CITY OF GARDEN GROVE
PUBLIC WORKS STANDARD PLANS

SERIES B-100 STREET AND HIGHWAY

B-129 RIGHT TURN POCKET

B-130 MID-BLOCK BUS TURNOUT

B-131 CORNER BUS TURNOUT

B-132 PARABOLIC CURB TRANSITION

B-133 CONCRETE PAVER DETAIL

B-134 STREET RESURFACING AND TRENCH BACKFILL DETAIL

B-135 SIGN DETAIL FOR CONSTRUCTION

B-136 SIGN DETAIL FOR CITY PROJECT

SERIES B-200 STORM DRAIN

B-201 CATCH BASIN - TYPE OS (CURB OPENING SMALL)

B-202 CATCH BASIN - TYPE OL (CURB OPENING LARGE)

B-203 MISCELLANEOUS CATCH BASIN DETAILS

B-204 MISCELLANEOUS CATCH BASIN DETAILS

B-205A LOCAL DEPRESSION (SUMP CONDITION)

B-205B LOCAL DEPRESSION (FLOW-BY CONDITION)

B-206 STORM DRAIN MANHOLE

B-207 STORM DRAIN MANHOLE (SHALLOW DEPTH)

B-208 CONCRETE COLLAR FOR PIPES 18" THROUGH 66" DIAMETER

SERIES B-300 TRAFFIC AND LIGHTING

B-301 STREET SIGN FOR PUBLIC STREETS

B-302 STREET SIGN FOR PRIVATE STREETS

B-303 ROADWAY STRIPING DETAILS

B-305 TYPICAL TRAFFIC SIGN INSTALLATION

B-306 STANDARD BARRICADE

B-307 STEEL DAVIT STANDARDS

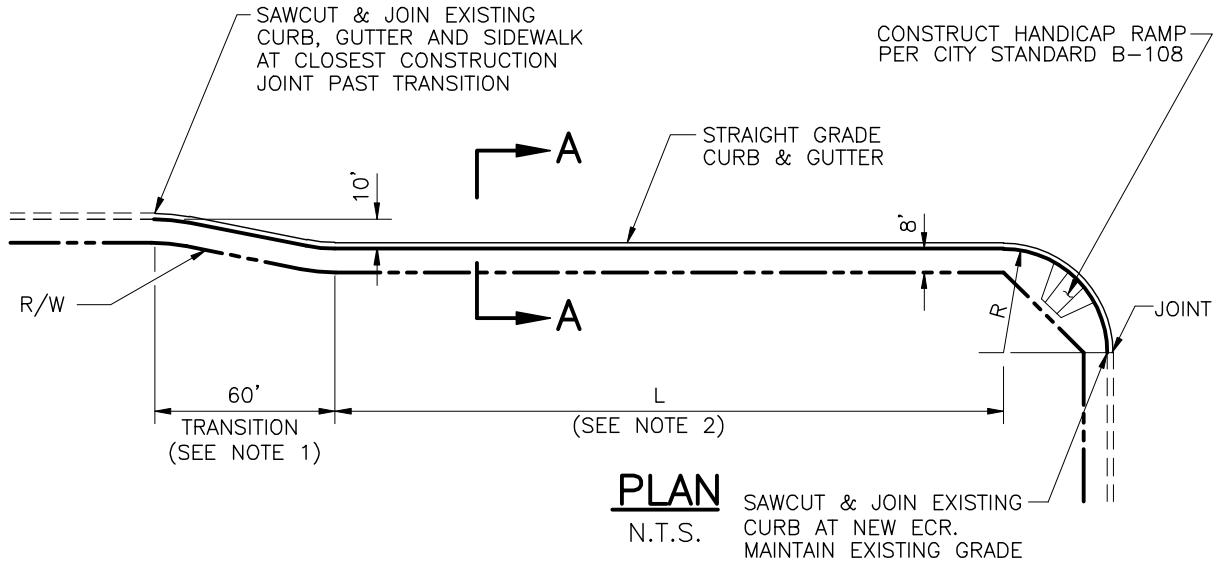
B-308 PRIVATE PROPERTY TOW AWAY SIGN

B-309 STREET NAME SIGN MOUNTING BRACKET (FLAT OR EXTRUDED)

B-310 STREET NAME SIGN POLE DETAIL

B-311 PARKING LOT LAYOUT

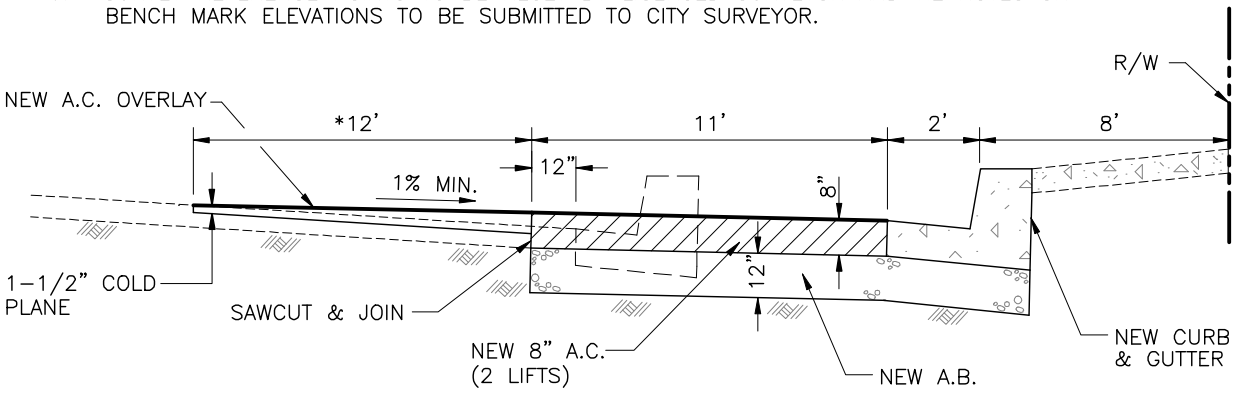
B-312 PARKING & QUEUING FOR DRIVE THROUGH RESTAURANTS



PLAN
N.T.S.

NOTES:

1. PROVIDE REVERSE TAPER PER CITY STD. PLAN B-132.
2. "L" DIMENSION WILL BE AS SPECIFIED BY CITY ENGINEER WITH 100 FEET AS MIN. LENGTH.
3. CONSTRUCTION PLAN AND TOPO SURVEY SHALL BE PROVIDED PRIOR TO APPROVAL BY CITY ENGINEER.
4. R=35' FOR ARTERIAL STREET; R=25' FOR LOCAL STREETS.
5. CONSTRUCT NEW CURB & GUTTER PER CITY STD. PLAN B-113.
6. SURVEY REFERENCE POINTS TO BE RESET BY LICENSED SURVEYOR AND TIE NOTES OR BENCH MARK ELEVATIONS TO BE SUBMITTED TO CITY SURVEYOR.



SECTION A-A
N.T.S.

* ACTUAL LOCATION OF JOIN TO BE DETERMINED BY CITY. SUBMIT CROSS SECTIONS AS REQUIRED BY CITY ENGINEER.

City of Garden Grove California

GARDEN GROVE

RIGHT TURN POCKET

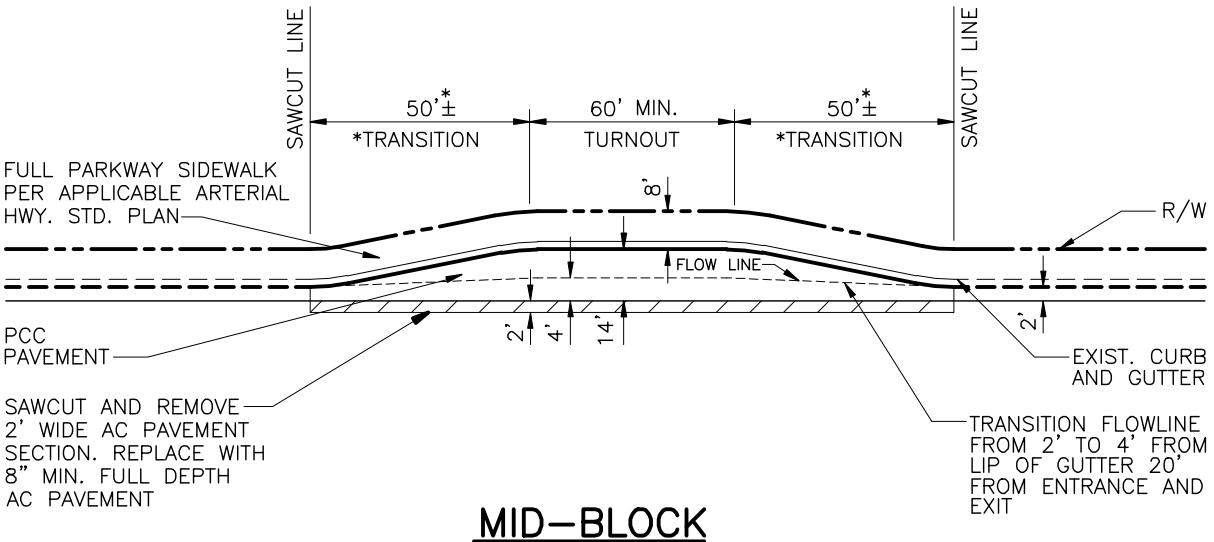
Approved Date

City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER
B-129

G.G./B-129.DWG



MID–BLOCK

NOTES:

*1. PROVIDE 50' RADIUS REVERSE CURVE AS REQUIRED BY CITY.

2. P.C.C. PAVEMENT THICKNESS SHALL BE 9" OVER 12" CLASS II 3/4" AGG. BASE

3. BUS SHELTERS SHALL BE SET BACK FROM THE FACE OF THE CURB A MINIMUM CLEAR DISTANCE OF FOUR (4) FEET FOR PEDESTRIAN TRAVEL WAY.

4. CURB SHALL BE POURED MONOLITHIC WITH P.C.C. PAVEMENT.

5. MODIFICATIONS OF THIS STANDARD SHALL BE REVIEWED FOR ACCEPTABILITY BY THE CITY TRAFFIC ENGINEER.

6. CONSTRUCT 3" x 3/4" FELT CONTROL JOINTS AT 15' INTERVALS.

7. CATCH BASINS SHALL NOT BE LOCATED IN BUS TURNOUTS IF POSSIBLE.

8. DRIVEWAYS SHALL NOT BE LOCATED IN BUS TURNOUTS.

9. CURB HEIGHTS MAY VARY TO MATCH EXIST. GRADE BEHIND CURB; 5" MIN. 8" MAX.

10. CONSTRUCTION PLAN AND TOPO SURVEY SHALL BE PROVIDED PRIOR TO APPROVAL BY CITY ENGINEER.

11. CONCRETE SHALL BE 7 SACK MIX WITH 1" AGG. PER SECTION 90–3.04 OF CALTRANS SPECS.

12. MAINTAIN 2% MAX. CROSS FALL ON CONCRETE BUS PAD.

City of Garden Grove California

GARDEN GROVE

MID–BLOCK BUS TURNOUT

Approved Date _____

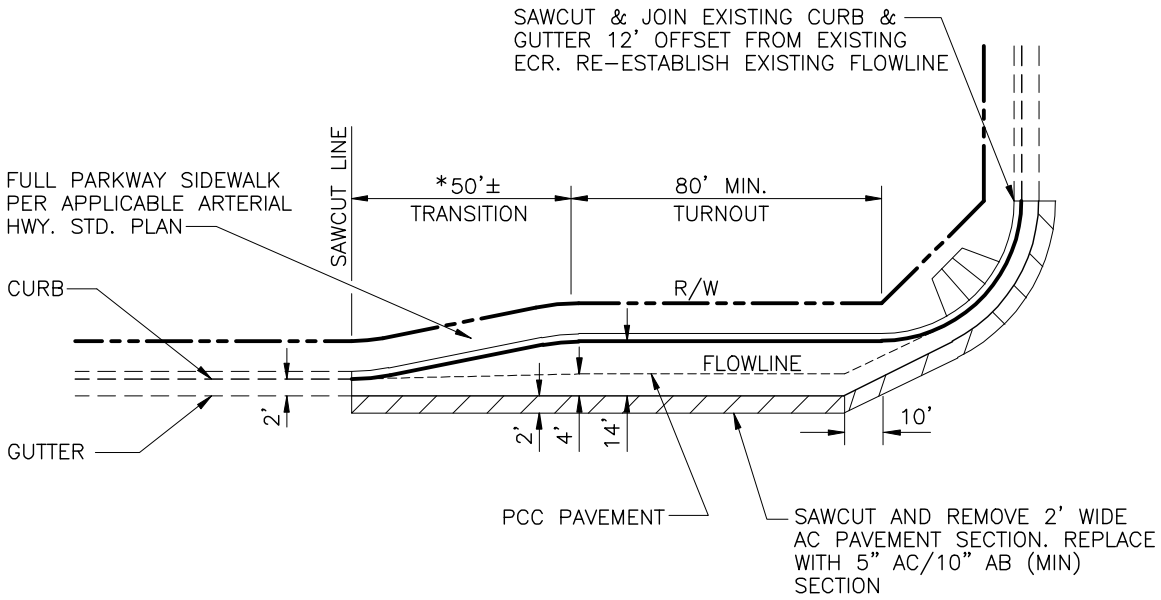
City Engineer R.C.E. 50353 Exp.06–30–09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B–130

G.G./B–130.DWG



FAR SIDE

N.T.S.

NOTES:

*1. PROVIDE 50' RADIUS REVERSE CURVE AT CURB FACE.

2. P.C.C. PAVEMENT THICKNESS SHALL BE 9" OVER 12" CLASS II 3/4" AGG. BASE.

3. BUS SHELTERS SHALL BE SET BACK FROM THE FACE OF THE CURB A MINIMUM CLEAR DISTANCE OF FOUR (4) FEET FOR PEDESTRIAN TRAVEL WAY.

4. CURB SHALL BE POURED MONOLITHIC WITH P.C.C. PAVEMENT.

5. MODIFICATIONS OF THIS STANDARD SHALL BE REVIEWED FOR ACCEPTABILITY BY THE CITY TRAFFIC ENGINEER.

6. CONSTRUCT 3" x 3/4" FELT CONTROL JOINTS AT 15' INTERVALS.

7. CATCH BASINS SHOULD NOT BE LOCATED IN BUS TURNOUTS IF POSSIBLE.

8. DRIVEWAYS SHALL NOT BE LOCATED IN BUS TURNOUTS.

9. CURB HEIGHTS MAY VARY TO MATCH EXIST. GRADE BEHIND CURB; 5" MIN. 8" MAX.

10. CONSTRUCTION PLAN AND TOPO SURVEY SHALL BE PROVIDED PRIOR TO APPROVAL BY CITY ENGINEER.

11. CONCRETE SHALL BE 7 SACK MIX WITH 1" AGGREGATE PER SECTION 90-3.04 CALTRANS SPECS.

12. MAINTAIN 2% MAX. CROSS FALL ON BUS PAD.

City of Garden Grove California

GARDEN GROVE

CORNER BUS TURNOUT

Approved Date

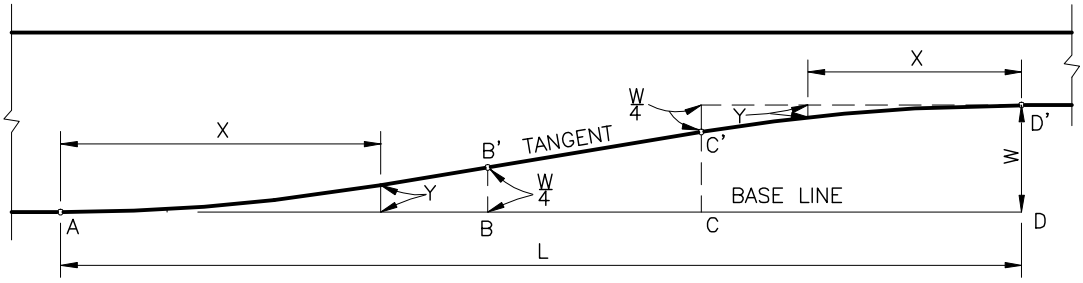
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B-131

G.G./B-131.DWG



W=WIDTH OF LEFT OR RIGHT TURN POCKET

L=LENGTH OF TAPER

AB=BC=CD= $\frac{L}{3}$

AB' AND C'D' ARE PARABOLIC CURVES EXCEPT ON CURVED ALIGNMENTS

X=DISTANCE FROM POINT "A" ALONG BASE LINE

Y=OFFSET FROM BASE LINE

SINGLE TURN POCKET

N.T.S.

L=90' W=10'

X	0'	10'	20'	30'	40'	50'	60'	70'	80'	90'
Y	0.00'	0.28'	1.11'	2.50'	4.17'	5.83'	7.50'	8.89'	9.72'	10.00'

L=60'* W=10'

X	0'	10'	20'	30'	40'	50'	60'
Y	0.00'	0.62'	2.50'	5.00'	7.50'	9.38'	10.00'

NOTES:

IN THE CASE WHEN THE BASE LINE IS CURVED THE OFFSETS ARE CALCULATED BY ASSUMING THE BASE LINE TO BE TANGENT; THEY ARE THEN APPLIED TO THE CURVED BASE LINE. AB' AND C'D' ARE NO LONGER PARABOLIC AND B'C' IS NO LONGER A TANGENT.

* USE 60' TRANSITION WHEN INSUFFICIENT DISTANCE IS AVAILABLE FOR 90' TRANSITION. USE OF 60' TRANSITION SHALL BE APPROVED BY CITY TRAFFIC ENGINEER.

City of Garden Grove California

GARDEN GROVE

PARABOLIC CURB TRANSITION

Approved Date _____

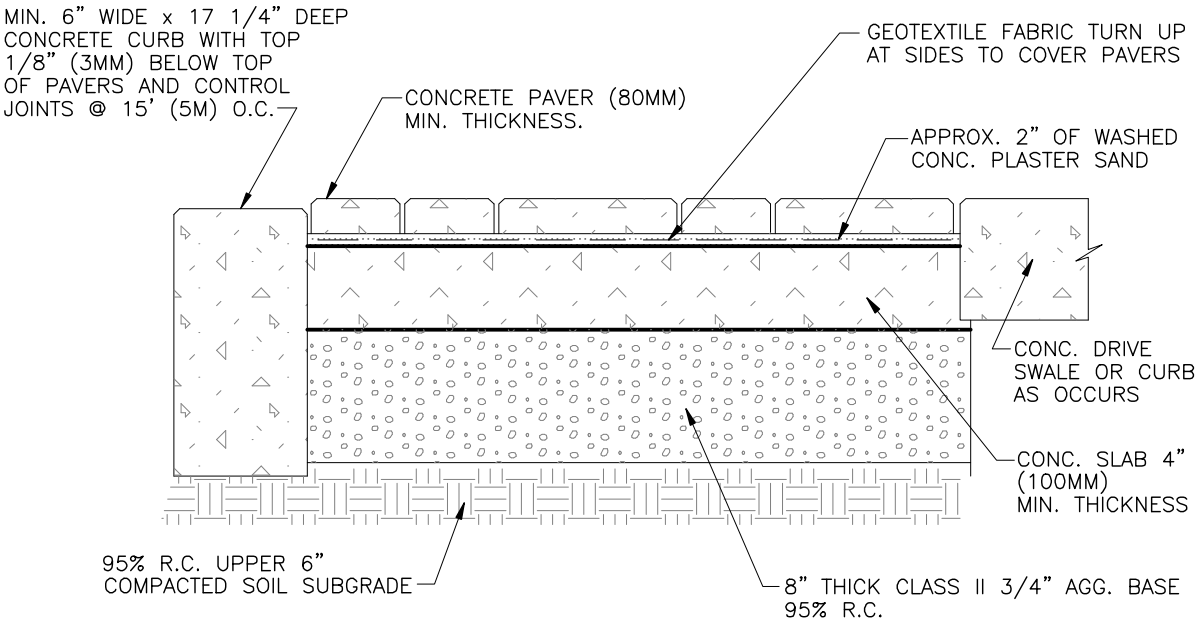
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B-132

G.G./B-132.DWG



CONCRETE PAVERS

NOTES:

1. STYLE AND COLOR OF CONCRETE PAVERS SHALL BE APPROVED BY PLANNING DEPARTMENT PRIOR TO INSTALLATION.
2. INSPECTOR SHALL BE PRESENT DURING INSTALLATION OF PAVERS.

City of Garden Grove California

GARDEN GROVE

CONCRETE PAVER DETAIL

Approved Date _____

City Engineer R.C.E. 50353 Exp.06-30-09

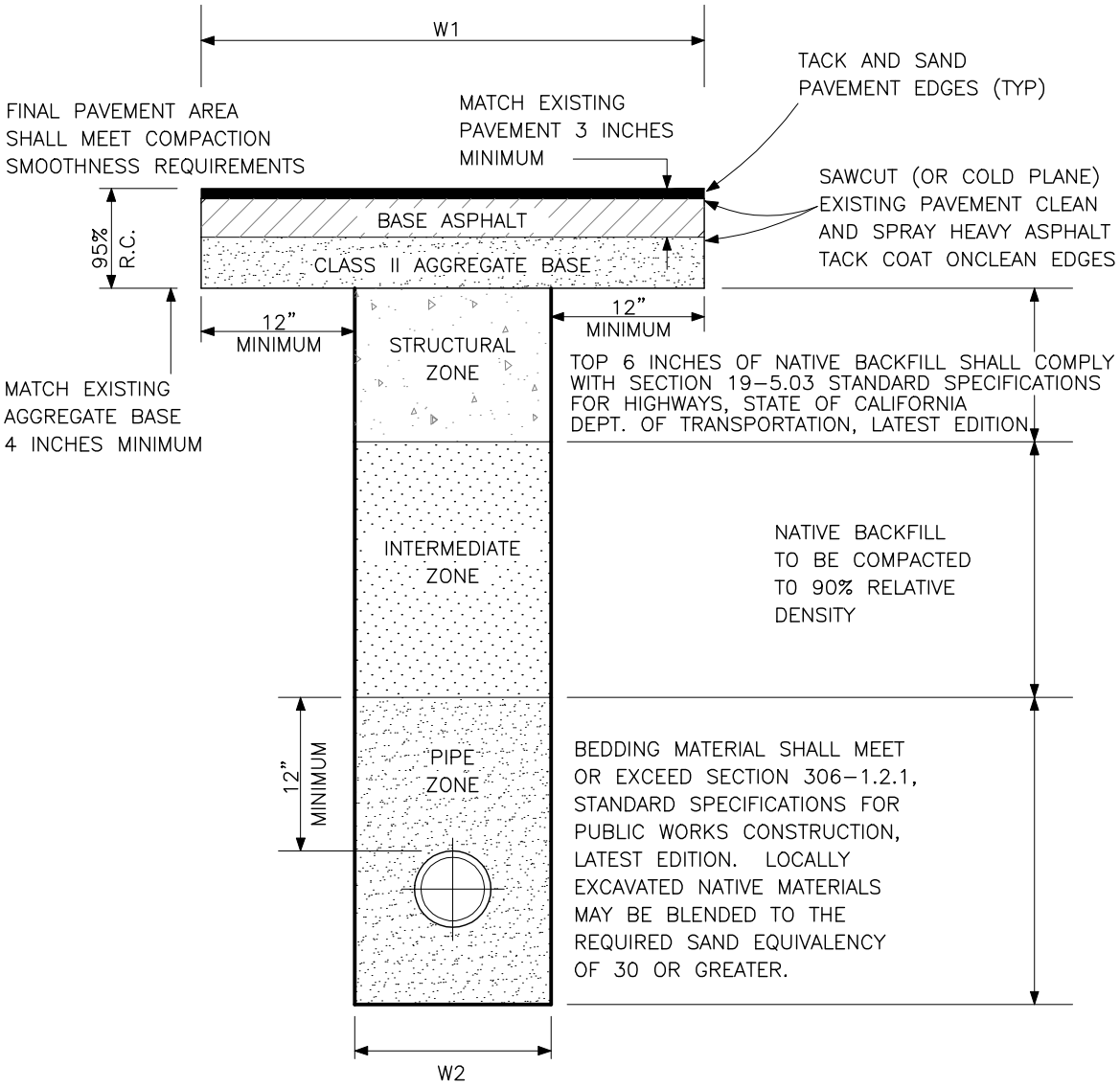
REVISIONS	BY	DATE

STD. PLAN NUMBER

B-133

G.G./B-133.DWG

LONGITUDINAL AND TRANSVERSE TRENCH BACKFILL SECTION
CASE A: T-CAP (AFFECTING TRAVEL LANES)



City of Garden Grove California

GARDEN GROVE

STANDARD STREET RESURFACING & TRENCH BACKFILL DETAIL

Approved Date

City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

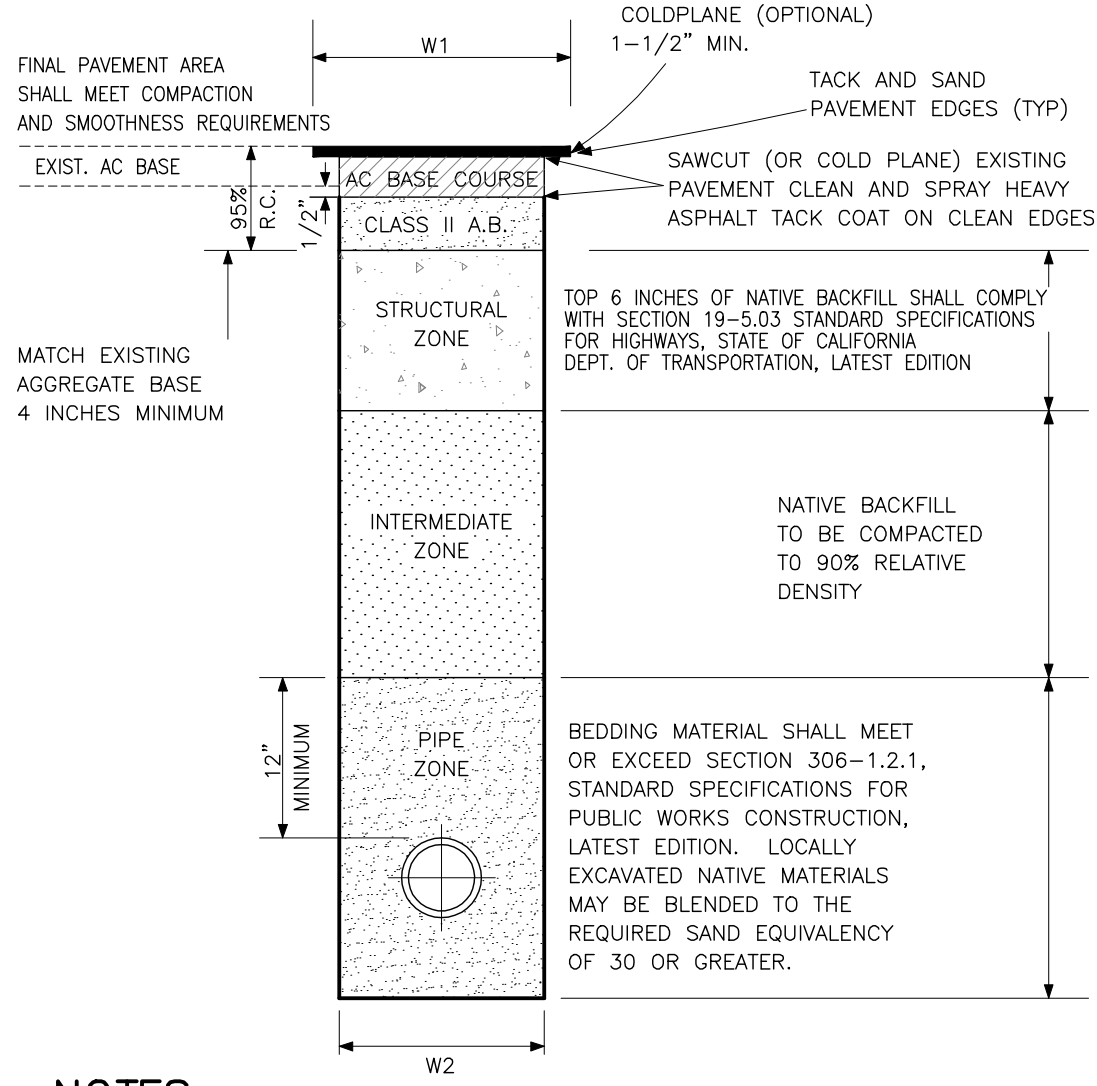
STD. PLAN NUMBER

B-134

SHEET 1 OF 2

G.G./B-134A.DWG

LONGITUDINAL TRENCH BACKFILL SECTION
CASE B: VERTICAL CUT ONLY (NO AFFECT ON TRAVEL LANES)



NOTES:

1. REPLACE BASE COURSE TO 1/2" BELOW EXISTING
2. COLD PLANE MINIMUM 1–1/2" (OPTIONAL) OR SAWCUT
3. TRENCHES WITHIN 3 FEET OF CURB SHALL PAVE TO LIP OF CURB
4. WIDTH OF CAP (W1) SUBJECT TO CITY ENGINEER APPROVAL
5. ALL WORK AND MATERIAL SHALL MEET OR EXCEED THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
6. LONGITUDINAL TRENCHES IN EXCESS OF 600 FEET MAY BE REQUIRED TO ADDITIONAL RESURFACING REQUIREMENTS DEPENDING ON STREET CONDITION AS DETERMINED BY THE CITY ENGINEER

City of Garden Grove California

GARDEN GROVE

STANDARD STREET RESURFACING & TRENCH BACKFILL DETAIL

Approved Date _____

City Engineer R.C.E. 50353 Exp.06–30–09

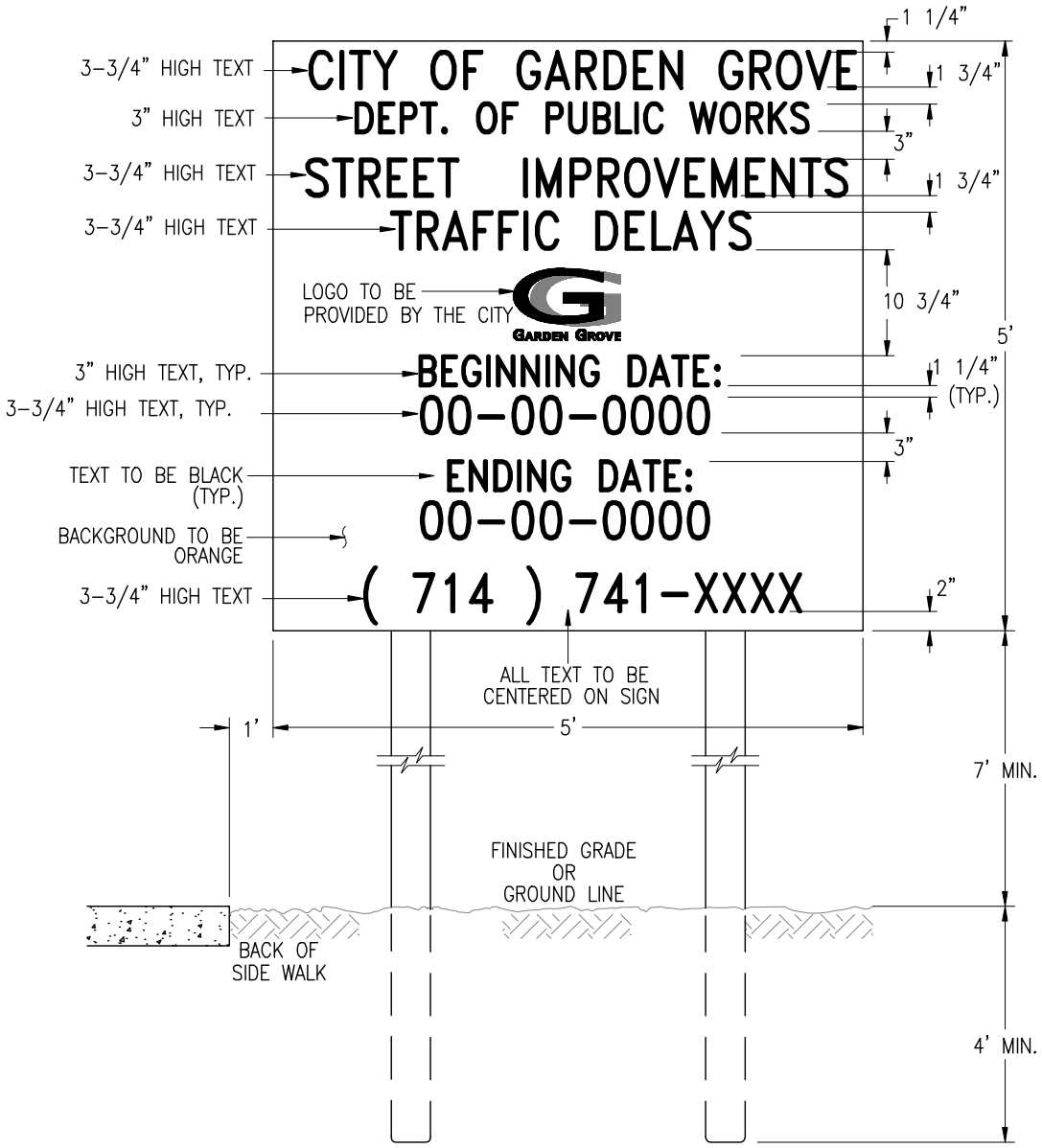
REVISIONS	BY	DATE

STD. PLAN NUMBER

B–134

SHEET 2 OF 2

G.G./B–134B.DWG



NOTES:

1. SIGN LOCATION TO BE DETERMINED IN THE FIELD BY CITY INSPECTOR.

2. (2) 4" x 4" POSTS 16' LONG, EMBEDDED 4' INTO GROUND.

City of Garden Grove California

GARDEN GROVE

SIGN DETAIL FOR CONSTRUCTION

Approved Date _____

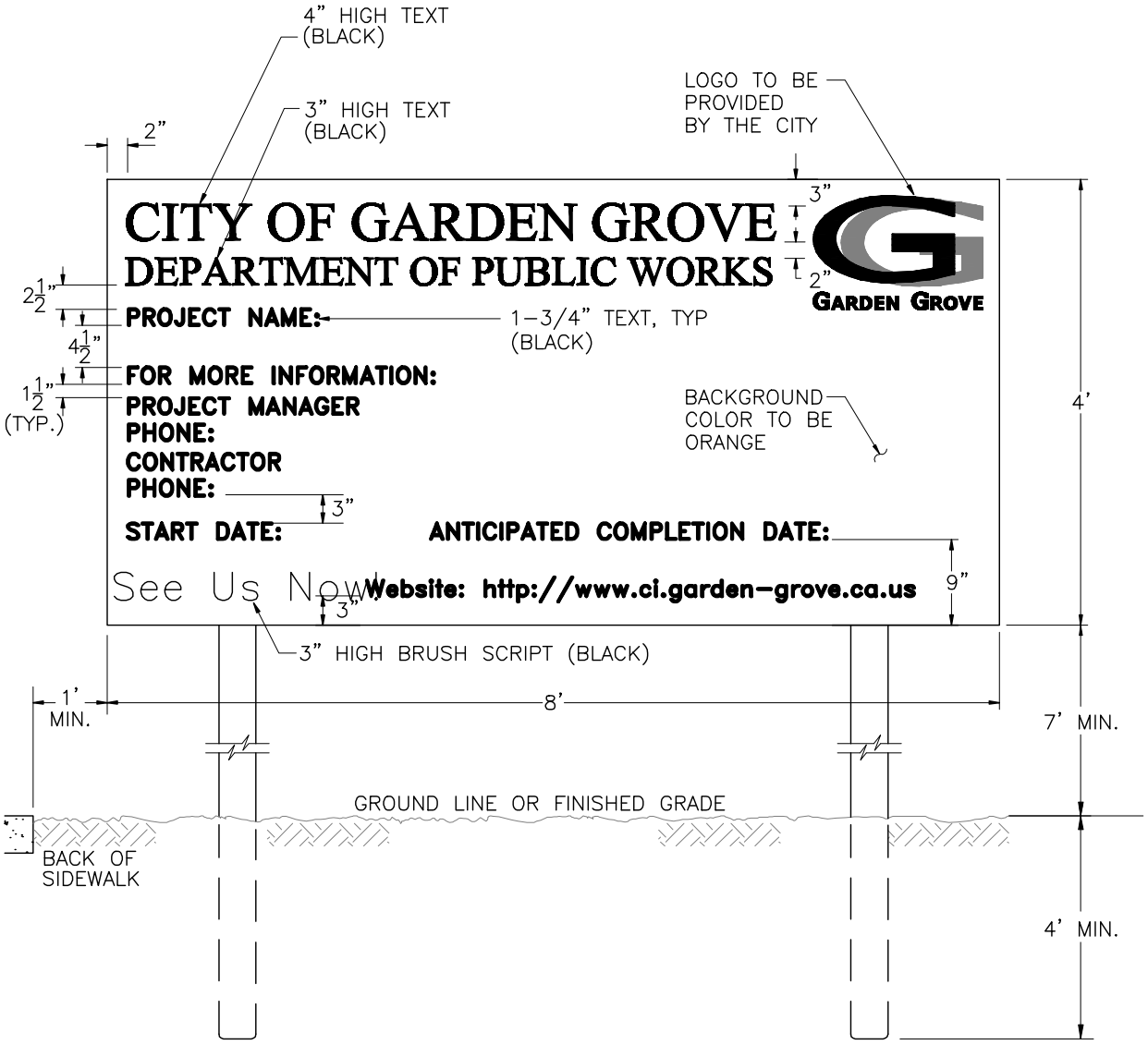
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B-135

G.G./B-135A.DWG



NOTES:

1. SIGN LOCATION TO BE DETERMINED IN THE FIELD BY CITY INSPECTOR.

2. (2) 4" x 4" POST EMBEDDED 4' INTO GROUND.

City of Garden Grove California

SIGN DETAIL FOR CITY PROJECT

Approved Date

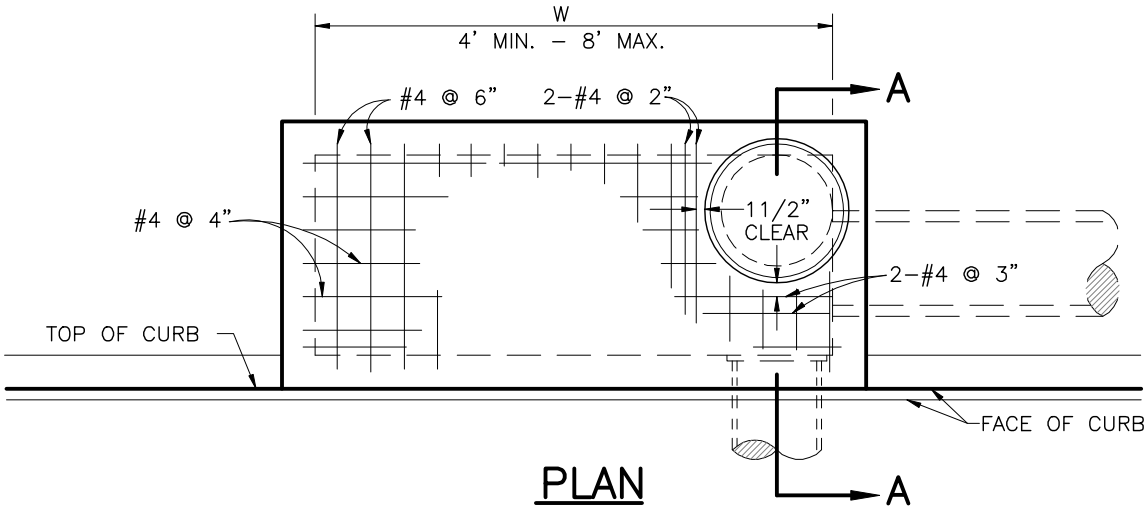
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

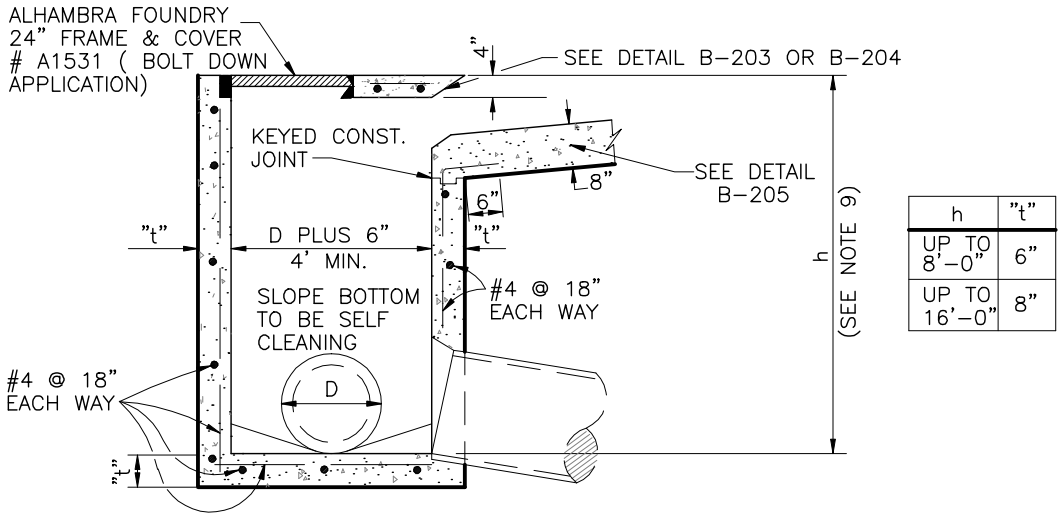
STD. PLAN NUMBER

B-136

G.G./B-136A.DWG



PLAN



h	"t"
UP TO 8'–0"	6"
UP TO 16'–0"	8"

SECTION A–A

NOTES:

1. HORIZONTAL PROTECTION BAR SHALL BE USED WHEN INLET OPENING IS MORE THAN 8 INCHES. SEE STD. PLAN B–203 OR B–204 FOR DETAILS.
2. STEPS REQUIRED WHEN "h" IS GREATER THAN 3'–0". SEE STD. B–203.
3. OUTLET MAY BE MADE IN ANY DIRECTION.
4. PIPE INLETS AND OUTLETS SHALL BE AT BOTTOM OF BASIN UNLESS OTHERWISE SPECIFIED.
5. ALL EXPOSED CONCRETE SURFACES SHALL CONFORM IN GRADE, COLOR AND FINISH TO ALL ADJOINING CURB AND WALK.
6. ALL WALL AND BASE REINFORCING STEEL SHALL BE 11/2 INCHES CLEAR FROM INSIDE OR OUTSIDE FACE OF STRUCTURE.
7. WHEN "W" EXCEEDS 8 FEET, USE STD. PLAN B–202.
8. ALL CONCRETE SHALL BE CLASS "A" (6 SACK WITH 3/4" AGGREGATE).
9. "h" SHALL BE 4' MIN. FOR MAINTENANCE PURPOSES IF POSSIBLE.
10. SLOPE BOTTOM OF CATCH BASIN TOWARDS OUTLET A MIN. OF 1" PER FOOT FROM ALL SIDES.

City of Garden Grove California

GARDEN GROVE

CATCH BASIN – TYPE OS (CURB OPENING – SMALL)

Approved Date

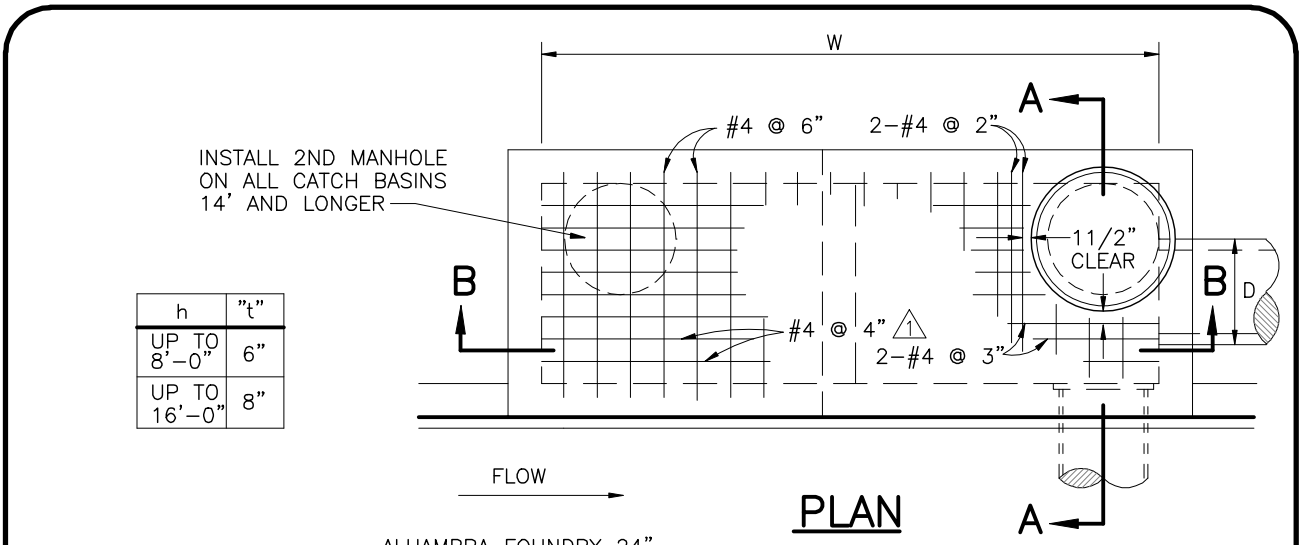
City Engineer R.C.E. 50353 Exp.06–30–09

REVISIONS	BY	DATE

STD. PLAN NUMBER

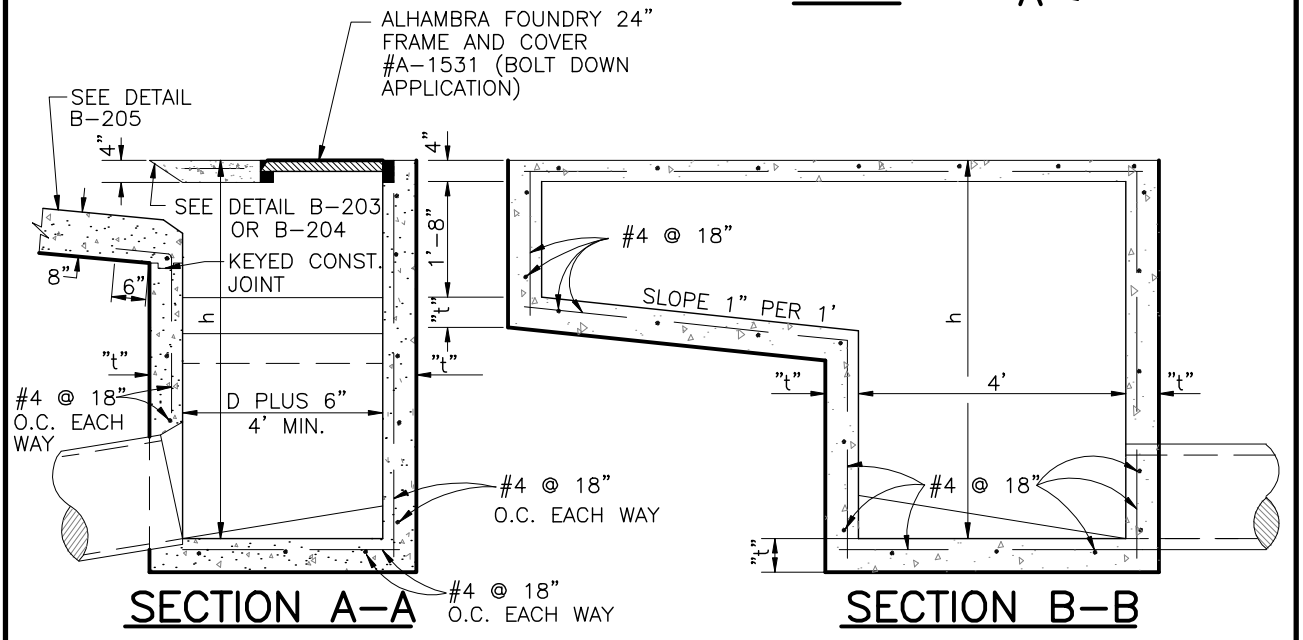
B–201

G.G./B–201.DWG



h	"t"
UP TO 8'–0"	6"
UP TO 16'–0"	8"

PLAN



SECTION A–A

SECTION B–B

NOTES:

1. HORIZONTAL PROTECTION BAR SHALL BE USED WHEN INLET OPENING IS MORE THAN 8 INCHES. SEE STD. PLAN B–203 OR B–204 FOR DETAILS.
2. STEPS REQUIRED WHEN "h" IS GREATER THAN 3'–0". SEE STD. PLAN B–203.
3. OUTLET MAY BE MADE IN ANY DIRECTION.
4. PIPE INLETS AND OUTLETS SHALL BE AT BOTTOM OF BASIN UNLESS OTHERWISE SPECIFIED.
5. ALL EXPOSED CONCRETE SURFACES SHALL CONFORM IN GRADE, COLOR AND FINISH TO ALL ADJOINING CURB AND WALK.
6. ALL WALL AND BASE REINFORCING STEEL SHALL BE 11/2 INCHES CLEAR FROM INSIDE OR OUTSIDE FACE OF STRUCTURE.
7. WHEN "W" IS LESS THAN 8 FEET, USE STD. PLAN B–201.
9. ALL CONCRETE SHALL BE CLASS "A" (6 SACK WITH 3/4" AGGREGATE).
10. SLOPE BOTTOM OF CATCH BASIN TOWARDS OUTLET A MIN. OF 1" PER FOOT FROM ALL SIDES.

City of Garden Grove California

GARDEN GROVE

CATCH BASIN – TYPE OL (CURB OPENING – LARGE)

Approved Date

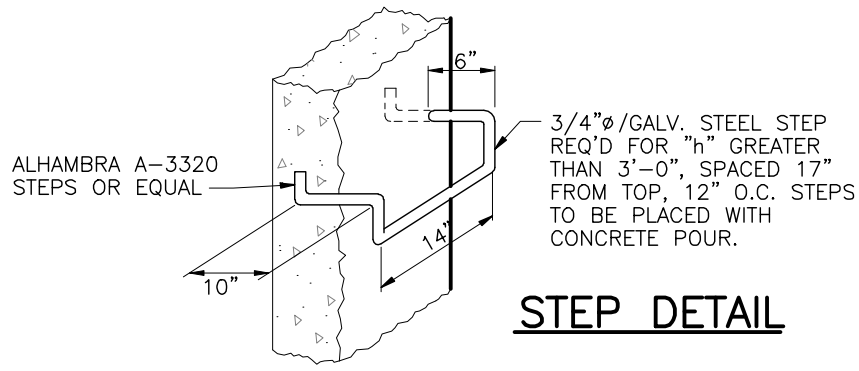
City Engineer R.C.E. 50353 Exp.06–30–09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B–202

G.G./B–202.DWG



STEP DETAIL

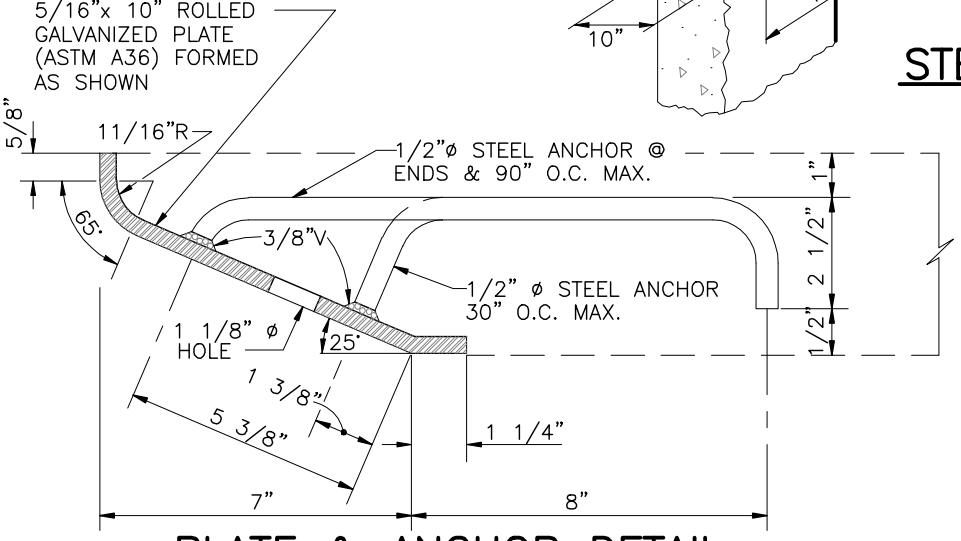
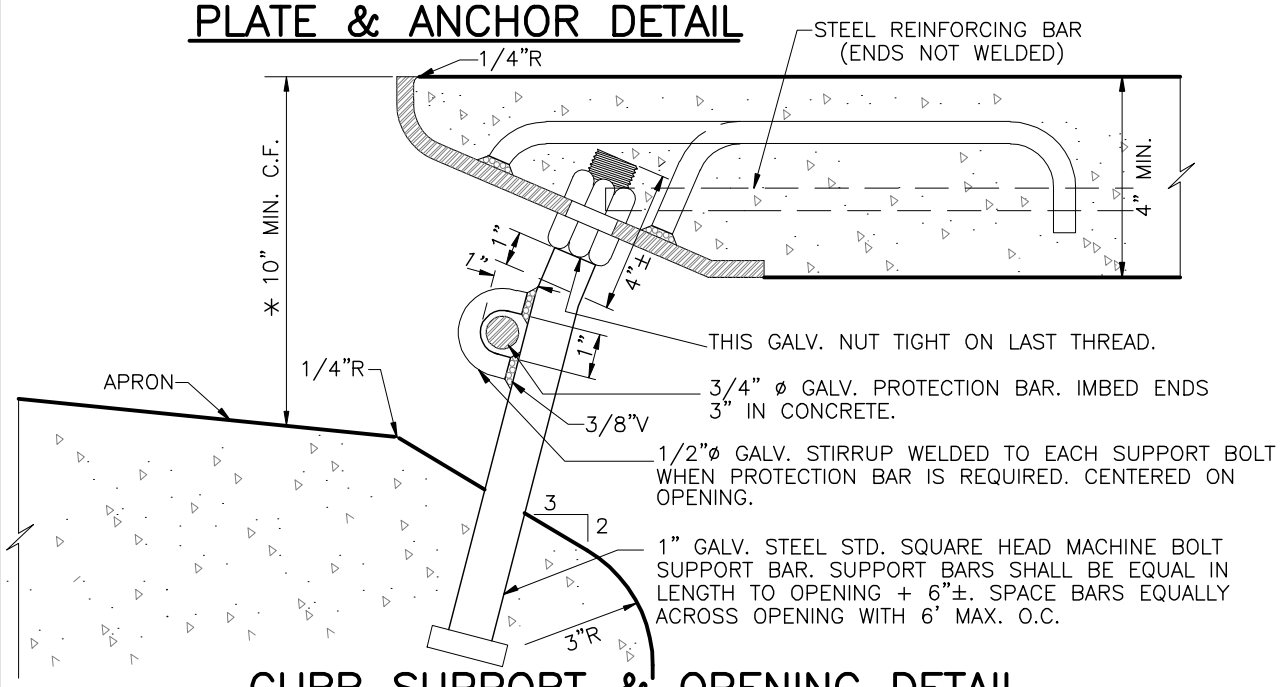


PLATE & ANCHOR DETAIL



CURB SUPPORT & OPENING DETAIL FOR TANGENTS AND CURVES GREATER THAN 100' RADIUS

* – USE 8" C.F. FOR CURB LANES 14' OR LESS.

City of Garden Grove California

GARDEN GROVE

MISCELLANEOUS CATCH BASIN DETAILS

Approved Date _____

City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B-203

G.G./B-203.DWG

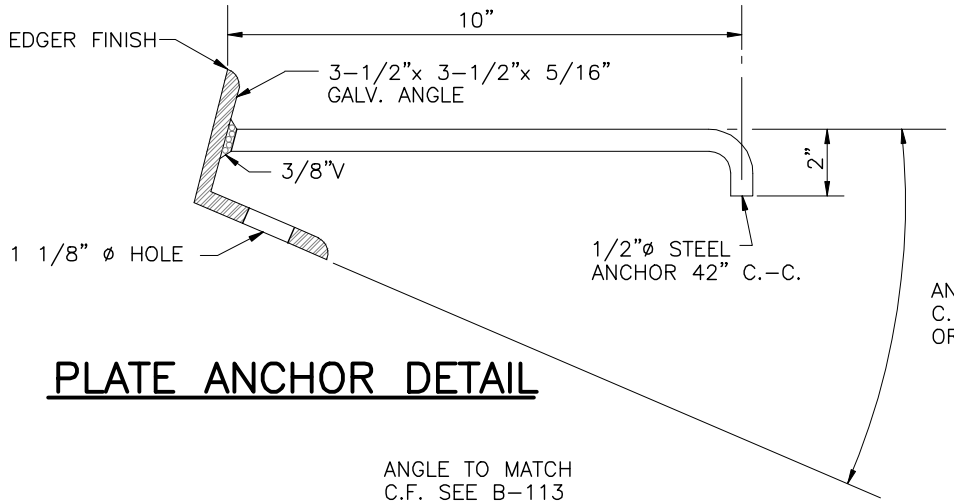
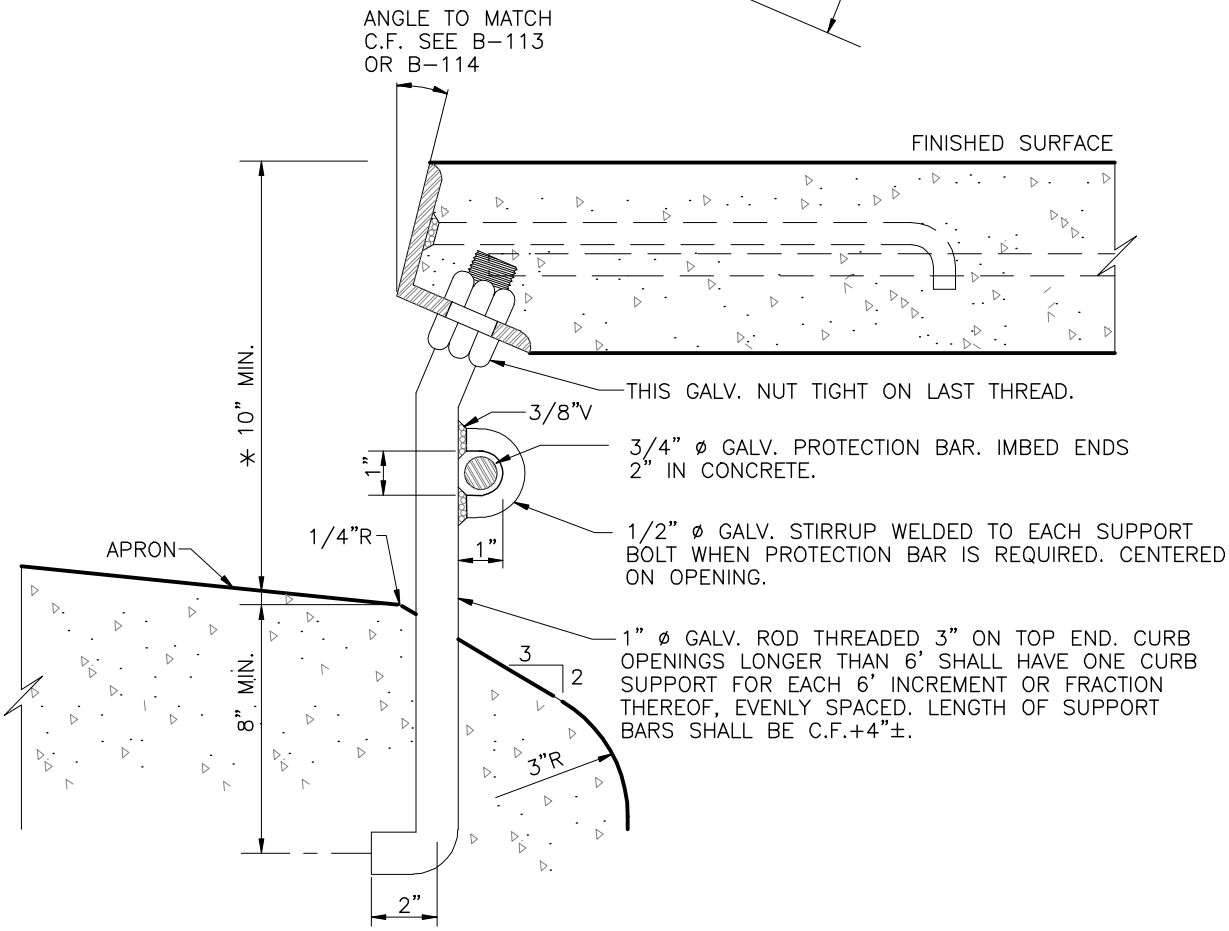


PLATE ANCHOR DETAIL



CURB SUPPORT AND OPENING DETAIL FOR CURVES OF RADIUS 100' OR LESS

* – USE 8" C.F. FOR CURB LANES 14' OR LESS.

City of Garden Grove California

MISCELLANEOUS CATCH BASIN DETAILS

Approved Date _____

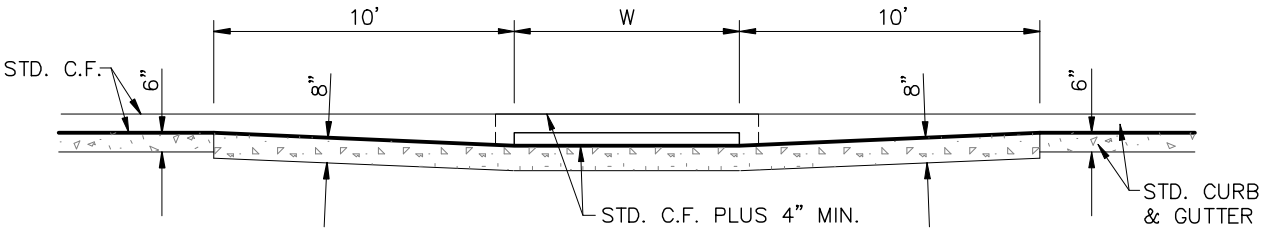
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

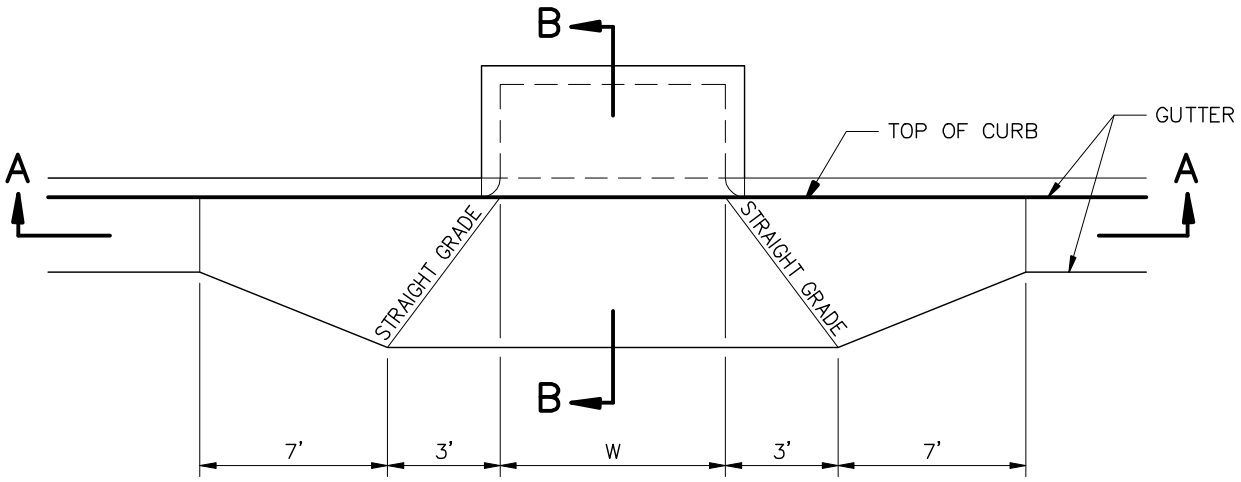
STD. PLAN NUMBER

B-204

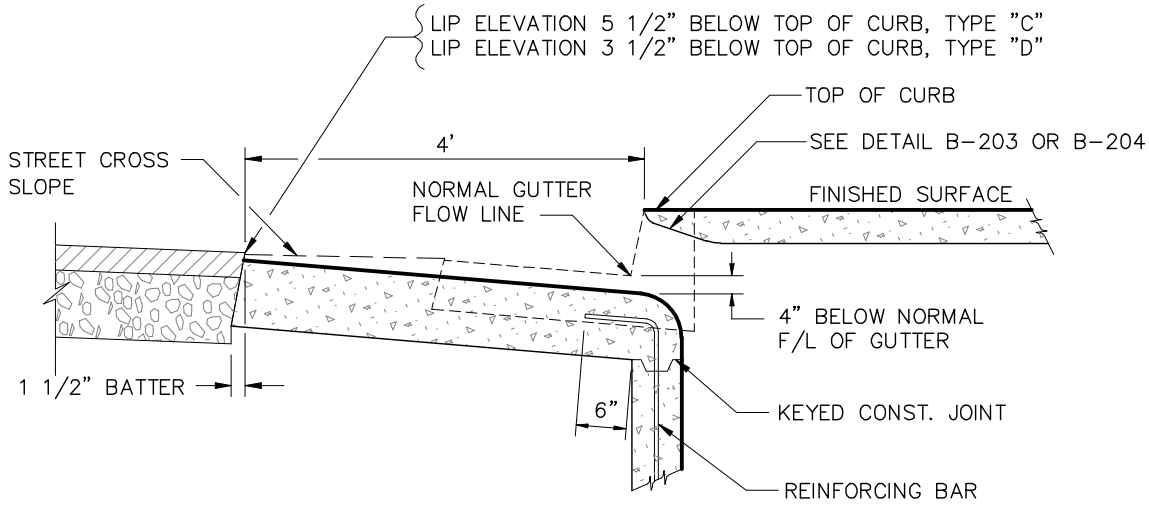
G.G./B-204.DWG



SECTION A–A



PLAN



SECTION B–B

City of Garden Grove California

GARDEN GROVE

LOCAL DEPRESSION (SUMP CONDITION)

Approved Date _____

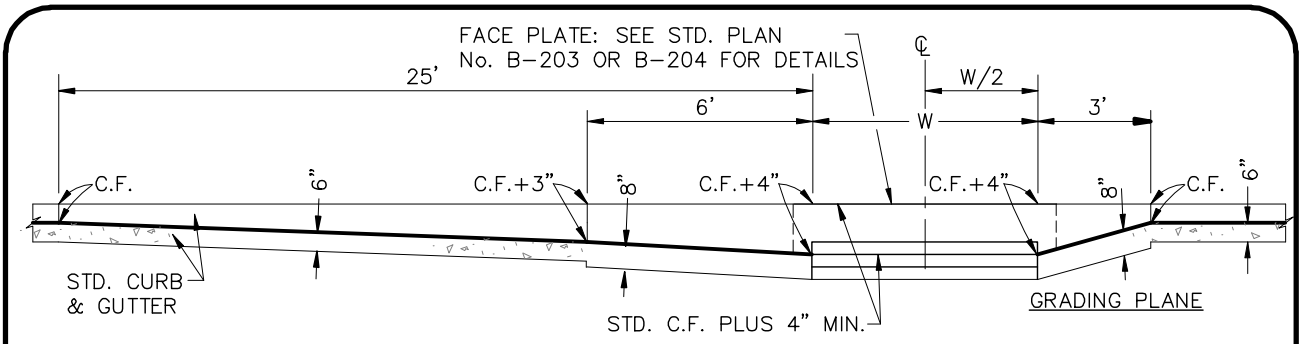
City Engineer R.C.E. 50353 Exp.06–30–09

REVISIONS	BY	DATE

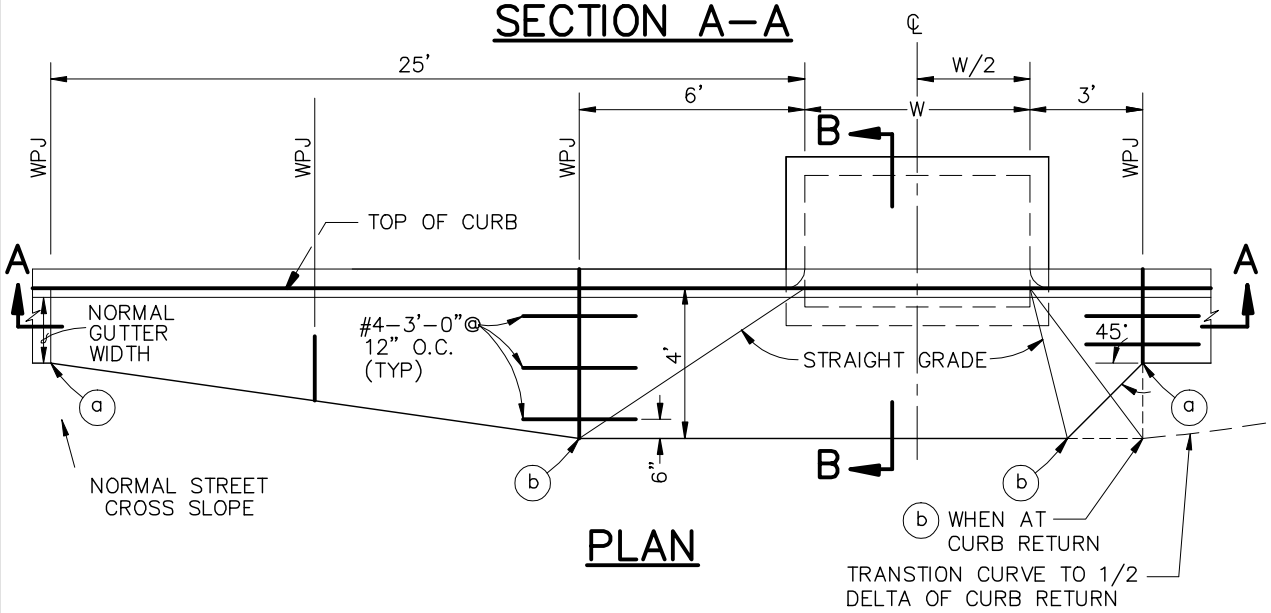
STD. PLAN NUMBER

B–205A

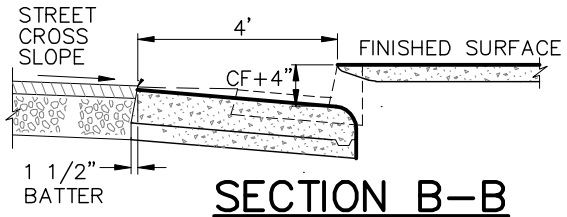
G.G./B–205A.DWG



SECTION A-A



PLAN



SECTION B-B

POINT	6" TO 10" CF TRANS DISTANCE BELOW TC	8" TO 12" CF TRANS DISTANCE BELOW TC
a	0.39'	0.51'
b	0.35'	0.48'

NOTES :

1. LOCAL DEPRESSION SHALL NOT BE CONSTRUCTED UNTIL CONNECTING CURB AND GUTTER HAS BEEN COMPLETED OR SHALL BE CONSTRUCTED MONOLITHICALLY WITH CONNECTING CURB AND GUTTER, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
2. LOCAL DEPRESSION SHALL CONFORM TO SAME SHAPE WHETHER GRATE INLET OR CURB OPENING, OR BOTH, ARE USED.
3. LENGTH OF OPENING "W" SHALL BE SPECIFIED ON PLANS.
4. SEE STANDARD PLANS B-203 OR B-204, FOR CURB OPENING DETAIL.

City of Garden Grove
California

GARDEN GROVE

LOCAL DEPRESSION (FLOW BY CONDITION)

Approved Date

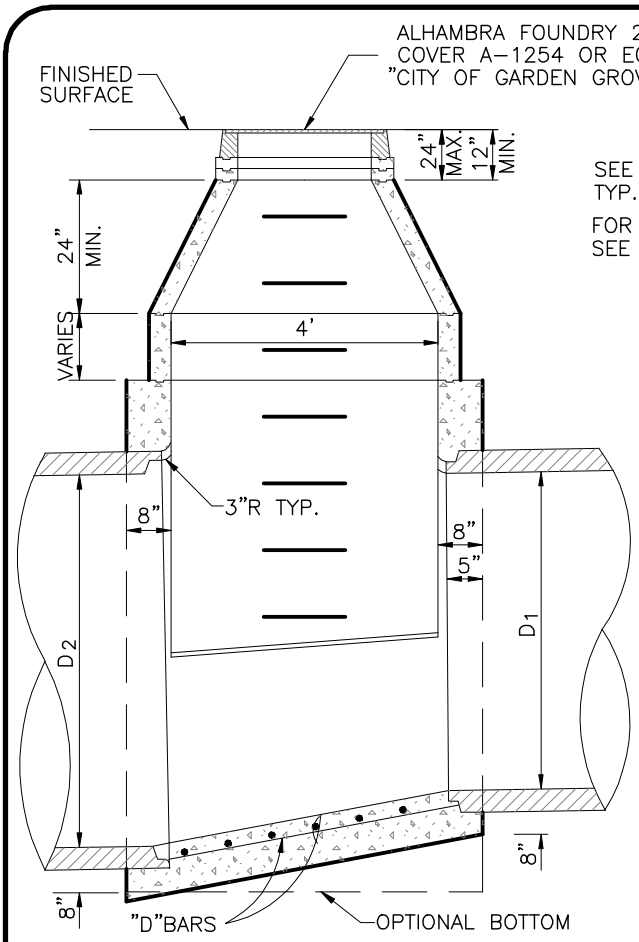
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

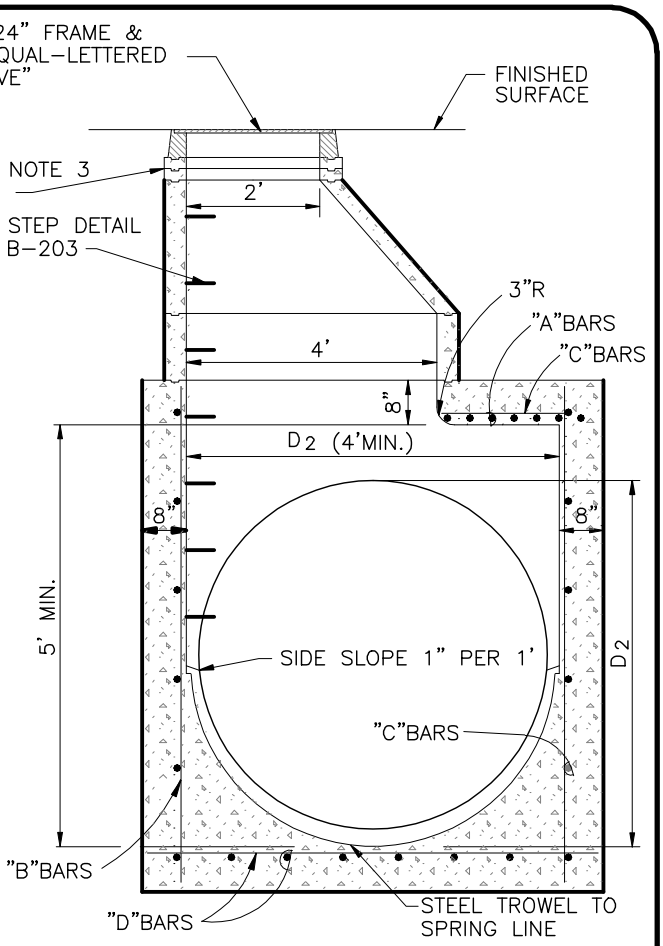
STD. PLAN NUMBER

B-205B

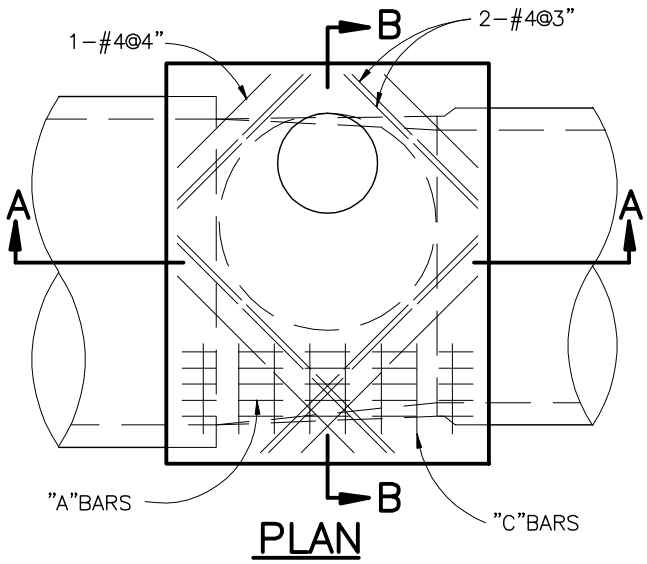
G.G./B-205B.DWG



SECTION A–A



SECTION B–B



PLAN

REINFORCING SCHEDULE		
BARS	D_2 UP TO 60"	D_2 63" UP TO 84"
"A"BARS	#5@4"	#5@4"
"B"BARS	#4@7"	#5@6"
"C"BARS	#4@18"	#4@18"
"D"BARS	#5@8"	#6@6"

NOTES:

1. ROUND EDGES OF OUTLET TO 3" RADIUS
2. ALL REINFORCING STEEL IN BASE STRUCTURE SHALL BE 1-1/2" CLEAR FROM INSIDE FACE OF CONCRETE.
3. CONCRETE RINGS FOR ACCESS SHAFT SHALL BE CEMENTED IN PLACE WITH 1:2 MIX CEMENT MORTAR.
4. CONCRETE SHALL BE CLASS "A" (6 SACK WITH 3/4" AGGREGATE).

City of Garden Grove California

GARDEN GROVE

STORM DRAIN MANHOLE

Approved Date

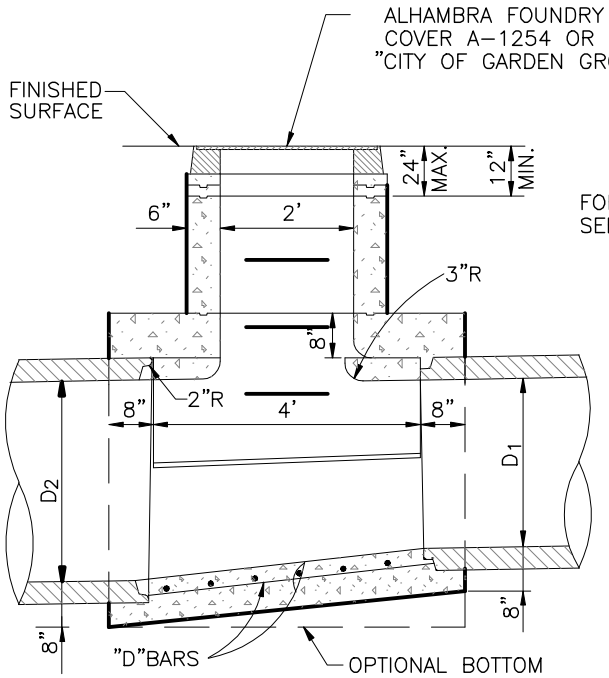
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

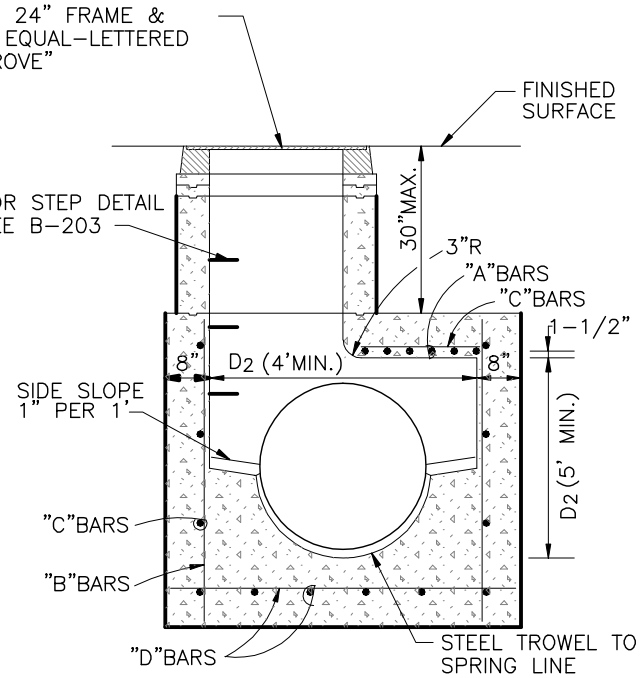
STD. PLAN NUMBER

B-206

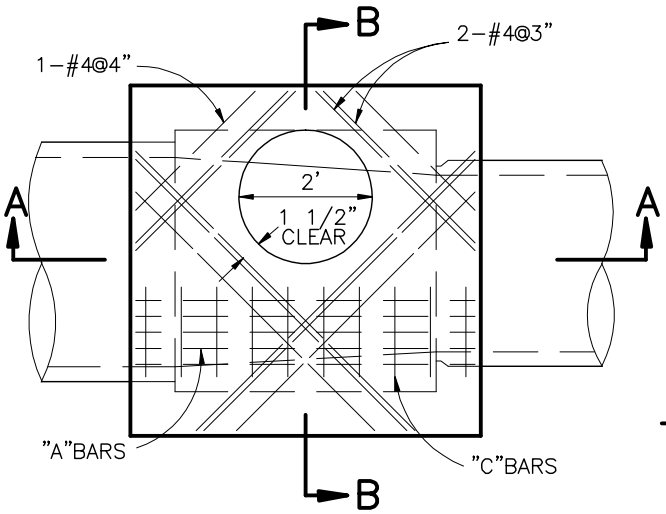
G.G./B-206.DWG



SECTION A–A



SECTION B–B



PLAN

REINFORCING SCHEDULE		
BARS	D_2 UP TO 60"	D_2 63" UP TO 84"
"A"BARS	#5@4"	#5@4"
"B"BARS	#4@7"	#5@6"
"C"BARS	#4@18"	#4@18"
"D"BARS	#5@8"	#6@6"

NOTES:

1. ROUND EDGES OF OUTLET TO 3" RADIUS
2. ALL REINFORCING STEEL IN BASE STRUCTURE SHALL BE 1-1/2" CLEAR FROM INSIDE FACE OF CONCRETE.
3. CONCRETE RINGS FOR ACCESS SHAFT SHALL BE CEMENTED IN PLACE WITH 1:2 MIX CEMENT MORTAR.
4. CONCRETE SHALL BE CLASS "A" (6 SACK WITH 3/4" AGGREGATE).

City of Garden Grove California

GARDEN GROVE

STORM DRAIN MANHOLE (SHALLOW DEPTH)

Approved Date

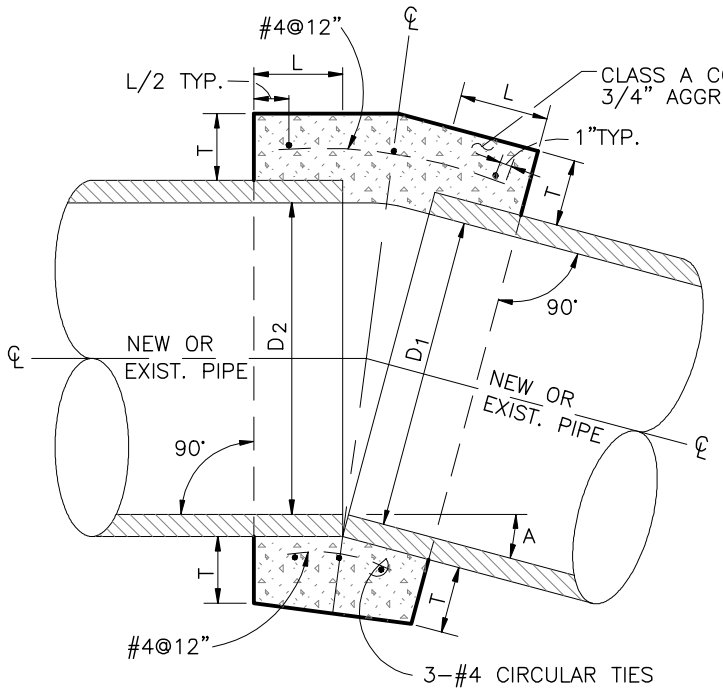
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B-207

G.G./B-207.DWG



D	L	T
18"	1.0'	6"
24"	1.0'	6"
36"	1.5'	8"
48"	1.5'	10"
57"	1.5'	10"
60"	1.75'	12"
66"	1.75'	12"

SECTION

NOTES:

1. WHERE PIPES OF DIFFERENT DIAMETERS ARE JOINED WITH A CONCRETE COLLAR, L AND T SHALL BE THOSE OF THE LARGER PIPE. $D=D_1$ OR D_2, WHICHEVER IS GREATER.
2. FOR PIPE SIZE NOT LISTED USE NEXT SIZE LARGER.
3. OMIT REINFORCING ON PIPES 24" AND LESS IN DIAMETER AND ON ALL PIPES WHERE ANGLE A IS LESS THAN 10°.
4. WHERE REINFORCING IS REQUIRED THE DIAMETER OF THE CIRCULAR TIES SHALL BE D + (2x WALL THICKNESS) + 6".
5. WHEN D_1 IS EQUAL TO OR LESS THAN D_2, JOIN INVERTS AND WHEN D_1 IS GREATER THAN D_2, JOIN SOFFITS.
6. PIPE MAY BE CORRUGATED METAL PIPE, CONCRETE PIPE OR REINFORCED CONCRETE PIPE.

City of Garden Grove California

CONCRETE COLLAR FOR PIPE 18"-66" DIAMETER

Approved Date

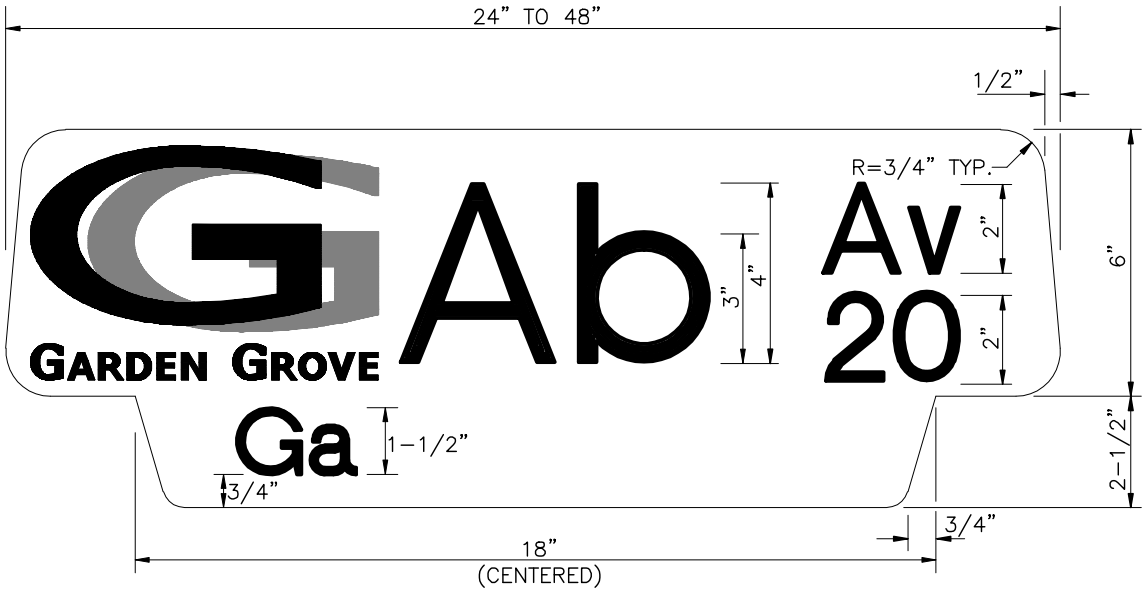
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B-208

G.G./B-208.DWG



CLASS "A" SIGN FOR ARTERIAL HIGHWAY

(CLASS "B" SIGN IDENTICAL MINUS 2-1/2" LOWER SECTION) ALL OTHER STREETS

NOTES:

1. BACKGROUND: WHITE REFLECTIVE SHEETING.
2. ALL LETTERING FONTS SHALL BE AS SHOWN ABOVE, COLOR SHALL MATCH LOGO DARK BLUE.
3. STREET NAME 4" UPPER CASE AND 3" LOWER CASE.
4. SUFFIX 2" UPPER CASE AND 1-1/2" LOWER CASE.
5. NUMBERS 2".
6. CITY NAME (CLASS "A" SIGN ONLY) 1-1/2" UPPER CASE, 1" LOWER CASE.
7. LOGO TO MATCH CITY STANDARD (GOLD, DARK BLUE, LIGHT BLUE WITH WHITE REFLECTIVE BORDER).
8. ALL LOWER CASE AT SAME RATIO AS STREET NAME 3:4.
9. SIGNS SHALL BE AS MANUFACTURED BY WESTERN HIGHWAYS OR APPROVED EQUAL.
10. SIGNS TO BE APPROVED PRIOR TO INSTALLATION.

GARDEN GROVE

City of Garden Grove California

STREET SIGN FOR PUBLIC STREETS

Approved Date _____

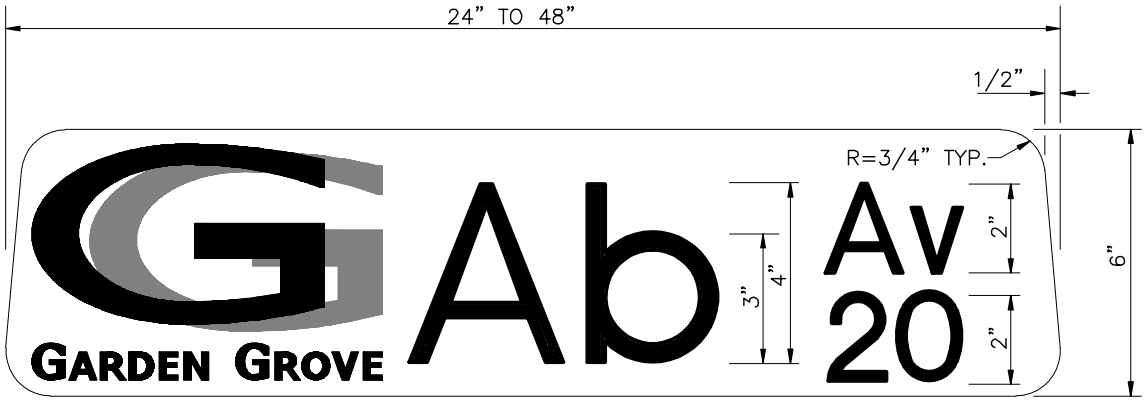
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B-301

G.G./B-301.DWG



CLASS "B" SIGN

NOTES:

1. BACKGROUND: LIGHT BLUE REFLECTIVE SHEETING.
2. ALL LETTERING FONTS SHALL BE AS SHOWN ABOVE, COLOR SHALL MATCH LOGO DARK BLUE.
3. STREET NAME 4" UPPER CASE AND 3" LOWER CASE.
4. SUFFIX 2" UPPER CASE AND 1–1/2" LOWER CASE.
5. NUMBERS 2".
6. LOGO TO MATCH CITY STANDARD (GOLD, DARK BLUE, LIGHT BLUE WITH WHITE REFLECTIVE BORDER).
7. ALL LOWER CASE AT SAME RATIO AS STREET NAME 3:4.
9. SIGNS SHALL BE AS MANUFACTURED BY WESTERN HIGHWAYS OR APPROVED EQUAL.
10. SIGNS TO BE APPROVED PRIOR TO INSTALLATION.

GARDEN GROVE
City of Garden Grove California

STREET SIGN FOR PRIVATE STREETS

Approved Date _____

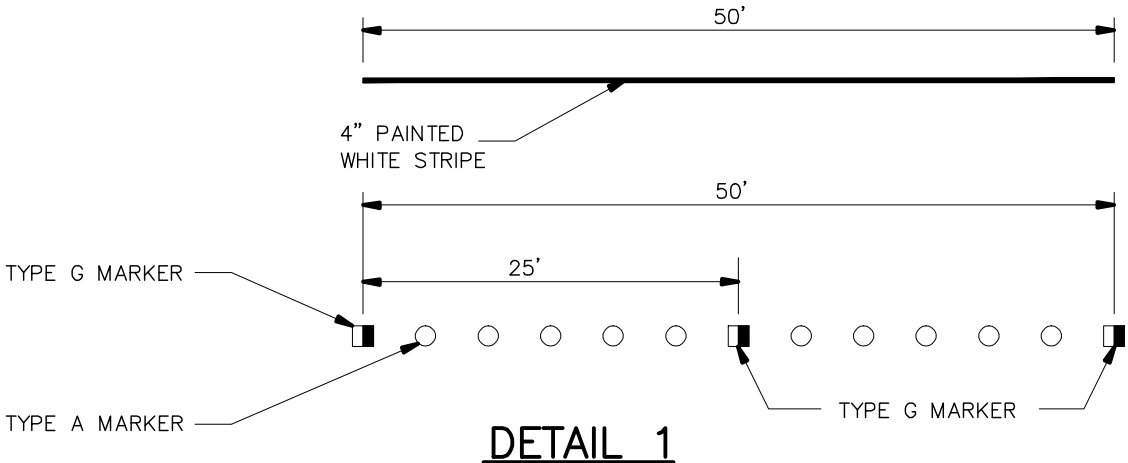
City Engineer R.C.E. 50353 Exp.06–30–09

REVISIONS	BY	DATE

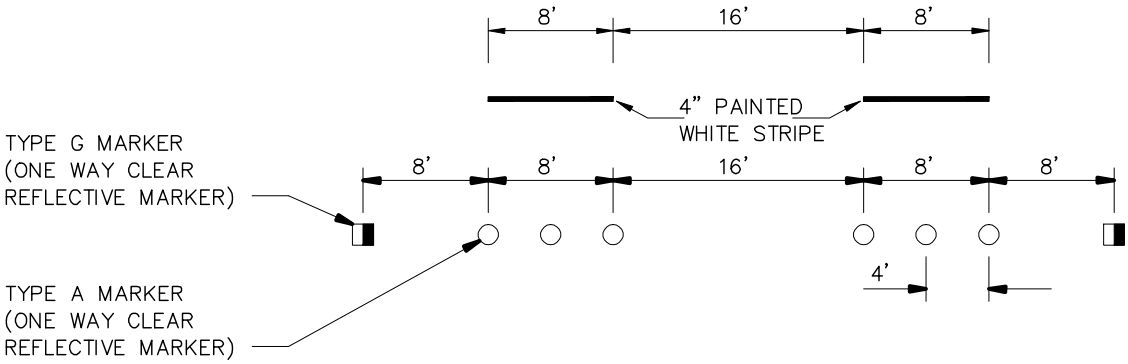
STD. PLAN NUMBER

B–302

G.G./B–302.DWG



DETAIL 1



DETAIL 3

NOTES:

1. BOTH PAINT AND MARKERS TO BE INSTALLED PER DETAIL AS SHOWN, WITH PAINT INSTALLED FIRST.
2. INSTALLATION OF ALL MARKERS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST CALTRANS STANDARD SPECIFICATIONS SECTION 85.

DO NOT USE THIS STANDARD FOR NEW STRIPING OF ENTIRE ROADWAYS – TO BE USED ONLY FOR REPLACEMENT OF EXISTING STRIPING IN ISOLATED AREAS TO MATCH ADJACENT STRIPING.

City of Garden Grove California

GARDEN GROVE

ROADWAY STRIPING DETAILS

Approved Date

City Engineer R.C.E. 50353 Exp.06-30-09

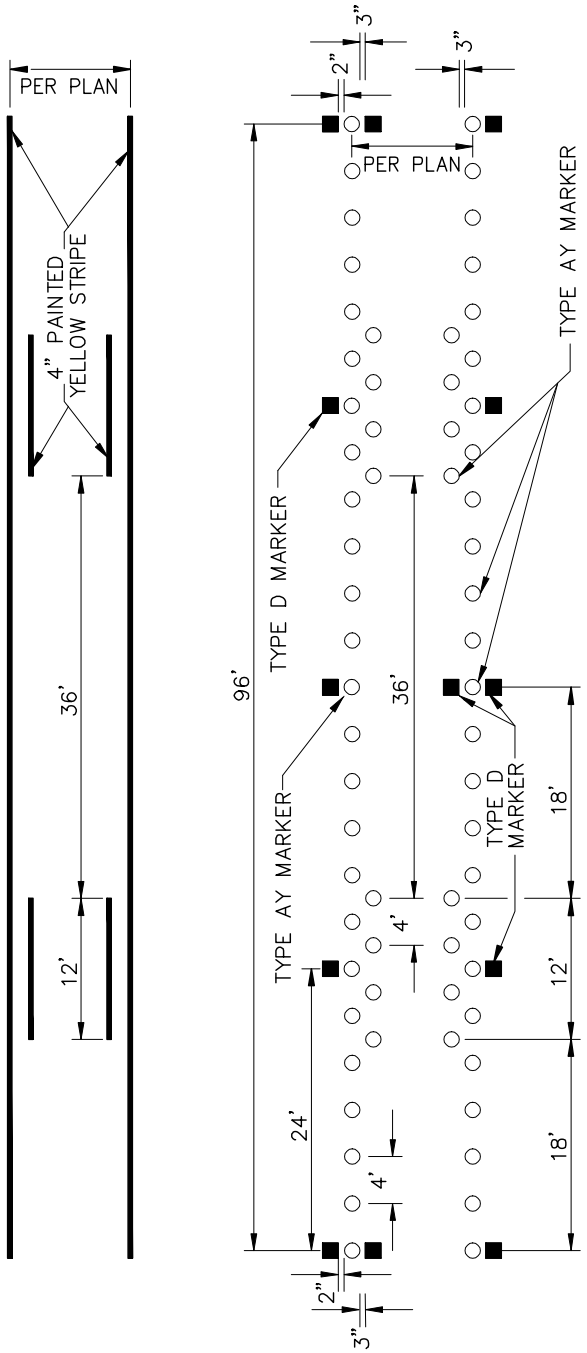
REVISIONS	BY	DATE

STD. PLAN NUMBER

B-303

SHEET 1 OF 3

G.G./B-303.DWG



DETAIL 2

DO NOT USE THIS STANDARD FOR NEW STRIPING OF ENTIRE ROADWAYS – TO BE USED ONLY FOR REPLACEMENT OF EXISTING STRIPING IN ISOLATED AREAS TO MATCH ADJACENT STRIPING.

NOTES:

1. BOTH PAINT AND MARKERS TO BE INSTALLED PER DETAIL AS SHOWN, WITH PAINT INSTALLED FIRST.
2. INSTALLATION OF ALL MARKERS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST CALTRANS STANDARD SPECIFICATIONS SECTION 85.

City of Garden Grove California

GARDEN GROVE

ROADWAY STRIPING DETAILS

Approved Date _____

City Engineer R.C.E. 50353 Exp.06-30-09

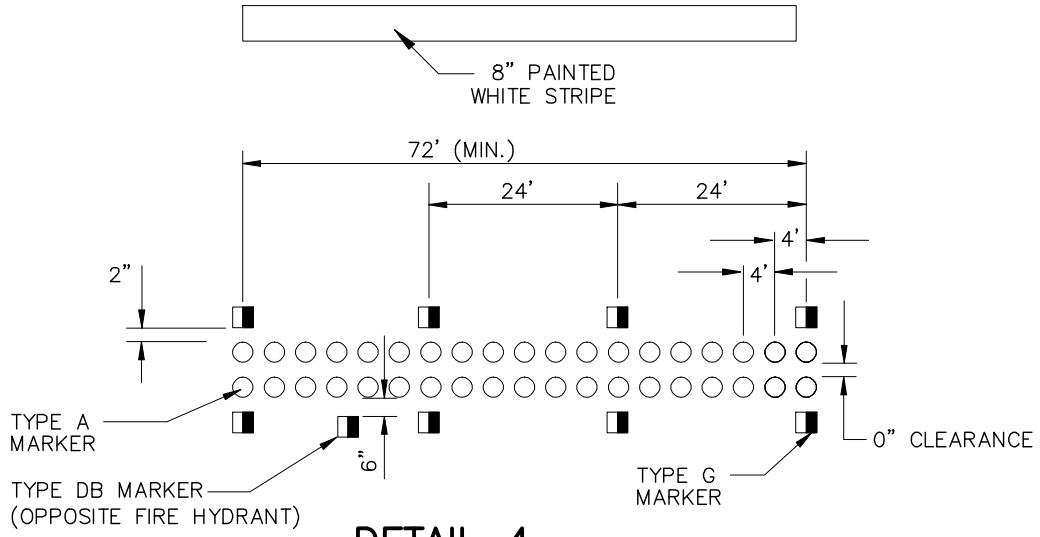
REVISIONS	BY	DATE

STD. PLAN NUMBER

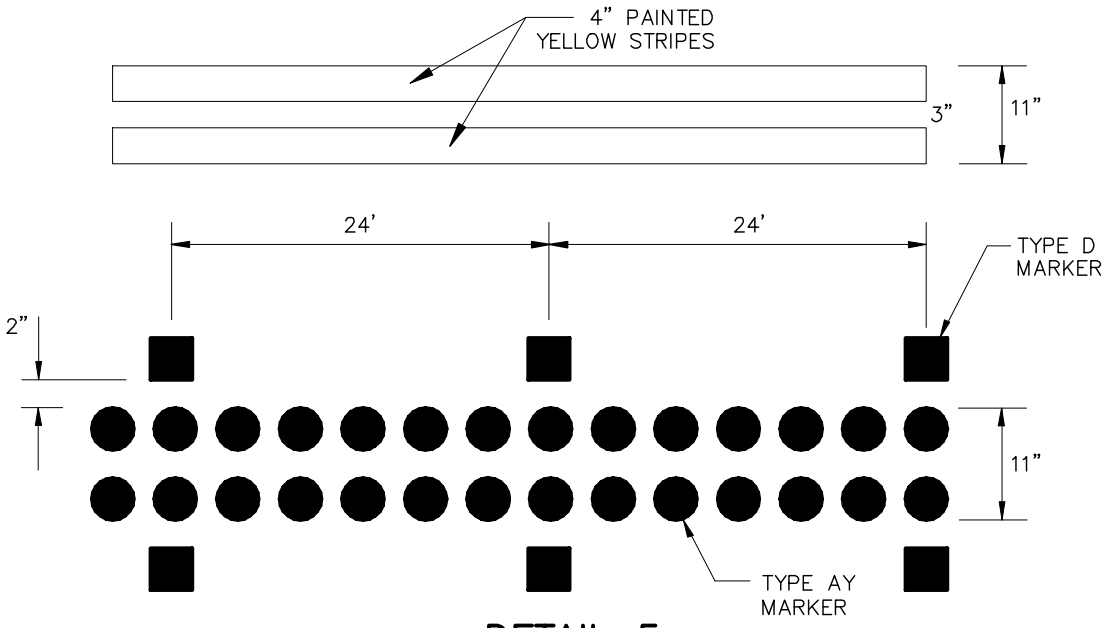
B-303

SHEET 2 OF 3

G.G./B-303B.DWG



DETAIL 4



DETAIL 5

NOTES:

1. BOTH PAINT AND MARKERS TO BE INSTALLED PER DETAIL AS SHOWN, WITH PAINT INSTALLED FIRST.
2. INSTALLATION OF ALL MARKERS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST CALTRANS STANDARD SPECIFICATIONS SECTION 85.

DO NOT USE THIS STANDARD FOR NEW STRIPING OF ENTIRE ROADWAYS – TO BE USED ONLY FOR REPLACEMENT OF EXISTING STRIPING IN ISOLATED AREAS TO MATCH ADJACENT STRIPING.

City of Garden Grove California

GARDEN GROVE

ROADWAY STRIPING DETAILS FOR SINGLE DOUBLE LINES

Approved Date

City Engineer R.C.E. 50353 Exp.06-30-09

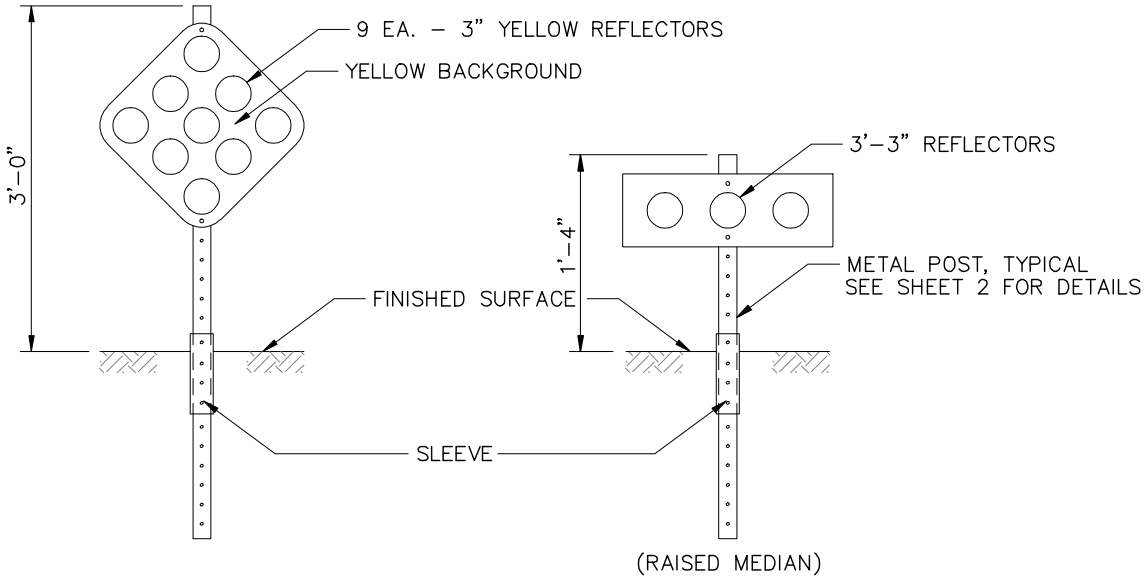
REVISIONS	BY	DATE

STD. PLAN NUMBER

B-303

SHEET 3 OF 3

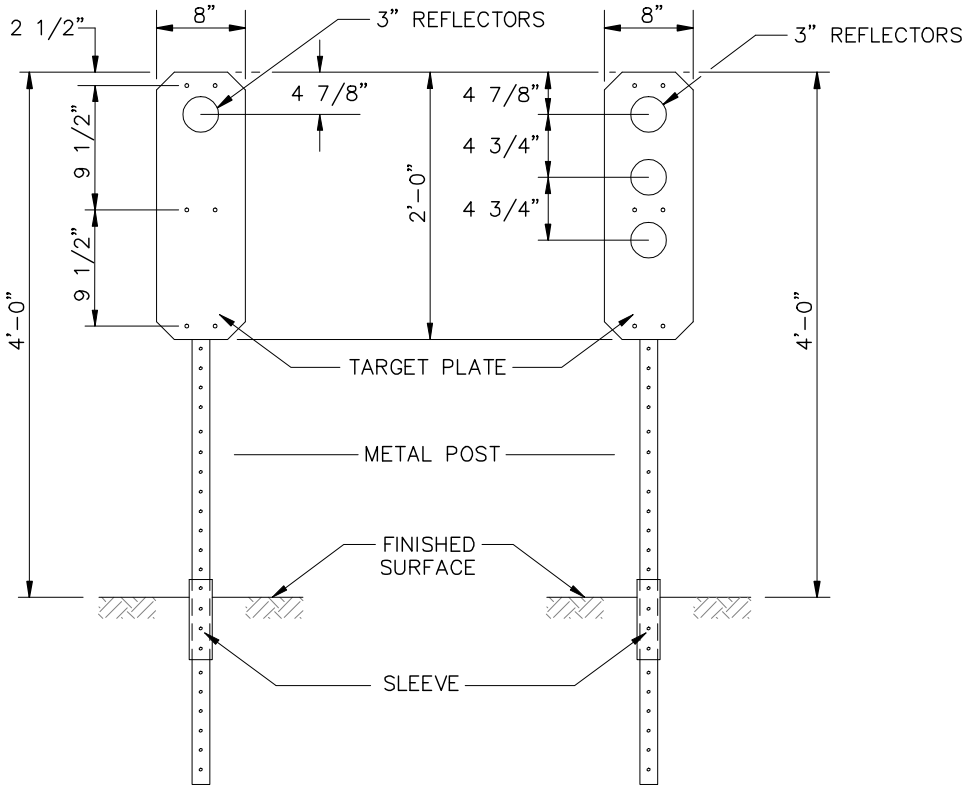
G.G./B-303C.DWG



TYPE N–4

(RAISED MEDIAN)

TYPE K



GUIDE MARKER
TYPE F

CLEARANCE MARKER
TYPE L

City of Garden Grove
California

GARDEN GROVE

TYPICAL TRAFFIC SIGN INSTALLATION

Approved Date

City Engineer R.C.E. 50353 Exp.06–30–09

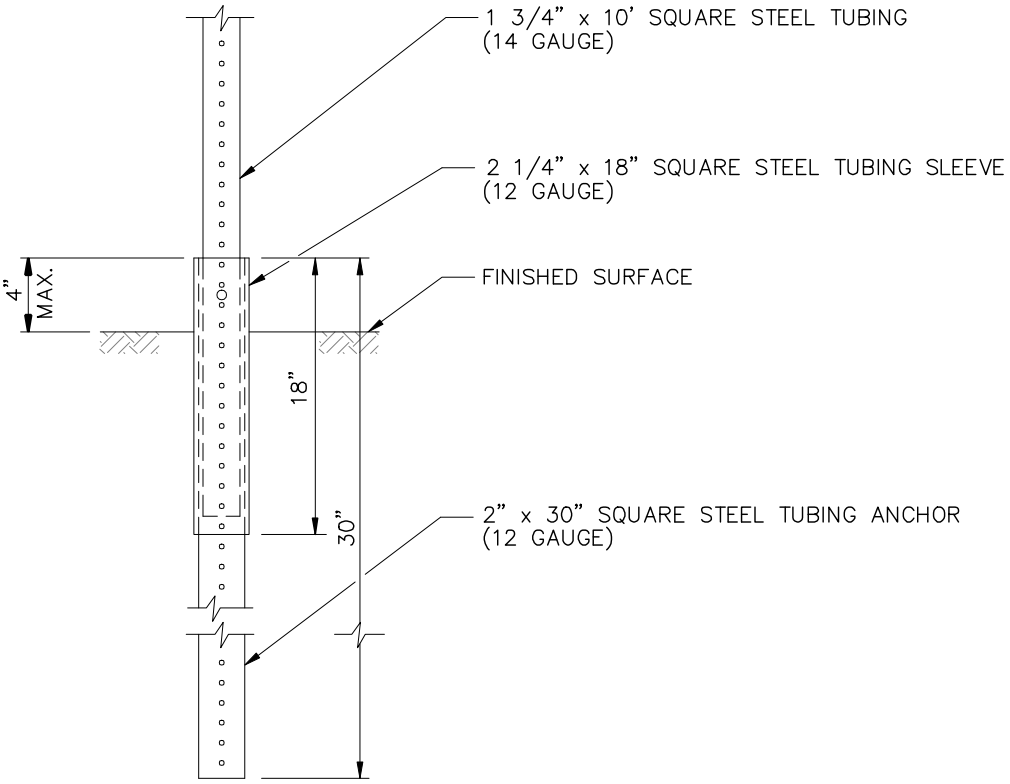
REVISIONS	BY	DATE

STD. PLAN NUMBER

B–305

SHEET 1 OF 2

G.G./B–305.DWG



SECTION

NOTES:

1. SQUARE STEEL TUBING SHALL BE GALVANIZED, WITH 7/16" DIAMETER DIE – CUT KNOCKOUTS ON 1" CENTERS, FULL LENGTH ON FOUR SIDES, AS MANUFACTURED BY ALLIED TUBE CONDUIT, OR APPROVED EQUAL.
2. SIGNS SHALL BE MOUNTED WITH GALVANIZED NUTS, BOLTS, AND WASHERS.

GARDEN GROVE City of Garden Grove California

TYPICAL TRAFFIC SIGN INSTALLATION

Approved Date _____

City Engineer R.C.E. 50353 Exp.06–30–09

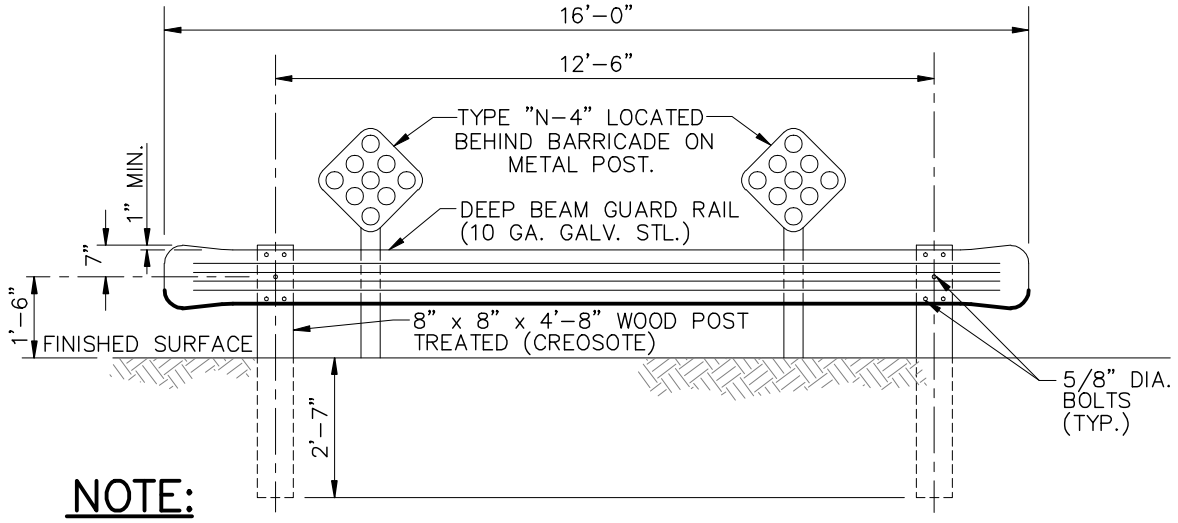
REVISIONS	BY	DATE

STD. PLAN NUMBER

B–305

SHEET 2 OF 2

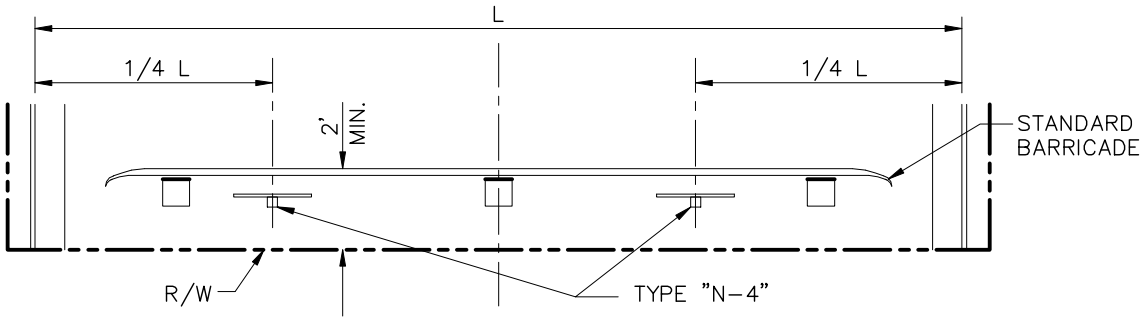
G.G./B–305B.DWG



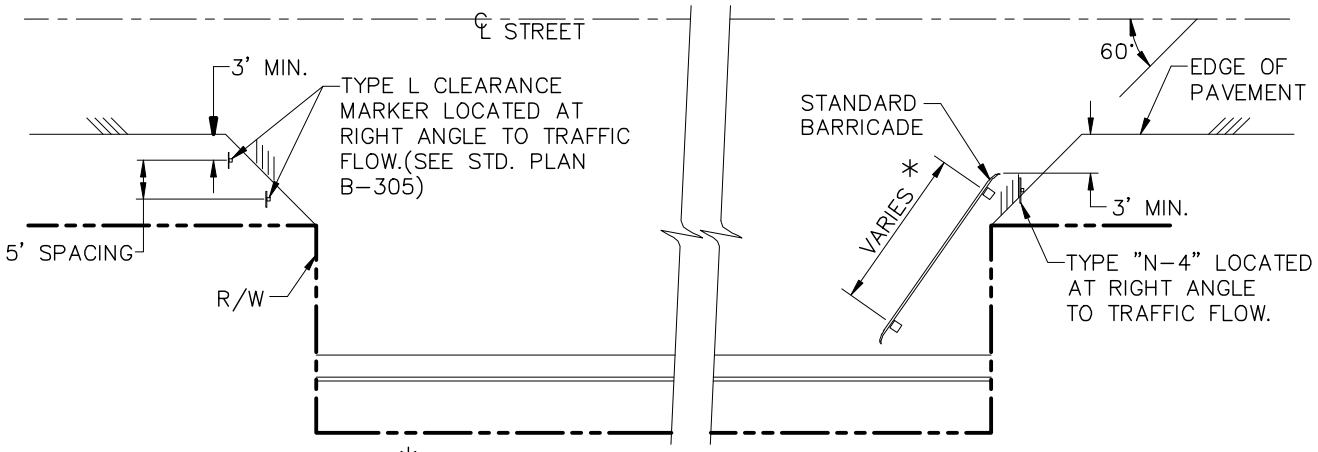
NOTE:

GUARD RAIL AND POSTS SHALL CONFORM TO THE PROVISIONS IN SECTION 83-1.02B OF THE STD. STATE SPECIFICATIONS & AS SHOWN IN THIS STD. PLAN.

STANDARD BARRICADE



TREATMENT FOR DEAD END STREET OR ALLEY



*LENGTH SHALL BE IN MULTIPLES OF 12'-6" WITH END SECTIONS OF 1'-9".

TREATMENT FOR WIDENING SECTION

City of Garden Grove California

GARDEN GROVE

STANDARD BARRICADE

Approved Date _____

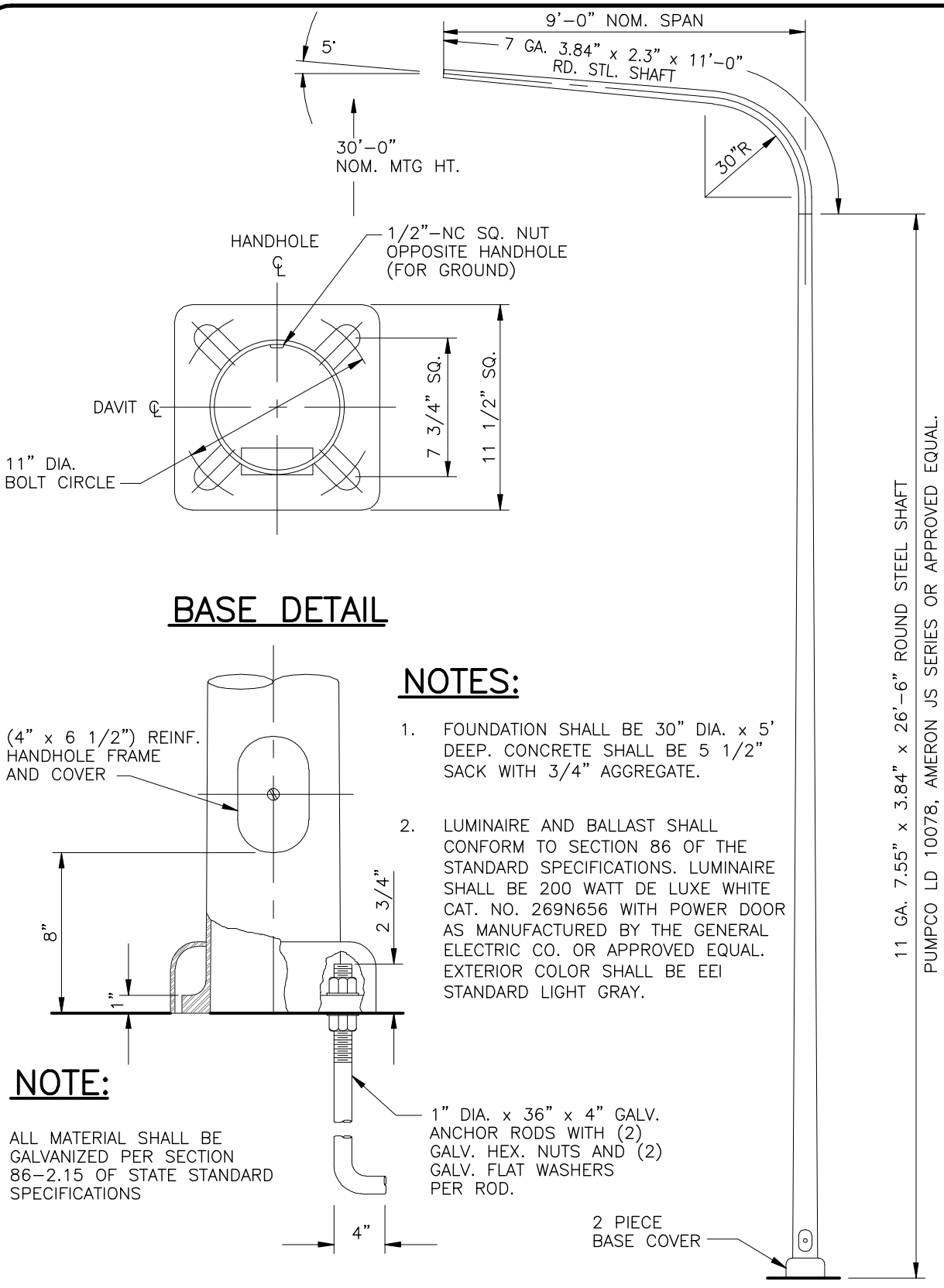
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B-306

G.G./B-306.DWG



BASE DETAIL

NOTES:

1. FOUNDATION SHALL BE 30" DIA. x 5' DEEP. CONCRETE SHALL BE 5 1/2" SACK WITH 3/4" AGGREGATE.
2. LUMINAIRE AND BALLAST SHALL CONFORM TO SECTION 86 OF THE STANDARD SPECIFICATIONS. LUMINAIRE SHALL BE 200 WATT DE LUXE WHITE CAT. NO. 269N656 WITH POWER DOOR AS MANUFACTURED BY THE GENERAL ELECTRIC CO. OR APPROVED EQUAL. EXTERIOR COLOR SHALL BE EEI STANDARD LIGHT GRAY.

NOTE:

ALL MATERIAL SHALL BE GALVANIZED PER SECTION 86-2.15 OF STATE STANDARD SPECIFICATIONS

City of Garden Grove California

GARDEN GROVE

STEEL DAVIT STANDARD

Approved Date

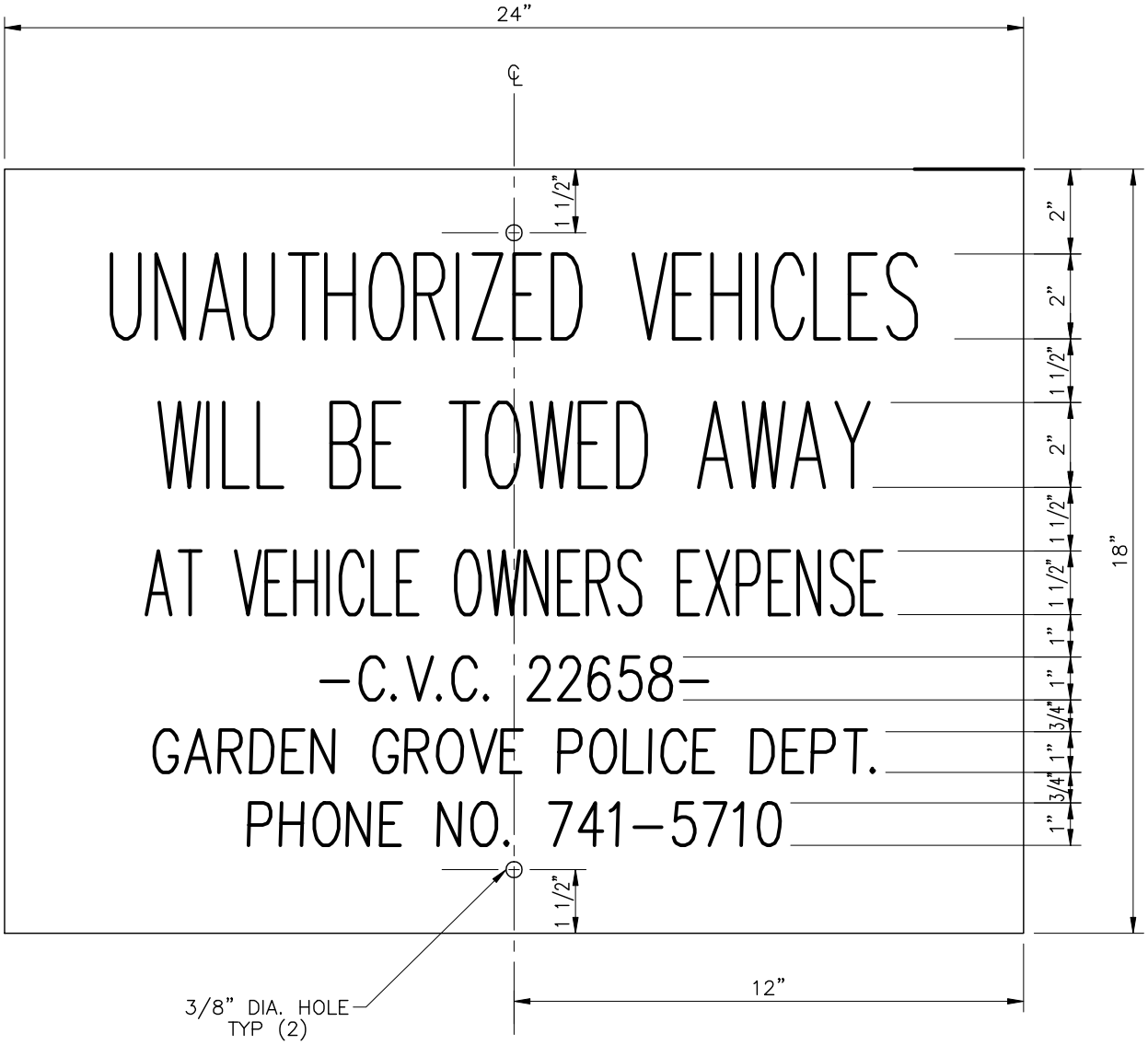
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B-307

G.G./B-307.DWG



NOTE:

1. COLOR SHALL BE BLACK LETTERS AND BORDER ON A WHITE BACKGROUND.
2. SIZES SHOWN ARE MINIMUM.
3. SIGN PLACEMENT SHALL BE IN ACCORDANCE WITH M.C. 10.56.220 AND C.V.C. 22658.

GARDEN GROVE

City of Garden Grove California

PRIVATE PROPERTY TOW AWAY SIGN

Approved Date

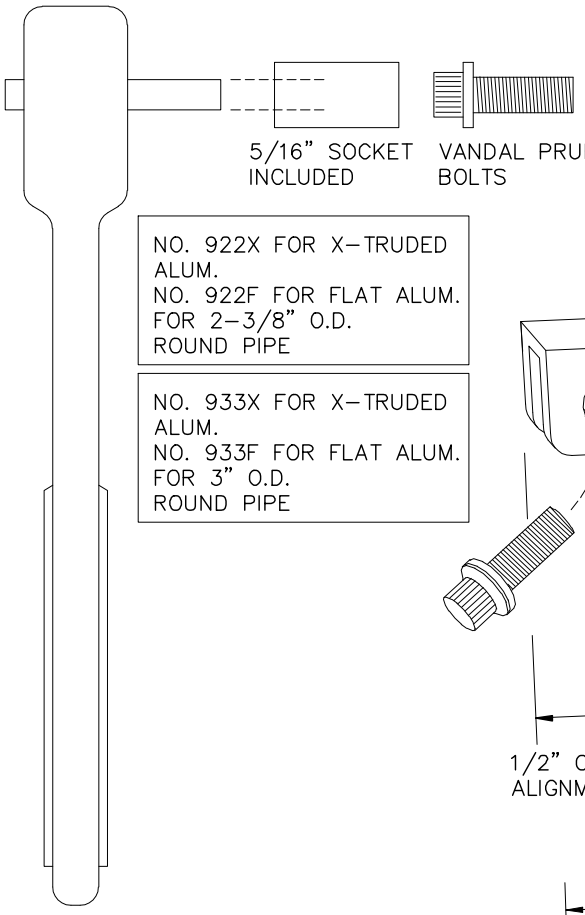
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

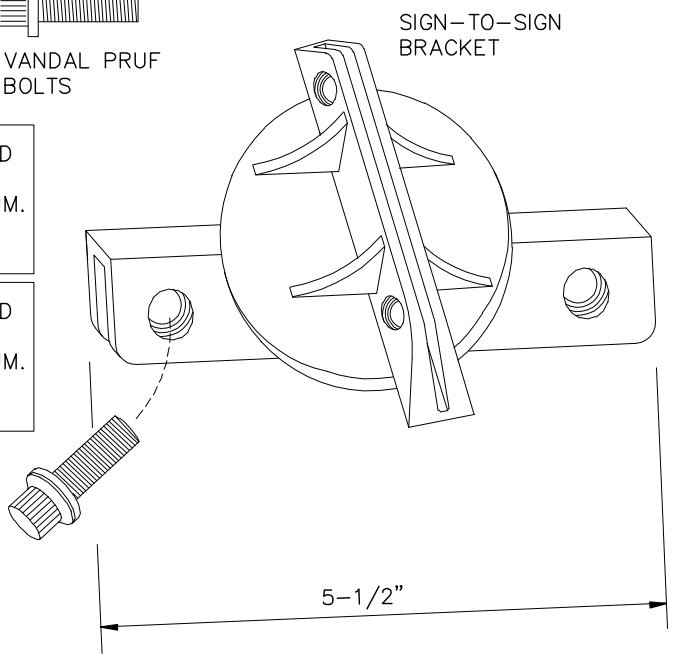
B-308

G.G./B-308.DWG



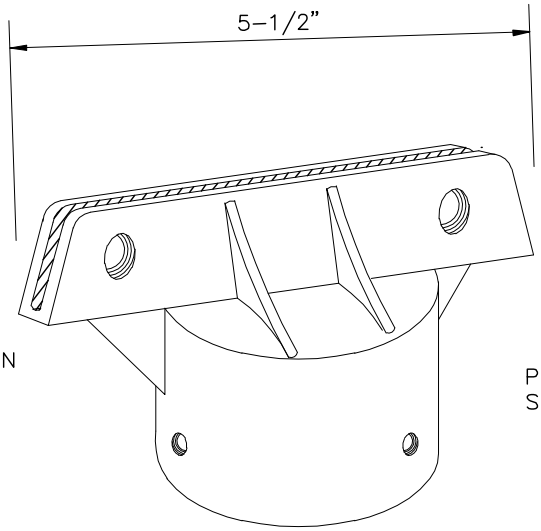
NO. 922X FOR X–TRUDED ALUM.
NO. 922F FOR FLAT ALUM. FOR 2–3/8" O.D. ROUND PIPE

NO. 933X FOR X–TRUDED ALUM.
NO. 933F FOR FLAT ALUM. FOR 3" O.D. ROUND PIPE



1/2" CLEARANCE HOLE OPPOSITE SIDES FOR PERFECT ALIGNMENT WITH VANDAL PRUF BOLTS

SHALL BE DIE CAST OF NO. 380 ALLOY WITH TENSILE STRENGTH OF 49,000 PSI WITH EXCELLENT RESISTANCE TO CORROSION. THE BRACKETS SHALL BE SMOOTHLY FINISHED FREE OF HOLES, PITS OR FLAWS. ALL BRACKETS SHALL HAVE 2 ANGLED GUSSETS, OR RIBS ON EACH SIDE FOR EXTRA STRENGTH. ALL SETS OF BRACKETS SHALL BE TAPPED AND DRILLED FOR 10 EACH 5/16" ZINC DICHROMATE PLATED ALLEN TYPE SET SCREWS HAVING SELF LOCKING SAWTOOTH ENDS.



EXCLUSIVE FEATURE 4 FASTENERS IN BASE CAP PLUS LONGER BASE CAP FOR PERFECT ALIGNMENT

NOTE:

CAP SIZE 2–1/2" I.D.

City of Garden Grove California

STREET NAME SIGN MOUNTING BRACKET (FLAT OR EXTRUDED)

Approved Date _____

City Engineer R.C.E. 50353 Exp.06–30–09

REVISIONS	BY	DATE

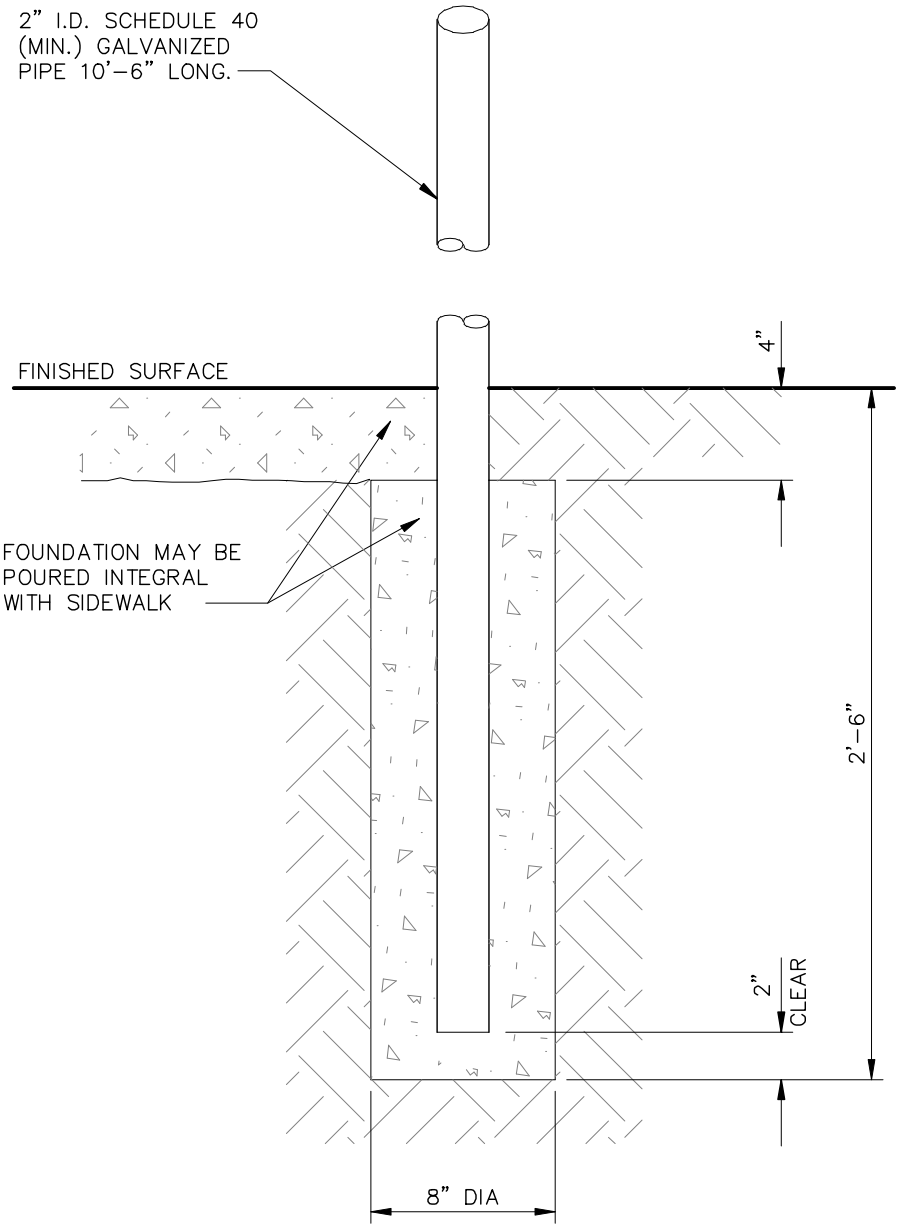
STD. PLAN NUMBER

B–309

G.G./B–309.DWG

NOTE:

SEE B–301 & B–302 FOR STREET SIGN DETAILS
AND B–305 FOR SIGN MOUNTING BRACKET DETAILS.



SECTION

City of Garden Grove
California

GARDEN GROVE

STREET NAME SIGN POLE DETAIL

Approved Date _____

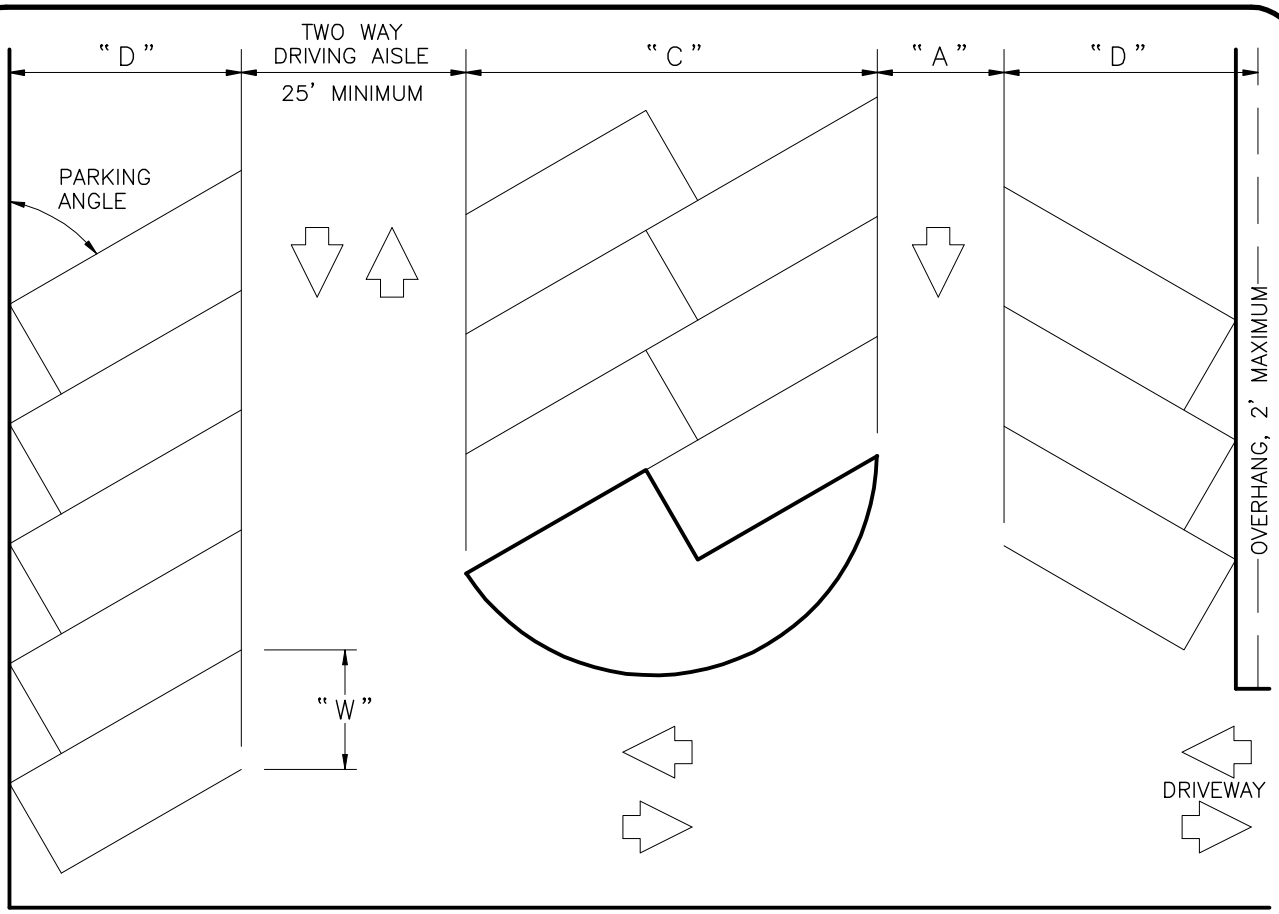
City Engineer R.C.E. 50353 Exp.06–30–09

REVISIONS	BY	DATE

STD. PLAN NUMBER

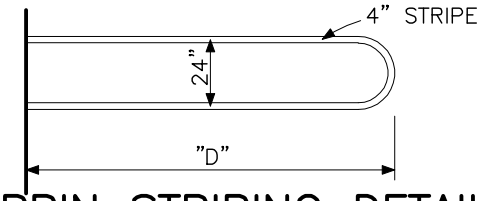
B–310

G.G./B–310.DWG



STALL TYPE	PARKING ANGLE (DEGREES)	" W " WIDTH of STALL PARALLEL to AISLE	" D " DEPTH of STALL PERPENDICULAR to AISLE	" A " WIDTH of DRIVING AISLE	" C " CENTER SECTION PARKING WIDTH
FULL SIZE	90	9' 0"	19' 0"	25' 0"	38' 0"
	60	11' 0"	21' 2"	25' 0"	37' 8"
	45	13' 5"	20' 2"	25' 0"	33' 7"
	30	19' 0"	17' 9"	25' 0"	27' 3"
	0*	22' 0"	**8' 0"	25' 0"	———
COMPACT	90	8' 0"	15' 0"	25' 0"	30' 0"
	60	8' 7"	16' 8"	25' 0"	29' 4"
	45	10' 7"	16' 0"	25' 0"	26' 3"

* PARALLEL PARKING ** 9' AGAINST A WALL



HAIRPIN STRIPING DETAIL

City of Garden Grove California

GARDEN GROVE

PARKING LOT LAYOUT

Approved Date _____

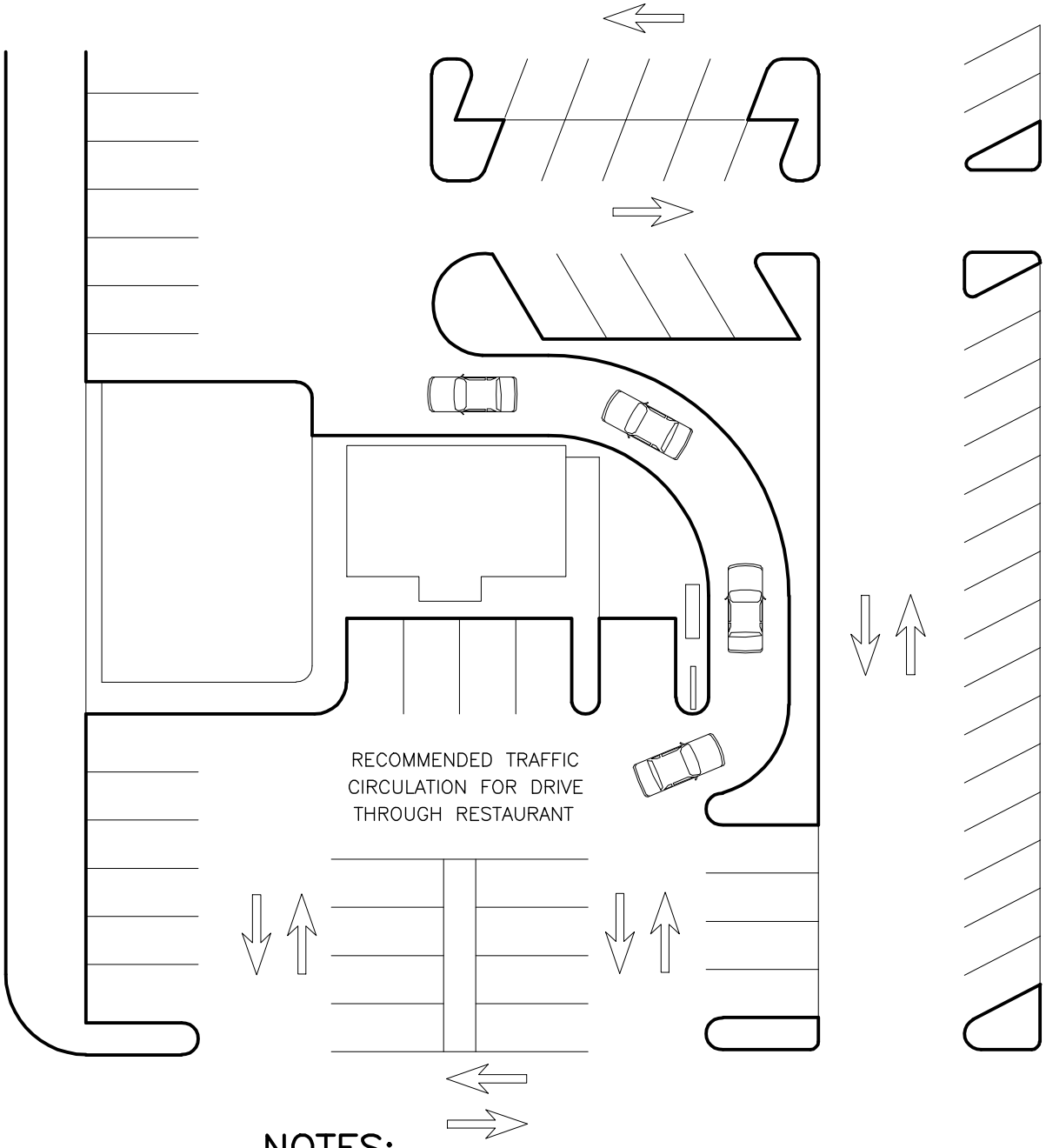
City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B-311

G.G./B-311.DWG



NOTES:

1. QUEUEING CRITERIA OF APPROXIMATELY 80 FEET OR FOUR VEHICLE LENGTHS BETWEEN THE SERVICE WINDOW AND THE ORDER BOARD.
2. PROVIDE AN ADDITIONAL 80 FEET OR FOUR VEHICLE LENGTHS OF QUEUEING DISTANCE BEHIND THE ORDER BOARD.
3. BASED ON PEAK CONDITIONS OCCURRING, THE QUEUEING LENGTH OF 160 FEET UTILIZES THE ABSOLUTE MAXIMUM DEMAND THAT WOULD OCCUR.
4. MAINTAIN A CLEAR CIRCULATION PATTERN WITHIN THE SITE OR SHOPPING CENTER.
5. THE PARKING AISLE ORIENTATION SHOULD BE TO PROVIDE EASY PEDESTRIAN ACCESS BY WALKING THE LENGTH OF AISLES INSTEAD OF THROUGH ROWS OF PARKED VEHICLES.

GARDEN GROVE

City of Garden Grove California

PARKING & QUEUEING FOR DRIVE THROUGH RESTAURANTS

Approved Date _____

City Engineer R.C.E. 50353 Exp.06-30-09

REVISIONS	BY	DATE

STD. PLAN NUMBER

B-312

G.G./B-312.DWG