

**CITY OF ORANGE COVE**

**STANDARD CONSTRUCTION DRAWINGS**



**MARCH 2016**

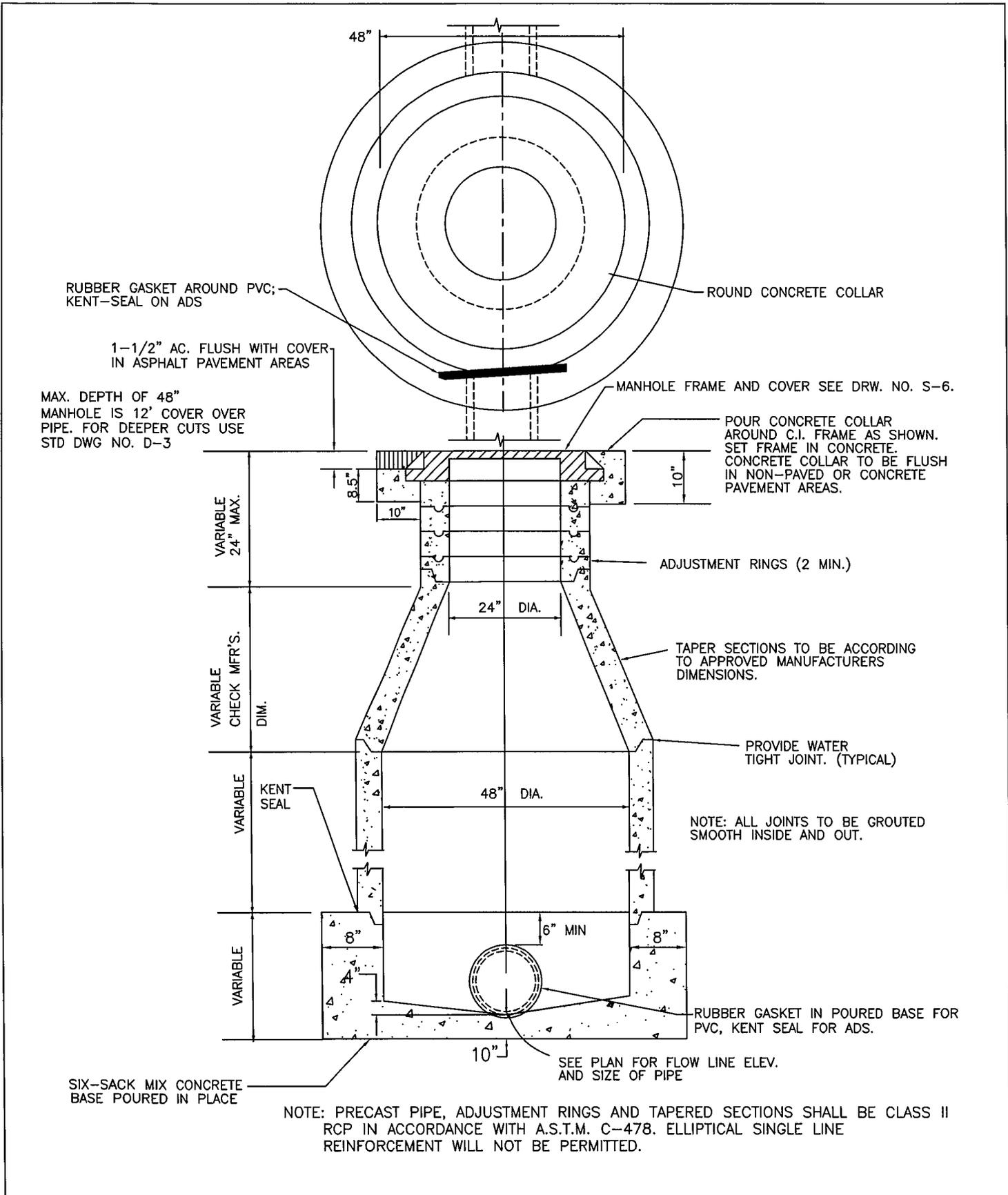
**(NOVEMBER 2008)**

**PREPARED BY**  
**YAMABE & HORN ENGINEERING, INC.**  
**FRESNO, CALIFORNIA**

## INDEX

<b><u>Standard Detail No.</u></b>	<b><u>Description</u></b>
D-1	48" Precast Storm Drain Manhole
D-2	60" Precast Storm Drain Manhole
D-3	Precast Storm Drain Manhole With Steps
D-4	Catch Basin Inlet
D-5	Catch Basin Form and Frame
D-6	Type "E" Drain Inlet
E-1	Street Light - Local Street
E-2	Street Light – Collector
E-3	Not Used
E-4	Street Light Pull Box
E-5	Street Light Placement – Cul de sacs
E-6	Street Light Placement – Local Street
E-7	Street Light Placement – Collector Street
E-8	Street Light Placement – Divided Arterial & Expressway Streets
L-1	Tree Well
L-2	Ground Cover Spacing
L-3	Double Staking
L-4	Shrub Planting
L-5	Trenching
L-6	Tree Bubbler
L-7	Gate Valve
L-8	Not Used
L-9	Pop-Up Spray Sprinkler Riser
L-10	Backflow Preventer
M-1	Parking Lot Construction Details
M-2	6' Concrete Block Fence Construction and General Notes
M-3	Parking Lot Requirements
M-4	Trash Enclose
M-5	Lot Line Grading Requirements
M-6	6' Chain Link Fence
M-7	6' Chain Link Fence Gate
M-8	Temporary Timber Barricade
M-9	Bench Mark
P-1	Typical Street Sections
P-2	Typical Boundary Street Sections
P-3	Standard Cul-De-Sac
P-4	Median Island Left Turn Pocket

<b>P-5</b>	<b>Concrete Sidewalk, Curb &amp; Gutter</b>
<b>P-6</b>	<b>Sidewalk Underdrain Pipe</b>
<b>P-7</b>	<b>Curb Removal for New Approaches</b>
<b>P-8</b>	<b>Curb Return Wheelchair Ramps for Intersection Streets</b>
<b>P-9</b>	<b>Standard Wheelchair Ramp</b>
<b>P-10</b>	<b>Concrete Valley Gutter Street Intersection</b>
<b>P-11</b>	<b>Commercial Alley Approach</b>
<b>P-12</b>	<b>Alley Gutter Detail</b>
<b>P-13</b>	<b>Standard Residential Drive</b>
<b>P-14</b>	<b>Residential Driveway Approaches for 10'-12' Patterns</b>
<b>P-15</b>	<b>Standard Commercial Drive Approach</b>
<b>P-16</b>	<b>Commercial Driveway Approach</b>
<b>P-17</b>	<b>Not Used</b>
<b>P-18</b>	<b>Traffic Index Chart</b>
<b>P-19</b>	<b>Trench Backfill &amp; Surface Replacement</b>
<b>P-20</b>	<b>Street Name Sign</b>
<b>P-21</b>	<b>Local Street Roundabout</b>
<b>P-22</b>	<b>Bulb-Out Detail</b>
<b>S-1</b>	<b>Water Line &amp; Sewer Line Separation</b>
<b>S-2</b>	<b>House Branch &amp; Utilities Locations in Streets</b>
<b>S-3</b>	<b>48" Precast Sewer Manhole</b>
<b>S-4</b>	<b>60" Precast Sewer Manhole</b>
<b>S-5</b>	<b>Drop Manhole</b>
<b>S-6</b>	<b>Cast Iron Frame &amp; Cover</b>
<b>S-7</b>	<b>Eccentric Manhole</b>
<b>S-8</b>	<b>Commercial &amp; Industrial Grease Trap</b>
<b>W-1</b>	<b>Location of Underground Pipes in City Streets</b>
<b>W-2</b>	<b>1" Residential Service Connection</b>
<b>W-3</b>	<b>1" To 2" Service Connection</b>
<b>W-4</b>	<b>Reduced Pressure Backflow Preventer</b>
<b>W-5</b>	<b>Fire Hydrant</b>
<b>W-6</b>	<b>Valve Box &amp; Cover</b>
<b>W-7</b>	<b>Typical Hydrant Maker Location</b>
<b>W-8</b>	<b>Bacteria Sampling Station</b>
<b>W-9</b>	<b>Standard Thrust Block Details</b>
<b>W-10</b>	<b>PVC Restrained Joints</b>
<b>W-11</b>	<b>Well Abandonment</b>
<b>W-12</b>	<b>3" and 4" Turbo Water Meter</b>
<b>W-13</b>	<b>End-Point Transmitter Installation Detail</b>
<b>W-14</b>	<b>Multi-Family 3-Manifold Water Service</b>
<b>W-15</b>	<b>Multi-Family 4-Manifold Water Service</b>

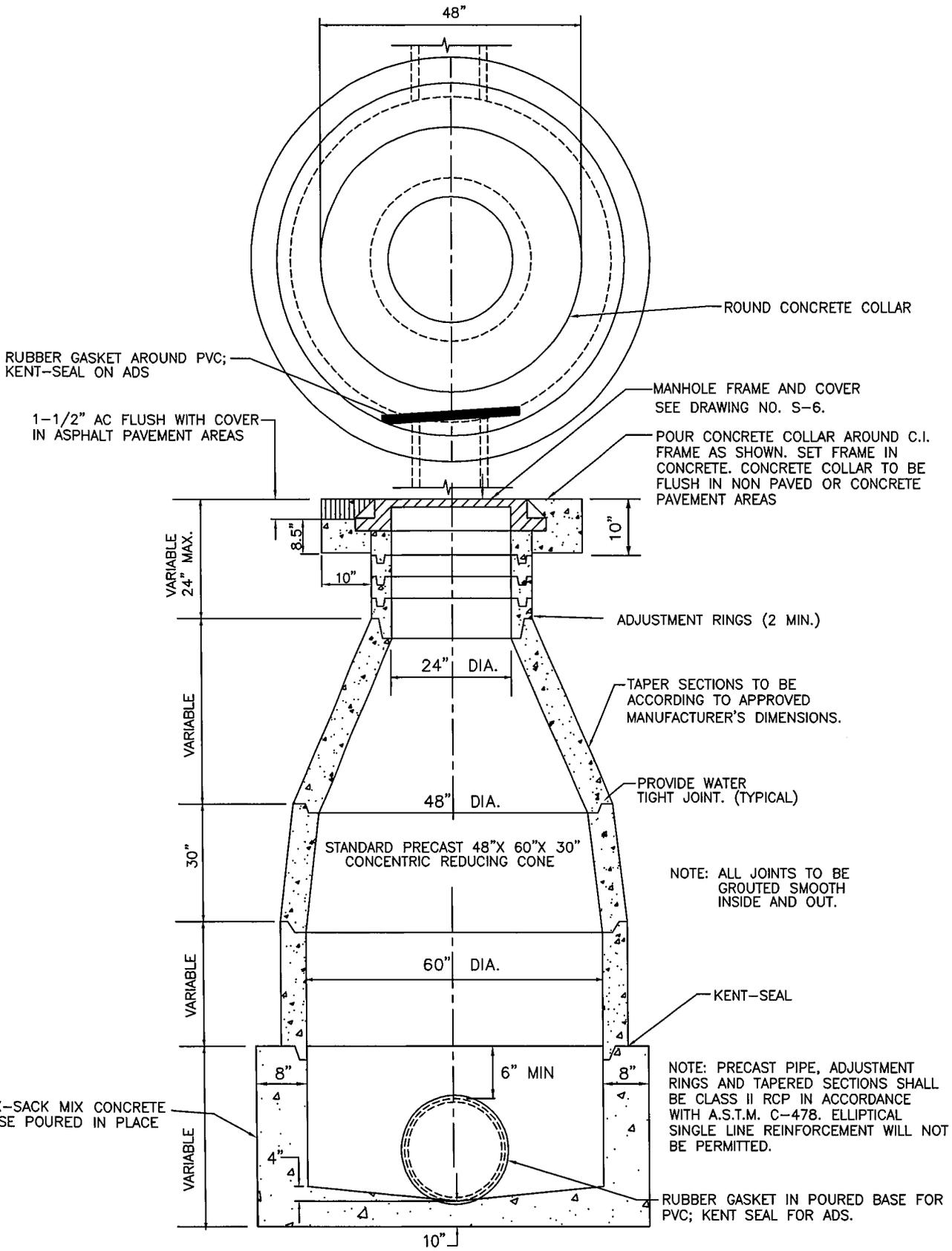


48" S.D. MANHOLE WITH  
 PRECAST SECTIONS & CAST  
 IRON FRAME & COVER

REVISIONS  
 3-10-10  
 7-25-13

CITY OF ORANGE COVE

STD  
 NO.  
 D-1

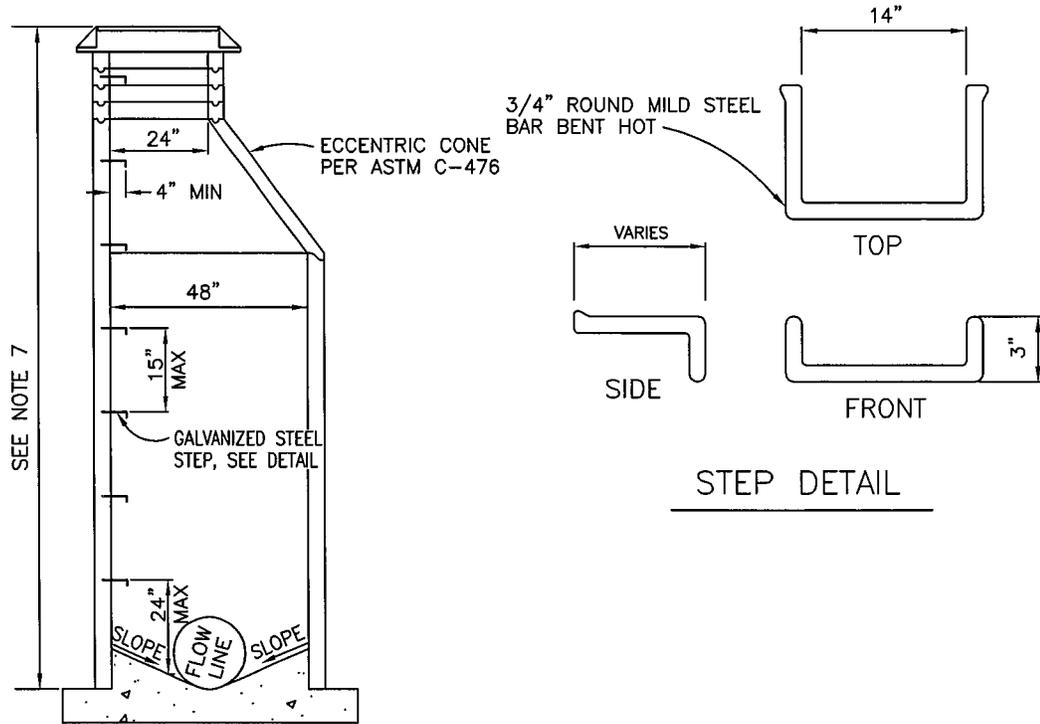


60" STORM DRAIN MANHOLE  
WITH PRECAST SECTIONS &  
CAST IRON FRAME & COVER

REVISIONS  
4-13-10  
7-25-13

CITY OF ORANGE COVE

STD  
NO.  
D-2

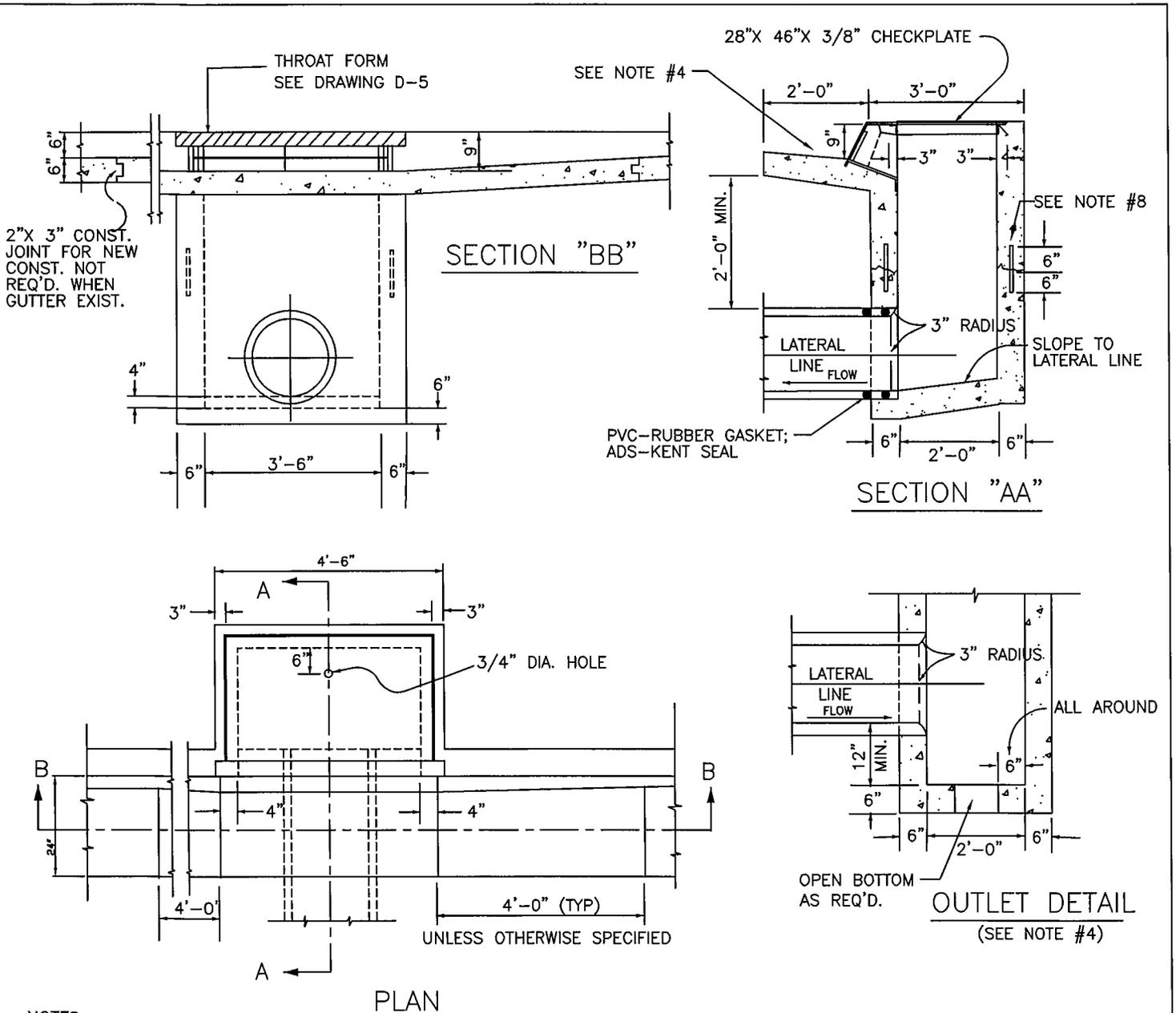


**MANHOLE WITH STEPS**  
NO SCALE

**NOTES:**

1. CONSTRUCTION OF MANHOLE SHALL BE IN ACCORDANCE WITH THE STORM DRAIN MANHOLE STANDARD D-1, EXCEPT AS MODIFIED HEREON.
2. AN ALTERNATE STEP MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.
3. ALL STEPS WILL BE FIRMLY AND RIGIDLY SET WITH EPOXY GROUT OR EPOXY.
4. STEPS SHALL BE GALVANIZED AFTER BENDING.
5. COST OF STEPS SHALL BE INCLUDED IN PRICE OF THE MANHOLE.
6. IN MANHOLES WITH LATERAL LINE CONNECTIONS, THE STEPS SHALL BE PLACED IN THE WALL WITH NO LATERALS, OR THE WITH THE LEAST DIAMETER LATERAL, SUCH THAT A CONTINUOUS VERITICAL ALIGNMENT OF STEPS MAY BE ACHIEVED.
7. MANHOLES WITH STEPS SHALL BE USED WHENEVER THE DISTANCE BETWEEN THE MANHOLE FLOW LINE AND THE TOP OF COVER IS EQUAL TO OR GREATER THAN 12 FEET.

<p>STORM DRAIN MANHOLE WITH STEPS</p>	<p>REVISIONS 4-13-10</p>	<p>CITY OF ORANGE COVE</p>	<p>STD NO. D-3</p>
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**NOTES:**

1. THE INLET MAY BE MODIFIED SLIGHTLY TO MATCH EXISTING CONDITIONS, AS DIRECTED BY THE ENGINEER.
2. STRUCTURE SHALL BE SIX-SACK MIX CONCRETE. EXPOSED SURFACES SHALL BE FINISHED AS PER CURB SPECIFICATIONS.
3. COST OF FRAME AND GRATE AND THROAT FORM SHALL BE INCLUDED IN PRICE OF INLET OR OUTLET.
4. WHEN EMPLOYED AS OUTLET, PLACE GUTTER 6" BELOW TOP OF CURB GRADE AND ELIMINATE 1/2" IRON ROD FROM THROAT FORMS.
5. CURB & GUTTER SHALL BE CONSTRUCTED OR RECONSTRUCTED ON EACH SIDE OF BOX AS INDICATED ON THE PLANS AND COST THEREOF SHALL BE INCLUDED IN PRICE OF INLET OR OUTLET.
6. FLOOR OF INLET SHALL SLOPE FROM ALL WALLS TO THE LATERAL LINE AND SHALL BE GIVEN A STEEL-TROWELED FINISH.
7. AT THE CONTACT POINT BETWEEN THE LATERAL LINE AND THE INLET WALL A SMOOTH 3" RADIUS SHALL BE CONSTRUCTED.
8. IF INLET IS CONSTRUCTED IN A TWO STAGE POUR, PROVIDE A ROUGHENED CONSTRUCTION JOINT AND PLACE ONE No. 4 BAR 12" LONG IN EACH OF THE FOUR WALLS AS SHOWN.

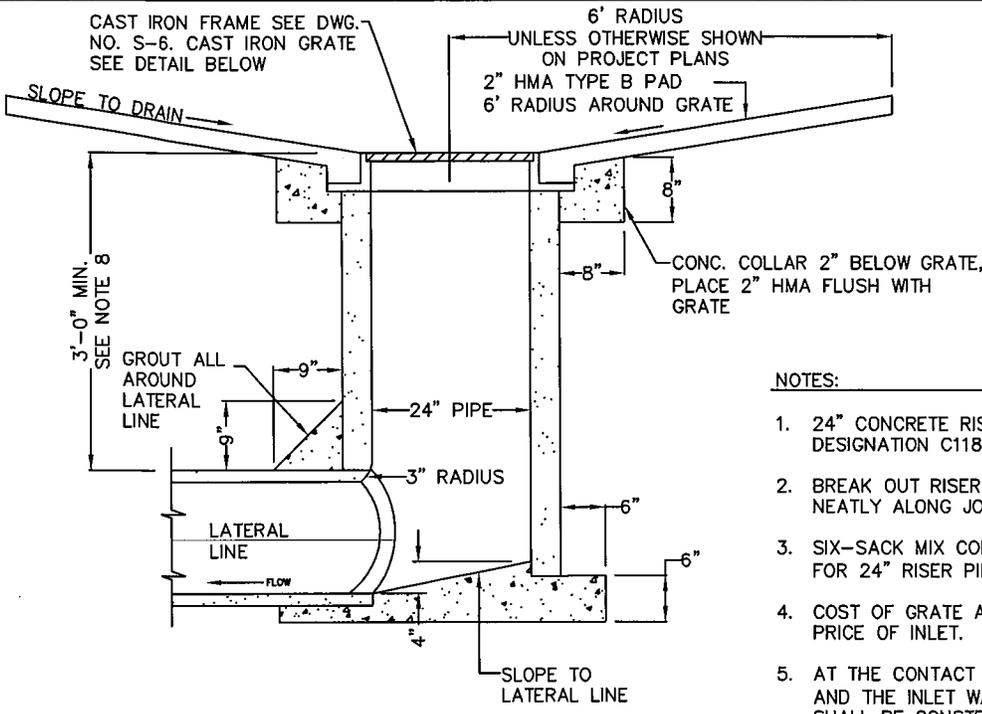
CATCH BASIN  
INLET & OUTLET

REVISIONS

CITY OF ORANGE COVE

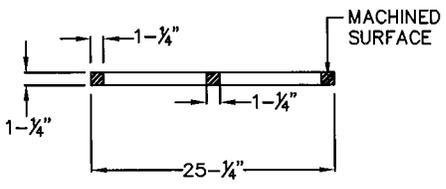
STD  
NO.  
D-4



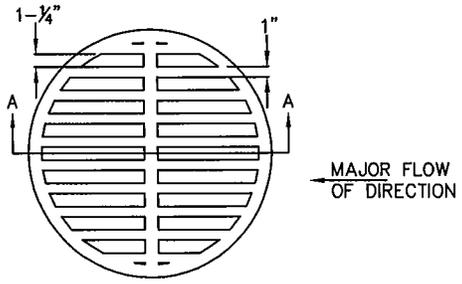


DRAIN INLET DETAIL  
NO SCALE

- NOTES:
- 24" CONCRETE RISER PIPE SHALL BE A.S.T.M. DESIGNATION C118.
  - BREAK OUT RISER PIPE AND CUT LATERAL LINE NEATLY ALONG JOINT. FILL JOINT SPACE WITH MORTAR.
  - SIX-SACK MIX CONCRETE BASE SHALL BE PROVIDED FOR 24" RISER PIPE AS SHOWN.
  - COST OF GRATE AND FRAME SHALL BE INCLUDED IN PRICE OF INLET.
  - AT THE CONTACT POINT BETWEEN THE LATERAL LINE AND THE INLET WALL A SMOOTH 3" RADIUS CURVE SHALL BE CONSTRUCTED.
  - FLOOR OF THE INLET SHALL SLOPE FROM ALL WALLS TO THE LATERAL LINE AND SHALL BE GIVEN A STEEL-TROWELED FINISH.
  - COST OF THE 2"x6" DIAMETER A.C. PAD IS TO BE INCLUDED IN PRICE OF INLET WHERE ACCURS.
  - PIPE MINIMUM DEPTH MAY BE ADJUSTED BY THE DESIGNER OR ENGINEER. MAY REQUIRE PIPE CLASS CHANGE OR SPECIAL BACKFILL.



SECTION A-A  
N.T.S.



PLAN  
N.T.S.  
24" CAST IRON GRATE  
NO SCALE

- NOTES:
- ALL DIMENSIONS ARE FINISHED DIMENSIONS
  - GRATE SHALL BE CAST IRON
  - GRATE SHALL BE INSTALLED SUCH THAT THE SLOTS ARE PARALLEL TO MAJOR DIRECTION OF DRAINAGE FLOW.

TYPE "E" DRAIN INLET

REVISIONS  
4-13-10  
8-12-13

CITY OF ORANGE COVE

STD  
NO.  
D-6

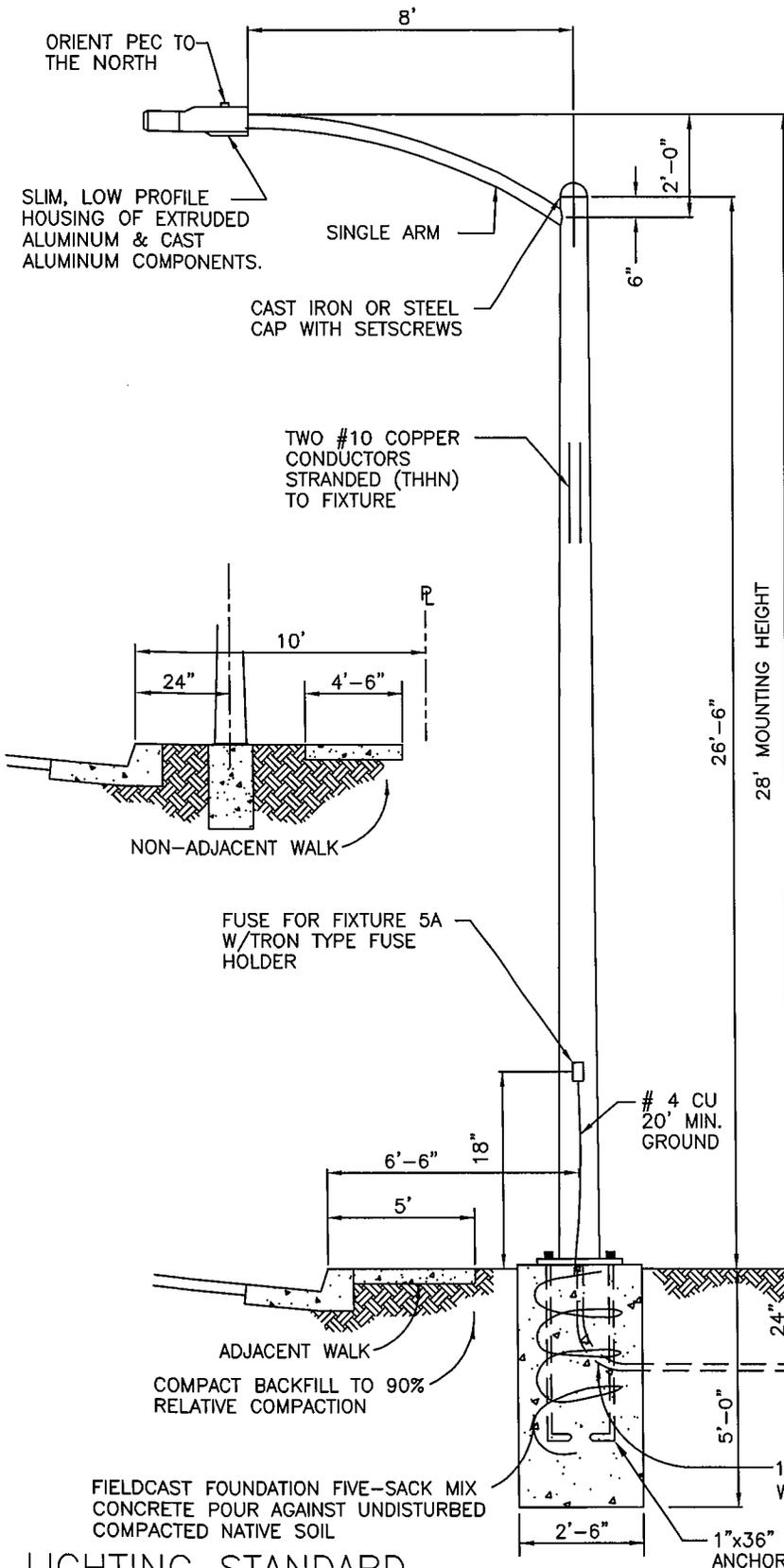
# GENERAL NOTES

ALL WORK SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE SPECIFICATIONS ENTITLED "STANDARD SPECIFICATIONS, STATE OF CALIFORNIA, BUSINESS AND TRANSPORTATION AGENCY, DEPARTMENT OF TRANSPORTATION", AND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, AND THESE SPECIAL PROVISIONS.

LUMINAIRE SHALL BE LIGHT EMITTING DIODE TYPE, LEDWAY STREETLIGHT TYPE III MEDIUM, AS MANUFACTURED BY BETALED, OR APPROVED EQUAL. BETALED CATALOG# STR-LWY-3M-HT-03-C-UL-SV-R, OR APPROVED EQUAL, SHALL BE CONSIDERED EQUIVALENT TO A 70 WATT HIGH PRESSURE SODIUM LUMINAIRE. BETALED CATALOG# STR-LWY-3M-HT-04-C-UL-SV-R, OR APPROVED EQUAL, SHALL BE CONSIDERED EQUIVALENT TO A 150 WATT HIGH PRESSURE SODIUM LUMINAIRE.

ALL STREET LIGHTS SHALL BE NUMBERED. NUMERICAL SEQUENCE TO BE OBTAINED FROM P.G.&E. NUMBERS TO BE 1 1/2" HIGH AND INSTALLED NINE FEET ABOVE FINISHED GRADE, FACING STREET.

A PULL BOX WILL BE REQUIRED WHEREVER CONDUIT CHANGES DIRECTION AND WHERE MULTIPLE LIGHTS ARE INSTALLED ON A SINGLE SERVICE. PULLBOX SPACING SHALL NOT EXCEED 200'. (SEE P.W. STD. E-4)



## BASE PLATE DETAIL

SEE BASE DETAIL STD. E-2

LIGHTING STANDARD  
P.G.&E. 35-7274

STREETLIGHT-LOCAL STREET  
WITH BASE, PULL BOX &  
PVC CONDUIT

REVISIONS  
03-22-10  
03-31-11

CITY OF ORANGE COVE

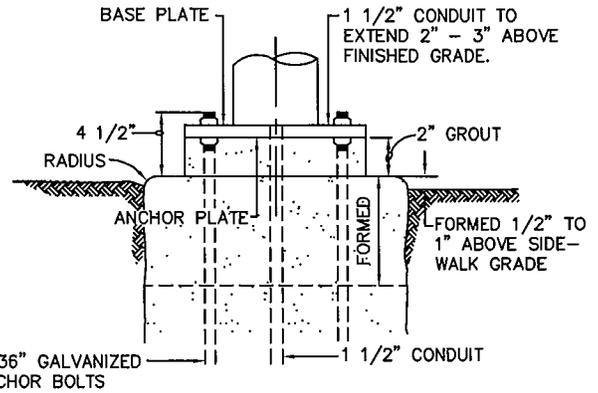
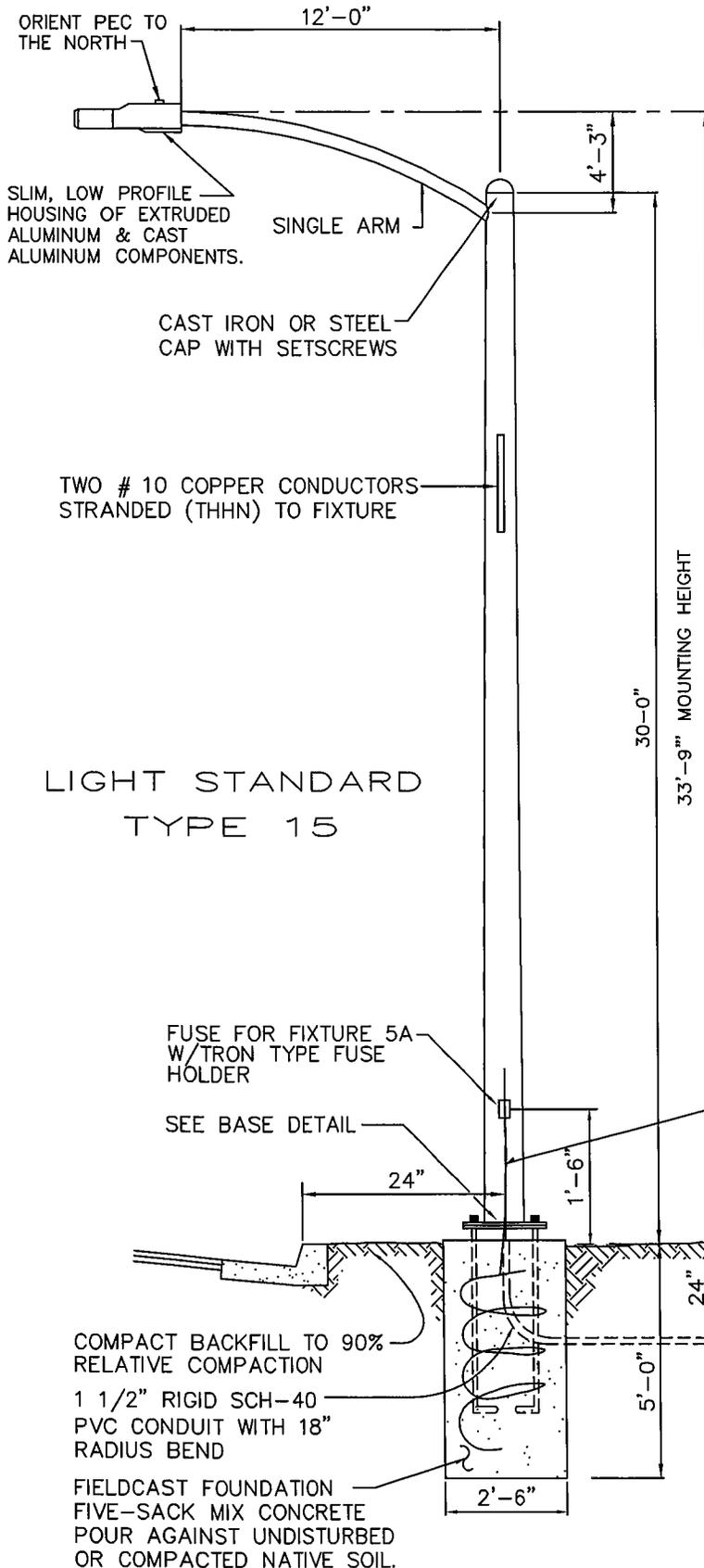
STD  
NO.  
E-1

**GENERAL NOTES**

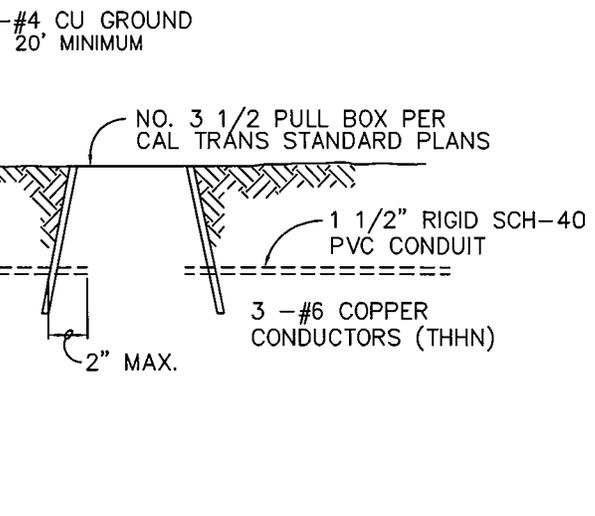
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**BASE DETAIL**

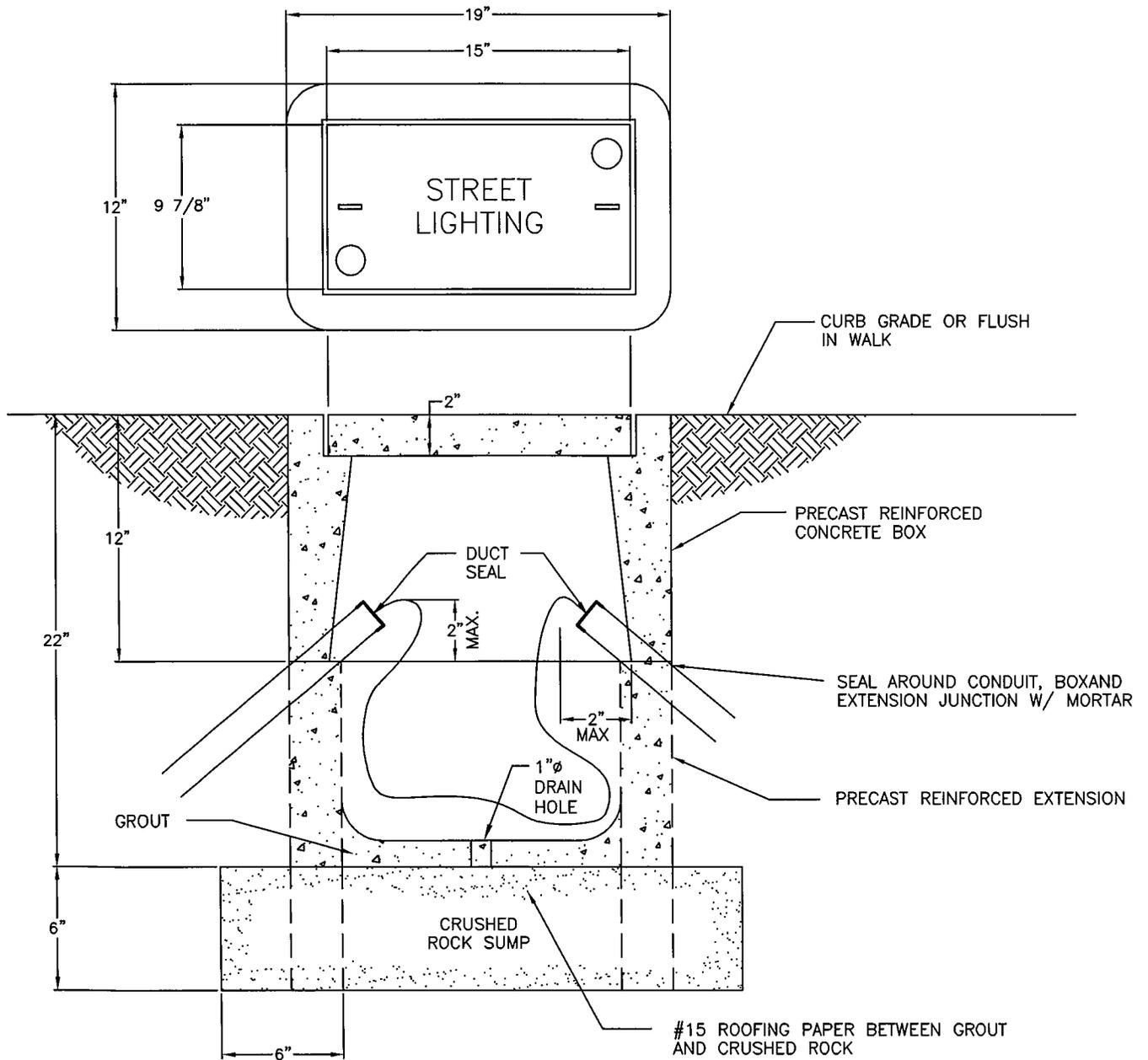


**STREET LIGHT-COLLECTOR  
STREET WITH BASE, PULL BOX  
& PVC CONDUIT**

REVISIONS  
9-13-94  
12-8-05  
03-22-10  
03-31-11

CITY OF ORANGE COVE

STD  
NO.  
E-2



### GENERAL NOTES:

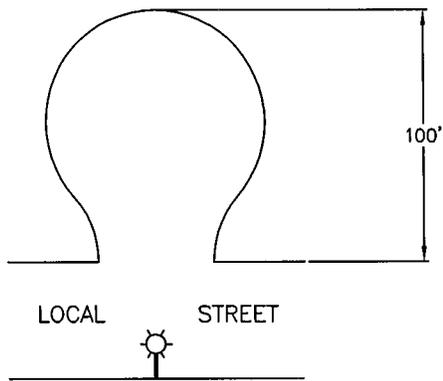
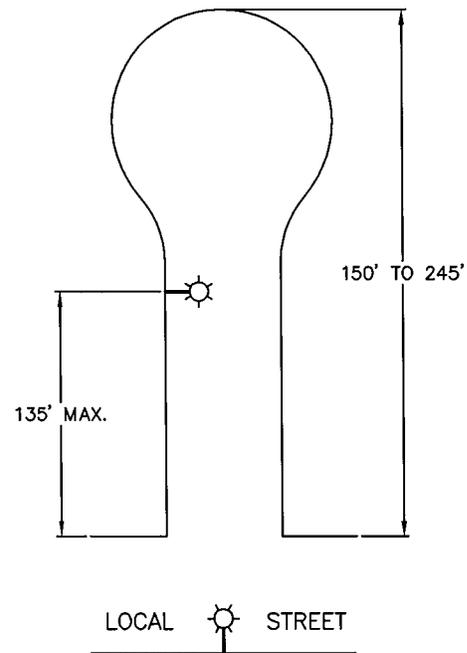
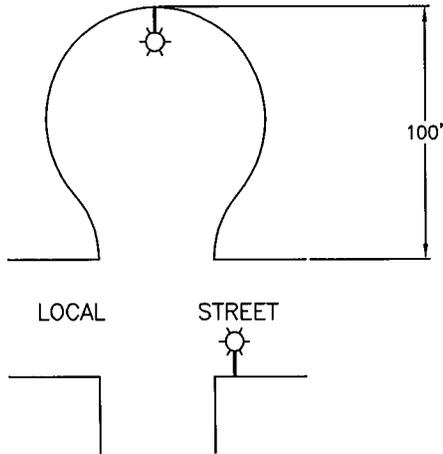
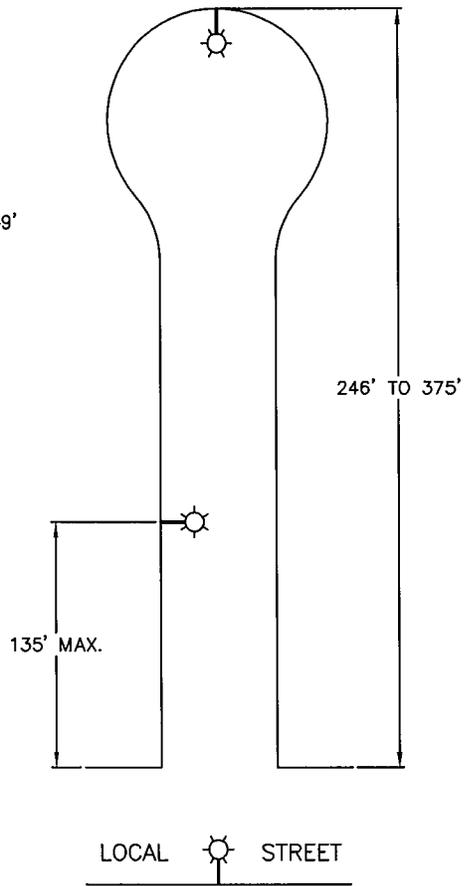
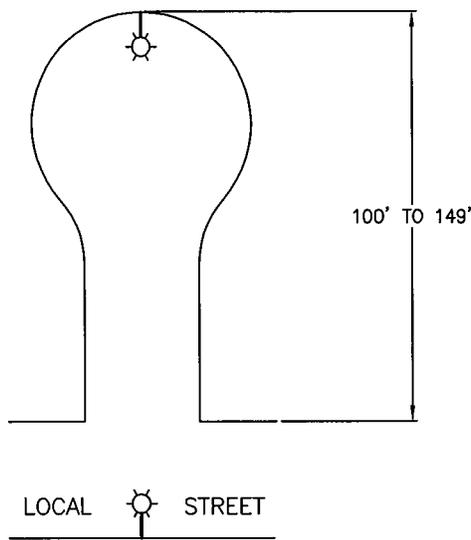
1. PULL BOXES SHALL BE #3 1/2 AS PER CAL TRANS STANDARD SPECIFICATION OR CHRISTY N-9 OR APPROVED EQUAL.
2. PULL BOXES SHALL BE GROUTED PRIOR TO INSTALLATION OF CONDUCTORS, SLOPED TOWARD THE DRAIN HOLE. PLACE A LAYER OF ROOFING PAPER BETWEEN THE CRUSHING ROCK AND THE GROUT.
3. PULL LIDS BEFORE POURING CONCRETE AROUND PULL BOXES.
4. WRAP PULL BOX WITH ROOFING PAPER BEFORE BACKFILLING.
5. FUSE AT POINT OF SERVICE SHALL BE 60A IF #6 CONDUCTOR AND 40A IF #8 CONDUCTOR AND SHALL HAVE A TRON TYPE FUSE HOLDER. (SINGLE POLE)
6. INSTALL A ONE-FOOT RING OF CONCRETE, FOUR INCHES DEEP, AROUND THE WRAPPED PULL BOXES INSTALLED IN DIRT AREAS. SLOPED TO DRAIN AWAY FROM THE PULL BOX.

STREETLIGHTS  
CONCRETE PULL BOXES

REVISIONS  
12-8-05

CITY OF ORANGE COVE

STD  
NO.  
E-4



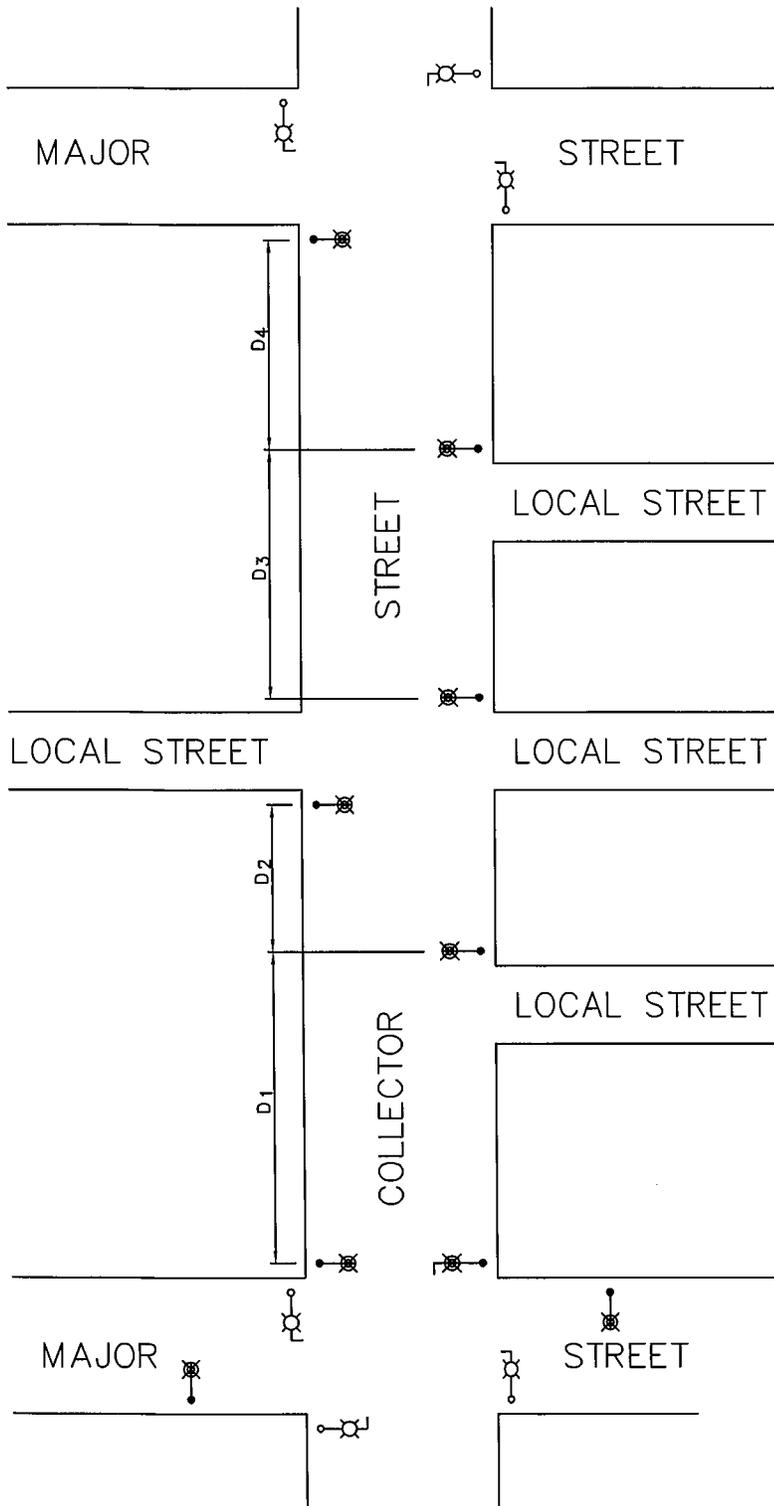
# STREETLIGHT-PLACEMENT CUL-DE-SAC STREETS

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
E-5





$D_n$  = DISTANCE TO BE DIVIDED FOR MID BLOCK LIGHTING

☉ DESIGN CONTROL STREET LIGHT -150W  
MID-BLOCK LIGHTS SHALL BE 70W

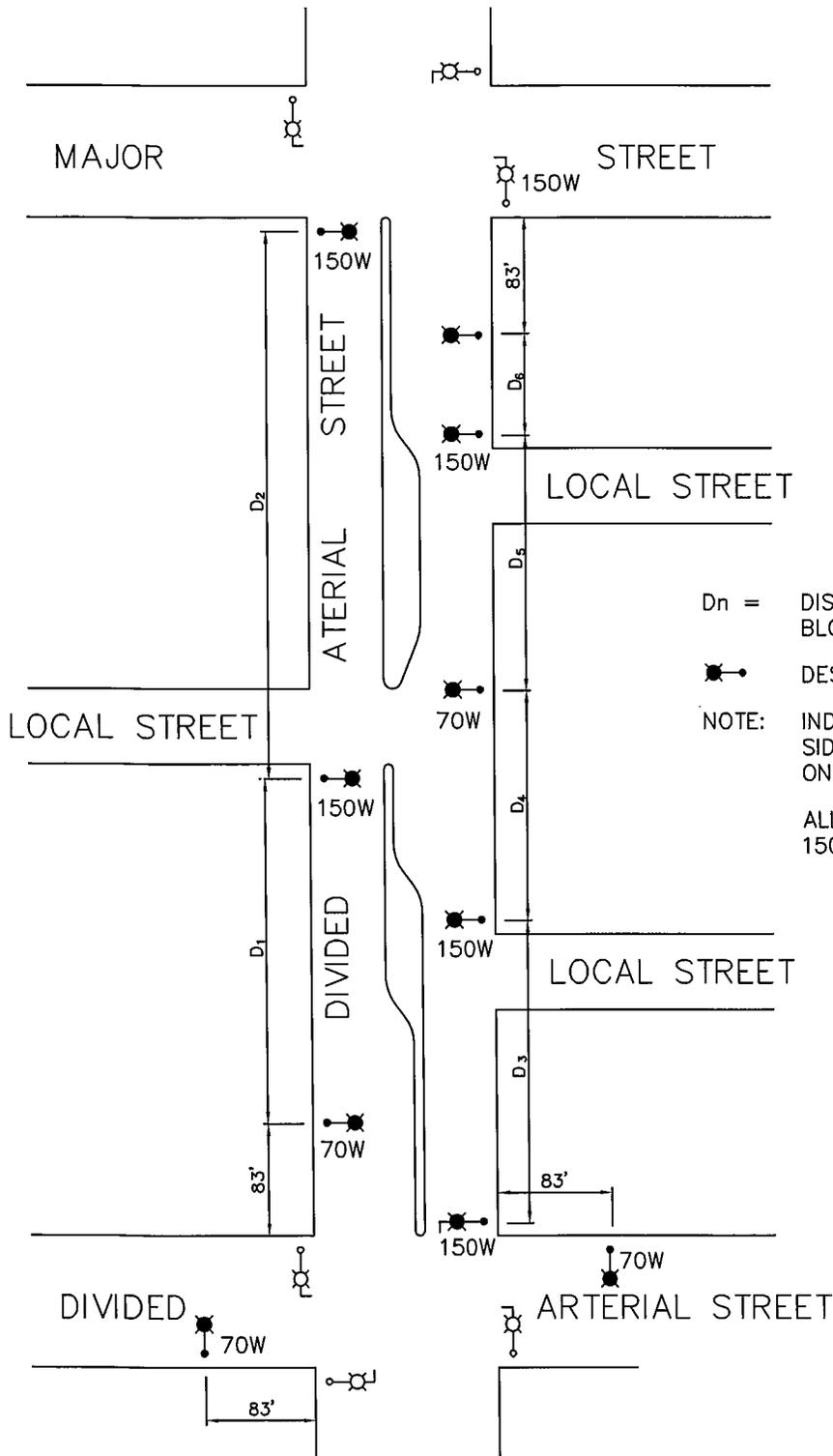
NOTE: STAGGER OR ALL ON ONE SIDE  
MAX, SPACING UNIT TO UNIT 150'  
UNDIVIDED ROADWAY 50-90'

STREETLIGHT-PLACEMENT  
COLLECTOR STREET

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
E-7



D<sub>n</sub> = DISTANCE TO BE DIVIDED FOR MID BLOCK LIGHTING

● DESIGN CONTROL STREET LIGHT

NOTE: INDEPENDENT SYSTEMS ON EACH SIDE WITH 165 FT. MAX. SPACING ON EACH SIDE

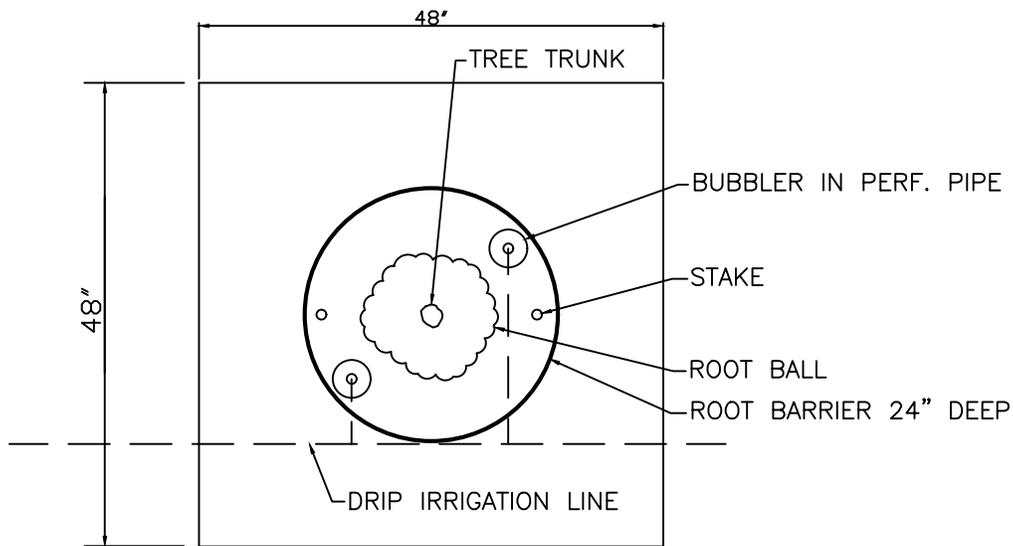
ALL INTERSECTIONS LIGHTS SHALL BE 150W, MID BLOCK LIGHTS SHALL BE 70W

# STREETLIGHT-PLACEMENT DIVIDED ARTERIAL & EXPRESSWAY STREETS

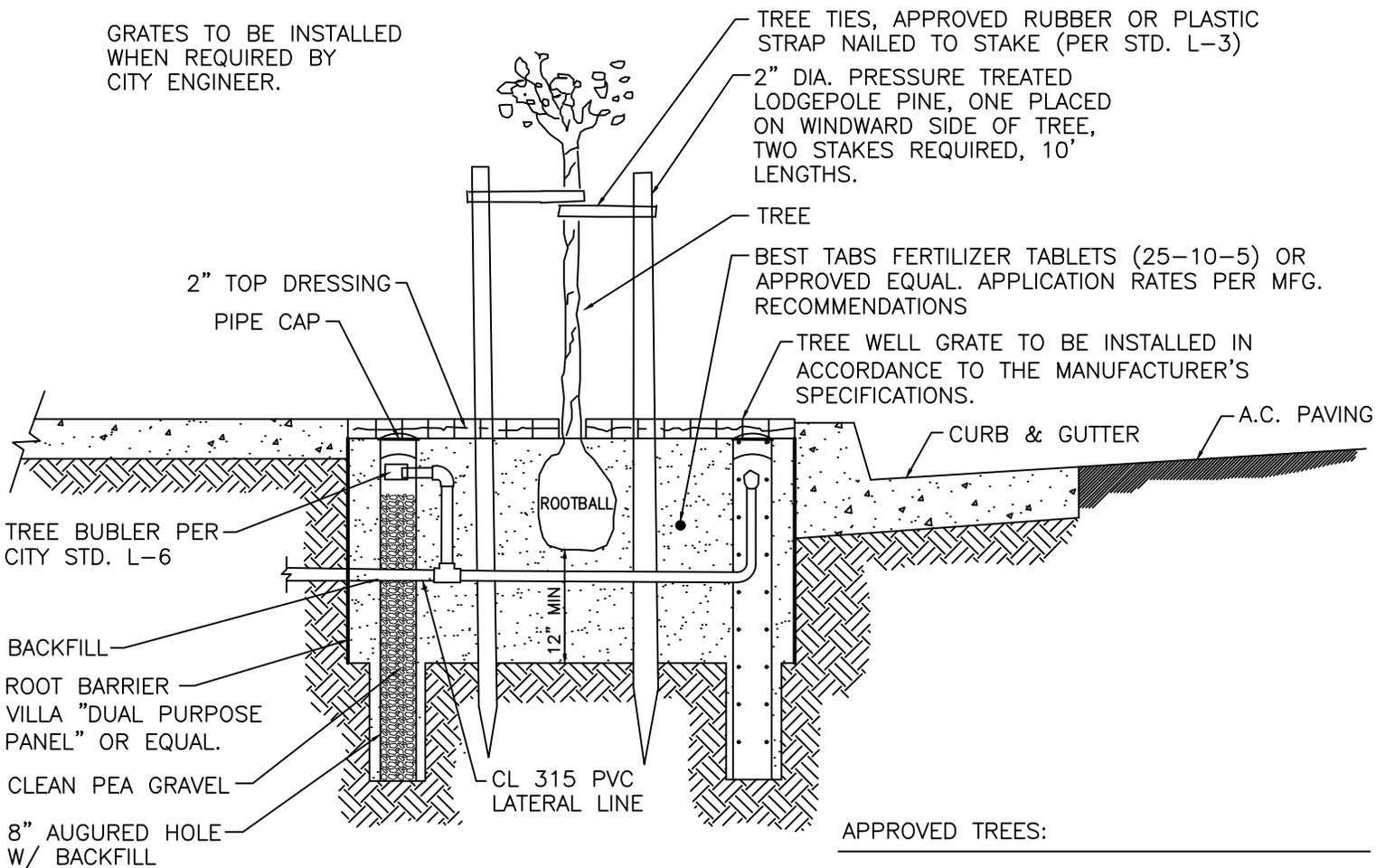
REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
E-8



GRATES TO BE INSTALLED WHEN REQUIRED BY CITY ENGINEER.



**NOTE:**

1. INSTALL BUBBLER & PERF. PIPE INSIDE ROOT BARRIER AS SHOWN IN DTL. ABOVE.
2. ROOT BARRIER REQUIRED FOR ANY TREE WITHIN 5' OF SIDEWALK OR CURB.

**APPROVED TREES:**

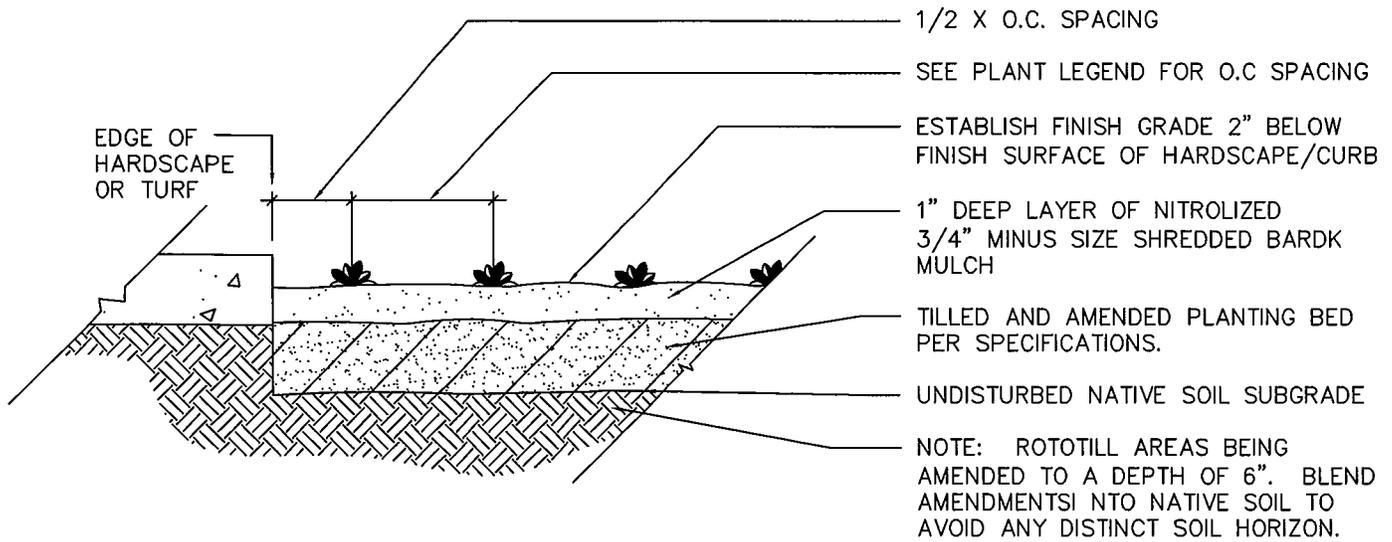
1. LONDON PLANE TREE (*PLATANUS ACERIFOLIA*).
2. CHINESE PISTACHE (*PISTACIA CHINENSIS*).
3. WESTERN REDBUD (*CERCIS OCCIDENTALIS*).
4. CREPE MYRTLE (*LARGERSTROEMIA*).

TREE WELL

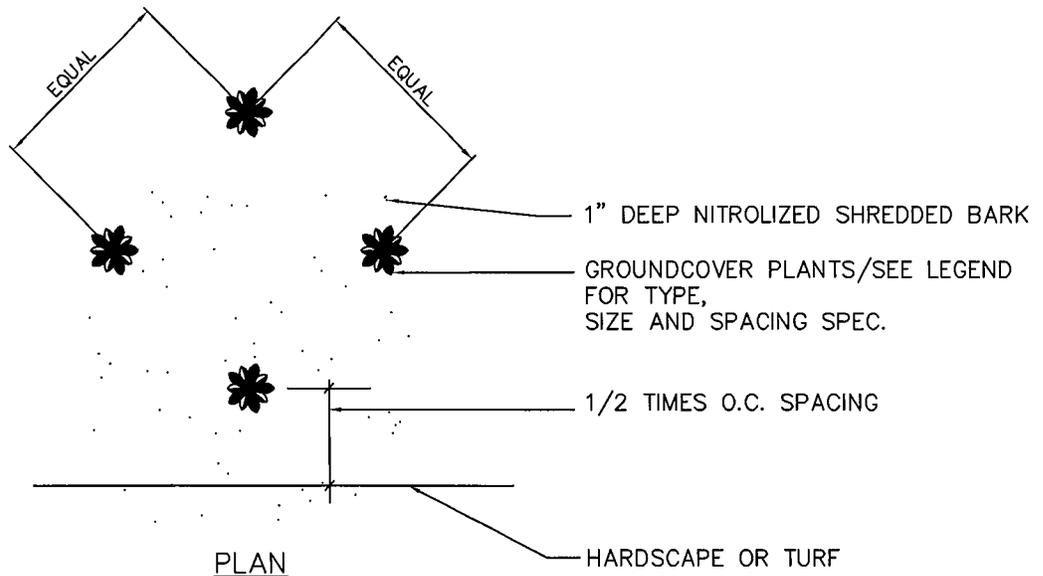
REVISIONS  
8-12-13  
3-24-15

CITY OF ORANGE COVE

STD  
NO.  
L-1



SECTION



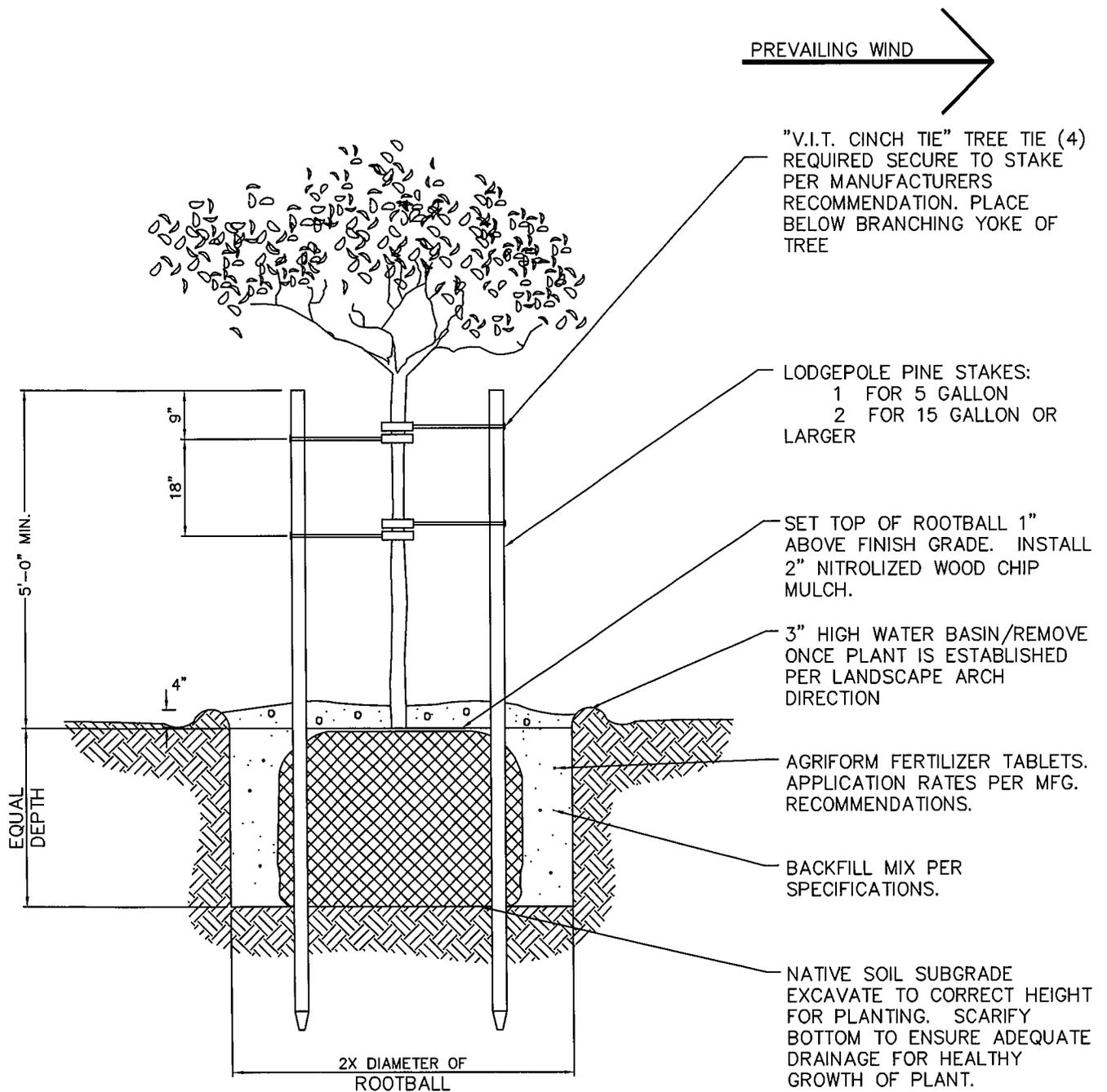
PLAN

GROUND COVER SPACING

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
L-2

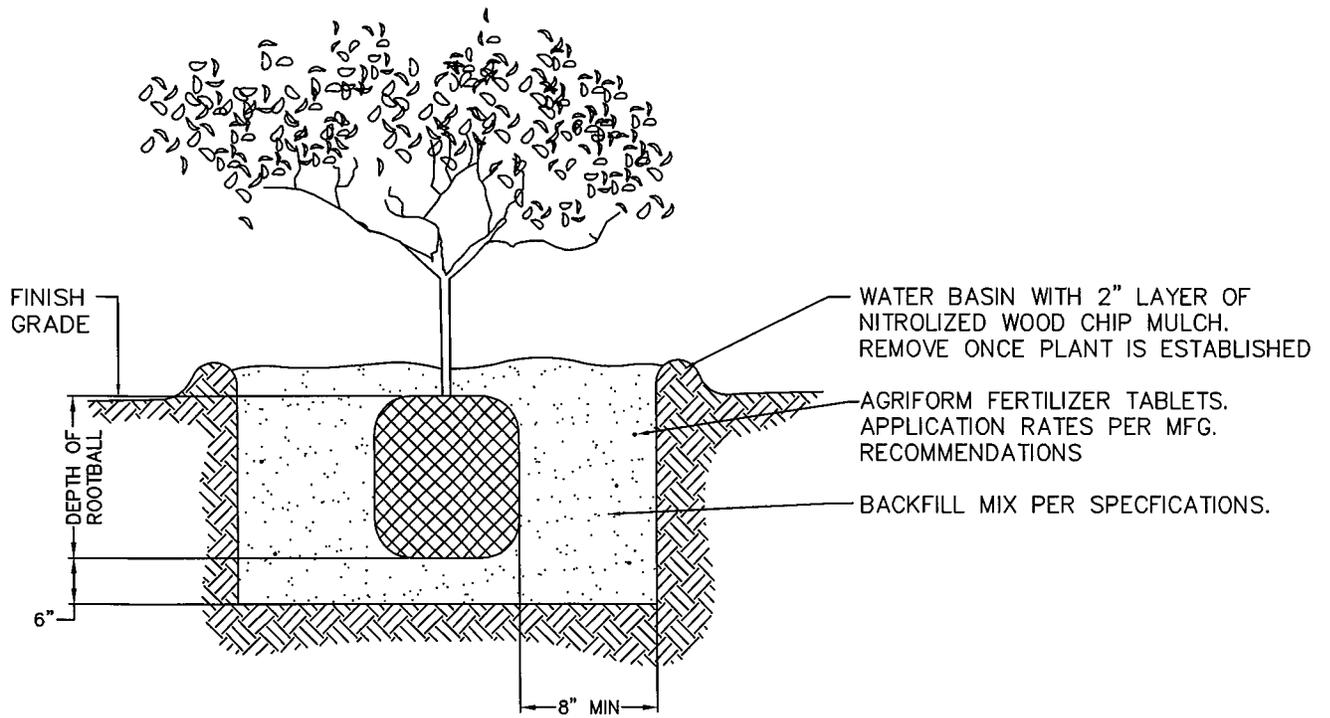


# DOUBLE STAKING

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
L-3



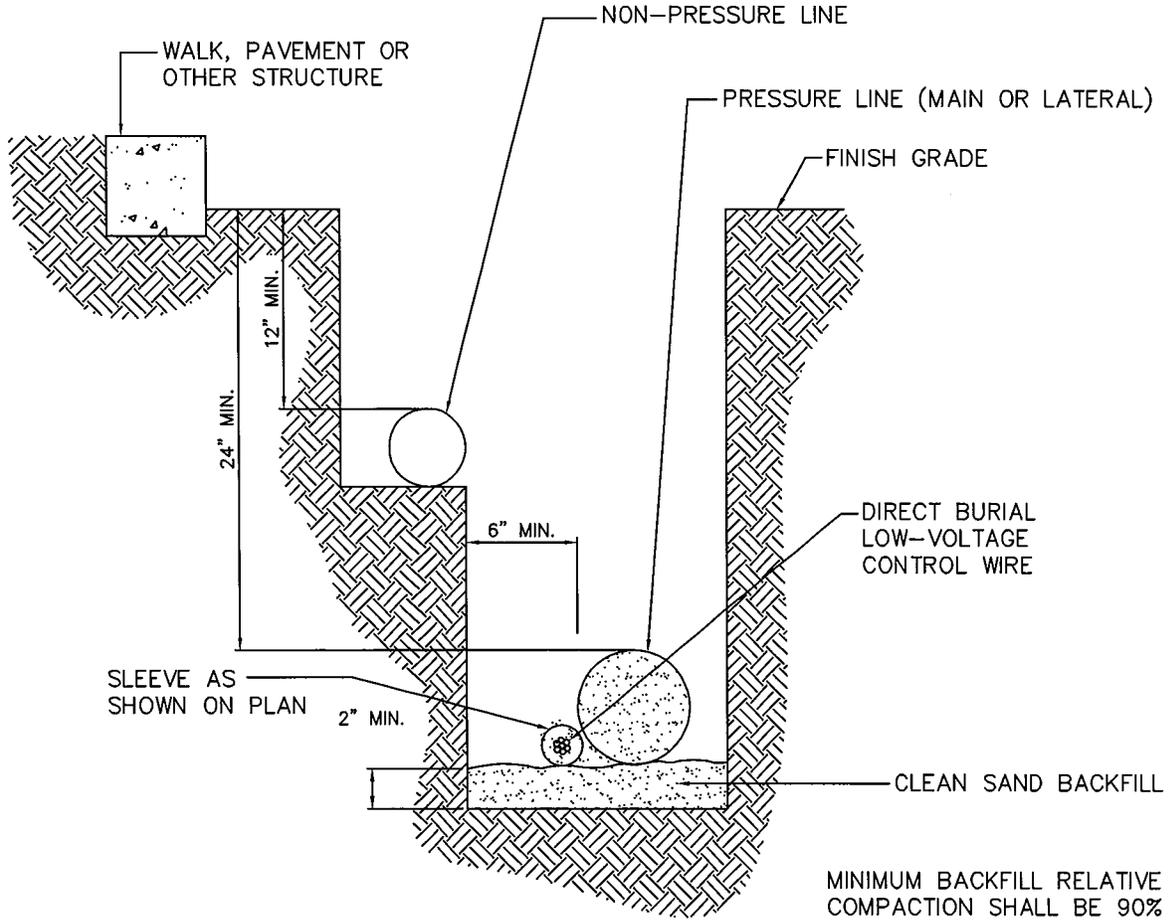
SHRUB PLANTING

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
L-4

NOTE: TRENCHING AND BACKFILLING SHALL BE PER STANDARD SPECIFICATIONS



NOTE:

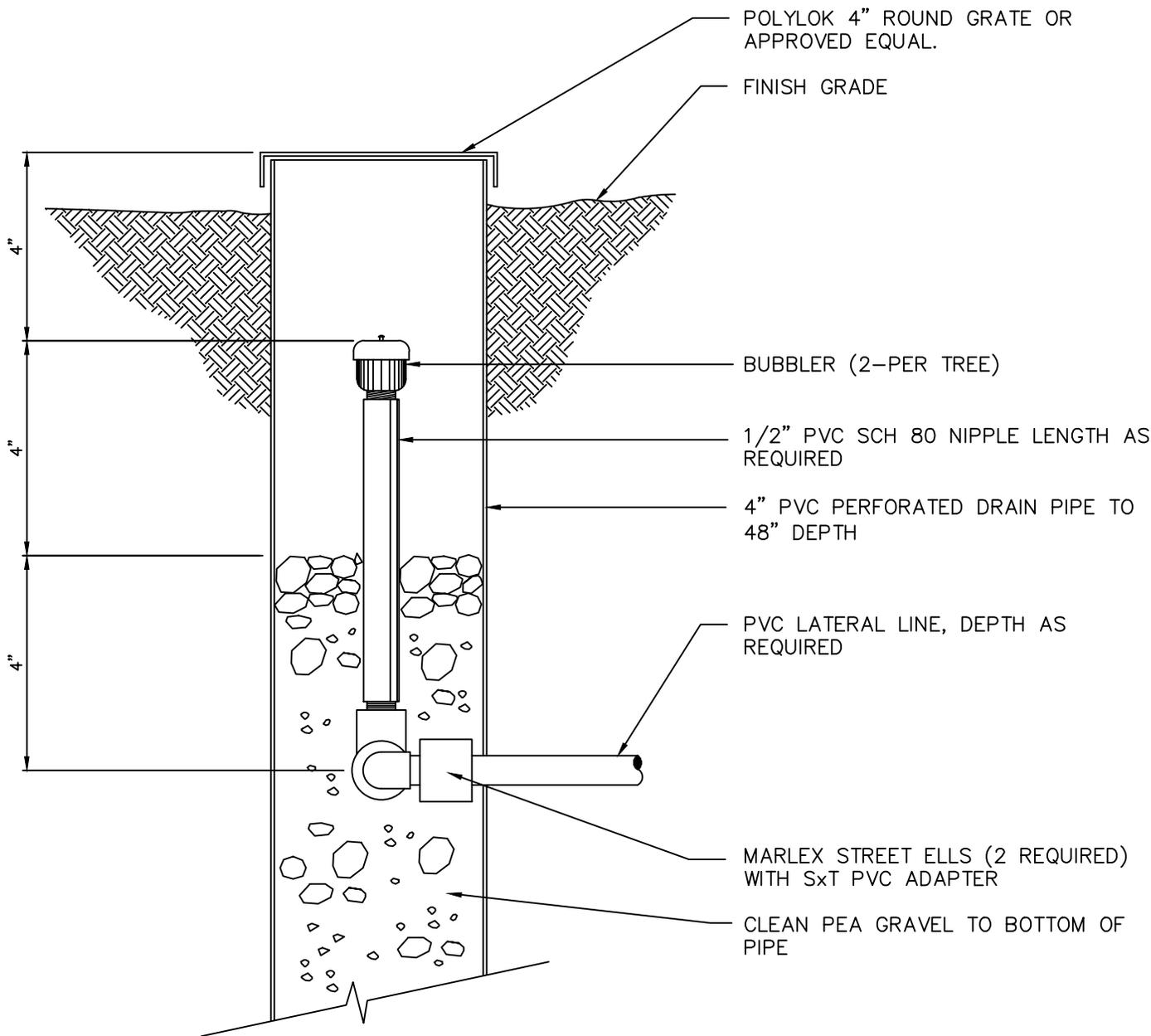
1. ALL PLASTIC PIPING TO BE SNAKED IN TRENCHES
2. BUNDLE & TAPE WIRING AT 10' INTERVALS
3. TIE A LOOSE 20" LOOP IN WIRING AT CHANGES OF DIRECTION GREATER THAN 30°. UNTIE ALL LOOPS AFTER ALL CONNECTIONS HAVE BEEN MADE.
4. INSTALL ALL CONTROL WIRE ON THE UNDERSIDE OF THE MAINLINE PIPE.
5. SEE IRRIGATION SPECIFICATIONS FOR BACKFILL AND COMPACTION REQUIREMENTS.
6. PIPE DEPTH FOR PRESSURE MAINLINE SHALL BE 24" MINIMUM.
7. PIPE DEPTH FOR NON-PRESSURE LATERAL LINES SHALL BE 12" MINIMUM.
8. PIPE DEPTH FOR ALL LINES UNDER PAVEMENT SHALL BE 24" MINIMUM.

TRENCHING

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
L-5

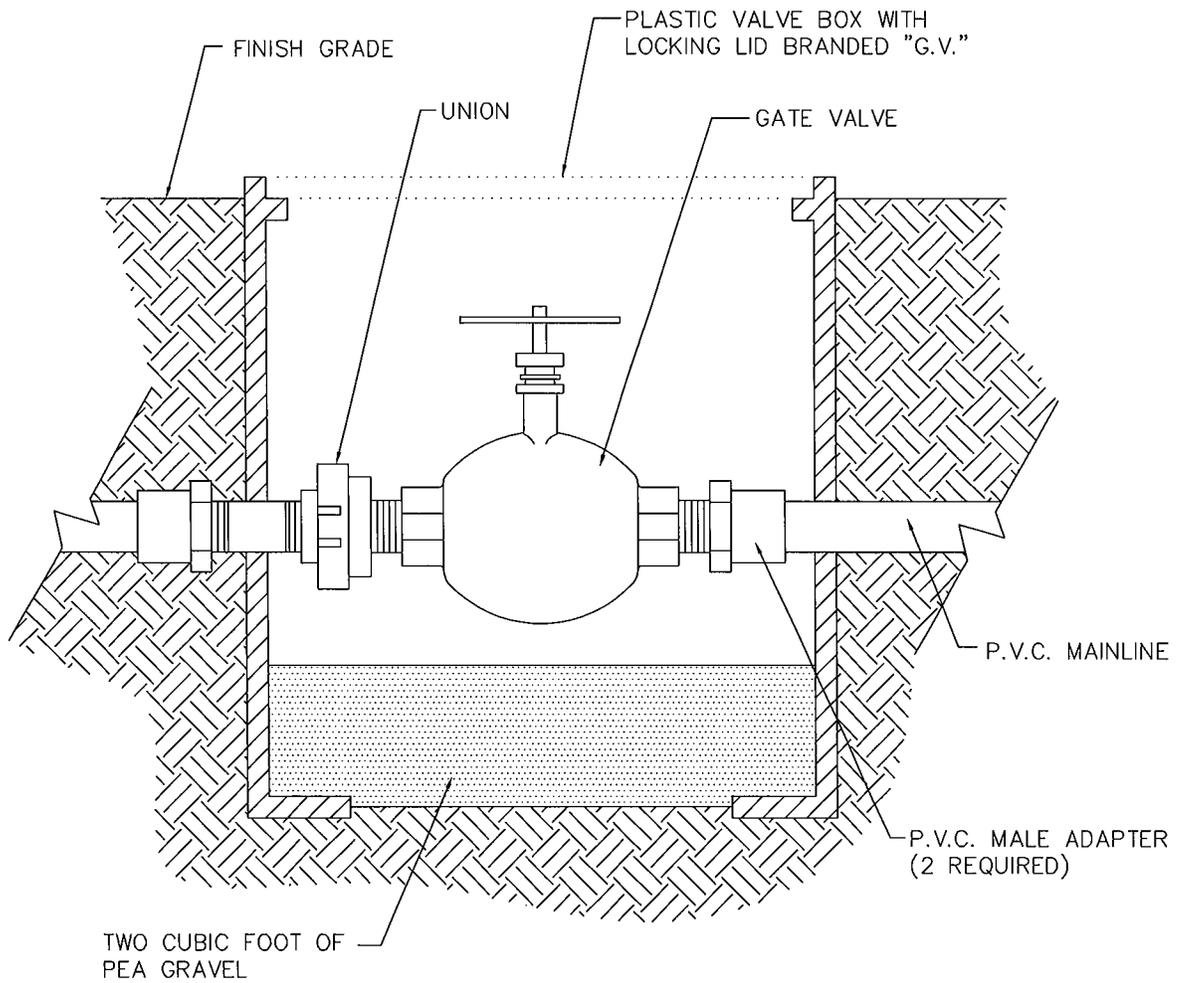


TREE BUBBLER

REVISIONS  
 5-07-10  
 3-20-15

CITY OF ORANGE COVE

STD  
 NO.  
 L-6



NOTE: INSTALL VALVE BOX SO THAT THE TOP OF COVER IS 2" ABOVE FINISH GRADE IN GROUND COVER AREAS.

GATE VALVE

REVISIONS  
5-7-10

CITY OF ORANGE COVE

STD  
NO.  
L-7

RECTANGULAR PLASTIC VALVE BOX WITH BOLT DOWN LID. ONE VALVE PER BOX—NO EXCEPTION. INSTALL BOX AS SHOWN IN BOX INSTALLATION DETAIL. TOP DIMENSION: 12" x 17" (12" DEEP)

POLYURETHANE I.D. TAG WITH CONTROLLER AND STATION NUMBER

FINISH GRADE

VALVE CONTROL WIRE—PROVIDE 3M DBY SEAL PACKS AT ALL SPLICES AND 36" OF EXCESS WIRE IN A 1" DIAMETER COIL.

SCHEDULE 40 PVC MALE ADAPTER

REMOTE CONTROL VALVE WITH FLOW CONTROL AND MANUAL BLEED

SCHEDULE 80 PVC THREADED FITTINGS (AS REQUIRED)

PVC LATERAL LINE

BRICK — 1 EACH CORNER

12"  
18"

SCHEDULE 80 PVC NIPPLE

PEA GRAVEL—4" DEEP BELOW VALVE (NO SOIL IN VALVE BOX)

SCHEDULE 80 PVC THREADED UNION

LOWER LATERAL LINE WITH SCHEDULE 40 PVC 45° ELLS

PVC MAINLINE

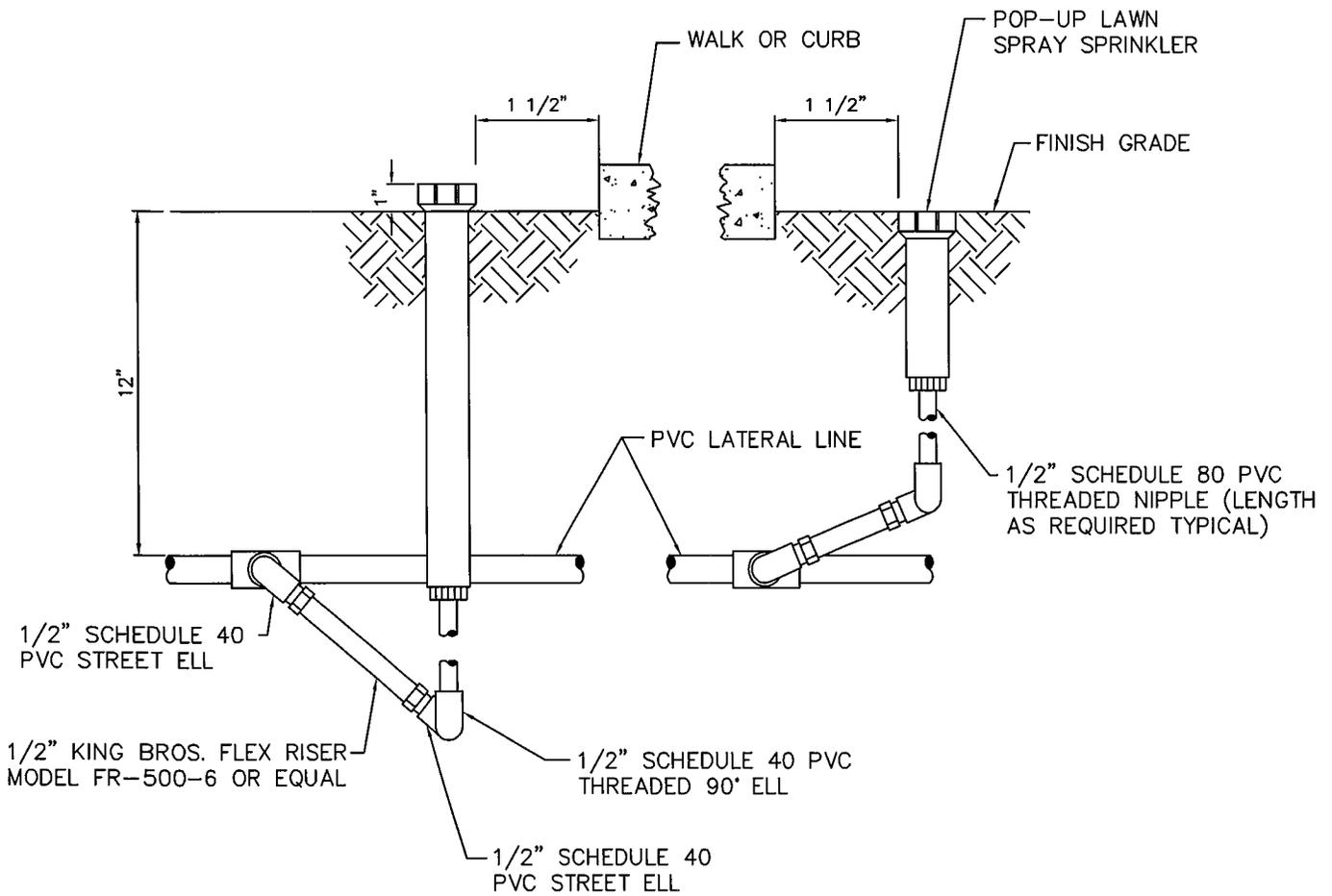
UPC APPROVED SCHEDULE 40 PVC TEE

# REMOTE CONTROL VALVE

REVISIONS  
5-7-10

CITY OF ORANGE COVE

STD  
NO.  
L-8



NOTE: SPRINKLER HEADS ADJACENT TO BUILDINGS ARE TO BE PLACED 12" FROM BUILDING WALLS.

# POP-UP SPRAY SPRINKLER RISER

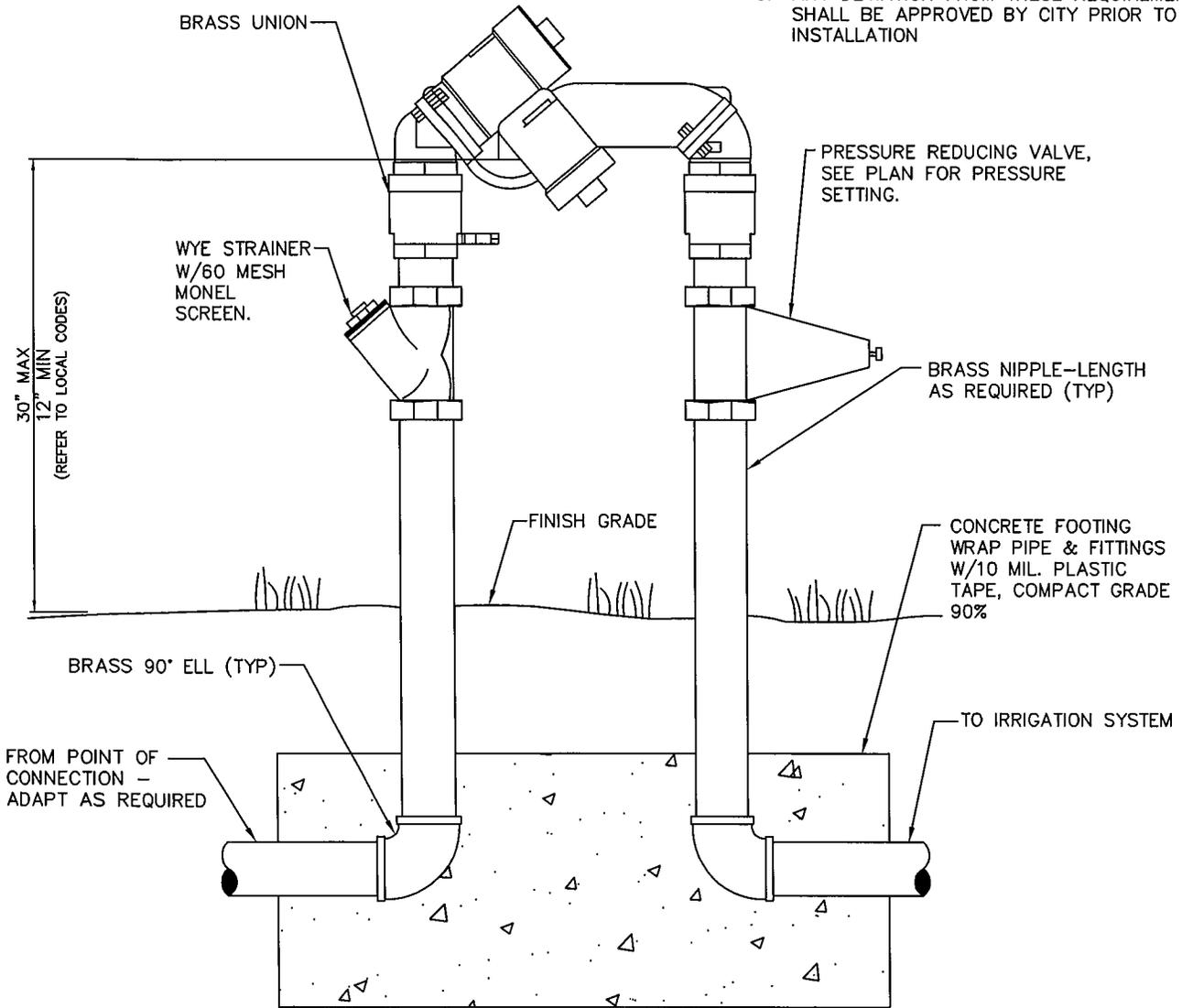
REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
L-9

**NOTES:**

1. INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENTS. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.
2. CONTRACTOR TO SUPPLY FROST CONTROL BLANKET FOR CITY PROJECTS.
3. ANY DEVIATION FROM THESE REQUIREMENTS SHALL BE APPROVED BY CITY PRIOR TO INSTALLATION

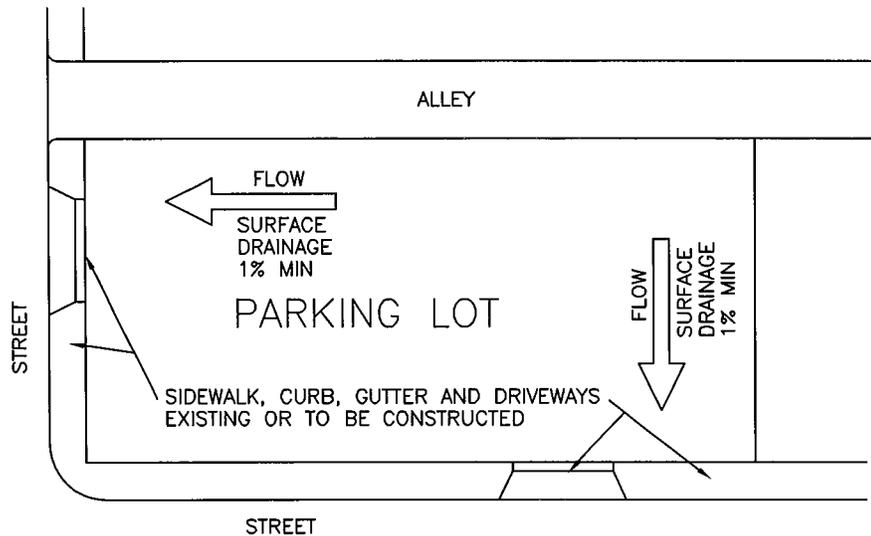


BACKFLOW PREVENTER

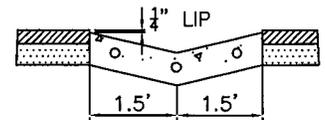
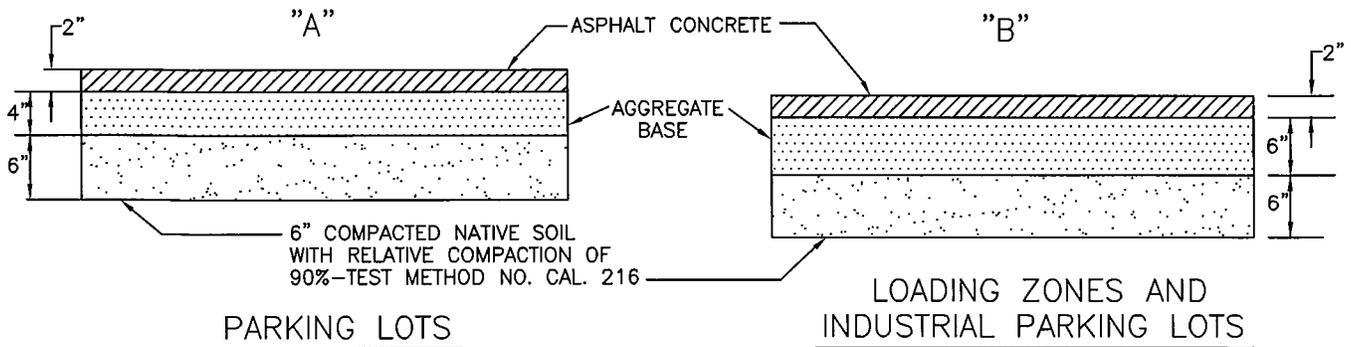
REVISIONS  
5-7-10  
8-12-13

CITY OF ORANGE COVE

STD  
NO.  
L-10



TYPICAL MINIMUM CROSS-SECTIONS



PARKING LOT V GUTTER  
FOR DETAILS SEE P-12

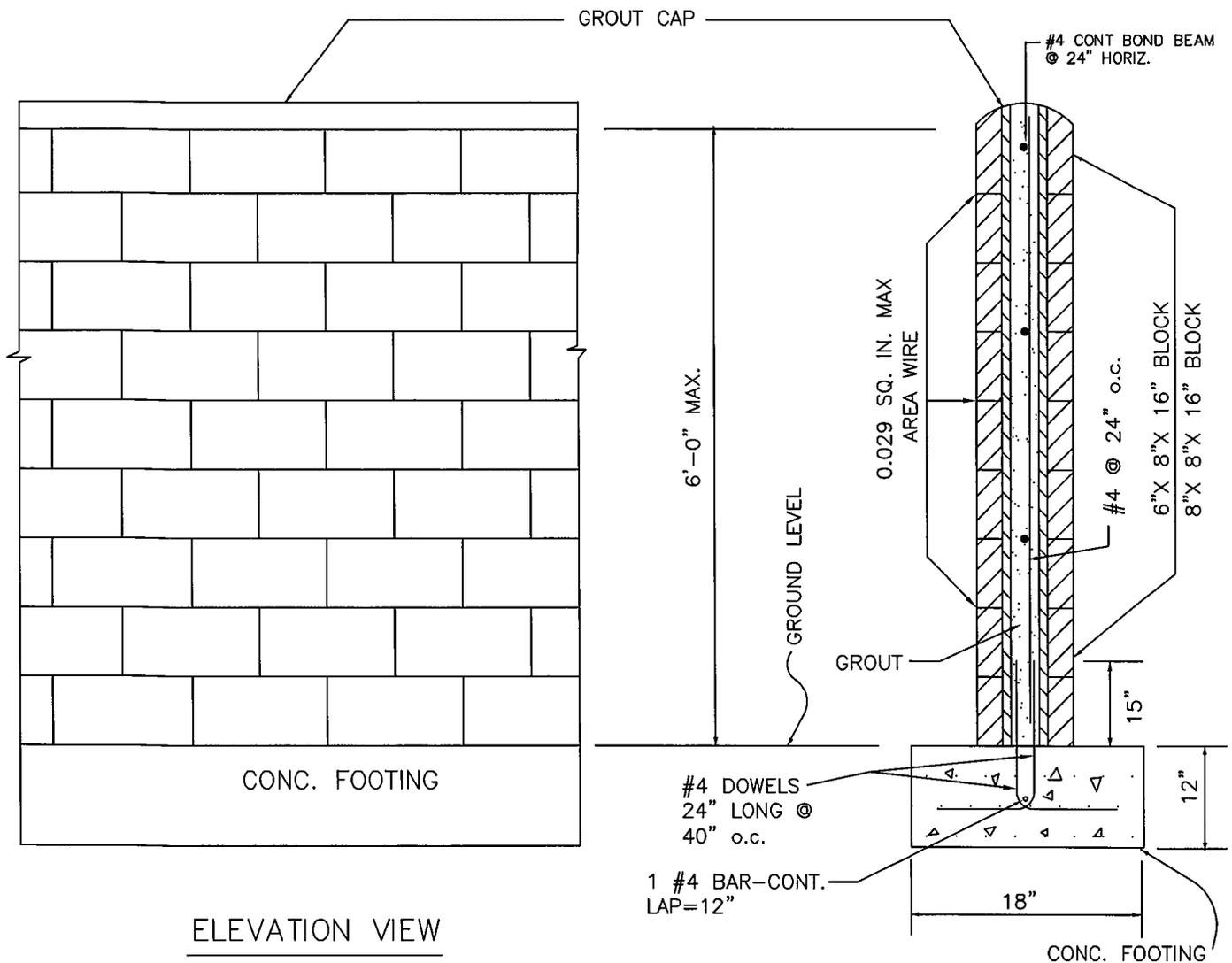
- NOTE: 1. SURFACE DRAINAGE SHALL BE TO STREET OR INTO STORM DRAIN SYSTEM.  
 2. PARKING BUMPERS TO BE PLACED SO THAT PARKED CARS WILL NOT ENCROACH ON SIDEWALKS OR PARKWAYS.  
 3. SURFACE DRAINAGE TO ALLEY ONLY BY WRITTEN APPROVAL OF THE CITY ENGINEER.  
 4. TEMPORARY PARKING LOTS (USE NOT TO EXCEED 60 DAYS) SHALL BE GRADED AND ROLLED SMOOTH. THE TOP 6" OF NATIVE SOIL SHALL BE COMPACTED TO 85% RELATIVE COMPACTION USING TEST METHOD NO. CAL. 216. A DUST PALLIATIVE PER STATE STANDARD SPECIFICATIONS SHALL BE APPLIED AT THE RATE OF 1 GAL./SQ.YD. TO OBTAIN A MIN. PENETRATION OF 1". THE MIXING RATIO SHALL BE 4:1 PER STATE STANDARD SPECIFICATIONS. THE DEVELOPER SHALL POST A BOND TO GUARANTEE REMOVAL OF ALL IMPROVEMENTS FOR A TEMPORARY PARKING LOT.

PARKING LOT DETAILS

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
M-1



GENERAL NOTES

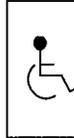
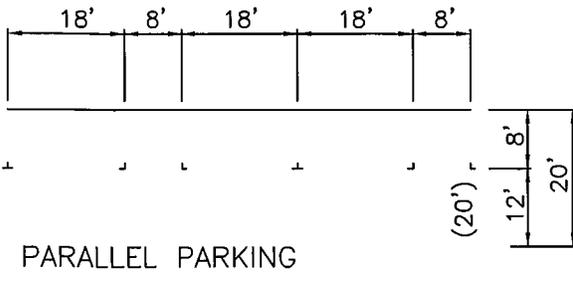
1. CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
2. WALL THICKNESS SHALL BE EITHER 6" OR 8", AS SPECIFIED.
3. ALL MASONRY UNIT CELLS SHALL BE POURED SOLID WITH GROUT.
4. MORTAR SHALL CONSIST OF PORTLAND CEMENT AND SAND, MEETING TYPE "S" REQUIREMENTS.
5. FOOTING SHALL BE SIX-SACK MIX CONCRETE.

CONCRETE BLOCK FENCE

REVISIONS  
04-13-10

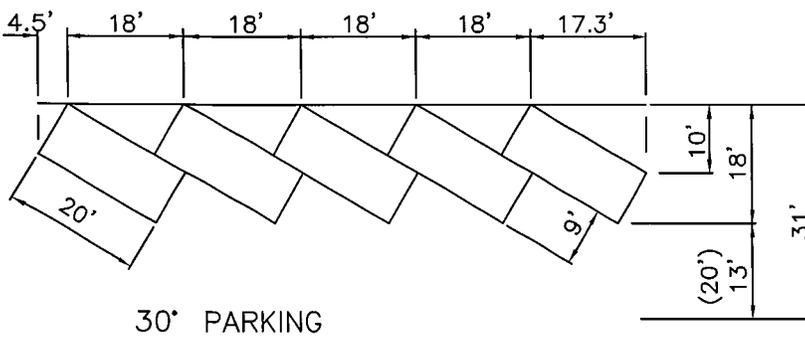
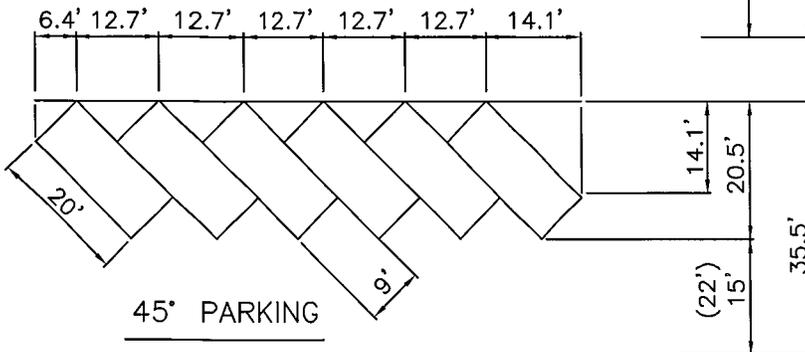
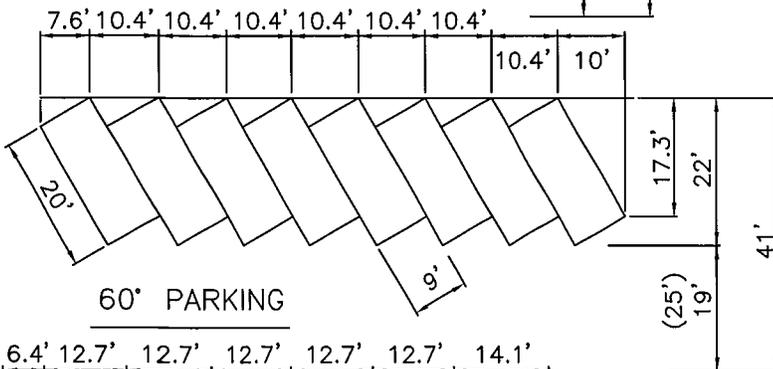
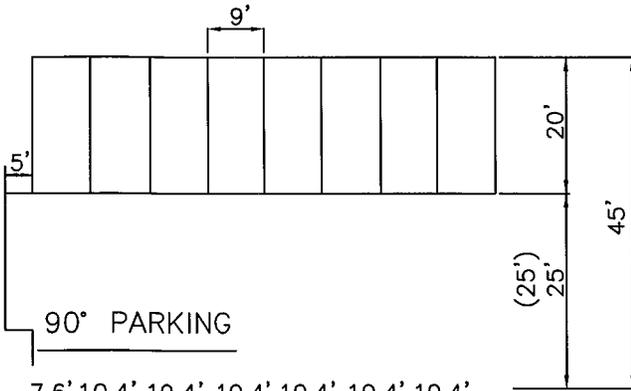
CITY OF ORANGE COVE

STD  
NO.  
M-2



PARKING STALL FOR THE HANDICAPPED SHALL MEET ADA REQUIREMENTS.

PARKING FOR HANDICAPPED



NOTES;

1. DIMENSIONS IN PARENTHESES INDICATE THE MINIMUM AISLE REQUIRED FOR TWO WAY TRAFFIC.
2. THE PERCENT OF AREA TO BE LANDSCAPED SHALL BE DETERMINED AT THE TIME OF SITE PLAN REVIEW.
3. PROVIDE THE REQUIRED NUMBER OF PARKING STALLS SPECIFIED BY THE CITY PLANNING DEPARTMENT, BASED ON ZONING AND LAND USE.
4. INSTALL WHEEL STOPS TO PREVENT PARKED CARS FROM ENCROACHING OVER SIDEWALKS, ADJOINING PROPERTY OR CITY RIGHT-OF-WAY. REFER TO STD. DWG. FOR OVERHANG CLEARANCE AND WHEEL STOP REQUIREMENTS.
5. REFER TO STD. DWGS. FOR PARKING LOT DRAINAGE AND STRUCTURAL SECTION REQUIREMENTS.
6. PARKING LOTS SHALL HAVE 2% OF THE SPACE DESIGNATED FOR THE PHYSICALLY HANDICAPPED. PARKING LOTS WITH 50 SPACES OR LESS SHALL HAVE A MINIMUM OF ONE HANDICAPPED PARKING SPACE. CONFORM TO ADA REQUIREMENTS OF TITLE 24 OF CALIF. CODE.
7. LENGTH OF STALL MAY BE REDUCED TO 18' WHEN OPEN SPACE IS AVAILABLE FOR FRONT OVERHANG.

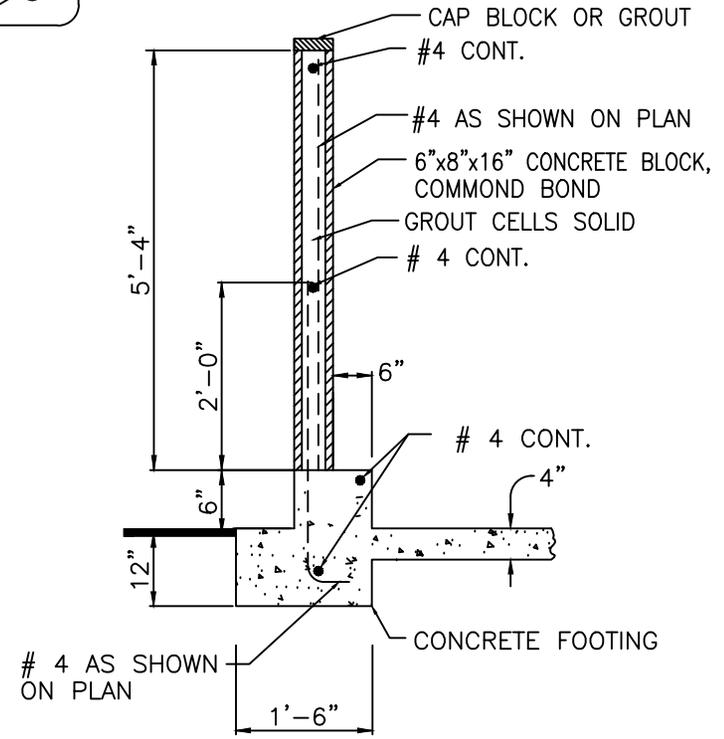
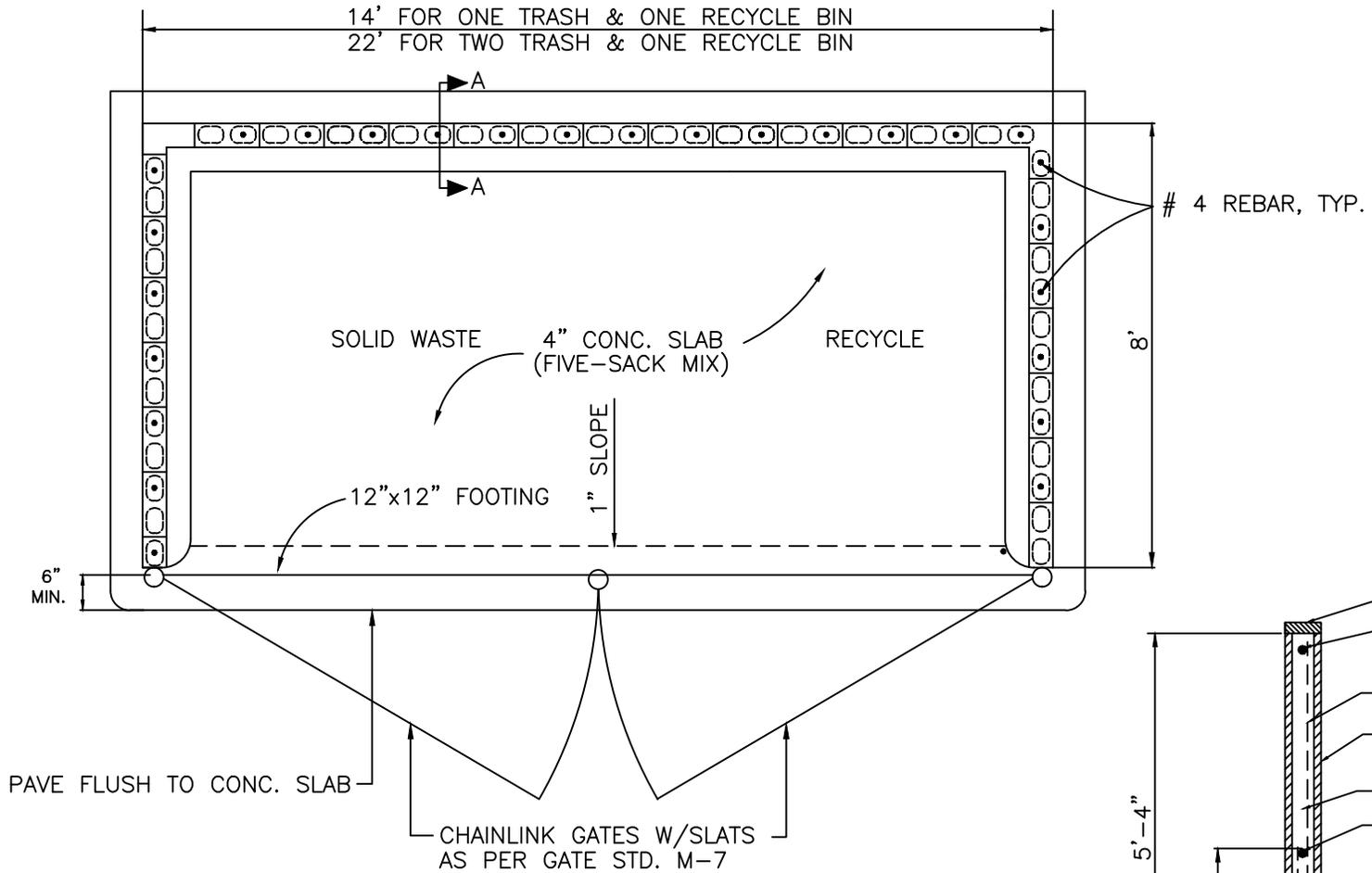
PARKING LOT REQUIREMENTS

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
M-3

# TRASH ENCLOSURE



SECTION A-A

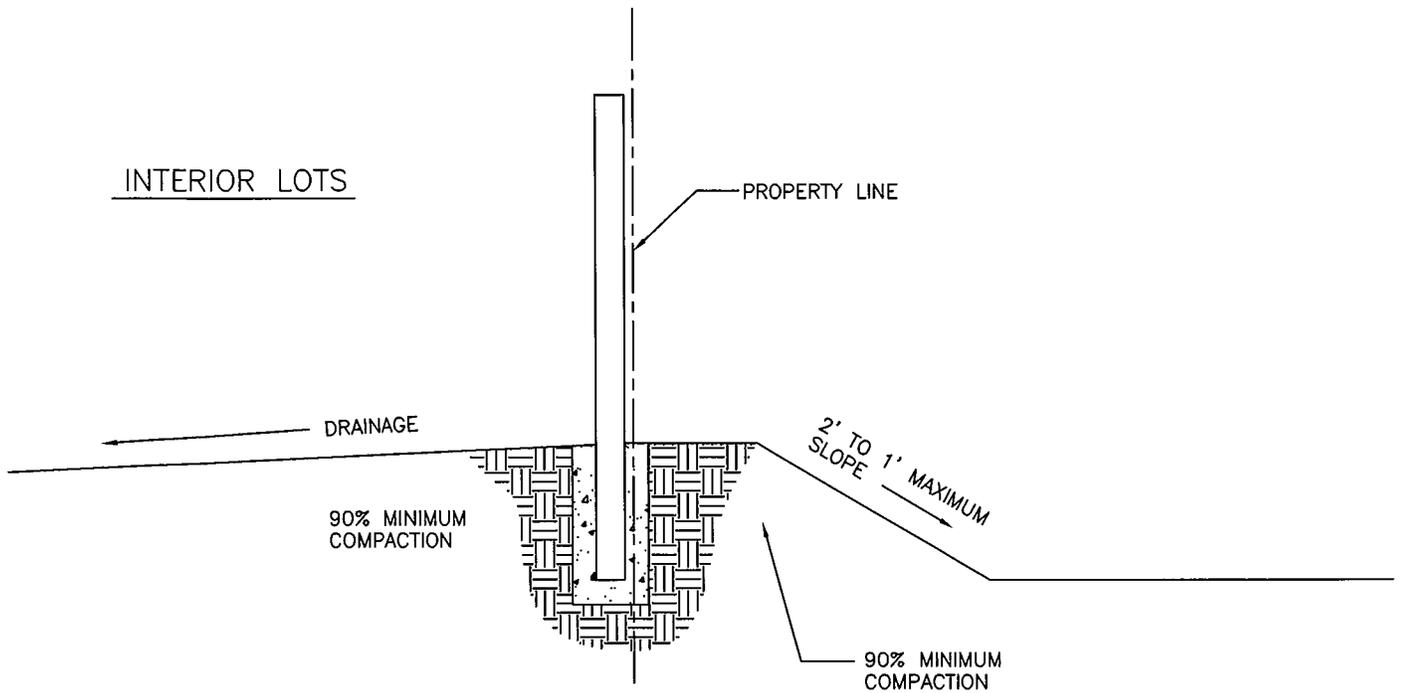
REVISIONS  
03-22-10  
03-21-16

CITY OF ORANGE COVE

1. PUBLIC WORKS RECOMMENDED ENCLOSURE.
2. CUT CORNER BLOCK ENDS TO FORM A CONT. BOND BEAM,
3. GROUND TO BE SLOPED AWAY FROM WALL.
4. LOCATION OF BIN ENCLOSURE TO BE APPROVED BY THE CITY ENGINEER.
5. A BUILDING PERMIT SHALL BE OBTAINED FROM THE CITY BLD. DEPT.
6. HOT WATER AND SEWER DRAIN REQUIRED FOR RESTAURANTS.
6. PEDESTRIAN ACCESS ALONG SIDE OR BACK WALLS SUBJECT TO REVIEW AND APPROVAL OF CITY ENGINEER.

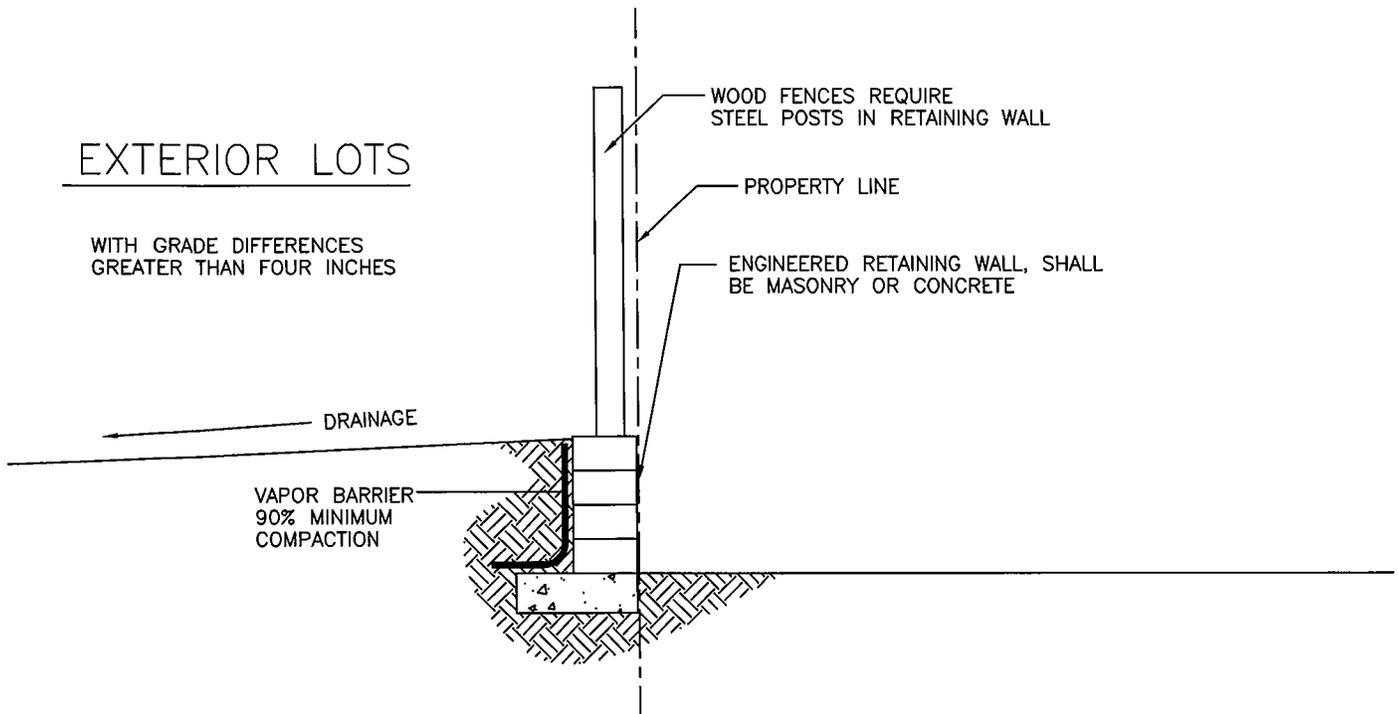
STD NO. M-4

INTERIOR LOTS



EXTERIOR LOTS

WITH GRADE DIFFERENCES  
GREATER THAN FOUR INCHES



LOT LINE  
GRADING STANDARD

REVISIONS  
5-7-10

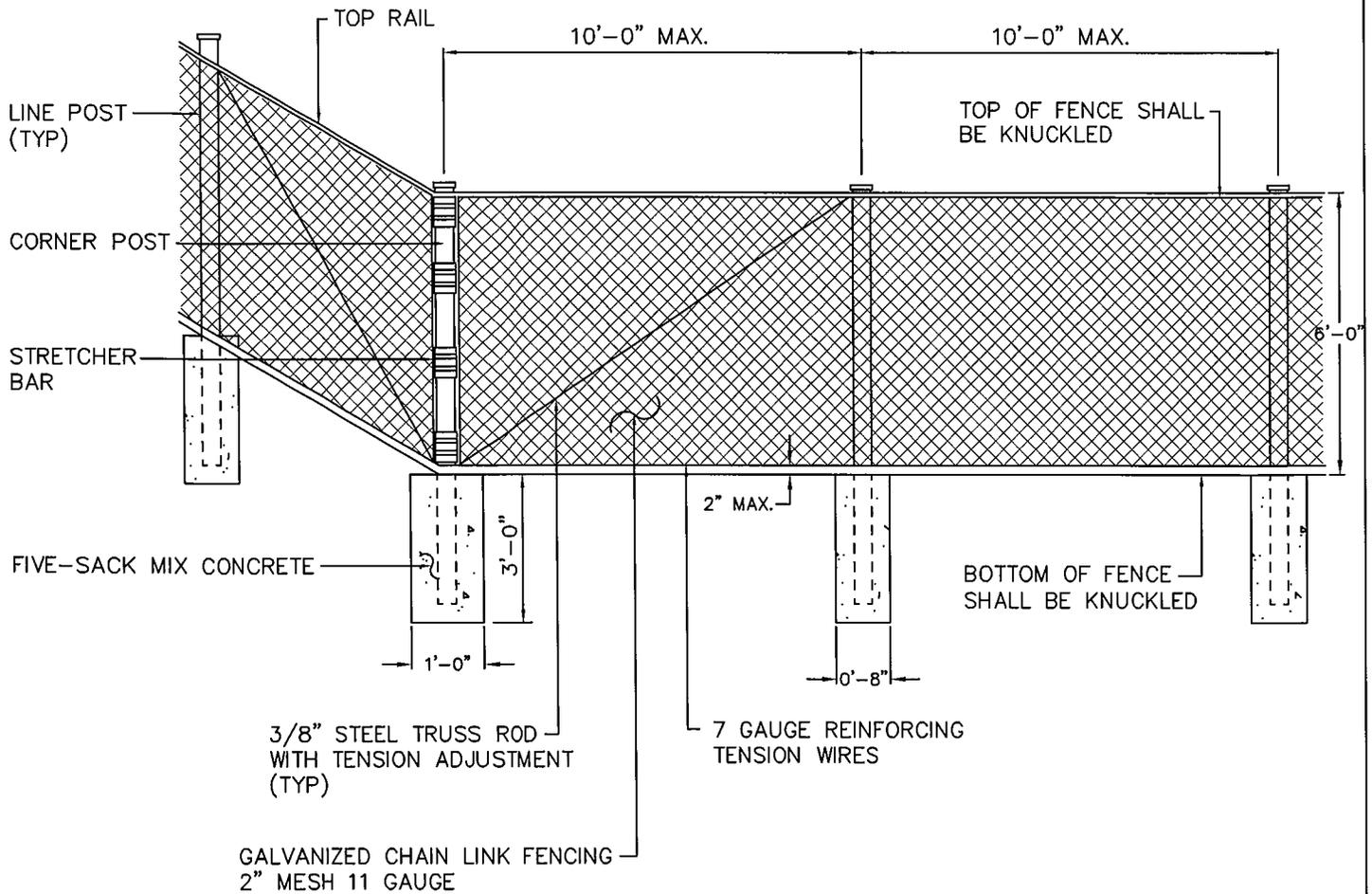
CITY OF ORANGE COVE

STD  
NO.  
M-5

DESCRIPTION	SIZE	TABLE A	DESCRIPTION	SIZE
END POSTS	2-7/8" OD SCH. 40		STRETCHER BAR BANDS	1/8"x1"
CORNER POSTS	2-7/8" OD SCH. 40		STRETCHER BAR	1/4"x3/4"
LINE POSTS	1-7/8" OD SCH. 40		TRUSS ROD	3/8" DIA. ADJUSTABLE
TENSION WIRE	7 GAUGE REINFORCING		TENSION WIRE TIES	11 GAUGE @ 24" O.C.
TOP RAILS	1-5/8" OD SCH. 40		LINE POST TIES	6 GAUGE @ 14" O.C.
CHAIN LINK FABRIC	2x11x6'- 11 GAUGE			

**NOTE:**

1. ALL MATERIALS HOT-DIP GALVANIZED (EXCEPT AS NOTED).
2. SLATTED FENCES SHALL BE EITHER SOLID VINYL OR WIDE SLATS WITH NO MORE THAN 1/4" BETWEEN SLATS.



**TYPICAL FENCE ELEVATION**  
NO SCALE

6' CHAIN LINK FENCE

REVISIONS  
9-13-94  
9-11-96  
12-8-05  
3-22-10  
4-13-10

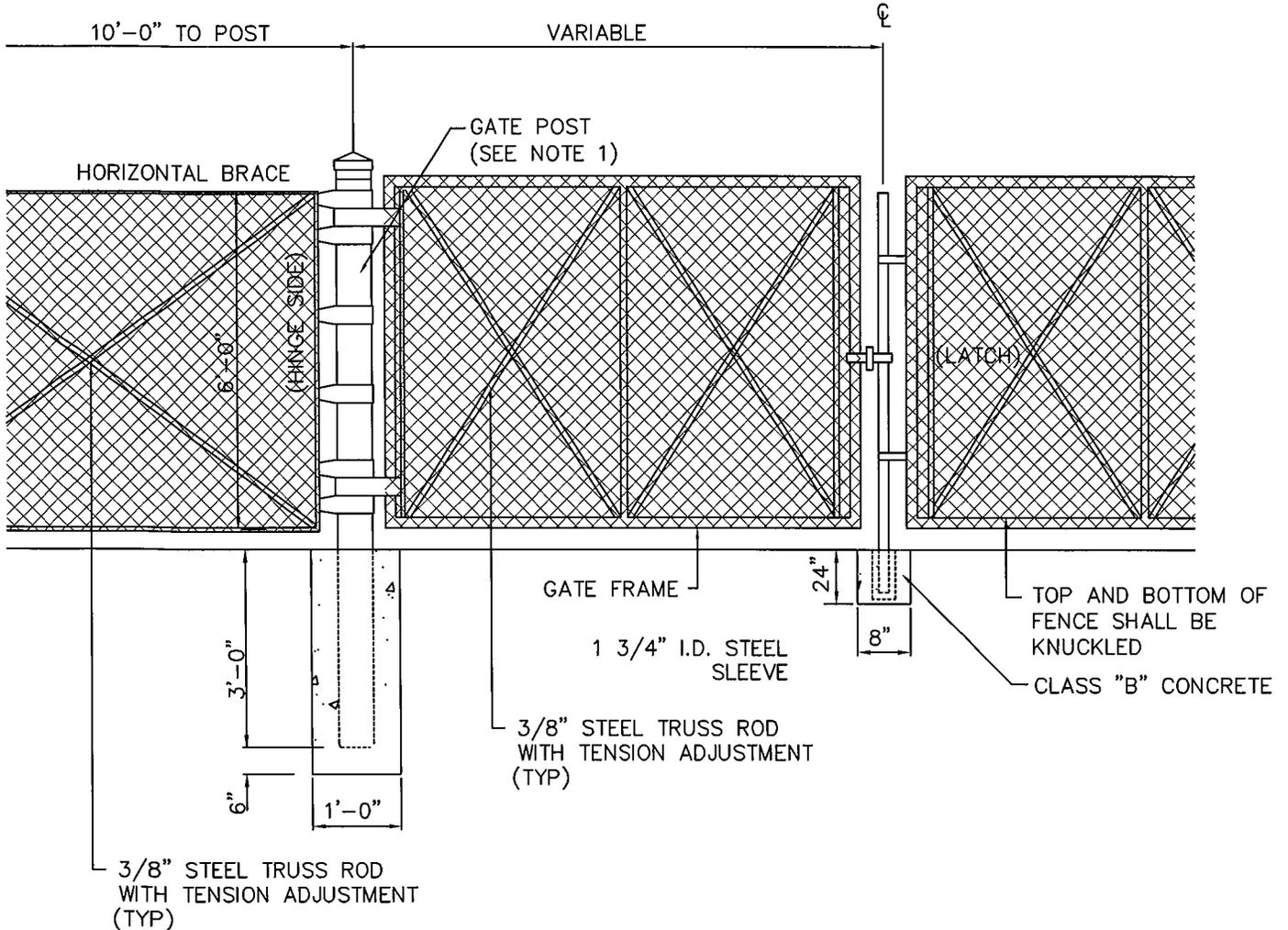
CITY OF ORANGE COVE

STD  
NO.  
M-6

NOTE:

FOR MATERIAL TYPES AND SIZE SEE CITY STD. M-6

DOUBLE SWING GATE  
SYMMETRICAL ABOUT  $\phi$



1. GATE POSTS TO BE SCH. 40: GATE WIDTH  
6' OR LESS: 2 7/8" O.D. 5.79 LBS/FT.  
7' THRU 13': 4 1/2" O.D. 9.11LBS/FT.  
14' THRU 18': 6 5/8" O.D. 18.97 LBS/FT.  
OVER 18': 8 5/8" O.D. 24.70 LBS/FT.
2. ALL METAL SHALL BE GALVANIZED.
3. GATE FRAMES SHALL HAVE WELDED CONNECTIONS.
4. GATE FABRIC SHALL BE 9 GAUGE, 2" MESH, KNUCKLED SWEDGES.

DOUBLE SWING GATE

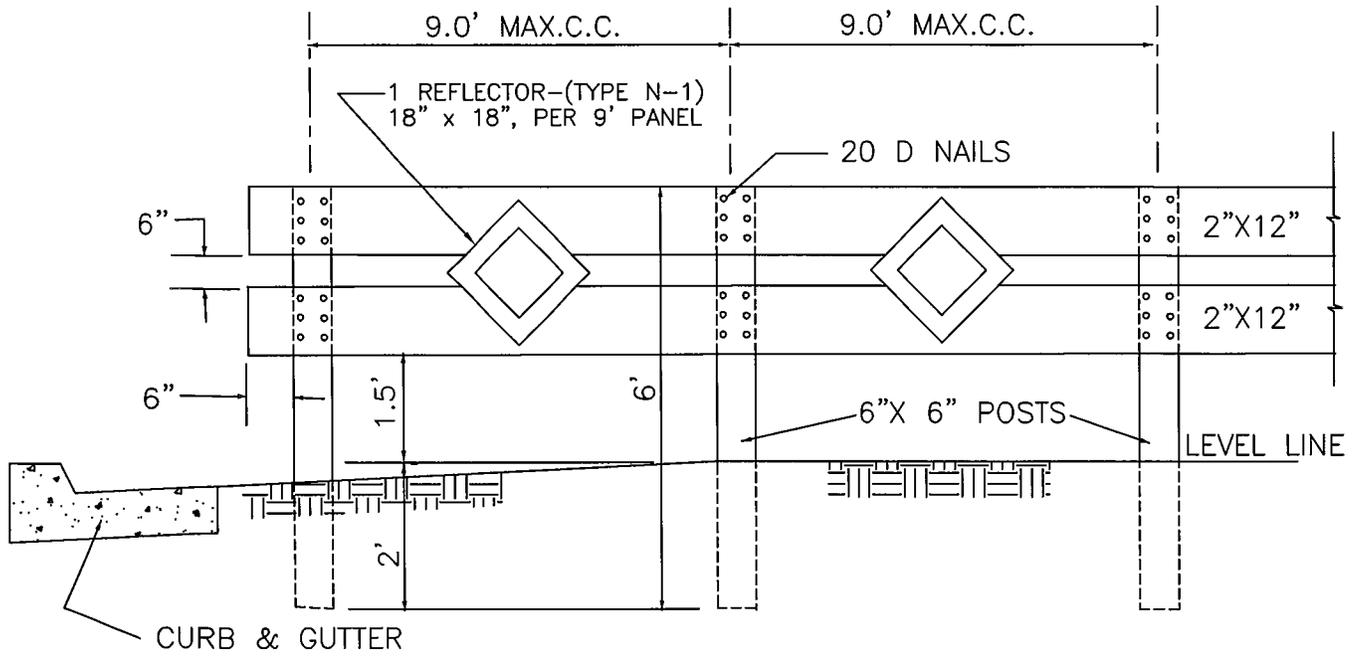
NO SCALE

6' CHAIN LINK FENCE GATE

REVISIONS  
9-13-94  
12-8-05  
7-26-13

CITY OF ORANGE COVE

STD  
NO.  
M-7



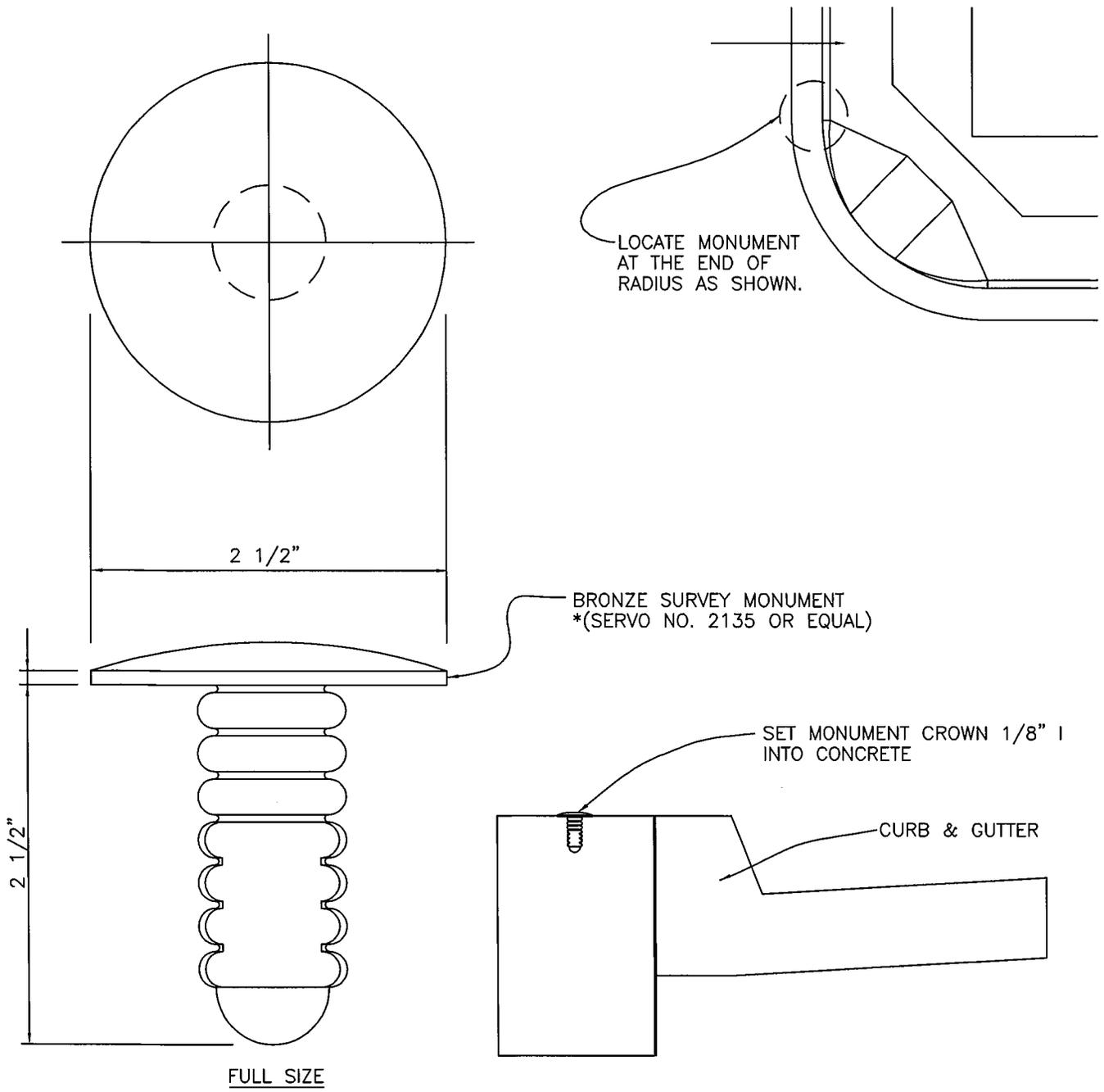
- NOTE:
1. BARRICADES MUST BE FULL WIDTH OF PAVEMENT OR TRAVELED WAY.
  2. APPLY TWO COATS OF EXTERIOR FLAT WHITE PAINT TO ALL EXPOSED WOOD MEMBERS.
  3. ANY DEVIATION FROM THE ABOVE FOR TEMPORARY INSTALLATIONS, SHALL BE SUBJECT TO APPROVAL OF THE CITY ENGINEER.
  4. "K" RAILS WITH REFLECTIVE MATERIAL MAY BE USED AS AN ALTERNATE BARRICADE WHEN APPROVED BY CITY ENGINEER.

TEMPORARY TIMBER  
BARRICADE

REVISIONS  
9-11-96

CITY OF ORANGE COVE

STD  
NO.  
M-8

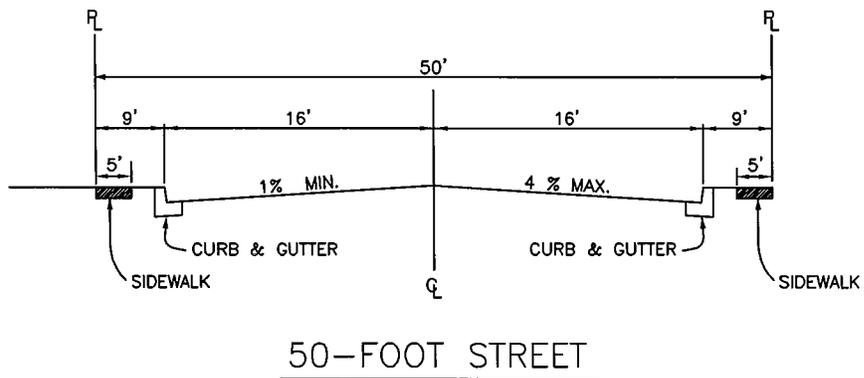
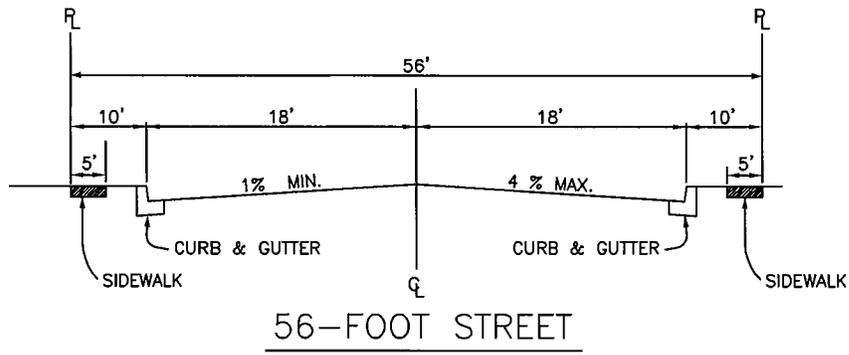
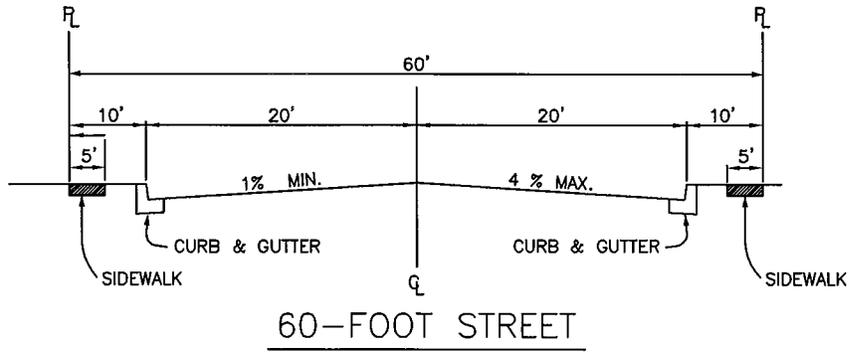


NOTES:

1. LOCATE BENCH MARKS AT THE NORTHEAST CORNER OF INTERSECTIONS APPROVED BY THE CITY ENGINEER.
2. COMPLETE NOTES SHOWING LOCATIONS, ELEVATIONS, AND CLOSURES SHALL BE FILED WITH THE CITY ENGINEER.
3. ELEVATIONS SHALL BE BASED ON U.S.G.S. DATUM.

\* AVAILABLE AT: SERVCO, 2942 CENTURY PLACE, COSTA MESA, CA 92626

BENCH MARK	REVISIONS 12-8-05	CITY OF ORANGE COVE	STD NO. M-9
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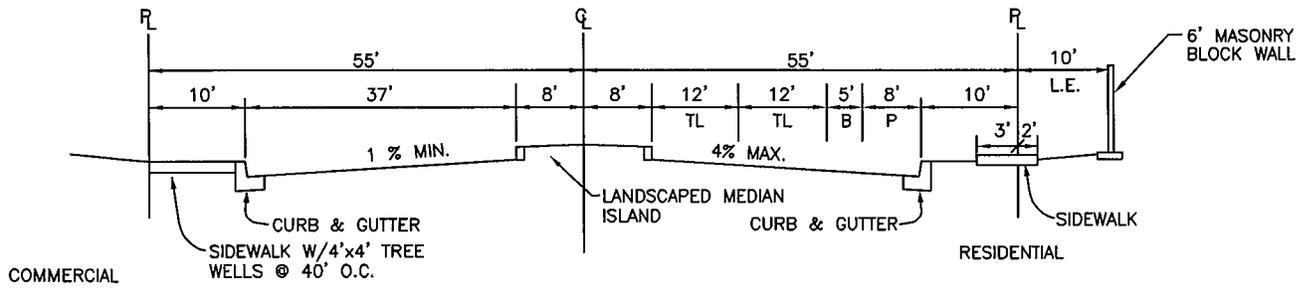


TYPICAL STREET SECTIONS

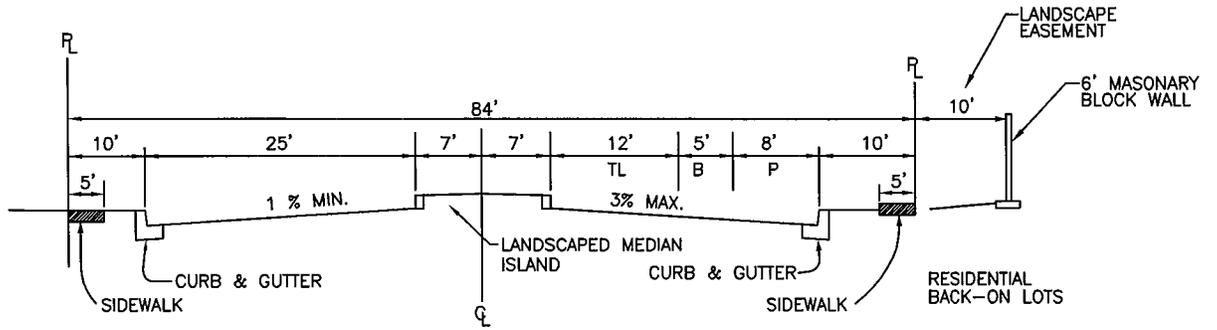
REVISIONS  
8-22-06

CITY OF ORANGE COVE

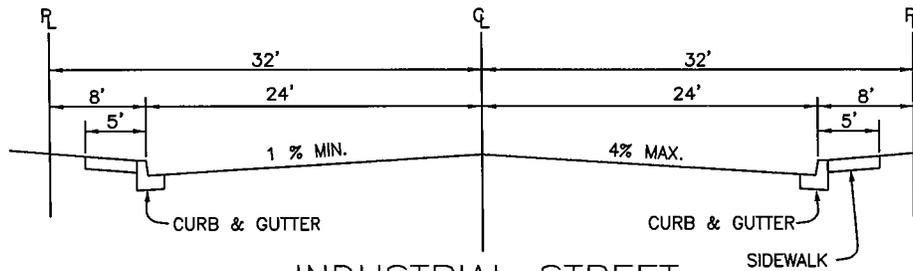
STD  
NO.  
P-1



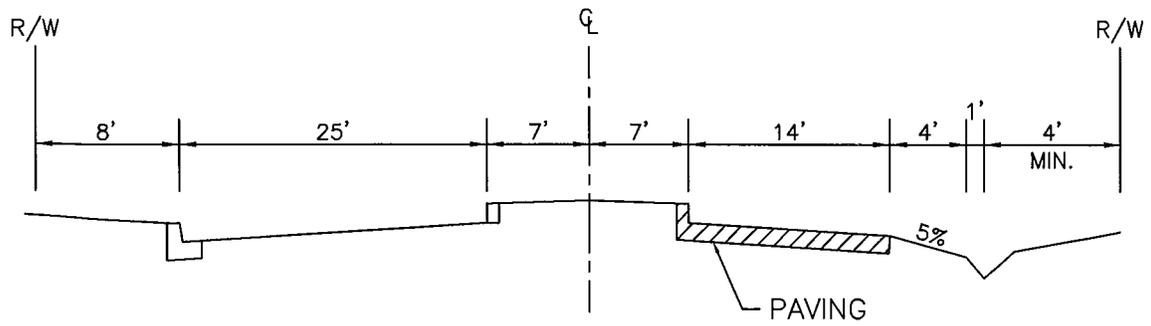
ARTERIAL STREET



COLLECTOR STREET

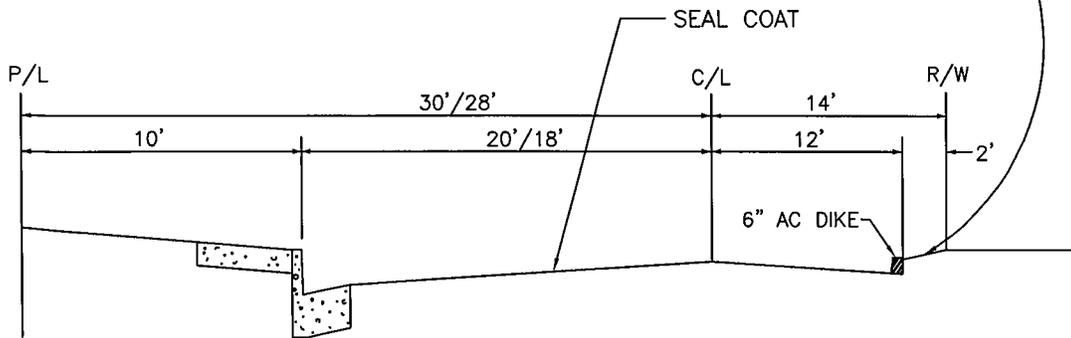


INDUSTRIAL STREET



MINIMUM SECTION OF 3/4 COLLECTOR STREET

NOTE:  
 SLOPE FROM AC DIKE TO  
 EXISTING SURFACE OR NATURAL  
 GROUND.  
 MAX. SLOPE SHALL BE 2:1.



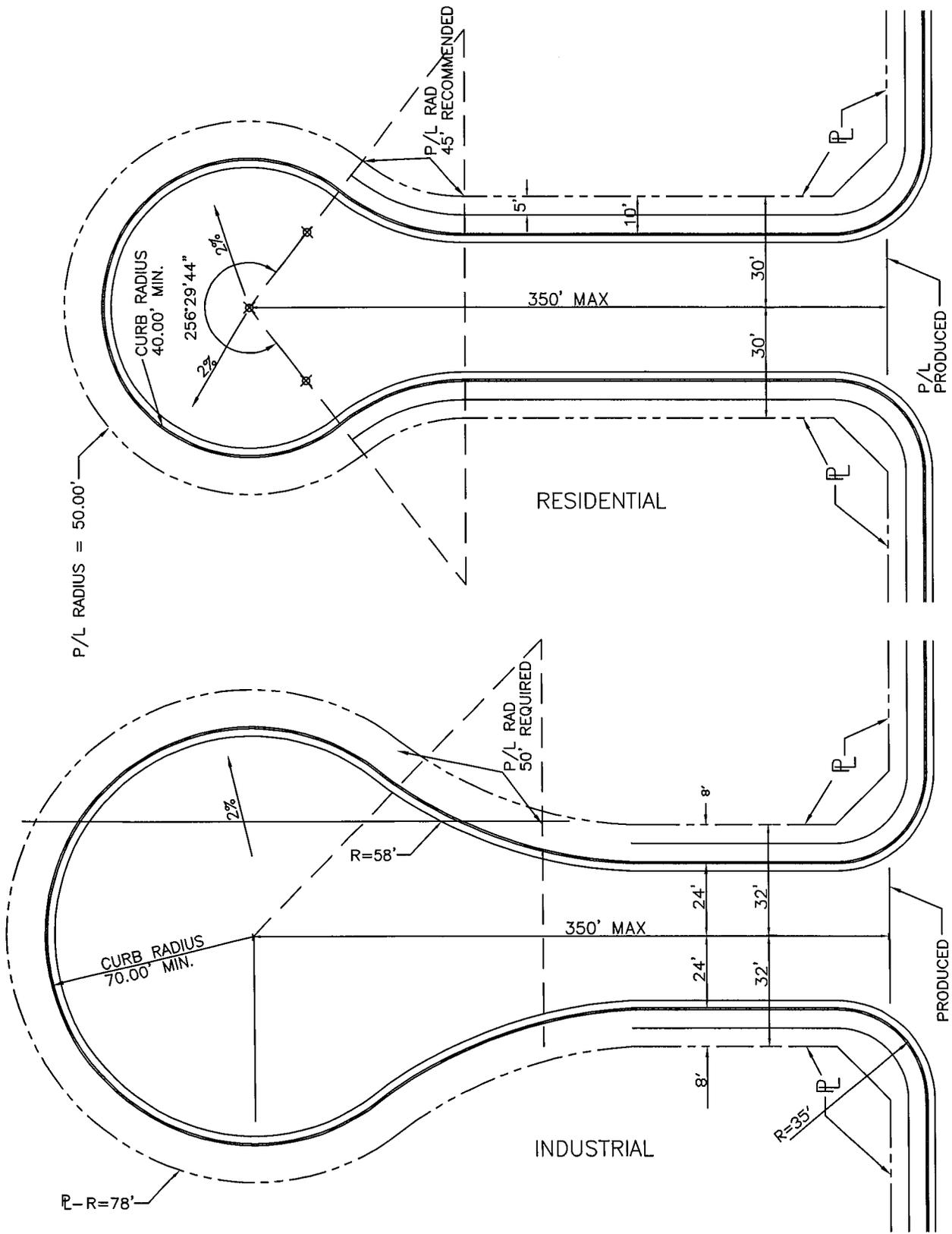
MINIMUM SECTION OF 3/4 LOCAL STREET

TYPICAL BOUNDARY  
 STREET SECTIONS

REVISIONS  
 4-13-10

CITY OF ORANGE COVE

STD  
 NO.  
 P-2



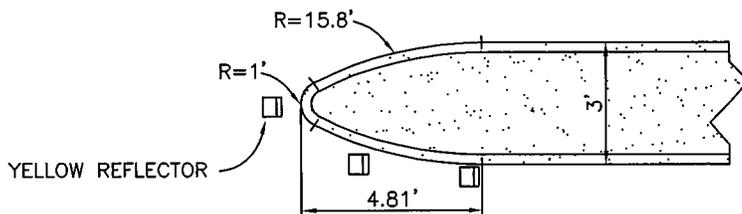
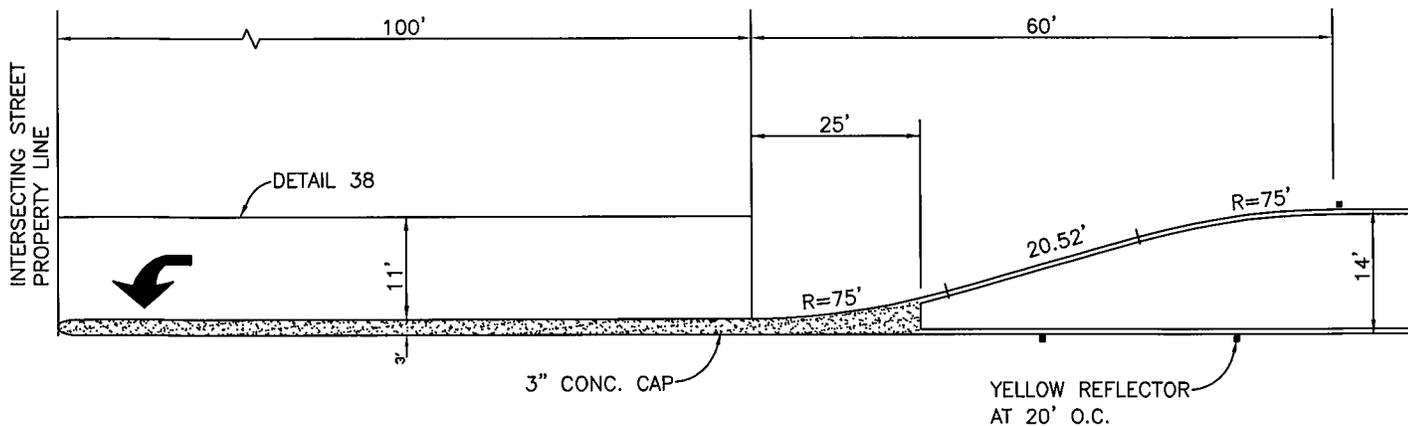
X ST.

STANDARD CUL-DE-SAC

REVISIONS

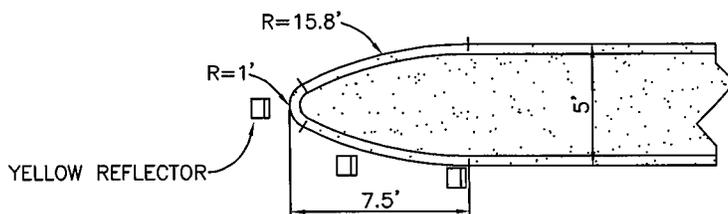
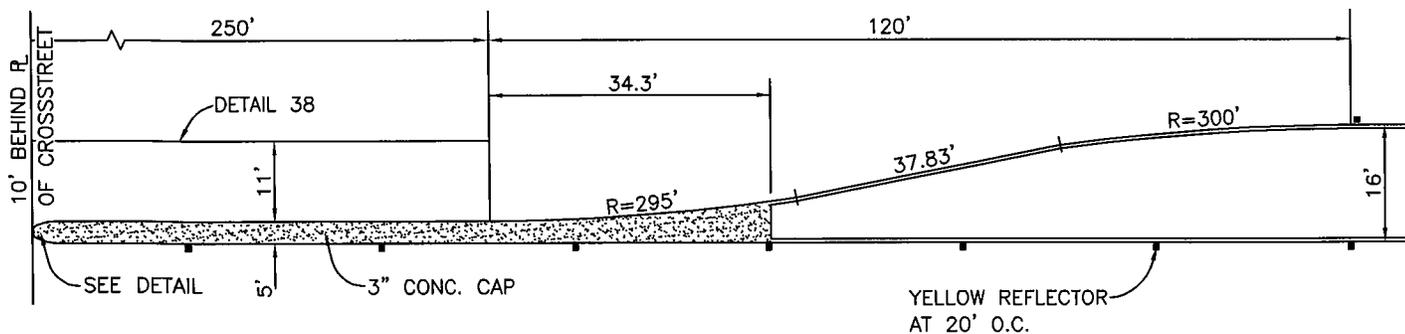
CITY OF ORANGE COVE

STD  
NO.  
P-3



ISLAND NOSE DETAIL

COLLECTOR STREET



ISLAND NOSE DETAIL

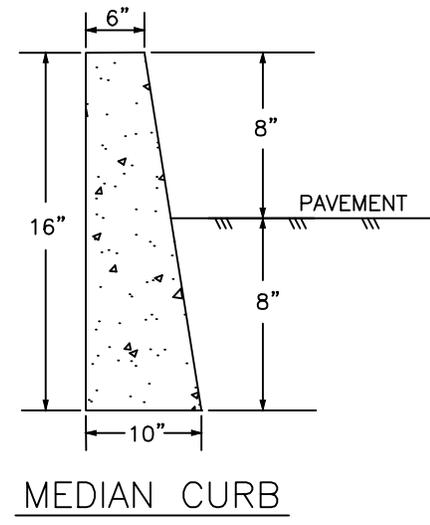
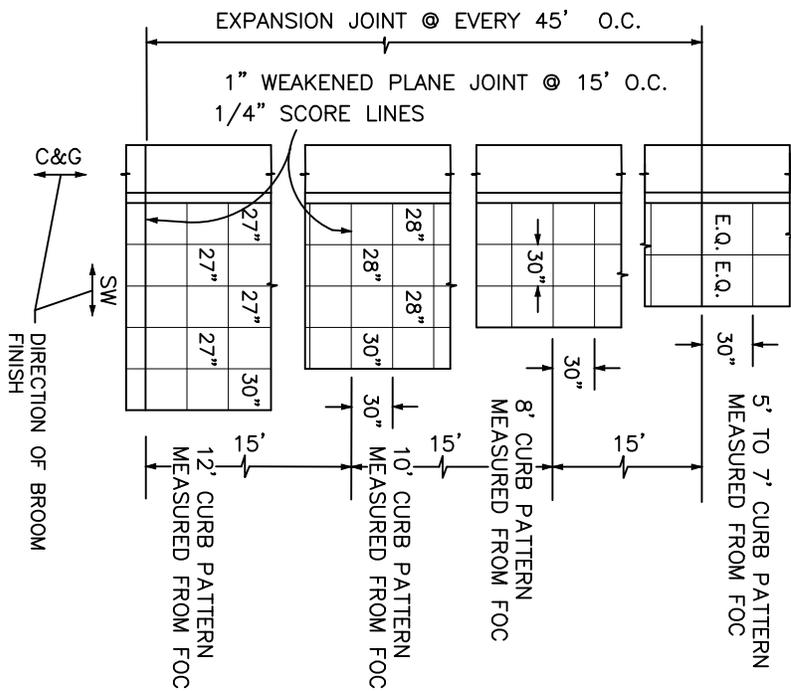
ARTERIAL STREET

MEDIAN ISLAND  
LEFT-TURN POCKET

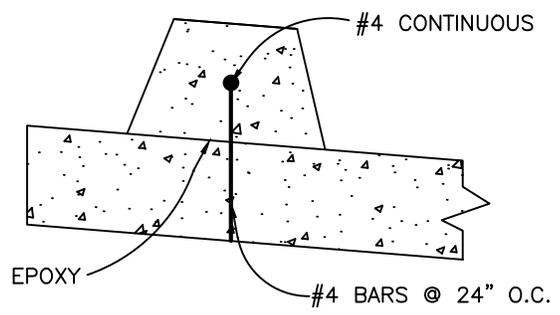
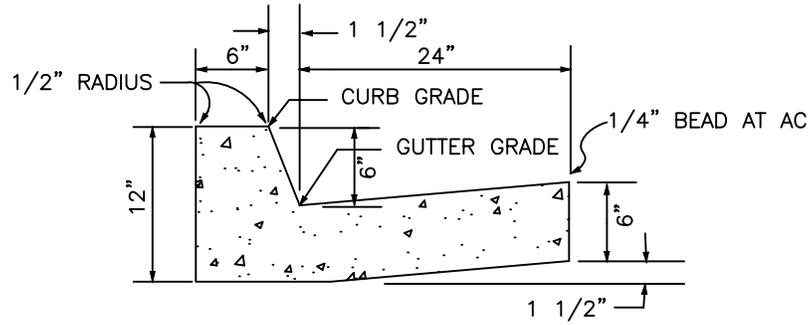
REVISIONS  
5-12-10

CITY OF ORANGE COVE

STD  
NO.  
P-4

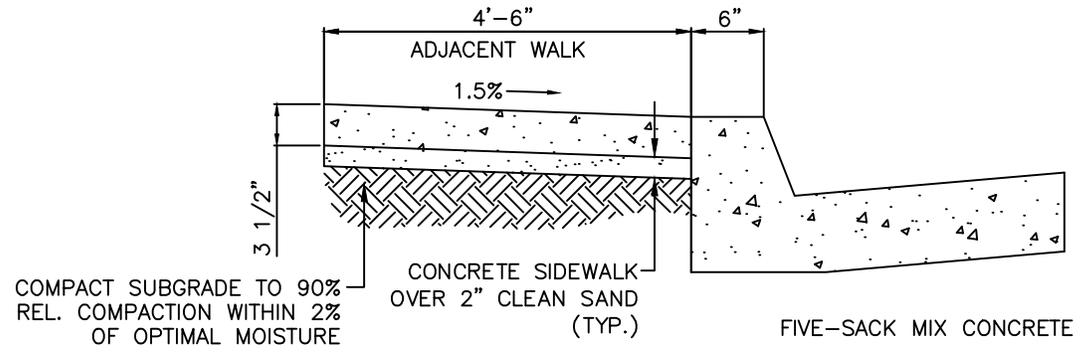


PLANS OF SIDEWALK, CURB & GUTTER, SCRIBE LINE DETAILS



- NOTE:
1. CONTRACTOR SHALL FILL AREA BETWEEN NEW GUTTER AND EXISTING STREET SURFACE WITH 7" THICK HMA PLUG OR AS REQUIRED BY CITY ENGINEER TO MEET EXISTING STREET SURFACE.
  2. COMPACTION SHALL BE MADE TO THE SATISFACTION OF THE ENGINEER.
  3. CONCRETE SHALL BE FINISHED WITH A "BROOM" FINISH.
  4. MINIMUM GUTTER SLOPE = 0.15%

MEDIAN DOWELED CURBS  
AS ALLOWED BY ENGINEER



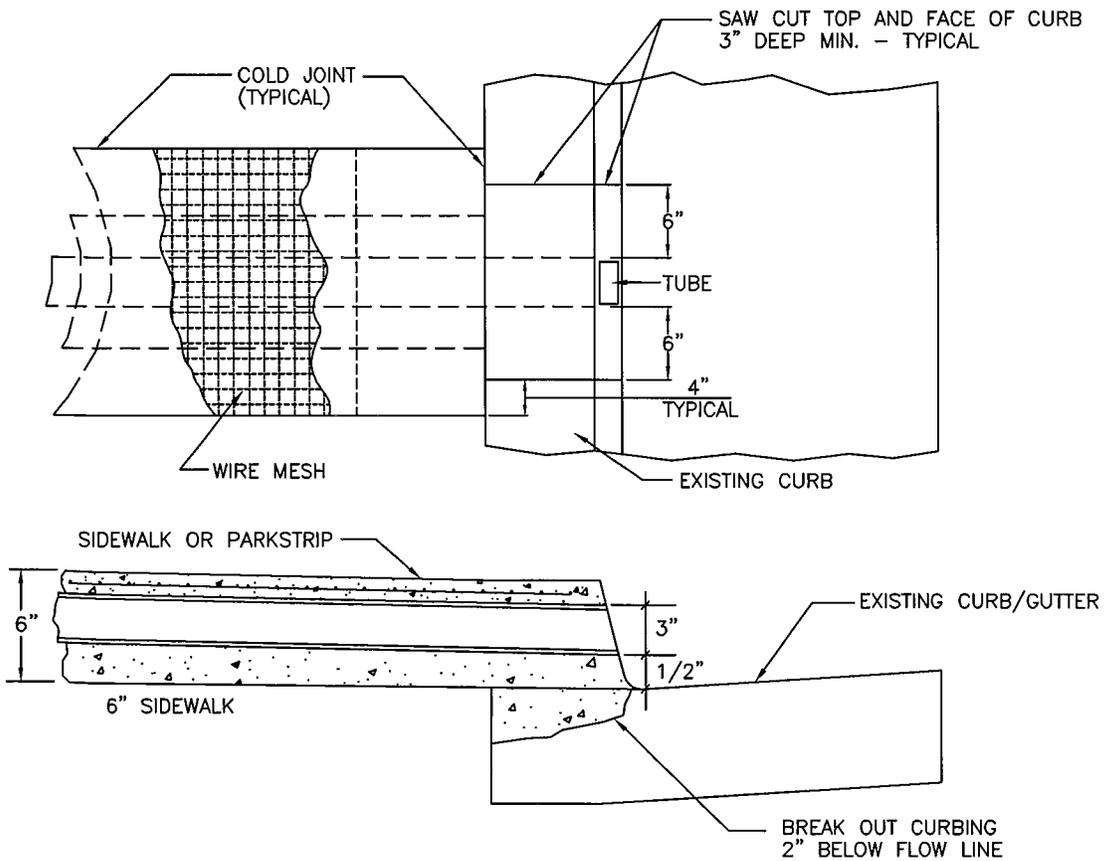
SECTION OF SIDEWALK & CURB

CONCRETE SIDEWALK,  
CURB & GUTTER

REVISIONS
12-08-05
04-13-10
11-19-13
01-13-14
03-03-15

CITY OF ORANGE COVE

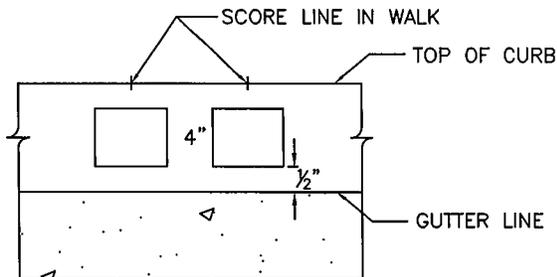
STD  
NO.  
P-5



DRAINLINE INSTALLATION  
FOR EXISTING CURB & GUTTER

NOTES:

1. TUBES SHALL BE ONE CONTINUOUS LENGTH FROM PROPERTY LINE TO CURB LINE.
2. MULTIPLE TUBES TO BE SET A MINIMUM DISTANCE OF 4" APART. (SEE DETAIL BELOW)
3. CONCRETE SHALL BE SIX-SACK MIX.
4. WIRE MESH TO BE INSTALLED IN CONCRETE ABOVE DRAIN LINE.
5. TUBES SHALL BE 3x4, 3x5 OR 3x6, 3/16" WALL THICKNESS



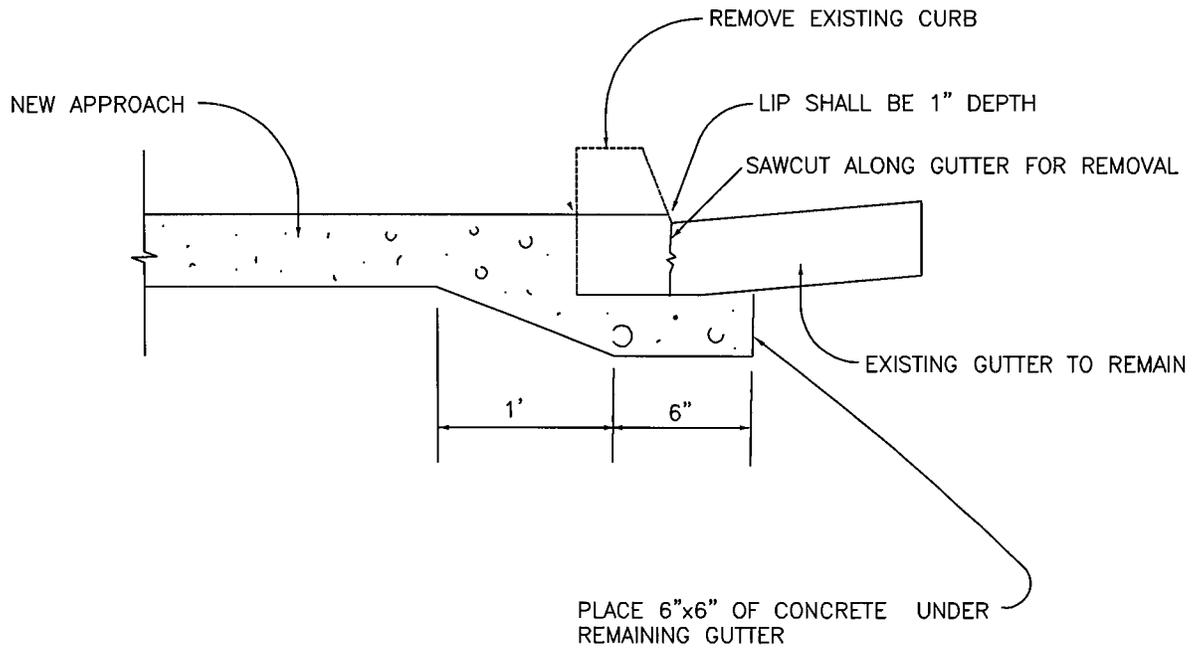
DUAL PIPE INSTALLATION

SIDEWALK UNDERDRAIN PIPE

REVISIONS  
3-22-10

CITY OF ORANGE COVE

STD  
NO.  
P-6

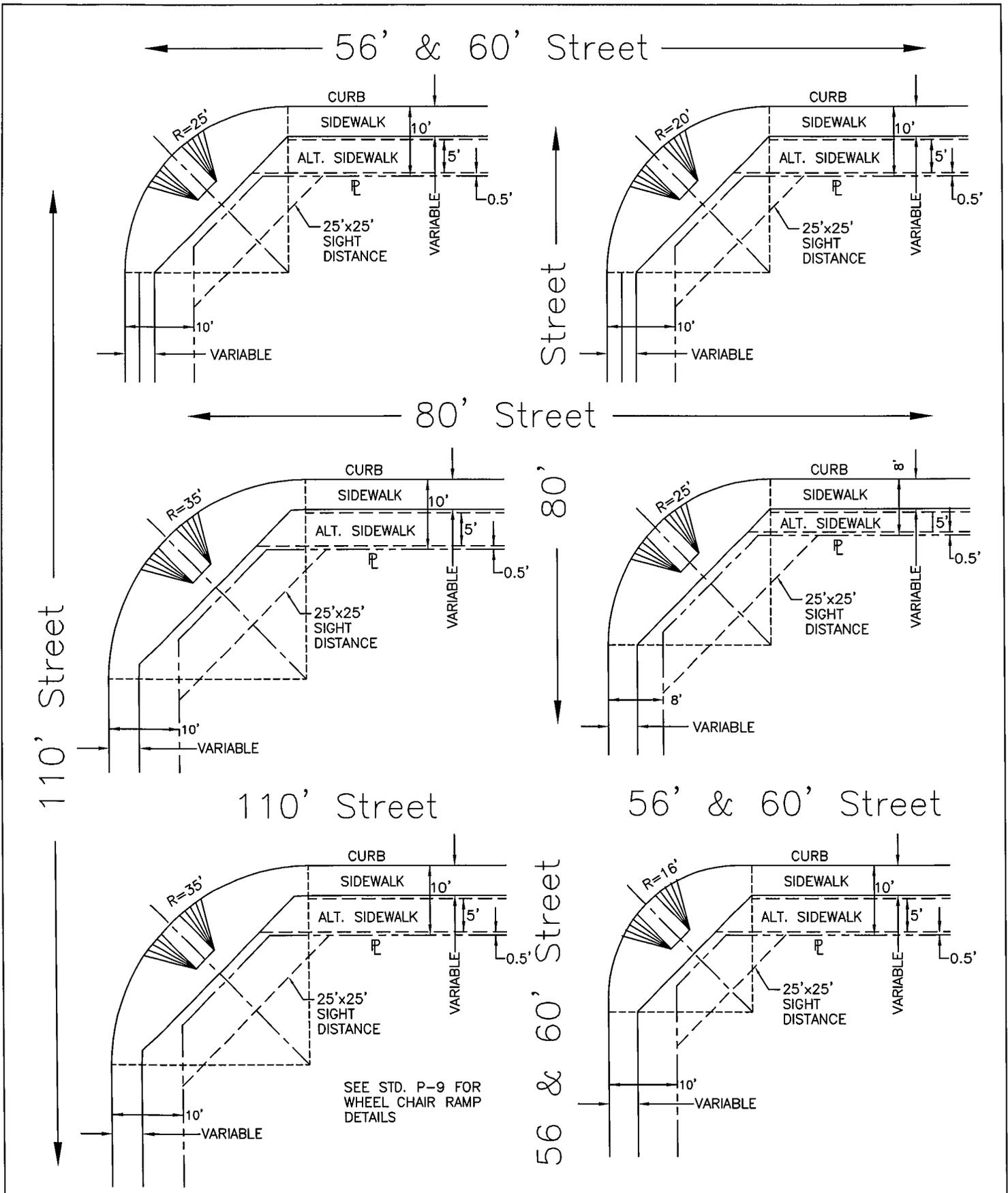


CURB REMOVAL FOR  
NEW APPROACHES

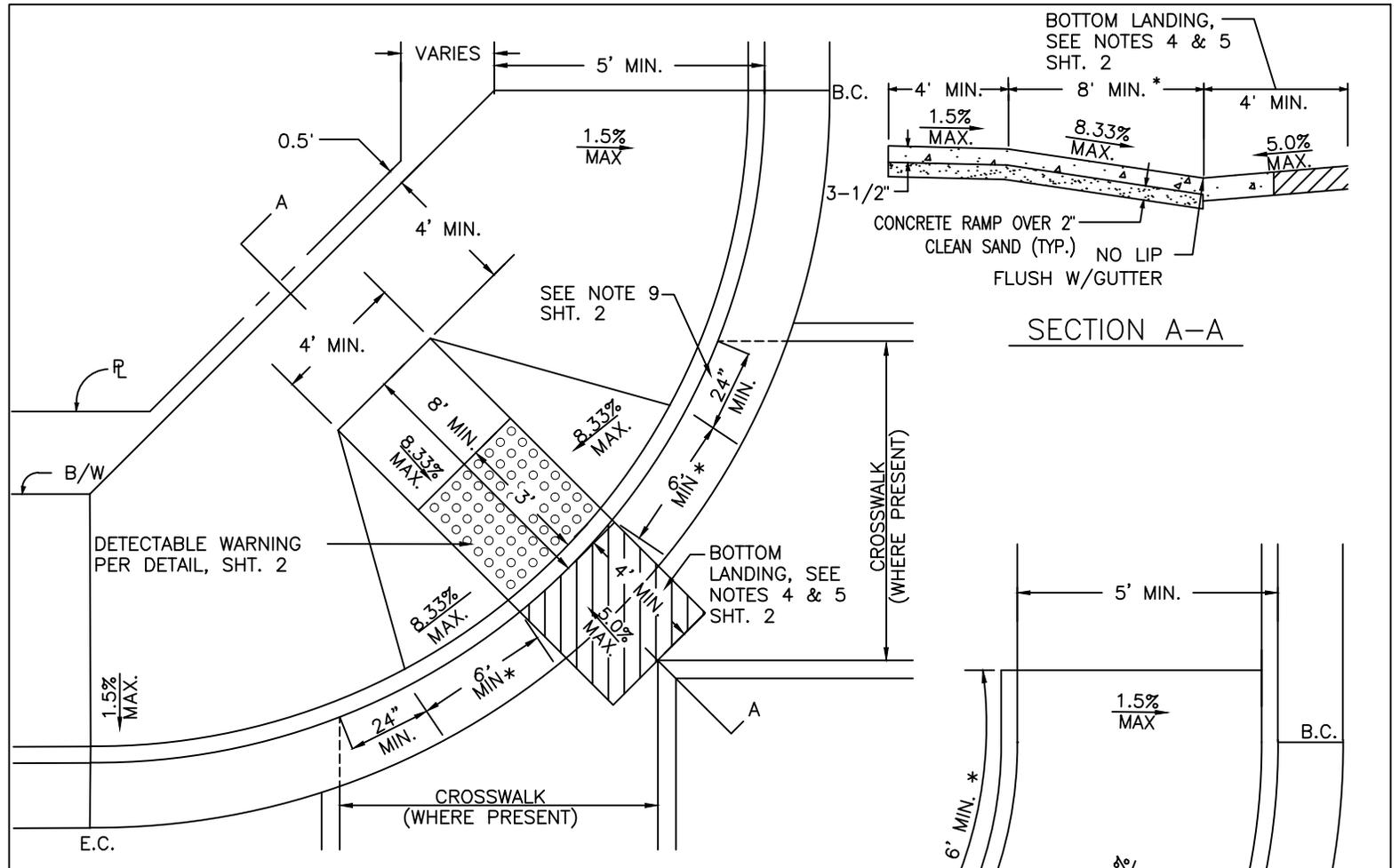
REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
P-7



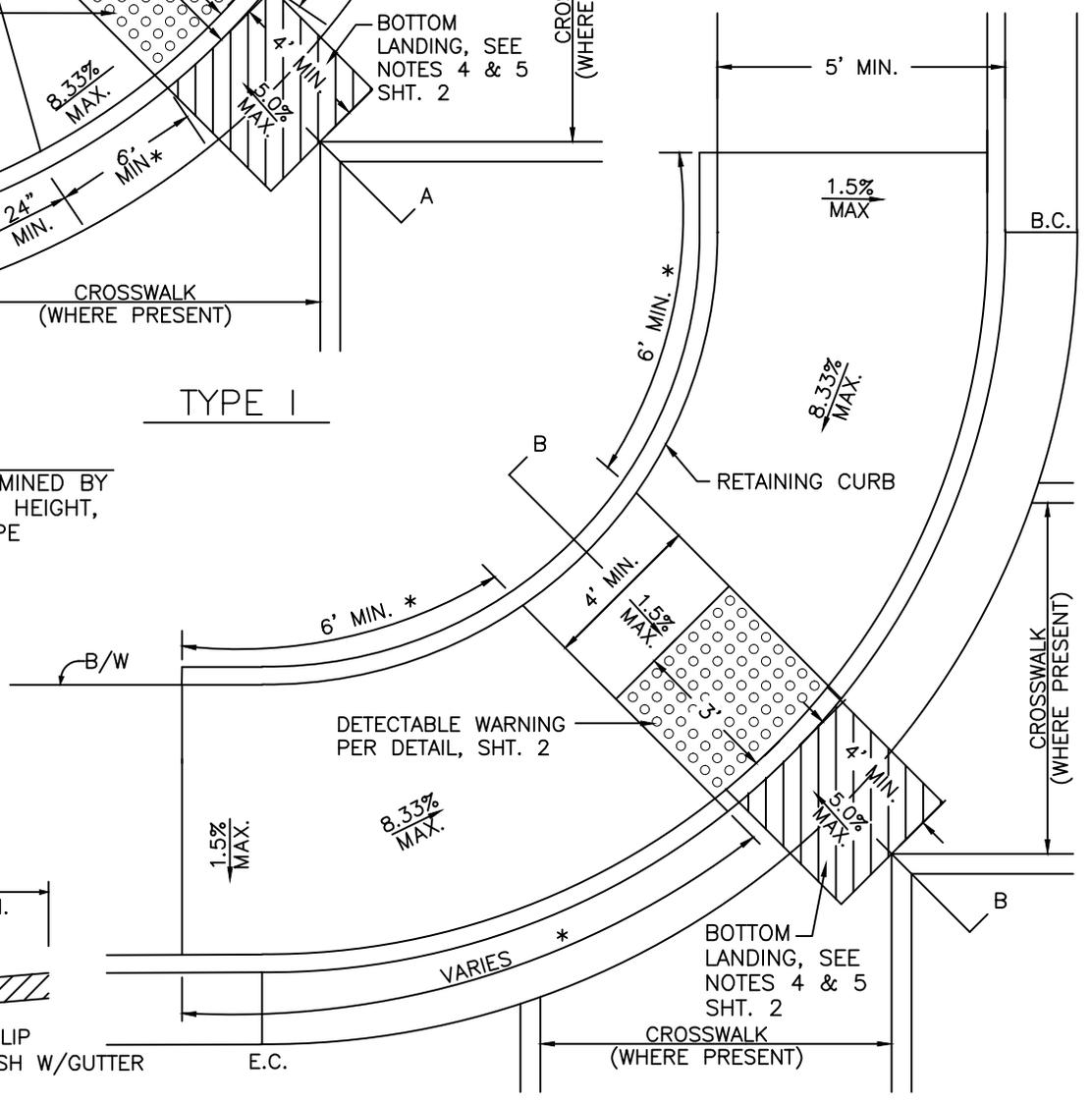
<p>CURB RETURNS WHEELCHAIR RAMPS FOR INTERSECTING STREETS</p>	<p>REVISIONS 12-8-05</p>	<p>CITY OF ORANGE COVE</p>	<p>STD NO. P-8</p>
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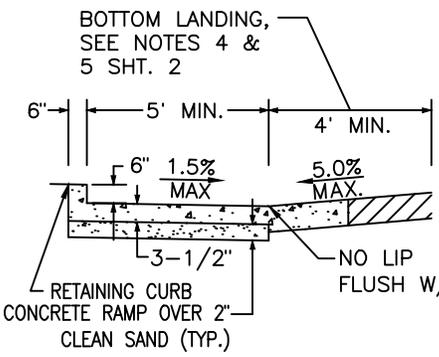
SECTION A-A

TYPE I

NOTE:  
 \* DIMENSION TO BE DETERMINED BY FLARE SLOPE, CURBFACE HEIGHT, CURVE RADIUS AND SLOPE AROUND RETURN.



TYPE II



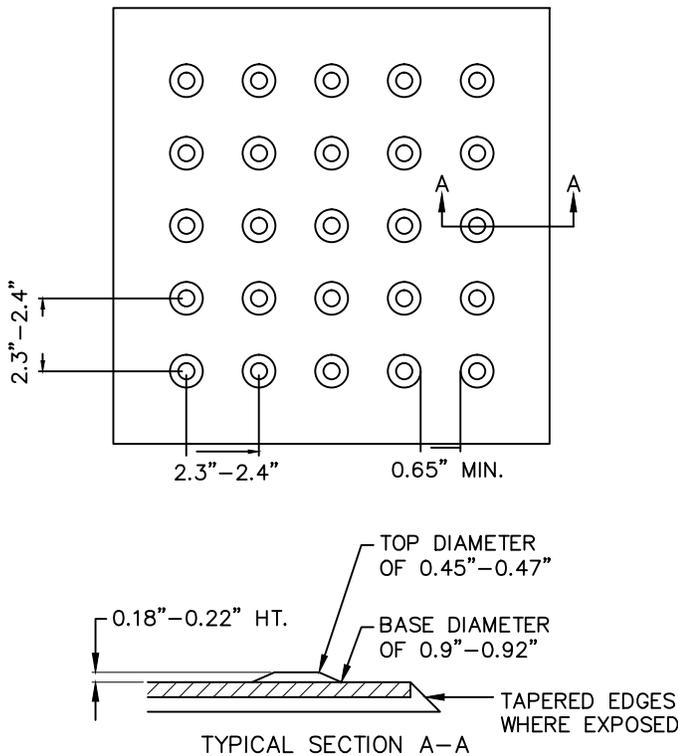
SECTION B-B

# STANDARD WHEELCHAIR RAMP

REVISIONS
6-8-12
2-20-13
2-24-14
1-15-16

CITY OF ORANGE COVE

STD  
 NO.  
 P-9



DETECTABLE WARNING DETAIL

DETECTABLE WARNING NOTES:

1. DETECTABLE WARNINGS AT CURB RAMPS SHALL EXTEND 36 INCHES FROM THE BOTTOM OF THE RAMP IN THE DIRECTION OF TRAVEL. DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE RAMP RUN EXCLUDING ANY FLARED SIDES. DETECTABLE WARNINGS SHALL BE LOCATED SO THE EDGE NEAREST THE CURB IS 6 INCHES FROM THE LINE AT THE FACE OF THE CURB MARKING THE TRANSITION BETWEEN THE CURB AND THE GUTTER OR STREET.
2. DETECTABLE WARNINGS SHALL COMPLY WITH THE 2013 CALIFORNIA BUILDING CODE.
3. DETECTABLE WARNINGS SHALL BE SLIP-RESISTANT AND CONSIST OF RAISED TRUNCATED DOMES.
4. THE DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
5. THE TRUNCATED DOMES SHALL BE SSTD-FLEXIBLE MAT, TRADITIONAL SYSTEM FROM SAFETY STEP TD, OR APPROVED EQUAL.

NOTES:

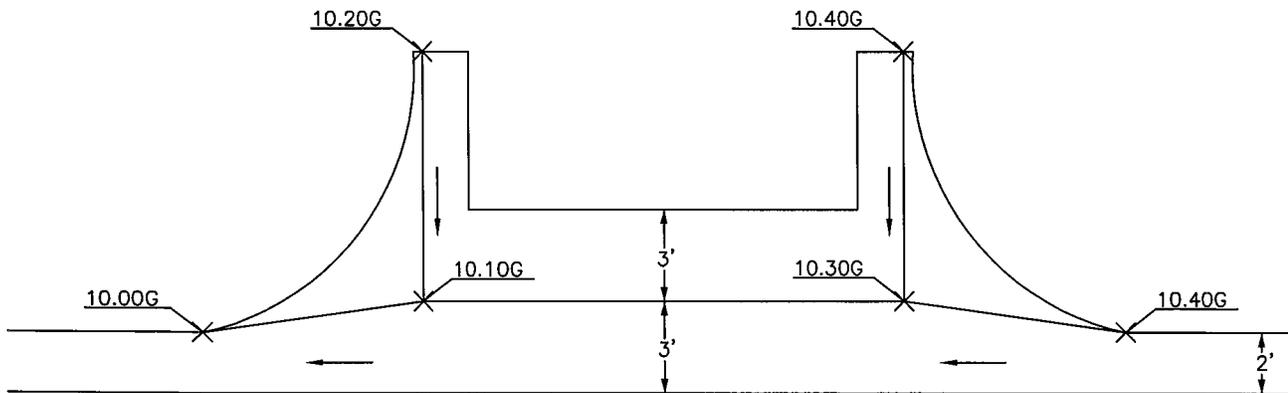
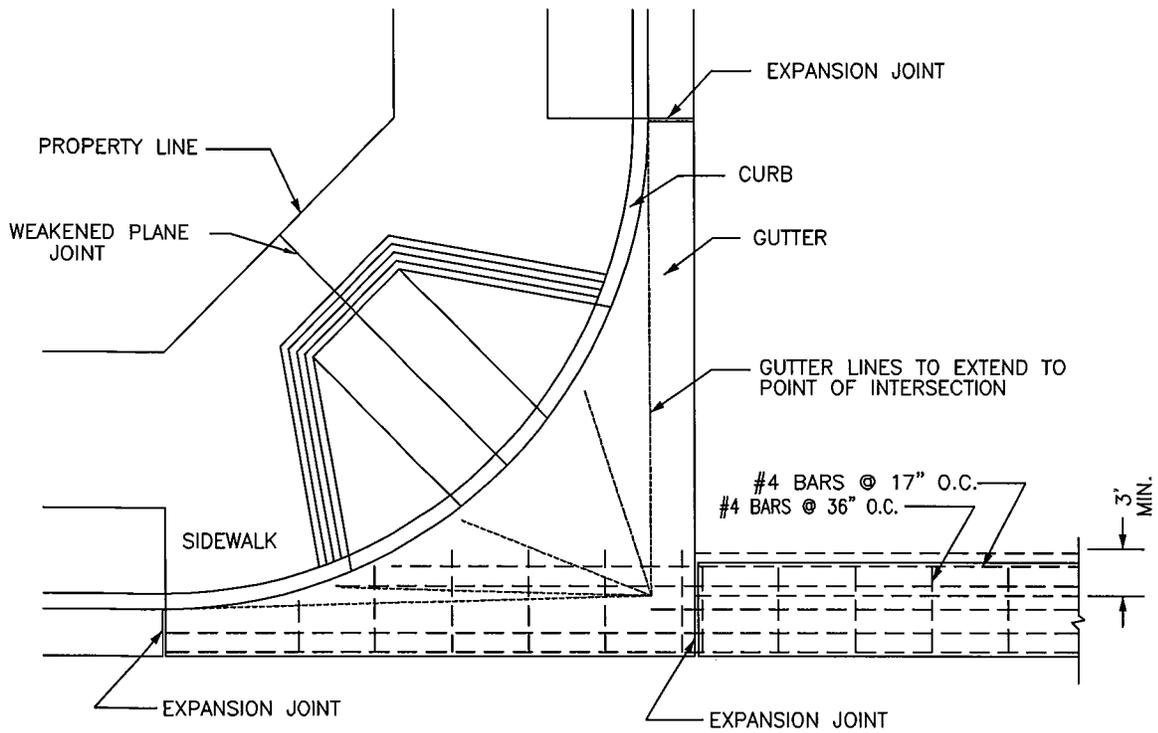
1. RAMP SHALL BE A MINIMUM OF 4' WIDE AND SHALL LIE, GENERALLY, IN A SINGLE SLOPED PLANE WITH A MINIMUM OF SURFACE WARPING AND CROSS SLOPE.
2. RAMP SLOPE SHALL NOT EXCEED 8.33%. FOR TYPE I RAMPS, THE SLOPE OF THE FLARED SIDES SHALL NOT EXCEED 8.33%.
3. TRANSITIONS FROM RAMPS AND LANDINGS TO SIDEWALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
4. THE SLOPE OF ADJOINING GUTTERS, ROAD SURFACE OR ACCESSIBLE ROUTE WITHIN 4' OF THE BOTTOM OF THE RAMP SHALL NOT EXCEED 5% SLOPE. THIS LANDING AREA SHALL BE THE FULL WIDTH OF THE RAMP. GUTTER PAN TRANSITIONING SHALL OCCUR OUTSIDE OF THIS LANDING AREA.
5. THE 4' CLEAR SPACE AT THE BOTTOM OF THE RAMP SHALL TERMINATE WITHIN THE INSIDE EDGE OF MARKED CROSSWALKS.
6. PROVIDE A LANDING AREA AT THE UPPER END OF THE RAMP OF AT LEAST 4' DEEP BY THE FULL WIDTH OF THE RAMP. THE UPPER LANDING AREA SHALL NOT EXCEED 1.5% SLOPE IN ANY DIRECTION.
7. SURFACE OF CURB RAMP AND FLARED SIDES SHALL HAVE A BROOM FINISH TRANSVERSE TO THE PATH OF TRAVEL AND SHALL BE OF CONTRASTING FINISH TO THAT OF ADJACENT SIDEWALK.
8. FOR TYPE I RAMPS, THERE SHALL BE A SEGMENT OF FULL-HEIGHT CURB AT LEAST 24" LONG ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSWALK.
10. ALL WORK CONSTRUCTED BY THIS STANDARD SHALL BE IN COMPLIANCE WITH THE 2013 CALIFORNIA BUILDING CODE AND CURRENT ADA REGULATIONS.
11. 2" OF CLEAN SAND SHALL BE PLACED UNDER CONCRETE SIDEWALK AND WHEELCHAIR RAMP.

STANDARD WHEELCHAIR  
RAMP

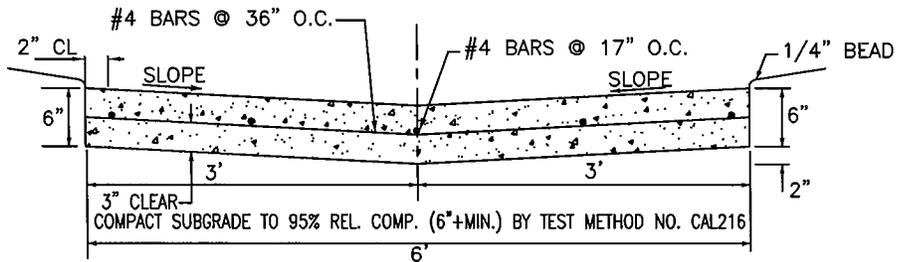
REVISIONS  
6-8-12  
2-20-13  
2-24-14  
1-15-16

CITY OF ORANGE COVE

STD  
NO.  
P-9



TYPICAL DRAINAGE FOR LOCAL STREET (GUTTER GRADES)



SECTION

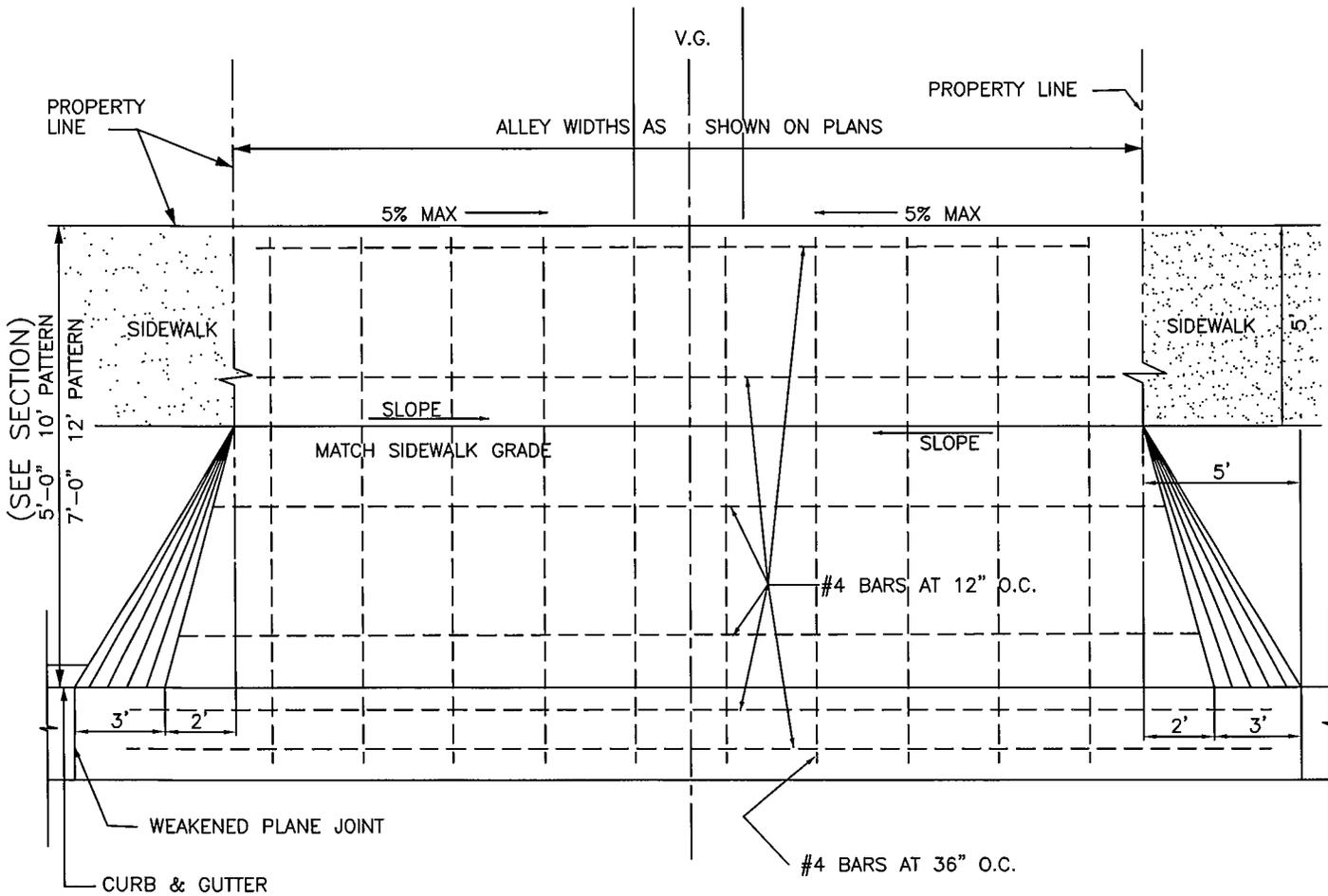
6 SACK MIX CONCRETE

CONCRETE VALLEY GUTTER  
STREET INTERSECTION

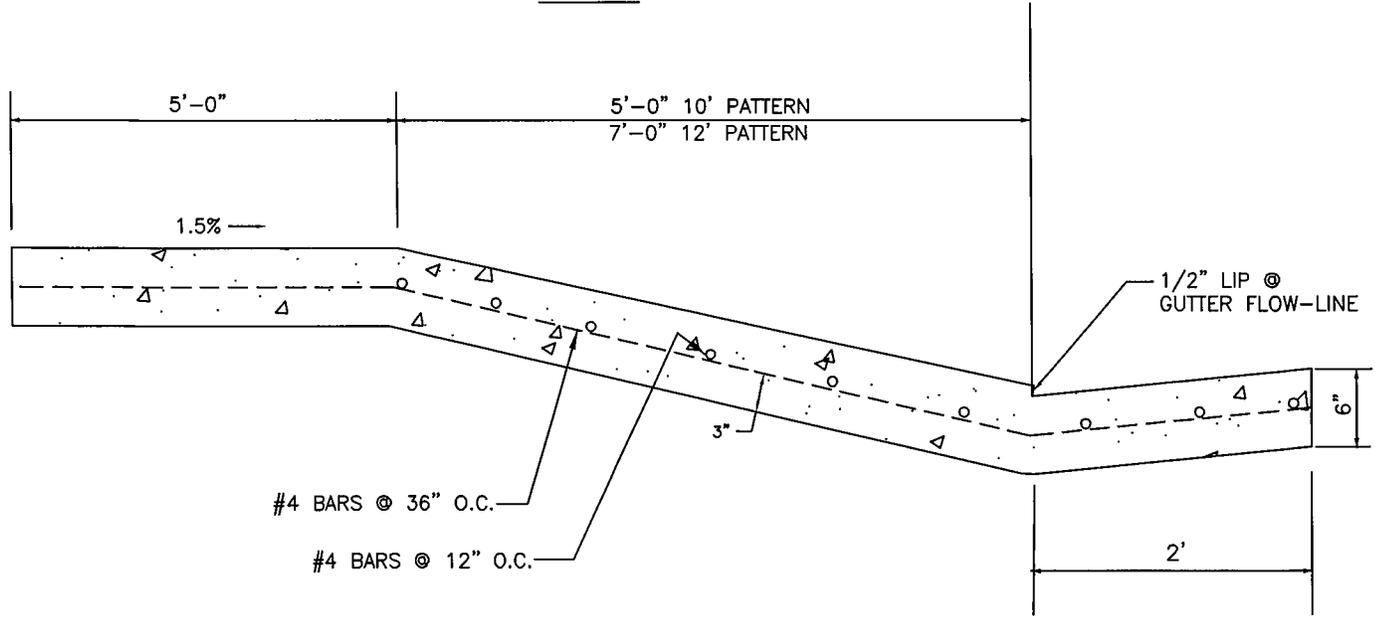
REVISIONS  
4-13-10

CITY OF ORANGE COVE

STD  
NO.  
P-10



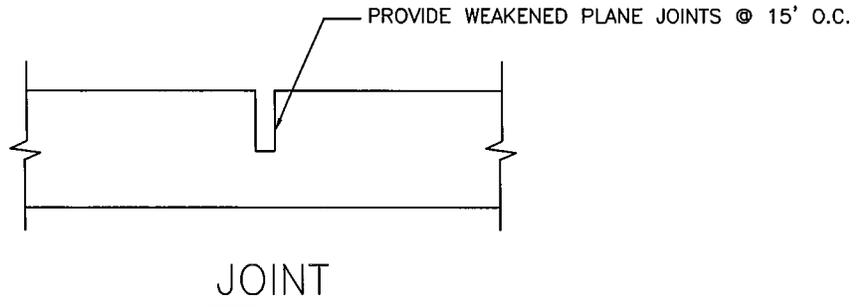
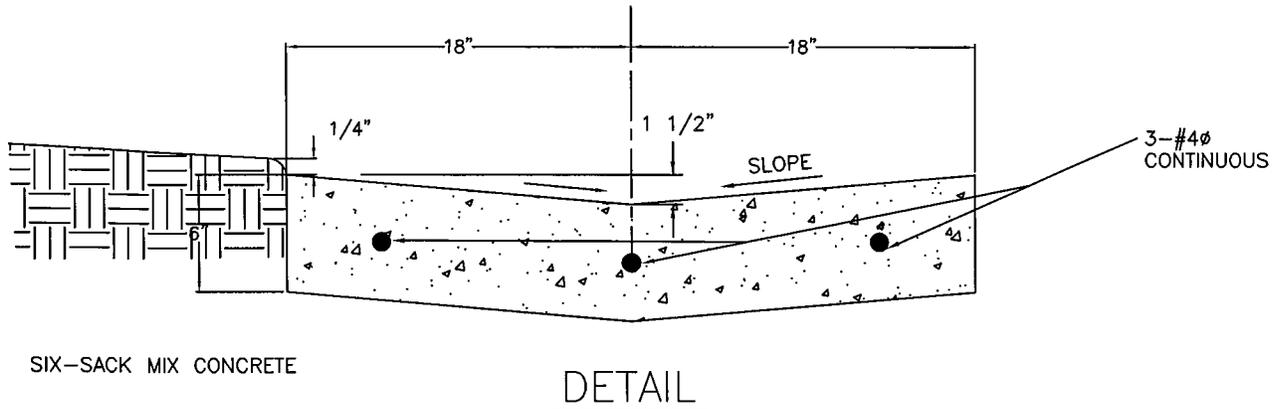
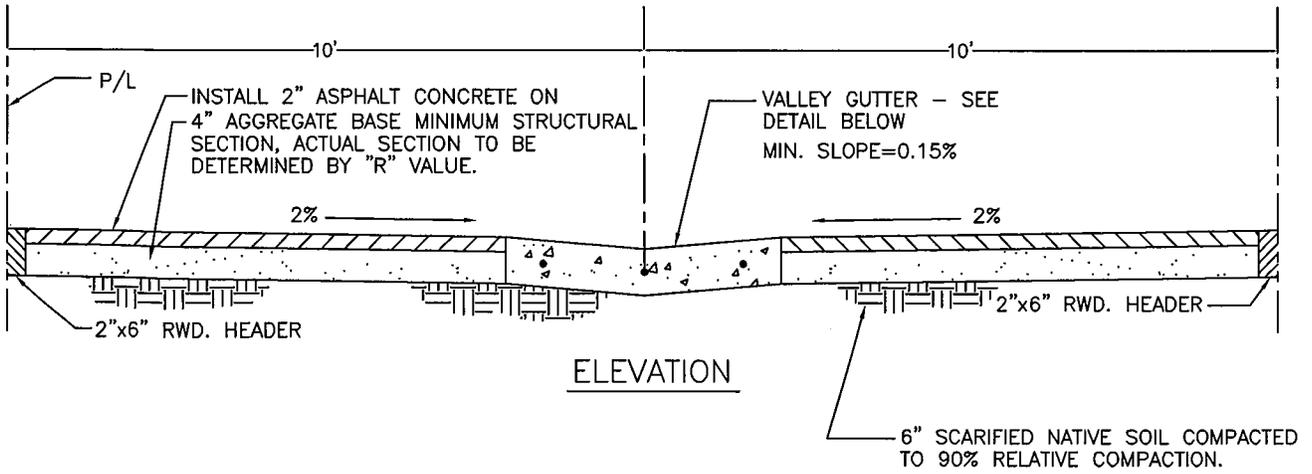
PLAN



SECTION

SIX SACK MIX CONCRETE

<p>COMMERCIAL ALLEY APPROACH</p>	<p>REVISIONS 4-13-10 7-31-13</p>	<p>CITY OF ORANGE COVE</p>	<p>STD NO. P-11</p>
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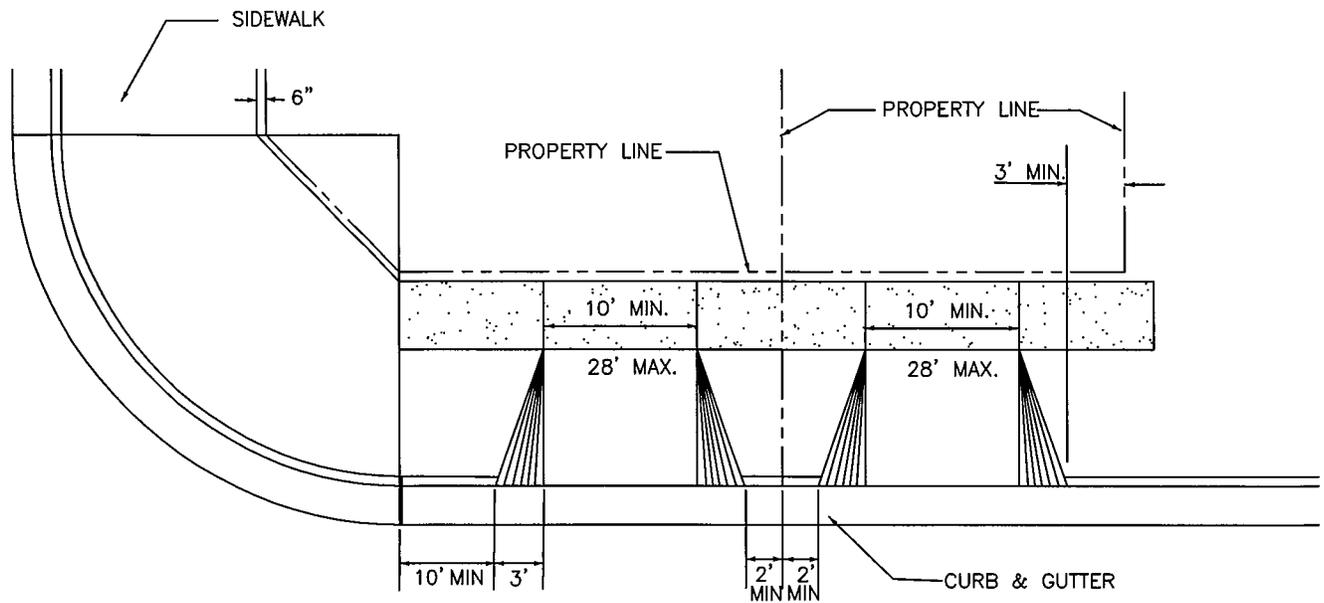


# ALLEY GUTTER DETAIL

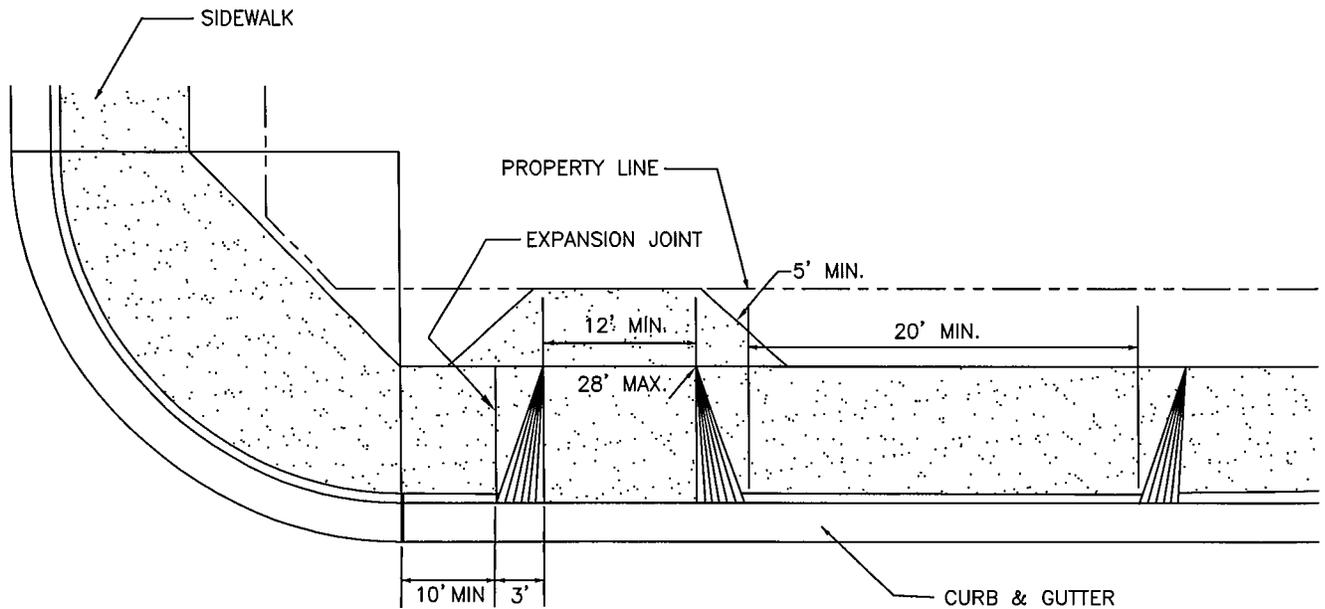
REVISIONS  
12-8-05  
4-13-10

CITY OF ORANGE COVE

STD  
NO.  
P-12



STANDARD CURB, GUTTER & NON-ADJACENT SIDEWALK



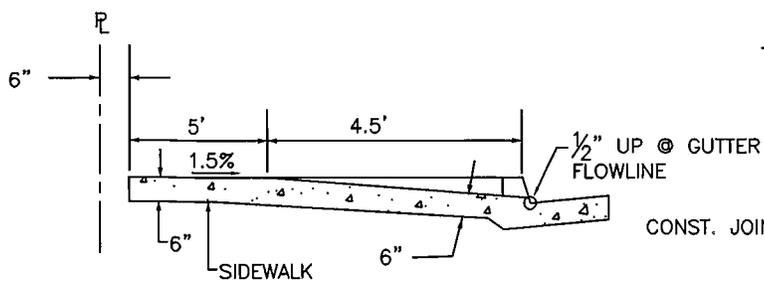
STANDARD CURB, GUTTER WITH ADJACENT SIDEWALK

STANDARD RESIDENTIAL  
DRIVE APPROACH

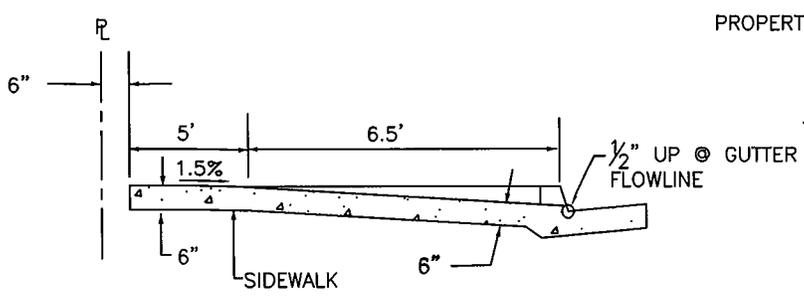
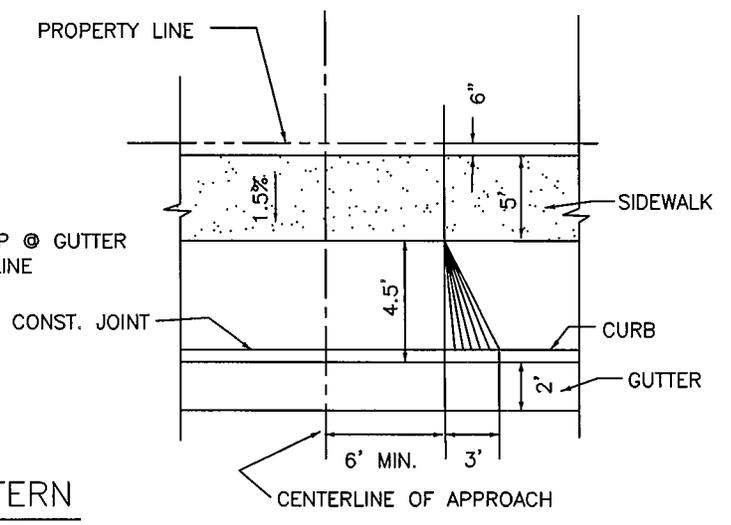
REVISIONS  
8-12-13

CITY OF ORANGE COVE

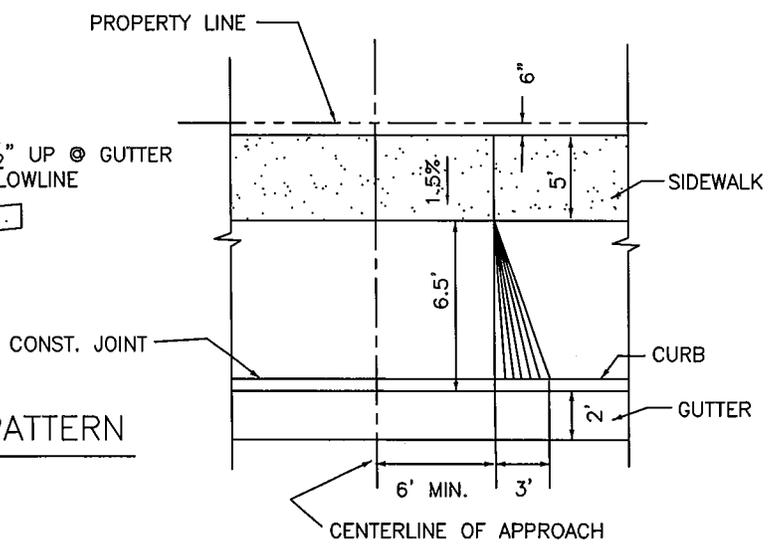
STD  
NO.  
P-13



10' PATTERN



12' PATTERN

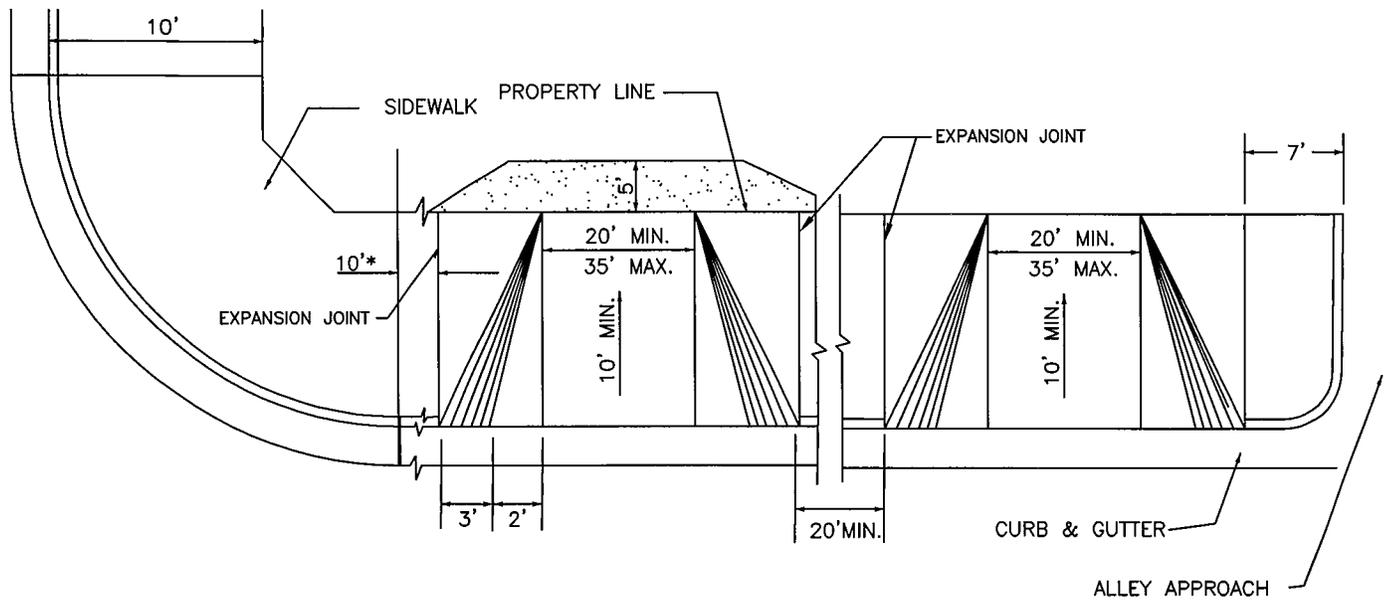


RESIDENTIAL DRIVE APPROACHES  
FOR 10'-12' PATTERN

REVISIONS  
10-28-08  
3-01-13

CITY OF ORANGE COVE

STD  
NO.  
P-14



STANDARD COMMERCIAL CURB, GUTTER AND SIDEWALK

NOTE:

SEE DRIVE APPROACH STANDARDS

NOT MORE THAN 60% OF THE CURB FACE  
MAY BE USED FOR DRIVEWAY OPENING.

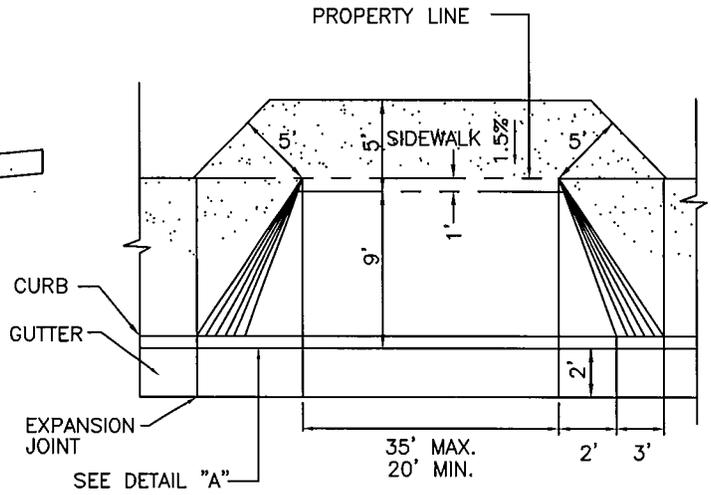
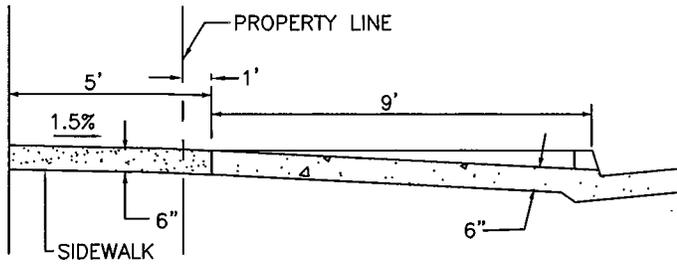
\* MINIMUM SPACING BETWEEN CURB RETURN  
AND EDGE OF DRIVE APPROACH—10'

STANDARD COMMERCIAL  
DRIVE APPROACH

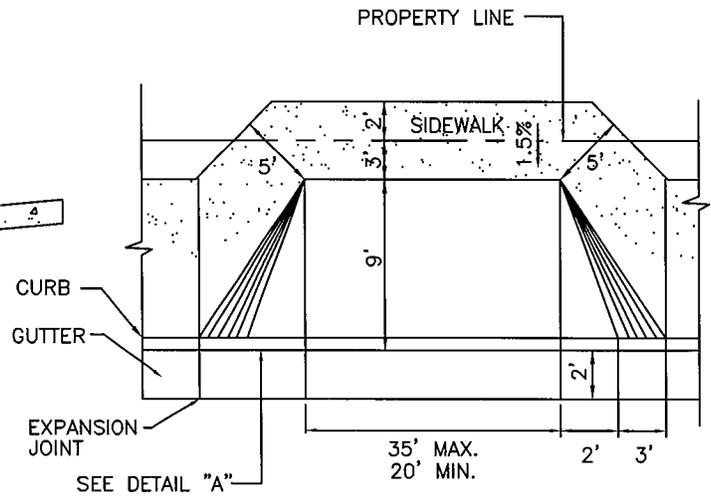
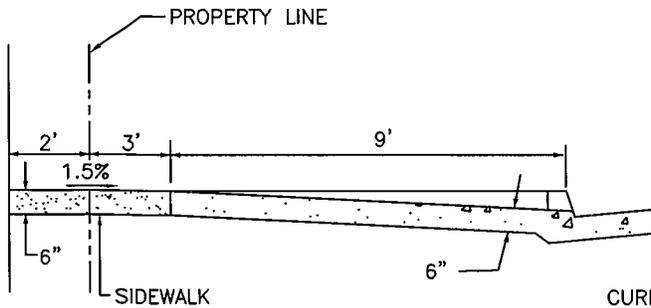
REVISIONS  
12-8-05  
8-12-13

CITY OF ORANGE COVE

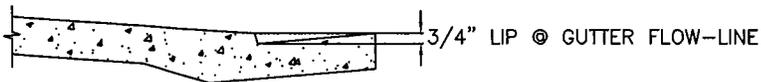
STD  
NO.  
P-15



10' PATTERN



12' PATTERN



DETAIL A

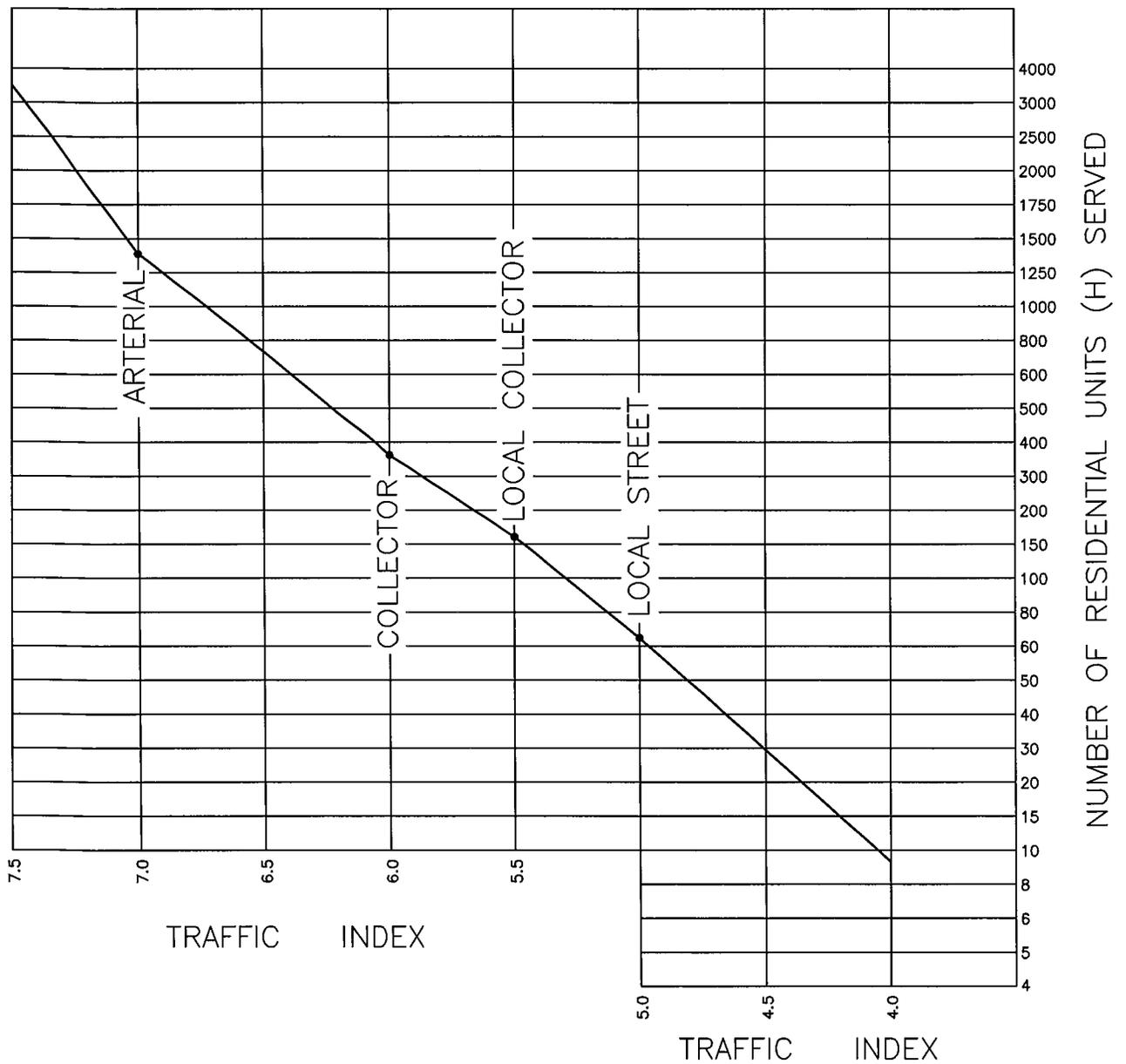
FIVE-SACK MIX CONCRETE

COMMERCIAL DRIVEWAY  
APPROACHES

REVISIONS  
12-8-05  
4-13-10  
3-01-13

CITY OF ORANGE COVE

STD  
NO.  
P-16



$$T.I. = 3.16(H)$$

WHERE THE NUMBER OF UNITS TO BE SERVED OR TRAFFIC COUNTS CAN NOT BE DETERMINED, USE THE TRAFFIC INDEX SHOWN.

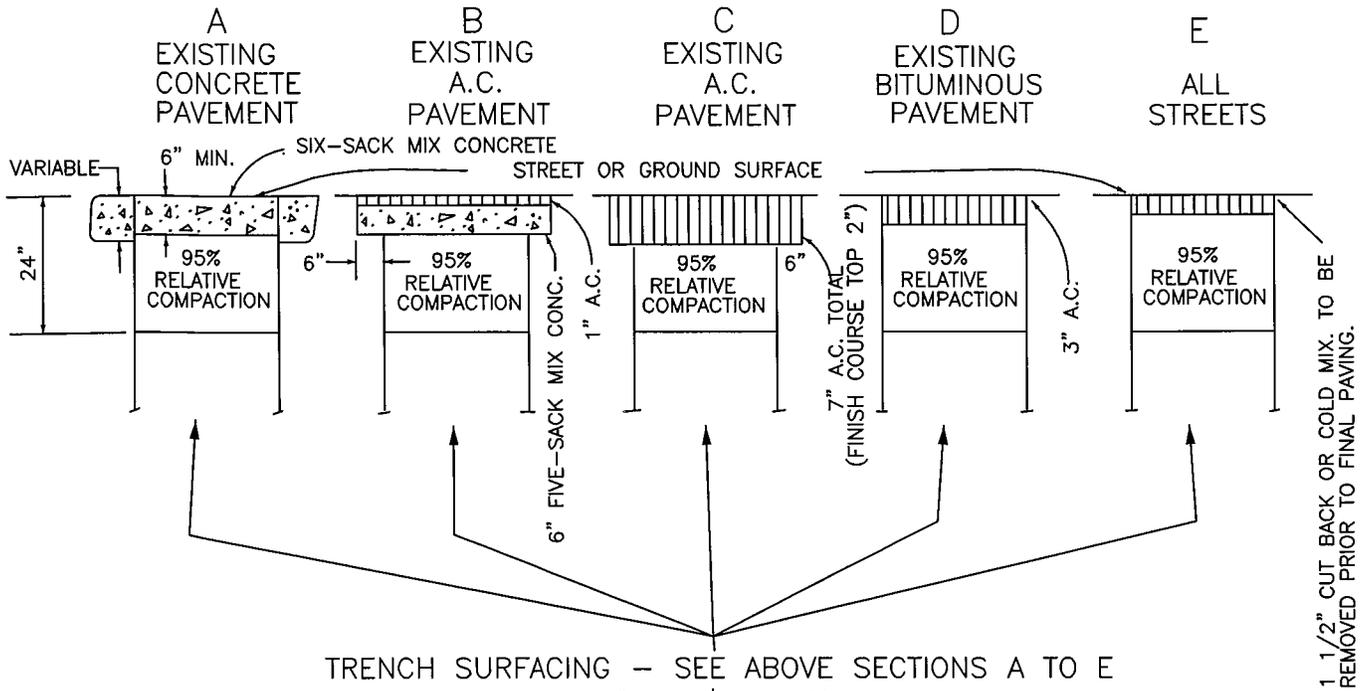
AREAS CONSIDERED AS SHOULDER MAY HAVE T.I.'S EQUAL TO 0.6 OF THE TRAFFIC LANES. 4.0 IS MINIMUM T.I. FOR DESIGN OF TRAVELWAY AND SHOULDERS.

# TRAFFIC INDEX CHART

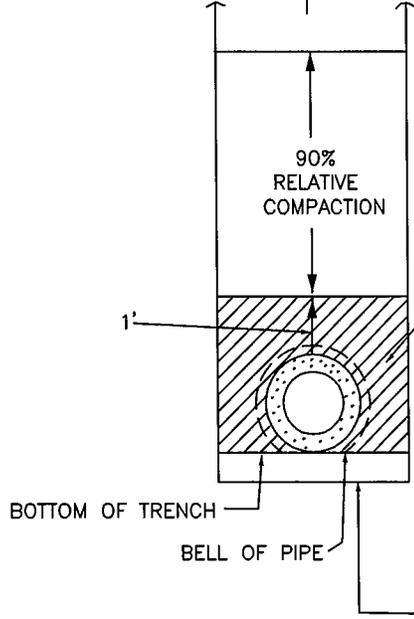
REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
P-18



TRENCH SURFACING -- SEE ABOVE SECTIONS A TO E

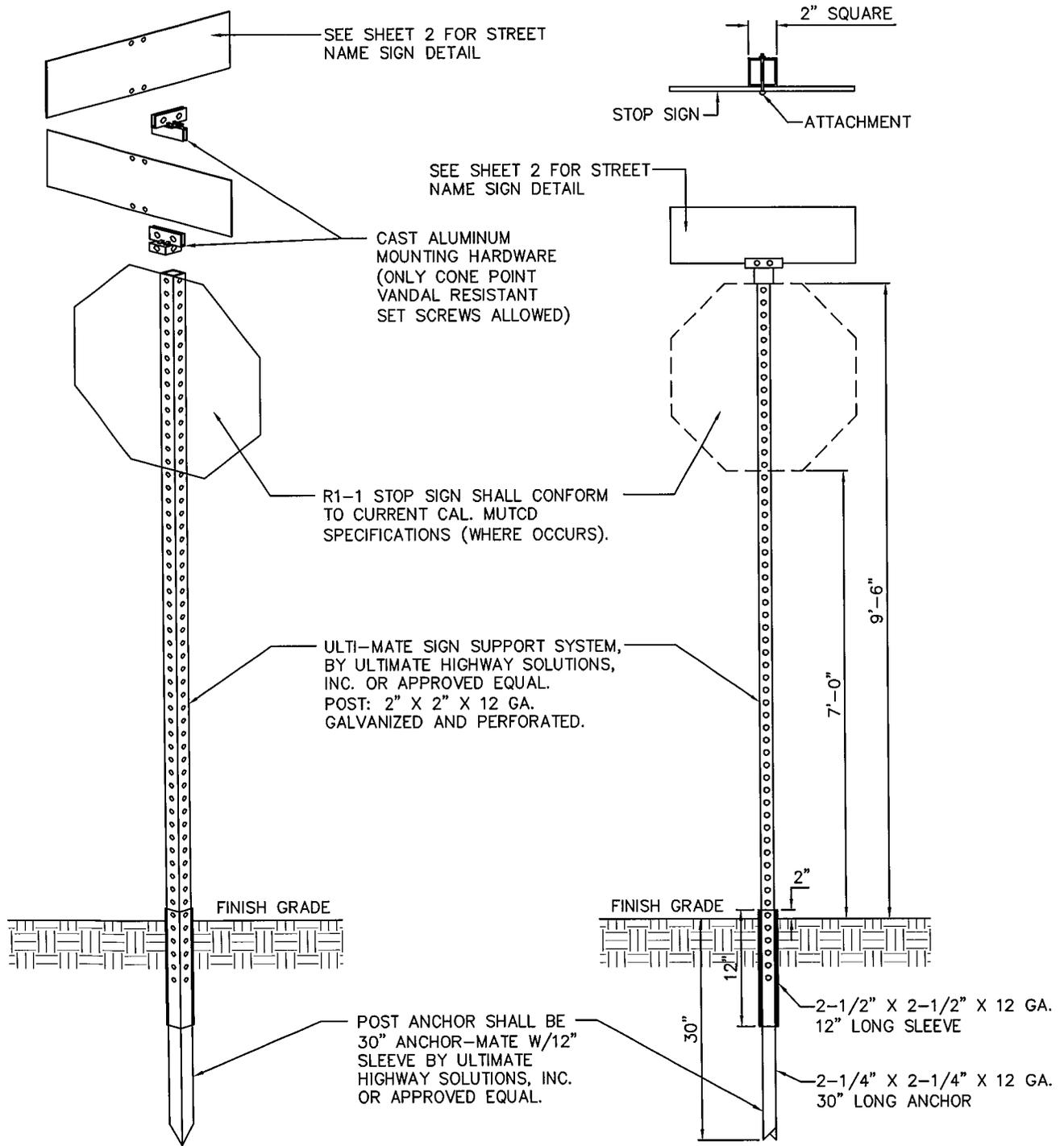


SELECT NATIVE MATERIAL PLACED BY HAND & FREE OF FOREIGN MATERIAL AND HARD LUMPS. WATER JETTING AROUND PIPE PRIOR TO COMPLETION OF BACKFILL. JETTING TO BE APPROVED BY THE ENGINEER.

WHERE HARD CLAY IS ENCOUNTERED, THE TRENCH SHALL BE OVER-EXCAVATED A MINIMUM OF 4" AND SELECT MATERIAL PLACED TO GRADE AND COMPACTED TO 85% PRIOR TO PLACING PIPE.

- NOTE:
1. TYPE "C" MAY BE USED IN LIEU OF "B" WHEN TRENCH WIDTH EXCEEDS 4'.
  2. TEMPORARY RESURFACING AS SHOWN ON SECTION "E", SHALL BE REQUIRED IN ALL STREET INTERSECTIONS, OR AS DIRECTED BY THE ENGINEER.
  3. TEST 216 FOR ALL RELATIVE COMPACTION DETERMINATIONS, STATE OF CALIFORNIA.
  4. A.C.= ASPHALT CONCRETE.
  5. THE PAVEMENT SECTIONS SHOWN ABOVE ARE MINIMUM, AND IF THE EXISTING STRUCTURAL SECTION IS GREATER, IT SHALL BE MATCHED UNLESS OTHERWISE APPROVED BY THE ENGINEER.
  6. ALL TRENCH EDGES SHALL BE SAWCUT PRIOR TO PLACING PERMANENT SURFACING.

<h1>TRENCH BACKFILL &amp; SURFACE REPLACEMENT</h1>	REVISIONS 3-22-10	CITY OF ORANGE COVE	STD NO.
			P-19



**STREET SIGN POST DETAIL**  
NO SCALE

**NOTE:**

1. SLEEVE AND ANCHOR SHALL BE TWO-PIECE WELDED.
2. TOP OF ANCHOR AND SLEEVE SHALL REMAIN 1" TO 2" ABOVE FINISH GRADE.
3. POST AND ANCHOR SHALL BE HOT-DIP GALVANIZED CONFORMING TO COATING DESIGNATION G-140 FOR CORROSION PREVENTION AND SHALL BE 12-GAUGE STEEL THAT COMPLIES WITH ASTM A653.
4. SEE SHEET 2 FOR SIGN LOCATIONS.

SHEET 1 OF 2

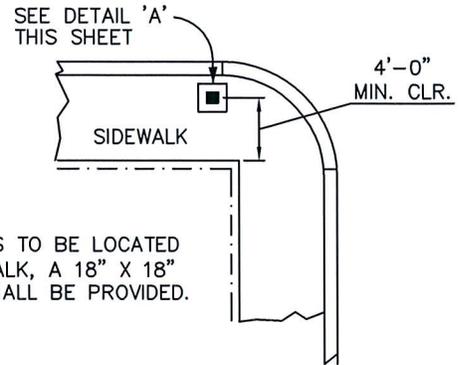
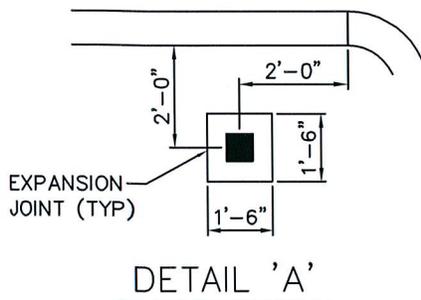
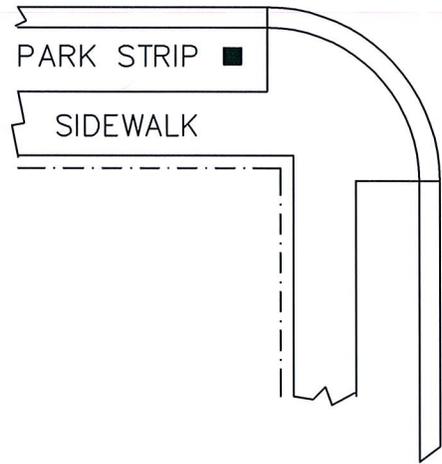
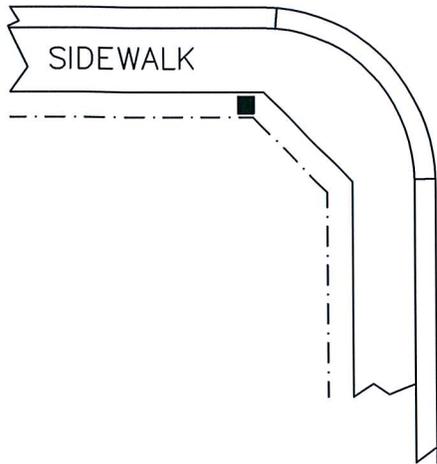
<h1>STREET NAME AND STOP SIGN INSTALLATION</h1>	<p>REVISIONS</p> <p>3-22-10</p> <p>4-13-10</p> <p>8-14-13</p>	<p>CITY OF ORANGE COVE</p>	<p>STD NO.</p> <p>P-20</p>
	<p>S:\CAD\Agencies\CITY OF ORANGE COVE\_STANDARDS\DWG\P20.dwg</p>		

18", 24", 30" OR 36"



SIGN NOTES:

1. SIGN TO BE SINGLE BLADE DOUBLE FACED FINISH WITH NAME ON BOTH SIDES.
2. SIGNS SHALL BE 14 GA. FLAT NON-EXTRUDED SIGN BLADE MADE OF ALUMINUM ALLOY.
3. FINISH SHALL BE ENGINEERING GRADE (EG) TYPE 1 RETRO-REFLECTIVE SHEETING, GREEN BACKGROUND WITH WHITE LETTERS AND CITY LOGO ON THE LEFT SIDE.
4. SIGNS TO BE COVERED WITH AVERY DENNISON OL-1000 PREMIUM ANTI-GRAFFITI FILM OR APPROVED EQUAL.
5. SIGN-TO-SIGN BRACKET SHALL BE 90° CROSSPIECE THAT WILL ACCOMMODATE THE 14 GA. SIGN BLADE.
6. STREET SIGNS TO BE SIGNMAX OR APPROVED EQUAL.
7. STOP SIGNS TO BE 30" OCTAGON AND SHALL CONFORM TO CURRENT CAL. MUTCD SPECIFICATIONS.



NOTE:  
WHEN POST IS TO BE LOCATED WITHIN SIDEWALK, A 18" X 18" KNOCKOUT SHALL BE PROVIDED.

TYPICAL LOCATIONS

LOCATION OF STREET NAME SIGNS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. ALTERNATE LOCATIONS TO BE APPROVED BY CITY ENGINEER. TYPICAL LOCATIONS ARE: B.C.R. OF N.E. & S.W. CORNER OF INTERSECTIONS.

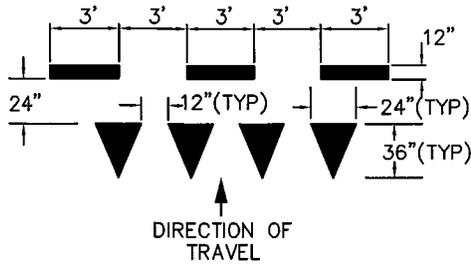
SHEET 2 OF 2

STREET NAME AND STOP SIGN INSTALLATION

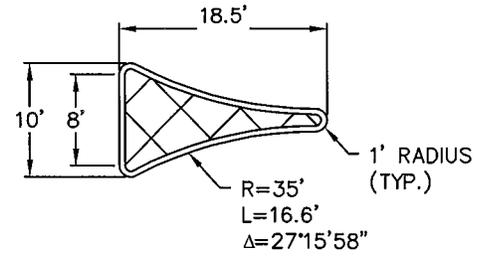
REVISIONS  
4-13-10  
8-14-13

CITY OF ORANGE COVE

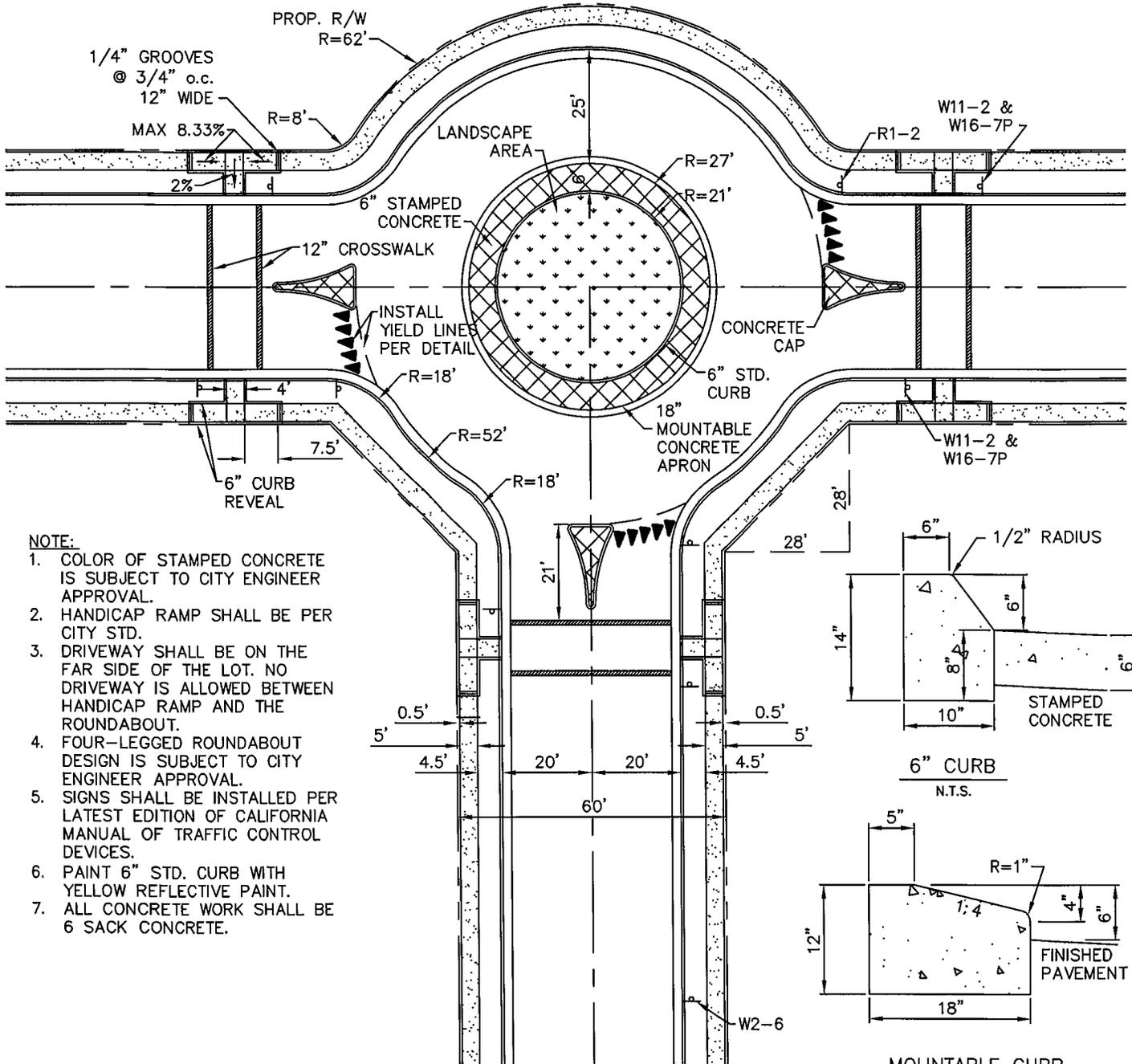
STD  
NO.  
P-20



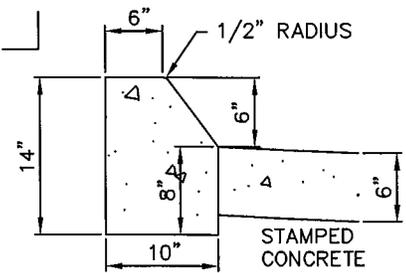
**YIELD LINE DETAIL**  
N.T.S.



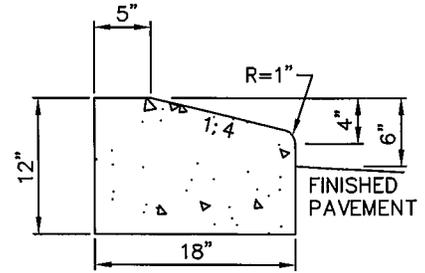
**SPLITTER ISLAND**  
N.T.S.



- NOTE:**
1. COLOR OF STAMPED CONCRETE IS SUBJECT TO CITY ENGINEER APPROVAL.
  2. HANDICAP RAMP SHALL BE PER CITY STD.
  3. DRIVEWAY SHALL BE ON THE FAR SIDE OF THE LOT. NO DRIVEWAY IS ALLOWED BETWEEN HANDICAP RAMP AND THE ROUNDABOUT.
  4. FOUR-LEGGED ROUNDABOUT DESIGN IS SUBJECT TO CITY ENGINEER APPROVAL.
  5. SIGNS SHALL BE INSTALLED PER LATEST EDITION OF CALIFORNIA MANUAL OF TRAFFIC CONTROL DEVICES.
  6. PAINT 6" STD. CURB WITH YELLOW REFLECTIVE PAINT.
  7. ALL CONCRETE WORK SHALL BE 6 SACK CONCRETE.



**6" CURB**  
N.T.S.



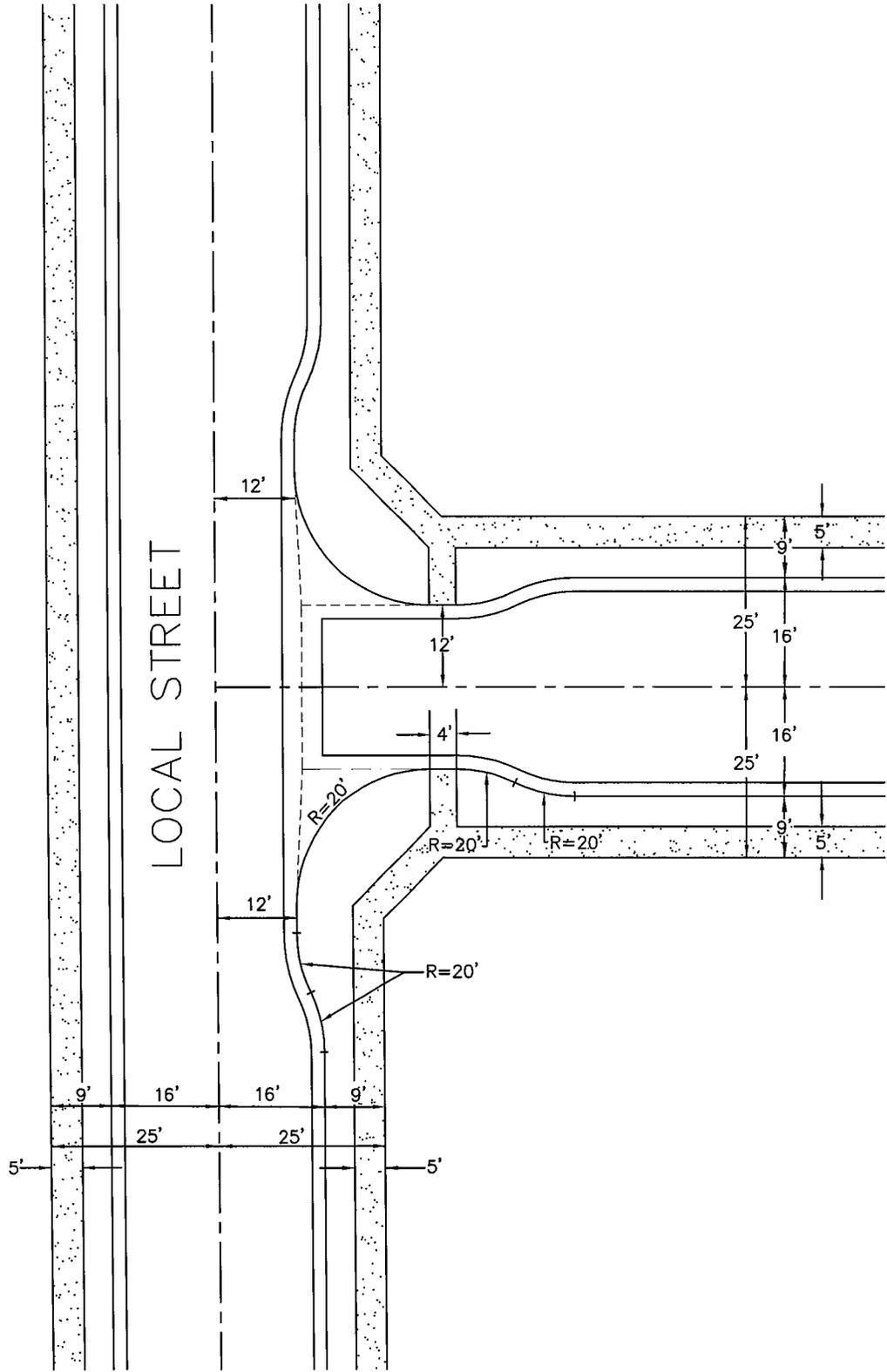
**MOUNTABLE CURB**  
N.T.S.

**LOCAL STREET ROUNDABOUT**

REVISIONS  
8-1-13

CITY OF ORANGE COVE

STD  
NO.  
P-21

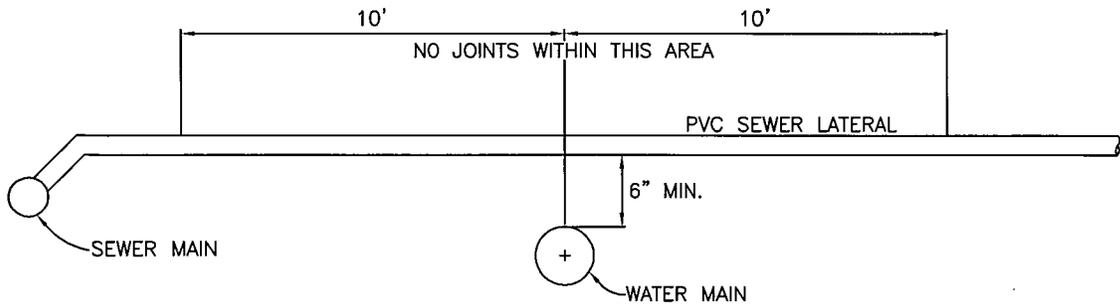
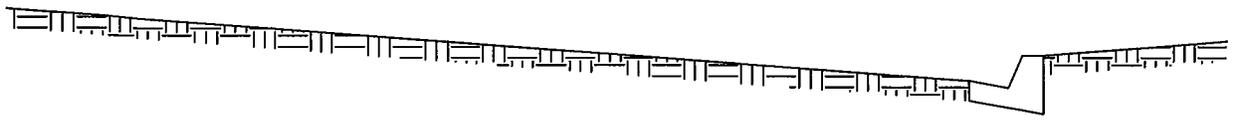


BULB-OUT DETAIL

REVISIONS  
4-13-10

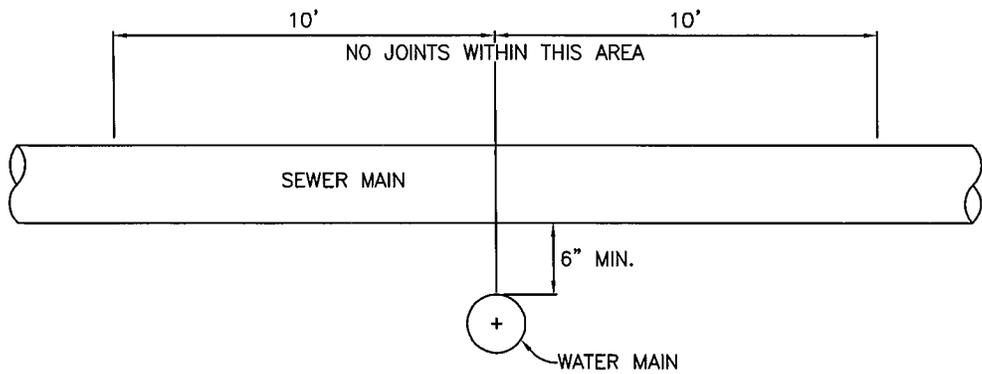
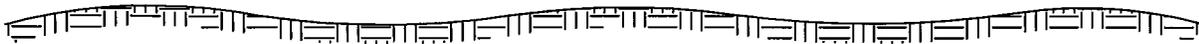
CITY OF ORANGE COVE

STD  
NO.  
P-22



SEWER LATERAL ABOVE WATER MAIN

1. IF BOTH SEWER AND WATER ARE NEW CONSTRUCTION, WATER MAIN SHALL BE CLASS 200 PIPE WITH NO JOINTS WITHIN 10 FEET OF CROSSING.
2. IF ONLY WATER MAIN IS NEW CONSTRUCTION, WATER MAIN SHALL BE CLASS 200 PIPE, WITH NO JOINTS WITHIN 10 FEET OF CROSSING.
3. IF ONLY SEWER MAIN IS NEW CONSTRUCTION, SEWER PIPE 10 FEET ON EACH SIDE OF CROSSING SHALL BE DUCTILE IRON PIPE WITH FLANGED JOINTS, OR PVC ENCASED IN CONCRETE, MINIMUM THICKNESS OF 6 INCHES.



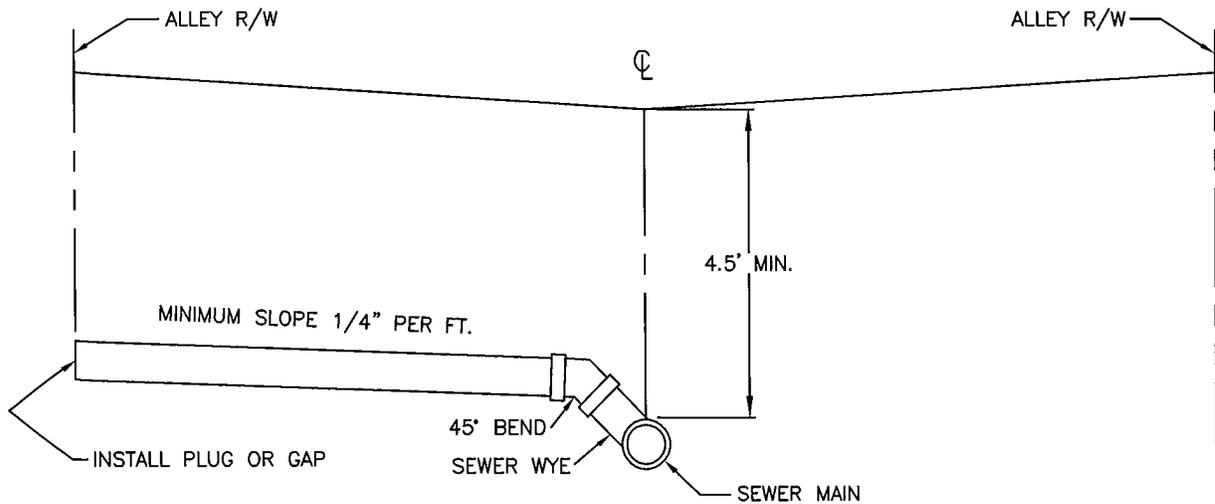
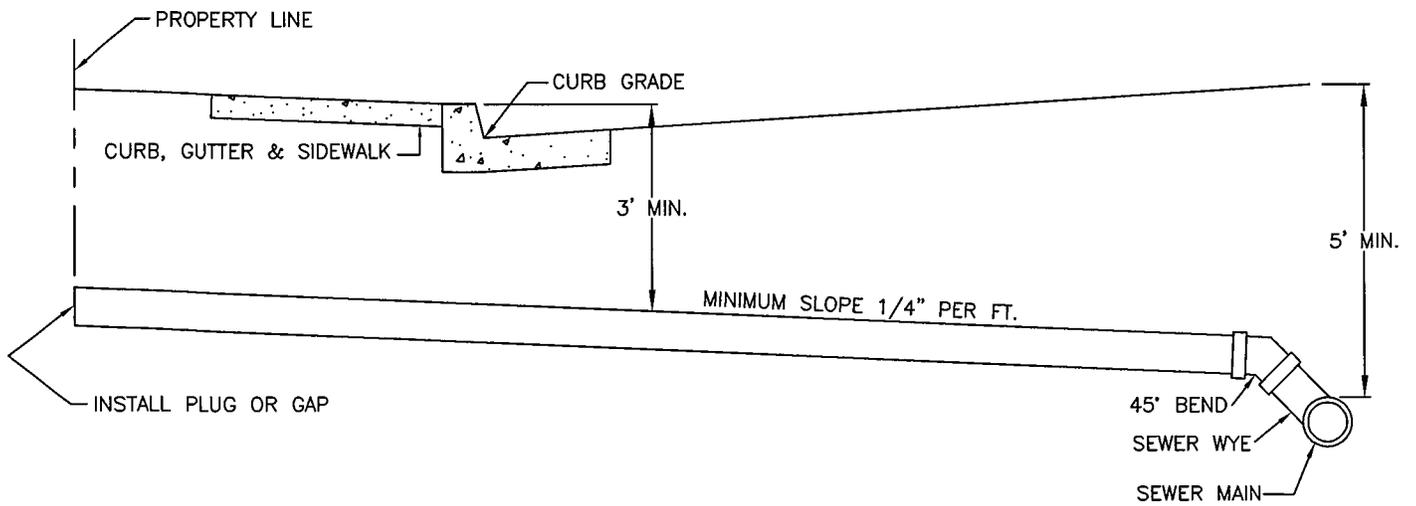
SEWER MAIN ABOVE WATER MAIN

SEWER SERVICE AND  
WATER MAIN SEPARATION

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
S-1



APPROVED TYPE OF PIPE SHALL MEET OR EXCEED THE FOLLOWING REQUIREMENTS:

1. P.V.C.- A.S.T.M. D3034-74 PSIG SDR-35(EXTRA STRENGTH)

# HOUSE BRANCH & UTILITIES LOCATION IN STREET

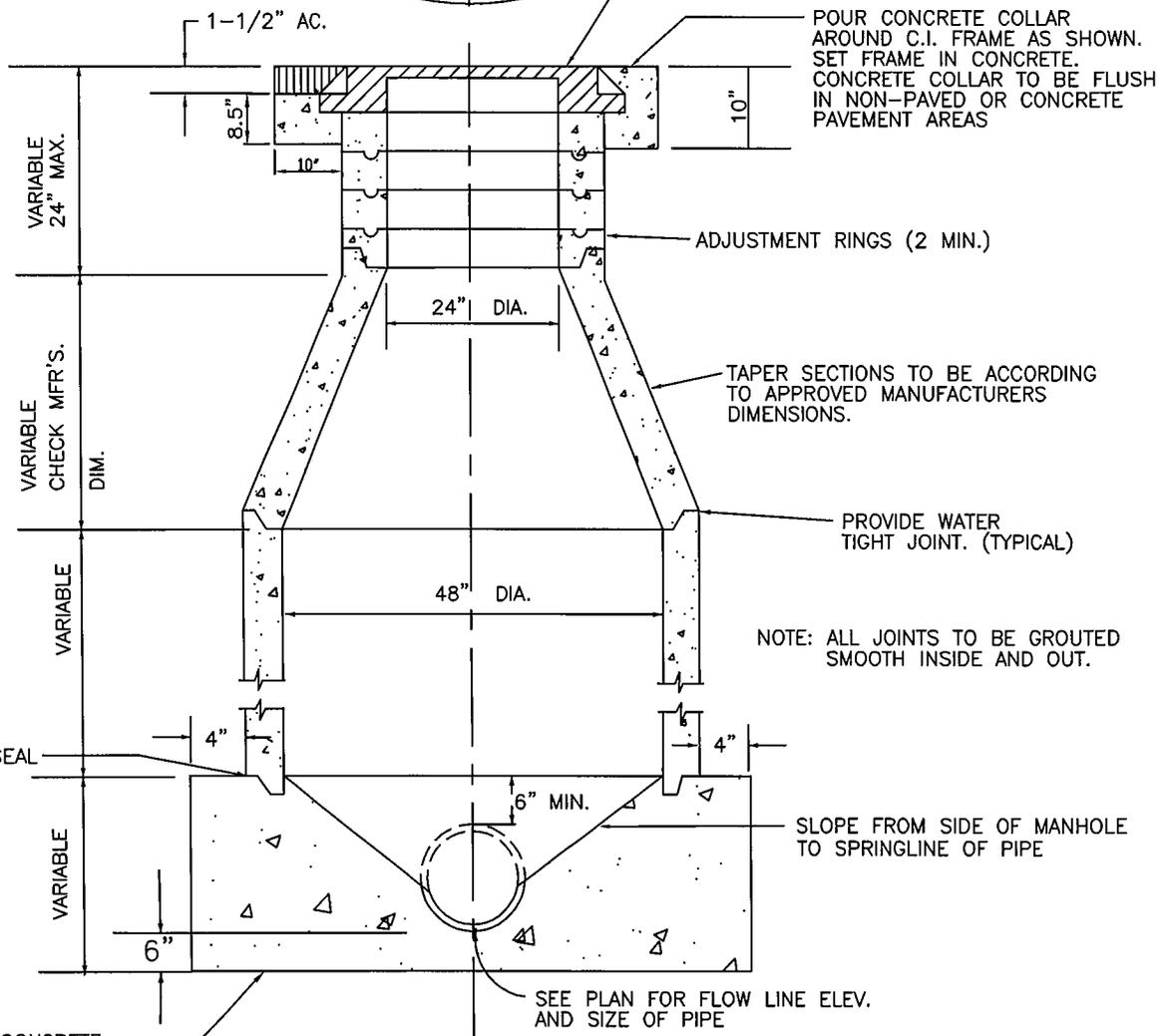
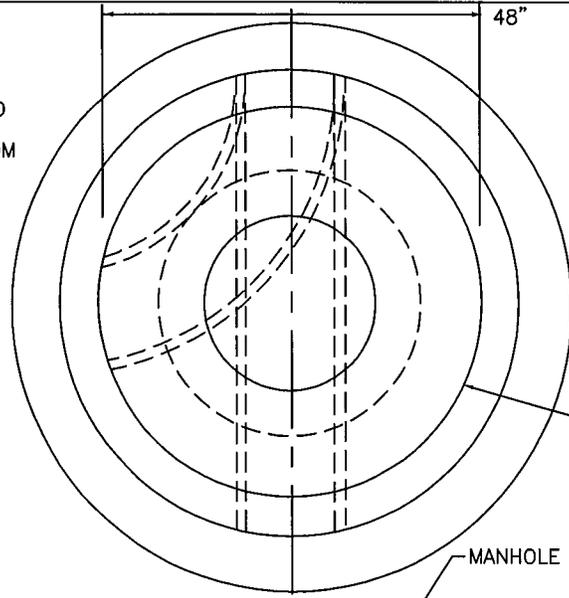
REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
S-2

QUARTER TURNS TO BE CONSTRUCTED TO FORM A SMOOTH FLOW LINE OF SAME SHAPE AND PATTERN AS BOTTOM WALL OF PIPE.

PLAN VIEW SHOWING QUARTER BEND TO BE USED WHEN MAKING A TURN. ALL STRAIGHT PIPE TO BE LAID THROUGH MANHOLES WITH TOP HALF REMOVED AND ROUGH BROKEN EDGES MORTARED SMOOTH.



SIX-SACK MIX CONCRETE BASE POURED IN PLACE. SURFACE OF BASE AND CONCRETE FLOW LINE TO EQUAL SMOOTHNESS OF PIPE.

NOTE: PRECAST PIPE, ADJUSTMENT RINGS AND TAPERED SECTIONS SHALL BE CLASS II RCP IN ACCORDANCE WITH A.S.T.M. C478. ELLIPTICAL SINGLE LINE REINFORCEMENT WILL NOT BE PERMITTED.

# 48" SEWER MANHOLE WITH PRECAST SECTIONS & CAST IRON FRAME AND COVER

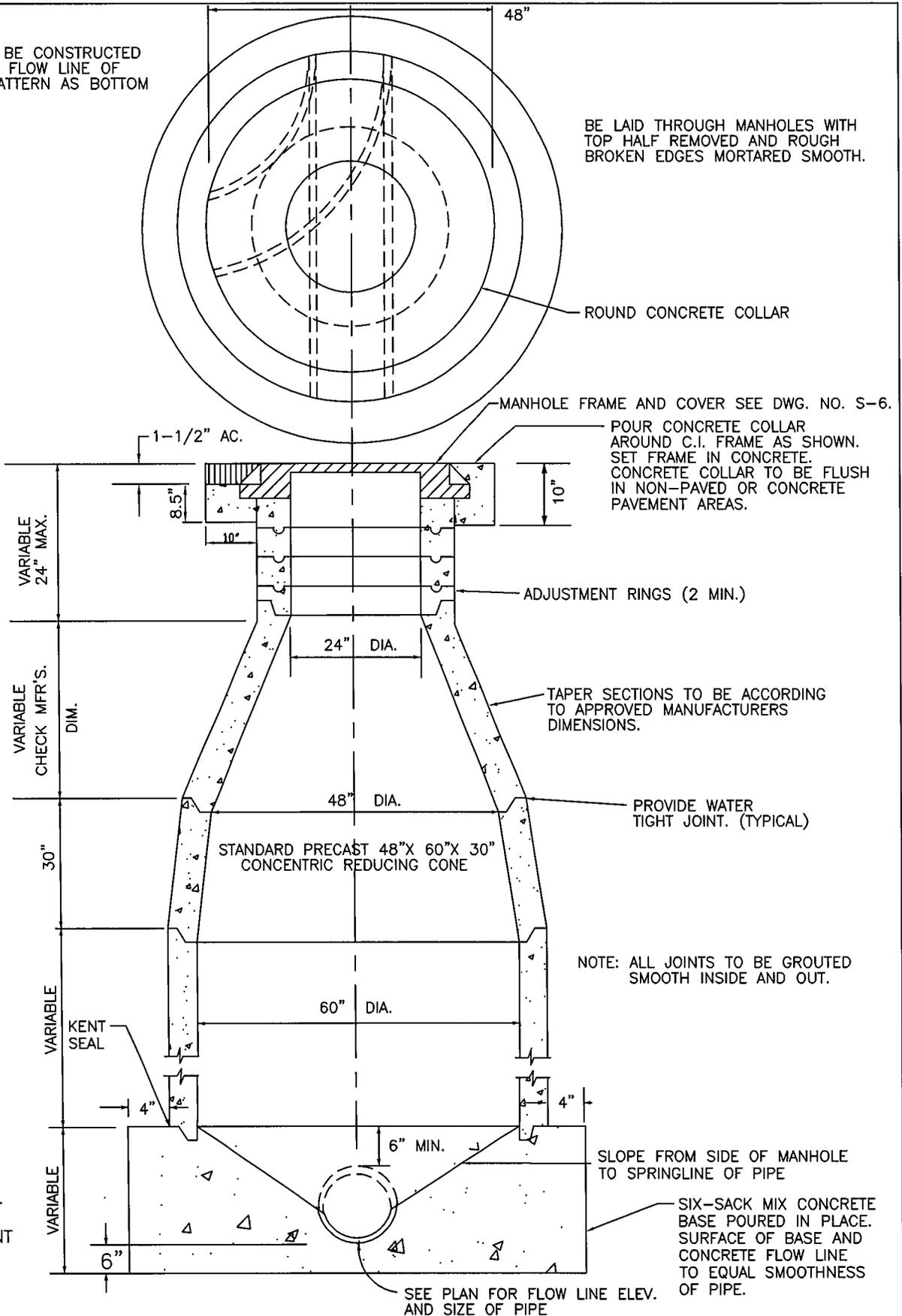
REVISIONS  
4-13-10  
8-1-13

CITY OF ORANGE COVE

STD NO. S-3

QUARTER TURNS TO BE CONSTRUCTED TO FORM A SMOOTH FLOW LINE OF SAME SHAPE AND PATTERN AS BOTTOM WALL OF PIPE.

BE LAID THROUGH MANHOLES WITH TOP HALF REMOVED AND ROUGH BROKEN EDGES MORTARED SMOOTH.



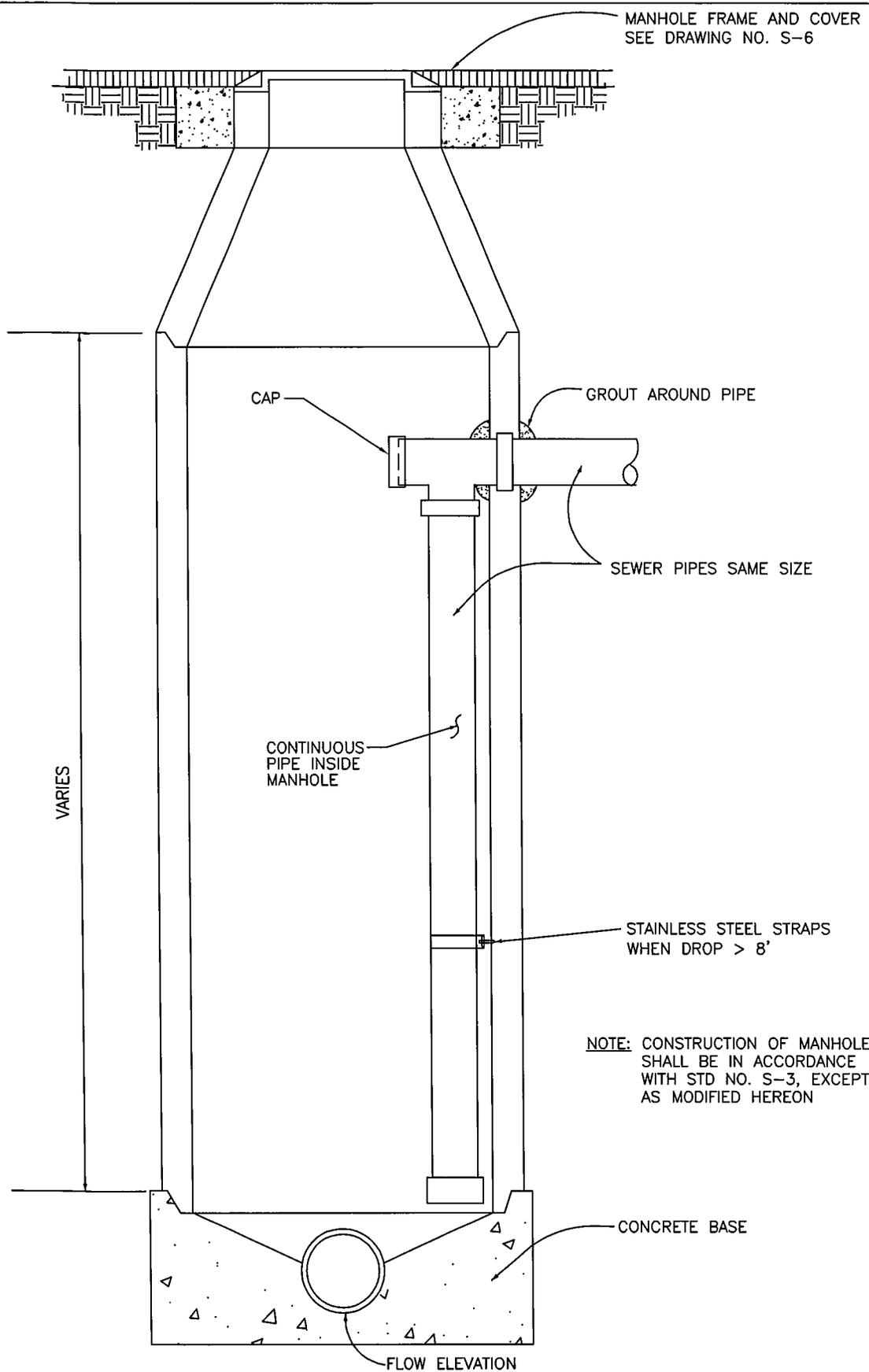
NOTE: PRECAST PIPE, ADJUSTMENT RINGS AND TAPERED SECTIONS SHALL BE CLASS II RCP IN ACCORDANCE WITH A.S.T.M. C478. ELLIPTICAL SINGLE LINE REINFORCEMENT WILL NOT BE PERMITTED.

NOTE: ALL JOINTS TO BE GROUTED SMOOTH INSIDE AND OUT.

SLOPE FROM SIDE OF MANHOLE TO SPRINGLINE OF PIPE  
SIX-SACK MIX CONCRETE BASE POURED IN PLACE. SURFACE OF BASE AND CONCRETE FLOW LINE TO EQUAL SMOOTHNESS OF PIPE.

SEE PLAN FOR FLOW LINE ELEV. AND SIZE OF PIPE

<p>60" SEWER MANHOLE WITH PRECAS SECTIONS &amp; CAST IRON FRAME &amp; COVER</p>	<p>REVISIONS 4-13-10 8-1-13</p>	<p>CITY OF ORANGE COVE</p>	<p>STD NO. S-4</p>
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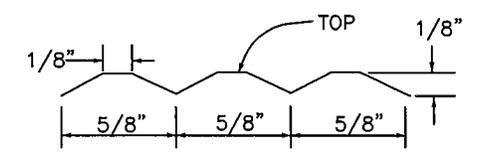
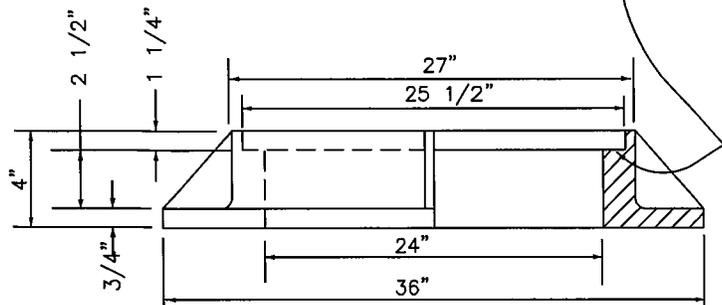
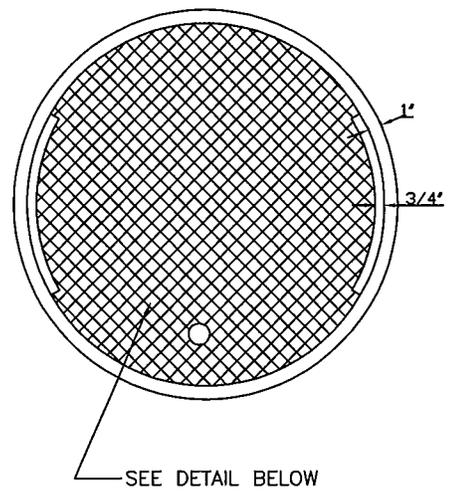
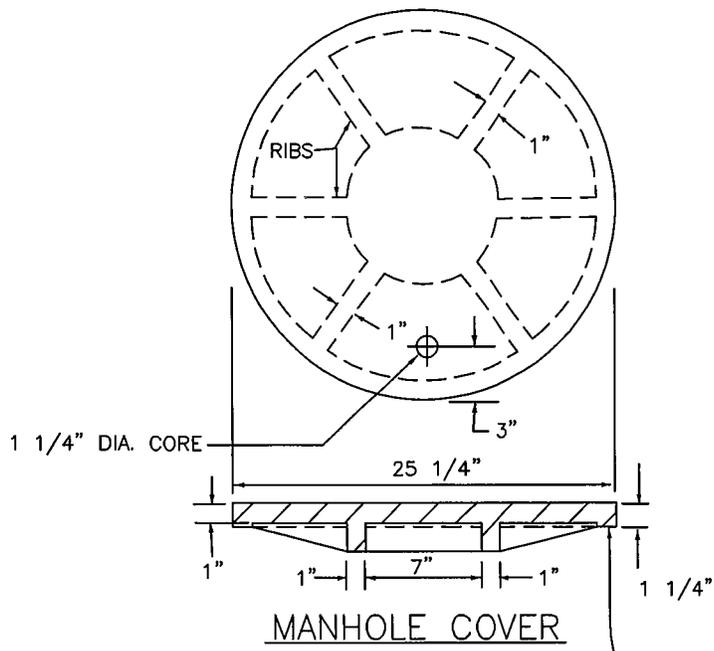


# DROP MANHOLE

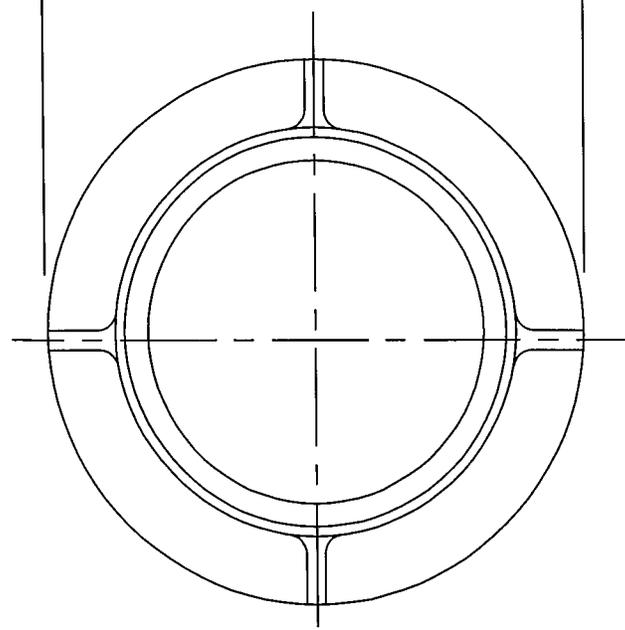
REVISIONS  
4-13-10

CITY OF ORANGE COVE

STD  
NO.  
S-5



DETAIL OF WAFFLE PATTERN

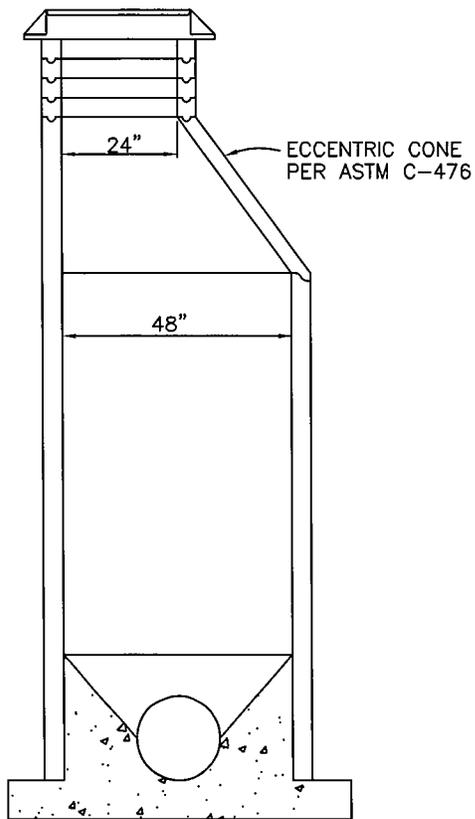


CAST IRON MANHOLE  
FRAME & COVER

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
S-6



ECCENTRIC MANHOLE  
NO SCALE

NOTES:

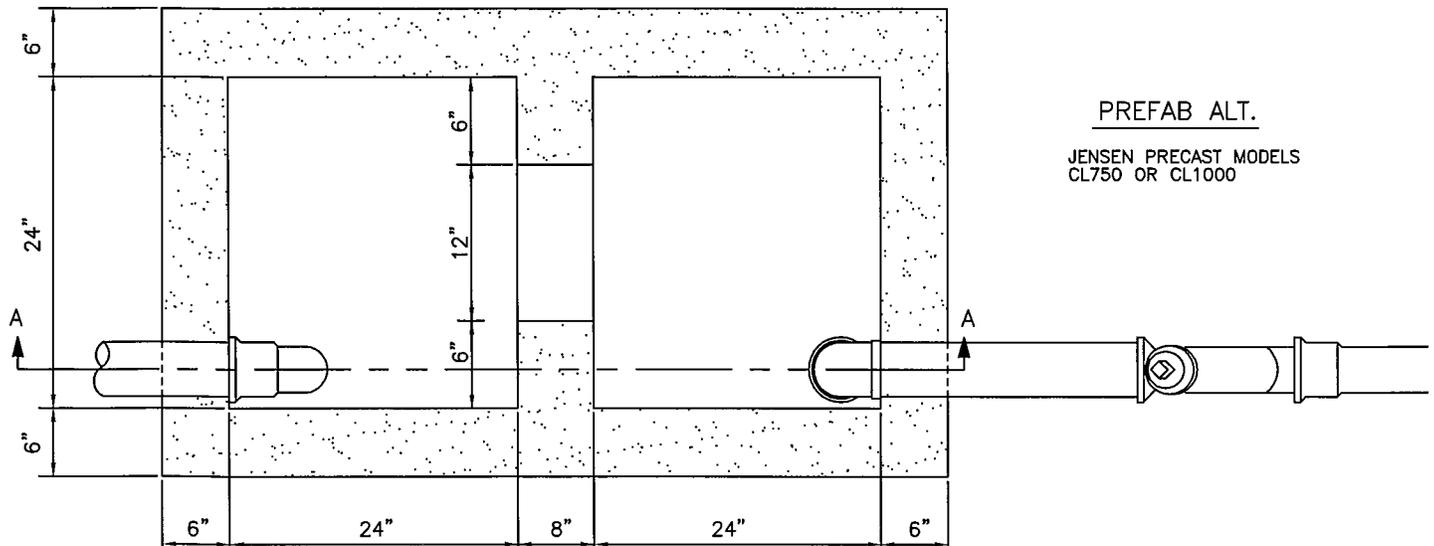
1. CONSTRUCTION OF MANHOLE SHALL BE IN ACCORDANCE WITH THE SEWER MANHOLE STANDARD S-3, EXCEPT AS MODIFIED HEREON.

ECCENTRIC MANHOLE

REVISIONS  
4-13-10

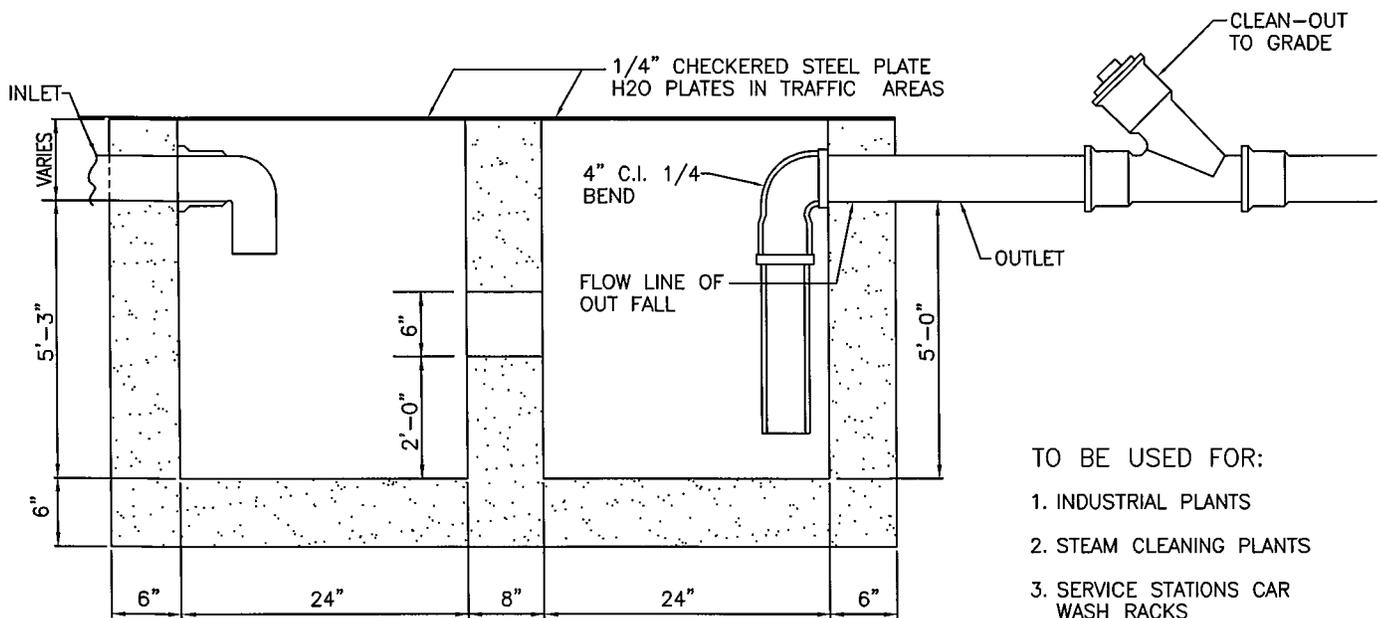
CITY OF ORANGE COVE

STD  
NO.  
S-7



PREFAB ALT.  
 JENSEN PRECAST MODELS  
 CL750 OR CL1000

SECTIONAL PLAN



- TO BE USED FOR:
1. INDUSTRIAL PLANTS
  2. STEAM CLEANING PLANTS
  3. SERVICE STATIONS CAR WASH RACKS

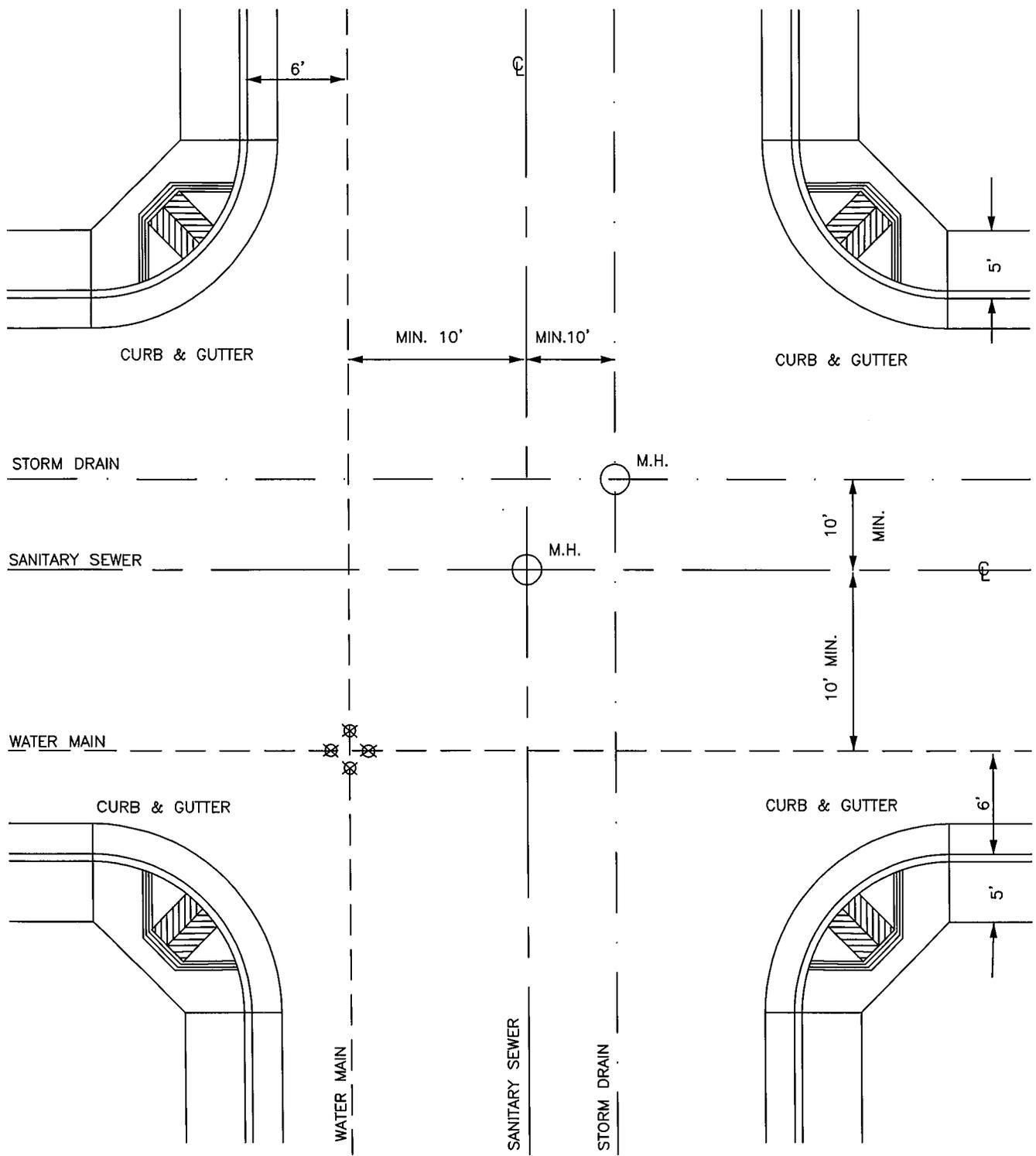
ELEVATION SECTION A-A

COMMERCIAL AND  
 INDUSTRIAL GREASE TRAP

REVISIONS

CITY OF ORANGE COVE

STD  
 NO.  
 S-8



NOTE:  
 THIS "STANDARD" IS A GUIDE ONLY AND DEVIATIONS WILL BE ACCEPTABLE WHERE CONDITIONS DICTATE.  
 DIMENSIONS SHOWN ARE DESIRABLE BUT DO NOT GOVERN.  
 THE INTENTION IS TO SHOW THE RELATIVE POSITION OF ALL UTILITIES.  
 ANY CHANGES OR DEVIATION MUST BE APPROVED BY THE CITY ENGINEER.

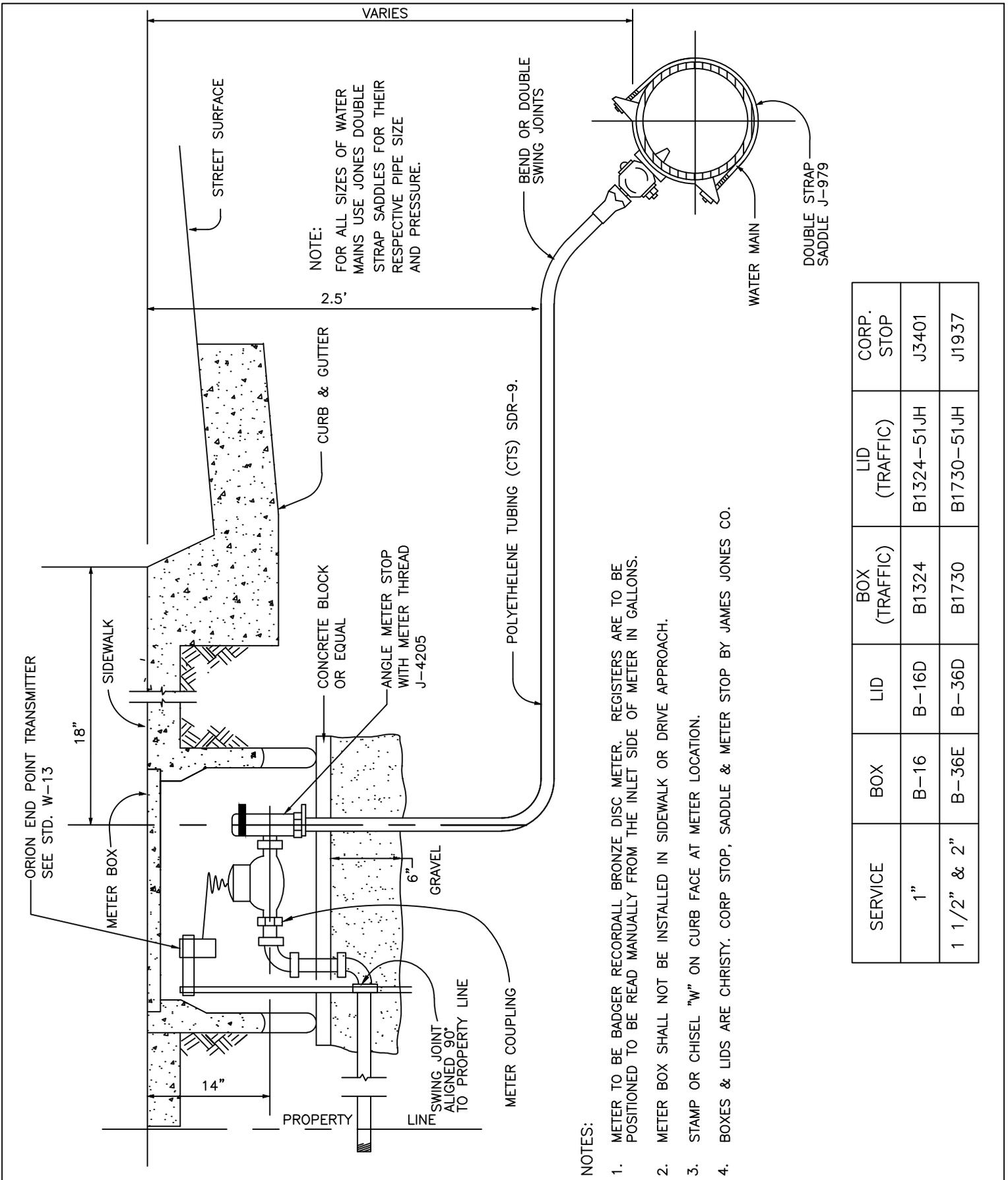
LOCATIONS FOR UNDERGROUND  
 CONDUITS & PIPES IN  
 RESIDENTIAL AREA CITY STREETS

REVISIONS

CITY OF ORANGE COVE

STD  
 NO.  
 W-1





NOTES:

1. METER TO BE BADGER RECORDALL BRONZE DISC METER. REGISTERS ARE TO BE POSITIONED TO BE READ MANUALLY FROM THE INLET SIDE OF METER IN GALLONS.
2. METER BOX SHALL NOT BE INSTALLED IN SIDEWALK OR DRIVE APPROACH.
3. STAMP OR CHISEL "W" ON CURB FACE AT METER LOCATION.
4. BOXES & LIDS ARE CHRISTY. CORP STOP, SADDLE & METER STOP BY JAMES JONES CO.

SERVICE	BOX	LID	BOX (TRAFFIC)	LID (TRAFFIC)	CORP. STOP
1"	B-16	B-16D	B1324	B1324-51JH	J3401
1 1/2" & 2"	B-36E	B-36D	B1730	B1730-51JH	J1937

1" THROUGH 2" COMMERCIAL SERVICE CONNECTION

REVISIONS  
3-30-15

CITY OF ORANGE COVE

STD  
NO.  
W-3

# REDUCE PRESSURE PRINCIPLE BACKFLOW PEVENTER INSTALLATION

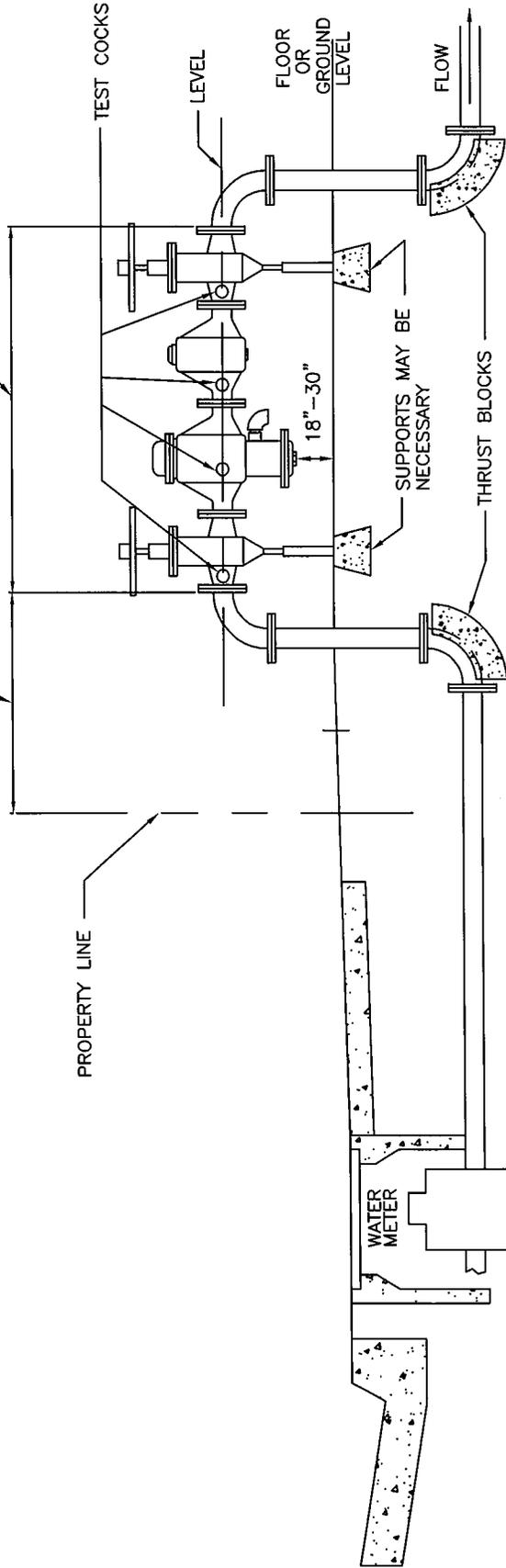
REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
W-4

APPROVED MAKE AND MODEL OF REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE

LOCATION SHALL BE APPROVED BY WATER DIVISION PRIOR TO INSTALLATION.



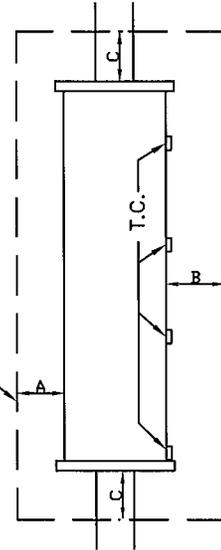
MIN. CLEARANCE

SIZE/DC	A	B	C
1"-3"	12"	18"	12"
4"& UP	24"	24"	12"

GENERAL NOTES

1. GATE VALVES AND TEST COCKS ARE REQUIRED.
2. CITY WATER SUPPLY--NO CONNECTIONS OR TEES WILL BE ALLOWED BETWEEN METER AND DEVICE.
3. PROTECTION FROM FREEZE DAMAGE MAY BE REQUIRED IN EXPOSED AREAS.
4. DEVICE MUST BE ACCESSIBLE FOR TESTING AND MAINTENANCE.
5. PROVIDE CERTIFICATION BY APPROVED TECHNICIAN PRIOR TO ACCEPTANCE.

CLEARANCE LINE



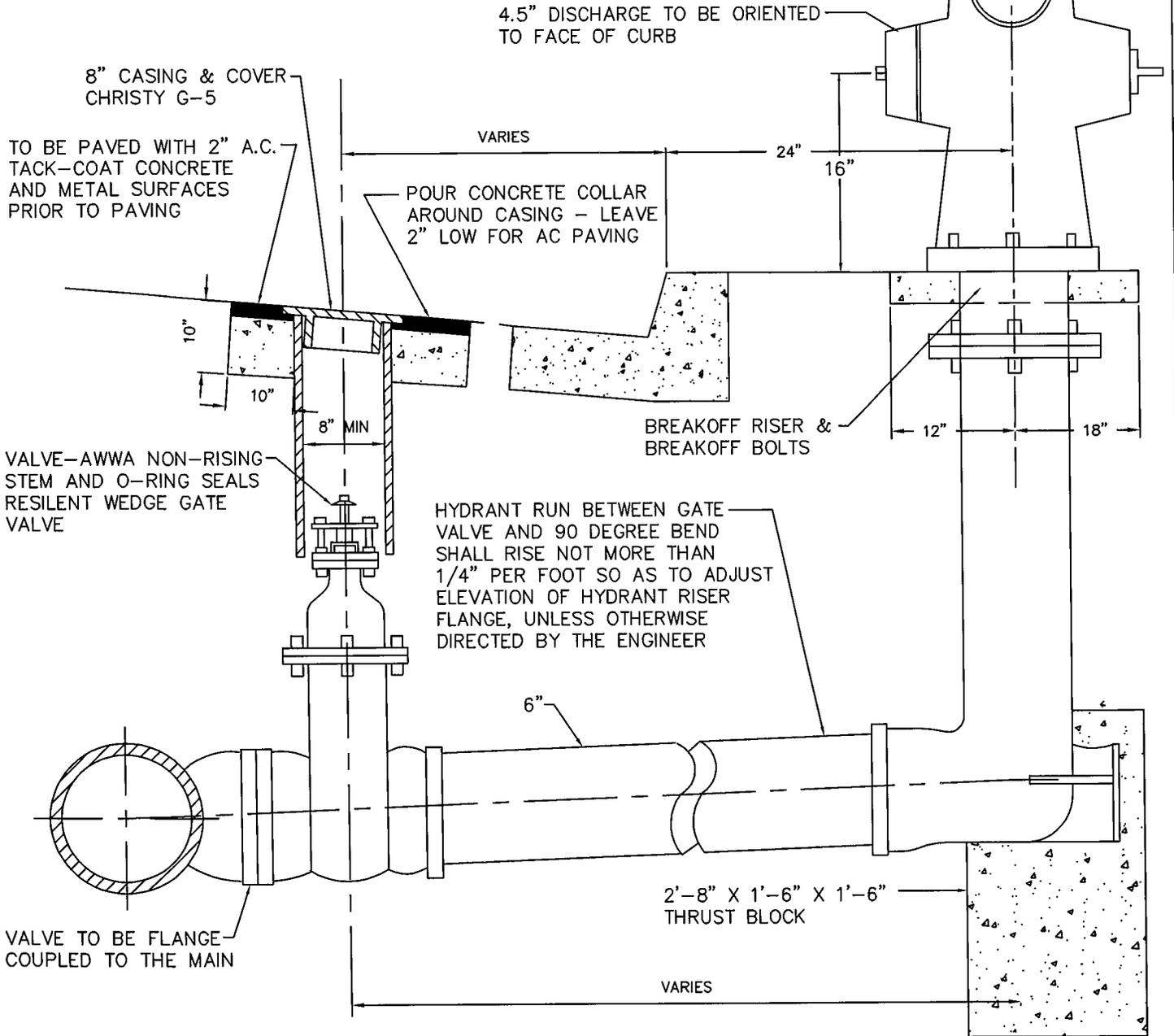
FOR CITY OF ORANGE COVE LANDSCAPE SERVICE PROVIDE:

1. 4" CONCRETE SLAB.
2. THERMAL BLANKET.
3. EXPANDED METAL MESH CAGE.

NOTES:

1. DISTANCES INDICATED SHALL BE USED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. BLUE DOT HYDRANT MARKERS TO BE PLACED PER STD NO. W-7.
3. PAINT CURB FACE RED, 15' EACH SIDE OF HYDRANT.
4. HYDRANT TO BE PAINTED FIRE HYDRANT RED.

APPROVED FIRE HYDRANT  
CLOW MODEL 850

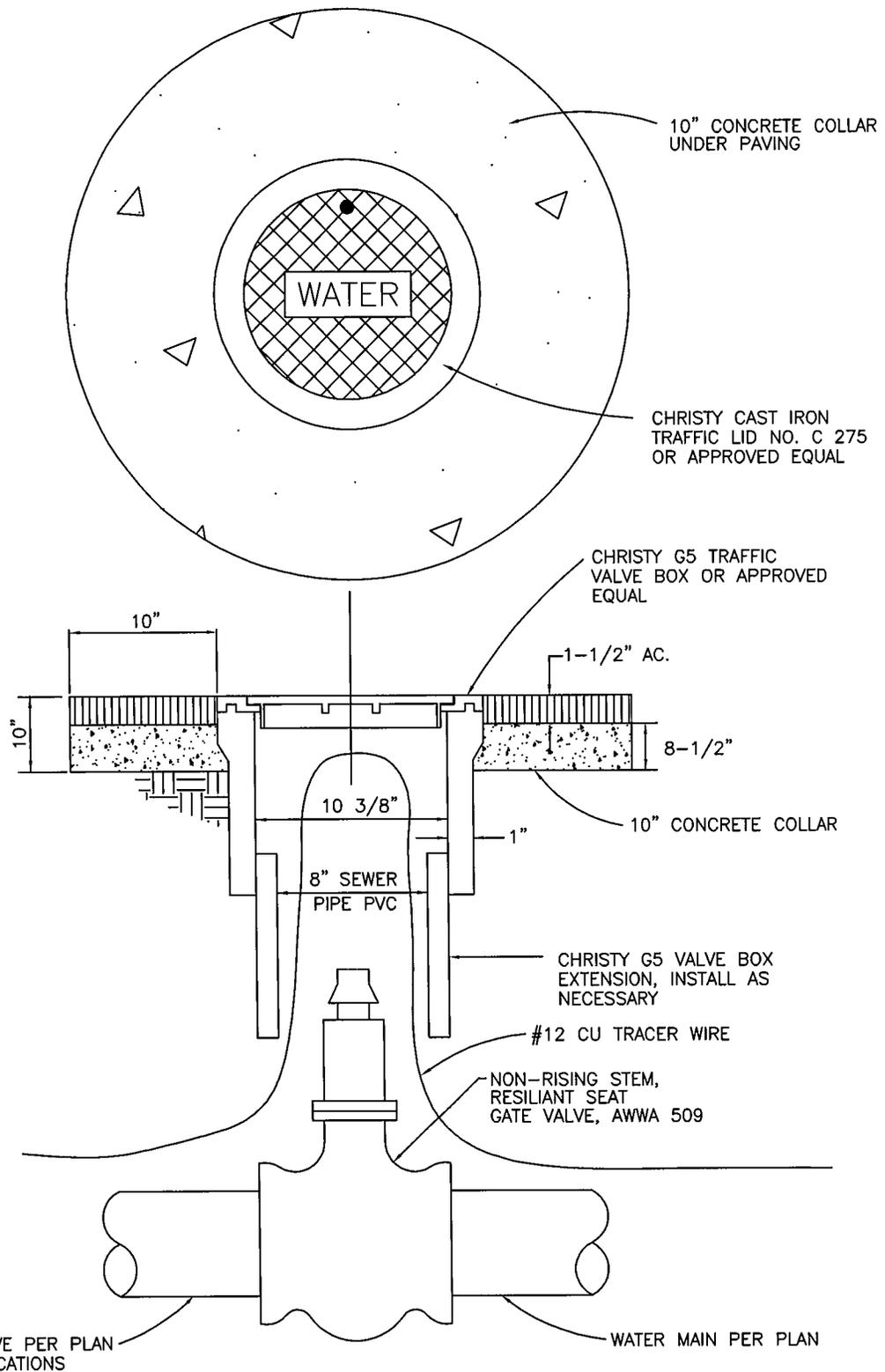


FIRE HYDRANT

REVISIONS  
4-13-10

CITY OF ORANGE COVE

STD  
NO.  
W-5



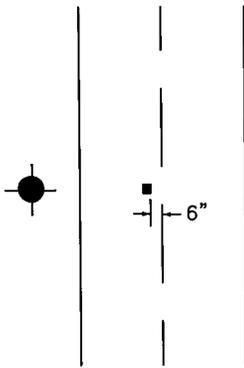
VALVE, BOX AND COVER DETAIL

REVISIONS  
4-13-10

CITY OF ORANGE COVE

STD  
NO.  
W-6

FIGURE 1  
TWO LANE STREET



LEGEND

- = FIRE HYDRANT
- = BLUE PAVEMENT MARKER

FIGURE 2  
MULTI-LANE STREET

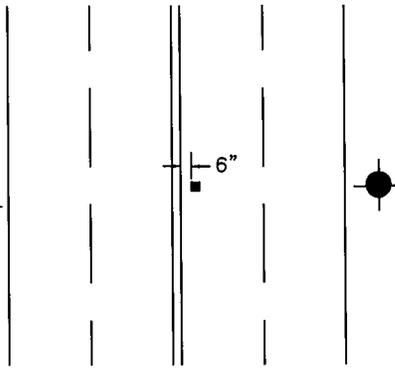


FIGURE 3  
FOUR-WAY INTERSECTION

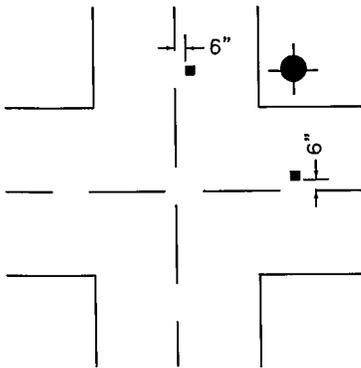


FIGURE 4  
FOUR LANE STREET WITH TURN LANE  
AT INTERSECTION

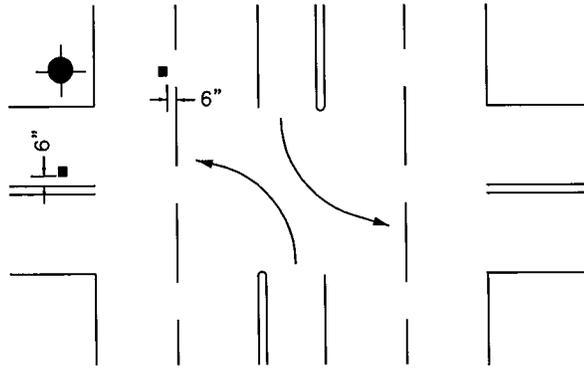
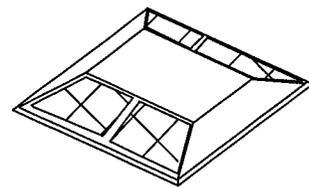
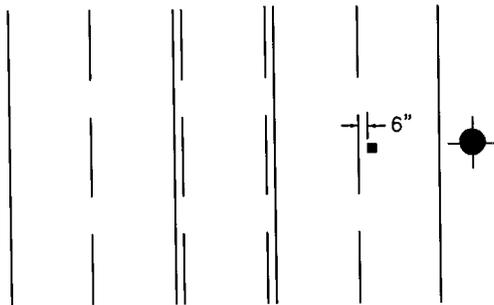


FIGURE 5  
MULTI-LANE STREET  
WITH TURN LANE



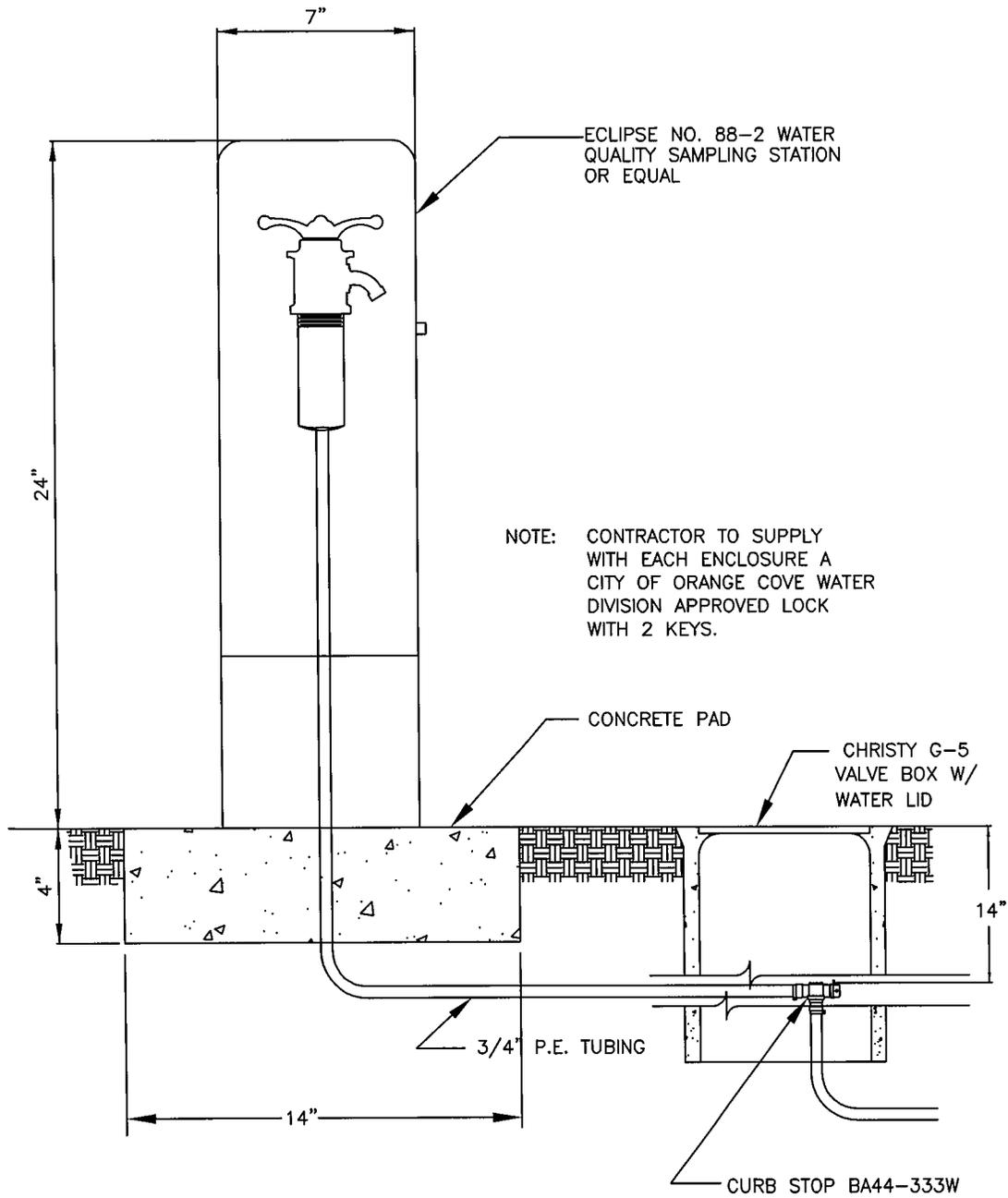
BLUE DOT FIRE  
HYDRANT LOCATOR

TYPICAL HYDRANT  
MARKER LOCATION

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
W-7



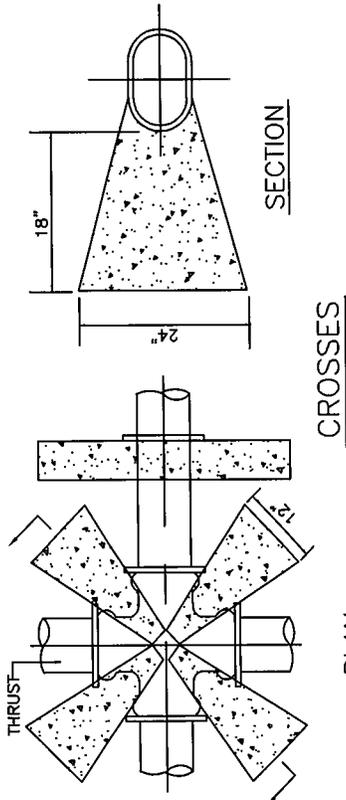
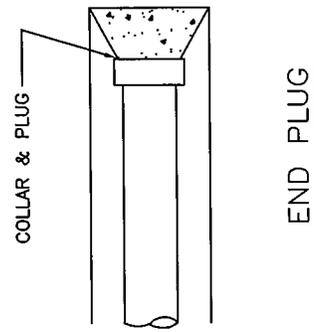
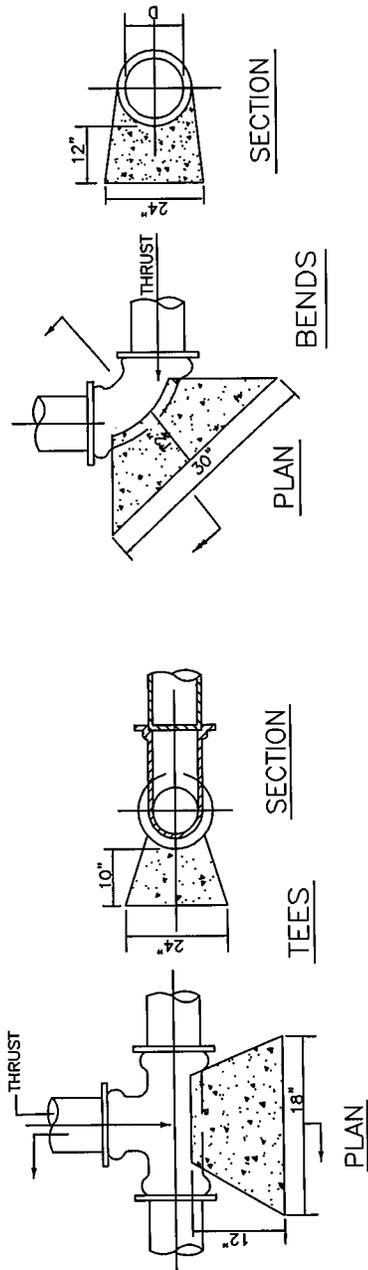
NOTE: LOCATION TO BE APPROVED BY CITY

# BACTERIA SAMPLING STATION

REVISIONS

CITY OF ORANGE COVE

STD  
NO.  
W-8



- NOTE: 1. ALL THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL AND TO HAVE A MINIMUM THICKNESS BETWEEN FOOTING AND SOIL OF 12".
2. ALL DIMENSIONS SHOWN ARE MINIMUM.
3. CONCRETE TO BE FIVE-SACK MIX.
4. SUPPORT AND PROTECT ALL PIPE.

# STANDARD THRUST BLOCK DETAILS

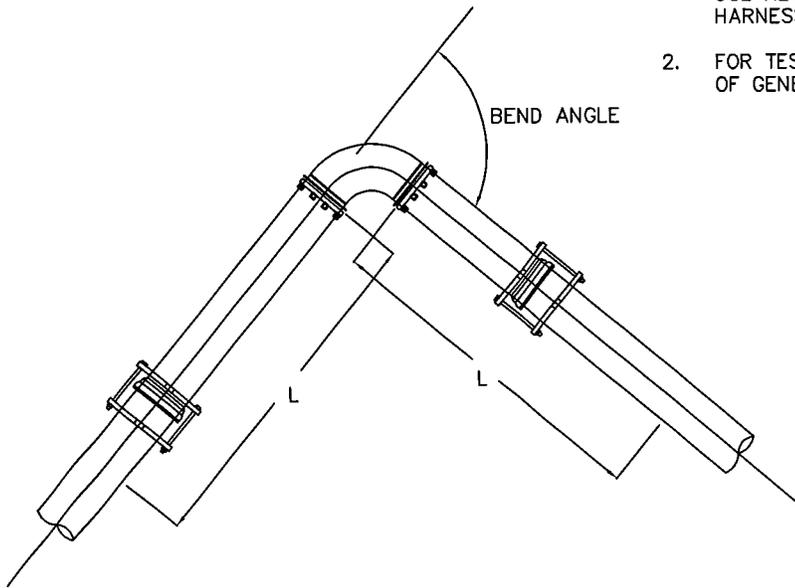
REVISIONS  
4-13-10

CITY OF ORANGE COVE

STD  
NO.  
W-9

# HORIZONTAL BEND

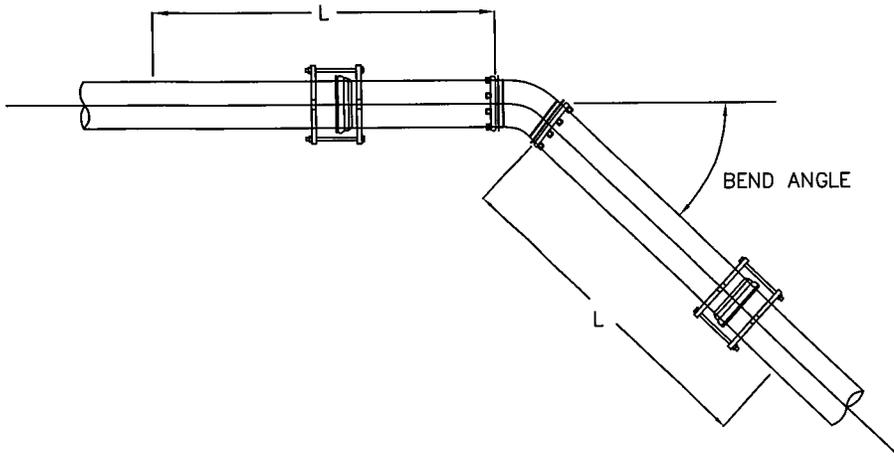
1. ALL JOINTS WITHIN LENGTH "L" MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS WITH PUSH-ON PIPE PER CITY STD. SPECIFICATIONS.
2. FOR TEST PRESSURES AND LAYING CONDITIONS SEE SECTION OF GENERAL NOTES FOR USE OF RESTRAINED JOINT LENGTHS.



BEND ANGLE	SIZE				
	4	6	8	10	12
11.25	3	3	3	4	4
22.5	3	5	7	7	9
45	7	11	13	15	18
90	17	24	31	37	43

RESTRAINED LENGTHS, "L" (IN FEET)

# VERTICAL BEND



BEND ANGLE	SIZE				
	4	6	8	10	12
11.25	5	7	9	11	13
22.5	11	15	19	23	27
45	23	31	40	48	56

RESTRAINED LENGTHS, "L" (IN FEET)

1. ALL JOINTS WITHIN LENGTH "L" MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS WITH PUSH-ON PIPE PER CITY STD. SPECIFICATIONS.
2. FOR TEST PRESSURES AND LAYING CONDITIONS SEE SECTION OF GENERAL NOTES FOR USE OF RESTRAINED JOINT LENGTHS.

SHEET 1 OF 2

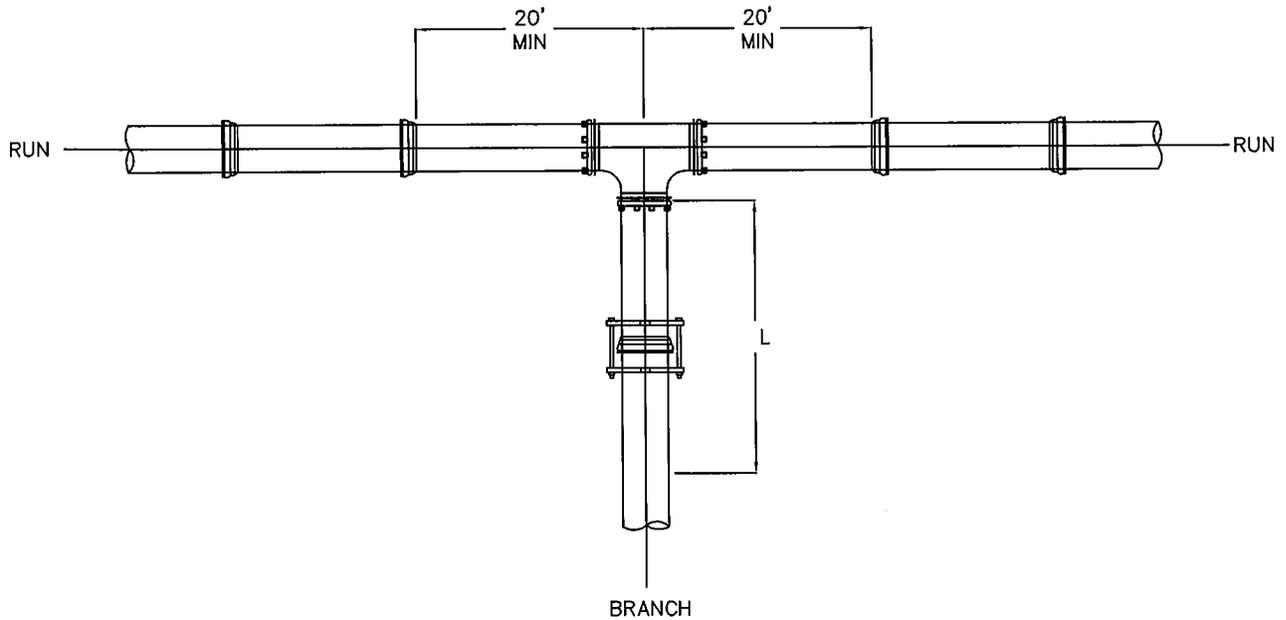
PVC RESTRAINED JOINTS

REVISIONS  
4-13-10

CITY OF ORANGE COVE

STD  
NO.  
W-10

# TEE



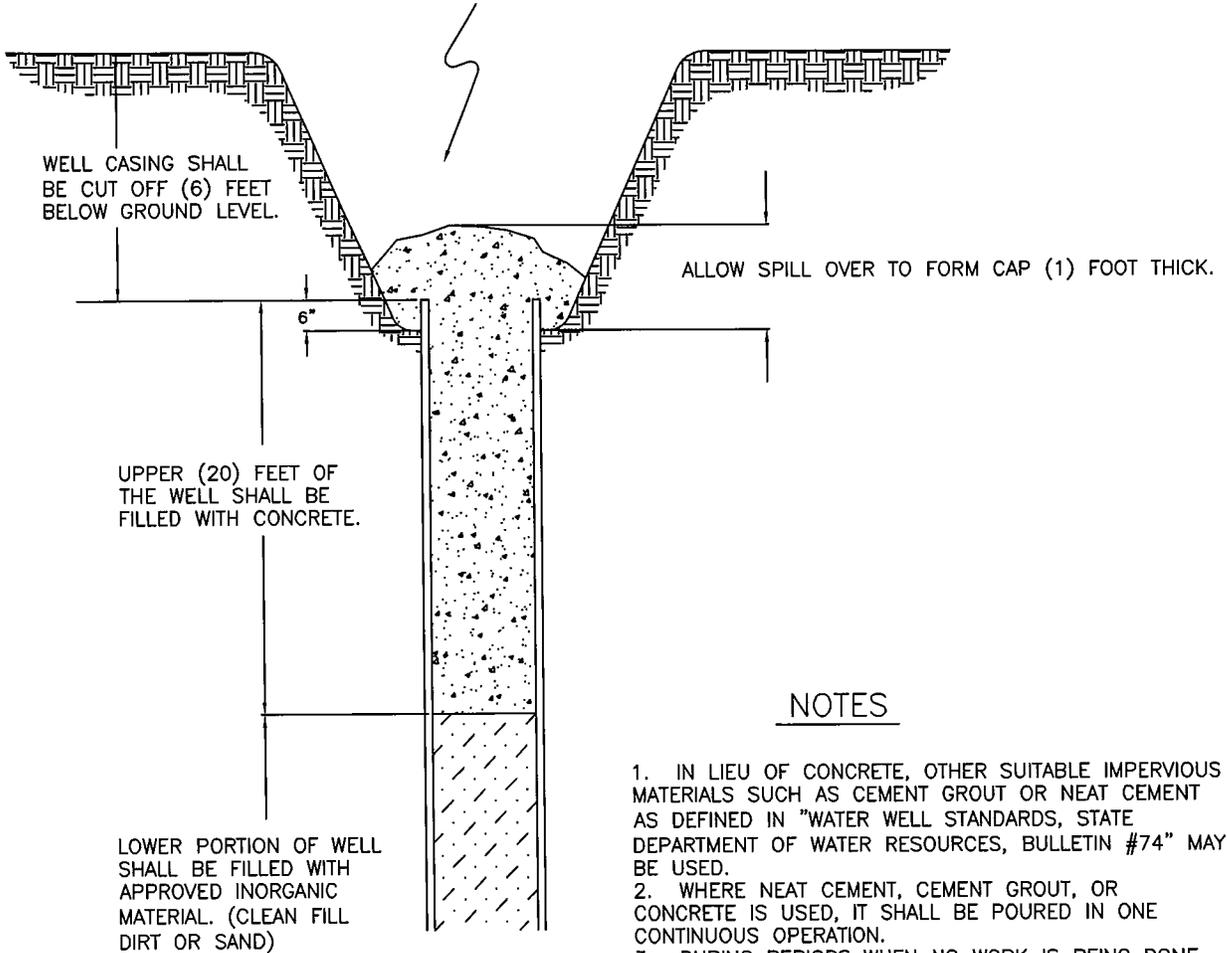
BRANCH SIZE	RUN SIZE				
	4	6	8	10	12
4		*	*	*	*
6		*	*	*	*
8			*	*	*
10				*	*
12					13

\* - FOR THIS CONDITION NEED ONLY RESTRAIN THE BRANCH OUTLET OF THE TEE.

### RESTRAINED LENGTHS, "L" (IN FEET)

1. RESTRAIN THE TWO MECHANICAL JOINTS ON THE RUN SIDES OF THE TEE. THERE SHOULD BE A FULL 20 FEET LENGTH OF PIPE INSTALLED ON EACH SIDE OF THE RUN.
2. ALL JOINTS WITHIN LENGTH "L" ON THE BRANCH MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS ON PUSH-ON PIPE PER CITY SPECIFICATION.
3. FOR TEST PRESSURES AND LAYING CONDITIONS SEE SECTION OF GENERAL NOTES FOR USE OF RESTRAINED JOINT LENGTHS.

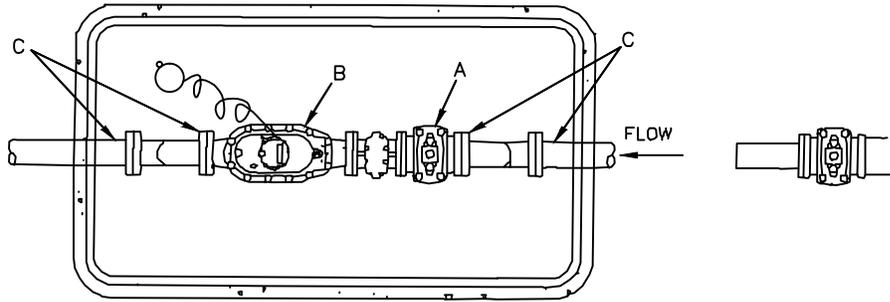
AFTER THE WELL HAS BEEN PROPERLY FILLED, THE EXCAVATION SHALL BE FILLED WITH NATIVE SOIL.



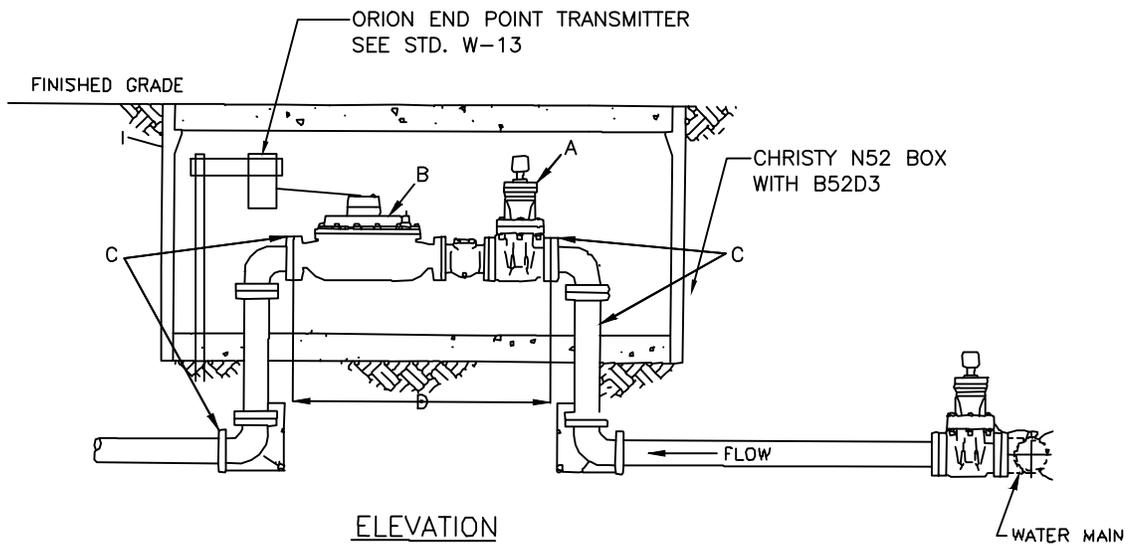
NOTES

1. IN LIEU OF CONCRETE, OTHER SUITABLE IMPERVIOUS MATERIALS SUCH AS CEMENT GROUT OR NEAT CEMENT AS DEFINED IN "WATER WELL STANDARDS, STATE DEPARTMENT OF WATER RESOURCES, BULLETIN #74" MAY BE USED.
2. WHERE NEAT CEMENT, CEMENT GROUT, OR CONCRETE IS USED, IT SHALL BE POURED IN ONE CONTINUOUS OPERATION.
3. DURING PERIODS WHEN NO WORK IS BEING DONE ON THE WELL, SUCH AS OVERNIGHT OR WHILE WAITING FOR SEALING MATERIAL TO SET, THE WELL AND ANY SURROUNDING EXCAVATION SHALL BE COVERED. THE COVER SHALL BE SUFFICIENTLY ANCHORED AND STRONG ENOUGH TO KEEP FOREIGN MATERIAL FROM ENTERING THE WELL.

WELL ABANDONMENT	REVISIONS	CITY OF ORANGE COVE	STD NO. W-11
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PLAN VIEW



ELEVATION

LEGEND:

- A. 3" OR 4" FLANGED GATE VALVE, CCW TO OPEN
- B. FLANGED 3" OR 4" BADGER RECORDALL TURBO METER WITH INTEGRAL WATER METER STRAINER, AND ENCODER REGISTER, READING IN GALLONS.
- C. FLANGED 3" OR 4" PIPE/FITTINGS.
- D. LAY LENGTH PROVIDED.

NOTES:

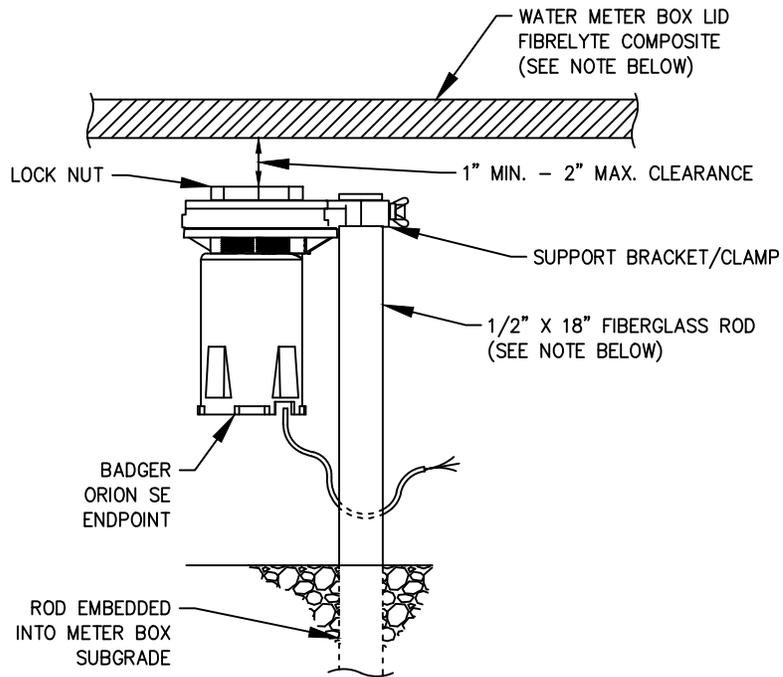
- 1. VALVE TO BE MUELLER A-2360 OR EQUAL WITH 2" SQUARE NUTS, CCW TO OPEN.

3" OR 4" TURBO WATER  
METER INSTALLATION DETAIL

REVISIONS  
4-01-15

CITY OF ORANGE COVE

STD  
NO.  
W-12



PIT ORION BENEATH LID INSTALLATION – SIDE VIEW

N.T.S.

NOTES:

1. WHEN LID CANNOT BE FIBRELYTE, METAL TRAFFIC LID SHALL HAVE THREE  $\frac{1}{2}$ " HOLES DRILLED INTO LID PER DETAIL ON THIS PAGE.
2. SEE DETAILS CITY STANDARDS W-2 & W-3 FOR BOX SIZE, LID MUST BE LABELED "WATER METER".
3. ANTENNA: BADGER ORION SE II NETWORK GATEWAY TRANSCEIVER.
4. CONTRACTOR SHALL INSTALL REQUIRED ANTENNA WITH EACH PROJECT.

INSTALLATION OF ORION ENDPOINT BELOW A METER PIT LID:

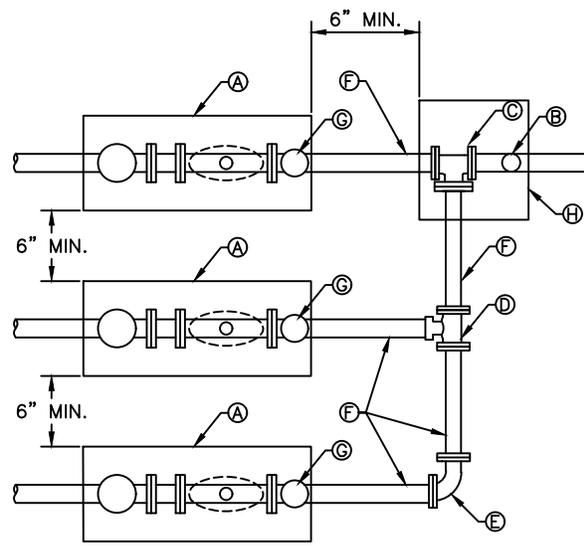
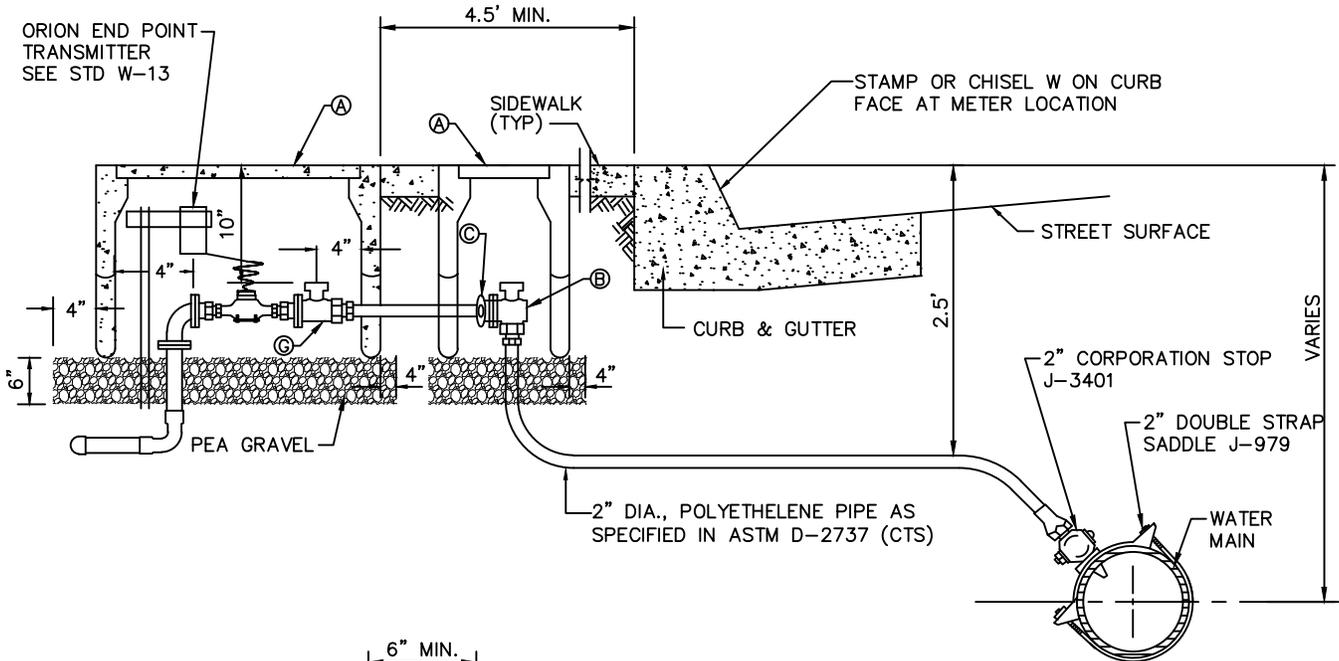
1. DRIVE FIBERGLASS ROD INTO THE GROUND PRIOR TO ATTACHING THE ENDPOINT TO AVOID DAMAGE.
2. ONCE IN THE GROUND, SECURE THE MOUNTING BRACKET ON THE APPROPRIATE ROD USING THE ENCLOSED WASHER, WING NUT AND HEX HEAD BOLT PROVIDED WITH THE BRACKET.
3. INSERT THE ENDPOINT THROUGH THE BOTTOM OF THE BRACKET AND THREAD THE LOCK NUT ONTO THE TOP OF THE ENDPOINT. MOUNT THE ENDPOINT A MAXIMUM OF ONE TO TWO INCHES BELOW THE UNDERSIDE OF THE LID.

END-POINT TRANSMITTER  
INSTALLATION DETAIL

REVISIONS  
3-30-15

CITY OF ORANGE COVE

STD  
NO.  
W-13



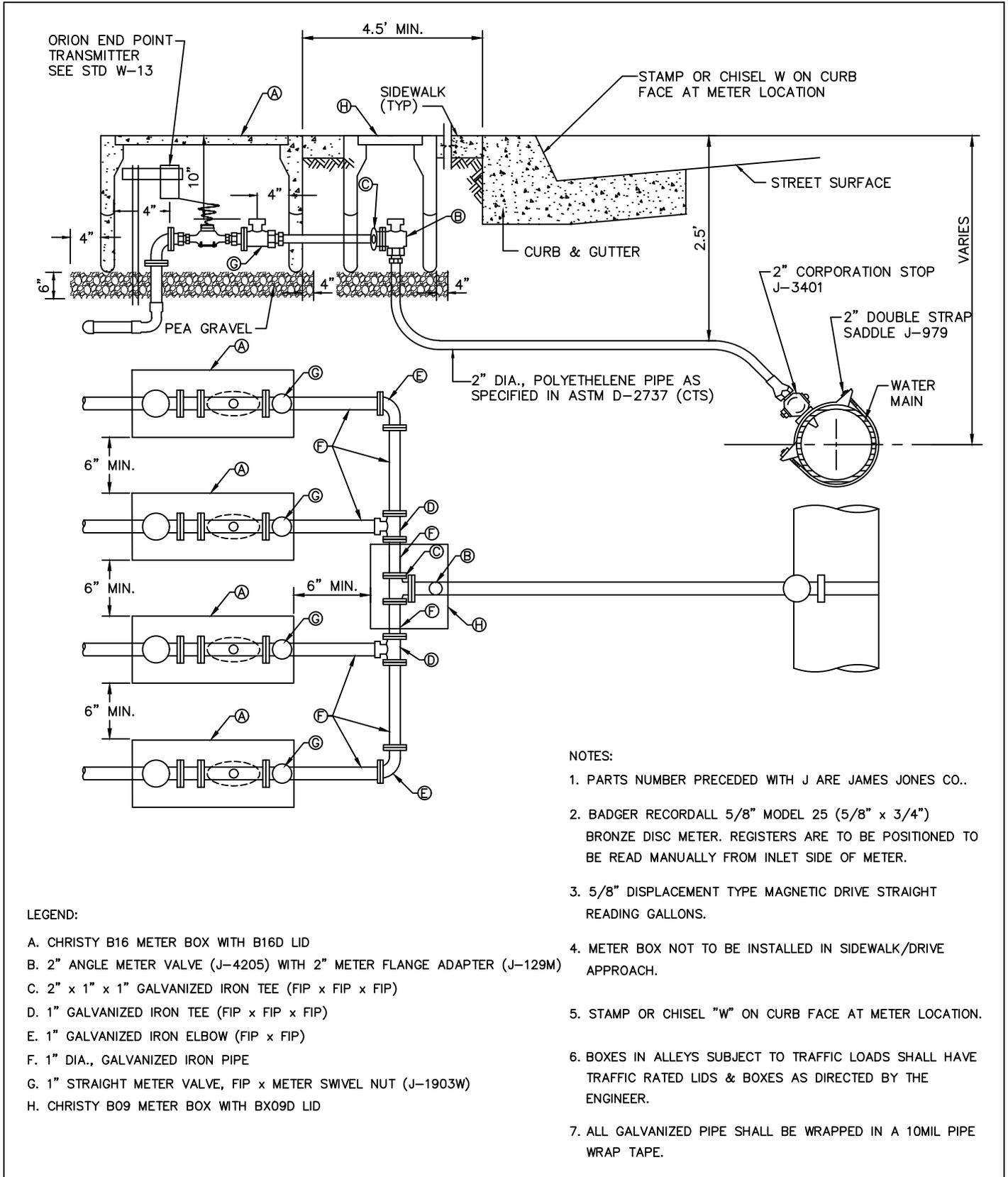
**LEGEND:**

- A. CHRISTY B16 METER BOX WITH B16D LID
- B. 2" ANGLE METER VALVE (J-4205) WITH 2" METER FLANGE ADAPTER (J-129M)
- C. 2" GALVANIZED IRON TEE WITH (2) 2"x1" MIPxFIP GALVANIZED IRON HEX BUSHING CONNECTORS
- D. 1" GALVANIZED IRON TEE (FIP x FIP x FIP)
- E. 1" GALVANIZED IRON ELBOW (FIP x FIP)
- F. 1" DIA., GALVANIZED IRON PIPE
- G. 1" STRAIGHT METER VALVE, FIP x METER SWIVEL NUT (J-1903W)
- H. CHRISTY B09 METER BOX WITH BX09D LID

**NOTES:**

1. PARTS NUMBER PRECEDED WITH J ARE JAMES JONES CO..
2. BADGER RECORDALL 5/8" MODEL 25 (5/8" x 3/4") BRONZE DISC METER. REGISTERS ARE TO BE POSITIONED TO BE READ MANUALLY FROM INLET SIDE OF METER.
3. 5/8" DISPLACEMENT TYPE MAGNETIC DRIVE STRAIGHT READING GALLONS.
4. METER BOX NOT TO BE INSTALLED IN SIDEWALK/DRIVE APPROACH.
5. STAMP OR CHISEL "W" ON CURB FACE AT METER LOCATION.
6. BOXES IN ALLEYS SUBJECT TO TRAFFIC LOADS SHALL HAVE TRAFFIC RATED LIDS & BOXES AS DIRECTED BY THE ENGINEER.
7. ALL GALVANIZED PIPE SHALL BE WRAPPED IN A 10MIL PIPE WRAP TAPE.

MULTI-FAMILY 3-MANIFOLD WATER SERVICE	REVISIONS 12-16-15	CITY OF ORANGE COVE	STD NO. W-14
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- NOTES:
1. PARTS NUMBER PRECEDED WITH J ARE JAMES JONES CO..
  2. BADGER RECORDALL 5/8" MODEL 25 (5/8" x 3/4") BRONZE DISC METER. REGISTERS ARE TO BE POSITIONED TO BE READ MANUALLY FROM INLET SIDE OF METER.
  3. 5/8" DISPLACEMENT TYPE MAGNETIC DRIVE STRAIGHT READING GALLONS.
  4. METER BOX NOT TO BE INSTALLED IN SIDEWALK/DRIVE APPROACH.
  5. STAMP OR CHISEL "W" ON CURB FACE AT METER LOCATION.
  6. BOXES IN ALLEYS SUBJECT TO TRAFFIC LOADS SHALL HAVE TRAFFIC RATED LIDS & BOXES AS DIRECTED BY THE ENGINEER.
  7. ALL GALVANIZED PIPE SHALL BE WRAPPED IN A 10MIL PIPE WRAP TAPE.

- LEGEND:
- A. CHRISTY B16 METER BOX WITH B16D LID
  - B. 2" ANGLE METER VALVE (J-4205) WITH 2" METER FLANGE ADAPTER (J-129M)
  - C. 2" x 1" x 1" GALVANIZED IRON TEE (FIP x FIP x FIP)
  - D. 1" GALVANIZED IRON TEE (FIP x FIP x FIP)
  - E. 1" GALVANIZED IRON ELBOW (FIP x FIP)
  - F. 1" DIA., GALVANIZED IRON PIPE
  - G. 1" STRAIGHT METER VALVE, FIP x METER SWIVEL NUT (J-1903W)
  - H. CHRISTY B09 METER BOX WITH BX09D LID

<p>MULTI-FAMILY 4-MANIFOLD WATER SERVICE</p>	<p>REVISIONS 12-16-15</p>	<p>CITY OF ORANGE COVE</p>	<p>STD NO. W-15</p>
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