

8. ALL TRAFFIC STRIPING AND/OR MARKINGS DAMAGED DURING RESTORATION WORK SHALL BE REPLACED.

9. WHEN WORK REQUIRES REMOVAL OF EXISTING CONCRETE STREET FEATURES, SUCH AS DRIVEWAY APPROACH, ALLEY APPROACH, DRIVEWAYS, CURB RAMPS, OR PORTION(S) THEREOF, RESTORATION OF CONCRETE STREET FEATURES SHALL CONFORM TO THE LATEST CITY STANDARDS. CONCRETE POUR SHALL BE MONOLITHIC AND CONCRETE SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

10. WHEN ROADWAY WORK REQUIRES REMOVAL OF EXISTING CONCRETE BUS PAD OR PORTION(S) THEREOF, CONTRACTOR SHALL RESTORE CONCRETE BUS PAD IN KIND MATCHING EXISTING PCC THICKNESS OR 8-IN MINIMUM WHICHEVER IS GREATER. CONCRETE POUR SHALL BE MONOLITHIC AND RESTORATION OF BUS PAD SHALL CONFORM TO THE LATEST STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION. CONCRETE BUS PAD SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY OR OTHERWISE APPROVED BY THE CITY ENGINEER.

11. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS ("GREENBOOK").

12. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR APPROVED CALIFORNIA SPECIALTY CONTRACTOR'S LICENSE.
CASE III - EXISTING SECTION: ASPHALT OVER CONCRETE

1. CONSTRUCT NEW PCC PAVEMENT 1" THICKER THAN THE EXISTING CONCRETE, 6" MINIMUM USING CLASS 560-C-3250.

2. CONSTRUCT NEW ASPHALT CONCRETE BASE COURSE, TYPE B, PG 64-10.

3. CONSTRUCT 2" NEW ASPHALT CONCRETE WEARING COURSE PER TABLE - 1.

4. THE EXACT LIMITS FOR REMOVAL SHALL BE DETERMINED BY THE CITY ENGINEER SUCH THAT JOIN LINES ARE NOT WITHIN 2'-6" OF EXISTING PAVEMENT JOINTS OR SIGNIFICANT CRACKS. IF THE EXCAVATIONS ARE LESS THAN 5' APART OR LESS THAN 2'-6" FROM A CONCRETE CURB, GUTTER OR EXPANSION JOINT, THE RESTORATION SHALL BE CONTINUOUS BETWEEN EXCAVATIONS AND/OR THE EDGE OF CONCRETE.

5. TRENCH BACKFILL SHALL BE EITHER:
   A. TWO SACK CEMENT SAND SLURRY
   B. 150 P.S.I. CLSM
   C. CRUSHED AGGREGATE BASE
   D. NATIVE MATERIAL

THE CONTRACTOR IS TO SUPPLY COMPACTION TEST RESULTS AT NO COST TO THE CITY (PER ASTM TEST METHOD 1557), UNLESS SLURRY OR CLSM IS USED.
6. Sawcutting will be required around the perimeter of the T-cut to provide clean, straight, vertical sides.

7. Dowel size, spacing, and embedment should be as follows:

<table>
<thead>
<tr>
<th>Concrete Thickness</th>
<th>Size and Spacing</th>
<th>Embedment</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5&quot;</td>
<td>See Key Detail CBH 105</td>
<td>None</td>
</tr>
<tr>
<td>5&quot; to 7&quot;</td>
<td>#4 @ 16&quot; O.C.</td>
<td>4&quot;</td>
</tr>
<tr>
<td>7.1 to 9&quot;</td>
<td>#5 @ 16&quot; O.C.</td>
<td>6&quot;</td>
</tr>
<tr>
<td>&gt; 9&quot;</td>
<td>#6 @ 16&quot; O.C.</td>
<td>8&quot;</td>
</tr>
</tbody>
</table>

Dowel hole shall be wire brushed and blown free of debris. Epoxy will be inserted, and dowel will be seated to full depth of hole. Dowel shall be 12" in length, with a 6" embedment, or as directed by inspectors.

8. All traffic striping and/or markings removed by restoration work shall be replaced.

9. When work requires removal of existing concrete street features, such as driveway approach, alley approach, driveways, curb ramps, or portion(s) thereof, restoration of concrete street features shall conform to the latest city standards. Concrete pour shall be monolithic and concrete shall be removed and replaced in its entirety unless otherwise approved by the city engineer.

10. When roadway work requires removal of existing concrete bus pad or portion(s) thereof, contractor shall restore concrete bus pad in kind matching existing PCC thickness or 8-in minimum whichever is greater. Concrete pour shall be monolithic and restoration of bus pad shall conform to the latest standard plans for public works construction. Concrete bus pad shall be removed and replaced in its entirety or otherwise approved by the city engineer.

11. All work shall be constructed in accordance with the latest edition of standard specifications for public works ("Greenbook").

12. Contractor shall have a valid Class "A" or approved California Specialty Contractor's License.
1. ALL ARTERIAL AND COLLECTOR STREETS WITHIN CITY OF BEVERLY HILLS RIGHT-OF-WAY SHALL REQUIRE ASPHALT RUBBER PAVEMENT OVERLAY INSTALLATION. THE CITY ENGINEER MAY REQUIRE OTHER LOCATIONS TO CONFORM TO THIS STANDARD.

2. UNLESS OTHERWISE DETERMINED BY THE CITY ENGINEER, THE ARHM SHALL BE CLASS ARHM-GG-C.

3. ROADWAYS TO RECEIVE FULL-WIDTH COLDMILLING SHALL BE RESURFACED WITHIN 24 HOURS OF COLDMILLING ANY PORTION OF THE WORK.

4. THE ROADWAY CROSS SLOPE SHALL BE A MINIMUM OF 2 PERCENT OR MATCH THE EXISTING CROSS SLOPE IF HIGHER THAN 2 PERCENT.

5. THE NEW PAVEMENT SHALL BE FLUSH WITH THE LIP OF GUTTER ON EACH SIDE OF STREET.

6. THE COLDMILL, AND ARHM APPLICATION SHALL FULLY COMPLY WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, (GREENBOOK), LATEST EDITION.

7. THE LIMITS OF COLDMILL AND ASPHALT PAVEMENT SHALL BE THE FULL WIDTH OF THE STREET PAVEMENT.

8. ALL TRAFFIC STRIPING AND/OR MARKINGS REMOVED BY THE COLDMILL AND OVERLAY WORK SHALL BE REPLACED TO CURRENT STANDARD.

9. ANY IMPACTS TO EXISTING UTILITIES, STRUCTURES, AND SURVEY MONUMENTS DUE TO THE COLDMILL AND OVERLAY WORK SHALL BE RESTORED IN ACCORDANCE WITH THE CITY OF BEVERLY HILLS STANDARDS AND THE (GREENBOOK), LATEST ADDITION.

10. AFTER ANY GRINDING OR MICRO-MILLING OF ANY STREET OR ALLEY, CRACKS MUST BE CLEANED AND SEALED.

11. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

12. ANY DEVIATION OF THIS STANDARD PLAN, SHALL REQUIRE APPROVAL AND DIRECTION BY THE CITY ENGINEER OR THEIR DESIGNEE(S).
Section II

Sewer and Sanitation
NOTES:
1. MANHOLE SHALL BE CONSTRUCTED USING PRE-CAST CONCRETE BARRELS, CONES (CONCENTRIC OR ECCENTRIC), AND PRE-CAST CONCRETE GRADE RINGS.
2. PRECAST UNITS SHALL BE ASSEMBLED USING CLASS "B" MORTAR.
3. THE DEPTH OF THE CHANNEL SHALL BE THE FULL DIAMETER OF THE PIPE.
4. IF DEPTH OF SEWER INVERT FROM THE RIM IS LESS THAN 6 FEET, THE HEIGHT OF THE MANHOLE ABOVE THE LINE L-M IS TO BE 3 FEET AND THE HEIGHT BELOW LINE L-M WILL THEN BECOME VARIABLE.
LARGE MANHOLE "B"

NOTES:
1. MANHOLE SHALL BE CONSTRUCTED USING PRE-CAST CONCRETE BARRELS, CONES (CONCENTRIC OR ECCENTRIC), AND PRE-CAST CONCRETE GRADE RINGS.
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JUNCTION CHAMBER "H"

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED  DATE  7-30-09
APPROVED  DATE  7-31-09

STANDARD DRAWING
BH 205
NOTES:

1. MANHOLE SHALL BE CONSTRUCTED USING PRE-CAST CONCRETE BARRELS, CONES (CONCENTRIC OR ECCENTRIC), AND PRE-CAST CONCRETE GRADE RINGS.

2. PRECAST UNITS SHALL BE ASSEMBLED USING CLASS "B" MORTAR.

3. THE DEPTH OF THE CHANNEL SHALL BE THE FULL DIAMETER OF THE PIPE.

4. IF DEPTH OF SEWER INVERT FROM THE RIM IS LESS THAN 6 FEET, THE HEIGHT OF THE MANHOLE ABOVE THE LINE L-M IS TO BE 3 FEET AND THE HEIGHT BELOW LINE L-M WILL THEN BECOME VARIABLE.
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1. MANHOLE SHALL BE CONSTRUCTED USING PRE-CAST CONCRETE BARRELS, CONES (CONCENTRIC OR ECCENTRIC), AND PRE-CAST CONCRETE GRADE RINGS.
2. PRECAST UNITS SHALL BE ASSEMBLED USING CLASS "B" MORTAR.
3. THE DEPTH OF THE CHANNEL SHALL BE THE FULL DIAMETER OF THE PIPE.
4. IF DEPTH OF SEWER INVERT FROM THE RIM IS LESS THAN 6 FEET, THE HEIGHT OF THE MANHOLE ABOVE THE LINE L-M IS TO BE 3 FEET AND THE HEIGHT BELOW LINE L-M WILL THEN BECOME VARIABLE.

MODIFIED JUNCTION CHAMBER "F"
INSTALLATION NOTES:
1. THE MANHOLE FRAME AND COVER SHALL BE MADE OF GRAY CAST IRON CONFORMING TO THE
2. ALL PARTS OF THE MANHOLE FRAME AND COVER EXCEPT MACHINED SURFACES SHALL BE COATED
   WITH ASPHALTUM PAINT.
3. THE MANHOLE FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE
   MARKED IN SETS BEFORE DELIVERY. THE COVER SHALL FIT THE FRAME SNUGLY BUT NOT TIGHTLY.
4. RAISED SURFACES OF LETTERS SHALL BE FLUSH WITH SURFACES OF THE RAISED BLOCK TREAD.
5. ALL RADI 1/8" UNLESS OTHERWISE SPECIFIED.
6. DRAFT TO BE 1-1/2" UNLESS OTHERWISE SPECIFIED.

NON-ROCKING MANHOLE FRAME AND COVER

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY: [Signature]
DATE: 7-30-09

APPROVED BY: [Signature]
DATE: 7-31-09

STANDARD DRAWING BH 208

SHEET 1 OF 1
INSTALLATION NOTES:


2. ALL PARTS OF THE MANHOLE FRAME AND COVER EXCEPT MACHINED SURFACES SHALL BE COATED WITH ASPHALTUM PAINT.

3. THE MANHOLE FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS BEFORE DELIVERY. THE COVER SHALL FIT THE FRAME SNUGLY BUT NOT TIGHTLY.

4. RAISED SURFACES OF LETTERS SHALL BE FLUSH WITH SURFACES OF THE RAISED BLOCK TREAD.

5. ALL RADIUS 1/8" UNLESS OTHERWISE SPECIFIED.

6. DRAFT TO BE 1-1/2" UNLESS OTHERWISE SPECIFIED.

LARGE MANHOLE FRAME AND COVER

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED BY: [Signature] DATE: 7-30-09
APPROVED BY: [Signature] DATE: 7-5-09

STANDARD DRAWING
BH 209

SHEET 1 OF 1
**CASE I**

**REINFORCED CONCRETE BEAM**

- (1) - 3/8" Ø BAR IF BEAM IS PRECAST
- 4" MAX. SPACING BETWEEN BARS
- MINIMUM BEARING = 1/2 "D" 

**CLASS 6.0-C-3000 REINFORCED CONCRETE BEAM DIMENSIONS**

<table>
<thead>
<tr>
<th>TRENCH WIDTH</th>
<th>DEPTH OF BEAM</th>
<th>BAR SIZE</th>
<th>BEAM LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>4'-0&quot; or LESS</td>
<td>8'</td>
<td>5/8&quot; Ø</td>
<td>7'-0&quot;</td>
</tr>
<tr>
<td>4'-6&quot;</td>
<td>9'</td>
<td>3/4&quot; Ø</td>
<td>7'-6&quot;</td>
</tr>
<tr>
<td>5'-0&quot;</td>
<td>9-1/2&quot;</td>
<td>3/4&quot; Ø</td>
<td>8'-0&quot;</td>
</tr>
<tr>
<td>6'-0&quot;</td>
<td>10'-1/2&quot;</td>
<td>3/4&quot; Ø</td>
<td>9'-0&quot;</td>
</tr>
<tr>
<td>7'-0&quot;</td>
<td>12&quot;</td>
<td>7/8&quot; Ø</td>
<td>10'-0&quot;</td>
</tr>
<tr>
<td>8'-0&quot;</td>
<td>13&quot;</td>
<td>7/8&quot; Ø</td>
<td>11'-0&quot;</td>
</tr>
</tbody>
</table>

1. WIDTH OF BEAMS SHALL BE NOMINAL DIAMETER OF PIPE PLUS 2".
2. REINFORCING STEEL SHALL BE PLACED 1-1/2" CLEAR FROM THE SIDE AND BOTTOM OF BEAMS.
3. IF BEAMS ARE PRECAST, 18" AT ENDS OF BEAMS SHALL BE BEDDED IN CLASS 4.5-C-2000 CONCRETE. CLASS "C" MORTAR SHALL BE PLACED BETWEEN TOP OF BEAMS AND BOTTOM OF PIPE TO GIVE BEARING.

**CASE II**

**CONCRETE SUPPORT WALL**

- 4" WEEP HOLES
- TYPE "A"
- TYPE "B"

1. SUPPORTING WALL SHALL HAVE A FIRM BEARING ON THE SUBGRADE AND AGAINST THE SIDES OF THE EXCAVATION.
2. WALL SHALL BE AT LEAST 2" FREE AND CLEAR OF ANY GAS OR WATER MAIN OR OTHER CONDUIT OR DUCT.
3. EITHER TYPE "A" OR "B" CROSS SECTION MAY BE USED AT THE CONTRACTORS OPTION.

**CASE III**

**CAST IRON PIPE**

- COLLAR OF CLASS "C" MORTAR
- 4" (TYP.)
- 3/8 "D"

**CLASS OF CAST IRON PIPE**

<table>
<thead>
<tr>
<th>CLASS 150 PIPE</th>
<th>CLASS 250 PIPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSIDE DIAMETER</td>
<td>6&quot;  8&quot;  10&quot;</td>
</tr>
<tr>
<td>MAXIMUM TRENCH WIDTH</td>
<td>4'-6&quot;  5'-6&quot;  7'-0&quot;</td>
</tr>
</tbody>
</table>

**CASE IV**

**SPUN REINFORCED CONCRETE PIPE**

(STORM DRAINS ONLY)

- 6" (TYP.)

1. CLASS 2000-D SPUN REINFORCED CONCRETE PIPE OF THE SAME DIAMETER AS STORM DRAIN MAY BE USED FOR STORM DRAINS ONLY WHERE WIDTH OF TRENCH IS 5'-0" OR LESS.
2. BEARING OF THE PIPE ENDS AND JOINT CLOSURE SHALL BE THE SAME AS FOR CASE III.

---

**PIPE SUPPORTS ACROSS TRENCHES**

**CITY OF BEVERLY HILLS, CALIFORNIA**

**DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION**

**CIVIL ENGINEERING DIVISION**

**RECOMMENDED**

**APPROVED**

**STANDARD DRAWING**

**BH 210**
CASE I
Clay and Concrete Pipe

CASE III
Reinforced Concrete Pipe

CASE V
Clay and Concrete Pipe

CASE II
Clay and Concrete Pipe

CASE IV
Reinforced Concrete Pipe

GENERAL NOTES

1. Use CASE III for RCP and CASE II for Vitrified Clay and Plain Concrete Pipe unless otherwise specified or shown on the Project Drawings.

2. Bedding "A" shall be composed of Sand, No. 3 or No. 4 Crushed Rock or Gravel, or other granular material as may be specified or otherwise approved by the Engineer. The maximum size rock or gravel shall be No. 3 for pipes 27 inches in diameter and larger, and No. 4 for pipes smaller than 27 inches in diameter. Bedding "B" shall be composed of sand or other granular material as may be specified or otherwise approved by the Engineer and shall be completed prior to placing balance of backfill.

3. Concrete encasement, where called for on the Project Drawings, shall be Class 4.5-C-1800 concrete poured from a minimum of 6" below bottom of pipe to a minimum of 6" above top of pipe.

PIECE BEDDING IN TRENCHES

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED
APPROVED
SIGNATURES
DATE
7-30-09
7-31-09

STANDARD DRAWING
BH 211
SHEET 1 OF 1
Standard Drawing BH 212 Sewer & Water Main Parallel Separation <10’ is currently being updated. Updated version to be posted soon.

Thank you for your patience.
NOTES:

1. EXTEND BOTH ENDS OF CRADLE OR ENCASEMENT TO A POINT 1" SHORT OF FIRST PIPE
   JOINT BEYOND LOCATIONS SPECIFIED ON PLANS.

   ![Plan View Diagram]

2. APPLY FORM OIL, THIN PLASTIC SHEET, OR OTHER ACCEPTABLE MATERIAL TO PIPE, TO
   PREVENT BOND BETWEEN PIPE AND CONCRETE.

3. USE CLASS 420-C:2000 CONCRETE FOR ALL CASES.

4. CONDITIONS OF REQUIRED USE:
   a. CASE I - CONCRETE CRADLE
      1. WHEN OVERBURDEN DEPTH IS GREATER THAN 20'.
      2. AS A SUPPORT WHEN CROSSING OVER A STRUCTURE WITH A CLEARANCE
         LESS THAN 1.5' AND GREATER THAN 0.5'.
      3. WHEN WITHIN A 45° ANGLE DOWNWARD FROM THE BOTTOM OF A FOOTING.
   b. CASE II - CONCRETE ENCASEMENT
      1. WHEN CROSSING UNDER A STRUCTURE WITH A CLEARANCE LESS THAN 1.5'
         AND GREATER THAN 0.5'.
      2. WHEN COVER DIRT IS LESS THAN 4'.
      3. WHEN LESS THAN 3' FROM A POWER POLE.
   c. CASE III - SPECIAL CRADLE
      1. AS A SUPPORT WHEN CROSSING OVER A TRENCH GREATER THAN 4' IN WIDTH,
         SEE APWA STANDARD PLAN 224.
   d. CASE IV - SPECIAL ENCASEMENT
      1. WHEN CROSSING UNDER A STRUCTURE WITH A WIDTH GREATER THAN 5' AND
         A CLEARANCE LESS THAN 1.5' AND GREATER THAN 0.5'.
      2. WHEN WITHIN 10' OF A PRESSURIZED WATER MAIN, OR WITHIN 25' OF A
         GRAVITY FLOW WATER MAIN.

CRADLING AND ENCASEMENT

<table>
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<tr>
<th>REVISIONS</th>
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<td>MARK</td>
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</table>

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED: [Signature]
DATE: 11-18-09

APPROVED: [Signature]
DATE: 11-18-10

STANDARD DRAWING
BH 213

SHEET 2 OF 2
ADDITIONAL NOTES:

1. MATERIALS SHALL BE SELECTED FROM THE CITY OF BEVERLY HILLS APPROVED MATERIALS LIST.
2. IN NO CASE SHALL CONNECTION BE MADE DIRECTLY ON TOP OF SEWER MAIN.
3. NO MORE THAN ONE CUT-IN LATERAL CONNECTION WILL BE ALLOWED FOR EACH LENGTH OF VCP SEWER MAIN.
4. LINING SHALL BE CORED THE EXACT DIAMETER OF THE LATERAL.
5. LATERAL SHALL BE FLUSH WITH THE LINING MATERIAL AND SHALL NOT PROTRUDE WITHIN THE LINING.

LATERAL CONNECT TO LINED SEWER MAIN
Section III

Flood Control and Storm Drain Facilities

(RESERVED)
Section IV

Street Lighting and Traffic Signals
NOTES:
1. THREE TURNS OF DETECTA-DUCT OR TYPE 2 LOOP WIRE STACKED ONE WIRE ON TOP OF ANOTHER. A PRE-WOUND LOOP WIRE SHALL BE USED IN SLOTS GREATER THAN 1/4" IN WIDTH.
2. LOOP DETECTOR LEAD-IN CABLE EXTENDING FROM THE PULL BOX ADJACENT TO THE LOOP TO THE FIELD TERMINAL IN THE CONTROLLER CABINET SHALL BE TWO, THREE, OR FOUR PAIR #18 AWG INDIVIDUALLY TWISTED, INDIVIDUALLY SHIELDED, FILLED (WATER BLOCKED) CABLE. EACH CABLE SHALL BE IDENTIFIED BY THE INSTALLATION OF A RIGID PLASTIC TAG HELD IN PLACE WITH TWO NYLON TIES.
3. STUB OUT SHALL BE LOCATED AT THE EDGE OF GUTTER IN PAVEMENT, 4" BELOW FINISHED SURFACE OR INSTALL DETECTOR HANDHOLE (CITY OF BH, STANDARD DRAWING BH 402) AS DIRECTED BY CITY ENGINEER.
4. IF THE "STUB OUT" EXCAVATION AREA FOR LOOP HOMERUNS IS GREATER THAN 6" IN DIAMETER, BACKFILL WITH ASPHALT CONCRETE. IF EXCAVATION AREA IS LESS THAN OR EQUAL TO 6" IN DIAMETER, SEAL AREA WITH HOT RUBBERIZED ASPHALT SEALANT.
5. FILL SLOT WITH HOT MELT RUBBERIZED ASPHALT SEALANT IN ACCORDANCE WITH SECTION 86-5.01A OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS. POUR POTS ARE NOT ACCEPTABLE TO APPLY SEALANT.
6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
NOTES:
1. THREE TURNS OF DETECTA-DUCT OR TYPE 2 LOOP WIRE STACKED ONE WIRE ON TOP OF ANOTHER. A PRE-WOUNDED LOOP WIRE SHALL BE USED IN SLOTS GREATER THAN 1/4" IN WIDTH.
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4. IF THE "STUB OUT" EXCAVATION AREA FOR LOOP HOMERUNS IS GREATER THAN 8" IN DIAMETER, BACKFILL WITH ASPHALT CONCRETE. IF EXCAVATION AREA IS LESS THAN OR EQUAL TO 6" IN DIAMETER, SEAL AREA WITH HOT RUBBERIZED ASPHALT SEALANT.
5. FILL SLOT WITH HOT MELT RUBBERIZED ASPHALT SEALANT IN ACCORDANCE WITH SECTION 86-5.01A OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS. POUR POTS ARE NOT ACCEPTABLE TO APPLY SEALANT.
6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
7. FRONT LOOP (LOOP 1) SHALL EXTEND INTO CROSSWALK 12" WHERE APPLICABLE.
8. ROUND CORNERS OF ACUTE ANGLE SAWCUTS TO PREVENT DAMAGE TO CONDUCTORS.

BIKE LOOP DETECTOR INSTALLATION
NOTES:
1. NON-METALLIC BUSHING SHALL BE USED AT ROADWAY END OF CONDUIT.
2. TAPE WIRE 5" EACH SIDE OF ROADWAY BUSHING.
3. INSTALL DUCT SEAL COMPOUND TO EACH END OF ROADWAY CONDUIT BEFORE INSTALLING EPOXY OR OTHER APPROVED MATERIALS.
4. ROUND ALL SHARP EDGES WHERE WIRE HAS TO PASS.
5. SPLICE DETECTOR CONDUCTORS OR CABLE TO LEAD-IN CABLE FOR RUN TO CONTROLLER CABINET.
6. 2" PVC CONDUIT ENDS SEALED WITH APPROVED COMPOUND AFTER CONDUCTOR INSTALLATION.
7. EXACT LOCATION OF THE DETECTOR HANDHOLE WILL BE DETERMINED BY THE CITY ENGINEER IN THE FIELD.
8. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
LID
- FIBRELYTE LID, NON-CONCRETE
- ETCHED POLYETHYLENE FACE
- FACE ANCHORED IN CONCRETE
- ULTRA-VIOLET INHIBITOR

BOX
- CHRISTY OR EQUAL

TRAFFIC SIGNAL PULL BOX & LID

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED
APPROVED
PUBLIC WORKS DIRECTOR

STANDARD DRAWING
BH 404

MARK DATE DESCRIPTION

REVISIONS

SHEET 1 OF 1
Section V

Landscaping and Irrigation

(RESERVED)
Section VI

General Facilities
SYMMETRICAL RESIDENTIAL AND COMMERCIAL FRONTAGE

<table>
<thead>
<tr>
<th>d (IN FEET)</th>
<th>NUMBER OF SPACES</th>
</tr>
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<tbody>
<tr>
<td>0.30</td>
<td>1</td>
</tr>
<tr>
<td>30-52</td>
<td>2</td>
</tr>
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<td>52-74</td>
<td>3</td>
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<tr>
<td>74-96</td>
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<tr>
<td>96-118</td>
<td>5</td>
</tr>
<tr>
<td>118-140</td>
<td>6</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>d (IN FEET)</th>
<th>NUMBER OF SPACES</th>
</tr>
</thead>
<tbody>
<tr>
<td>140-162</td>
<td>7</td>
</tr>
<tr>
<td>162-184</td>
<td>8</td>
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<td>184-206</td>
<td>9</td>
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<tr>
<td>206-228</td>
<td>10</td>
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<tr>
<td>228-250</td>
<td>11</td>
</tr>
<tr>
<td>250-272</td>
<td>12</td>
</tr>
</tbody>
</table>

PAINTING DETAILS

PARKING SPACE MARKINGS
CROSSWALKS

LEGEND SHALL BE YELLOW (TYP.)

W63 (S1-1) AND W65 (S4-3) ± 300 FEET IN ADVANCE OF SCHOOL ZONE ONLY.

W63 W65

12" WHITE LIMIT BAR (TYP.)

NOTES:
1. ALL CROSSWALK LINES SHALL BE 12" STROKE.
2. CROSSWALK WIDTH SHALL BE EQUAL TO ADJACENT MAXIMUM SIDEWALK WIDTH, BUT NO LESS THAN 12 FEET.
3. OMIT LEGEND ON INTERSECTION APPROACHES WHEN SIGNALS, STOP OR YIELD SIGNS ARE IN PLACE.
4. REFER TO M.U.T.C.D CA SUPPLEMENT (LATEST EDITION).

SCHOOL CROSSWALKS

CROSSWALKS STRIPING

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED DATE 7-30-09
APPROVED DATE 7-31-09

STANDARD DRAWING BH 602

SHEET 1 OF 1
SECTION A-A

SECTION B-B

INSTALLATION NOTES:
1. SPEED HUMPS SHALL NOT BE PLACED OVER MANHOLES, WATERGATES, JUNCTION CHAMBERS, ETC.
2. EDGE OF SPEED HUMP SHALL BE 5 FEET MINIMUM FROM EDGE OF DRIVEWAY.
3. WHENEVER POSSIBLE SPEED HUMPS SHALL BE PLACED AT PROPERTY LINES INSTEAD OF MID-LOT.
4. WHENEVER POSSIBLE SPEED HUMPS SHALL BE PLACED ADJACENT TO STREET LIGHTS.

SPEED HUMP DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED
APPROVED

STANDARD DRAWING
BH 603

MARK DATE DESCRIPTION

REVISIONS

CITY ENGINEER
PUBLIC WORKS DIRECTOR

DATE 7-30-09
DATE 1-31-09
TEMPORARY CURB RAMP DETAIL

EARTH BEHIND CURB TO BE KEPT LEVEL, TO TOP OF RAMP AND SOLIDLY COMPACTED.

1\"x6\" PLANK ON TOP OF CURB MAY BE OMITTED FOR PNEUMATIC TIRED VEHICLES.

1\" LESS THAN CURB FACE

EXISTING CURB AND GUTTER

SECTION A-A

(2)-2\"x4\" PLANKS, SPACED AS SHOWN

(1)-2\"x4\" PLANK, BEVELED AS SHOWN

TWO RAMPS SPACED FOR VEHICLES

TEMPORARY CURB RAMP PLAN
NOT TO SCALE

TEMPORARY CURB RAMP

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED CITY ENGINEER DATE 7-30-09
APPROVED PUBLIC WORKS DIRECTOR DATE 9-31-09

STANDARD DRAWING

BH 604

SHEET 1 OF 1
SPECIFICATIONS:

ALL MONUMENT COVERS SHALL BE MADE OF CAST IRON IN ACCORDANCE WITH A.S.T.M STANDARD SPECIFICATIONS A48M-03, CLASS 30, EXCEPT THAT NO TRANSVERSE TEST WILL BE REQUIRED.

ALL MONUMENT COVERS SHALL BE MADE TO THE DIMENSIONS AS SHOWN HEREON, SHALL BE OF UNIFORM THICKNESS AND FREE FROM FLAWS OR DEFECTS. ALL LETTERING SHALL BE RADIALY PLACED, UNIFORM IN SIZE AND SHALL CONFORM TO THE DIMENSIONS AS SHOWN HEREON WITHOUT FLAWS OR IRREGULAR LETTERING.

NOTES:

1. ALL RADI TO BE 1/16" UNLESS OTHERWISE SPECIFIED.
2. ALL DRAFT TO BE 1-1/2° UNLESS OTHERWISE SPECIFIED.
SPECIFICATIONS FOR POST:

STEEL PIPE, STANDARD WEIGHT, 2" X 48" LONG, ASTM-A120-63T, NEW AND UNUSED, HOT DIPPED GALVANIZED, TOP REAMED

ADDITIONAL NOTES:

1. POST TO BE LEVEL AND STRAIGHT
2. AREA TO BE LEFT CLEAN
3. CEMENT GROUT = 1 CEMENT : 2-1/2 SAND
4. TOP OF INSTALLED METER COIN/CARD SLOT SHALL NOT EXCEED 48" ABOVE FINISHED GRADE.

PARKING METER POST INSTALLATION - CONCRETE SETTING
Section VII

Water Pipe Line Installations
WATER NOTES

GENERAL:

1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, FIRE AND POLICE DEPARTMENT AT LEAST 72 HOURS PRIOR TO SHUTTING DOWN ANY WATER MAINS, FIRE HYDRANTS OR BLOCKING ACCESS TO ANY AREA. FIRE HYDRANTS SHALL NOT BE OUT OF SERVICE FOR MORE THAN FOUR HOURS AND NONE SHALL BE OUT OF SERVICE OVERNIGHT OR DURING WEEKENDS.

2. THE CONTRACTOR SHALL FIELD VERIFY AND PROTECT ALL EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL DETERMINE THE DEPTH OF GAS, ELECTRICAL, TELEPHONE, TELEVISION, STORM DRAIN, SEWER AND WATER AT ALL INTERSECTIONS PRIOR TO CONSTRUCTION AND AS NOTED ON THE PLANS. DAMAGED UTILITIES SHALL BE REPLACED IN KIND UNDER THE SUPERVISION OF THE OWNER AT CONTRACTORS EXPENSE.

3. DUE TO INDIVIDUAL LOT IMPROVEMENTS, THE EXISTING SEWER, GAS LATERALS AND/OR ELECTRICAL UNDERGROUNDING MAY NOT BE AT LOCATIONS SHOWN OR SHOWN IN THEIR ENTIRETY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING.

4. PRIOR TO SHUT DOWN AND CUTING OF ANY EXISTING WATER MAIN, ALL EXISTING VALVES SHALL BE EXERCISED BY CITY PERSONNEL. THE CONTRACTOR SHALL NOTIFY THE CITY'S DEPARTMENT OF PUBLIC WORKS, WATER DIVISION SUPERVISORY AT 310 - 285 - 2493 A MINIMUM OF FOUR DAYS PRIOR TO COORDINATE THE SHUT DOWN OF ANY WATER MAIN.

5. FOR ALL WATER SYSTEM CONSTRUCTION, CONTRACTOR SHALL CONTACT SUPERVISING PUBLIC WORKS INSPECTOR AT 310-285-2518.

6. CONTRACTOR SHALL PROTECT IN PLACE THE EXISTING SURVEY MONUMENTS DURING WATER MAIN CONSTRUCTION. IF MONUMENTS ARE DESTROYED, THE CONTRACTOR SHALL SURVEY AND RESET RECORDED MONUMENTS.

DUCTILE IRON PIPE:

6. ALL D.I.P. WATER LINES AND FITTINGS SHALL BE CEMENT LINED, DOUBLE THICKNESS, CLASS 350 (CL 52) PRESSURE CLASS WITH POLYETHYLENE ENCASEMENT AND COMPLY WITH ANSI A21.51(AWWA C 151).

7. STATIC WATER PRESSURE IN VICINITY IS SHOWN FOR LOW AND HIGH ELEVATIONS ON THE PLANS. (REFER TO TOP OR BOTTOM OF SHEETS).

8. PIPE MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND THE MANUFACTURER'S RECOMMENDATIONS.

9. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES, EXCEPT AT POINTS OF CONNECTION TO EXISTING WATER MAINS. REFER TO STD. DWG BH-709.

10. THE CONTRACTOR MAY VARY THE GRADE IN THE ALIGNMENT OF THE WATERLINE IF FIELD CONDITIONS WARRANT WITH THE APPROVAL OF THE ENGINEER.

11. PIPE DEFLECTIONS SHALL NOT EXCEED 80% OF THE MANUFACTURER'S RECOMMENDED ALLOWABLE DEFLECTIONS FOR DUCTILE IRON PIPE AND FITTINGS INSTALLATION.


13. THE OPEN ENDS OF ALL ABANDONED WATER LINES SHALL BE PLUGGED WITH CONCRETE PER STD DWG BH 707. THE LOCATION OF THE CONCRETE PLUGS SHALL BE APPROVED BY THE CITY ENGINEER IN THE FIELD.

14. ALL EXCAVATIONS FOR THE INSTALLATION OF THE MAIN LINE PIPE AND SERVICES, INSTALLATION OF COMBINATION AIR VACUUM AND AIR RELEASE VALVES, INSTALLATION OF END OF LINE FLUSH-OUTS, AND ABANDONMENT OF EXISTING WATER MAINS SHALL BE BACKFILLED WITH A 2-SACK CEMENT SAND SLURRY MIX. SLURRY SHALL BE USED UPON WITHIN 4 INCHES BELOW THE FINISHED SURFACE.

15. ALL BACKFILL FOR THE ENTIRE PROJECT SHALL BE A 2 SACK CEMENT SLURRY MIX.

FITTINGS:

16. ALL FITTINGS AND MECHANICAL JOINTS SHALL BE DUCTILE IRON UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER. ALL RESTRAINED JOINTS AS SHOWN SHALL BE CONSTRUCTED WITH RERAINTS (MEGALUG OR FIELD-LOG GASKETS).

17. ALL DUCTILE IRON TEES AND CROSSES SHALL BE CLASS 350 FLANGE FITTINGS UNLESS OTHERWISE NOTED ON THE PLANS. ALL OTHER DUCTILE IRON FITTINGS SHALL BE CLASSED 350 WITH PUSH-ON JOINTS UNLESS OTHERWISE NOTED THE PLANS. PROVIDE FITTINGS WITH ENDS THAT ARE COMPATIBLE WITH MECHANICAL RERAINTS WHERE RESTRAINED JOINTS ARE REQUIRED.

18. ALL "STANDARD TEE" INSTALLATIONS SHALL BE PER TYPICAL STD DWG BH-704, UNLESS SHOWN OTHERWISE ON CONSTRUCTION PLANS.

19. THE CONTRACTOR SHALL FURNISH ALL FITTINGS NECESSARY FOR DEVIATION OF PIPE ALIGNMENT NOT SHOWN ON CONSTRUCTION PLANS.

VALVES:

20. ALL VALVES SHALL BE BUTTERFLY OR GATE VALVES. VALVE ASSEMBLIES SHALL BE PER TYPICAL STD DWG BH-704 & BH-706.

21. BUTTERFLY VALVES SHALL BE PLACED WITH OPERATING NUT EITHER NORTH OR WEST OF THE WATER MAIN.

22. ALL VALVES CONNECTING TO TEES, CROSSES, AND REDUCERS SHALL HAVE FLANGED OR FLANGED X PUSH-ON ENDS.

23. NO VALVE SHALL BE LOCATED WITHIN A GUTTER OR OTHER CONCRETE DRAINAGE DEVICE, ALLEY GUTTERS, DRIVEWAY AND ALLEY APPROACHES OR SIDEWALKS, UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE CITY ENGINEER.

24. THE CONTRACTOR SHALL ADJUST ALL VALVE SLEEVES TO FINISH GRADE UPON COMPLETION OF REPAVEMENT.

25. EXISTING PIPE TEES, CROSSES AND OTHER FITTINGS WHICH INTERFERE WITH THE PROPOSED WATER SYSTEM IMPROVEMENTS SHALL BE REMOVED AND DISPOSED OF PROPERLY OR SALVAGED AS DIRECTED BY THE ENGINEER.

26. EXISTING VALVES SHALL BE SALVAGED UNDER THE DIRECTION OF THE ENGINEER. VALVE CANS SHALL BE REMOVED, BACKFILLED AND PAVED OVER.
(CONTINUED) WATER NOTES

AIR VALVES AND PUMP WELLS:

27. THE CONTRACTOR SHALL CONSTRUCT A COMBINATION AIR/VAC AIR RELEASE VALVE ASSEMBLY PER STANDARD DRAWING BH-717 AT ALL HIGH POINTS IN THE ALIGNMENT, WHETHER OR NOT IT IS SHOWN ON THE DRAWINGS.

28. CONTRACTOR SHALL CONSTRUCT A BLOW-OFF ASSEMBLY PER STANDARD DRAWING BH-718 AT ALL LOW POINTS IN THE ALIGNMENT, WHETHER OR NOT IT IS SHOWN ON THE DRAWINGS.

FIRE HYDRANTS:

29. ALL FIRE HYDRANTS, VALVES AND OTHER ASSOCIATED FACILITIES SHALL BE LOCATED IN THE FIELD AS DIRECTED BY THE CITY REPRESENTATIVE. THE LOCATION SHOWN ON THE PLANS ARE APPROXIMATE.

30. REMOVAL OF THE EXISTING FIRE HYDRANTS WILL INCLUDE CUTTING THE FIRE HYDRANT BURY TWO FEET (2'-0") BELOW EXISTING GRADE AND BACKFILLING WITH CONCRETE. SALVAGED FIRE HYDRANTS SHALL BE DELIVERED TO THE CITY OF BEVERLY HILLS WATER DIVISION YARD.

31. FIRE HYDRANT INSTALLATIONS SHALL INCLUDE NEW 6-INCH LATERALS, 6" VALVES WITH 6" x 6" x 6" OR 8" x 6" x 8" TEE PER CITY STANDARD DWG. BH-720 AND BH-701.

WATER SERVICES AND METERS:

32. ALL WATER SERVICES AND FIRE LINES SHALL BE REPLACED FROM THE NEW WATER LINE UP TO THE METER PER STANDARD DRAWINGS BH-713-716, AND BH-720.

33. THE CONTRACTOR SHALL LOCATE AND FIELD VERIFY ALL WATER SERVICE CONNECTIONS AND FIRE LINE SERVICES SIZES AND LOCATIONS PRIOR TO COMMENCING WORK ON THE PROJECT.

34. THE CONTRACTOR SHALL REPLACE ALL WATER METER BOXES ALONG THE NEW WATER MAIN DURING CONSTRUCTION WITH BOXES AND COVERS AS DEFINED IN THE CONTRACT SPECIFICATIONS, AND AS APPROVED BY THE CITY ENGINEER.

POTHOLING/UTILITIES:

35. THE CONTRACTOR SHALL POTHOLE ALL TIE-IN CONNECTION LOCATIONS, PRIOR TO CONSTRUCTION TO FIELD VERIFY THE ACTUAL SIZE, DEPTH, AND ROUNDNESS OF THE EXISTING WATER SYSTEM. THE TIE-IN WILL BE APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION.

36. EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION PLANS.

37. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS A MINIMUM DISTANCE OF 200 FEET IN ADVANCE OF WATER MAIN TRENCHING TO DETERMINE THE EXACT LOCATION AND VERIFY THE MATERIAL, SIZE, DEPTH, AND ROUNDNESS OF ALL PARALLEL AND CROSSING UTILITIES WITHIN THE ALIGNMENTS OF THE NEW WATER MAIN. PIPE JOINTS SHALL BE DEFLUCTED AT A MAXIMUM OF 80% OF THE MANUFACTURER'S RECOMMENDATION TO CLEAR INTERFERENCES WITH KNOWN OBSTRUCTIONS OR OTHER UTILITIES WHICH ARE SHOWN OR NOT SHOWN ON THE PLANS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY INFORMATION GATHERED DEVIATING FROM THE PLANS SHALL BE CONVEYED TO THE CITY ENGINEER IN WRITING.

38. FAILURE TO COMPLY WITH ANY OF THE ABOVE ITEMS SHALL BE SUFFICIENT CAUSE FOR THE AGENCY TO ARRANGE FOR THE NECESSARY WORK TO BE PERFORMED BY OTHERS. ANY COSTS INCURRED TO COMPLETE THE NECESSARY WORK WILL BE CHARGED TO THE CONTRACTOR.

CONNECTIONS:

39. THE CONTRACTOR SHALL RECONNECT ALL EXISTING SERVICES INCLUDING, WATER SERVICE AND FIRE PROTECTION SERVICE CONNECTIONS FROM THE ABANDONED OR REPLACED WATER MAIN TO THE NEW WATER MAIN. THE CONTRACTOR SHALL ALSO PROVIDE ALL REQUIRED TEES, BLIND FLANGES, CAPS, FITTINGS, PIPES, AND RESTRAINED JOINT CONNECTIONS REQUIRED TO RECONNECT ALL SERVICES CONNECTIONS TO THE NEW WATER MAIN PER THE CITY OF BEVERLY HILLS STANDARDS. WATER AND FIRE SERVICE CONNECTIONS HAVE NOT BEEN SHOWN IN DETAIL FOR PLAN CLARITY.

40. AT CONNECTION POINTS, THE CONTRACTOR SHALL CUT THE EXISTING PIPE AND INSTALL FITTINGS, VALVES AND MAKE UP SPOOL PIECES AND JOIN PIPE ENDS WITH TRANSITION COUPLINGS.

41. IF ASBESTOS CEMENT PIPE (ACP) IS LOCATED, DO NOT CUT TO CONNECT. IF ACP IS INTERFERING WITH NEW WORK IDENTIFIED, NOTIFY THE CITY ENGINEER FOR MITIGATION MEASURES, BEFORE NEW WORK BEGINS.

42. CONNECTIONS OR INSTALLATION TO EXISTING WATER MAIN SHALL BE ACCORDING TO TYPICAL STANDARD DRAWINGS BH-719 - BH-722.

43. REFER TO TYPICAL INSTALLATION PIPELINE REPLACEMENT PER STANDARD DRAWING BH-722.

RESTRAINTS/THRUST BLOCKS:

44. RESTRAINING DEVICES SHALL BE INSTALLED ON BOTH SIDES OF ALL FITTINGS, VALVES, PLUGS, DEAD ENDS, AND ON ALL DIRECTION CHANGES. THE REQUIRED RESTRAINED FITTINGS SHALL BE PER STD. DWG. BH-708, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

45. THRUST BLOCKS SHALL ONLY BE INSTALLED AT LOCATIONS SPECIFICALLY APPROVED BY THE CITY ENGINEER/CITY DESIGNATED REPRESENTATIVE. WHEN APPROVED BY THE CITY ENGINEER, CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED PER THE CITY OF BEVERLY HILLS STANDARD DRAWING BH-708.

46. ALL NEW AND EXISTING WATER MAINS SHALL BE PROPERLY RESTRAINED BY THE CONTRACTOR DURING CONSTRUCTION AND HYDROSTATIC TESTING.
WATER SAMPLING STATIONS:

48. WATER SAMPLING STATIONS SHALL BE PROVIDED BY THE CITY. ALL APPURTENANCES, INCLUDING CONCRETE PAD AND SERVICE LINE TO THE STATION, SHALL BE PROVIDED BY THE CONTRACTOR. FINAL LOCATION OF THE WATER SAMPLING STATION SHALL BE FIELD APPROVED BY THE ENGINEER AND COORDINATED WITH THE CITY OF BEVERLY HILLS.

TESTING/DISINFECTION:

49. THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER THAT ALL WATER MAINS HAVE BEEN RELIEVED OF ENTRAPPED AIR BY HOLDING HYDROSTATIC PRESSURE IN PIPELINES BEING TESTED AT A MINIMUM OF 4 HOURS PER AWWA C600 OR C605.

50. ALL WATER LINE INSTALLATIONS SHALL BE FREE OF DEBRIS AND ORGANIC MATERIALS. THE PIPE SHALL BE PRESSURE AND LEAKAGE TESTED, FLUSHED AND CHLORINATED. CHLORINATING SHALL BE IN ACCORDANCE WITH THE STATE OF CALIFORNIA HEALTH DEPARTMENT, CONSISTING OF NOT LESS THAN 50 PPM INITIAL DOSAGE AND NOT LESS THAN 25 PPM RESIDUAL DOSAGE AFTER 24 HOURS. INSTALLATIONS SHALL BE FLUSHED AND A 48-HOUR BACTI TEST SHALL BE REQUIRED PRIOR TO PRESSURE TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BACTERIOLOGICAL TESTING BY A CERTIFIED LABORATORY. THE CONTRACTOR SHALL NOT HAVE CUSTODY OF THE WATER SAMPLES AT ANY TIME. ALL TESTING METHODS AND RESULTS SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER PRIOR TO CONNECTING THE NEW WATER MAIN TO THE CITY’S WATER SYSTEM.

51. ALL BACTI AND PRESSURE TESTS SHALL BE APPROVED BY THE CITY REPRESENTATIVE PRIOR TO PLACEMENT OF PERMANENT RESURFACING.

HIGH LINING (BY-PASS):

52. NOT USED.

53. BY-PASS WATER PLANS SHALL BE PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER FOR ALL WATER MAINS TO BE REMOVED AND REPLACED PER PLAN. ALL BYPASS PLANS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND COORDINATED AND APPROVED WITH THE CITY FIRE MARSHALL.

ABANDONMENT:

54. WHERE THE NEW WATER MAIN REPLACES AN EXISTING MAIN, THE EXISTING MAIN SHALL BE ABANDONED IN PLACE (UNLESS NOTED OTHERWISE), AND THE ENDS SHALL BE FILLED WITH 2 FEET MINIMUM OF SLURRY, CAPPED OR PLUGGED PROPERLY AND SECURED WITH CONCRETE PRIOR TO BACKFILLING.


56. REPLACE METER BOXES AS SHOWN PER PLAN OR DIRECTED BY THE CITY OF BEVERLY HILLS PER STANDARD DRAWINGS BH-714 THROUGH BH-716.

SEPARATIONS:

57. ALL WATER MAIN SEPARATIONS SHALL COMPLY WITH THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH GUIDANCE CRITERIA FOR THE SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES (LATEST EDITION) AND STANDARD DRAWING BH-212.

58. WHEREEVER A WATER LINE CROSSES A SEWER LINE, SEPARATION SHALL NOT BE LESS THAN 4 INCHES. WHERE THE SEPARATION IS BETWEEN 4 INCHES AND ONE FOOT, THE CONTRACTOR SHALL INSTALL THE WATER MAIN SO THAT A 20 FOOT SECTION OF PIPE IS CENTERED AT THE SEWER LINE, AND THERE SHALL NOT BE A PIPE JOINT WITHIN 8 FEET, PER STANDARD DRAWING BH-212.


60. WHERE THE NEW WATER MAIN ENCROACHES WITHIN 4 FEET OF AN EXISTING SEWER OUTER DIAMETER, SPECIAL CONSTRUCTION WILL BE REQUIRED BY CONSTRUCTING A CASING PIPE FOR THE NEW WATER MAIN PER BH-212 AND BH-735.

TRENCHING AND BACKFILLING:

61. NO MECHANICAL EQUIPMENT IS PERMITTED TO OPERATE WITHIN THREE FEET OF A GAS LINE AND ANY CLOSER WORK MUST BE DONE BY HAND.
NOTES:
1. HYDRANT OUTLETS SHALL FACE THE STREET AT 45° OR AS DIRECTED BY THE CITY ENGINEER.
2. FINAL HYDRANT LOCATION TO BE DETERMINED BY THE CITY ENGINEER.
3. CONNECTION OF THE FIRE HYDRANT TO THE WATER MAIN MAY REQUIRE FITTING AND COUPLINGS NOT SHOWN HEREON. THE CONTRACTOR SHALL PROVIDE AND INSTALL AT NO EXTRA COST.
4. BREAKAWAY BOLTS SHALL BE USED TO INSTALL THE HYDRANT HEAD ON THE BURY.
5. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH 708 OR AS DIRECTED BY THE CITY ENGINEER.
6. FIRE HYDRANTS SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS.
7. ALL HYDRANTS WATER OUTLET CAP MATERIAL SHALL BE BRONZE.
8. ALL FITTINGS USED TO CONNECT THE FIRE HYDRANT TO THE WATER MAIN SHALL BE PROPERLY RESTRAINED WITH APPROVED STANDARD METHODS OR AS DIRECTED BY THE CITY ENGINEER.
9. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED WITH TWO SACK SLURRY MIX AS DIRECTED BY THE CITY ENGINEER.
10. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH TAR BITUMASTIC ENAMEL PRIOR TO BACKFILL.
11. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.

FIRE HYDRANT ASSEMBLY (TYPICAL)
EXISTING WATER MAIN TO REMAIN IN SERVICE

REMOVE INTERFERING PORTIONS OF EXISTING PIPE, VALVES, FITTINGS, ETC. AS REQUIRED

UNDISTURBED SOIL

THRUST BLOCK

PROPOSED FIRE HYDRANT OR SERVICE LATERAL.
SEE SHEET 1 OF 2 FOR FIRE HYDRANT ASSEMBLY.

NOTES:

1. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH 708 OR AS DIRECTED BY THE CITY ENGINEER.

2. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH TAR BITUMASTIC ENAMEL PRIOR TO BACKFILL.

3. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED WITH TWO SACK SLURRY MIX AS DIRECTED BY THE CITY ENGINEER.

4. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.

FIRE HYDRANT LATERAL INSTALLATION
FIRE HYDRANT INSTALLATION
WITH WATER MAIN BEHIND CURB

NOTES:
1. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH-708 OR AS DIRECTED BY THE CITY ENGINEER.
2. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH BITUMASTIC ENAMEL PRIOR TO BACKFILL.
3. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.
JONES NO. J-3775 (6" x 4" x 4" x 2-1/2") WITH 8 BOLT HOLES EQUALLY SPACED FOR CITY OF BEVERLY HILLS.
JONES NO. J-3775 (6" x 4" x 2-1/2") WITH 8 BOLT HOLES EQUALLY SPACED FOR CITY OF WEST HOLLYWOOD, ALL BRONZE BODY.

NOTES:
1. HYDRANT OUTLETS SHALL FACE THE STREET AT 45-DEGREE OR AS DIRECTED BY THE CITY ENGINEER.
2. FINAL HYDRANT LOCATION TO BE DETERMINED BY THE CITY ENGINEER.
3. CONNECTION OF THE FIRE HYDRANT TO THE WATER MAIN MAY REQUIRE FITTINGS AND COUPLINGS NOT SHOWN HEREON. THE CONTRACTOR SHALL PROVIDE AND INSTALL AT NO EXTRA COST.
4. BREAKAWAY BOLTS SHALL BE USED TO INSTALL THE HYDRANT HEAD ON THE BURY.
5. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH-708 OR AS DIRECTED BY THE CITY REPRESENTATIVE.
6. FIRE HYDRANTS SHALL BE PAINTED SILVER FOR BEVERLY HILLS OR SAFETY YELLOW FOR WEST HOLLYWOOD.
7. ALL HYDRANTS WATER OUTLET CAP MATERIAL SHALL BE BRONZE.
8. ALL FITTINGS USED TO CONNECT THE FIRE HYDRANT TO THE WATER MAIN SHALL BE PROPERLY RESTRAINED WITH APPROVED STANDARD METHODS OR AS DIRECTED BY THE CITY ENGINEER.
9. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED WITH TWO SACK SLURRY MIX AS DIRECTED BY THE CITY ENGINEER.
10. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH BITUMASTIC ENAMEL PRIOR TO BACKFILL.
11. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.
12. ALL PIPES AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE SLEEVE.
13. ALL NUTS SHALL BE ZINC COATED.

FIRE HYDRANT INSTALLATION - HOT TAP

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED __________________________ DATE 8/21/2020
WATER RESOURCES MANAGER

APPROVED __________________________ DATE 12/04/2020
CITY ENGINEER

STANDARD DRAWING
BH-703
SHEET 1 OF 2
GATE VALVE OR BUTTERFLY VALVE PROPOSED FIRE HYDRANT OR SERVICE LATERAL. SEE STANDARD DRAWING BH-701 FOR FIRE HYDRANT ASSEMBLY. SEE STANDARD DRAWING BH-705 FOR 3" AND LARGER WATER SERVICE WITH 4" BY-PASS.

SS TAPPING SLEEVE HOT TAP SADDLE W/ SLEEVE & GATE VALVE PER SHEET 1 OF 2 GATE VALVE OR BUTTERFLY VALVE MEGALUG RETAINER GLAND

EXISTING DI WATER MAIN TO REMAIN IN SERVICE UNDISTURBED SOIL THRUST BLOCK

NOTES:
1. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH-708 OR AS DIRECTED BY THE CITY ENGINEER.
2. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH TAR BITUMASTIC ENAMEL PRIOR TO BACKFILL.
3. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED WITH ONE SACK SAND SLURRY MIX AS DIRECTED BY THE CITY ENGINEER.
4. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.
5. ALL PIPES AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE SLEEVE.

HYDRANT LATERAL - HOT TAP

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
APPROVED DATE 12/04/2020

STANDARD DRAWING BH-703 SHEET 2 OF 2
NOTES:
1. THRUST BLOCKS PER STANDARD DRAWING NUMBER BH-708 ARE REQUIRED AT ALL PLUGS, TEES, AND ENDS, OR AS DIRECTED BY THE CITY ENGINEER.
2. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH BITUMASTIC ENAMEL PRIOR TO BACKFILL.
3. ALL PERMANENT PLUGS OR CAPS, PER STANDARD DRAWING NO. BH-707, SHALL BE CAPABLE OF WITHSTANDING A 200 PSI TEST PRESSURE.
4. FINAL FIRE HYDRANT LOCATION TO BE DETERMINED BY THE CITY ENGINEER.
5. REMOVE EXISTING TEE, VALVE, LATERAL, AND FIRE HYDRANT ASSEMBLY IF LOCATION REMAINS THE SAME.
6. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED WITH TWO SACK SAND SLURRY MIX AS DIRECTED BY THE CITY ENGINEER.
7. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.
8. WHEN USING STANDARD PUSH-ON TEES, REGARDLESS OF SIZE, USE FIELD LOCK GASKETS PER CONTRACT SPECIFICATIONS. FOR ALL STANDARD FLANGE TEES, USE ONLY MEGALUG MECHANICAL JOINT RESTRAINTS APPROVED BY THE CITY REPRESENTATIVE.

UPGRADED HYDRANT LATERAL & STANDARD TEE

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/20/2020
APPROVED DATE 12/04/2020

STANDARD DRAWING
BH-704
SHEET 1 OF 1
NOTE:
FOR WATER VAULT BOX AND LID, SEE STD. DWG. BH-710.

12" DEEP 3/4" GRAVEL BASE
COMPACTED TO 90% R.D.

3" & LARGER WATER SERVICE WITH 4" BY-PASS
CONSTRUCTION NOTES:

1. D.I. PIPE TO MATCH METER SIZE (4” MIN.)
2. 4” X 3” D.I. REDUCER (FOR 3” SERVICE ONLY).
3. METER SIZE D.I. FLANGED TEE 4” MIN.
4. 4” D.I. FLANGED GATE VALVE WITH HAND WHEEL.
5. METER (GALLONS). METER TYPE AND BRAND TO BE DETERMINED BY THE CITY ENGINEER.
6. METER SIZE D.I. SPOOL PIPE, PE X PE 3” MIN.
7. 4” FLG x MJ ADAPTOR.
8. 4” DIP FLANGED 90-DEGREE BEND.
9. STAINLESS STEEL TAPPING SLEEVE AND VALVE PER BH-703, MAIN SIZE 4” MIN.
10. MEGALUG RETAINER GLAND 4” MIN.
11. METER SIZE MEGALUG RETAINER GLAND.
12. METER SIZE D.I. FLANGED COUPLING ADAPTER.
13. 2” MUELLER MODEL CORPORATION STOP (MODEL NO. B-20046, MIP x FIP).

3" & LARGER WATER SERVICE WITH 4" BY-PASS
VALVE TYPE: | PAINT COLOR: (VALVE LOCATED IN IN BEVERLY HILLS) | PAINT COLOR: (VALVE LOCATED IN IN W. HOLLYWOOD)
---|---|---
WATER MAIN ISOLATION VALVE | YELLOW | YELLOW
FIRE HYDRANT BRANCH VALVE | SILVER | YELLOW
ZONE VALVE | RED | YELLOW

NOTES:
1. VALVE OPERATORS SHALL BE A NON-TRAVELING NUT TYPE AND HAVE 2-INCH OPERATING NUTS.
2. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.
HUB-END OR RING-TITE FITTING OR VALVE

FLANGED FITTING OR VALVE

DUCTILE OR CAST IRON MAIN

STEEL MAIN

NOTES:
1. CONCRETE SHALL BE 3000 P.S.I.
2. POUR CONCRETE THRUST BLOCKS AGAINST UNDISTURBED SOIL.
3. REMOVE INTERFERING PORTIONS OF MAIN TO BE ABANDONED.
4. USE STEEL ANCHOR RODS OR STRAPS ONLY WHERE PERMITTED BY THE ENGINEER.
5. USE BRACE PIPE CLAMP ONLY WHERE PERMITTED BY THE ENGINEER.
6. SEE BH-708 FOR THRUST BLOCK DIMENSIONS.

TYPICAL CAPS AND PLUGS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
APPROVED DATE 12/04/2020

STANDARD DRAWING BH-707
SHEET 1 OF 1
NOTE:
DIMENSIONS SHOWN REFER TO THRUST BLOCK TYPES SHOWN IN DETAIL AND ARE MINIMUM VALUES ONLY.

ALL THRUST BLOCKS SHALL BE POURED SOLIDLY AGAINST FIRM, UNDISTURBED SOIL.

### CONCRETE THRUST BLOCK SCHEDULE

#### NOTES:
1. THRUST BLOCK SIZES ARE BASED ON A BEARING CAPACITY OF 1500 P.S.F., WITH A MINIMUM SOIL COVER OF 3'-0". IF SOIL COVER IS LESS THAN 3'-0", MULTIPLY BEARING AREA BY A FACTOR OF 1.5 FOR SOIL COVER OF 2'-0" TO 3'-0", OR BY A FACTOR OF 3 FOR SOIL COVER OF 1'-0" TO 2'-0".
2. DIMENSIONS SHOWN REFER TO THRUST BLOCK TYPES SHOWN IN DETAIL AND ARE MINIMUM VALUES ONLY.
3. CONCRETE MIX SHALL BE IN ACCORDANCE WITH SPECIFICATIONS FOR 3000 LBS. STRENGTH AT 28 DAYS WHEN TESTED IS ACCORDANCE WITH ASTM 039.
4. ALL THRUST BLOCKS SHALL BE POURED SOLIDLY AGAINST FIRM, UNDISTURBED SOIL.
5. IF SOILS HAVE BEEN PREVIOUSLY EXCAVATED AND BACKFILLED, CONTRACTOR SHALL NOTIFY THE CITY ENGINEER, WHO MAY DIRECT THAT THE DIMENSIONS SHOWN SHALL BE INCREASED BY A FACTOR OF 1.5.
6. CONCRETE POURED AGAINST PIPE FITTINGS SHALL NOT EXTEND BEYOND THE FITTING JOINTS WITHOUT THE APPROVAL OF THE CITY ENGINEER.
7. THRUST REACTION BACKING TYPE (SEE DRAWING) SHALL BE AS DIRECTED BY THE CITY ENGINEER.

### CONCRETE THRUST BLOCKS

<table>
<thead>
<tr>
<th>NOMINAL PIPE SIZE (INCHES)</th>
<th>TEST PRESSURE (P.S.I.)</th>
<th>DEAD ENDS AND TEES</th>
<th>BENDS LESS THAN OR EQUAL TO ANGLE:</th>
<th>ALL BENDS</th>
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<td>22 - 1/2&quot;</td>
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<tr>
<td></td>
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<td>A</td>
<td>B</td>
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<td>2'-6&quot;</td>
<td>1'-6&quot;</td>
<td>6&quot;</td>
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<td>200</td>
<td>7'-6&quot;</td>
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<td>1'-0&quot;</td>
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<tr>
<td></td>
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<td>200</td>
<td>1'-6&quot;</td>
<td>3'-0&quot;</td>
<td>1'-0&quot;</td>
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<tr>
<td>8</td>
<td>200</td>
<td>2'-0&quot;</td>
<td>4'-0&quot;</td>
<td>1'-0&quot;</td>
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<tr>
<td>10</td>
<td>200</td>
<td>2'-0&quot;</td>
<td>4'-6&quot;</td>
<td>1'-0&quot;</td>
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<tr>
<td>12</td>
<td>200</td>
<td>2'-6&quot;</td>
<td>5'-0&quot;</td>
<td>1'-0&quot;</td>
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<th>NOMINAL PIPE SIZE (INCHES)</th>
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<th>DEAD ENDS AND TEES</th>
<th>BENDS LESS THAN OR EQUAL TO ANGLE:</th>
<th>ALL BENDS</th>
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<td>4'-0&quot;</td>
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<tr>
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<td>200</td>
<td>2'-0&quot;</td>
<td>4'-6&quot;</td>
<td>1'-0&quot;</td>
</tr>
<tr>
<td>12</td>
<td>200</td>
<td>2'-6&quot;</td>
<td>5'-0&quot;</td>
<td>1'-0&quot;</td>
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</table>
3/4" ANCHOR ROD / FIELD LOCK GASKET

FOR AREA ON SIDE FACES, USE VALVES REQUIRED FOR TEES

NOTES:
1. CONCRETE FOR THRUST BLOCK TO BE 3000 P.S.I.
2. MINIMUM RESTRAINED JOINT LENGTH OF 40 FEET EACH WAY WITH FIELD LOCK GASKET AND RODS.

CONCRETE THRUST BLOCKS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED _______ DATE 8/21/2020
WATER RESOURCES MANAGER

APPROVED _______ DATE 12/04/2020
CITY ENGINEER

BH-708
SHEET 2 OF 4
TYPE I

TYPE II

TYPE III

TYPE IV

NOTES:

1. SEE STANDARD DRAWING NO. BH-708, SHT. 1 FOR THRUST BLOCK SCHEDULE AND NOTES.

2. MINIMUM RESTRAINED JOINT LENGTH OF 40 FEET. EACH WAY WITH FIELD LOCK GASKET AND RODS.

SECTION B

CONCRETE THRUST BLOCKS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED ____________________________ DATE 8/21/2020
WATER RESOURCES MANAGER

APPROVED ____________________________ DATE 12/04/2020
CITY ENGINEER

STANDARD DRAWING

BH-708

SHEET 3 OF 4
**CONCRETE THRUST BLOCKS**

**TYPE V**

MAKE BLOCK FULL WIDTH OF TRENCH

**SECTION L**

TYPE VI

#5 REBAR @ O.D. OF PIPE, TOP AND BOTTOM

6" (TYP.)

12" (TYP.)

**SECTION P**

TYPE VII

#5 @ 12" O.C. MAX.

MIN. 2 REQUIRED, TOP AND BOTTOM EACH SIDE

3/4" ANCHOR ROD / FIELD LOCK GASKET

3" (TYP.)

6" (TYP.)

12" (TYP.)

W 14 x 13

B/2

B/2

B/2

B/2

WRAP WITH PLASTIC LINER TO PREVENT CORROSION

NOTES:

1. SEE STANDARD DRAWING NO. BH-708, SHT. 1 FOR THRUST BLOCK SCHEDULE AND NOTES.
2. MINIMUM RESTRAINED JOINT LENGTH OF 40 FEET. EACH WAY WITH FIELD LOCK GASKET AND RODS.
NOTES:
1. WHEN TRENCH WORK CANNOT BE COMPLETED WITHIN THE SAME WORKING DAY, SEE BEVERLY HILLS STANDARD DRAWING BH-113 FOR STEEL PLATE PLACEMENT.

2. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
No. 100-T TOP SECTION
WT. 325 LBS.

No. 100 EXTENSION SECTION
WT. 325 LBS.

No. 100 LOWER SECTION
WT. 1200 LBS.

W-100 SERIES
2'-0" x 3'-0" UTILITY BOX WITH 4" WALLS

MINIMUM EXCAVATION SIZE:
3'-2" x 4'-2" x DEPTH REQUIRED.
BILL OF MATERIALS

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>CNT.</th>
<th>DESCRIPTION</th>
<th>WT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>5/16&quot; x 27 1/2&quot; OVAL PLATE x 30 1/2&quot; @ 13.81 lb/ft² (SEE DETAIL)</td>
<td>103 lbs</td>
</tr>
<tr>
<td>B</td>
<td>2</td>
<td>1 1/2&quot; x 1 1/2&quot; x 1/4&quot; BENT PLATE x 30-1/2&quot; @ 2.401 lb/ft² (SEE DETAIL &quot;B&quot;)</td>
<td>15 lbs</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>1 1/2&quot; x 1 1/2&quot; x 1/4&quot; BENT PLATE x 23 3/8&quot; @ 2.401 lb/ft² (SEE DETAIL &quot;C&quot;)</td>
<td>9 lbs</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
<td>2 1/4&quot; x 2 1/4&quot; x 1/4&quot; ANGLE x 35 3/8&quot; @ 3.820 lb/ft²</td>
<td>28 lbs</td>
</tr>
<tr>
<td>E</td>
<td>4</td>
<td>1/4&quot; x 1 1/4&quot; FLAT BAR x 3&quot; @ 1.468 lb/ft²</td>
<td>1 lb</td>
</tr>
<tr>
<td>F</td>
<td>4</td>
<td>1&quot; x 1 1/4&quot; x 3/4&quot; ANGLE x 13 1/2&quot; @ 1.16 lb/ft² (SEE DETAIL)</td>
<td>8 lbs</td>
</tr>
<tr>
<td>G</td>
<td>4</td>
<td>1/4&quot; x 1 1/2&quot; x 6-3/8&quot; @ 1.28 lb/ft²</td>
<td>20 lbs</td>
</tr>
<tr>
<td>H</td>
<td>2</td>
<td>1/4&quot; x 1 1/2&quot; FLAT BAR x 35 3/8&quot; @ 1.28 lb/ft² (SEE DETAIL)</td>
<td>10 lbs</td>
</tr>
<tr>
<td>J</td>
<td>2</td>
<td>2 1/2&quot; x 1 1/2&quot; x 3/4&quot; BENT PLATE x 5&quot; @ 2.44 lb/ft²</td>
<td>2 lbs</td>
</tr>
<tr>
<td>K</td>
<td>4</td>
<td>3/8-16 NUTS WELDED IN PLACE</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>2</td>
<td>READING LID (PROVIDED BY CUSTOMER)</td>
<td></td>
</tr>
</tbody>
</table>

NOTES:
1. TOTAL WEIGHT OF COVER IS 150 lbs.
2. REFERENCE DRAWING SD-400-092-596 FOR FRAME.
3. COVER MAKING PER CUSTOMERS SPECS.
4. COVER DESIGNED PER CALCULATION NO. 502938.
5. STRUCTURAL ANGLE CAN BE USED IN LIEU OF BENT PLATES OR BENT PLATES IN LIEU OF ANGLES.

TOLERANCES:
1. ALL LINEAR DIMENSIONS ARE ± 1/8".
2. ITEM "A" WIL BE SQUARE TO WITHIN 1/8" DIFFERENCE IN DIAGNOL MEASURE.

100 SERIES 4" & 6" FIRE SERVICE LID

REVISIONS

MARK  DATE  DESCRIPTION

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
WATER RESOURCES MANAGER

APPROVED DATE 12/04/2020
CITY ENGINEER

STANDARD DRAWING
BH-710

SHEET 2 OF 16
100 SERIES - 4" & 6" FIRE SERVICE LID

BILL OF MATERIALS

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
<th>WT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>5/16&quot; x 27 1/2&quot; DIAMOND PLATE x 39 1/2&quot; @ 13.81 lb/ft²</td>
<td>103 lbs</td>
</tr>
</tbody>
</table>

PLAN VIEW

SLOT DETAIL (4 PLAACES) 1 1 3/4" 1"

CUTOUT TYP 2 PLACES

1" DIAL LIFT HOLE 2-REQD.

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

WATER RESOURCES MANAGER
CITY OF BEVERLY HILLS, CALIFORNIA

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
WATER RESOURCES MANAGER

APPROVED DATE 12/04/2020
CITY ENGINEER

STANDARD DRAWING BH-710

REVISIONS

MARK DATE DESCRIPTION

100 SERIES - 4" & 6" FIRE SERVICE LID

SHET 3 OF 16
W-200 SERIES
2'-6" x 4'-0" UTILITY BOX WITH 4" WALLS

MINIMUM EXCAVATION SIZE:
3'-8" x 5'-2" x DEPTH REQUIRED.

200 SERIES METER BOX - 4" & 6" DOMESTIC SERVICE
200 SERIES - 4" & 6" DOMESTIC SERVICE LID

BILL OF MATERIALS

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>CNT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>5/16&quot; x DIAMOND PLATE 33 1/2&quot; x 31 1/2&quot; @ 15.0 lb/ft² (SEE BELOW)</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
<td>4&quot; x 3&quot; x 3/8&quot; ANGLE 29 3/8&quot; x 6.5 lb/ft</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td>1 1/2&quot; x 1 1/2&quot; x 1/2&quot; HOLLOW PLATE 80 1/2&quot; @ 224 lb/ft³ (SEE DETAIL)</td>
</tr>
<tr>
<td>D</td>
<td>2</td>
<td>1 1/2&quot; x 1 1/2&quot; x 1/2&quot; HOLLOW PLATE 80 1/2&quot; @ 224 lb/ft³ (SEE DETAIL)</td>
</tr>
<tr>
<td>E</td>
<td>6</td>
<td>1/4&quot; x 1/8&quot; FRAMING x 3&quot; @ 1.10 lb/ft</td>
</tr>
<tr>
<td>F</td>
<td>1</td>
<td>1/4&quot; x 4&quot; x 20-3/8&quot; RIB @ 330 lb/ft</td>
</tr>
<tr>
<td>G</td>
<td>4</td>
<td>1/4&quot; x 1 1/2&quot; x 6-3/8&quot; HOLE @ 1.90 lb/ft</td>
</tr>
<tr>
<td>H</td>
<td>2</td>
<td>1/4&quot; x 1 1/2&quot; PLATE 16 1/2&quot; @ 1.06 lb/ft³ (SEE DETAIL)</td>
</tr>
<tr>
<td>J</td>
<td>3</td>
<td>1 1/2&quot; x 2 1/2&quot; x 1/4&quot; HOLLOW PLATE 5&quot; @ 3.10 lb/ft</td>
</tr>
<tr>
<td>K</td>
<td>4</td>
<td>1&quot; x 1 1/2&quot; x 3/8&quot; ANGLE 13 1/2&quot; @ 1.10 lb/ft³ (SEE DETAIL)</td>
</tr>
<tr>
<td>L</td>
<td>4</td>
<td>3/8-16 HSS NUTS WELDED IN PLACE</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

NOTES:
1. COVER DESIGN PER STRUCTURAL CALC. #31/40.
2. TOTAL WEIGHT OF COVER IS 325 LB.
3. REFER TO DRAWING 200-14 For Frame.
4. COVER WELDING PER CUSTOMER SPEC.
5. STRUCTURAL ANGLE CAN BE USED IN LIEU OF HOLLOW PLATE.

TOLERANCES:
1. ALL LINEAR DIMENSIONS ARE 1/32" C.
2. "A" TO BE SQUARE TO WITHIN 1/8" DIFFERENCE IN DIAGONAL MEASURE.

200 SERIES - 4" & 6" DOMESTIC SERVICE LID

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
APPROVED DATE 12/04/2020

STANDARD DRAWING BH-710
SHEET 5 OF 16
### WATER METER BOX LID 1" AND 1 1/2" SERVICE

**Revisions**

<table>
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<th>MARK</th>
<th>DATE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>

**City of Beverly Hills, California**

Department of Public Works
Engineering Division

**Recommended**

DATE: 8/21/2020

**Approved**

DATE: 12/04/2020
No. 65 MB - BODY
WT. 159 lbs.

No. 65 MB - EXTENSION
WT. 159 lbs.

*NON-TRAFFIC RATED
WATER METER LID - 1 1/2" & 2" SERVICE

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
APPROVED DATE 12/04/2020

STANDARD DRAWING
BH-710
SHEET 10 OF 16
TRAFFIC BOX
REINFORCED CONCRETE
H-20 LOADING
166 lbs.

EXTENSION
REINFORCED CONCRETE
H-20 LOADING
163 lbs.
(AS REQUIRED IN FIELD)

NOTES:

1. FOLLOW CALTRANS No. 5T STATE
   SPECIFICATIONS.
   *TRAFFIC RATED

13" x 24" WATER METER BOX - H/20 LOADING
13" x 24" METER BOX LID - H/20 LOADING

MATERIALS
1 - 1/2" DIAMOND CHECKER PLATE
2 - 1/4" x 1-1/2" STEEL FLAT STOCK
3 - 3/4" x 1/2" STEEL FLAT STOCK
4 - 3/8" - 16 STEEL NUT
5 - 3/16" THICK WASHER TO BE WELDED PER ASTM A-706
6 - SURFACE AROUND WELD TO BE FLAT
7 - USE BH-710 SHT 15 OR 16 FOR INSTALLATION

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
APPROVED DATE 12/04/2020

STANDARD DRAWING BH 710
SHEET 12 OF 16
BOX
REINFORCED CONCRETE
H-20 LOADING
268 lbs.

EXTENSION
REINFORCED CONCRETE
H-20 LOADING
250 lbs.
(AS REQUIRED IN FIELD)

NOTES:
1. FOLLOW CALTRANS No. 6T STATE SPECIFICATIONS.
   *TRAFFIC RATED

17" x 30" WATER METER BOX - H/20 LOADING
17" x 30" METER BOX LID - H/20 LOADING

MATERIALS
1. - 1/2" DIAMOND CHECKER PLATE
2. - 1/4" x 1-1/2" STEEL FLAT STOCK
3. - 3/4" x 1/2" STEEL FLAT STOCK
4. - 3/8" - 16 STEEL NUT
5. - 3/16" THICK WASHER TO BE WELDED PER ASTM A-706
6. - SURFACE AROUND WELD TO BE FLAT
7. - USE BH 710 SHT. 15 OR 16 FOR INSTALLATION
7 X 13 X 1 POLYMER CONCRETE LID

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

ALCLAIRA STAR
UNIT LOCATION
(UNIT NOT SUPPLIED)

WATER METER
NON SKID SURFACE

PILOT HOLE (2X)
ON BACK OF COVER

BOTTOM VIEW

END VIEW

PLAN VIEW

BOLTDOWN (2X)
1"Ø X 9/16" RECESS
W/ 1/2"Ø HOLE

CUSTOMER LOGO

BOLTDOWN (2X)
POLYMER CONCRETE COVER

9/16"

1’nø

1/2"ø

APPROX. WT. = 7 LBS.
SECTION A-A

7 X 13 WITH ACLARA WITH AMR PROVISION

CITY OF BEVERLY HILLS, CALIFORNIA

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

STANDARD DRAWING

BH-710

RECOMMENDED  DATE  8/21/2020
WATER RESOURCES MANAGER

APPROVED  DATE  12/04/2020
CITY ENGINEER

SHEET 16 OF 16
<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>'A'</th>
<th>'B'</th>
<th>'C'</th>
<th>'D' MINIMUM</th>
<th>'D' MAXIMUM</th>
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<td>8</td>
<td>11-1/2</td>
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<td>9</td>
<td>8-1/2</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>** 2-1/2</td>
<td>9</td>
<td>10-1/4</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>** 2-1/2</td>
<td>9</td>
<td>11-5/8</td>
<td>15-1/4</td>
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<tr>
<td>8</td>
<td>3</td>
<td>** 2-1/2</td>
<td>9</td>
<td>13-5/8</td>
<td>16-1/2</td>
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<td>3</td>
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<td>18-7/8</td>
<td>20-3/4</td>
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<tr>
<td>16</td>
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<td>10</td>
<td>19-7/8</td>
<td>22-1/4</td>
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<tr>
<td>18</td>
<td>6</td>
<td>3-1/2</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
</tbody>
</table>

* DENOTES REFERENCE TO MANUFACTURER
EXISTING PAVEMENT GRAVEL BOTTOM SHORT SERVICE RISER TO BE 1" COPPER TUBING TYPE K 1" CORPORATION STOP, MUELLER 1" DOUBLE STRAP BRONZE SADDLE MUELLER BR2B SERIES NEW DIP WATERLINE PER PLAN *METER TRANSMITTING UNIT ELEVATION NTS SHORT SERVICE TRAFFIC RATED

1" AND 1 1/2" WATER SERVICE CONNECTION SHORT TR

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
WATER RESOURCES MANAGER
APPROVED DATE 12/04/2020
CITY ENGINEER

STANDARD DRAWING BH-713 SHEET 1 OF 2
NOTES: FOR SHORT/LONG SERVICES

1. MATERIALS AND INSTALLATION SHALL CONFORM WITH THE APPLICABLE SECTIONS OF THE CITY OF BEVERLY HILLS, SPECIFICATIONS FOR DOMESTIC WATER SYSTEMS.
2. NEW SERVICES WILL NOT BE SPLICED WHEN DAMAGED, SERVICES WILL BE RENEWED.
3. EXISTING OR DAMAGED METER BOXES SHALL BE REPLACED PER CITY STANDARD DRAWING NO. BH-710 SHEET 11 AS DIRECTED BY CITY'S FIELD REPRESENTATIVE. INSTALLATION OF NEW METER BOX SHALL INCLUDE A 6" WIDE CONCRETE COLLAR AROUND THE METER BOX (SEE DETAIL "A"). ALL ASPHALT REPLACEMENT SHALL BE NEATLY SAWCUT.

1" AND 1 1/2" WATER SERVICE CONNECTION LONG TR

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

CITY OF BEVERLY HILLS, CALIFORNIA

STANDARD DRAWING
BH-713

RECOMMENDED
WATER RESOURCES MANAGER
Dated 8/21/2020

APPROVED
CITY ENGINEER
Dated 12/04/2020
SINGLE SERVICE PLAN

45°

NTS

GRAVEL BOTTOM

SHORT SERVICE

RISER TO BE 1" COPPER TUBING, TYPE K

1" CORPORATION STOP, MUELLER

1" DOUBLE STRAP BRONZE SADDLE MUELLER BR2B SERIES

INSTALL 1" MUELLER COPPER FITTING

1" ANGLE METER STOP WITH LOCK WING MUELLER

EXISTING METER BOX TO BE PROTECTED IN PLACE OR REPLACED IN KIND USE BH-710 SHT 7. (TYPICAL FOR ALL SERVICES)

4" CONCRETE SIDEWALK OR GRASS PARKWAY

1' TO 3' AND VAR. (SEE PLANS)

NEW DIP WATERLINE PER PLAN

POINT OF CONNECTION, JOIN CUSTOMER SERVICE AS REQUIRED

GRAVEL BOTTOM

REMOVE EXISTING WATER METER AND INSTALL NEW NEPTUNE T-10 METER

RISER TO BE 1" COPPER TUBING, TYPE K

1" CORPORATION STOP, MUELLER

ELEVATION

SHORT SERVICE

NON-TRAffic RATED

1" AND 1 1/2" WATER SERVICE CONNECTION SHORT

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
WATER RESOURCES MANAGER
APPROVED DATE 12/04/2020
CITY ENGINEER

STANDARD DRAWING BH-714

REVISIONS

MARK
DATE
DESCRIPTION

WATER RESOURCES MANAGER
CITY ENGINEER
NOTES: FOR SHORT/LONG SERVICE

1. MATERIALS AND INSTALLATION SHALL CONFORM WITH THE APPLICABLE SECTIONS OF THE CITY OF BEVERLY HILLS, SPECIFICATIONS FOR DOMESTIC WATER SYSTEMS.
2. NEW SERVICES WILL NOT BE SPLICED WHEN DAMAGED, SERVICE WILL BE RENEWED.
3. EXISTING OR DAMAGED METER BOXES SHALL BE REPLACED PER CITY STANDARD DRAWING NO. BH-710 SHEET 7 AS DIRECTED BY THE CITY’S FIELD REPRESENTATIVE. ALL ASPHALT REPLACEMENT SHALL BE NEATLY SAWCUT.

1" AND 1 1/2" WATER SERVICE CONNECTION LONG

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED____________________DATE 8/21/2020
APPROVED____________________DATE 12/04/2020

STANDARD DRAWING
BH-714 SHEET 2 OF 2
EXISTING PAVEMENT
SAWCUT AND REPLACE FULL
DEPTH AC PAVEMENT FOR METER
BOX REPLACEMENT
EXISTING CONCRETE COLLAR TO
BE PROTECTED IN PLACE OR
REPLACED IN KIND
SEE DETAIL "A"

ELEVATION
NTS

SHORT SERVICE
TRAFFIC RATED

2" WATER SERVICE CONNECTION SHORT TR

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
APPROVED DATE 12/04/2020

WATER RESOURCES MANAGER
CITY ENGINEER

STANDARD DRAWING BH-715
NEW SERVICES WILL NOT BE SPLICED WHEN DAMAGED, SERVICE WILL BE RENEWED.

NOTES: FOR SHORT/LONG SERVICE

1. MATERIALS AND INSTALLATION SHALL CONFORM WITH THE APPLICABLE SECTIONS OF THE CITY OF BEVERLY HILLS SPECIFICATIONS FOR DOMESTIC WATER SYSTEMS.

2. NEW SERVICES WILL NOT BE SPLICED WHEN DAMAGED. SERVICE WILL BE RENEWED.

3. EXISTING OR DAMAGED METER BOXES SHALL BE REPLACED PER CITY STANDARD DRAWING BH-710 SHEET 13, AS DIRECTED BY THE CITY'S FIELD REPRESENTATIVE. INSTALLATION OF NEW METER BOX SHALL INCLUDE A 6" WIDE BY 6" DEEP CONCRETE COLLAR AROUND METER BOX (SEE DETAIL "A"), ALL ASPHALT REPLACEMENT SHALL BE NEATLY SAWCUT.

4. IF REQUIRED, THE CITY WILL SUPPLY A 1-1/2-INCH SERVICE METER.
SINGLE SERVICE PLAN

NTS

GRAVEL BOTTOM

SHORT SERVICE

2" COPPER TUBING, TYPE K

2" CORPORATION STOP, MUELLER B-25028

2" DOUBLE STRAP BRONZE SADDLE, MUELLER BR2B SERIES

NEW DIP WATERLINE PER PLAN

42" MIN.

1' TO 3' AND VAR. (SEE PLANS)

EXISTING METER BOX TO BE PROTECTED IN PLACE OR REPLACED IN KIND USE BH-710 SHT 9. (TYPICAL FOR ALL SERVICES)

ELEVATION

NTS

SHORT SERVICE

NON-TRAFFIC RATED

2" WATER SERVICE CONNECTION SHORT

CITY OF BEVERLY HILLS, CALIFORNIA

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020

WATER RESOURCES MANAGER

APPROVED DATE 12/04/2020

CITY ENGINEER

STANDARD DRAWING

BH-716
NOTES: FOR SHORT/LONG SERVICE
1. MATERIALS AND INSTALLATION SHALL CONFORM WITH THE APPLICABLE SECTIONS OF THE CITY OF BEVERLY HILLS
SPECIFICATIONS FOR DOMESTIC WATER SYSTEMS.
2. NEW SERVICES WILL NOT BE SPLICED WHEN DAMAGED, SERVICE WILL BE RENEWED.
3. EXISTING OR DAMAGED METER BOXES SHALL BE REPLACED PER CITY STANDARD DRAWING BH-710 SHEET 9, AS DIRECTED BY THE
CITY'S FIELD REPRESENTATIVE. ALL ASPHALT REPLACEMENT SHALL BE NEATLY SAWCUT.
CONSTRUCTION NOTES:

1. 1" AIR-VAC COMBO
2. 1"x1"x1" BRASS TEE
3. 1" x 3/4" BRASS BUSHING
4. 3/4" BRASS BALL VALVE
5. 3/4" x BRASS CLOSED NIPPLE
6. 3/4"-90° ELBOW
7. 1" BRASS BALL VALVE
8. 1" x DESIRED HEIGHT BRASS NIPPLE
9. REMOVABLE PLUG

1" COPPER TUBING, TYPE K

SLOPE= 1/2%

NEW DIP WATER MAIN

1" DOUBLE STRAP BRONZE SADDLE, MUELLER BR2B SERIES

SCREEN END OF 1/2" NIPPLE WITH SS INSECT SCREEN & SS BAND, McMaster-Carr #9877K514

12" CEDE CO #12 12-3/4" x 18" (RED PRIMER) COVER

1" STRAIGHT COUPLING, MUELLER H15428

1" AIR-VAC WITH TESTING ASSEMBLY

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

STANDARD DRAWING BH-717

REVISIONS
MARK DATE DESCRIPTION

RECOMMENDED DATE 8/21/2020
APPROVED DATE 12/04/2020

WATER RESOURCES MANAGER
CITY ENGINEER
1" AIR-VAC FOR MAIN

LIST OF FITTINGS

A 1" AIR RELEASE VALVE, APCO NO. 140C.
B PIPELINE PRODUCT 6" O.D. x 24" HEIGHT WITH DOOR PART #RMCH0636 STEEL PIPE.
C 1" CORPORATION STOP, MUELLER.
D 1" EXTRA STRONG COPPER NIPPLE, 2" LONG.
E 1" COUPLING COMP xFIP.
F 1"-90° ELBOW SLIP x SLIP.
G 3-2" x 2" x 1/4" x 1/2" ANGLE WITH 3/8" BOLTS, GALVANIZED.
H 1" TYPE "K" COPPER TUBING
I 1" BRONZE SADDLE, DOUBLE STRAP.
J 1" BRONZE BALL VALVE.

1" AIR-VAC FOR MAIN

CITY OF BEVERLY HILLS, CALIFORNIA

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
WATER RESOURCES MANAGER
APPROVED DATE 12/04/2020
CITY ENGINEER

STANDARD DRAWING BH-717

SHEET 2 OF 2
CONSTRUCTION NOTES:

1. 2" AIR-VAC COMBO WHARF HEAD.
2. 2" BRASS PIPE.
3. 2"-90° STANDARD BRASS ELBOW SLIP x I.P.T.
4. 2" COPPER SLIP x I.P.T. ADAPTOR.
5. 2" COPPER TUBING (TYPE K-HARD).
6. 2" STAINLESS STEEL BALL VALVE.
7. 2" BRASS NIPPLE.
8. CONCRETE VAULT & COVER PER BH-710.

2" BLOW-OFF ASSEMBLY (WHARF HEAD TYPE)
REPLACE EXISTING TEE WITH CROSS

CASE "A"

EXISTING 8-INCH CAST IRON PIPE
INSTALL COMPRESSION COUPLING W/ RESTRAINED JOINTS DRESSER, ROMAC, OR EQUIVALENT
INSTALL 3-8" MJ X FLG BUTTERFLY VALVES WITH RESTRAINTS (TYPICAL)
EXISTING TEE TO BE REMOVED, INSTALL NEW 8-INCH FLG DIP CROSS
EXISTING 8-INCH CAST IRON PIPE
NEW 8-INCH DIP

NEW CONNECTION / CUT IN TEE
CASE "B"

EXISTING 8-INCH CAST IRON PIPE
INSTALL COMPRESSION COUPLING W/ RESTRAINED JOINTS DRESSER, ROMAC, OR EQUIVALENT
INSTALL 3-8" MJ X FLG BUTTERFLY VALVES WITH RESTRAINTS
EXISTING TEE TO BE REMOVED, INSTALL NEW 8-INCH FLG DIP TEE
EXISTING 8-INCH CAST IRON PIPE
NEW 8-INCH DIP

CONNECTIONS TO EXISTING AND PROPOSED WATERLINE
FIRE SERVICE TEE
CASE "C" TYP. INSTALLATION

EXISTING 8-INCH CAST IRON PIPE OR DUCTILE IRON PIPE

NEW 8-INCH DIP PExPE 4' LONG MIN.

INSTALL 4", 6" OR 8" MJ x FLG BUTTERFLY VALVE WITH RESTRAINTS

EXISTING 8-INCH CAST IRON PIPE OR DUCTILE IRON PIPE

NEW 8-INCH DIP PExPE 4' LONG MIN.

INSTALL 4", 6" OR 8" MJ x FLG DIP TO MATCH FIRE SERVICE LINE. SEE PLAN

INSTALL COMPRESSION COUPLING W/ RESTRAINED JOINTS DRESSER, ROMAC, OR EQUIVALENT

EXISTING 8-INCH CAST IRON PIPE OR DUCTILE IRON PIPE

NEW 8-INCH DIP PExPE 4' LONG MIN.

INSTALL COMPRESSION COUPLING W/ RESTRAINED JOINTS DRESSER, ROMAC, OR EQUIVALENT

IMPORTANT: INSTALL NEW 4", 6" OR 8" DIP TO MATCH FIRE SERVICE LINE.
12" x 12" x 8" TEE
CASE "D"

12-INCH DIP CROSS
CASE "E"

TYPICAL INSTALLATIONS: CASE "D" AND "E"
CASE "F" NTS

EXISTING 8-INCH DUCTILE IRON PIPE
EXISTING 8-INCH DIP FITTING
INSTALL COMPRESSION COUPLING WITH RESTRAINED JOINTS DRESSER, ROMAC, OR EQUIVALENT
INSTALL 4' MIN. DIP SPOOL PE x PE
VARIIES TO BE FIELD VERIFIED
EXISTING 8-INCH DIP FITTING
EXISTING 8-INCH DUCTILE IRON PIPE

EXISTING 4-INCH CAST IRON PIPE/DIP TO BE CAPPED AND ABANDONED PER THE CITY'S STANDARD BH-707
CUT AND REMOVE PORTION OF EXISTING DIP
NEW 8-INCH DIP 11.25° MJ x MJ BENDS WITH RESTRAINED JOINTS
NEW 8-INCH DIP 11.25° MJ x MJ BENDS WITH RESTRAINED JOINTS
EXISTING 8" x 4" DI REDUCER TO BE REMOVED, CONTRACTOR TO POTHOLE AND FIELD VERIFY LOCATION
NEW 8-INCH DIP 11.25° MJ x MJ BENDS WITH RESTRAINED JOINTS
EXISTING 8-INCH DIP FITTING
EXISTING 8-INCH DUCTILE IRON PIPE

12' UP TO 18'
NEW 8-INCH DIP

CONNECTIONS TO EXISTING AND PROPOSED WATER

TYPICAL INSTALLATION PIPELINE REPLACEMENT

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
WATER RESOURCES MANAGER
APPROVED DATE 12/04/2020
CITY ENGINEER

STANDARD DRAWING BH-722
SHEET 1 OF 1
1. THE NEW LOCATION OF BAC-T SYSTEM AND BOLLARDS SHALL BE DETERMINED BY THE CITY REPRESENTATIVE.
NOTES:

1. All fittings shall be restrained with megalugs.
2. Length shall be determined by next existing joint.
3. Length, depth, and height shall be field determined.
4. Apply bitumastic enamel coating to all nuts and bolts.
5. Backfill shall be 90% relative compaction and conform to specifications.
6. Air release valves on overcrossings are required, and shall conform to detail BH-717, Sheet 2 of 2, unless otherwise indicated.

SIDE ELEVATION

OVERCROSSING (TYPICAL)
1. INSTALL ONE BOND ON TOP OF EACH PIPE FOR EACH JOINT.
2. PIPE JOINT CONFIGURATION IS SCHEMATIC ONLY.

NOTES:

PUSH-ON OR MECHANICAL JOINT DIP

DUCTILE IRON PIPE (PUSH-ON JOINT SHOWN)
RUBBER GASKET

CABLE TO PIPE THERMITE WELD (TYPICAL)
CABLE TO PIPE

NO. 6 BOND CABLE
NOTES:
1. **ALL FITTINGS SHALL BE RESTRAINED WITH MEGALUGS.**
2. **OVERALL LENGTH SHALL BE DETERMINED BY NEXT EXISTING JOINT.**
3. **LENGTH, DEPTH, AND HEIGHT SHALL BE FIELD DETERMINED.**
4. **APPLY BITUMASTIC ENAMEL COATING TO ALL NUTS AND BOLTS.**
5. **BACKFILL SHALL BE 90% RELATIVE COMPACTION AND CONFORM TO SPECIFICATIONS.**
6. **BLOW OFF VALVES ON UNDERCROSSENGS ARE REQUIRED, SEE BH-718.**
FLANGED COUPLING
ADAPTER BONDING DETAIL
N.T.S.

FLANGED JOINT BONDING DETAIL
N.T.S.

JOINT BONDING FOR DUCTILE IRON PIPE: FLANGED JOINT
WILKINS RP/DA WITH BY-PASS METER SHALL READ IN CUBIC FEET

VALVE POSITION DETECTOR SWITCH IF REQUIRED BY THE FIRE DEPARTMENT (TYP.)

PIPE SUPPORT SEE BH-711

D.I. PIPE CUSTOMER SERVICE LINE

BACKFLOW PREVENTION OR FIRE SPRINKLER SERVICE

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED WATER RESOURCES MANAGER DATE 8/21/2020
APPROVED CITY ENGINEER DATE 12/04/2020

NOTE:
ALL ABOVE GROUND PIPING & VALVES SHALL RECEIVE ONE COAT RUSTOLIUM PRIMER AND TWO FINISHING COATS OF ENAMEL PAINT (COLOR SHALL BE DETERMINED BY THE CITY OF BEVERLY HILLS.)

BACKFLOW PREVENTION OR FIRE SPRINKLER SERVICE
LARGE IRRIGATION SERVICE BACKFLOW PREVENTER

WILKINS RP BACKFLOW PREVENTER
"USC" APPROVED LEAD FREE

NOTE:
ALL ABOVE GROUND PIPING & VALVES SHALL RECEIVE
ONE COAT RUSTOLIUM PRIMER AND TWO FINISHING
COATS OF ENAMEL PAINT (COLOR SHALL BE
DETERMINED BY THE CITY OF BEVERLY HILLS).

<table>
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<tr>
<th>SERVICE</th>
<th>LENGTH (A)</th>
<th>MIN. / MAX. FLOW</th>
<th>WILKINS</th>
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<td>2-1/12&quot;</td>
<td>15- 7/8&quot;</td>
<td>75 - 224 GPM</td>
<td>MODEL 375</td>
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<tr>
<td>3&quot;</td>
<td>15-7/8&quot;</td>
<td>115 - 346 GPM</td>
<td>MODEL 375</td>
</tr>
<tr>
<td>4&quot;</td>
<td>19-7/8&quot;</td>
<td>198 - 595 GPM</td>
<td>MODEL 375</td>
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OR USC BACKFLOW FOUNDATION APPROVED DEVICES

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

STANDARD DRAWING BH-733

RECOMMENDED DATE 8/21/2020
APPROVED DATE 12/04/2020
NOTE:
1. CONTRACTOR SHALL CLEARLY AND PERMANENTLY LABEL THE PRESSURE ZONES ON THE INLET AND OUTLET PIPES. METHOD TO BE APPROVED BY THE INSPECTOR. USE 2" MINIMUM HIGH NUMERALS AND LETTERS.

2. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

3. FINISH SURFACE (FS) ELEVATIONS SHALL BE SHOWN ON THE PLANS.

4. PIPING SHALL BE PAINTED "SAFETY BLUE" FOR POTABLE WATER AND PANTONE PURPLE FOR RECYCLED WATER.

5. (D1) = LARGE DIAMETER (D2) = MEDIUM DIAMETER (D3) SMALL DIAMETER

<table>
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<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
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<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>1</td>
<td>(D1) PRESSURE REDUCER CLA-VALVE, FLG</td>
<td>15</td>
<td>(D2) VICTAULIC COUPLING, GROOVED</td>
</tr>
<tr>
<td>2</td>
<td>(D2) PRESSURE REDUCER CLA-VALVE, FLG</td>
<td>16</td>
<td>(D3) THREADED BRONZE UNION</td>
</tr>
<tr>
<td>3</td>
<td>(D3) PRESSURE REDUCER VALVE, FLG OR THREADED</td>
<td>17</td>
<td>(D1) 90 DEGREES ELBOW</td>
</tr>
<tr>
<td>4</td>
<td>3-1/2&quot; LIQUID FILLED PRESSURE GAUGE (0-160 PSI) ASSEMBLY</td>
<td>18</td>
<td>(D1) x (D2) FL D.I. TEE</td>
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<tr>
<td>5</td>
<td>(D1) GATE VALVE RESILIENT WEDGE TYPE 3.V. MUELLER</td>
<td>19</td>
<td>(D2) FL D.I. TEE</td>
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<td>6</td>
<td>(D2) GATE VALVE RESILIENT WEDGE TYPE 3.V. MUELLER</td>
<td>20</td>
<td>(D2) D.I. BLIND FLANGE WITH THREADED OUTLET</td>
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<td>(D3) BRONZE BALL VALVE</td>
<td>21</td>
<td>(D3) 90 DEGREES BRONZE ELBOW</td>
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<td>8</td>
<td>(D1) FL x GROOVED D.I. SPOOL (LENGTH AS REQ'D)</td>
<td>22</td>
<td>PRESSURE ZONE LABEL</td>
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<tr>
<td>9</td>
<td>(D1) FL x FL D.I. SPOOL</td>
<td>23</td>
<td>4&quot; CONCRETE PAD OVER 12&quot; AGGREGATE BASE</td>
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<tr>
<td>10</td>
<td>(D2) FL x GROOVED D.I. SPOOL (LENGTH AS REQ'D)</td>
<td>24</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>(D2) FL x FL D.I. SPOOL</td>
<td>25</td>
<td>INSULATING BUSHING</td>
</tr>
<tr>
<td>12</td>
<td>(D3) BRONZE PIPE WITH THREADED ENDS</td>
<td>26</td>
<td>FOR FLANGED PRV. (D3) BRONZE FLANGE</td>
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<tr>
<td>13</td>
<td>-</td>
<td>27</td>
<td>AUTOMATIC COMBO. AIR RELEASE &amp; VACUUM RELIEF VALVE</td>
</tr>
<tr>
<td>14</td>
<td>(D1) VICTAULIC COUPLING, GROOVED</td>
<td>28</td>
<td>SEE PIPE SUPPORT DETAIL BH-711</td>
</tr>
</tbody>
</table>

PRESSURE REDUCING VALVE STATION DETAIL

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/21/2020
APPROVED DATE 12/04/2020

STANDARD DRAWING BH-734

SHEET 1 OF 2
NOTES:

1. CONTRACTOR SHALL CLEARLY AND PERMANENTLY LABEL THE PRESSURE ZONES ON THE INLET AND OUTLET PIPES. METHOD TO BE APPROVED BY THE INSPECTOR. USE 2" MINIMUM HIGH NUMERALS AND LETTERS.

2. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

3. FOR LIST OF MATERIALS, SEE STD. DWG. BH-734 SHEET 1 OF 2.

4. CONSTRUCTION PLANS SHALL CALL OUT ELEVATIONS.

5. FOR PIPE SUPPORT LOCATIONS, REFER TO SECTION A-A OF THIS SHEET. FOR MOUNTING, SEE CONSTRUCTION DETAIL BH-711.

6. P.R.V. STATION SHALL HAVE AN EXPANDED METAL ENCLOSURE SURROUNDING THE INSTALLATION HINGED SO IT CAN BE OPENED FOR MAINTENANCE ACCESS.
FILL TOP 270° AREA WITH GROUT OR PIT SAND AFTER PIPE HAS BEEN PLACED

CONTINUOUS GREASED SKIDS, NOTCH AND STRAP TO WATER MAIN

NOTE:
GROUT HOLES SHALL BE PROVIDED AT LOCATIONS ACCEPTABLE TO THE ENGINEER. FILL VOIDS OUTSIDE CASING PIPE WITH GROUT.

JACKED CASING WITH WATER MAIN

NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

CITY OF BEVERLY HILLS, CALIFORNIA

RECOMMENDED DATE 8/21/2020
APPROVED DATE 12/04/2020

WATER RESOURCES MANAGER
CITY ENGINEER

STANDARD DRAWING BH-735

SHEET 1 OF 1
CONCRETE ENCASEMENT OVER STORM DRAIN

NOTES:

1. WHEN TRENCH WORK CAN NOT BE COMPLETED WITHIN THE SAME WORKING DAY, SEE BEVERLY HILLS STANDARD DRAWING BH-113 FOR STEEL PLATE PLACEMENT.

2. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BEVERLY HILLS STANDARD SPECIFICATIONS.
1. CONCRETE ENCASEMENT SHALL BE INSTALLED AS REQUIRED BY THE SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.


NOTES:

WHEN TRENCH WORK CANNOT BE COMPLETED WITHIN THE SAME WORKING DAY, SEE BEVERLY HILLS STANDARD DRAWING BH-113 FOR STEEL PLATE PLACEMENT.

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BEVERLY HILLS STANDARD SPECIFICATIONS.