# CITY OF ALAMEDA
## STANDARD PLANS - TABLE OF CONTENTS

### STORM DRAIN STANDARDS

<table>
<thead>
<tr>
<th>SD 1-1</th>
<th>CATCH BASIN TYPE 1</th>
<th>- / DEC 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD 1-2</td>
<td>CATCH BASIN TYPE 1</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SD 1-3</td>
<td>CATCH BASIN TYPE 1</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SD 2</td>
<td>CATCH BASIN TYPE A</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SD 3</td>
<td>GRATED CATCH BASIN</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SD 4</td>
<td>MAINTENANCE HOLE FOR STORM DRAIN</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SD 5-1</td>
<td>CULVERT - 30 INCH</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SD 5-2</td>
<td>CULVERT - 30 INCH</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SD 6-1</td>
<td>CULVERT - 36 INCH</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SD 6-2</td>
<td>CULVERT - 36 INCH</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SD 7-1</td>
<td>DRAINAGE CHANNEL</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SD 7-2</td>
<td>DRAINAGE CHANNEL</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SD 8</td>
<td>CURB DRAIN IN EXISTING CURB AND SIDEWALK</td>
<td>- / DEC 2021</td>
</tr>
</tbody>
</table>

### SANITARY SEWER STANDARDS

<table>
<thead>
<tr>
<th>SS 1-1</th>
<th>4&quot; SEWER LATERAL TWO-WAY CLEANOUT</th>
<th>- / DEC 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS 1-2</td>
<td>4&quot; SEWER LATERAL TWO-WAY CLEANOUT</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SS 2</td>
<td>NOT USED</td>
<td></td>
</tr>
<tr>
<td>SS 3</td>
<td>45° CLEANOUT</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SS 4</td>
<td>PRE-CAST CONCRETE MAINTENANCE HOLE TYPE &quot;A&quot;</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SS 5</td>
<td>MAINTENANCE HOLE TYPE &quot;B&quot; AND &quot;C&quot; SHALLOW DEPTH</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SS 6</td>
<td>SANITARY SEWER MAINTENANCE HOLE COVER</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SS 7</td>
<td>INSIDE DROP MAINTENANCE HOLE FOR 4&quot; - 12&quot; SEWER PIPES</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SS 8</td>
<td>PIPE CROSSING DETAILS</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SS 9</td>
<td>ABANDONED PIPE DETAIL</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>SS 10</td>
<td>ABANDONED MAINTENANCE HOLE DETAIL</td>
<td>- / DEC 2021</td>
</tr>
</tbody>
</table>

### STREET STANDARDS

<table>
<thead>
<tr>
<th>ST 1-1</th>
<th>TYPE A AND B CURB AND GUTTER</th>
<th>- / DEC 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST 1-2</td>
<td>CONCRETE CURB AND GUTTER AT DRIVEWAY APPROACH</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 1-3</td>
<td>TYPE A CONCRETE CURB AND GUTTER WITH ASPHALT</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 1-4</td>
<td>TYPE E CONCRETE CURB AND GUTTER</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 1-5</td>
<td>CURB AND GUTTER WITH SIDEWALK</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 1-6</td>
<td>CURB AND GUTTER PLANTER AND SIDEWALK</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 2</td>
<td>NOT USED</td>
<td></td>
</tr>
<tr>
<td>ST 3</td>
<td>NOT USED</td>
<td></td>
</tr>
<tr>
<td>ST 4</td>
<td>NOT USED</td>
<td></td>
</tr>
<tr>
<td>ST 5</td>
<td>LARGE RADIUS FLUSH RETURN</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 6</td>
<td>SIDEWALK REINFORCING AROUND UTILITY BOX &gt; 24&quot; x 36&quot;</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 7-1</td>
<td>TRENCH DETAIL RESURFACING</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 7-2</td>
<td>TRENCH DETAIL NARROW TRENCH &amp; SMALL HOLES</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 7-3</td>
<td>TRENCH DETAIL TRENCH BACKFILL</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 7-4</td>
<td>TRENCH DETAIL</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 7-5</td>
<td>TRENCH DETAIL CONTROLLED LOW STRENGTH MATERIAL (CLSM)</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 8</td>
<td>NOT USED</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 9-1</td>
<td>STREET TREE PLANTING</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 9-2</td>
<td>STREET TREE PLANTING</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 9-3</td>
<td>STREET TREE PLANTING</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 10-1</td>
<td>STREET NAME SIGN</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 10-2</td>
<td>STREET NAME SIGN</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 11</td>
<td>TRAFFIC SIGN INSTALLATION</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 12-1</td>
<td>TRAFFIC SIGN SPECIFICATIONS</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 12-2</td>
<td>TRAFFIC SIGN SPECIFICATIONS</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 13</td>
<td>SURVEY MONUMENT</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 14</td>
<td>STREET BARRICADE</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 15-1</td>
<td>TYPICAL APPLICATIONS FOR MARKED CROSSWALKS</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 15-2</td>
<td>TYPICAL APPLICATIONS FOR MARKED CROSSWALKS</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 16</td>
<td>BIKE LANE BUFFER WIDTHS (NON-METERED PARKING)</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 17-1</td>
<td>PARKLET BARRICADE DETAIL</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 17-2</td>
<td>PARKLET BARRICADE DETAIL</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 18</td>
<td>RESIDENTIAL DRIVEWAY WITH PLANTING STRIP</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 19</td>
<td>RESIDENTIAL DRIVEWAY WITH MONOLITHIC SIDEWALK</td>
<td>- / DEC 2021</td>
</tr>
<tr>
<td>ST 20</td>
<td>COMMERCIAL TYPE GUTTER &amp; DRIVEWAY</td>
<td>- / DEC 2021</td>
</tr>
</tbody>
</table>

**STREET LIGHT STANDARDS**

| SL8 | ALAMEDA RECREATION & PARKS DEPT DECO STANDARD POLE | - / DEC 2021 |
| SL9 | 28' TAPERED ALUM. POLE WITH 6' ARM | - / DEC 2021 |
| SL10 | 30' TAPERED LIGHT POLE WITH 12" PIPE BRACKET ARM | - / DEC 2021 |
| SL11 | YORK SERIES LIGHTING POLE | - / DEC 2021 |
| SL12 | 20' TAPERED LIGHT POLE WITH 12" PIPE BRACKET ARM | - / DEC 2021 |
| SL13 | TAPERED LIGHT POLE WITH 12" TWIN PIPE BRACKET ARM | - / DEC 2021 |
| SL 50-1 | STREET LIGHT FOUNDATION - TYPE A | - / DEC 2021 |
| SL 50-2 | STREET LIGHT POLE BASE DETAIL | - / DEC 2021 |
| SL 57-1 | 120V STREET LIGHT WIRING | - / DEC 2021 |
| SL 57-2 | 240V STREET LIGHT WIRING | - / DEC 2021 |
| SL 57-3 | SPLICING AND CRIMPING | - / DEC 2021 |
NOTES:

1. CONNECTION PIPES MAY BE PLACED IN ANY POSITION AROUND THE WALLS PROVIDED THEY POINT IN THE PROPER DIRECTION AND THE POSITION IS OTHERWISE CONSISTENT WITH THE IMPROVEMENT PLAN.

2. CURVATURE OF THE LIP AND SIDEWALLS AT GUTTER OPENING SHALL BE FORMED BY CURVED FORMS AND SHALL NOT BE MADE BY PLASTERING.

3. WALL THICKNESS (T)
   
   \[ T = \begin{cases} 
   6 \text{ inches} & \text{if } H \text{ is 8 feet or less} \\
   8 \text{ inches} & \text{if } H \text{ exceeds 8 feet.} 
   \end{cases} \]

4. DEPTH \((H)\) SHALL BE A MAXIMUM OF 6 FEET. FOR DEPTHS BETWEEN 6 FEET TO 12 FEET, CATCH BASIN SHALL BE ON A MAINTENANCE HOSE BASE, SEE SS 4. FOR DEPTHS GREATER THAN 12 FEET DEEP REQUIRE A SPECIAL DESIGN BY A REGISTERED CIVIL ENGINEER.

5. FLOOR OF BASIN SHALL BE TROWELED AND RETROWELED TO PRODUCE A HARD, POLISHED SURFACE OF MAXIMUM DENSITY AND SMOOTHNESS. SLOPE OF FLOOR PARALLEL WITH CURB SHALL BE 1 TO 12 UNLESS OTHERWISE SPECIFIED.

6. MAINTENANCE HOLE SHALL BE PLACED AS SHOWN IN IMPROVEMENT PLANS.

7. OUTLET PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.

8. REINFORCING STEEL SHALL BE #4 ROUND DEFORMED BARS. SPLICES SHALL BE 10” MIN. LAPS (INCLUDING CORNERS)

9. CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90–2 “MINOR CONCRETE” OF STATE STANDARD SPECIFICATION, 3/4” AGGREGATE.

10. STEPS ARE NOT ALLOWED.

11. SURFACE OF ALL EXPOSED CONCRETE IN BASIN SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH, AND SCORING TO EXISTING OR PROPOSED CURB AND WALK ADJACENT TO THE BASIN.


13. GENERAL NOTES: CATCH BASIN DETAILS SHOWN ARE FOR CAST-IN-PLACE. PRECAST OR PREFORMED ALTERNATES MAY BE APPROVED AT THE DISCRETION OF THE CITY ENGINEER. (OLDCASTLE PRE-CAST MODEL 3AC/4AC, JENSEN SACRAMENTO COUNTY TYPE G, OR SIMILAR.)

14. HORIZONTAL PROTECTION BAR SHALL BE USED WHEN CURB FACE IS 10 INCHES OR MORE.

15. WHEN “L” EXCEEDS 3’–6”, VERTICAL SUPPORT BARS SHALL BE USED AT 42” MAX. SPACING.

16. “NO DUMPING – DRAINS TO BAY” LABELING.
NOTE:

1. FOR USE IN CITY PARKS OR ON PRIVATE PROPERTY ON A CASE BY CASE BASIS PER APPROVED PLANS. PRECAST CONCRETE CONSTRUCTION OF SAME OR LARGER DIMENSIONS IS ACCEPTABLE (E.G. JENSEN PRECAST MODEL NO. D1203NB DROP INLET OR SIMILAR).

2. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2 "MINOR CONCRETE" OF STATE SPECIFICATIONS, 3/4" AGGREGATE.
NOTES:

1. FOR 24" W FRAME AND GRATE SHALL BE GALVANIZED STEEL PHOENIX IRON WORKS P-6302 OR APPROVED EQUAL WHERE "V" IS GREATER THAN 8", "W" SHALL BE 36" WITH FRAME & GRATE INWESCO (36"X36" CLEAR OPENING) OR APPROVED EQUAL.

2. REINFORCING BARS SHALL BE #4 BARS AT 9" O.C.

3. SLOPE BOTTOM EACH WAY 0.10' MINIMUM TO THE OUTFALL OR AS OTHERWISE SPECIFIED.

4. STEPS ARE NOT ALLOWED.

5. "NO DUMPING – DRAINS TO BAY" LABELING ON LID.

6. PRECAST, REINFORCED CONCRETE SECTIONS WITH TONGUE AND GROOVE, CASKETED JOINTS ARE ACCEPTABLE (OLDCASTLE OR JENSEN PRECAST TYPE G1).

7. CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2 "MINOR CONCRETE" OF STATE SPECIFICATIONS, 3/4" AGGREGATE.
NOTES:

1. THIS STRUCTURE NOT FOR STREET AREA USE. STREET USE REQUIRES ADDITIONAL REINFORCEMENT PER CITY ENGINEER.

2. STEPS SHALL BE USED WHEN DEPTH IS GREATER THAN 3'-6". VERTICAL SPACING AT 16" CENTERS. STEPS SHALL BE 1/2" # STEEL, POLYPROPYLENE PLASTIC COATED.

3. CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2 "MINOR CONCRETE" OF STATE SPECIFICATIONS, 3/4" AGGREGATE.

4. EXPOSED SURFACES TO CONFORM TO ADJOINING CURB AND WALK IN GRADE & FINISH.

5. WALLS AND FLOOR SHALL BE REINFORCED WITH #3 BARS AT 9" C-C. ROOF SHALL BE REINFORCED WITH #4 BARS AS SHOWN. ALL SPLICES IN REINFORCING SHALL HAVE 10" MIN. LAP (INCLUDING AT CORNERS). BARS SHALL BE PLACED 2/3 CLEAR FROM INTERIOR FACES EXCEPT AS NOTED.

6. INLET & OUTLET LOCATIONS AS SPECIFIED.

7. PRECAST, REINFORCED CONCRETE SECTIONS WITH TONGUE AND GROOVE, GASKETED JOINTS MAY BE APPROVED AT THE DISCRETION OF CITY ENGINEER.
CULVERT - 30 INCH

12 ga. GALV. CORR. STEEL ARCH 30° WIDE 3 5/8" RISE

ALL LONGITUDINAL REINFORCING #3 BARS

FIRST PCC POUR INCLUDES BASE & WALLS UP TO A POINT THAT LEAVES 2" OF STEEL EXPOSED.

SEE ARCH SUPPORT DETAIL

R=1"± (TYP.)

3" MIN. (TYP.)

6" TYP.

3'-3 1/2"

3 5/8

BOX 1/2

1" CLEAR

SECTION C-G

SEE CITY STD. ST 1-1 FOR CURB AND GUTTER

1 1/4" x 1 1/4" x 1/4" GALV. CURB ANGLE WITH BATTER TO MEET SLOPE OF CURB FACE.

MEET CURB GRADE & INSTALL 1/2" EXPANSION MATERIAL AT EACH SIDE OF CULVERT.

CURB OPENING

CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

SD 5-2

PAGE 2 OF 2

SCALE: NONE

DEC 2021

RUSS THOMPSON

DATE 12/07/21

CITY ENGINEER
CULVERT - 36 INCH

MANHOLE RING & COVER 18" CIRCULAR (D & L FOUNDRY B-6018 OR EQUAL)

HAND HOLE

CURB OPENING

PLAN DETAILS OF GALV. CORRUGATED STEEL ARCH

CIVIL OPENING

TYPICAL CULVERT PLAN

1 1/4" x 1 1/4" x 1/4" GALV. ANGLE

NOTE: GUTTER GRADE MUST MEET CURB GRADE & INSTALL 1/2" EXPANSION MATERIAL AT EACH SIDE OF CULVERT

SIDESWALK

LOCAL DEPRESSION

STREET SECTION

TYPICAL CULVERT PLAN

1 1/4" x 1 1/4" x 1/4" GALV. CURB ANGLE WITH BATTER TO MEET SLOPE OF CURB FACE

CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

SD 6-1

CULVERT - 36 INCH

REVISIONS

SD 6-1

PAGE 1 OF 2

SCALE: NONE

DATE 12/07/21

RUSS THOMPSON

CITY ENGINEER

DEC 2021
NOTES:

1. INSTALL CLEANOUTS ON ALL 4" SEWER LATERAL SERVICES. INSTALL "LOOSE CAP" USING RUBBER, STAINLESS STEEL BANDED END CAP, LOOSELY TIGHTENED TO ALLOW FLUID BACK PRESSURE TO REMOVE THE CAP, OR SEWER POPPER, OR SIMILAR.

2. IN DRIVEWAYS: USE CHRISTY B03C CAST-IRON LID OR EQUAL; IN LAWN/LANDSCAPE AREAS OR SIDEWALKS NOT SUBJECT TO TRAFFIC LOADING: USE CHRISTY B03D REINFORCED CONCRETE LID. IN DRIVEWAY AREAS, ANGLE BOX TO MATCH DRIVEWAY SLOPE.

3. INSTALL 2-WAY CLEANOUTS IF REQUIRED PER PLANS AND AT PROPERTY/RIGHT-OF-WAY LINE.

4. SUPPORT NOT NEEDED IF SET IN CONCRETE.

5. PROVIDE OVERFLOW PROTECTION OR BACKWATER DEVICE IF THE DIFFERENCE IN ELEVATION BETWEEN THE LOWEST FLOOR WITH PLUMBING WASTE FIXTURES OR FLOOR DRAINS AND THE RIM OF THE NEAREST UPSTREAM MANHOLE OR CLEANOUT CAP IS 12" OR LESS.

6. PROVIDE ADDITIONAL CLEANOUTS IF GREATER THAN 100 FT SPACING OR FOR EACH AGGREGATE HORIZONTAL CHANGE OF DIRECTION EXCEEDING 1.5 DEGREES.

7. FOR CLEANOUT LOCATION SEE DETAIL ON SHEET 2.

8. CLEARANCE FROM TOP OF CHRISTY BOX TO TOP OF CAP SHALL BE 5" MINIMUM.
WITH APPROVAL OF THE CITY, CLEANOUTS MAY BE INSTALLED IN SIDEWALK WHERE A WALL OR OTHER STRUCTURE PREVENTS INSTALLATION BEHIND WALK. RIGHT OF WAY CONCRETE PERMIT IS REQUIRED.

CLEANOUTS ON SERVICES AT EASEMENTS INSTALLED 6" TO 24" OUTSIDE THE EASEMENT. CONTACT PUBLIC WORKS FOR LOCATION OF PUBLIC EASEMENT.

NOTE:
1. RECONSTRUCT SIDEWALK PER CITY STD. ST 1-5. INSTALL REBAR PER CITY STD. SS 1-2. LIMITS FOR CONCRETE RECONSTRUCTION TO BE NEAREST SCORE MARK OR AS DIRECTED BY CITY ENGINEER.
45 DEGREE CLEANOUT (STREET)
MIN OF ONE 3" AND ONE 6" GRADE ADJUSTMENT RING. MAX HEIGHT OF GRADE ADJUSTMENT RINGS = 11"

2 ROWS OF BUTYL ADHESIVE TAPE AT ALL EXTERIOR JOINTS, TYP. (RAM-NEK, KENT SEAL, OR EQUAL PER ASTM C443)

CONC. COLLAR SEE NOTE

UNIMPROVED SURFACE

MAINTENANCE HOLE FRAME AND COVER. SEE CITY STD. SS 6

8" MIN.

ASPHALT CONCRETE

LOCATION OF FRAME OPENING

LEVEL MAINTENANCE HOLE FRAME WITH MORTAR. 1:3 MORTAR, 1" MIN.

CLASS "2" CONCRETE COLLAR, TOP DOWN 2" FROM FINISH GRADE

ECCENTRIC CONE

PRE-CAST REINFORCED MAINTENANCE HOLE SECTIONS

XYPEX COATING OR EQUAL

SECTION A-A

METAL FORMING RING IN BASE FOR FIRST PRECAST SECTION

SLOPE 1/2" PER FT

WATERSTOP (TYP.)

CAST IN PLACE

#4 BAR @ 12" O.C. BOTH WAYS.

MIN. 6" COMPACTED AGGREGATE BASE (USE 1 1/2" ROCK FOR WET CONDITIONS)

NOTES:

1. A RING OF MORTAR APPROXIMATELY 6" DEEP & EXTENDING PAST THE OUTER EDGE OF THE RING SHALL BE PLACED ALL AROUND & ON TOP OF THE BOTTOM FLANGE. THE MORTAR SHALL BE SMOOTHLY FINISHED & HAVE A SLIGHT SLOPE TO SHED WATER AWAY FROM THE FRAME. THIS CONDITION APPLIES IN NON-PAVEMENT AREAS ONLY. A STANDARD STREET PATCH SHALL BE USED IN PAVED AREAS.

2. RAM-NEK OR APPROVED EQUAL SHALL BE USED IN JOINTS. ALL JOINTS SHALL BE WATERTIGHT.

3. USE TYPE "A" MAINTENANCE HOLE FOR DEPTH OF COVER ON MAIN SEWER PIPE OVER 3.5 FT. SEE CITY STD. SS 5 FOR SHALLOWER DEPTHS.

4. WHEN MAIN IS 18" IN DIAMETER OR LARGER, ECCENTRIC CONE SHALL BE SET 90" FROM DIRECTION OF FLOW

5. ASTM C923 RUBBER GASKETED WATERSTOP/MAINTENANCE HOLE ADAPTER REQUIRED FOR PIPE CONNECTIONS (A-LOK, KOR-N-SEAL, OR APPROVED EQUAL)

6. ALL MAINTENANCE HOLE INTERIORS TO BE COATED WITH A CEMENTITIOUS CRYSTALLINE WATERPROOFING (XYPEX OR APPROVED EQUAL)

7. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2 "MINOR CONCRETE" OF STATE SPECIFICATIONS, 3/4" AGGREGATE.
CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

MAINTENANCE HOLES TYPE "B" AND "C" SHALLOW DEPTH

NOTES:
1. VALUES "B" AND "C" ARE DEPTHS FROM GROUND SURFACE TO TOP OF MAIN SEWER PIPE. SEWER LATERALS WITH COVER LESS THAN THAT OF MAIN SEWER MAY REQUIRE THE CHIPPING OUT OF A PORTION OF THE TAPERED SECTION OF THE MAINTENANCE HOLE TO ACCOMMODATE THE PIPE.
2. A RING OF MORTAR APPROXIMATELY 6" DEEP AND EXTENDING PAST THE OUTER EDGE OF THE RING SHALL BE PLACED ALL AROUND AND ON TOP OF THE BOTTOM FLANGE. THE MORTAR SHALL BE SMOOTHLY FINISHED AND HAVE A SLOPE TO SLEND WATER AWAY FROM THE FRAME (THIS CONDITION APPLIES IN NON-PAVE AREAS ONLY. A STANDARD STRAIGHT PATCH SHALL BE USED IN PAVED AREAS).
3. EXTERNAL BANDS SHALL BE APPLIED.
4. RAM-NEK OR APPROVED EQUAL SHALL BE USED IN JOINTS. ALL JOINTS SHALL BE WATERTIGHT.
5. ASTM C923 RUBBER GASKETED WATERSTOP/MAINTENANCE HOLE ADAPTER REQUIRED FOR PIPE CONNECTIONS (A-LOK, KOR-N-SEAL, OR APPROVED EQUAL).
6. ALL MAINTENANCE HOLE INTERIORS TO BE COATED WITH A CEMENTOUS CRYSSTALLINE WATERPROOFING (XYPENX OR APPROVED EQUAL)
7. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2 "MINOR CONCRETE" OF STATE SPECIFICATIONS, 3/4" AGGREGATE.

LEVEL MAINTENANCE HOLE FRAME WITH MORTAR, 1:3 MORTAR, 1" MIN

CAST IN PLACE CONC.

#4 BAR @ 12"O.C. BOTH WAYS

MIN. 6" COMPACTED AGGREGATE BASE
(USE 1 1/2" ROCK FOR WET CONDITIONS)

LEVEL MAINTENANCE HOLE FRAME WITH MORTAR, 1:3 MORTAR, 1" MIN

CAST IN PLACE CONC.

#4 BAR @ 12"O.C. BOTH WAYS

MIN. 6" COMPACTED AGGREGATE BASE
(USE 1 1/2" ROCK FOR WET CONDITIONS)

STANDARD MAINTENANCE HOLE TYPE B SHALL BE USED FOR VALUES OF "B" FROM 2'-6" TO 3'-6".

STANDARD MAINTENANCE HOLE TYPE C SHALL BE USED FOR VALUES OF "C" LESS THAN 2'-6".
NOTES:
1. COVER AND FRAME SHALL BE MACHINED TO FIT ACCURATELY SO THAT COVER SHALL NOT ROCK OR RATILE UNDER THE WHEEL OF TRAFFIC.
2. SOLID COVER WITHOUT HOLES (EXCEPT FOR PICK AND HOOK HOLES)
3. LID SHALL HAVE CAST-IN "SANITARY SEWER" LABEL 1 INCH HIGH LETTERS, MINIMUM. (USE "STORM SEWER" LABEL WHERE APPROPRIATE.
4. SOUTH BAY FOUNDRY SBF-1254 OR EQUAL.

CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

SANITARY SEWER
MAINTENANCE HOLE COVER

Approved Models:
1. Phoenix Ironworks P-1090
2. Southbay Foundry 1900FS
3. D & L Foundry A-1024
CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

INSIDE DROP MAINTENANCE
HOLE FOR 4" - 12" SEWER PIPES

NOTES

1. INSTALL WATERSTOP IN ACCORDANCE WITH MANUFACTURER’S INSTRUCTIONS AS SHOWN.

2. NEW MAINTENANCE HOLES CONSTRUCTED USING THIS STANDARD SHALL BE 48 INCHES IN DIAMETER, AND INSTALLED IN CONFORMANCE WITH STD PLAN SS 4.

3. ENCLOSE ELBOW IN CONCRETE. FORM SMOOTH CHANNEL TO MAINTENANCE HOLE FLOWLINE.

4. PVC PIPE AND FITTINGS TO BE SDR 35 OR SCH 40.

EMBEDDED ELBOW
ELBOW EMBEDDED AT 45° WITH SEWER FLOW
NEW SEWER PIPE
MIN. 10", DUCTILE IRON,
NO JOINTS, CENTERED

NEW OR EXIST.
WATER PIPE

6" MINIMUM
SEE NOTE 3

COUPLINGS

NEW SEWER UNDER
NEW OR EXISTING WATER
CASE 1

MECHANICAL JOINTS
BOTH ENDS

NEW SEWER PIPE
MIN. 18" DUCTILE IRON,
NO JOINTS, CENTERED

NEW OR EXISTING
WATER PIPE

6" MINIMUM

NEW SEWER OVER
NEW OR EXISTING WATER
CASE 2

COUPLINGS

2" MIN

NEW PIPE UNDER EXISTING
CASE 3 - SEE NOTE 4

NOTES:
1. THIS STANDARD APPLIES TO PIPES UP TO AND INCLUDING 16" DIAMETER. ALL CROSSINGS OF LARGER DIAMETER SHALL BE AS APPROVED BY THE CITY ENGINEER.
2. ALL NEW DUCTILE IRON SHALL BE WRAPPED IN POLYETHYLENE PER CITY CONSTRUCTION SPECIFICATIONS.
3. WHERE SEWER CROSSES BELOW A WATER MAIN, WITH 1' OR MORE VERTICAL CLEARANCE, NO SPECIAL INSTALLATION IS REQUIRED.
4. "NEW PIPE UNDER EXISTING—CASE 3" SHALL BE USED WHEN THE EXISTING PIPE HAS A JOINT OVER OR WITHIN 2' OF THE NEW TRENCH.
5. ANY PIPE—PIPE CROSSING WITH LESS THAN 6" VERTICAL CLEARANCE SHALL NOT BE INSTALLED WITHOUT APPROVAL OF THE CITY ENGINEER.
6. SEE CITY APPROVED LIST FOR COUPLINGS.
1. PIPE PLUGS SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY ENGINEER.
2. ABANDONED PIPES, 12" AND LARGER, SHALL BE BROKEN INTO EVERY 50' AND SHALL BE FILLED COMPLETELY WITH CONTROLLED LOW-STRENGTH MATERIAL (CLSM).
3. SEWER LATERALS SHALL BE PLUGGED AND ABANDONED AT THE CONNECTION TO MAIN.
REPAIR OR REPLACE EX GROUND OR PAVING PER CITY STD. ST 7-2

SEE NOTE

3' MIN

COMPACTED BACKFILL

SEE CITY STD. SS 9 FOR PIPE ABANDONMENT

KNOCK HOLE, MIN. 6" DIAMETER, IN BASE, IN BARREL ADJACENT TO BASE, OR AS DIRECTED BY THE CITY.

NOTES:
1. REMOVE FRAME, COVER, TAPER AND BARREL SECTIONS.
2. AFTER PLUGGING ALL PIPES IN MAINTENANCE HOLE, THE REMAINING PORTION OF THE BARREL SECTION AND ALL VOIDS CREATED BY THE REMOVAL OF THE UPPER PORTIONS OF THE MAINTENANCE HOLE, SHALL BE BACKFILLED AND COMPACTED TO 90% RELATIVE DENSITY. USE TRENCH BACKFILL OR PIPE BEDDING MATERIAL.
NOTES:

1. PRIOR TO BEGINNING ANY WORK, AN ENCROACHMENT PERMIT SHALL BE OBTAINED.
2. CONTINUOUS #4 LONGITUDINAL REBAR, WITH 6" MINIMUM EMBEDMENT INTO EXISTING CURB & GUTTER. DO NOT DOWEL PRIVATE IMPROVEMENTS INTO PUBLIC IMPROVEMENTS.
3. 6" MINIMUM CLASS II AGGREGATE BASE, COMPACTED TO 95% RC.
4. 1/2" DEPTH DEEP JOINTS AT 20' MAX. 1/4" DEPTH CONTRACTION JOINTS AT 5' MAX AND SHALL BE SCORED TO MATCH ADJACENT SIDEWALK.

5. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2, "MINOR CONCRETE" OF STATE SPECIFICATIONS. 3/4" AGGREGATE WITH 1 1/2 POUNDS OF LAMAX BLACK PER CUBIC YARD. FINISH TO BE UNIFORM MEDIUM BROOMED TEXTURE.
6. ASPHALT TO BE HOT MIX ASPHALT 1/2" MEDIUM.
7. NO PAVING AGAINST NEW CURB OR GUTTER FOR 7 DAYS.
8. LONGITUDINAL GUTTER FLOW LINE SHALL HAVE A MINIMUM SLOPE OF 0.6% (S=0.006).
NOTES:
1. PRIOR TO BEGINNING ANY WORK, AN ENCROACHMENT PERMIT SHALL BE OBTAINED.
2. TO BE Poured MONOLITHIC WITH DRIVEWAY APPROACH.
3. 6" MINIMUM CLASS 2 A.B. COMPACTED TO 95%.
4. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90–2, "MINOR CONCRETE" OF STATE SPECIFICATIONS. 3/4" AGGREGATE WITH 1 1/2 POUNDS OF LAMP BLACK PER CUBIC YARD. FINISH TO BE UNIFORM MEDIUM BROomed TEXTURE.
5. ASPHALT TO BE HOT MIX ASPHALT 1/2" MEDIUM.
6. 12" #4 REBAR DOWELS, 3" MINIMUM DEPTH INTO EXISTING CURB & GUTTER. DO NOT DOWEL PRIVATE IMPROVEMENTS INTO PUBLIC IMPROVEMENTS.
7. SEE DETAIL ST 3 AND ST 4 FOR DRIVEWAY APPROACH.
8. SEE DETAIL ST 1–1 FOR CURB AND GUTTER.
### NOTES:

1. PRIOR TO BEGINNING ANY WORK, AN ENCROACHMENT PERMIT SHALL BE OBTAINED.
2. #4 REBAR CONTINUOUS DOWELS WITH 3" MINIMUM DEPTH INTO EXISTING CURB, 24" O.C. DO NOT DOWEL PRIVATE IMPROVEMENTS INTO PUBLIC IMPROVEMENTS.
3. 6" MINIMUM CLASS 2 A.B. COMPACTED TO 95%.
4. 1/2" DEEP CONTRACTION JOINTS AT 20', 1/4" DEEP CONTRACTION JOINS AT 10'.
5. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2, "MINOR CONCRETE" OF STATE SPECIFICATIONS.
   3/4" AGGREGATE WITH 1 1/2 POUNDS OF LAMP BLACK PER CUBIC YARD. FINISH TO BE UNIFORM MEDIUM BROOMED TEXTURE.
6. ASPHALT TO BE HOT MIX ASPHALT 1/2" MED.
7. CURB AND GUTTER AND SIDEWALK CONSTRUCTION SHALL CONFORM TO CITY STD. ST 1-1.
8. ALL SOFT OR SPONGY SUB-GRADE MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL AS REQUIRED BY THE CITY ENGINEER.
9. REINFORCING BARS SHALL BE MINIMUM GRADE 40 AND SHALL CONFORM TO SECTION 52, "REINFORCEMENT" OF THE CALTRANS STANDARD SPECIFICATIONS.
10. EPOXY USED FOR BONDING REINFORCING BARS TO EXISTING CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 95, EPOXY AND SECTION 95-203, "EPOXY RESIN ADHESIVE FOR BONDING NEW CONCRETE TO OLD CONCRETE" OF THE CALTRANS STANDARD SPECIFICATIONS.
11. CURB AND GUTTER SHALL BE SAWCUT AND REMOVED TO THE NEAREST CONTROL JOINT WHEN PRACTICAL AS DIRECTED BY THE CITY INSPECTOR.
NOTES:

1. PRIOR TO BEGINNING ANY WORK, AN ENCROACHMENT PERMIT SHALL BE OBTAINED.
2. CONTINUOUS #4 LONGITUDINAL REBAR, WITH 6" MINIMUM EMBEDMENT INTO EXISTING CURB & GUTTER. DO NOT DOWEL PRIVATE IMPROVEMENTS INTO PUBLIC IMPROVEMENTS.
3. 6" MINIMUM CLASS 2 A.B. COMPACTED TO 95%.
4. 1/2" DEEP CONTRACTION JOINTS AT 20', 1/4" DEEP CONTRACTION JOINTS AT 10'.
5. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2, "MINOR CONCRETE" OF STATE SPECIFICATIONS. 3/4" AGGREGATE WITH 1 1/2 POUNDS OF LAMP BLACK PER CUBIC YARD. FINISH TO BE UNIFORM MEDIUM BROOMED TEXTURE.
6. ASPHALT TO BE HOT MIX ASPHALT 1/2" MEDIUM.
CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT
CURB AND GUTTER WITH SIDEWALK

NOTES:

1. CURB AND GUTTER TO BE CONSTRUCTED MONOLITHICALLY WITH SIDEWALK UNLESS APPROVED BY THE CITY ENGINEER. IF NOT Poured MONOLITHICALLY, DOWEL WITH #4 REBAR @ 24" O.C.

2. 12" #4 REBAR DOWELS, 3" MINIMUM DEPTH INTO EXISTING OR NEW SIDEWALK. DO NOT DOWEL PRIVATE IMPROVEMENTS INTO PUBLIC IMPROVEMENTS.

3. 4" MINIMUM CLASS II AB COMPACTED TO 95% MINIMUM.

4. 1/2" DEPTH DEEP JOINTS AT 15' MAX, 1/4" DEPTH CONTRACTION JOINTS AT 5' MAX. AND SHALL BE SCORED TO MATCH EXISTING CONTIGUOUS SIDEWALK.

5. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 9-2, "MINOR CONCRETE" OF STATE SPECIFICATIONS, 3/4" AGGREGATE WITH 1 1/2 POUNDS OF LAMP BLACK PER CUBIC YARD.

6. #4 REBAR CONTINUOUS IN NEW CURB AND GUTTER, DOWEL PER NOTE 2.

CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT
CURB AND GUTTER WITH SIDEWALK

NO. | REVISED | BY | APP.
--- | --- | --- | ---

OWN: CLG
CHK: JT

RUSS THOMPSON
CITY ENGINEER
DEC 2021
DATE 12/07/21
SCALE: NONE

ST 1-5
PAGE 5 OF 6
NOTES:

1. PRIOR TO BEGINNING ANY WORK, AN ENCROACHMENT PERMIT SHALL BE OBTAINED.
2. 12" #4 REBAR DOWELS, 3" MINIMUM DEPTH INTO EXISTING OR NEW SIDEWALK. DO NOT
   DOWEL PRIVATE IMPROVEMENTS INTO PUBLIC IMPROVEMENTS.
3. 6" MINIMUM CLASS II AB COMPACTED TO 95% MINIMUM.
4. 1/2" DEPTH DEEP CONTRACTION JOINTS AT 20', 1/4" DEPTH CONTRACTION JOINTS AT 10'.
   SIDEWALK SHALL BE SCORED TO MATCH CONTIGUOUS EXISTING SIDEWALK.
5. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2, "MINOR CONCRETE"
   OF STATE SPECIFICATIONS. 3/4" AGGREGATE WITH 1 1/2 POUNDS OF LAMP BLACK
   PER CUBIC YARD. FINISH TO BE UNIFORM MEDIUM BROOMED TEXTURE.
6. #4 REBAR CONTINUOUS IN NEW CURB AND GUTTER, DOWEL PER NOTE 2.
SIDEWALK REINFORCING
AROUND UTILITY BOX > 24" x 36"

1.5" MIN.
3"

1/2 L MIN.
3/"(TYP.)

TIED WITH STEEL WIRE @
EACH CORNER

#4 REINFORCING BAR
ALL FOUR SIDES OF BOX
WHERE BOX IS LARGER
THAN 24" x 36".

SECTION A-A
TRENCH DETAIL
RESURFACING

CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

TRENCH PAVING TABLE (ASSUMES R = 10)

<table>
<thead>
<tr>
<th>STREET TYPE</th>
<th>MIN. HMA THICKNESS</th>
<th>MIN. CL II AB THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESIDENTIAL/LOCAL (Ti = 5)</td>
<td>3&quot;</td>
<td>9&quot;</td>
</tr>
<tr>
<td>COLLECTOR (Ti = 7)</td>
<td>4&quot;</td>
<td>14&quot;</td>
</tr>
<tr>
<td>ARTERIAL (Ti = 9)</td>
<td>6&quot;</td>
<td>18&quot;</td>
</tr>
</tbody>
</table>

NOTES:
1. NEATLY CUT PAVEMENT AFTER TRENCH IS BACKFILLED TO SUBGRADE. ADDITIONAL PAVEMENT REMOVAL: REMOVE ADDITIONAL PAVEMENT TO A PAINTED LANE STRIPE, A LIP OF GUTTER, EXISTING PAVEMENT PATCH, OR AN EDGE OF THE PAVEMENT IF SUCH STREET FEATURE IS WITHIN 3 FEET OF THE FINAL SAW CUT.
2. FULL TACK COAT COVERAGE ON ALL VERTICAL AND EXISTING HMA SURFACES.
3. RELATIVE COMPACTED IS DESIGNATED AS RC.
4. 1-1/2" SURFACE COURSE IF EXISTING HMA IS GREATER THAN OR EQUAL TO 3" THICK. IF HMA IS LESS THAN 3" THICK, REPLACE WITH FULL DEPTH HMA.
5. SECTIONS MAY BE REDUCED BASED ON ACTUAL R-VALUES.
CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

TRENCH DETAIL
NARROW TRENCH AND SMALL HOLES

TRENCHES UNDER 24 INCHES WIDTH IN EXISTING PAVING

NOTES:
1. IF ANY DIMENSION IS GREATER THAN 6’ OR THE HOLE IS NOT BACKFILLED ON THE SAME DAY OF EXCAVATION, USE STD. 7-1 TRENCH RESURFACING DETAIL.
2. NEATLY CUT PAVEMENT AFTER TRENCH IS BACKFILLED TO SUBGRADE. ADDITIONAL PAVEMENT REMOVAL: REMOVE ADDITIONAL PAVEMENT TO A PAINTED LANE STRIPE, A LIP OF GUTTER, EXISTING PAVEMENT PATCH, OR AN EDGE OF THE PAVEMENT IF SUCH STREET FEATURE IS WITHIN 3 FEET OF THE FINAL SAW CUT.
3. FULL TACK COAT COVERAGE ON ALL VERTICAL AND EXISTING HOT MIX ASPHALT (HMA) SURFACES.
4. PLACE 1-1/2” SURFACE COURSE IF EXISTING HMA IS GREATER THAN OR EQUAL TO 3” THICK. IF HMA IS LESS THAN 3” THICK, REPLACE WITH FULL DEPTH HMA.

TRENCH PAVING TABLE

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<thead>
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</thead>
<tbody>
<tr>
<td>RESIDENTIAL/LOCAL</td>
<td>3”</td>
</tr>
<tr>
<td>COLLECTOR</td>
<td>4”</td>
</tr>
<tr>
<td>ARTERIAL</td>
<td>6”</td>
</tr>
</tbody>
</table>

Image: Alameda.mpp/PSF Spagation-blue-2.55 INCHES.png
PATH: E:\MAP-STD\Alamedo\ST7-2.png
Layout: Name: ST 7-2 Plot Date: Dec 07, 2021 at 13:31
NOTES:
1. EMBEDMENT MATERIAL MUST BE CLASS I.
2. EMBEDMENT MATERIAL SHALL BE COMPACTED TO A MINIMUM 90% STANDARD PROCTOR DENSITY FOR CLASS I MATERIAL.
3. STANDARD BEDDING SHALL BE UTILIZED FOR ALL CASES WHERE TRENCH BOTTOMS ARE UNSTABLE DUE TO SOIL TYPE OR MOISTURE CONDITIONS.
4. VOIDS AND HAUNCH AREA ARE TO BE HAND FILLED.
5. UNDER ENGINEERS APPROVAL, COMPACTED BACK FILL MAY BE NATIVE MATERIAL.
MATERIAL SPECIFICATIONS

DRain ROCK MAY BE USED AS BEDDING UNDER PIPE FOR SLOPES LESS THAN 8%. DRain ROCK SHALL BE 100% CRUSHED AND SHALL CONFORM TO THE FOLLOWING GRADING:

<table>
<thead>
<tr>
<th>Size</th>
<th>#4</th>
<th>#200</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot;</td>
<td>100</td>
<td>65-100</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>90-100</td>
<td>30-100</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>80-100</td>
<td>0-15</td>
</tr>
</tbody>
</table>

CUT OFF WALLS SHALL BE PROVIDED WHEN SHOWN ON THE PLANS OR REQUIRED BY THE CITY ENGINEER.

PIPE BEDDING FOR SLOPES LESS THAN OR EQUAL TO 8% SHALL HAVE A MINIMUM SAND EQUIVALENT VALUE OF 30 AND SHALL CONFORM TO THE FOLLOWING GRADING:

<table>
<thead>
<tr>
<th>Size</th>
<th>#4</th>
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</thead>
<tbody>
<tr>
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<tr>
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<td>30-100</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>80-100</td>
<td>0-15</td>
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</table>

PIPE BEDDING FOR SLOPES GREATER THAN 8% SHALL HAVE A MINIMUM SAND EQUIVALENT VALUE OF 30 AND SHALL CONFORM TO THE FOLLOWING GRADING:

<table>
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</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>3/8&quot;</td>
<td>80-100</td>
<td>10-100</td>
</tr>
</tbody>
</table>

TRENCH BACKFILL SHALL CONFORM TO THE FOLLOWING GRADED AND HAVE A MINIMUM SAND EQUIVALENT VALUE OF 25.

<table>
<thead>
<tr>
<th>Size</th>
<th>#4</th>
<th>#200</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot;</td>
<td>100</td>
<td>40-100</td>
</tr>
<tr>
<td>#200</td>
<td>30-100</td>
<td>0-15</td>
</tr>
</tbody>
</table>

WHEN SAND BEDDING IS PROPOSED FOR UTILITY CONDUIT INSTALLATION, THE MATERIAL SPECIFICATIONS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW 5 WORKING DAYS BEFORE CONSTRUCTION.

AGGREGATE BASE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 26 OF THE STATE STANDARD SPECIFICATIONS. HOT MIX ASPHALT SHALL CONFORM TO THE REQUIREMENTS OF SECTION 39 OF THE STATE STANDARD SPECIFICATIONS.

COMPACTION REQUIREMENTS

AS SHOWN ON STD. ST 7-1, ST 7-2, ST 7-3 AND IN THE FOLLOWING MODIFICATIONS

DRain ROCK SHALL BE CONSOLIDATED WITH A SURFACE VIBRATOR.

PIPE BEDDING MATERIAL USED TO GRADE THE TRENCH SHALL BE CONSOLIDATED WITH A SURFACE VIBRATOR WHEN IT IS PLACED OVER DRain ROCK OR WHEN DEPTH IS GREATER THAN 6 INCHES.

TRENCH BACKFILL MAY NOT BE COMPACTED BY JETTING.
CONTROLLED LOW STRENGTH MATERIAL (CLSM)

CLSM SHALL BE A MIXTURE OF PORTLAND CEMENT, SAND AND 1" MAXIMUM COARSE AGGREGATE, AIR ENTRAINING AGENT AND WATER, BATCHED BY A READY-MIXED CONCRETE PLANT AND DELIVERED TO THE JOBSITE BY MEANS OF TRANSIT MIXING TRUCKS. CONTROL DENSITY FILL MAY ALSO CONTAIN CLASS F POZZOLAN (FLY ASH). CLSM SHALL BE FREE OF ASPHALTIC MATERIAL.

MATERIALS

CEMENT SHALL MEET THE STANDARDS AS SET FORTH IN ASTM C-150, TYPE II CEMENT.

FLY ASH SHALL MEET THE STANDARDS AS SET FORTH IN ASTM C-618, FOR CLASS F POZZOLANS. THE FLY ASH SHALL NOT INHIBIT THE ENTRAINMENT OF AIR.

AGGREGATE SIZE 1" MAX.
SAND EQUIVALENT 31 MM.

MIX PROPORTIONS

THE MIX PROPORTIONS SHALL BE DETERMINED BY THE PRODUCER OF THE CLSM TO PRODUCE A FLOWABLE FILL MIXTURE WHICH WILL NOT SEGREGATE. EACH YARD SHALL CONTAIN NOT LESS THAN 50 POUNDS OF PORTLAND CEMENT AND NOT LESS THAN A TOTAL OF 100 POUNDS OF CEMENTITIOUS MATERIAL, THE CONTRACTOR SHALL SUPPLY A MIX DESIGN TWO WEEKS PRIOR TO ANY USE OF CLSM.

MIXTURE PROPERTIES

COMPRESSIVE STRENGTH 75-200 PSI @ 28 DAYS
SLUMP 3 - 9 INCHES

THE CONSISTENCY OF CLSM SHALL BE SUCH THAT ALL TRENCH VOIDS ARE FILLED WITH MINIMUM RODDING OR VIBRATING BUT NOT SO WET AS TO CAUSE EXCESSIVE SHRINKAGE.

PAVING

PERMANENT PAVEMENT MAY BE PLACED DIRECTLY UPON THE CLSM AS SOON AS IT HAS CONSOLIDATED FOR THE SURFACE TO WITHSTAND THE PROCESS OF PAVING WITHOUT DISPLACEMENT. THE SURFACE OF THE CLSM SHALL BE FIRM AND UNYIELDING. ANY VISIBLE MOVEMENT VERTICALLY OR HORIZONTALLY OF THE CLSM UNDER THE ACTION OF CONSTRUCTION EQUIPMENT OR OTHER MAXIMUM LEGAL AXLE LOADS SHALL BE CONSIDERED AS EVIDENCE THAT THE CLSM DOES NOT MEET THIS REQUIREMENT. THE CONTRACTOR SHALL PROVIDE TRENCH PLATES TO ALLOW TRAFFIC FLOW FOR ALL LOCATIONS UNTIL CLSM IS READY TO BE PAVED.
STREET TREE PLANTING

CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

NOTE:
TREE STAKES FOR ALL STREET TREES SHALL BE PARALLEL TO STREET

TREE STAKING PLAN

CUT TOP OF STAKE AS REQUIRED TO CLEAR LOWEST BRANCH BY 6".

SEE STAKING PLAN ABOVE

USE SECOND TIE IF TREE SIZE IS 24" BOX OR LARGER OR AS REQUIRED

3" MULCH RING DIRECTLY OVER PLANTING HOLE (KEEP CLEAR FROM TRUNK - DON'T MOUND BASE OF TREE)

PLANTER SAUCER EDGE

EX. SOIL

PLANTING MIX OR BACKFILL

ROOTBALL CROWN TO BE 2" ABOVE SURROUNDING FINISH GRADE

4" x 2" PERFORATED PLASTIC WATERING PIPE, SEE NOTE 18.

WIRE BASKET OPTIONAL

NOTES:
1. CUT AND REMOVE TOP 1/3 OF WIRE BASKET, TURN DOWN TOP 1/3 OF BURLAP; REMOVE ALL CORD & TWINE FROM BASE OF TRUNK; IF NON-DEGRADEABLE WRAP IS USED, REMOVE TOTALY.
2. LOOSEN EXTERIOR OF THE ROOT BALL AND THE ROOT MAT AT THE BOTTOM OF THE BALL, CUT ALL MAJOR CIRCULATING ROOTS.

TREE PLANTING AND STAKING SECTION

NO. | REVISED | BY | APP.
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CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

STREET TREE PLANTING

STD DETAIL
ST 9-1
PAGE 1 OF 3
SCALE: NONE

OWN: CLG
CHK: JT

RUSS THOMPSON
CITY ENGINEER
DATE 12/07/21
STREET TREE PLANTING

CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

ST 9-2

STREET TREE PLANTING

CENTER LINE OF TREE
TREE TRUNK
ROOT BARRIER, SEE BELOW

ADJACENT PAVING, CURB, CURB AND GUTTER, OR PATH

ROOT CONTROL PLAN

TREE TRUNK
2' MIN - 8' MAX

ADJACENT PAVING, CURB, CURB AND GUTTER, OR PATH

2' MINIMUM FOR NEW PLANTER STRIP

ROOT BARRIER; CONTRACTOR SHALL USE DEEP ROOT LINEAR ROOT BARRIER #22-29-18-P / HIGH DENSITY POLYETHYLENE, MANUFACTURED BY DEEP ROOT CORP. OR APPROVED EQUAL. SET TOP FLUSH WITH FINISHED GRADE.

EX. SOIL

ROOT CONTROL BARRIER SECTION

TREE PLANTING IN POORLY DRAINED SOILS

ROOTBALL CROWN TO BE 2" ABOVE SURROUNDING FINISH GRADE

3" MULCH RING DIRECTLY OVER PLANTING HOLE

PLANTER SAUCER EDGE

EXISTING GROUND LINE
WIRE BASKET OPTIONAL
PLANTING MIX BACKFILL

EXISTING SOIL
CHIMNEY DRAIN, 8" DIA. HOLE X 5' DEEP. BACKFILLED WITH DRAIN ROCK. DRILL ON DOWNHILL SLOPE OF ROOTBALL FOR DRAINAGE

X BALL DIAMETER
2X TO 3X

1/3X
1/3X

TO 2/3X

TO 2/3X

1/3X

2/3X
TREE PLANTING NOTES:

1. ALL WORK SHALL BE PERFORMED BY PERSONS FAMILIAR WITH THIS TYPE OF WORK AND UNDER THE SUPERVISION OF A QUALIFIED PLANTING FOREMAN.
2. CONTRACTOR SHALL VERIFY THAT ADEQUATE DRAINAGE EXISTS PRIOR TO PLANTING.
3. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO PLANTING.
4. TREES SHALL BE 7 TO 10 FEET HIGH SUPPLIED IN FIFTEEN GALLON CONTAINERS. TREES SHALL HAVE A MINIMUM OF 1.5 INCH TRUNK DIAMETER AT BREAST HEIGHT.
5. ALL TREES SHALL CONFORM TO THE STANDARDS SET FORTH IN THE MOST RECENT AMERICAN STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (A.A.N.).
6. TREES SHALL HAVE A STRAIGHT STRONG TERMINAL LEADER, UNCUT AND UNBROKEN. THE MAIN TRUNK SHALL HAVE ACCEPTABLE LATERAL GROWTH ALONG ITS LENGTH SHORTER AND SMALLER IN DIAMETER THAN THE MAIN TRUNK.
7. ALL TREES THAT, IN THE OPINION OF THE CITY ENGINEER, ARE DISEASED, INSECT INFECTED, OR HAVE ORDONING ROOTS, WILL BE REJECTED.
8. TREES WITH ROOT FLARE COVERED BY MORE THAN 1.5 INCHES OF SOIL WILL BE REJECTED PRIOR TO INSTALLATION.
9. PLANTING MIXTURE FOR THE BACKFILL SHALL HAVE NO SOIL AMENDMENTS.
10. IN PARKWAY STRIPS, SET PLANTER TOP 1.5 INCHES BELOW SIDEWALK GRADE. IN LAWNS OR GROUNDCOVER AREAS, SET PLANTER TOP FLUSH WITH FINISHED GRADE. IN LAWN AREAS THERE SHALL BE A 2 FOOT MULCH RING CLEARANCE BETWEEN EDGE OF LAWN AND TREE.
11. STAKING OF TREE IS NOT RECOMMENDED, EXCEPT ON WINDY SITES, FOR LARGE EVERGREEN TREES, OR IN AREAS WITH HEAVY TRAFFIC. IF STAKING IS DONE, FLEXIBLE HOSE, NOT TIES AND WIRES, SHALL BE USED. NAIL FLEXIBLE TREE STRAP TO EACH SIDE OF THE STAKE IN TEARDROP FIGURE WITH 1 INCH MAX GALVANIZED ROOFING NAIL.
12. TREE STAKES SHALL BE REMOVED AFTER TWO YEARS.
13. AT PLANTING, PRUNE ONLY CROSSING LIMBS, CO-DOMINANT LEADER, BROKEN, DISEASED OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS WHILE PRESERVING FORM AND CHARACTER OF TREE. DO NOT CUT LEADER. DO NOT PRUNE IN ORDER TO REDUCE CANOPY SIZE.
14. DO NOT WRAP TRUNK OF TREE.
15. A ROOT COLLAR EXCAVATION FOR ALL TREES SPECIFIED WILL BE DONE BY THE CITY ENGINEER TO ENSURE THAT TREES WERE NOT PLANTED OR GROWN TOO DEEPLY AT THE NURSERY. CONTRACTOR SHALL HAVE SUPPLIERS MARK GROUND LEVEL LINE ABOVE ROOT BALL. IF CITY ENGINEER DETERMINES THAT THERE IS EXCESSIVE SOIL OVER THE ROOT CROWN, THE TREES WILL BE REJECTED.
16. MULCH SHALL BE 3" DEEP UNLESS OTHERWISE NOTED.
17. TREES SHALL BE WATERED TWICE WEEKLY. ALL TREES NOT MEETING WITH THE APPROVAL OF THE CITY ENGINEER AT THE END OF THAT PERIOD SHALL BE REPLACED BY THE CONTRACTOR.
18. INSTALL TWO DEEP WATERING PERFORATED PLASTIC PIPES AS SHOWN..setFill PIPES WITH 3/4 INCH CLEAN DRAIN ROCK.
NOTES:

1. STREET NAME BLADES SHALL BE 0.080" GAUGE, 6061-T6 ALUMINUM ALLOY (ASTM SPECIFICATION B221).
2. FACE BACKGROUND SHALL BE INTERSTATE GREEN HIGH INTENSITY GRADE PRISMATIC REFLECTIVE SHEETING MATERIAL, CONFORMING TO THE CALTRANS SPECIFICATIONS.
3. LEGEND SHALL BE SILVER SUPER ENGINEER GRADE (SEG) REFLECTORIZED SHEETING MATERIAL. THE STREET NAME SHALL BE COMPOSED OF 5" UPPER CASE AND 3 3/4" LOWER CASE LETTERS, FHWA SERIES B OR C. STREET NAME SUFFIXES SHALL BE 2" UPPER CASE LETTERS, FHWA SERIES C. BLOCK NUMBERS SHALL BE 2", FHWA SERIES C.

5. IN CASE WHERE NORMAL LAYOUT RESULTS IN A SIGN LONGER THAN 48", THE LEGEND SHALL BE CONDENSED IN A UNIFORM AND PROPORTIONAL MANNER SUBJECT TO APPROVAL BY THE ENGINEER.
6. FACE SHALL BE ADHERED TO BLADES. ALL SIGNS SHALL BE DOUBLE-FACED. SIGN FACES SHALL BE FREE FROM BLEMISHES, BUSTERS, CRACKS, ETC.
7. THE WORD "BLIND" IN 2" UPPER CASE, FHWA SERIES C LETTERS SHALL BE SUBSTITUTED FOR THE BLOCK NUMBER AND ARROWHEAD WHEN SO SPECIFIED.
STREET NAME SIGN

CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

ST 10-2

NOTES:

1. Post mounting brackets shall be Hawkins 109-00821 (5 1/4" flat slot) or Pacific Products & Services #850 or approved equal.

2. Sign blade 90-degree cross pieces shall be Hawkins 037-0021 (5 1/2") Pacific Products & Services #850 or approved equal.

3. Electrolizer mounting "L" bracket shall be Hawkins V14F-SWB or Pacific Products & Services #10-10 or approved equal.

4. All mounting brackets shall be of heavy duty cast aluminum without welded connections. Brackets shall be complete with theft-proof allen set screws.

5. Signs over 36" in length shall be mounted with Pacific Products & Services #730 (9" long) bracket and be bolted to their mounting brackets using stainless steel 1/4" - 20 X 1 1/2" hex cap machine screws. Stainless steel 3/8" - 20 nuts and stainless steel 3/8" lockwashers. A 1/4" diameter hole is to be drilled thru the bracket and sign blade at each set screw location. Bands for electrolizer mounting shall be stainless steel, 1/2" wide and .025" thick. These shall be secured with stainless steel clamps.

6. Location of street name signs shall be as directed by the engineer.
TRAFFIC SIGN INSTALLATION

CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

SEE CITY STD. ST 12 FOR "L" AND "H" DIMENSIONS.

TYPICAL SIGN INSTALLATION

ELECTROLIER MOUNTED USING TWO PACIFIC PRODUCTS & SERVICES #730 BRACKET OR APPROVED EQUAL. SEE NOTE 3.

ELECTROLIER MOUNTED SIGN DETAIL

NOTES:

1. SIGN LEGEND AND SHAPE SHALL CONFORM WITH THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR EACH DESIGNATION SHOWN. SIGN SIZE, COLORS AND MATERIALS SHALL BE AS SPECIFIED IN CITY STD. ST 12.
2. PARENTHESES ( ) IN THE SIGN DESIGNATION INDICATE AN ARROW IN THE SIGN LEGEND. DIRECTION OF THE ARROW SHALL BE AS SHOWN ON THE CONSTRUCTION PLANS.
4. ALL SIGNS SHALL BE ALUMINUM ALLOY WITH REFLECTIVE SHEETING EXCEPT AS FOLLOWS:
   A. THE TYPE N-4, TYPE N-5, TYPE K-1, AND TYPE L-1 SHALL BE ALUMINUM ALLOY WITH NON-REFLECTIVE SHEETING.
   B. THE TYPE N-4, TYPE N-5, TYPE L-1, AND TYPE K-1 SHALL HAVE REFLECTOR BUTTONS.
5. ALL SIGN MATERIALS AND FABRICATION SHALL BE IN CONFORMANCE WITH THE LATEST CALTRANS SPECIFICATIONS AND SHALL MEET WITH THE APPROVAL OF THE CITY ENGINEER. REFLECTIVE SHEETING SHALL BE 3M HIGH-INTENSITY GRADE PRISMATIC OR APPROVED EQUAL, NON-REFLECTIVE SHEETING SHALL BE 3M ELECTROCAT FILM OR APPROVED EQUAL.
6. ALL SIGNS SHALL CONFORM TO GAUGE (PANEL THICKNESS) AS PER CALTRANS SPECIFICATIONS.
<table>
<thead>
<tr>
<th>SIGN</th>
<th>DESIGNATION</th>
<th>SIZE</th>
<th>COLORS LEGEND ON BACKGROUND</th>
<th>H</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOP</td>
<td>R1-1</td>
<td>30&quot; OCTAGON</td>
<td>WHITE ON RED</td>
<td>7'</td>
<td>11'</td>
</tr>
<tr>
<td>SPEED LIMIT</td>
<td>R2-1</td>
<td>24&quot; X 30&quot;</td>
<td>BLACK ON WHITE</td>
<td>7'</td>
<td>11-1/2'</td>
</tr>
<tr>
<td>KEEP RIGHT (SYMBOL)</td>
<td>R4-7</td>
<td>24&quot; X 30&quot;</td>
<td>BLACK ON WHITE</td>
<td>5'</td>
<td>10'</td>
</tr>
<tr>
<td>STOP AHEAD</td>
<td>W3-1</td>
<td>30&quot; X 30&quot;</td>
<td>RED &amp; BLACK ON YELLOW</td>
<td>7'</td>
<td>12'</td>
</tr>
<tr>
<td>ONE WAY</td>
<td>R6-1 R10-1 (L OR R)</td>
<td>36&quot; X 12&quot;</td>
<td>BLACK ON WHITE, BLACK ON BLACK</td>
<td>4'</td>
<td>7'</td>
</tr>
<tr>
<td>DO NOT ENTER</td>
<td>R5-1</td>
<td>36&quot; X 36&quot; OR</td>
<td>RED ON WHITE</td>
<td>7'</td>
<td>12'</td>
</tr>
<tr>
<td>NO RIGHT TURN</td>
<td>R3-1</td>
<td>24&quot; X 24&quot;</td>
<td>RED &amp; BLACK ON WHITE</td>
<td>7'</td>
<td>12'</td>
</tr>
<tr>
<td>NO LEFT TURN</td>
<td>R3-2</td>
<td>24&quot; X 24&quot;</td>
<td>RED &amp; BLACK ON WHITE</td>
<td>7'</td>
<td>12'</td>
</tr>
<tr>
<td>RIGHT LANE MUST</td>
<td>R3-7</td>
<td>20&quot; X 32&quot;</td>
<td>BLACK ON WHITE</td>
<td>7'</td>
<td>12'</td>
</tr>
<tr>
<td>TURN RIGHT</td>
<td>R26</td>
<td>12&quot; X 18&quot;</td>
<td>RED ON WHITE</td>
<td>7'</td>
<td>10-1/2'</td>
</tr>
<tr>
<td>NO PARKING ANY TIME</td>
<td>R26 (S)</td>
<td>12&quot; X 18&quot; OR</td>
<td>RED ON WHITE</td>
<td>7'</td>
<td>10-1/2'</td>
</tr>
<tr>
<td>NO PARKING ANY TIME</td>
<td>R28A</td>
<td>18&quot; X 24&quot; OR</td>
<td>RED ON WHITE</td>
<td>7'</td>
<td>10-1/2'</td>
</tr>
<tr>
<td>2 HOUR PARKING</td>
<td>R32</td>
<td>12&quot; X 18&quot;</td>
<td>GREEN ON WHITE</td>
<td>7'</td>
<td>10-1/2'</td>
</tr>
<tr>
<td>NO LEFT TURN</td>
<td>R33</td>
<td>24&quot; X 36&quot;</td>
<td>RED &amp; BLACK ON WHITE</td>
<td>7'</td>
<td>12'</td>
</tr>
<tr>
<td>NO U TURN</td>
<td>R3-4</td>
<td>24&quot; X 24&quot;</td>
<td>RED &amp; BLACK ON WHITE</td>
<td>8.5</td>
<td>12-1/2'</td>
</tr>
<tr>
<td>TRUCK ROUTE</td>
<td>R14-1</td>
<td>24&quot; X 24&quot;</td>
<td>BLACK ON WHITE</td>
<td>7'</td>
<td>11'</td>
</tr>
<tr>
<td>YIELD</td>
<td>R1-2</td>
<td>36&quot; SIDES</td>
<td>RED ON WHITE</td>
<td>7'</td>
<td>11-1/2'</td>
</tr>
<tr>
<td>YIELD HERE TO PED</td>
<td>R1-5</td>
<td>30&quot; X 30&quot;</td>
<td>RED &amp; BLACK ON WHITE</td>
<td>7'</td>
<td>12'</td>
</tr>
<tr>
<td>RIGHT TURN ONLY</td>
<td>R3-5 (R)</td>
<td>30&quot; X 36&quot; OR</td>
<td>BLACK ON WHITE</td>
<td>7'</td>
<td>12'</td>
</tr>
<tr>
<td>LEFT TURN ONLY</td>
<td>R3-5 (L)</td>
<td>30&quot; X 36&quot; OR</td>
<td>BLACK ON WHITE</td>
<td>7'</td>
<td>12'</td>
</tr>
<tr>
<td>NO PEDESTRIAN XING</td>
<td>R9-3a</td>
<td>36&quot; X 18&quot;</td>
<td>BLACK ON WHITE</td>
<td>7'</td>
<td>10-1/2'</td>
</tr>
<tr>
<td>BIKE ROUTE</td>
<td>D11-1</td>
<td>24&quot; X 18&quot;</td>
<td>WHITE ON GREEN</td>
<td>7'</td>
<td>10-1/2'</td>
</tr>
<tr>
<td>&quot;BEGIN&quot; WITH (BIKE ROUTE)</td>
<td>M4-14</td>
<td>12&quot; X 5&quot;</td>
<td>WHITE ON GREEN</td>
<td>8.5</td>
<td>11'</td>
</tr>
<tr>
<td>&quot;END&quot; WITH (BIKE ROUTE)</td>
<td>M4-6</td>
<td>8&quot; X 5&quot;</td>
<td>WHITE ON GREEN</td>
<td>8.5</td>
<td>11'</td>
</tr>
<tr>
<td>CURVE (90')</td>
<td>W1-1 OR</td>
<td>30&quot; X 30&quot;</td>
<td>BLACK ON YELLOW</td>
<td>7'</td>
<td>12-1/2'</td>
</tr>
<tr>
<td>CURVE</td>
<td>W1-1A (L OR R)</td>
<td>30&quot; X 30&quot;</td>
<td>BLACK ON YELLOW</td>
<td>7'</td>
<td>12-1/2'</td>
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Image: Alameda.pptx
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File Date: Dec 07, 2001 at 13:40
Scale: NONE

CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

TRAFFIC SIGN SPECIFICATIONS

ST 12-1
PAGE 1 OF 2

RUS THOMPSON
CITY ENGINEER
DEC 2011
DATE 12/07/21
SCALE: NONE
<table>
<thead>
<tr>
<th>SIGN</th>
<th>DESIGNATION</th>
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<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-INTERSECTION</td>
<td>W2-2 OR W2-4</td>
<td>30&quot; x 30&quot;</td>
<td>BLACK ON YELLOW</td>
<td>7&quot;</td>
<td>12-1/2&quot;</td>
</tr>
<tr>
<td>LANE REDUCTION</td>
<td>W4-2</td>
<td>30&quot; x 30&quot;</td>
<td>BLACK ON YELLOW</td>
<td>7&quot;</td>
<td>11-1/2&quot;</td>
</tr>
<tr>
<td>END</td>
<td>W31</td>
<td>24&quot; x 24&quot;</td>
<td>BLACK ON YELLOW</td>
<td>5&quot;</td>
<td>9&quot;</td>
</tr>
<tr>
<td>SIGNAL AHEAD</td>
<td>W3-3</td>
<td>36&quot; x 36&quot;</td>
<td>BLACK ON YELLOW</td>
<td>7&quot;</td>
<td>13-1/2&quot;</td>
</tr>
<tr>
<td>NOT A THROUGH STREET NO OUTLET</td>
<td>W14-2</td>
<td>24&quot; x 24&quot;</td>
<td>BLACK ON YELLOW</td>
<td>7&quot;</td>
<td>12&quot;</td>
</tr>
</tbody>
</table>
| TWO-WAY DIRECTIONAL ARROW   | W6-3        | 30" x 30" | BLACK ON YELLOW             | 5"  | 8-1/2"
| DIRECTIONAL ARROW           | W1-6 OR 1-7 | 36" x 18" | BLACK ON YELLOW             | 5"  | 8-1/2" |
| MERGING TRAFFIC             | W4-1        | 30" x 30" | BLACK ON YELLOW             | 7"  | 13-1/2" |
| SCHOOL                      | S1-1        | 30" x 30" | BLACK ON YELLOW             | 7"  | 12"  |
| SCHOOL XING                 | W16-2P      | 24" x 12" | BLACK ON YELLOW             | 7"  | 14"  |
| REFLECTOR                   | SM2-1 (TYPE K-1) | 15" x 6" | YELLOW REFLECTORS ON WHITE | 1"  | 3-1/2" |
| REFLECTOR                   | TYPE N-1    | 18" x 18" | YELLOW REFLECTIVE SHEETING W/ BLACK BORDER | 2.5" | 6-1/2" |
| REFLECTOR                   | TYPE N-2    | 18" x 18" | RED REFLECTIVE SHEETING W/ BLACK BORDER | 2.5" | 6-1/2" |
| REFLECTOR                   | TYPE N      | 18" x 18" | ORANGE REFLECTIVE SHEETING W/ BLACK BORDER | 2.5" | 6-1/2" |
| REFLECTOR (L OR T)          | OM1-1 (TYPE N-4) | 18" x 18" | YELLOW REFLECTORS ON WHITE | 2.5" | 6-1/2" |
| REFLECTOR                   | OM4-1 (TYPE N-5) | 18" x 18" | RED REFLECTORS ON RED | 2.5" | 6-1/2" |
| BIKE LANE                   | RB1         | 24" x 18" | BLACK ON WHITE              | 7"  | 10-1/2" |
| "BEGIN" WITH BIKE LANE      | RB1A        | 12" x 5" | BLACK ON WHITE              | 8.5" | 11"  |
| "END" WITH BIKE LANE        | RB1B        | 8" x 5"  | BLACK ON WHITE              | 8.5" | 11"  |
1. POSTS TO BE 6x6 STD OR BETTER PRESSURE-TREATED DOUGLAS FIR.
2. STRINGERS TO BE 2x6 STD OR BETTER PRESSURE-TREATED DOUGLAS FIR.
   SPlice AT POST USING 2 BOLTS PER STRINGER.
3. BARRICADE TO BE PAINTED WITH TWO COATS EXTERIOR WHITE PAINT.
GENERAL NOTES
1. PEDESTRIAN RAMPS NOT SHOWN.
2. TYPICAL APPLICATIONS DO NOT DEPICT STANDARDS FOR CROSSWALK ALIGNMENT WITH RESPECT TO PEDESTRIAN RAMPS.
3. IT IS PREFERRED TO HAVE BI-DIRECTIONAL ACCESSIBLE PEDESTRIAN RAMPS FOR EACH CORNER OF AN INTERSECTION.
4. ACCESSIBLE PEDESTRIAN RAMPS SHALL BE PROVIDED AT ALL NEW CROSSWALKS.
5. STRIPING MAINTENANCE SHALL ENHANCE EXISTING CROSSWALKS, BUT NOT ADD NEW CROSSWALKS.
6. WHEN DETERMINING WHETHER A STREET OR APPROACH IS MULTI-LANE, TURN POCKETS AND TWO-WAY LEFT-TURN LANES SHALL BE COUNTED.

CASE 1: SIGNALIZED INTERSECTION, REGIONAL ARTERIAL
1. APPLY WHEN AT LEAST ONE STREET IS A REGIONAL ARTERIAL OR COLLECTOR, UNLESS THERE ARE SITE SPECIFIC LIMITATIONS.
2. PROVIDE CONTINUOUS CROSSWALKS FOR EACH LEG.
3. PROVIDE ADVANCED STOP BARS FOR EACH APPROACH, TYPICAL 5 FT OFF-SET.
CASE 5. ONE / TWO-WAY STOP CONTROL, MULTI-LANE ARTERIAL / COLLECTOR AND EXISTING CROSSWALK
1. APPLY WHEN AT LEAST ONE STREET IS A MULTI-LANE ARTERIAL / COLLECTOR AND THERE IS / ARE EXISTING MARKED CROSSWALK / S (OR THE CROSSING MEETS THE CRITERIA FOR A MARKED CROSSWALK) CROSSING THE ARTERIAL / COLLECTOR.
2. PROVIDE STAGGERED LATTER CROSSWALKS CROSSING THE ARTERIAL / COLLECTOR – PREFERRED IN PAIRS, UNLESS THERE ARE SITE SPECIFIC LIMITATIONS.
3. PROVIDE YIELD LINES (SHARK'S TEETH), NO PARKING ZONES, AND APPROPRIATE SIGNS PER CURRENT CALIFORNIA STANDARDS.
4. PROVIDE ADVANCE STOP BARS FOR ALL STOP CONTROLLED APPROACHES, TYPICAL 5 FT OFF-SET.
5. PROVIDE TRAVEL MARKINGS ACROSS ALL STOP CONTROLLED APPROACHES.

CASE 6. ONE TWO-WAY STOP CONTROL, ARTERIAL / COLLECTOR AND EXISTING CROSSWALK
1. APPLY WHEN AT LEAST ONE STREET IS AN ARTERIAL / COLLECTOR AND THERE IS / ARE EXISTING MARKED CROSSWALK / S (OR THE CROSSING MEETS THE CRITERIA FOR A MARKED CROSSWALK) CROSSING THE ARTERIAL / COLLECTOR.
2. PROVIDE STAGGERED LATTER CROSSWALKS CROSSING THE ARTERIAL / COLLECTOR – PREFERRED IN PAIRS, UNLESS THERE ARE SITE SPECIFIC LIMITATIONS.
3. PROVIDE ADVANCE STOP BARS FOR ALL STOP CONTROLLED APPROACHES, TYPICAL 5 FT OFF-SET.
4. PROVIDE TRAVEL MARKINGS ACROSS ALL STOP CONTROLLED APPROACHES.

CASE 7. ONE / TWO-WAY STOP CONTROL, ARTERIAL / COLLECTOR AND NO EXISTING CROSSWALK
1. APPLY WHEN AT LEAST ONE STREET IS AN ARTERIAL / COLLECTOR AND THERE IS NO EXISTING MARKED CROSSWALK (OR THE CROSSING DOES NOT MEET THE CRITERIA FOR A MARKED CROSSWALK) CROSSING THE ARTERIAL / COLLECTOR.
2. PROVIDE NO CROSSWALK MARKINGS, UNLESS THERE ARE SITE SPECIFIC REASONS TO DO SO.

CASE 8. ONE / TWO-WAY STOP CONTROL, LOCAL / LOCAL
1. APPLY WHEN ALL STREETS ARE LOCAL.
2. PROVIDE NO CROSSWALK MARKINGS, UNLESS THERE ARE SITE SPECIFIC REASONS TO DO SO.
NOTES

1. **39** indicates detail 39, which is a continuous 6" wide, white stripe.

2. Buffer hatching shall be 6" wide, white stripes; at 45°; and spaced every 25' center to center.

3. The parking side buffer, where present, is 2' wide, measured perpendicular from the curb line.
CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

PARKLET BARRICADE DETAIL

PLACE 36" CHANNELIZER PER CALTRANS STD. A73-C @ 25' O.C. MAXIMUM, TYPICAL.

INSTALL CONTINUOUS ROW OF CONCRETE SECURITY/TRAFFIC BARRIER BY BOHLMANN QUALITY PRODUCTS, MODEL BC-48 OR EQUAL, STAINED WITH "PATIO GREEN" SHERWIN-WILLIAMS CONCRETE STAIN COLOR CODE HC105. MINIMUM WEIGHT 1,220 LBS.

PRECAST CONCRETE BARRICADE (BOHLMANN BC-48 OR EQUAL)

* NOTE: SEE "PARKLET DESIGN GUIDELINES" FOR OTHER REQUIREMENTS.

NO. REVISED BY APP.

OWN: CLG

CHK: JT

DEC 2021

DATE 12/07/21

SCALE: NONE
PARKLET BARRICADE DETAIL

CASE 1

EX. CURB

PARKLET AREA

BULB-OUT

PLACE 36" CHANNELIZER PER CALTRANS
STD. A73-C @ 25' O.C. MAXIMUM, TYPICAL

12" MAX.

CASE 2

EX. CURB

PARKLET AREA

PARKING

PLACE 36" CHANNELIZER PER CALTRANS
STD. A73-C @ 25' O.C. MAXIMUM, TYPICAL

CASE 3

RED CURB

FACE OF CURB

PARKING (WHERE OCCURS)

30' MIN.

PLACE 36" CHANNELIZER PER CALTRANS
STD. A73-C @ 25' O.C. MAXIMUM, TYPICAL

CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

ST 17-2

DATE 12/07/21

SCALE: NONE

OWN: CLG

CHK JT

DEC 2021
RESIDENTIAL DRIVEWAY WITH PLANTING STRIP

NOTES:

1. CONSTRUCT WEAKENED PLANE JOINTS AT 20' INTERVAL TO MATCH SCORE LINES.
2. SEE STD. DETAIL ST 1-2 FOR CONCRETE REQUIREMENTS. MEDIUM BROOM TEXTURE FINISH.
3. CONSTRUCT EXPANSION JOINTS AT 100' MAX.
4. TOTAL WIDTH OF DRIVEWAY OPENINGS NOT TO EXCEED 40% OF LOT FRONTAGE.
5. MINIMUM WIDTH OF CLEAR PASSAGE SHALL BE 4 FT. WHERE RIGHT OF WAY RESTRICTIONS CREATE UNREASONABLE HARDSHIP, THE CLEAR WIDTH MAY BE REDUCED TO 3FT., WITH APPROVAL OF THE PUBLIC WORKS DEPARTMENT.
6. ALL EXPOSED EDGES SHALL BE ROUNDED TO 1/2" RADIUS.
7. NEW OR MODIFIED UTILITY POLES OR UTILITY EQUIPMENT MAY BE LOCATED NO CLOSER THAN 10 FEET OF A DRIVEWAY TO AVOID SIGHT-LINE OBSTRUCTIONS.
8. 12" #4 REBAR DOWELS, 3" MINIMUM DEPTH INTO EXISTING CURB & GUTTER. DO NOT DOWEL PRIVATE IMPROVEMENTS INTO PUBLIC IMPROVEMENTS.
CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

RESIDENTIAL DRIVEWAY WITH MONOLITHIC SIDEWALK

NOTES:

1. CONSTRUCT WEAKENED PLANE JOINTS AT 20' INTERVAL TO MATCH SCORE LINES.
2. SEE STD. DETAIL ST 1-2 FOR CONCRETE REQUIREMENTS. MEDIUM BROOM TEXTURE FINISH.
3. CONSTRUCT EXPANSION JOINTS AT 100' MAX.
4. TOTAL WIDTH OF DRIVEWAY OPENINGS NOT TO EXCEED 40% OF LOT FRONTAGE.
5. MINIMUM WIDTH OF CLEAR PASSAGE SHALL 4 FT. WHERE RIGHT OF WAY RESTRICTIONS, NATURAL BARRIERS OR OTHER RESTRICTIONS CREATE AN UNREASONABLE HARDSHIP, THE CLEAR WIDTH MAY BE REDUCED TO 3FT, WITH APPROVAL OF THE PUBLIC WORKS DEPARTMENT.
6. ALL EXPOSED EDGES SHALL BE ROUNDED TO 1/2" RADIUS.
7. 12" #4 REBAR DOWELS, 3" MINIMUM DEPTH INTO EXISTING CURB & GUTTER. DO NOT DOWEL PRIVATE IMPROVEMENTS INTO PUBLIC IMPROVEMENTS.

IF JOINT IS GREATER THAN 1/4" WIDE, JT SHALL BE FILLED WITH POLYURETHANE CONCRETE JOINT SEALANT.

DRIVEWAY PLAN

TRANSITION

12'' MIN. = 20'' MAX.

NO SCORE LINES

1.5' 1.5'

CURB AND GUTTER TO MATCH EXISTING OR AS SPECIFIED ON THE PLANS.

EX. A.C.

NEW A.C.

RESIDENTIAL DRIVEWAY SECTION

ENTS

SEE NOTE 7

SEE NOTE 5

SIDEWALK

ENTS

2% MAX.

11% MAX.

6'' RESIDENTIAL DRIVEWAY

4'' CLASS II AB WITH 90% R.C.

12''

24''

4.5''

1''

1/2''

1/2''
NOTES:

1. SEE STD. DETAIL 101 FOR CONCRETE REQUIREMENTS. LIGHT BROOM FINISH WITH IMPERVIOUS MEMBRANE CURE.

2. ALL EXPOSED EDGES SHALL BE ROUNDED TO 1/2" RADIUS.

3. #4 BARS SPACED AT 6" O.C. MAY BE SUBSTITUTED FOR THE WIRE MESH WHEN APPROVED BY THE CITY ENGINEER.

4. 12" #4 REBAR DOWELS, 3" MINIMUM DEPTH INTO EXISTING CURB & GUTTER. DO NOT DOWEL PRIVATE IMPROVEMENTS INTO PUBLIC IMPROVEMENTS.
NOTES:
1. ONE COAT OF ANTI-GRAFFITI, FULL LENGTH.
2. SEE CITY STD. SL 50-1 STREET LIGHT FOUNDATION, TYPE A.

POLE SPECIFICATIONS
CATALOG NO.: KBC12-C-S11-FBP-AG
C/W 140-35/35
SECTION: OCTAGONAL
COLOR: ECLIPSE
FINISH: POLISHED
POLE TOP: 5 1/2" FL/FL
POLE BUTT: 17" FL/FL
POLE LENGTH: 12' 0"
APPROX WEIGHT: 1,100 LBS.
MIN. RACEWAY: 1 1/4" Ø
F'C @ 28 DAY PER ASTM C31: 8,000 PSI
WARRANTY: LIFETIME

LUMINAIRE SPECIFICATIONS
CATALOG NO.: K56-C-K24-P4AR-III/V-60W(SSL)
-7030-120; 277-PR7-#6-3K
LANTERN TYPE: CLEVELAND (NO SPURS)
POLE ADAPTOR: K24 CAPITAL
OPTICAL SYSTEM: FLAT ARRAY ACRYLIC RIPPED
IES LIGHTING CLASS: TYPE III ☐
TYPE V ☐
INPUT WATTS: 60W
SOLID STATE LIGHTING
SERIES: 7030
CCT: 3000K
LINE VOLTAGE: 120:277V
PAINT: TEXTURED BLACK
OPTIONS: 7-PRONG TWISTLOCK RECEPTACLE,
(PHOTO-EYE BY OTHERS)
ANSI C136.41 7 PIN RECEPTACLE
OPTIONS:
QUICK DISCONNECT ☒
TERMINAL BLOCK ☒

[A] 2 3/8" X 8" RECESSED ZINC H.H. BOX & COVERPLATE (PAINT: BLACK-TXT) C/W GROUNDWIRE & ALLENAHEAD SCREWS

3/4" THICK BASEPLATE
SEE NOTE 2

GRADE

(4) 3/4" DIA. X 27" L GALV. ANCHOR BOLTS (BY OTHERS)
SEE NOTE 2

(4) 7/8" X 1 3/4" L SLOTS ON A 23 3/8" DIA. BOLT CIRCLE

20" D

(4) 3/4" DIA. X 27" L GALV. MANUFACTURED Baseplate

H.H. BOX NAMEPLATE

3" WIRE ACCESS HOLE

MOLD SEAL
CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

28’ TAPERED ALUMINUM POLE WITH 6’ ARM

ALUM. POLE CAP WITH STAINLESS STEEL SCREWS

28’-0” SHAFT HEIGHT

4 1/2” O.D.

2 1/2” X 5 1/8” ELLIPTICAL SECTION

1 1/4” DIA. WIRE HOLE WITH 1” I.D. RUBBER CROMMET

EXTRUDED ALUM. POLE PLATE
ALLOY 6063-T6 WITH 1/2”-13NC STAINLESS STEEL HARDWARE

INTERNAL DAMPER (FACTORY INSTALLED)

TAPERED ALUM. TUBE
.188” WALL ALLOY 6063-T6

2’-6” RISE

2” NPS SLIP FITTER

30’-0” MOUNTING HEIGHT

11-1/2” DIA.
BOLT CIRCLE

FRAME TAPPED 3/8”-16NC FOR GROUNDING

REINFORCED HANDHOLE (4” X 6”) WITH COVER AND STAINLESS STEEL SCREWS

CAST ALUM. BASE FLANGE ALLOY 356-T6 WITH BOLT COVERS AND STAINLESS STEEL SCREWS

11 1/4” SQ.

NOTES:
SEE CITY STD. SL 50-1 STREET LIGHT FOUNDATION – TYPE A. POLE TO BE HAPCO B21-585 OR APPROVED EQUAL. DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES.
30' TAPERED LIGHT POLE
WITH 12" PIPE BRACKET ARM

ALUM. POLE CAP WITH STAINLESS STEEL SCREWS

2" SCH. 40 ALUM. PIPE ARM
(2 3/8" O.D.) ALLOY 6063-T6

DRILL & TAP 1/2"-13NC
(3 @ 120°)

5" DIA. ALUM. TUBE
.188" WALL ALLOY 6063-T6

FURNISH WITH:
(3) 1/2"-13NC X 1/2" LONG
STAINLESS STEEL SET SCREWS

TAPERED ALUM. TUBE
.156" WALL ALLOY 6063-T6

FRAME TAPPED 5/16"-18NC
FOR GROUNDING

FLUSH REINFORCED HANDHOLE (4" X 8")
WITH COVER AND STAINLESS STEEL SCREWS

CAST ALUM. BASE FLANGE ALLOY 356-T6 WITH
BOLT COVERS AND STAINLESS STEEL SCREWS

NOTES:
SEE CITY STD. SL 50-1 FOR STREET LIGHT FOUNDATION - TYPE A.
POLE TO BE HAPCO B103776 OR APPROVED EQUAL. HUB MOUNT TO
BE HAPCO A103777 OR APPROVED EQUAL. DO NOT INSTALL LIGHTING
POLES WITHOUT LUMINAIRES.
CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

YORK SERIES LIGHTING POLE

2 1/2" SCH. 40 ALUM. PIPE TENON
(2 7/8" O.D.) ALLOY 6063-T6

1/2" THICK X 6" DIA. ALUM. ADAPTER
ALLOY 6063-T6

POLE TOP TENON DETAIL

20" DIA.

GROUND LUG (41740-002) INSIDE,
OPPOSITE DOOR

CAST ALUM. PEDESTAL BASE ASSEMBLY
(103991) ALLOY 356-T6 WITH DOOR
AND STAINLESS STEEL SCREW

FLUTES CROSS SECTION

1 1/4" DIA.

NOTES:
Pole assembly shall be powder coated RAL 6005. See City
Std. SL 50-1 for Street Light Foundation - Type A. Pole to
be HAPCO B103752 with 103991 base.
CITY OF ALAMEDA, CALIFORNIA, PUBLIC WORKS DEPARTMENT

20' TAPERED LIGHT POLE WITH 12" PIPE BRACKET ARM

ALUM. POLE CAP WITH STAINLESS STEEL SCREWS

2" SCH. 40 ALUM. PIPE ARM (2 3/8" O.D.) ALLOY 6063-T6

DRILL & TAP 1/2"-13NC (3 @ 120°)

5" DIA. ALUM. TUBE .018" WALL ALLOY 6063-T6

FURNISH WITH:
(3) 1/2"-13NC X 1/2" LONG STAINLESS STEEL SET SCREWS

TAPERED ALUM. TUBE .156" WALL ALLOY 6063-T6

FRAME TAPPED 5/16"-18NC FOR GROUNDING

FLUSH REINFORCED HANDHOLE (4" X 8") WITH COVER AND STAINLESS STEEL SCREWS

CAST ALUM. BASE FLANGE ALLOY 356-T6 WITH BOLT COVERS AND STAINLESS STEEL SCREWS

11-1/2" DIA. BOLT CIRCLE

NOTES:
SEE CITY STD. SL 50-1 FOR STREET LIGHT FOUNDATION - TYPE A POLE TO BE HAPCO B104570 OR APPROVED EQUAL, HUB MOUNT TO BE HAPCO A103777 OR APPROVED EQUAL. DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES.
TAPERED LIGHT POLE WITH 12’ TWIN PIPE BRACKET ARM

ALUM. POLE CAP WITH STAINLESS STEEL SCREWS

2” SCH. 40 ALUM. PIPE ARM (2 3/8” O.D.) ALLOY 6063-T6

DRILL & TAP 1/2”-13NC (3 @ 120°)

5” DIA. ALUM. TUBE .188” WALL ALLOY 6063-T6

FURNISH WITH:
(3) 1/2”-13NC X 1/2” LONG STAINLESS STEEL SET SCREWS

12” STRAIGHT

4 1/2” O.D.

19’-11.31/32”

12” TAPERED ALUM. TUBE .156” WALL ALLOY 6063-T6

FRAME TAPPED 5/16”-18NC FOR GROUNDING

FLUSH REINFORCED HANDHOLE (4” X 8”) WITH COVER AND STAINLESS STEEL SCREWS

CAST ALUM. BASE FLANGE ALLOY 356-T6 WITH BOLT COVERS AND STAINLESS STEEL SCREWS

11-1/2” DIA. BOLT CIRCLE

CAST ALUM. BASE FLANGE ALLOY 356-T6 WITH BOLT COVERS AND STAINLESS STEEL SCREWS

NOTES:
SEE CITY STD. SL 50-1 FOR STREETLIGHT FOUNDATION – TYPE A, POLE TO BE HAPCO B104570 OR APPROVED EQUAL. HUB MOUNT TO BE HAPCO A103777 OR APPROVED EQUAL, DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES.
NOTES:

1. CALL CITY FOR INSPECTION BEFORE POURING CONCRETE.
2. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2 "MINOR CONCRETE" OF STATE SPECIFICATIONS, 3/4" AGGREGATE.
3. USE SONO TUBES FOR FORMING THE FOUNDATION.
PLACE MORTAR ALL AROUND BOLTS

TOP OF FOUNDATION

LEVING CENTER VOID PROVIDE DRAIN HOLE ALL SIDES

HEAVY HEX NUT, A563 GRADE A OR BETTER GALVANIZED TO ASTM A153 (TYP.)

LOCK WASHER

FLAT WASHER ASTM F436 GALVANIZED TO ASTM A153 (TYP.)

FLAT WASHER NUT

POLE BASE

STREET LIGHT POLE

1" ± 1/4"

1" MAX

STREET LIGHT FOUNDATION PER CITY STD. SL 50-1

THREADED ROD COUPLING

ANCHOR BOLTS AS SPECIFIED PER MANUFACTURE

ELECTRICAL CONDUIT PER CITY STD. SL 50-1

NOTE:

1. ELECTROPLATING ANCHOR BOLTS SHALL BE HELD IN POSITION FOR POURING BY MEANS OF A SUITABLE TEMPLATE. DEVIATION FROM THE TRUE POSITION, VERTICAL AND HEIGHT SHALL NOT EXCEED 1/16".
NOTES:

1. TYPE HEB FUSEHOLDER, COPPER CRIMP. INSTALL WITH LOAD SIDE TO STREETLIGHT. 3M HEAVY WALL HEAT SHRINK TUBING ITCSN SHALL BE USED ON CRIMPS.

2. CHRYSTY NO9 BOX OR EQUAL WITH FIRELYTE BOLT DOWN LID. USE 809X12 FOR EXTENSION.

3. TO BE APPROVED BY ENGINEER.

4. ENGINEER TO APPROVE WIRE TYPE, SIZE AND COLOR. MIN. 6’ SERVICE LOOP FROM FINISH GRADE.

5. USE PARTEX PPM CARRIER STRIPS WITH YELLOW PK CABLE MARKERS.

6. WASHED DRAIN ROCK TO BE BOTH UNDER BOX AND ON ALL SIDES WHEN BOX IS LOCATED IN LANDSCAPE.

7. SEE PLANS OR ENGINEER FOR LOCATIONS OF BOXES TO HAVE GROUND RODS.

8. PLACE DUCT SEAL AFTER CONDUCTORS ARE PULLED INTO BOX.
NOTES:

1. TYPE HEY FUSEHOLDER, COPPER CRIMP, INSTALL WITH LOAD SIDE TO STREETLIGHT. 3M HEAVY WALL HEAT SHRINK TUBING ITS/NM SHALL BE USED ON CRIMPS.
2. CHRISTY NO9 BOX OR EQUAL WITH FIRELYE BOLT DOWN LID. USE B09X12 FOR EXTENSION.
3. TO BE APPROVED BY ENGINEER.
4. ENGINEER TO APPROVE WIRE TYPE, SIZE AND COLOR. MIN. 6' SERVICE LOOP FROM FINISH GRADE.
5. USE PARTEX P/00 CARRIER STRIPS WITH YELLOW PK CABLE MARKERS.
6. WASHED DRAIN ROCK TO BE BOTH UNDER BOX AND ON ALL SIDES WHEN BOX IS LOCATED IN LANDSCAPE.
7. SEE PLANS OR ENGINEER FOR LOCATIONS OF BOXES TO HAVE GROUND RODS.
8. PLACE DUCT SEAL AFTER CONDUCTORS ARE PULLED INTO BOX.
INSTALLATION

1. THOROUGHLY CLEAN AND DRY THE SURFACE OF THE SUBSTRATE TO WHICH THE MATERIAL IS DESIRED TO BOND.

2. REMOVE GUARD BAG, USING CAUTION NOT TO DAMAGE INNER BAG.

3. GRIP BOTH EDGES OF BAG AT THE CENTER BARRIER (FIG. 1) AND WRINKLE AND FLEX THE BAG ACROSS THE BARRIER. THIS WILL WEAKEN THE BARRIER.

4. SQUEEZE THE CLEAR SIDE OF THE RESIN, FORCING THE RESIN THROUGH THE CENTER BARRIER.

5. MIX THOROUGHLY TO A UNIFORM COLOR BY SQUEEZING CONTENTS BACK AND FORTH 25–30 TIMES.

6. SQUEEZE RESIN TO ONE END OF BAG AND CUT OFF OTHER END. (FIG. 2)

7. SLOWLY INSERT CONNECTION INTO SEALING PACK UNTIL IT FITS SNUGLY AGAINST THE OPPOSITE END. (FIG. 3)

8. WRAP OPEN END OF BAG WITH SCOTCH® SUPER 33+™ VINYL ELECTRICAL TAPE AND POSITION THE TAPED END UP UNTIL RESIN GELS (8–12 MIN. @ 73°F (23°C)). (FIG. 4)

GROUNDING CONNECTIONS

1. ALL ELECTRICAL ITEMS SHALL BE U.L APPROVED.

2. USE GROUNDING COMPRESSION CRIMPING C-CLAMPS/ C-TAPS.

3. USE COPPER WIRE WITH GREEN INSULATION FOR ABOVE GROUND AND WITHIN CONDUITS, SOLID BARE COPPER WIRE FOR BELOW GRADE.

4. USE CORRECT INSTALLATION TOOLING AND DIE SELECTION FOR WIRE SIZE