

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

CURB OPENING CATCH BASIN

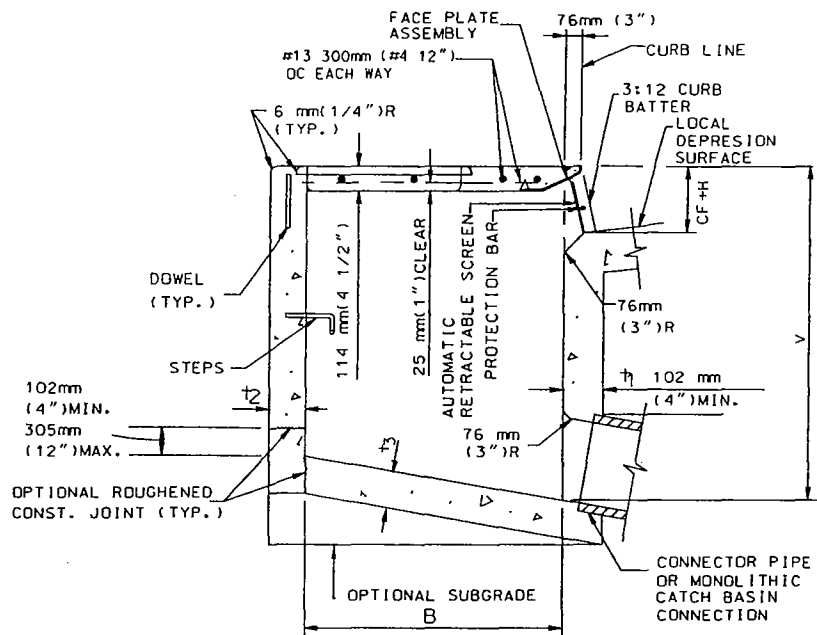
STANDARD PLAN  
WQ 300

APPROVED

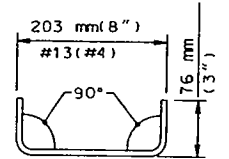
DIRECTOR OF PUBLIC WORKS

DATE

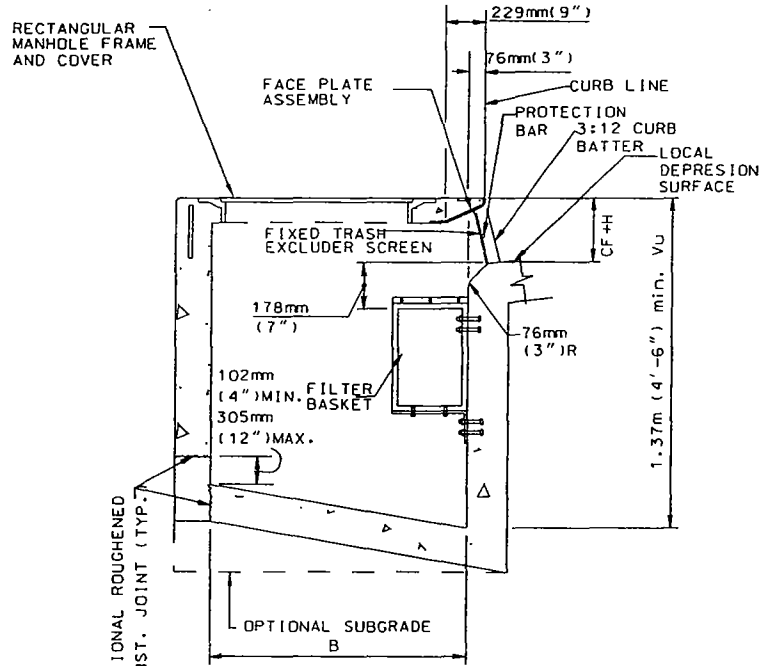
SHEET 1 OF 11



SECTION A-A  
CASE A & CASE B



DOWEL DETAIL



SECTION B-B  
CASE A & CASE B

NOTE:  
SEE SHEET 3 FOR  
SECTION C-C & D-D.  
(CASE A).

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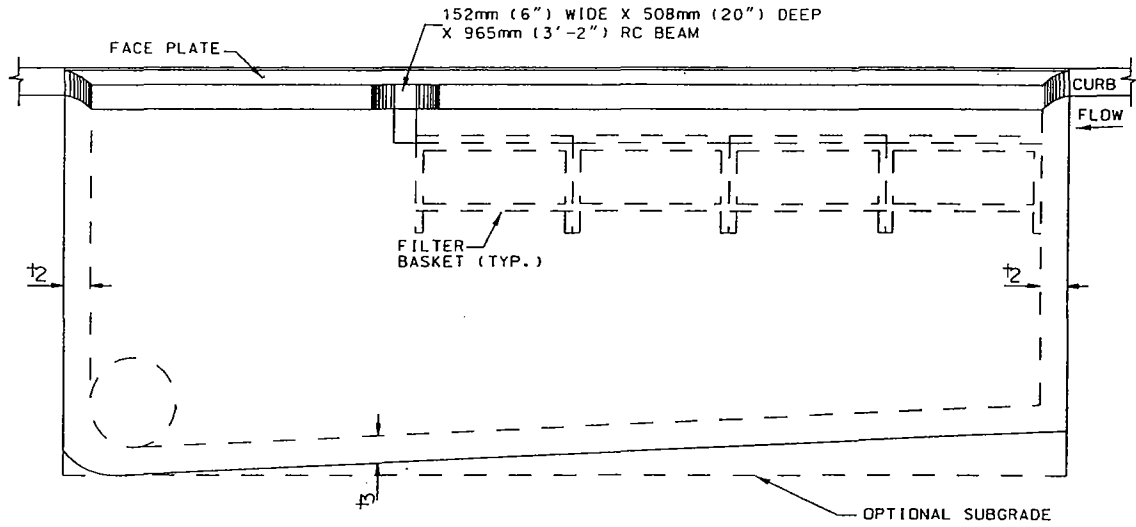
STANDARD PLAN  
WQ 300

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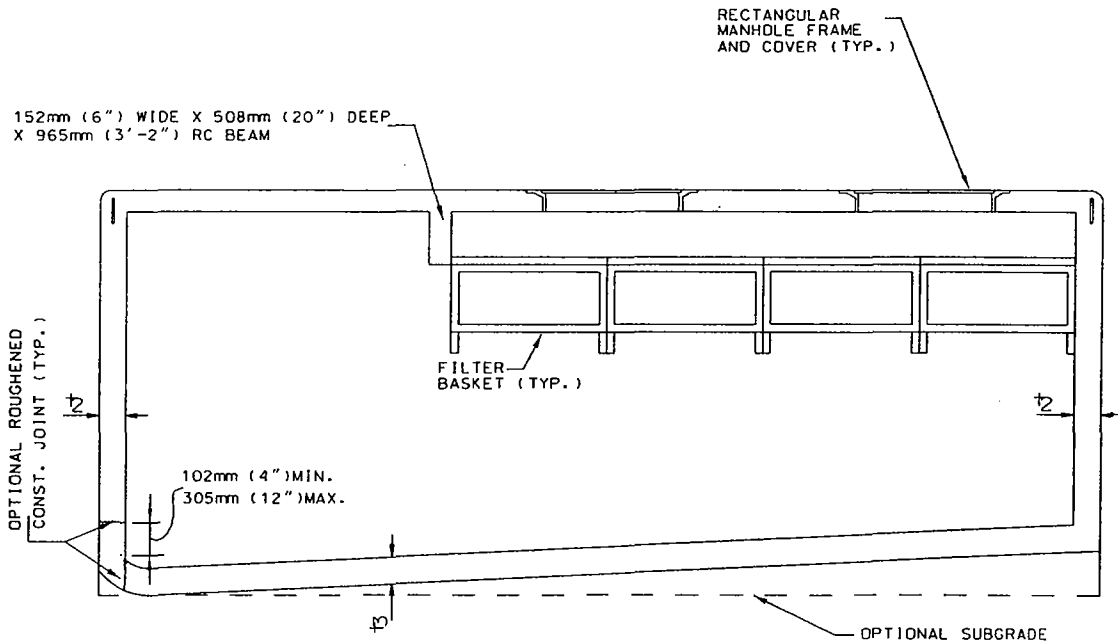
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SECTION C-C  
CASE A



SECTION D-D  
CASE A

NOTE:  
SEE SHEET 4 FOR RC  
BEAM DETAIL

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CURB OPENING CATCH BASIN

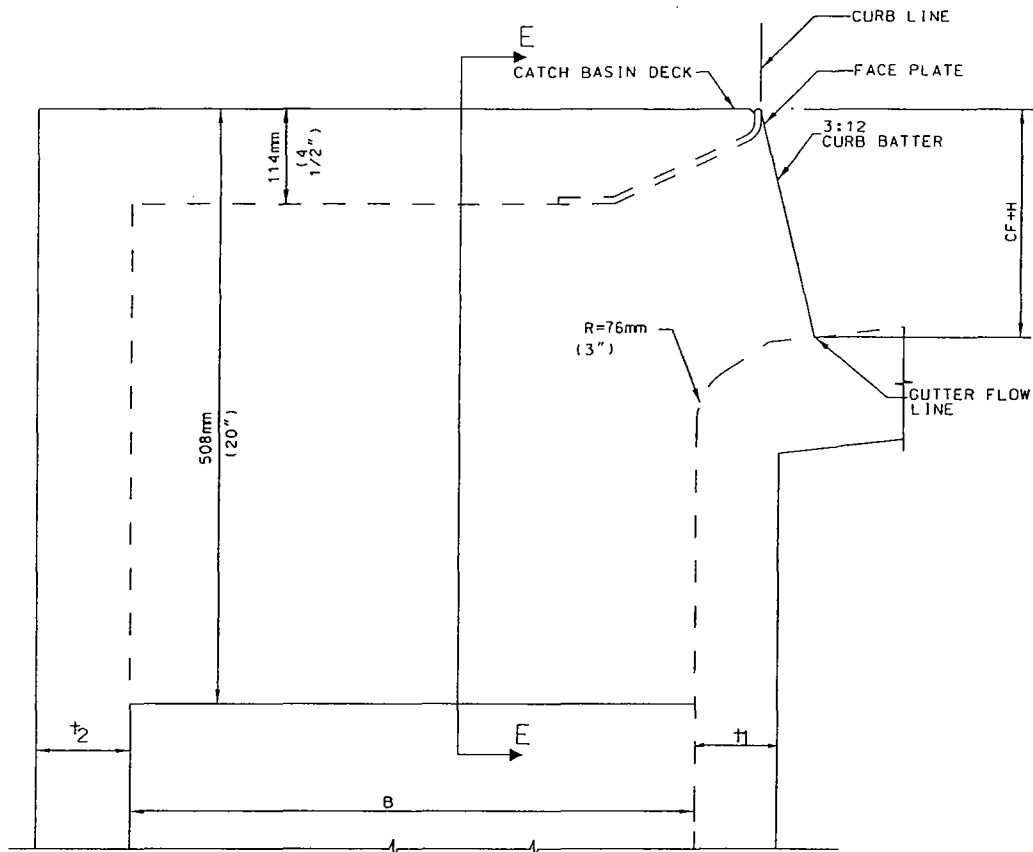
STANDARD PLAN  
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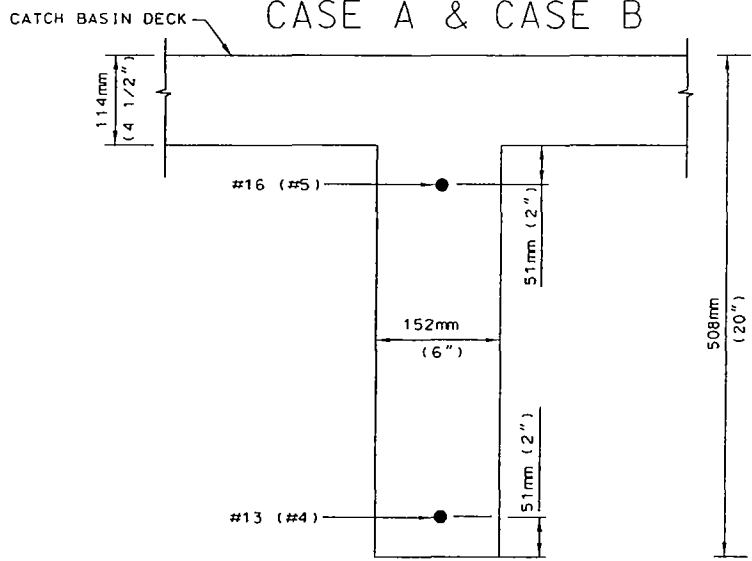
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RC BEAM DETAIL  
CASE A & CASE B



SECTION E-E

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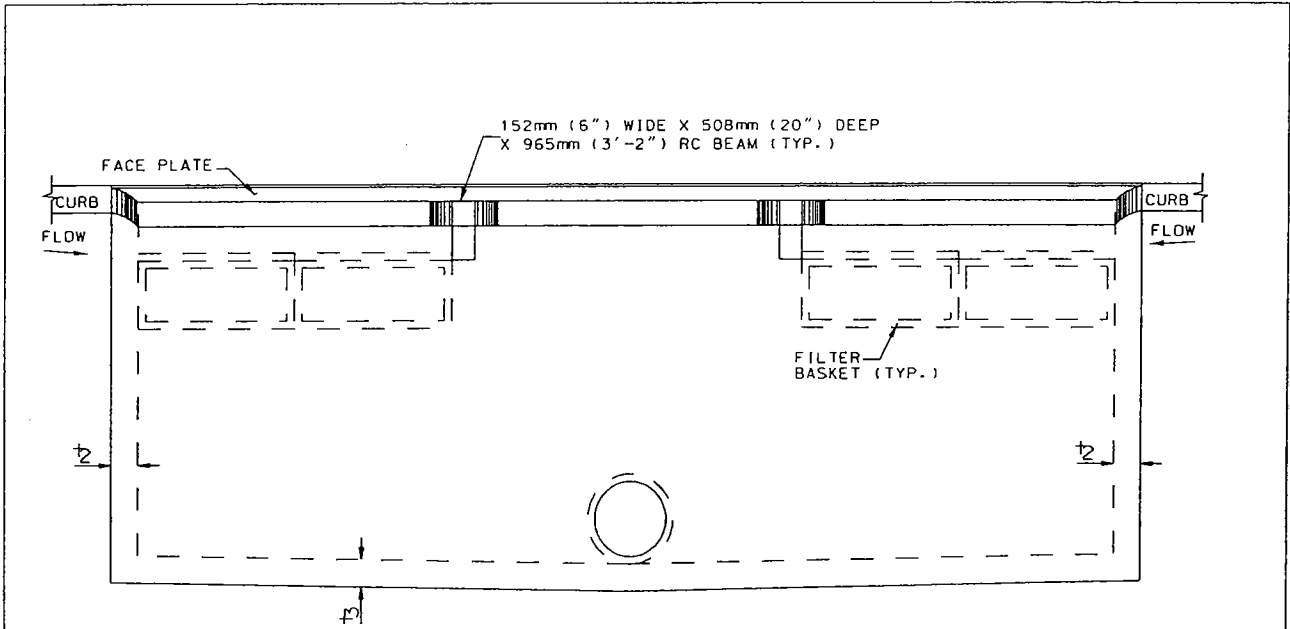
STANDARD PLAN  
WQ 300

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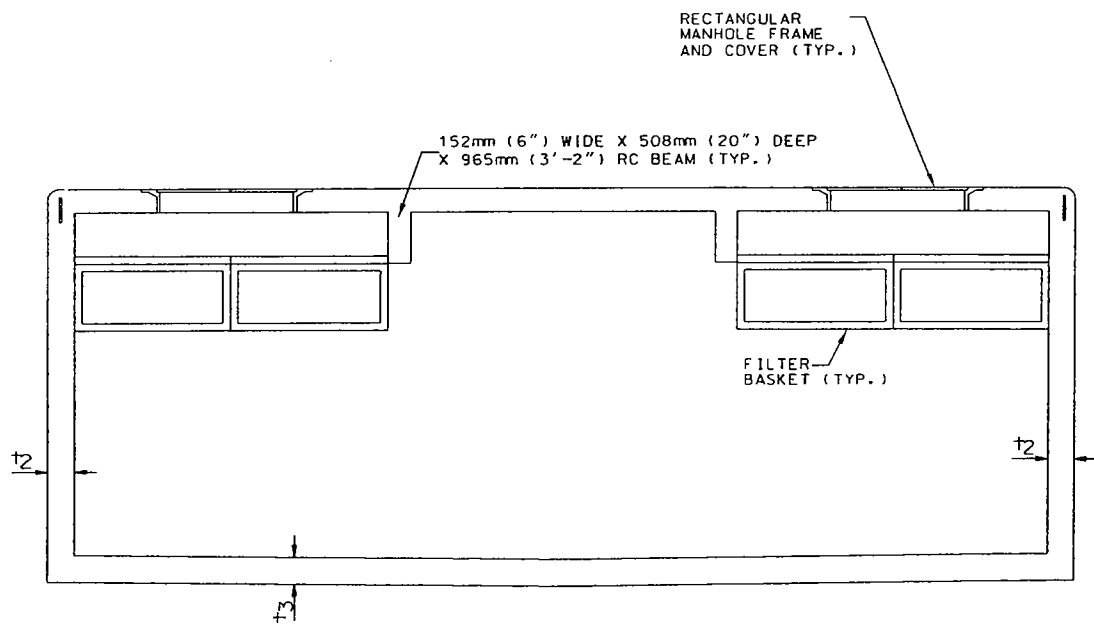
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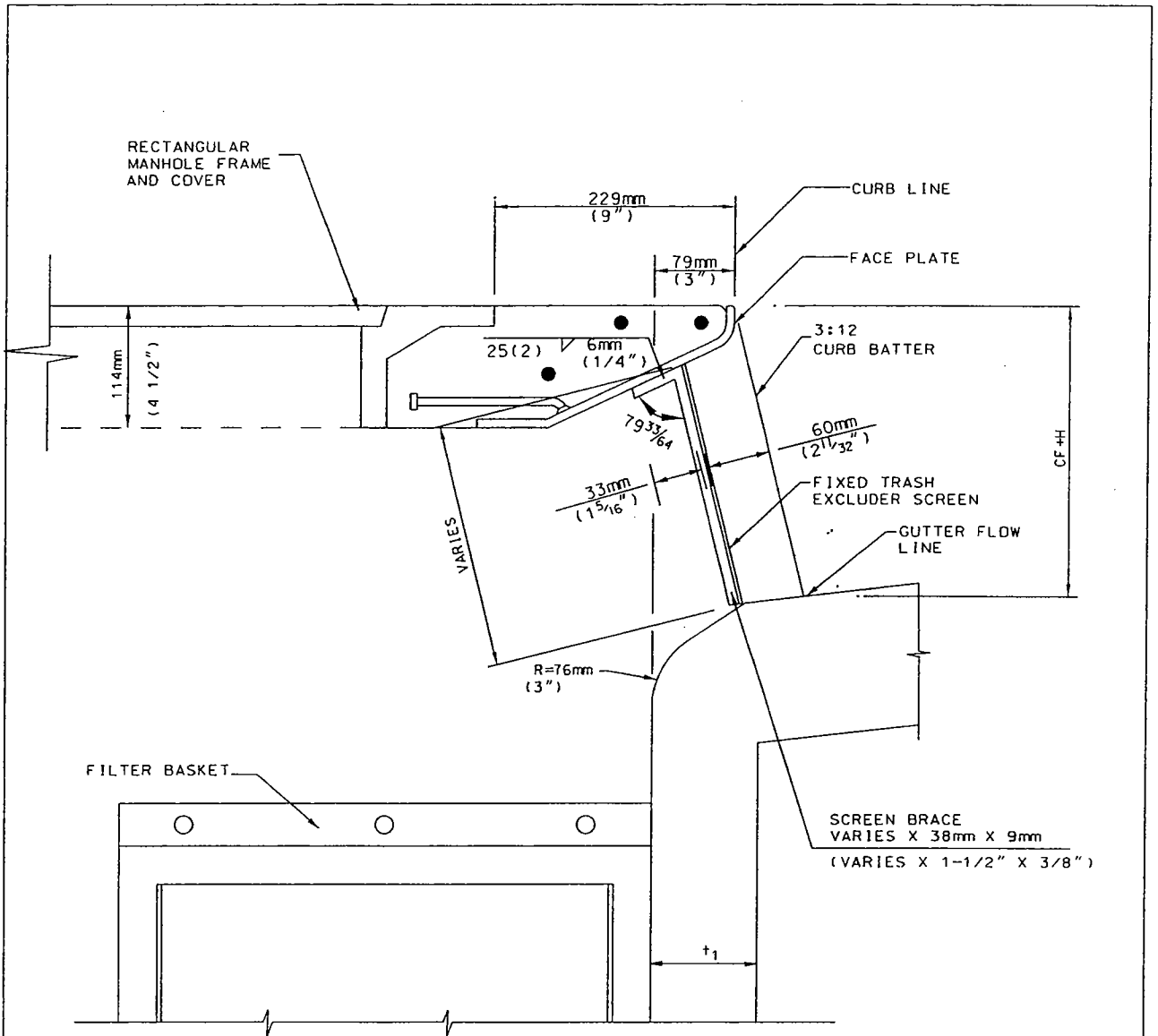
SECTION C-C  
CASE B



SECTION D-D  
CASE B

NOTE:  
SEE SHEET 3 FOR  
RC BEAM DETAIL

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS	
CURB OPENING CATCH BASIN	STANDARD PLAN WQ 300
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FIXED TRASH EXCLUDER SCREEN ASSEMBLY DETAIL

NOTE:

SCREEN BRACES SHALL BE LOCATED AT EACH END OF THE W2 INLET SECTION AND AT 1.07m (3'-6") MAXIMUM SPACING AS INDICATED ON STANDARD PLAN WQ 310, CATCH BASIN FACE PLATE ASSEMBLY AND PROTECTION BAR.

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STANDARD CATCH BASIN CONFIGURATIONS

CASE A

W1	W2	W	NO. OF FILTER BASKETS	NO. OF RECTANGULAR MH FRAME & COVER UNITS
1.07m (3.5')	1.07m (3.5')	2.29m (7.5')	1	1
1.07m (3.5')	2.13m (7.0')	3.35m (11.0')	2	1
1.07m (3.5')	4.27m (14.0')	5.49m (18.0')	4	2
2.13m (7.0')	1.07m (3.5')	3.35m (11.0')	1	1
2.13m (7.0')	2.13m (7.0')	4.42m (14.5')	2	1
2.13m (7.0')	4.27m (14.0')	6.55m (21.5')	4	2
3.05m (10.0')	1.07m (3.5')	4.27m (14.0')	1	1
3.05m (10.0')	2.13m (7.0')	5.33m (17.5')	2	1
3.05m (10.0')	4.27m (14.0')	7.47m (24.5')	4	2
3.05m (10.0')	6.40m (21.0')	9.60m (31.5')	6	3
4.27m (14.0')	1.07m (3.5')	5.49m (18.0')	1	1
4.27m (14.0')	2.13m (7.0')	6.55m (21.5')	2	1
4.27m (14.0')	4.27m (14.0')	8.69m (28.5')	4	2
4.27m (14.0')	6.40m (21.0')	10.82m (35.5')	6	3
6.40m (21.0')	1.07m (3.5')	7.62m (25.0')	1	1
6.40m (21.0')	2.13m (7.0')	8.69m (28.5')	2	1
6.40m (21.0')	4.27m (14.0')	10.82m (35.5')	4	2
6.40m (21.0')	6.40m (21.0')	12.95m (42.5')	6	3
8.53m (28.0')	1.07m (3.5')	9.75m (32.0')	1	1
8.53m (28.0')	2.13m (7.0')	10.82m (35.5')	2	1
8.53m (28.0')	4.27m (14.0')	12.95m (42.5')	4	2

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## STANDARD CATCH BASIN CONFIGURATIONS

### CASE B

W1	W2	W	NO. OF FILTER BASKETS	NO. OF RECTANGULAR MH FRAME & COVER UNITS
1.07m (3.5')	1.07m (3.5')	3.50m (11.5')	2	2
1.07m (3.5')	2.13m (7.0')	5.64m (18.5')	4	2
2.13m (7.0')	1.07m (3.5')	4.57m (15.0')	2	2
2.13m (7.0')	2.13m (7.0')	6.71m (22.0')	4	2
2.13m (7.0')	4.27m (14.0')	10.97m (36.0')	8	4
3.05m (10.0')	1.07m (3.5')	5.49m (18.0')	2	2
3.05m (10.0')	2.13m (7.0')	7.62m (25.0')	4	2
3.05m (10.0')	4.27m (14.0')	11.89m (39.0')	8	4
4.27m (14.0')	1.07m (3.5')	6.71m (22.0')	2	2
4.27m (14.0')	2.13m (7.0')	8.84m (29.0')	4	2
4.27m (14.0')	4.27m (14.0')	13.11m (43.0')	8	4
6.40m (21.0')	1.07m (3.5')	8.84m (29.0')	2	2
6.40m (21.0')	2.13m (7.0')	10.97m (36.0')	4	2
8.53m (28.0')	1.07m (3.5')	10.97m (36.0')	2	2
8.53m (28.0')	2.13m (7.0')	13.11m (43.0')	4	2

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STRUCTURAL DATA								
WALL AND SLAB DIMENSIONS AND REINFORCEMENT REQUIREMENTS								
MAX W	MAX V	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	REINFORCEMENT REQUIRED IN			
					FRONT WALL	REAR WALL	BOTTOM SLAB	END WALL
3.2m (10.5')	1.8m (6.0')	150 mm(6")	150 mm(6")	200 mm(8")	REINFORCEMENT REQUIRED			
4.3m (14.0')	1.8m (6.0')	150 mm(6")	150 mm(6")	200 mm(8")				
4.3m (14.0')	2.4m (8.0')	200 mm(8")	150 mm(6")	200 mm(8")				
4.3m (14.0')	3.7m (12.0')	250 mm(10")	200 mm(8")	305 mm(12")				
5.2m (17.0')	1.8m (6.0')	150 mm(6")	150 mm(6")	200 mm(8")				
5.2m (17.0')	2.4m (8.0')	200 mm(8")	150 mm(6")	200 mm(8")				
5.2m (17.0')	3.1m (10.0')	200 mm(8")	200 mm(8")	250 mm(10")				
5.2m (17.0')	3.7m (12.0')	250 mm(10")	200 mm(8")	305 mm(12")				
6.4m (21.0')	1.8m (6.0')	150 mm(6")	150 mm(6")	200 mm(8")				
6.4m (21.0')	2.4m (8.0')	200 mm(8")	150 mm(6")	200 mm(8")				
6.4m (21.0')	3.1m (10.0')	200 mm(8")	200 mm(8")	250 mm(10")				
6.4m (21.0')	3.7m (12.0')	250 mm(10")	200 mm(8")	305 mm(12")				
10.7m (35.0')	1.8m (6.0')	150 mm(6")	150 mm(6")	200 mm(8")				
10.7m (35.0')	2.4m (8.0')	200 mm(8")	150 mm(6")	200 mm(8")				
10.7m (35.0')	3.1m (10.0')	200 mm(8")	200 mm(8")	250 mm(10")				
10.7m (35.0')	3.7m (12.0')	250 mm(10")	200 mm(8")	305 mm(12")				
12.8m (42.0')	1.8m (6.0')	150 mm(6")	150 mm(6")	200 mm(8")				
12.8m (42.0')	2.4m (8.0')	200 mm(8")	150 mm(6")	200 mm(8")				
12.8m (42.0')	3.1m (10.0')	200 mm(8")	200 mm(8")	250 mm(10")				
12.8m (42.0')	3.7m (12.0')	250 mm(10")	200 mm(8")	305 mm(12")				

NOTE: 1. SEE STANDARD PLAN WQ 309 FOR REINFORCEMENT DETAILS  
2. USE REAR WALL REINFORCEMENT IN END WALLS

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**NOTES:**

1. WHERE THE BASIN IS TO BE CONSTRUCTED WITHIN THE LIMITS OF EXISTING OR PROPOSED SIDEWALK OR IS CONTIGUOUS TO SUCH SIDEWALK, THE TOP SLAB OF THE BASIN MAY BE POURED EITHER MONOLITHIC WITH THE SIDEWALK OR SEPARATELY, USING THE SAME CLASS OF CONCRETE AS IN THE BASIN. WHEN POURED MONOLITHICALLY, THE SIDEWALK SHALL BE PROVIDED WITH A WEAKENED PLANE OR A 25 mm(1") DEEP SAWCUT CONTINUOUSLY AROUND THE EXTERNAL PERIMETER OF THE CATCH BASIN WALLS, INCLUDING ACROSS THE FULL WIDTH OF THE SIDEWALK. SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH, AND SCORING TO EXISTING OR PROPOSED CURB AND WALK ADJACENT TO THE BASIN.
2. ALL CURVED CONCRETE SURFACES SHALL BE FORMED BY CURVED FORMS, AND SHALL NOT BE SHAPED BY PLASTERING.
3. FLOOR OF BASIN SHALL BE GIVEN A STEEL TROWEL FINISH AND SHALL HAVE A LONGITUDINAL AND LATERAL SLOPE OF 1:12 MINIMUM AND 1:3 MAXIMUM, EXCEPT WHERE THE GUTTER GRADE EXCEEDS 8 PERCENT, IN WHICH CASE THE LONGITUDINAL SLOPE OF THE FLOOR SHALL BE THE SAME AS THE GUTTER GRADE. SLOPE FLOOR FROM ALL DIRECTIONS TO THE OUTLET.
4. DIMENSIONS:
  - B = 965mm (3'-2") OR AS SHOWN ON PLANS. FOR B  $\phi$  965mm (3'-2"), SEE PROJECT PLANS FOR DESIGN.
  - V = THE DIFFERENCE IN ELEVATION BETWEEN THE TOP OF THE CURB AND THE INVERT OF THE CATCH BASIN AT THE OUTLET. 1.37m (4'-6") OR AS NOTED ON THE PROJECT PLANS.
  - $\psi$  = THE DIFFERENCE IN ELEVATION BETWEEN THE TOP OF THE CURB AND THE INVERT AT THE UPSTREAM END OF THE BASIN, AND SHALL BE DETERMINED BY THE REQUIREMENTS OF NOTE 3, BUT SHALL NOT BE LESS THAN 1.37m (4'-6") OR AS NOTED ON THE PROJECT PLANS.
  - W, W1, W2 = NOTED ON THE PROJECT PLANS.
  - W = TOTAL BASIN LENGTH, W1 = HINGED TRASH EXCLUDER SECTION LENGTH, AND W2 = TRASH EXCLUDER SCREEN SECTION LENGTH. MINIMUM W2 LENGTH IS 1.07m (3.5')
  - A = THE ANGLE, IN DEGREES, INTERCEPTED BY THE CENTERLINE OF THE CONNECTOR PIPE AND THE CATCH BASIN WALL TO WHICH THE CONNECTOR PIPE IS ATTACHED.
  - H = NOTED ON PROJECT PLANS, CF = CURB FACE
5. PLACE CONNECTOR PIPES AS INDICATED ON THE PROJECT PLANS. UNLESS OTHERWISE SPECIFIED, THE CONNECTOR PIPE SHALL BE LOCATED AT THE DOWNSTREAM END OF THE BASIN. WHERE THE CONNECTOR PIPE IS SHOWN AT A CORNER, THE CENTERLINE OF THE PIPE SHALL INTERSECT THE INSIDE CORNER OF THE BASIN. THE PIPE MAY BE CUT AND TRIMMED AT A SKEW NECESSARY TO INSURE MINIMUM 76 mm(3") PIPE EMBEDMENT, ALL AROUND, WITHIN THE CATCH BASIN WALL, AND 76 mm(3") RADIUS OF ROUNDING OF STRUCTURE CONCRETE, ALL AROUND, ADJACENT TO PIPE ENDS. A MONOLITHIC CATCH BASIN CONNECTION SHALL BE USED TO JOIN THE CONNECTOR PIPE TO THE CATCH BASIN WHENEVER ANGLE "A" IS LESS THAN 70 DEGREES OR GREATER THAN 110 DEGREES, OR WHENEVER THE CONNECTOR PIPE IS LOCATED IN A CORNER. THE OPTIONAL USE OF A MONOLITHIC CATCH BASIN CONNECTION IN ANY CASE IS PERMITTED. MONOLITHIC CATCH BASIN CONNECTIONS MAY BE CONSTRUCTED TO AVOID CUTTING STANDARD LENGTHS OF PIPE.
6. STEPS SHALL BE LOCATED AS SHOWN. IF THE CONNECTOR PIPE INTERFERES WITH THE STEPS, THEY SHALL BE LOCATED AT THE CENTERLINE OF THE DOWNSTREAM END WALL. STEPS SHALL BE SPACED 305 mm(12") APART. THE TOP STEP SHALL BE 178 mm(7") BELOW THE TOP TO THE MANHOLE AND PROJECT 63 mm(2-1/2"). ALL OTHER STEPS SHALL PROJECT 127 mm(5").
7. DOWELS ARE REQUIRED AT EACH CORNER AND AT 2 m(7.0') ON CENTER (MAXIMUM) ALONG THE BACKWALL.
8. RECTANGULAR MANHOLE FRAME AND COVER SHALL BE USED IN THE W2 SECTION OF THE CATCH BASIN. ONE FRAME AND COVER UNIT SHALL BE USED FOR TWO FILTER BASKET UNITS. THE FRAME AND COVER UNIT SHALL BE CENTERED TO ALIGN SYMMETRICALLY WITH INTERIOR FILTER BASKET UNIT(S).
9. CATCH BASINS LOCATED IN A SUMP (CASE B) SHALL BE SYMMETRICALLY CONFIGURED ABOUT THE CENTER OF THE W1 INLET SECTION OF THE CATCH BASIN.
10. DIMENSIONS SHOWN ON THIS PLAN FOR METRIC AND ENGLISH UNITS ARE NOT EXACT EQUAL VALUES. IF METRIC VALUES ARE USED, ALL VALUES USED FOR CONSTRUCTION SHALL BE METRIC VALUES. IF ENGLISH UNITS ARE USED, ALL VALUES USED FOR CONSTRUCTION SHALL BE ENGLISH UNITS. THE MAXIMUM W=13.11m (43').

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NOTES, CONTINUED:

11. THE FOLLOWING STANDARD PLANS ARE INCORPORATED HEREIN:  
308 MONOLITHIC CATCH BASIN CONNECTION (SPPWC)  
WQ 309 CATCH BASIN REINFORCEMENT  
WQ 310 CATCH BASIN FACE PLATE ASSEMBLY AND PROTECTION BAR  
WQ 385 CATCH BASIN FILTER BASKET ASSEMBLY AND INSERT  
WQ 386 CATCH BASIN TRASH EXCLUDER SCREEN  
WQ 387 RECTANGULAR FRAME AND COVER  
312 CATCH BASIN FRAME AND COVER (SPPWC)  
635 STEEL STEP (SPPWC)  
636 POLYPROPYLENE PLASTIC STEP (SPPWC)

DESIGN DATA:

REINFORCED CONCRETE

$F_c = 10 \text{ MPa (1500 psi)}$      $F'_c = 22 \text{ MPa (3250 psi)}$      $F_s = 165 \text{ MPa (24,000 psi)}$

STRUCTURAL STEEL

GRADE A36

BOLTS

ASTM A307 BOLTS EXCEPT AS NOTED

LOADINGS

LIVE LOAD: 12 kPa (250 psf) PEDESTRIAN LOADS  
EARTH: 5.6 kN/m<sup>2</sup> (36 pcf)

BEARING PRESSURE

SEE STANDARD PLAN WQ 309 FOR MAXIMUM SOIL BEARING PRESSURE

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