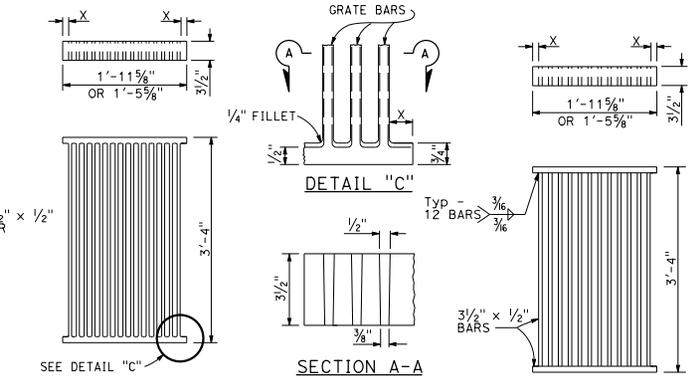
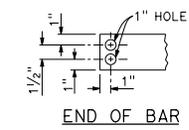
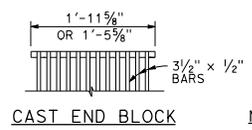


RECTANGULAR GRATE DETAILS
(See table below)

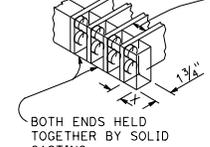


ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE

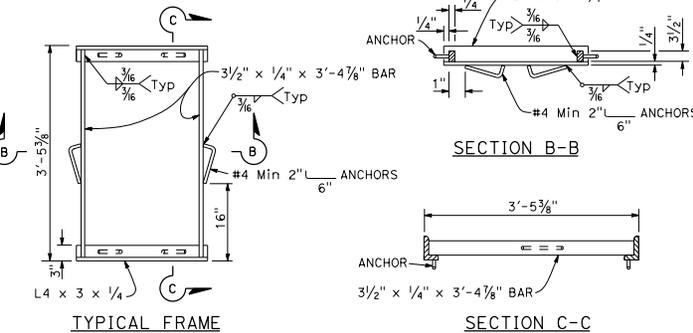
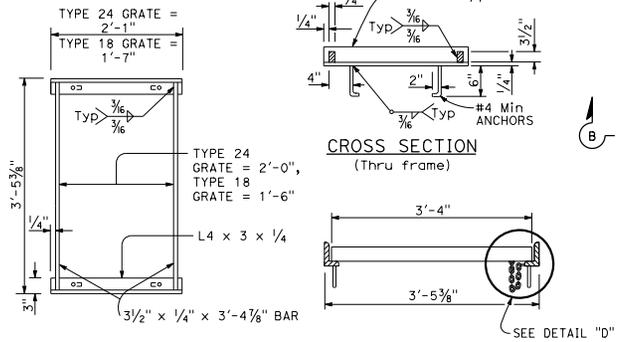
ALTERNATIVE WELDED GRATE



SPACING SAME AS FOR WELDED OR BOLTED GRATE



ALTERNATIVE CAST DUCTILE IRON OR CAST CARBON STEEL END BLOCK GRATE



ALTERNATIVE ANCHOR FOR RECTANGULAR FRAME
(For details not shown, See Rectangular Frame Details)

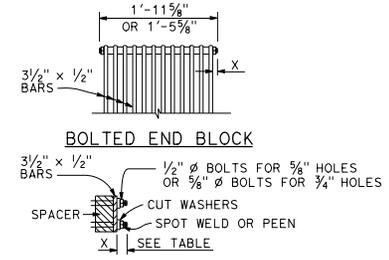
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

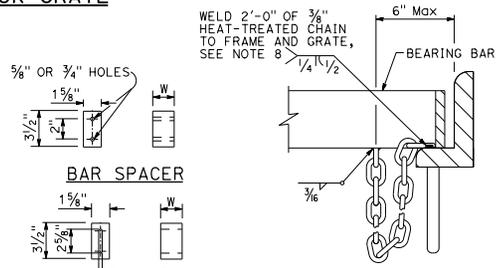
TYPE	No. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 3/8"
24-12	12	1 3/8"	1 1/4"

INLET TYPE	COVER TYPE	WEIGHT LB
OS	PLATE	174
OL-7	PLATE	170
OL-10	PLATE	170
OL-14	PLATE	170
OL-21	PLATE	170
OCPI	PLATE	112
OCPI	PLATE	112
OCPI	REDWOOD	42
OMP	PLATE	177
OMPI	PLATE	177

INLET TYPE	GRATE TYPE	No. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
G11	18-9	2	498
G12	18-9	2	498
G13	24-12	2	652
G14	24-12	2	652
TRASH RACK			22
GRATE CHAIN			3



ALTERNATIVE BOLTED GRATE



ALTERNATIVE SPACER
W = 1 3/8" or 2"

GRATE DETAILS No. 1
NO SCALE

BASIS FOR MISC IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS
(See Note 7)

RSP D77A DATED APRIL 19, 2013 SUPERSEDES RSP D77A DATED JULY 20, 2012 AND STANDARD PLAN D77A DATED MAY 20, 2011 - PAGE 164 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D77A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Raymond Don Isztos
REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
Raymond Don Isztos
No. C37332
Exp. 6-30-14
CIVIL
STATE OF CALIFORNIA

- TO ACCOMPANY PLANS DATED _____
- NOTES:**
1. Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
 2. Contractor has the option of using cast ductile iron, cast carbon steel, welded, bolted, or cast end block grate.
 3. Rounded top of bars optional on all grates.
 4. Pipe inlets with a grate shall be placed so that bars parallel direction of principle surface flow.
 5. Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
 6. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
 7. Grate and frame weights are based on welded grates (weights of face angles, steps, protection bars, etc. are not included).
 8. Connect chain to grate and frame only at locations shown on the plans. When chain is required, do not use cast ductile iron grates.

2010 REVISED STANDARD PLAN RSP D77A