

NOTES:

1. A CONCRETE COLLAR IS REQUIRED WHERE PIPES OF DIFFERENT DIAMETERS OR MATERIALS ARE JOINED, OR WHERE THE CHANGE IN ALIGNMENT OR GRADE EXCEEDS THAT ALLOWED FOR, ON ORDINARY JOINTS.
2. WHERE PIPES OF DIFFERENT DIAMETERS ARE JOINED WITH A CONCRETE COLLAR, L AND T SHOULD BE THOSE OF THE LARGER PIPE, D-D-1, OR D-2 WHICHEVER IS GREATER.
3. FOR PIPE SIZES NOT LISTED AND LESS THAN 66" USE NEXT SIZE LARGER.
4. WHERE REINFORCING IS REQUIRED, THE DIAMETER OF THE CIRCULAR TIES SHALL BE OUTSIDE DIAMETER OF PIPE + T.
5. FIELD CLOSURES OF PIPE OF THE SAME DIAMETER AND WITHOUT CHANGE IN GRADE OR ALIGNMENT SHALL BE MADE WITH A CONCRETE COLLAR.
6. CONCRETE SHALL BE CLASS B PER SECT. 725.

* = ANGLE OF DEFLECTION

TABLE		
D	L	T
12"	1.0'	4"
18"	1.0'	5"
24"	1.0'	6"
36"	1.5'	8"
48"	1.5'	10"
57"	1.5'	10"
60"	1.75'	11"
66"	1.75'	11"

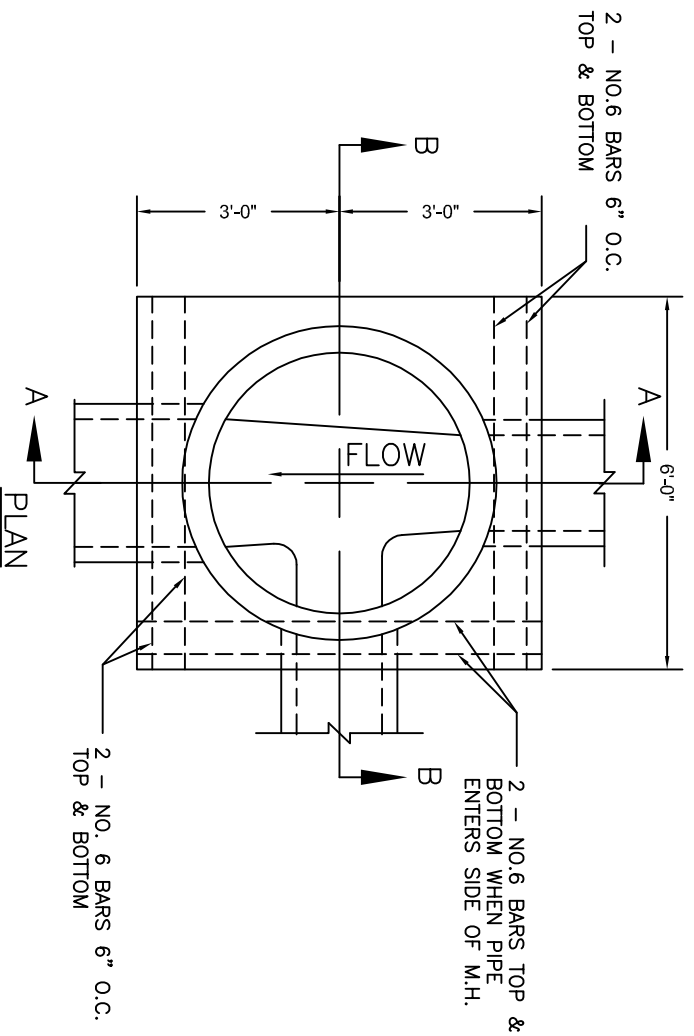
DETAIL NO.
P1505



CONCRETE PIPE COLLAR

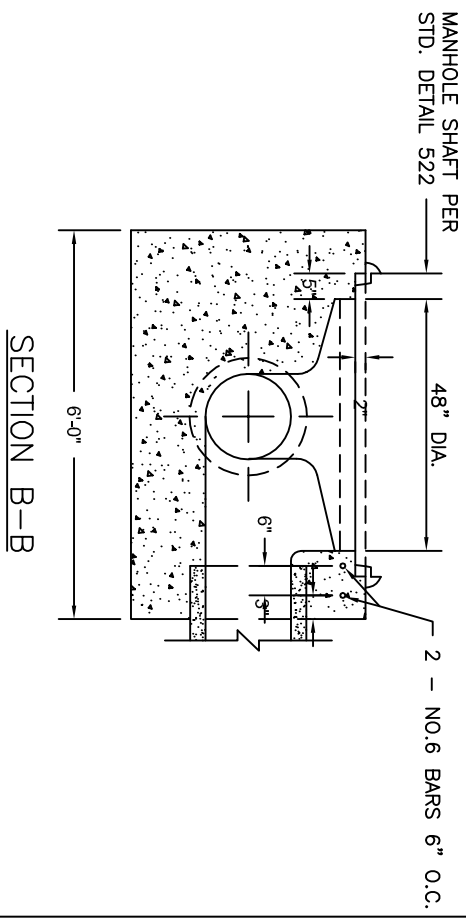
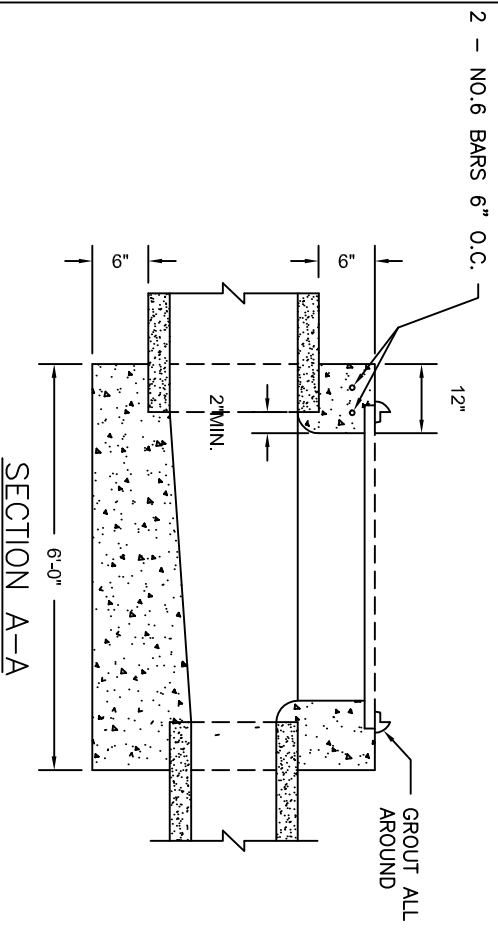
APPROVED
Maria S. Williams
CITY ENGINEER
7/19/04
DATE

DETAIL NO.
P1505



NOTES

1. ALL CONCRETE TO BE CLASS "A" PER SECTION 725.
2. MATCH SPRING LINES OF PIPES ENTERING M.H. UNLESS OTHERWISE NOTED.
3. CUT PIPED TO ALLOW SETTING OF 4' DIA. CYLINDRICAL FORM FROM 6" ABOVE MAIN LINE PIPE TO SPRING LINE. CUT PIPE 2" LARGER THAN FORM TO ALLOW 2" CONC. OVER ENDS OF ALL CUT PIPE.
4. INVERT AND BASE OF M.H. TO BE POURED AND INVERT TO BE SHAPED BY HAND TO MAKE SMOOTH TRANSITION FINISH WITH RUBBER FLOAT.
5. CENTER M.H. ON PIPE JOINT WHERE PIPE CHANGES SIZES.
6. BENCH M.H. BASE TO TOP OF LARGEST PIPE.



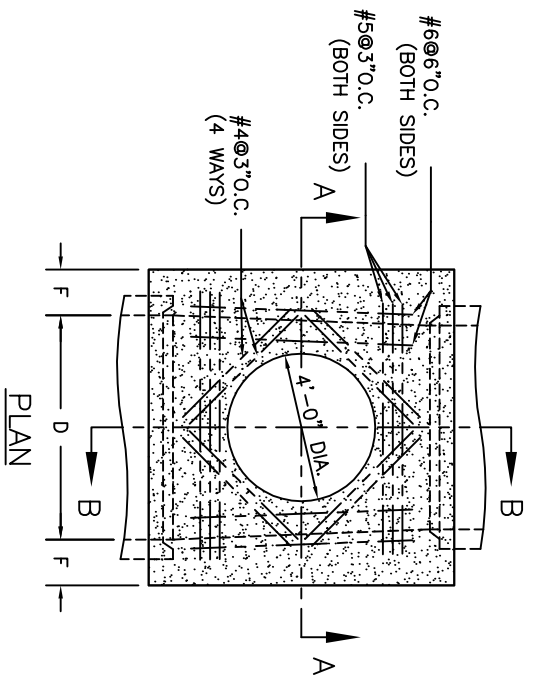
DETAIL NO.
P1520



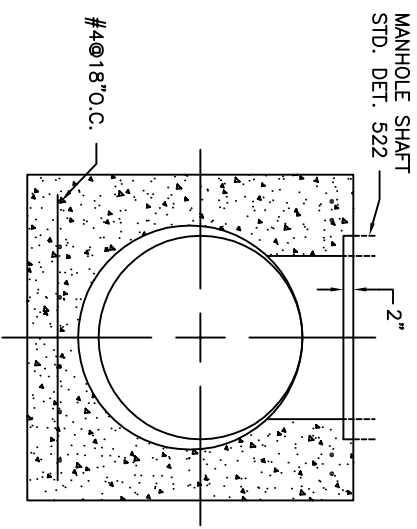
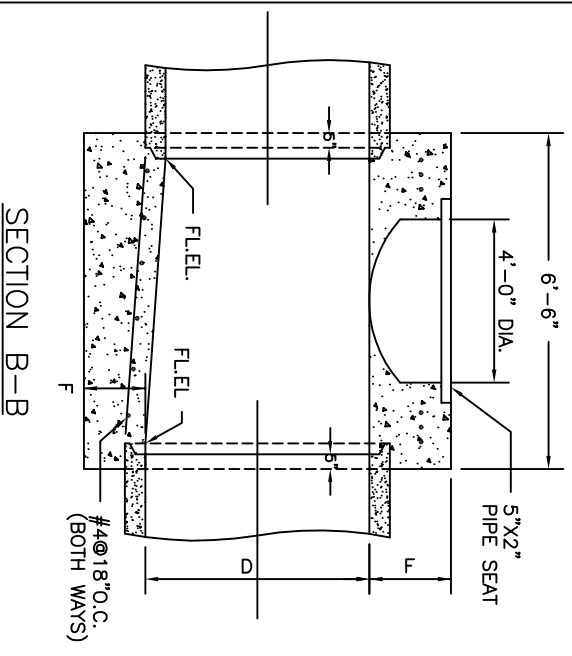
STORM DRAIN MANHOLE BASE
48" & SMALLER

APPROVED
Kenneth J. Davis
CITY ENGINEER
7/9/92
DATE

DETAIL NO.
P1520



- NOTES:**
1. THICKNESS OF DECK SHALL VARY WHEN NECESSARY TO PROVIDE LEVEL PIPE SEAT BUT SHALL NOT BE LESS THAN 'F'.
 2. FLOOR OF MANHOLE SHALL BE STEEL TROWELLED TO SPRING LINE.
 3. BODY OF MANHOLE SHALL BE POURED IN ONE CONTINUOUS OPERATION, EXCEPT THAT A CONSTRUCTION JOINT WITH A LONGITUDINAL KEYWAY MAY BE PLACED AT THE SPRING LINE.
 4. ALL REINFORCED STEEL SHALL CLEAR FACE OF CONCRETE BY 1-1/2" UNLESS SHOWN OTHERWISE.
 5. CONCRETE SHALL BE CLASS 'A'.



"F" DIMENSION TABLE

D	51"	54"	57"	60"	63"	66"
F	13-3/4"	14-1/2"	15"	15-1/2"	16-1/4"	16-3/4"
D	69"	72"	78"	84"	90"	96"
F	17-1/2"	18"	19-1/4"	20-1/2"	21-3/4"	23"

DETAIL NO.
P1560



STORM SEWER MANHOLE BASE TRANSITION

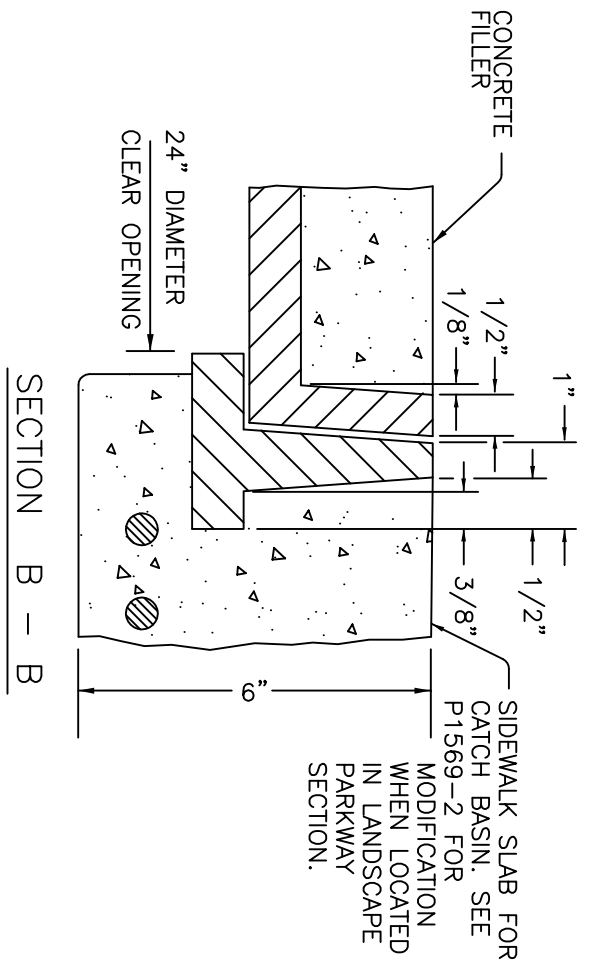
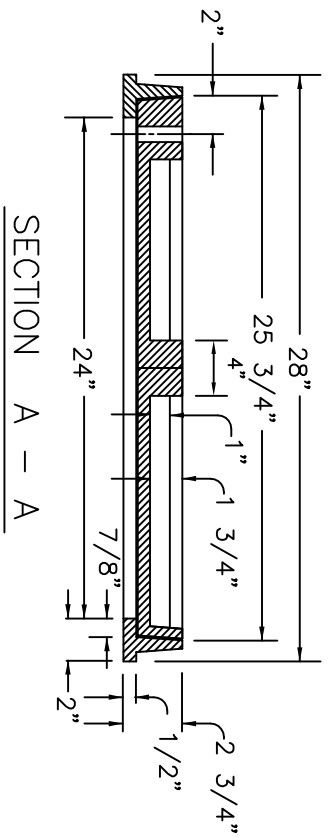
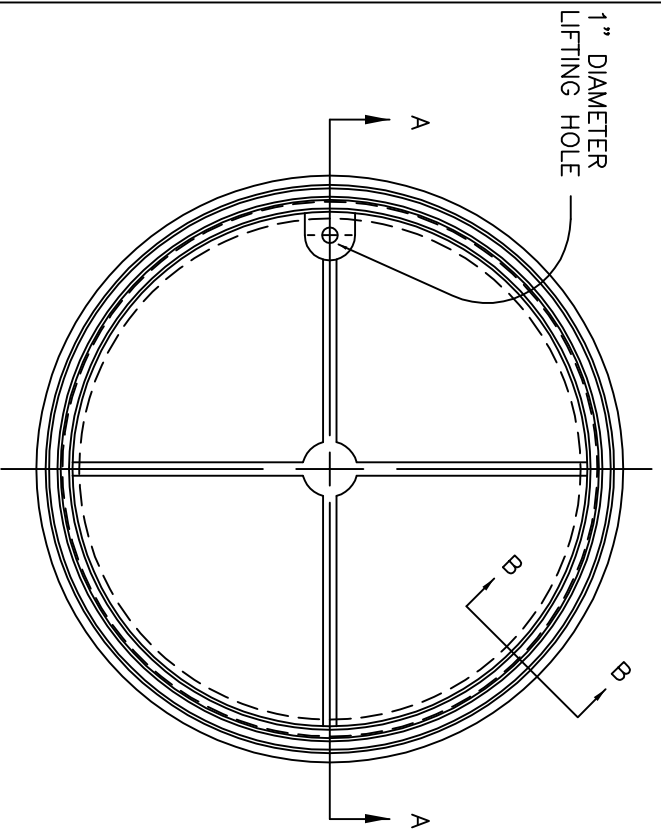
51" & LARGER

APPROVED

Michael P. Connolly
FOR CITY ENGINEER

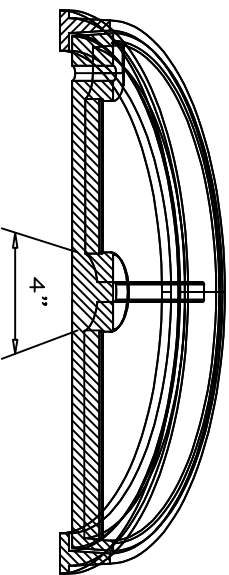
8/6/99
DATE

DETAIL NO.
P1560



NOTES

1. COVER SHALL BE NON-LOCKING.
2. FRAME AND COVER SHALL BE CAST IRON OR STRUCTURAL STEEL.
3. CATCH BASIN ACCESS FRAME AND COVER IS FOR USE ON NON VEHICULAR TRAFFIC AREAS ONLY.
4. COVER SHALL BE FILLED WITH CONCRETE AND BROOM FINISHED.
5. SMALL VARIATIONS IN DIMENSIONS OR FEATURES OF A MINOR NATURE THAT ARE PART OF THE FOUNDRY'S STANDARD CASTING ARE PERMISSIBLE.



DETAIL NO.
P1561



FRAME AND COVER
CATCH BASIN ACCESS

APPROVED
ACTING CIVIL ENGINEER

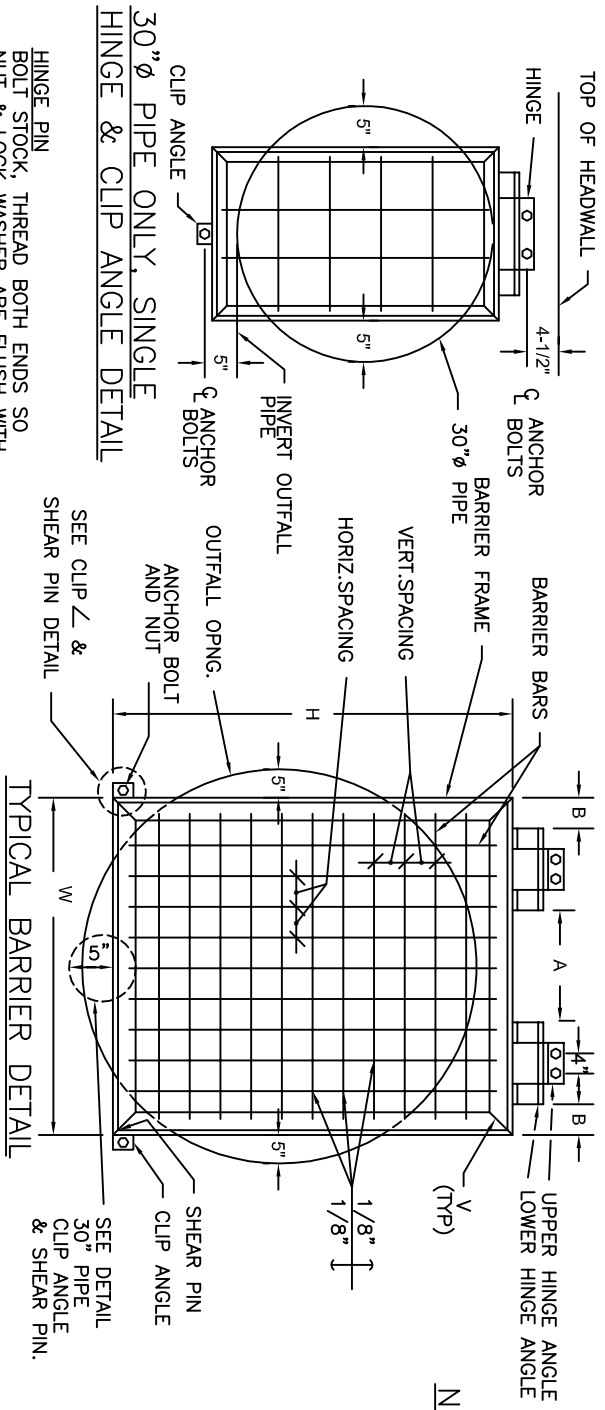
7/31/08
DATE

DETAIL NO.
P1561

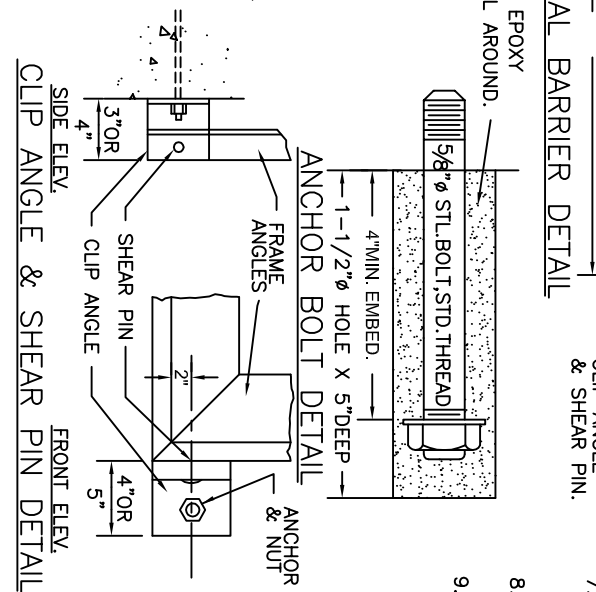
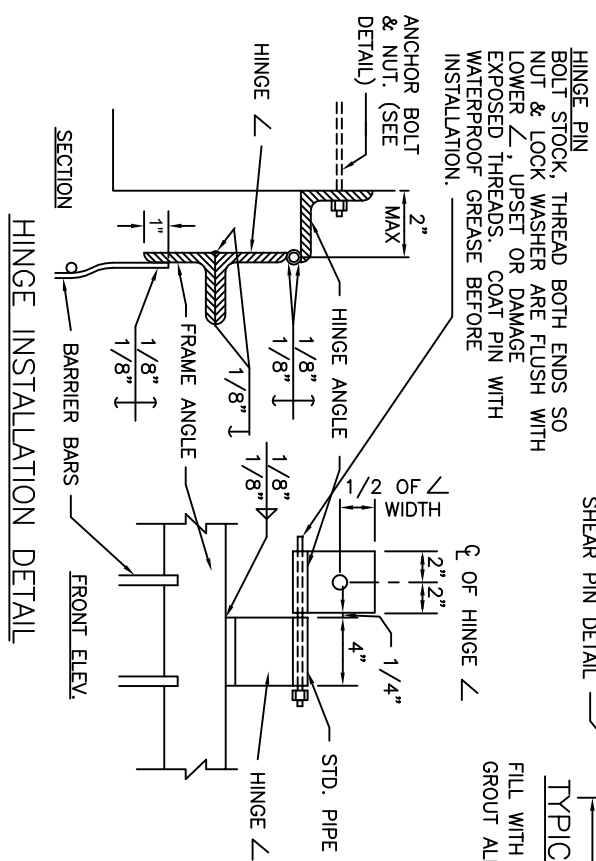
REVISED 4/14/08

SIZE OF OUTFALL CONDUIT	FRAME ANGLES	SHEAR PIN CLIP ANGLES	SHEAR PINS	ANCHOR BOLTS	HINGE PINS	HINGE ANGLES	HINGE STD. PIPE	HINGE TO FRAME WELDS	ANGLE TO FRAME WELDS	BARRIER BARS PLAIN	NO. OF EQUAL BARRIER BAR SPACES (HORIZ.)	NO. OF EQUAL BARRIER BAR SPACES (VERT.)	H (OUT TO OUT FRAME ANGLES)	W (OUT TO OUT FRAME ANGLES)	A	B
15"	2X2X1/4	4X4X1/4	1-1/8Ø	5/8Ø	1/2"Ø	2X2X1/4	3/4"	1/8	1/8	1/2"Ø	3	5	34"	20"	SINGLE HINGE CENTERED	
18"	2X2X1/4	4X4X1/4	1-1/8Ø	5/8Ø	1/2"Ø	2X2X1/4	3/4"	1/8	1/8	1/2"Ø	3	5	34"	20"	SINGLE HINGE CENTERED	
24"	2X2X1/4	4X4X1/4	1-1/8Ø	5/8Ø	1/2"Ø	2X2X1/4	3/4"	1/8	1/8	1/2"Ø	3	5	34"	20"	SINGLE HINGE CENTERED	
30"	2X2X1/4	4X4X1/4	1-1/8Ø	5/8Ø	1/2"Ø	2X2X1/4	3/4"	1/8	1/8	1/2"Ø	3	5	34"	20"	SINGLE HINGE CENTERED	
36"	2X2X1/4	4X4X1/4	2-1/8Ø	5/8Ø	1/2"Ø	2X2X1/4	3/4"	1/8	1/8	1/2"Ø	5	5	42"	32"	SINGLE HINGE CENTERED	
42"	2X2X1/4	4X4X1/4	2-1/8Ø	5/8Ø	1/2"Ø	2X2X1/4	3/4"	1/8	1/8	1/2"Ø	5	6	42"	32"	2 HINGES	0
48"	3X3X7/16	5X3X1/4	2-1/8Ø	5/8Ø	3/4"Ø	2-1/2X 2-2X1/4	1"	1/8	1/8	1/2"Ø	5	7	47"	38"	3"	1"
54"	3X3X7/16	5X3X1/4	2-1/8Ø	5/8Ø	3/4"Ø	2-1/2X 2-2X1/4	1"	1/8	1/8	1/2"Ø	6	8	54"	44"	5"	3"
60"	3X3X7/16	5X3X1/4	2-1/8Ø	5/8Ø	3/4"Ø	2-1/2X 2-2X1/4	1"	1/8	1/8	1/2"Ø	7	9	60"	50"	9"	4"
66"	3X3X7/16	5X3X1/4	2-1/8Ø	5/8Ø	3/4"Ø	2-1/2X 2-2X1/4	1"	1/8	1/8	1/2"Ø	8	10	66"	56"	11"	6"
72"	4X4X5/8	5X3X1/4	2-3/16Ø	5/8Ø	1"Ø	3X3X3/8	1-1/4"	1/8	1/8	1/2"Ø	9	11	73"	62"	15"	7"
78"	4X4X5/8	5X3X1/4	2-3/16Ø	5/8Ø	1"Ø	3X3X3/8	1-1/4"	1/8	1/8	1/2"Ø	10	11	79"	68"	17"	9"
84"	4X4X5/8	5X3X1/4	2-3/16Ø	5/8Ø	1"Ø	3X3X3/8	1-1/4"	1/8	1/8	1/2"Ø	11	13	86"	74"	21"	10"
90"	4X4X5/8	5X3X1/4	2-3/16Ø	5/8Ø	1"Ø	3X3X3/8	1-1/4"	1/8	1/8	1/2"Ø	12	13	92"	80"	23"	12"
96"	4X4X5/8	5X3X1/4	2-3/16Ø	5/8Ø	1"Ø	3X3X3/8	1-1/4"	1/8	1/8	1/2"Ø	12	14	98"	86"	29"	12"
108"																
120"																

DETAIL NO. P1562	 City of Phoenix STANDARD DETAIL	BARRIER SPECIFICATION SCHEDULE	APPROVED  CITY ENGINEER	8/8/03 DATE	DETAIL NO. P1562
---------------------	---	--------------------------------	--	----------------	---------------------



30" Ø PIPE ANGLE ONLY, SINGLE HINGE & CLIP ANGLE DETAIL



NOTES:

1. ALL SHEAR PIN ANGLES SHALL FIT SNUGLY AND TRULY FACE TO FACE. COVER WITH WATERPROOF GREASE PRIOR TO INSTALLATION OF PIN.
2. GALVANIZE ALL FERROUS PARTS AFTER FABRICATION.
3. THE SHEAR PIN HOLES IN THE ANGLE SHALL BE DRILLED FOR A TIGHT FIT OF THE SHEAR PINS.
4. FRAME AND HINGE ANGLES SHALL HAVE THE OUTSTANDING LEGS CUT FOR OUTLETS.
5. ALL ANCHOR BOLTS SHALL BE 5/8" Ø ANCHOR BOLTS EMBEDDED 4" (MIN.) INTO EPOXY GROUT.
6. ALL SHEAR PINS ARE TO BE PEENED BOTH ENDS AFTER INSTALLATION.
7. SHEAR PIN MATERIAL SHALL BE COMMERCIAL PURE ALUMINUM WIRE, ALLOY 1100, TEMPER 0, FEDERAL SPEC. QQ-A-411.
8. SEE BARRIER SCHEDULE, DET. P1562 FOR VARIABLE DIMENSIONS.
9. COVER ALL MOVABLE CONTACT SURFACE WITH A COAT OF WATERPROOF GREASE PRIOR TO INSTALLATION.

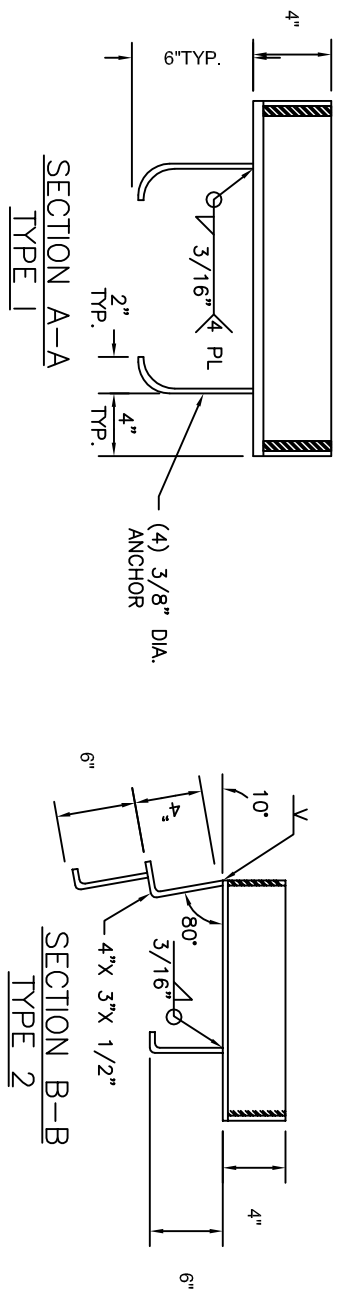
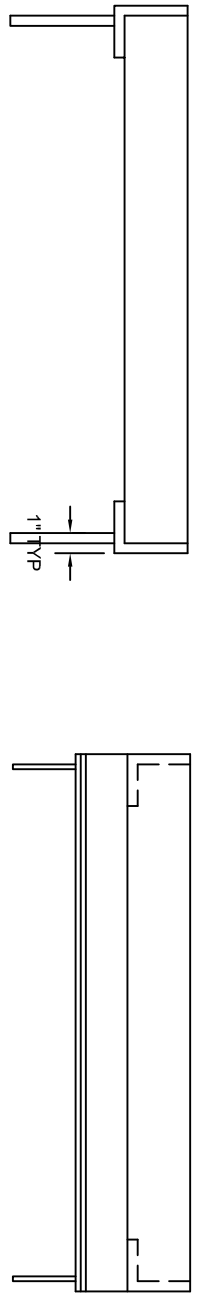
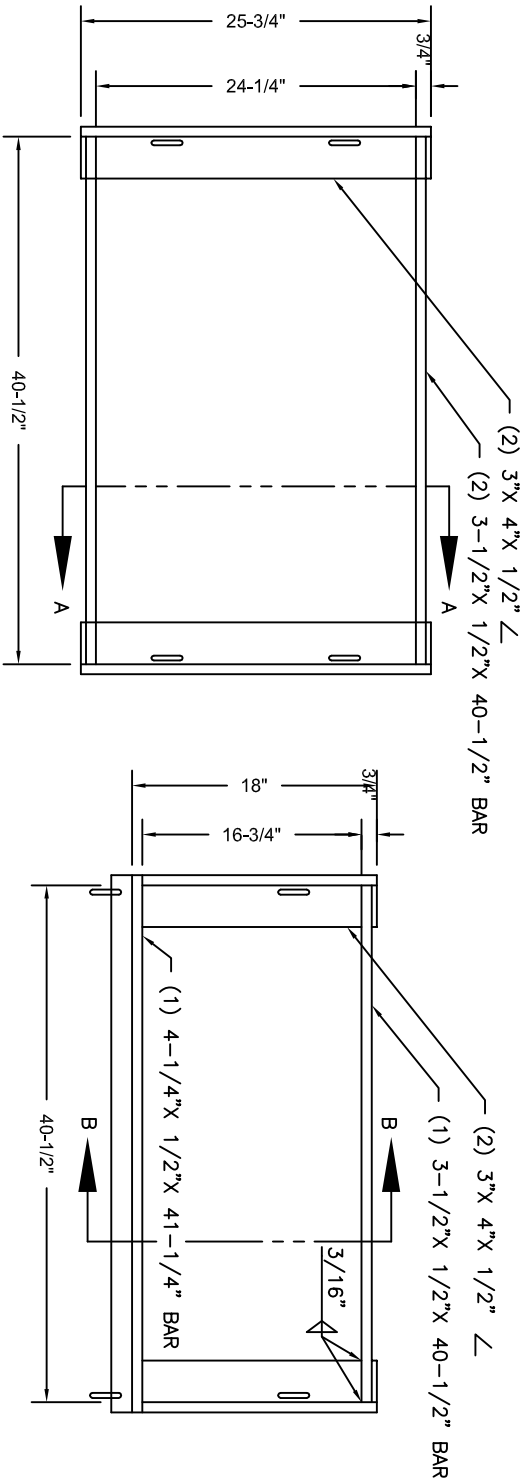
DETAIL NO. P1563



STORM SEWER ACCESS BARRIER

APPROVED *Maria S. Williams* CITY ENGINEER 7/19/04 DATE

DETAIL NO. P1563



NOTES

1. FRAME & FRAME SUPPORT SHALL BE FABRICATED FROM STRUCTURAL STEEL EXCEPT AS NOTED. STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH A.S.T.M. A-36.
2. WELDING SHALL BE IN ACCORDANCE WITH M.A.C. WELDING SPECIFICATIONS.
3. FRAME AND GRATE SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS BEFORE DELIVERY.
4. THE COMPLETED ASSEMBLY SHALL BE GIVEN ONE SHOP COAT OF NO. 1 PAINT, AND TWO FIELD COATS OF NO. 10 PAINT AS PER SECTION 790.
5. THE FRAME SHALL BE FABRICATED TO WITHIN ± 1/8" OF SPECIFIED DIMENSIONS.

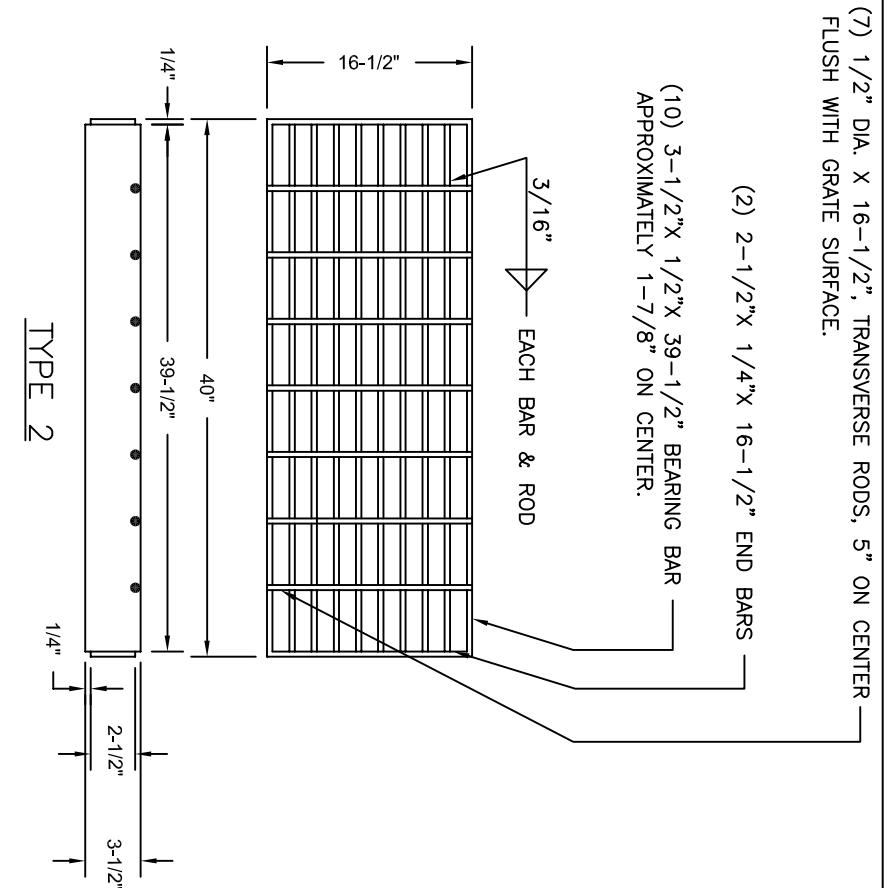
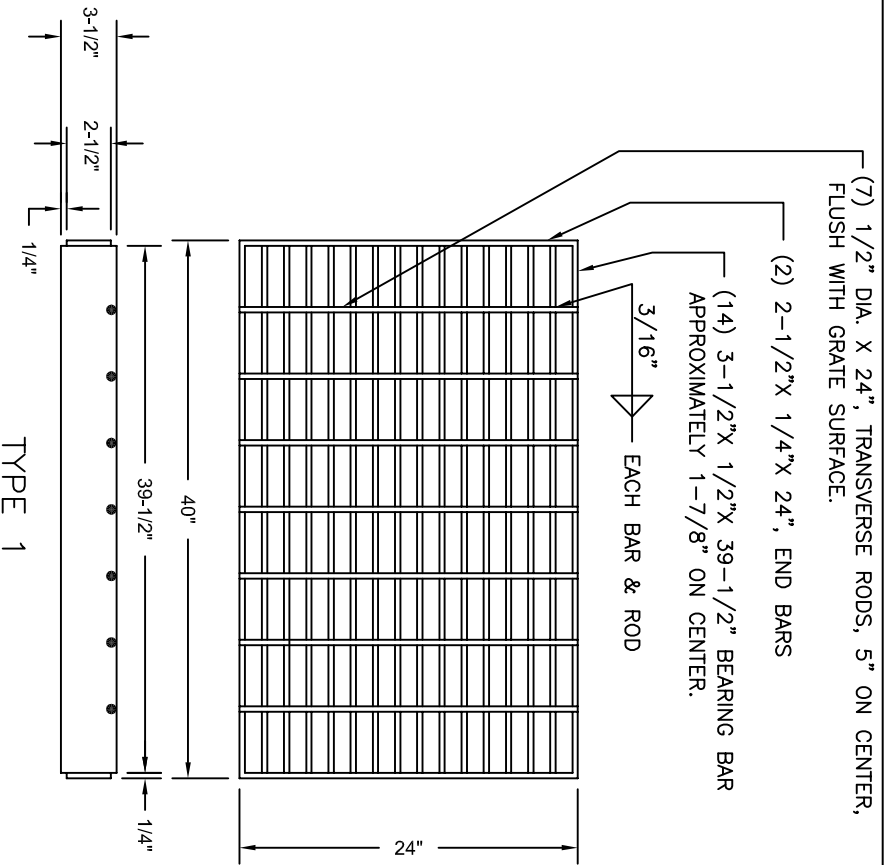
DETAIL NO.
P1564



CATCH BASIN GRATE FRAMES

APPROVED
Kevin J. Davis
CITY ENGINEER
7/9/92
DATE

DETAIL NO.
P1564



NOTES:

1. ALL STEEL SHALL BE IN ACCORDANCE WITH A.S.T.M. A-36.
2. WELDING SHALL BE IN ACCORDANCE WITH A.W.S. SPECIFICATIONS.
3. FRAME AND GRATE SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS BEFORE DELIVERY.
4. THE COMPLETED ASSEMBLY SHALL BE GIVEN ONE SHOP COAT OF NO. 1 PAINT AND TWO FIELD COATS OF NO. 10 PAINT AS PER SECTION 790.
5. THE GRATE SHALL BE FABRICATED TO WITHIN 1/8" OF SPECIFIED DIMENSIONS.

DETAIL NO.
P1565



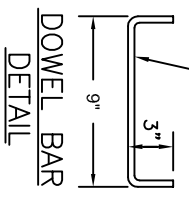
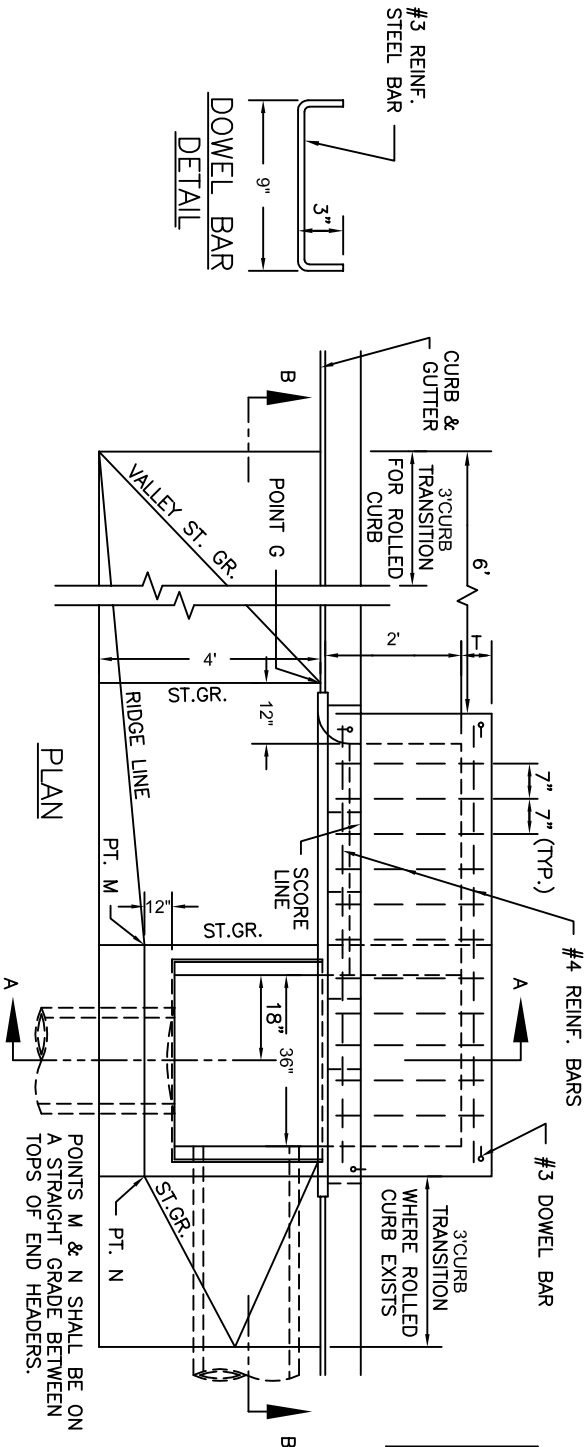
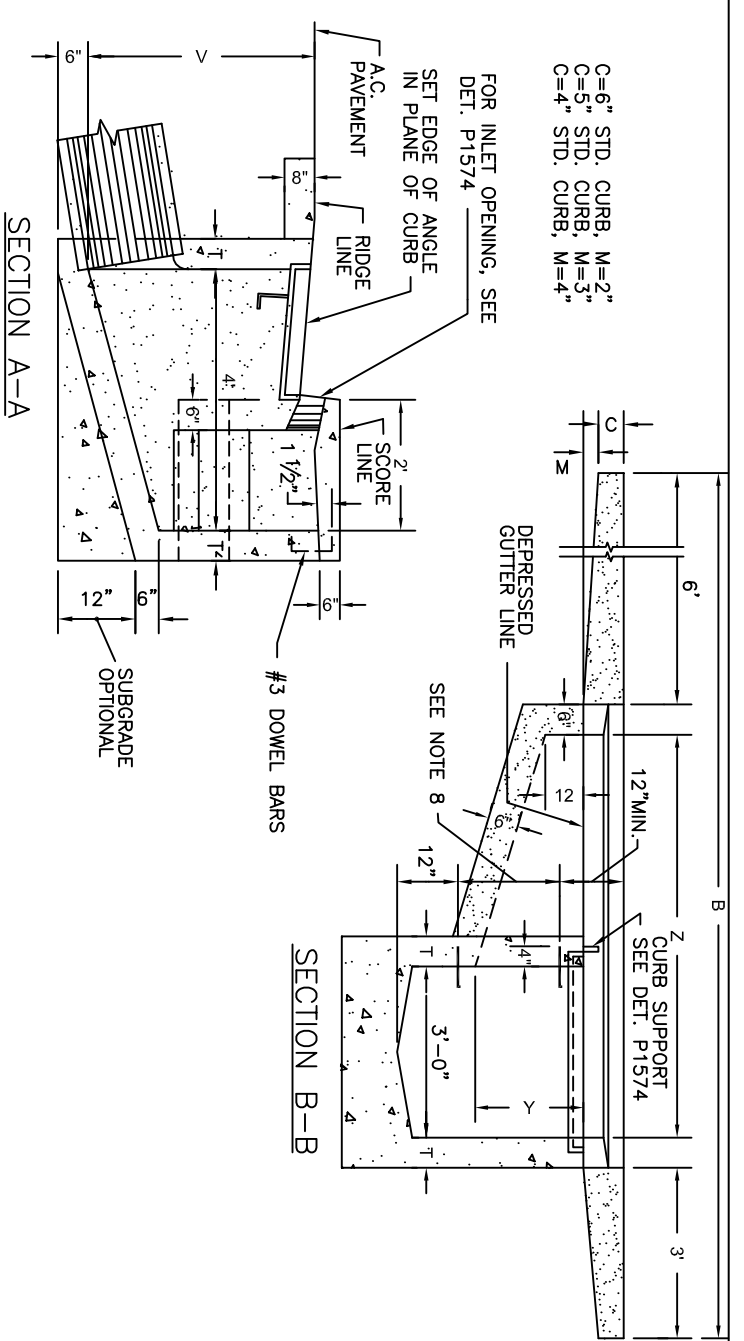
CATCH BASIN GRATES

APPROVED
Kenneth J. Davis
CITY ENGINEER
7/9/92
DATE

DETAIL NO.
P1565

C=6" STD. CURB, M=2"
 C=6" STD. CURB, M=3"
 C=4" STD. CURB, M=4"

FOR INLET OPENING, SEE
 DET. P1574



NOTES:

1. DIMENSIONS 'Z' SHALL EQUAL 7' OR 14' TYPES ARE DESIGNATED AS FOLLOWS:
 TYPE J7, (Z=7', Y=24", B=17")
 TYPE J14, (Z=14', Y=30", B=24")
2. ALL CONCRETE SHALL BE CLASS 'A'.
3. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM TO A.S.T.M. SPEC. 615.
4. CONNECTOR PIPES MAY BE PLACED IN ANY WALL BENEATH THE GRATE AS PER PLANS.
5. FLOOR OF BASIN SHALL BE TROWELLED TO A HARD SMOOTH SURFACE AND SHALL SLOPE FROM ALL DIRECTIONS TO OUTLET.
6. CONSTRUCTION DRAINS SHALL BE INSTALLED WHEN NOTED. (SEE DET. P1575)
7. DO NOT SPECIFY THIS DETAIL FOR USE IN A MAJOR STREET.
8. THE FRAME SHALL BE DET. P1564, TYPE I AND THE GRATE SHALL BE DET. P1565, TYPE I.

CATCH BASIN WALL THICKNESS
 T=6" IF V IS 4' OR LESS
 T=8" IF V IS 4' TO 8'
 IF V EXCEEDS 8' SPECIAL DESIGN IS REQUIRED
 V=4'-0" UNLESS OTHERWISE NOTED

DETAIL NO.
 P1566

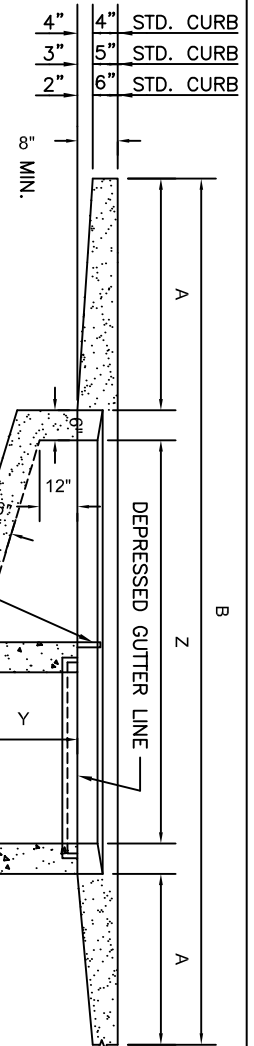


CATCH BASIN COMBINATION
 TYPE "J" WITH CONCRETE APRON

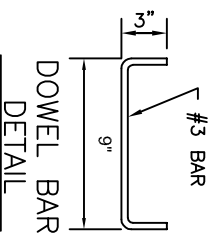
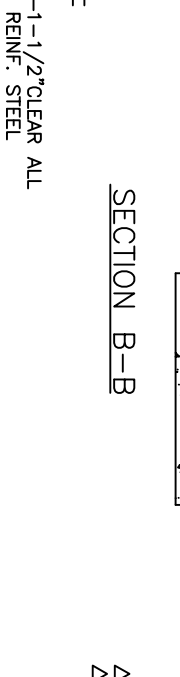
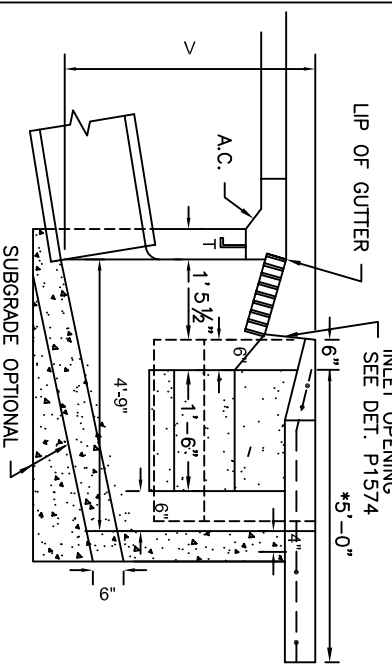
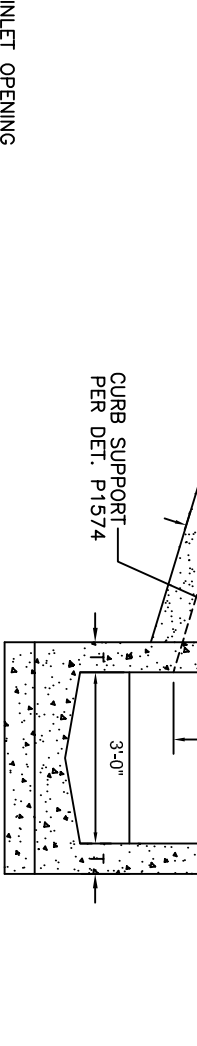
APPROVED
 ACTING CIVIL ENGINEER
 7/31/08
 DATE

DETAIL NO.
 P1566

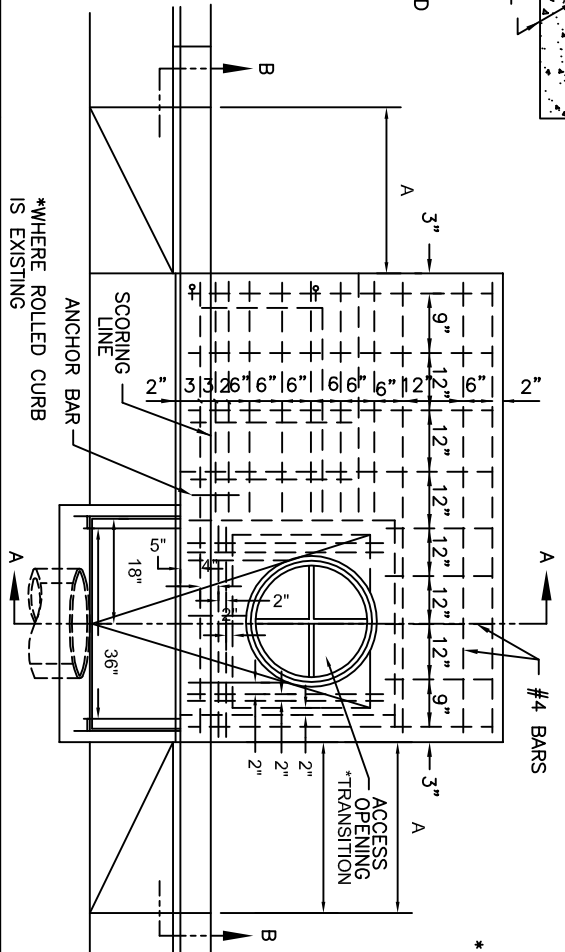
REVISED 4/14/08



CURB HEIGHT	DEPRESSED GUTTER TRANSITION	
	A	B
4"	3'-3"	14'-6"
5"	2'-6"	13'
6"	1'-9"	11'-6"
		18'-6"



SECTION A-A
 *4'-0" IN LOCATIONS WHERE 4' S/W IS REQ'D



NOTES:

1. DIMENSION Z SHALL EQUAL 7' OR 14' TYPES ARE DESIGNATED AS FOLLOWS:
 TYPE K7 (Z=7', Y=24")
 TYPE K14 (Z=14', Y=30")
2. ALL CONCRETE SHALL BE CLASS 'A'.
3. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM TO A.S.T.M. SPECIFICATION 615.
4. CONNECTOR PIPES MAY BE PLACED IN ANY WALL BENEATH THE GRATE AS PER PLANS.
5. FLOOR OF BASIN SHALL BE TROWELLED TO A HARD SMOOTH SURFACE AND SHALL SLOPE FROM ALL DIRECTIONS TO OUTLET.
6. CONSTRUCTION DRAINS SHALL BE INSTALLED WHEN NOTED. (SEE DET. P1575).
7. ACCESS FRAME AND COVER PER DET. P1561.
8. THE FRAME SHALL BE DET. P1564, TYPE 2 AND THE GRATE SHALL BE DET. P1565, TYPE 2.

CATCH BASIN WALL THICKNESS
 T=6" IF V IS 4' OR LESS
 T=8" IF V IS 4' TO 10'
 IF V EXCEEDS 8' SPECIAL DESIGN IS REQUIRED
 V=4'-0" UNLESS OTHERWISE NOTED.

DETAIL NO. P1567

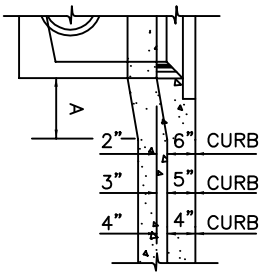


CATCH BASIN COMBINATION TYPE "K"

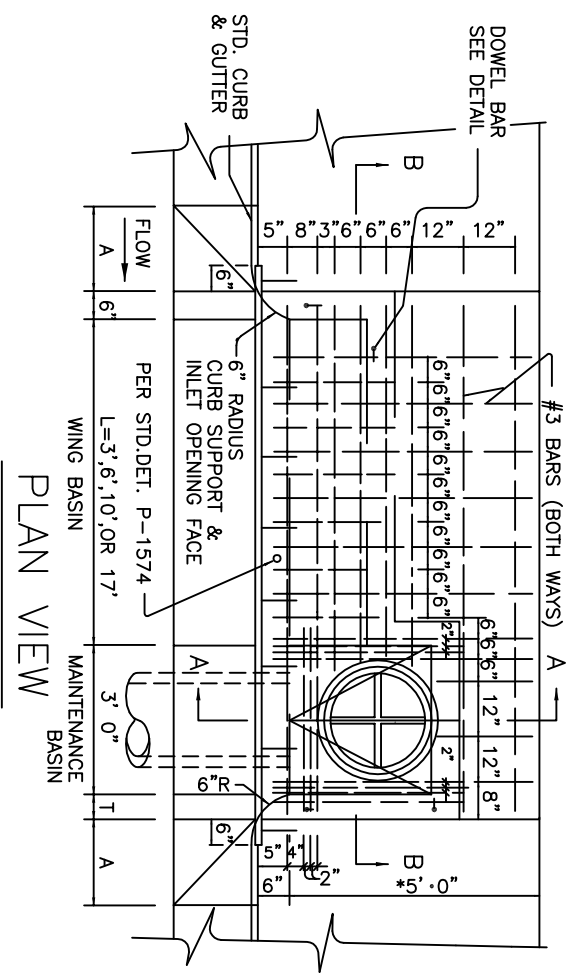
APPROVED: *Maria S. Williams* CITY ENGINEER 7/19/04 DATE

DETAIL NO. P1567

GUTTER TRANSITION	DIM. 'A'
CURB HEIGHT	3'-3"
4"	2'-6"
5"	1'-9"
6"	

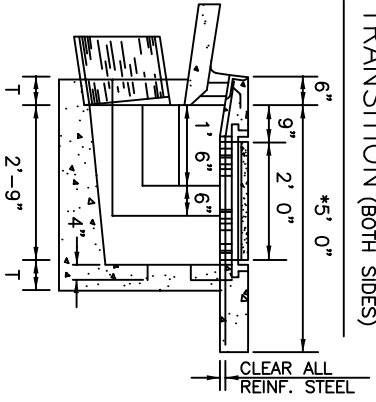


DEPRESSED GUTTER

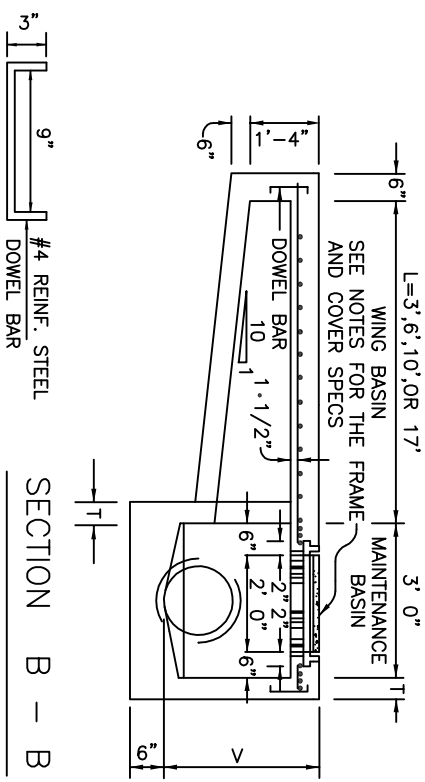


PLAN VIEW

TRANSITION (BOTH SIDES)

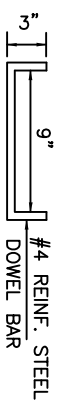


SECTION A - A



SECTION B - B

DOWEL BAR DETAIL



NOTES

1. TYPES ARE DESIGNATED AS FOLLOWS: 'M'. NO WING, 'M-1'. ONE WING, 'M-2'. TWO WINGS.
2. ALL CONCRETE SHALL BE CLASS 'A'.
3. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM TO A.S.T.M. SPECIFICATION 615.
4. CONNECTOR PIPES SHALL BE PLACED IN THE APPROPRIATE WALL OF THE MAINTENANCE BASIN.
5. FLOOR OF BASIN SHALL BE TROWELLED TO A HARD, SMOOTH SURFACE AND SHALL SLOPE FROM ALL DIRECTIONS TO OUTLET.
6. CONSTRUCTION DRAINS SHALL BE INSTALLED IN WHEN NOTED. (SEE DET. P-1575.)
7. LOCATE WING BASIN ON UPSTREAM SIDE OF MAINTENANCE BASIN FOR TYPE M-1. WING BASINS FOR TYPE M-2 SHALL BE BOTH SIDES OF MAINTENANCE BASIN.
8. ACCESS FRAME AND COVER PER DET. P-1561

CATCH BASIN WALL THICKNESS
T = 6" IF V = 4' OR LESS
T = 8" IF V = 4' TO 8'
(IF V EXCEEDS 8', SPECIAL DESIGN IS REQUIRED.)
L = 0' UNLESS SPECIFIED ON THE PLANS
V = 4'-0" MIN. UNLESS OTHERWISE NOTED
*4'-0" IN LOCATIONS WHERE 4' SIDEWALK IS REQ'D.

REVISED 4/14/08

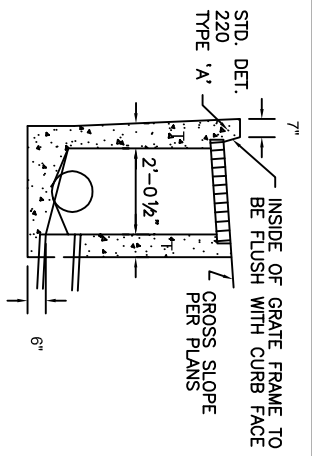
DETAIL NO. P1569-1



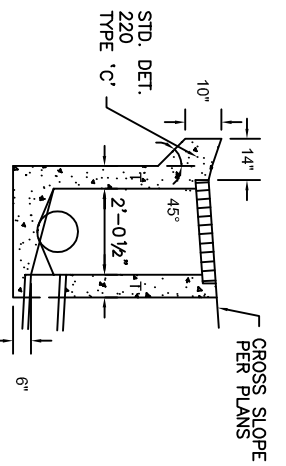
CATCH BASIN TYPE "M"

APPROVED
ACTING CITY ENGINEER
7/31/08
DATE

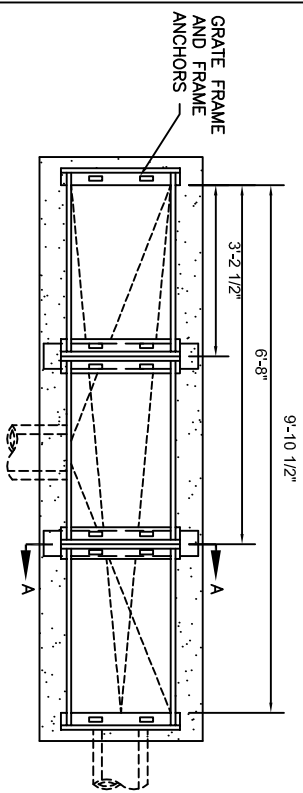
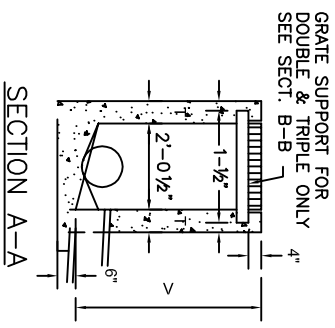
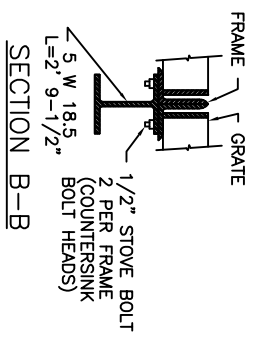
DETAIL NO. P1569-1



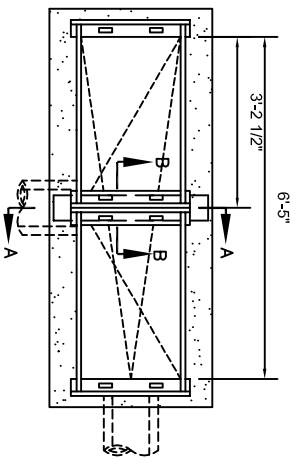
'N' CATCH BASIN IN VERTICAL CURB & GUTTER



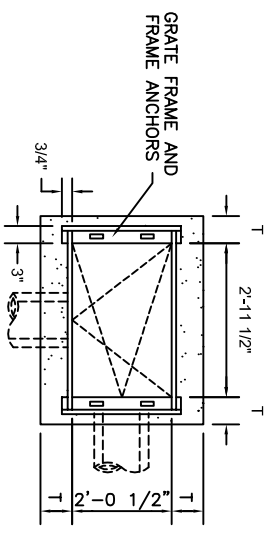
'N' CATCH BASIN IN ROLL CURB & GUTTER



TRIPLE CATCH BASIN PLAN



DOUBLE CATCH BASIN PLAN



SINGLE CATCH BASIN PLAN

- NOTES:**
1. ALL CONCRETE SHALL BE CLASS 'A'.
 2. CONNECTOR PIPES MAY BE PLACED IN ANY WALL AS PER PLAN.
 3. FLOOR OF BASIN SHALL BE TROWELLED TO A HARD, SMOOTH SURFACE AND SHALL SLOPE FROM ALL DIRECTIONS TO OUTLET.
 4. CONSTRUCTION DRAINS SHALL BE INSTALLED WHEN NOTED. (SEE DETAIL P1575)
 5. CONNECTOR PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.
 6. PLANS SHOULD SPECIFY ELEVATION AND INVERT ELEVATION.
 7. THE TYPE 'N' CATCH BASIN MAY BE PREFABRICATED PROVIDING A SHOP DRAWING IS APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
 8. THE FRAME SHALL BE DET. P1564, TYPE 1 AND THE GRATE SHALL BE DET. P1565, TYPE 1.

CATCH BASIN WALL THICKNESS
 T=6" IF V = 4' OR LESS
 T=8" IF V = 4' TO 8'
 (IF V EXCEEDS 8' SPECIAL DESIGN IS REQUIRED)
 V=4'-0" UNLESS OTHERWISE NOTED.

DETAIL NO.
P1570



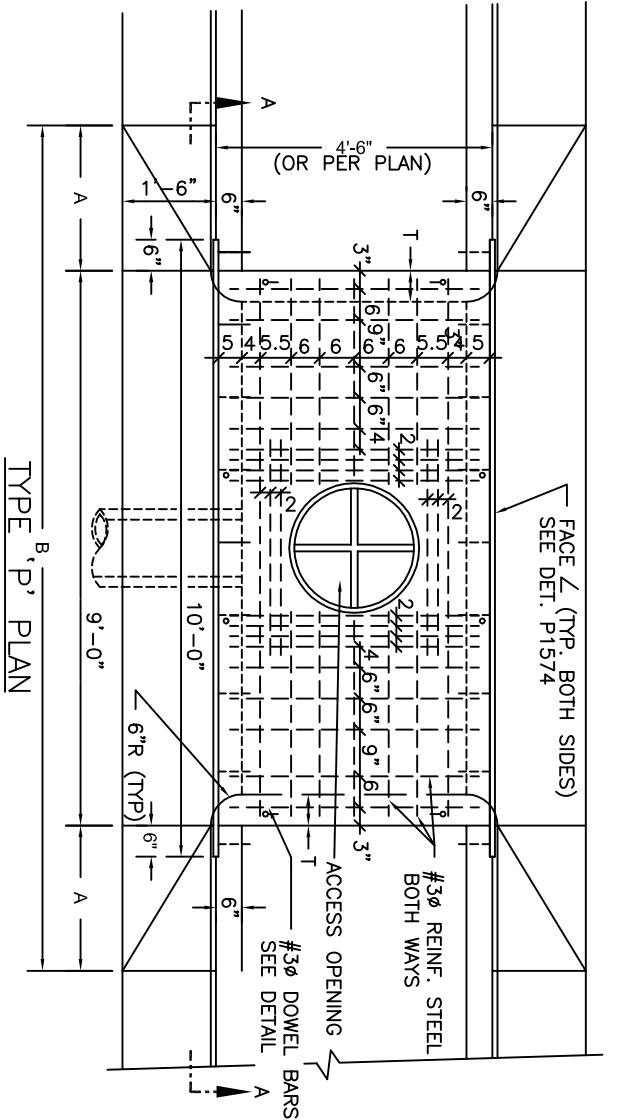
City of Phoenix
STANDARD DETAIL

CATCH BASIN
TYPE "N"

APPROVED
ACTING CIVIL ENGINEER
7/31/08
DATE

DETAIL NO.
P1570

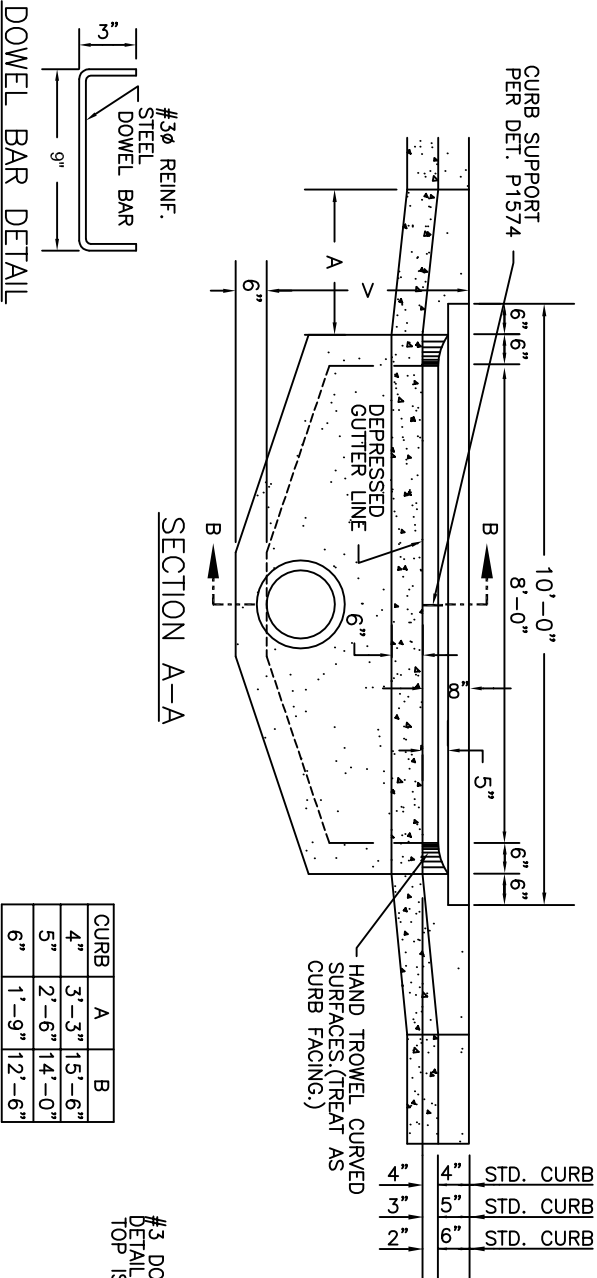
REVISED 4/14/08



TYPE 'P' PLAN

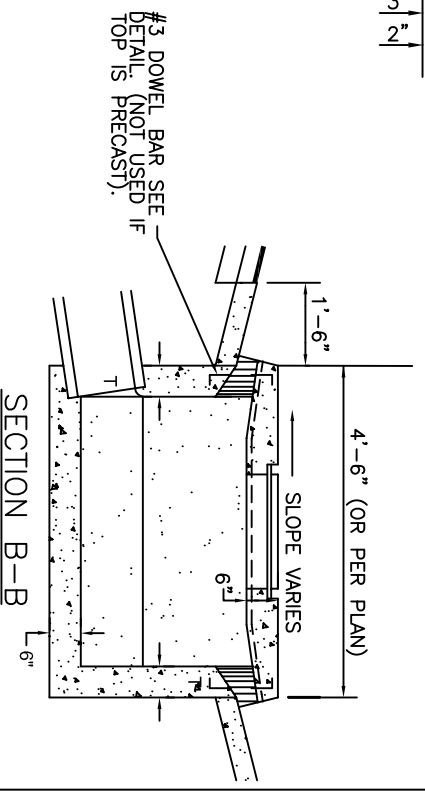
- NOTES:**
1. ALL CONCRETE SHALL BE CLASS 'A'.
 2. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM TO A.S.T.M. SPECIFICATION 615.
 3. CONNECTOR PIPES MAY BE PLACED IN ANY WALL AS PER PLANS.
 4. FLOOR OF BASIN SHALL BE TROWELLED TO A HARD, SMOOTH SURFACE AND SHALL SLOPE FROM ALL DIRECTIONS TO OUTLET.
 5. CONSTRUCTION DRAINS SHALL BE INSTALLED IN ALL INLETS BUILT WITH PAVING PROJECTS. (SEE DET. P1575.)
 6. ACCESS FRAME AND COVER PER DET. P1561.

CATCH BASIN WALL THICKNESS
 T=6" IF V = 4' OR LESS
 T=8" IF V = 4' TO 8'
 IF V EXCEEDS 8', SPECIAL DESIGN IS REQUIRED.
 V=4'-0" UNLESS UNLESS OTHERWISE SPECIFIED.

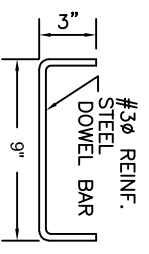


SECTION A-A

CURB	A	B
4"	3'-3"	15'-6"
5"	2'-6"	14'-0"
6"	1'-9"	12'-6"



SECTION B-B



DOWEL BAR DETAIL

DETAIL NO.
P1571

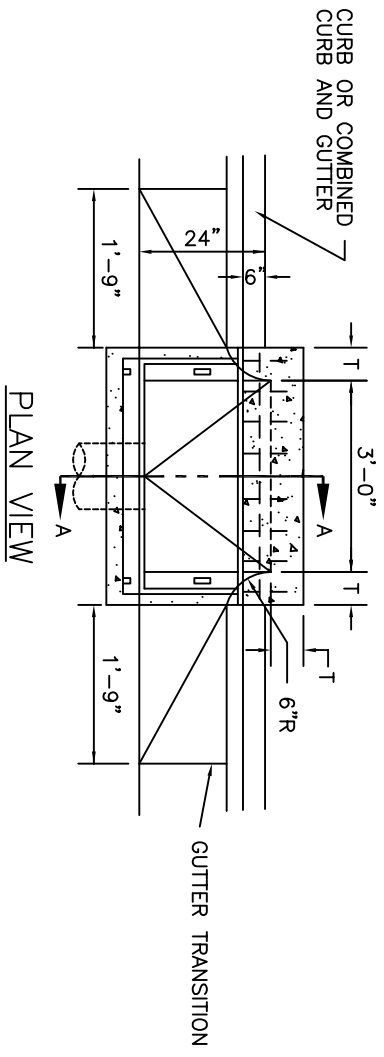
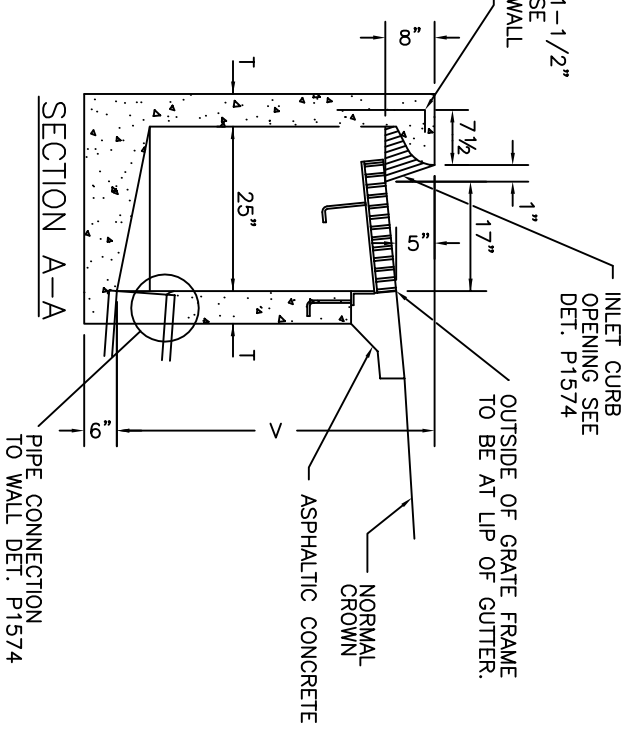


CATCH BASIN - TYPE "P"
DOUBLE CURB OPENING FOR FRONTAGE ROAD ISLANDS

APPROVED
Maria S. Williams
 CITY ENGINEER
 7/19/04
 DATE

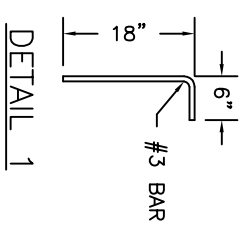
DETAIL NO.
P1571

#3 BARS @ 6" O.C., 1-1/2" CLEAR TO TOP OF NOSE SECTION & INSIDE OF WALL SEE DET. NO. 1



- NOTES:**
1. ALL CONCRETE SHALL BE CLASS 'A'.
 2. CONNECTOR PIPES MAY BE PLACED IN ANY WALL AS PER PLAN.
 3. FLOOR OF BASIN SHALL BE TROWELLED TO A HARD, SMOOTH SURFACE AND SHALL SLOP FROM ALL DIRECTIONS TO OUTLET.
 4. THE CONSTRUCTION DRAINS SHALL BE INSTALLED IN ALL INLETS BUILT WITH PAVING PROJECTS (SEE DET. P1575).
 5. CONNECTOR PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.
 6. LOCATION OF THE TYPE 'R' CATCH BASIN SHALL BE RESTRICTED TO AREAS WHERE 6" VERTICAL CURB & GUTTER IS EXISTING.
 7. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM TO A.S.T.M. SPECIFICATION 615.
 8. THE FRAME SHALL BE DET. P1564, TYPE 2 AND THE GRATE SHALL BE DET. P1565, TYPE 2.

CATCH BASIN WALL THICKNESS
 T=6" IF V = 4' OR LESS
 T=8" IF V = 4' TO 8'
 IF V EXCEEDS 8' SPECIAL DESIGN IS REQUIRED
 V=4'-0" UNLESS OTHERWISE NOTED.



DETAIL NO.
P1573

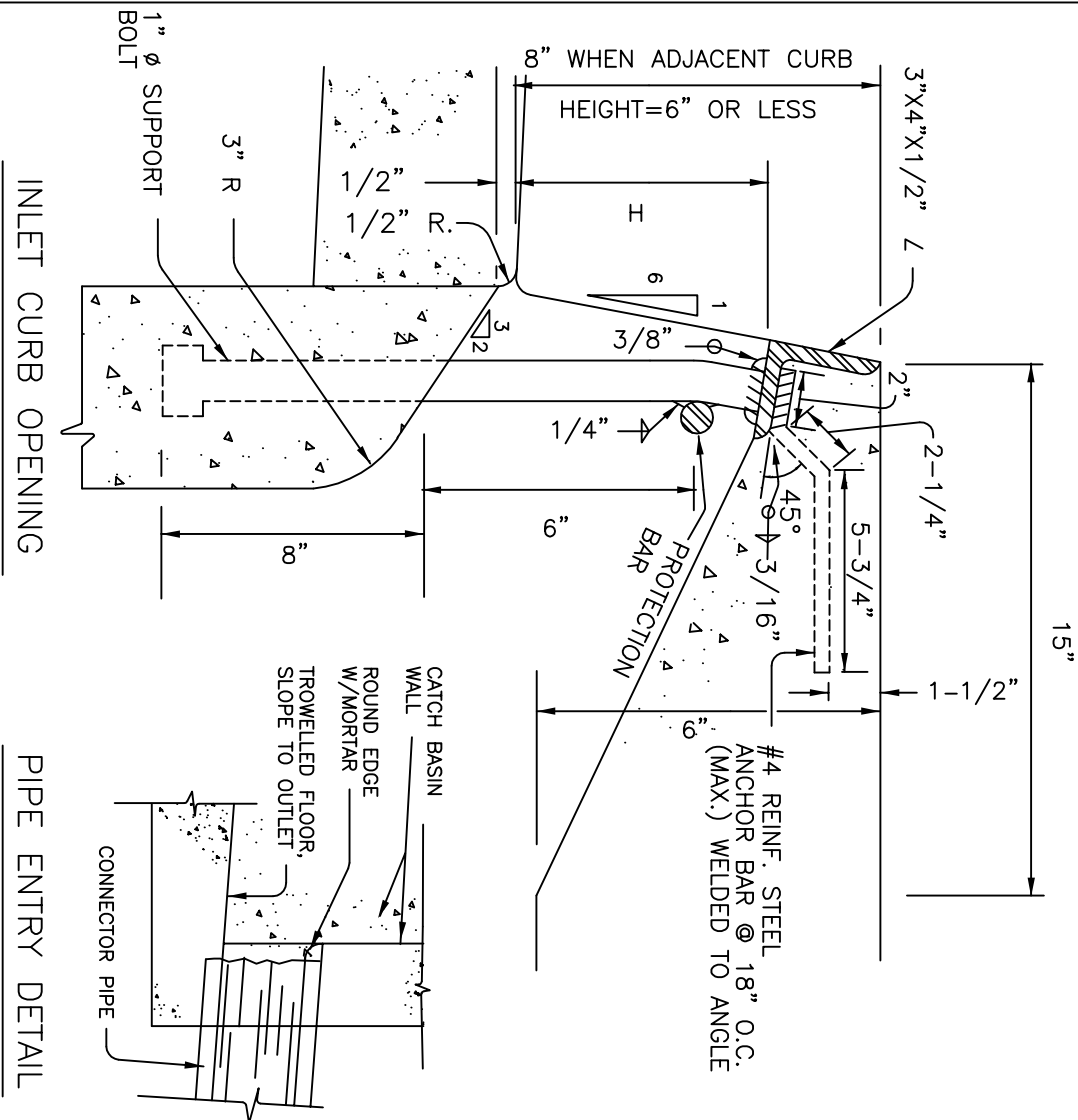


CATCH BASIN
TYPE "R"

APPROVED
 ACTING CIVIL ENGINEER
 7/31/08
 DATE

DETAIL NO.
P1573

REVISED 4/14/08



NOTES

1. CURB OPENING HEIGHT 'H' SHALL BE 5" (MINIMUM) UNLESS OTHERWISE SPECIFIED.
2. WHEN CURB OPENING HEIGHT 'H' EXCEEDS 6", INSTALL 1"Ø STEEL PROTECTION BARS. THE PROTECTION BARS SHALL EXTEND THE FULL LENGTH OF THE CURB OPENINGS AND SHALL BE EMBEDDED 3"(MIN.) AT EACH END.
3. INSTALL ADDITIONAL BARS AT 3 1/2" CLEAR SPACING ABOVE FIRST BAR WHEN OPENING EXCEEDS 13".
4. WHEN CURB OPENING LENGTH EXCEEDS 6', INSTALL 1"Ø STEEL SUPPORT BOLTS, SPACED AT NO MORE THAN 5' O.C.
5. ALL EXPOSED METAL HARDWARE SHALL BE GIVEN ONE SHOP COAT OF NO.1 PAINT AND 2 FIELD COATS OF NO.10 PAINT AS PER SECTION 790.
6. ALL METAL UNITS SHALL BE FABRICATED FROM STRUCTURAL STEEL EXCEPT AS NOTED. STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH A.S.T.M. A-36.
7. WELDING SHALL BE IN ACCORDANCE WITH M.A.G. WELDING SPECIFICATIONS.
8. CONNECTOR PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.
9. WHEN CATCH BASIN IS LOCATED WITHIN A LANDSCAPE PARKWAY SECTION, SEE DETAIL P1569-2 FOR INLET MODIFICATIONS.

REVISED 3/1/92

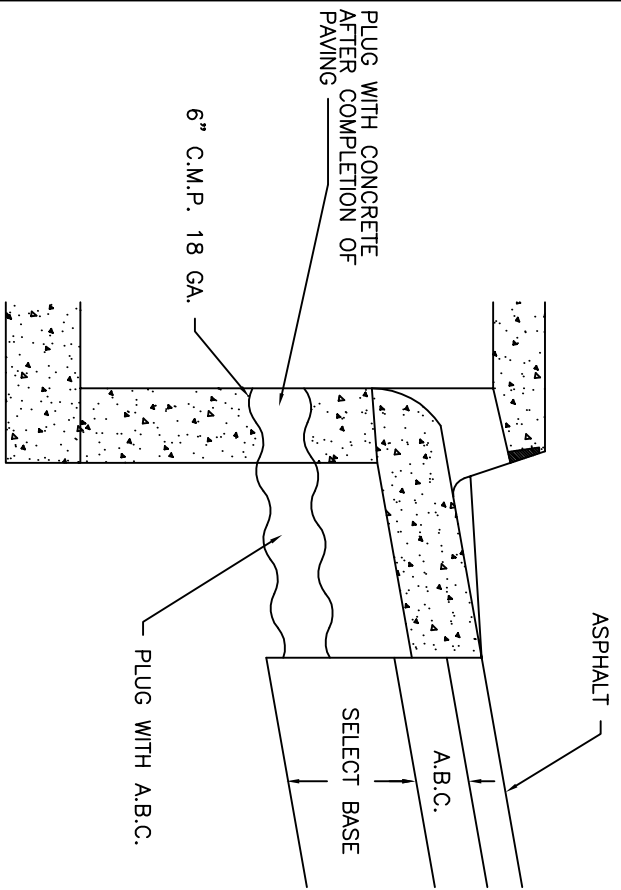
DETAIL NO.
P1574



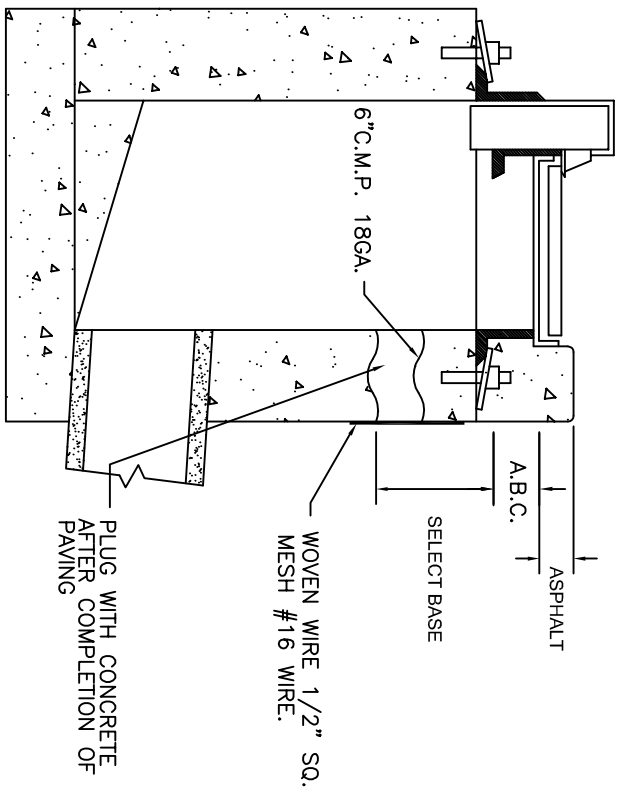
INLET CURB OPENING & PIPE ENTRY DETAIL

APPROVED
Kenneth J. Davis
CITY ENGINEER
7/9/92
DATE

DETAIL NO.
P1574



CURB OPENING INLET



GRATE OPENING INLET

NOTES:

1. CONSTRUCTION DRAINS TO BE INSTALLED IN ALL INLETS BUILT WITH PAVING PROJECTS.
2. SEE PROJECT PLANS FOR INLET DETAILS AND DEPTH OF PAVING.

DETAIL NO.
P1575



City of Phoenix
STANDARD DETAIL

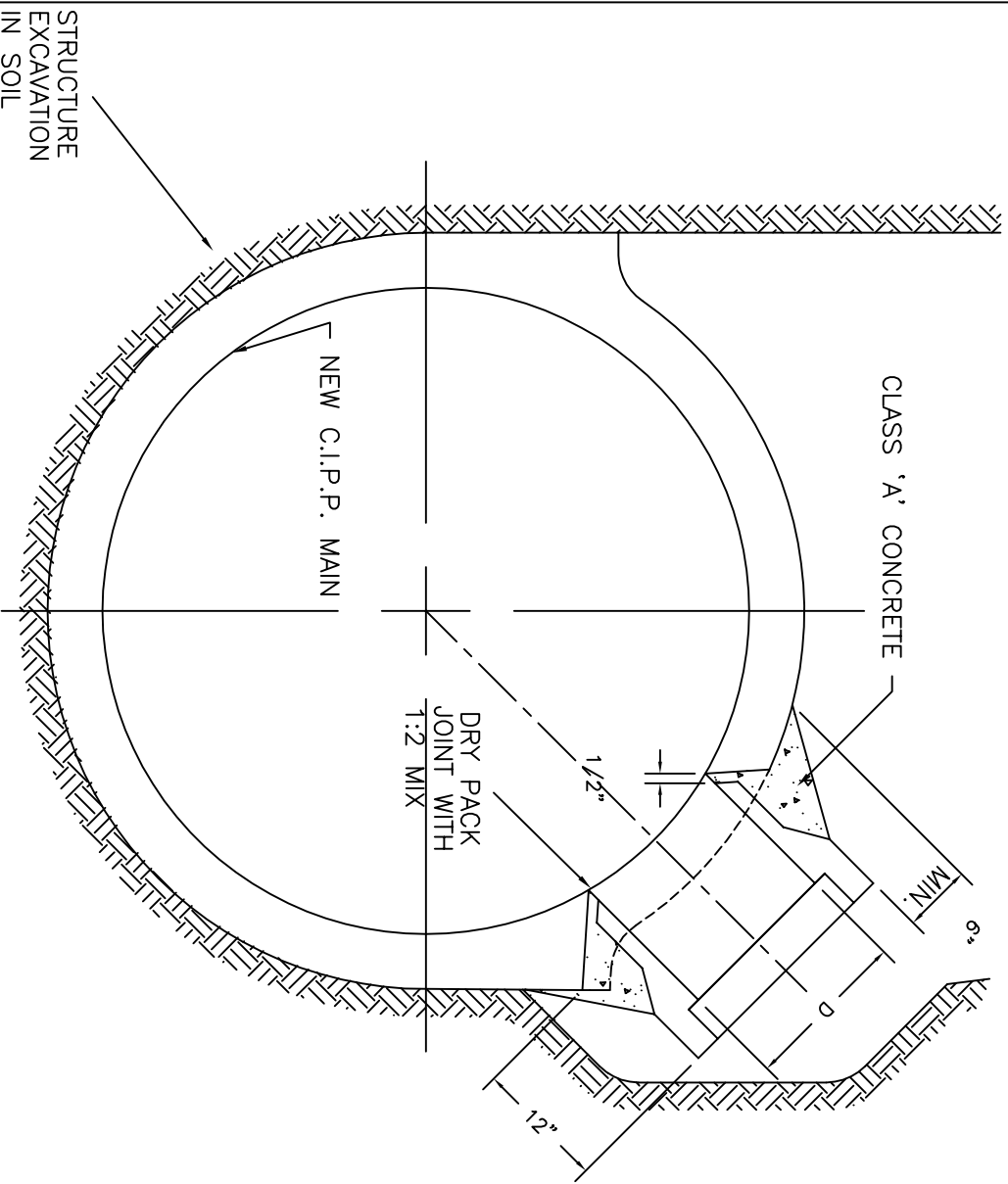
CONSTRUCTION SUB-GRADE DRAIN

APPROVED

Kenneth J. Davis
FOR CITY ENGINEER

7/9/92
DATE

DETAIL NO.
P1575



NOTES:

1. "D" SHALL BE 24" OR LESS.
2. PRECAST TEE SHALL BE INSTALLED WHERE THE MAINLINE PIPE IS SMALLER THAN THE MINIMUM OR THE CONNECTING PIPE IS LARGER THAN 24".
3. THE BELL END OF THE PRECAST CONCRETE PIPE SHALL BE INSTALLED AS SHOWN WHILE CONCRETE OF MAINLINE PIPE IS WET.
4. TRENCH WALL TO BE EXCAVATED AS NECESSARY PRIOR TO POURING MAINLINE PIPE TO ACCOMMODATE LATERAL STUB.
5. AXIS OF LATERAL STUB SHALL BE AS PER PLAN AND CROSS-SECTION.
6. THE LATERAL STUB SHALL SATISFY STRENGTH REQUIREMENTS AS SPECIFIED FOR THE LATERAL PIPE.
7. LATERALS FOR FUTURE CONNECTION SHALL BE MARKED. (SEE MAG DETAIL 427)

CONNECTING PIPE SIZE	MINIMUM SIZE MAIN
15"	24"
18"	36"
21"	42"
24"	48"

DETAIL NO.
P1576

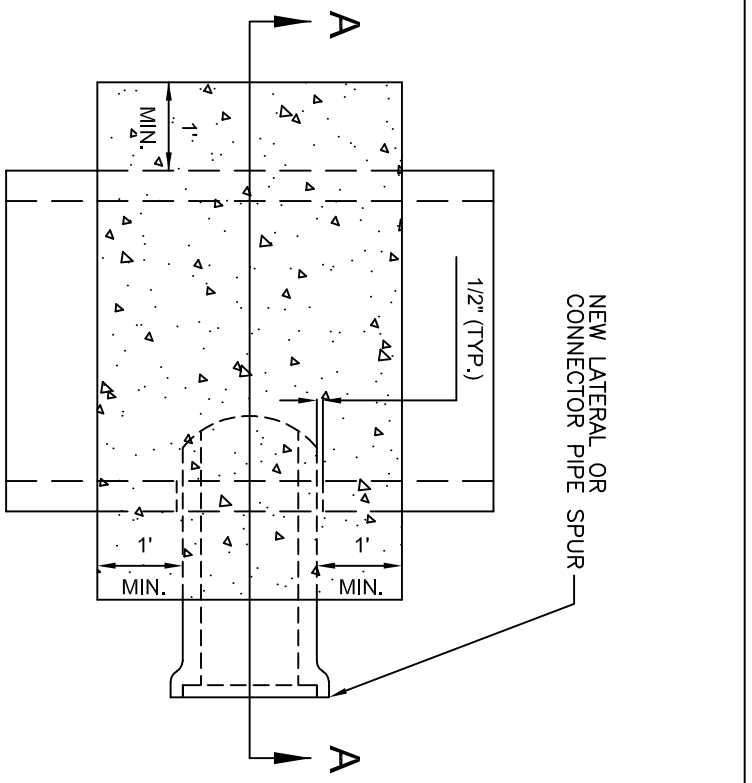


City of Phoenix
STANDARD DETAIL

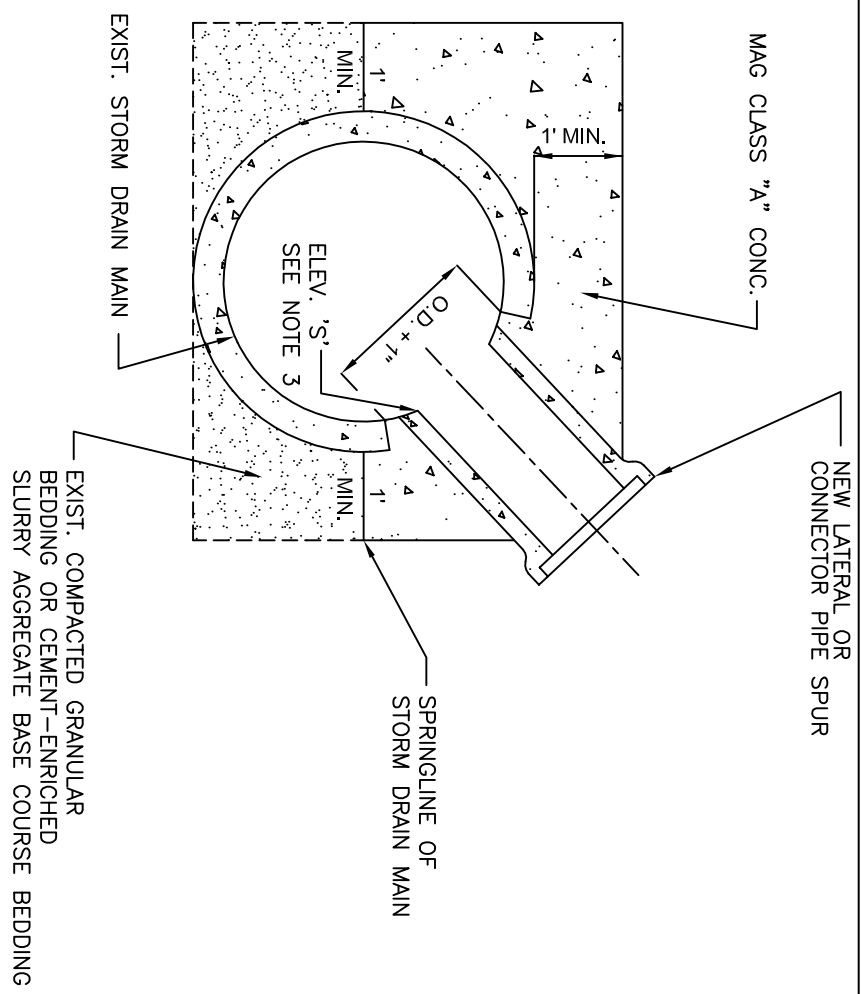
CAST-IN-PLACE PIPE
LATERAL PIPE CONNECTION

APPROVED
[Signature]
CITY ENGINEER
8/9/99
DATE

DETAIL NO.
P1576



PLAN VIEW



SECTION A-A

NOTES:

1. THIS DETAIL SHALL BE USED FOR CONNECTING NEW SMALL STORM DRAIN LATERALS OR CATCH BASIN CONNECTOR PIPES TO EXISTING STORM DRAIN MAINS.
2. THIS DETAIL SHALL ONLY BE USED WHEN OUTSIDE DIAMETER OF NEW LATERAL OR CONNECTOR PIPE SPUR IS LESS THAN OR EQUAL TO 1/2 THE INSIDE DIAMETER OF THE EXISTING STORM DRAIN MAIN.
3. THE CONNECTOR PIPE SPUR LINE SHALL BE CONSTRUCTED RADIAL TO THE MAIN, UNLESS OTHERWISE SHOWN BY ELEVATION 'S' AS SHOWN ON PLANS.
4. THE LENGTH OF THE SPUR STUB SHALL BE A MINIMUM OF 18" TO ALLOW FULL, CLEAN PIPE CONNECTION TO THE SPUR JOINT.
5. CONCRETE SHALL BE MAG CLASS "A".

DETAIL NO.
P1577

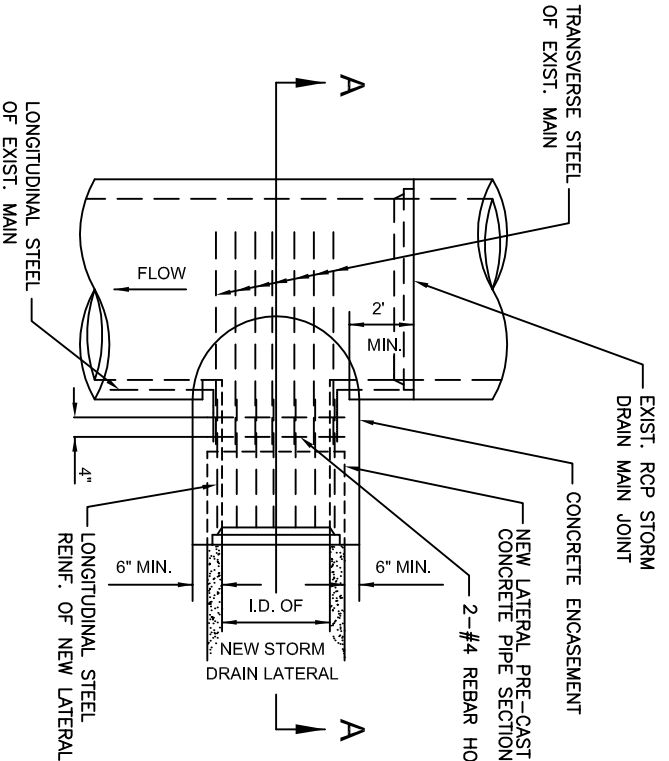


SMALL STORM DRAIN LATERAL CONNECTION OF CATCH BASIN CONNECTOR PIPE TO EXISTING STORM DRAIN MAIN

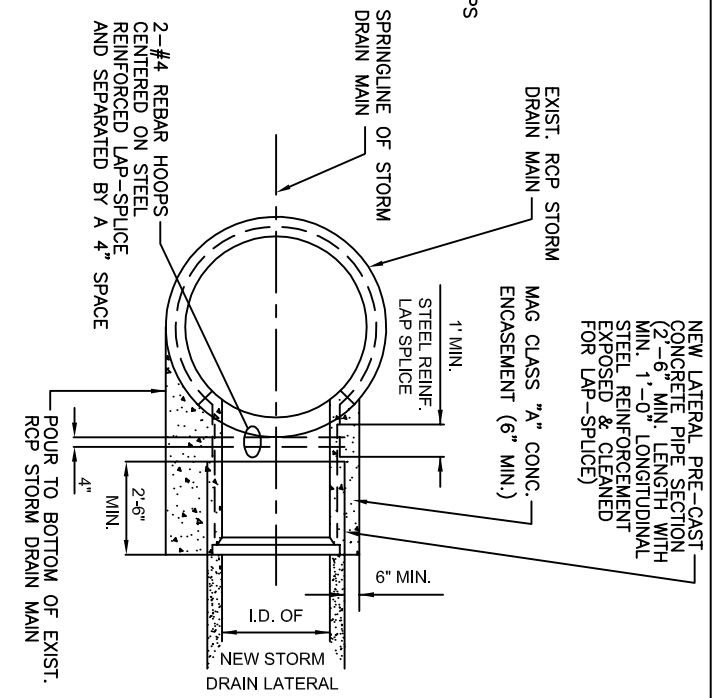
APPROVED
ACTING CITY ENGINEER
7/31/08
DATE

DETAIL NO.
P1577

REVISED 4/14/08



PLAN VIEW



SECTION A-A

NOTES:

1. THIS DETAIL SHALL BE USED FOR CONNECTING NEW LARGE RCP STORM DRAIN LATERALS OR CATCH BASIN CONNECTOR PIPES TO EXISTING RCP STORM DRAIN MAINS.
2. THIS DETAIL SHALL ONLY BE USED WHEN OUTSIDE DIAMETER OF NEW RCP STORM DRAIN LATERAL OR CONNECTOR PIPE IS GREATER THAN 1/2, BUT LESS THAN THE FULL INSIDE DIAMETER OF THE EXISTING STORM DRAIN MAIN, AND NO OTHER TYPE CONNECTION (SUCH AS A MANHOLE OR SPECIAL JUNCTION STRUCTURE) IS FEASIBLE OR DESIRABLE.
3. THE EXISTING STORM DRAIN MAIN SHALL BE EXPOSED AT THE PROPOSED LOCATION OF NEW CONNECTION. IF NECESSARY, THE LOCATION MAY BE MOVED DOWN STREAM SUCH THAT THE OUTSIDE OF THE NEW OPENING WILL BE A MINIMUM OF 2' FROM THE NEAREST JOINT IN THE EXISTING PIPE MAIN.
4. A CIRCULAR OPENING IN THE EXISTING MAINLINE PIPE SHALL BE CUT TO MATCH THE INSIDE DIAMETER OF THE NEW LATERAL. NORMAL TO THE PIPE SURFACE, WITHOUT DAMAGING STEEL. THE EXPOSED STEEL IN THE CIRCULAR OPENING OF THE EXISTING MAIN SHALL BE CUT TO PROVIDE RELATIVELY EQUAL-LENGTH REINFORCING STUBS AND BENT TO A HORIZONTAL POSITION IN PREPARATION FOR CONNECTION.
5. THE LONGITUDINAL STEEL ON THE END OF THE NEW STORM DRAIN LATERAL STUB SHALL BE PREPARED TO EXPOSE A MINIMUM 1'-0" OF CLEAN STEEL REINFORCEMENT FOR LAP-SPlicing AROUND THE PERIPHERY OF THE NEW STUB. THE EXPOSED STEEL OF THE EXISTING MAIN AND THE NEW STUB SHALL BE LAP-SPliced A MINIMUM OF 1'-0" AND REINFORCE-TIED WITH 2-#4 REBAR HOOPS.
6. THE NEW STUB AND JOINT SHALL THEN BE ENCASED WITH A MINIMUM OF 6" OF MAG CLASS 'A' CONCRETE. THE ENCASUREMENT SHALL EXTEND THE ENTIRE LENGTH OF THE STUB (MIN. 2'-6"). THE SPLICE-JOINT AREA BETWEEN THE PIPES SHALL BE NEATLY FORMED INSIDE TO CREATE A CLEAN, FORMED JOINT.

REVISED 4/14/08

DETAIL NO.
P1578



City of Phoenix
STANDARD DETAIL

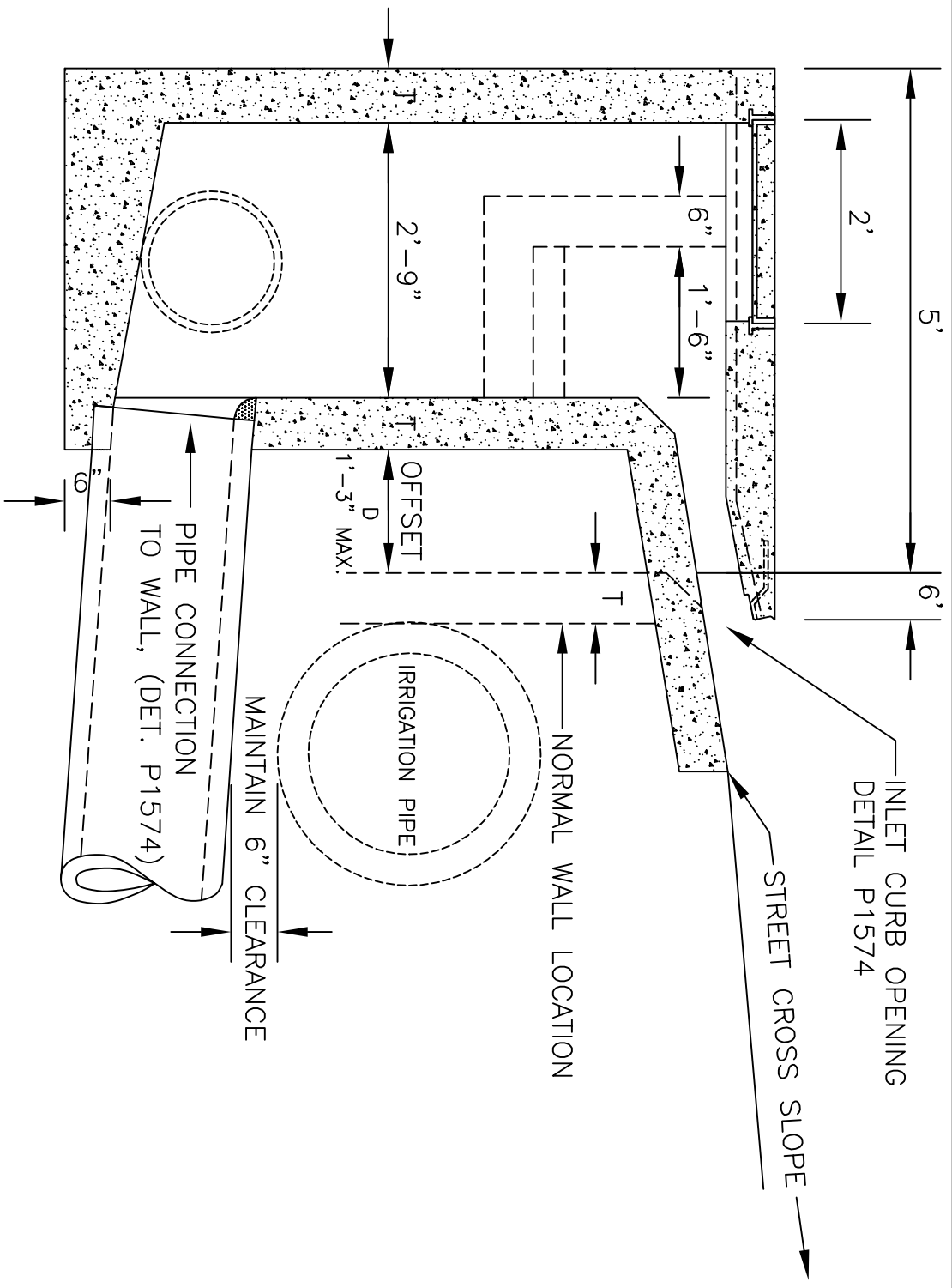
LARGE RCP STORM DRAIN LATERAL OR CATCH BASIN
CONNECTOR PIPE TO EXISTING RCP STORM DRAIN MAIN

APPROVED

[Signature]
ACTING CIVIL ENGINEER

7/31/08
DATE

DETAIL NO.
P1578



SECTION A-A

FOR ADDITIONAL INFORMATION & NOTES
 SEE CITY OF PHOENIX DETAIL P1569-1.

DETAIL NO.
 P1581



City of Phoenix
 STANDARD DETAIL

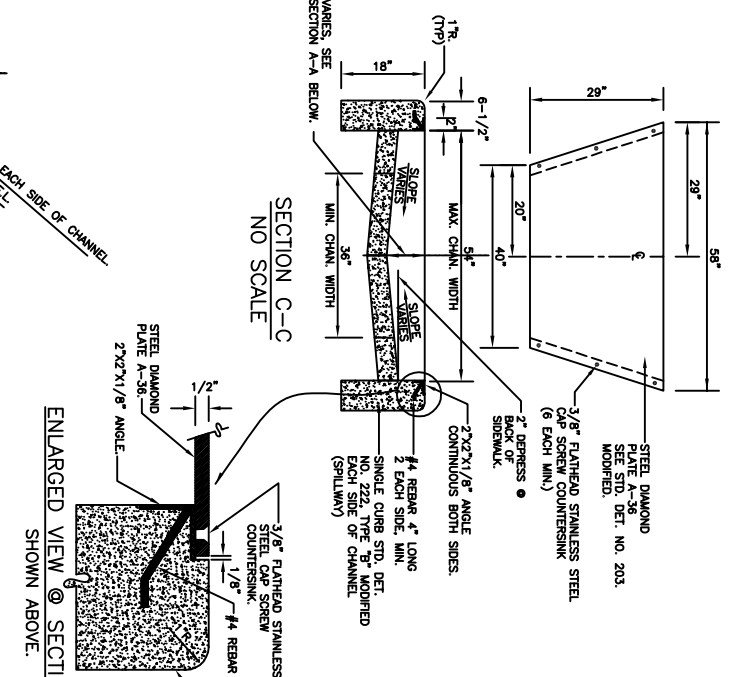
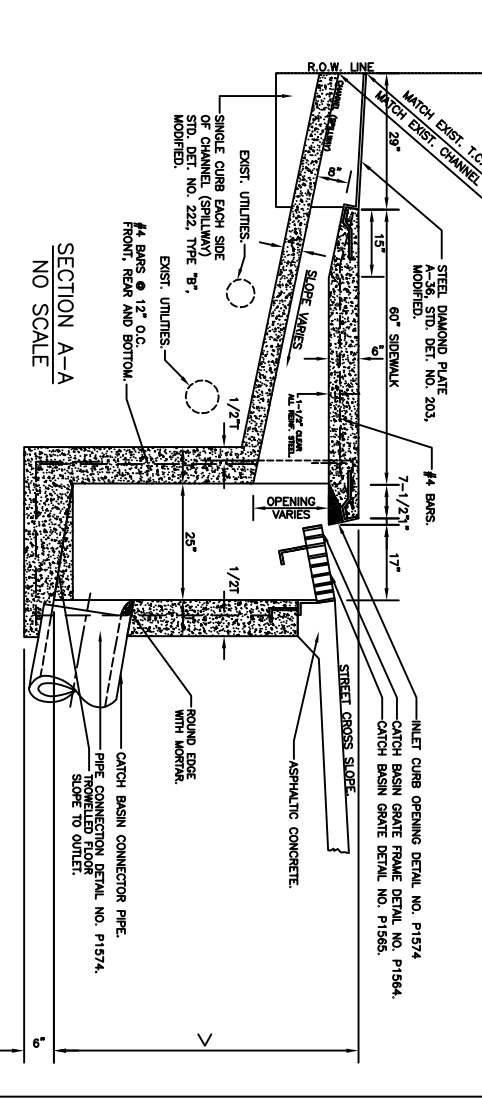
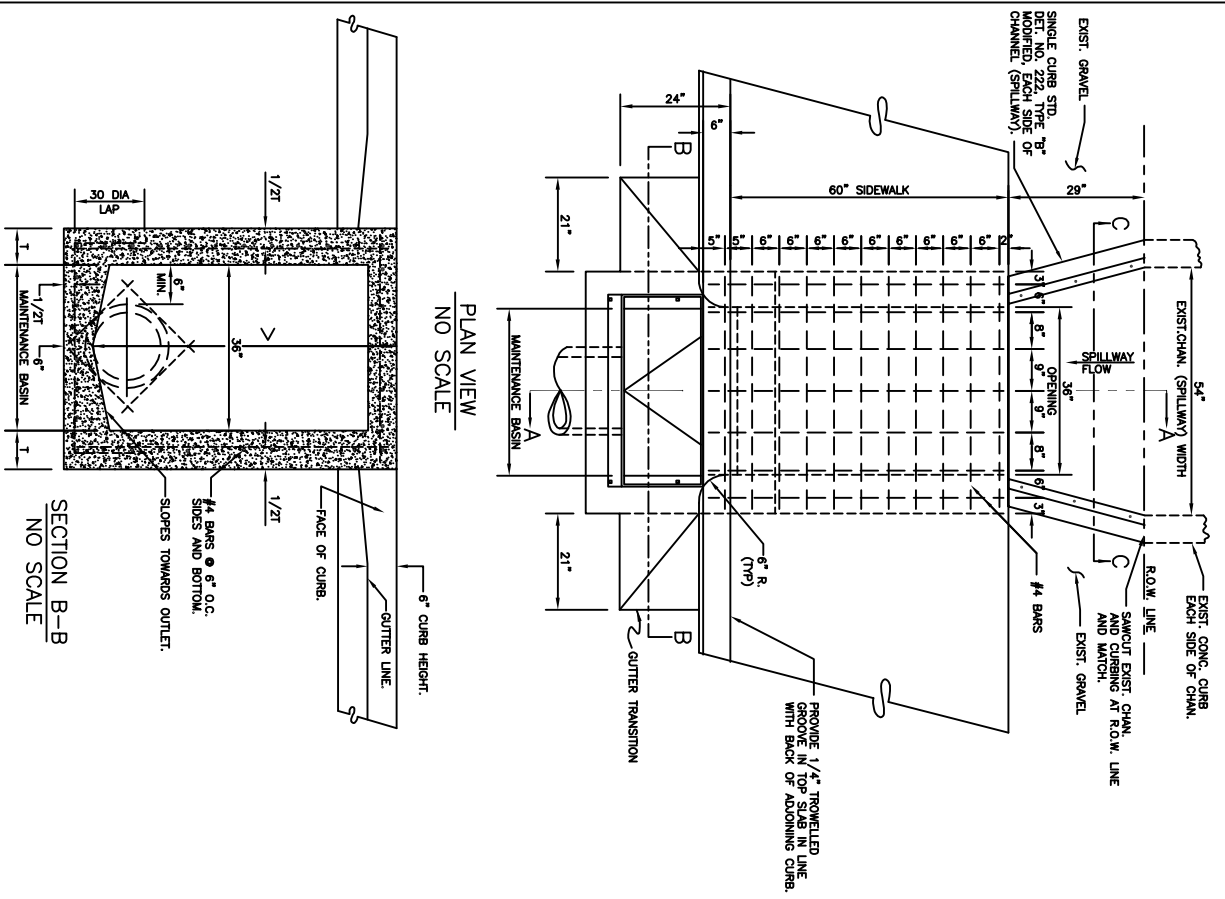
CATCH BASIN - TYPE "M" MODIFIED
 (OFFSET OPENING)

APPROVED

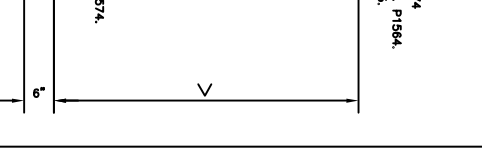
Maria S. Williams
 CITY ENGINEER

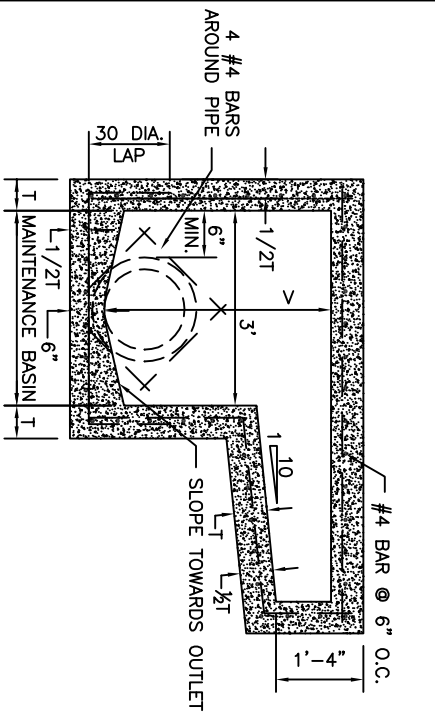
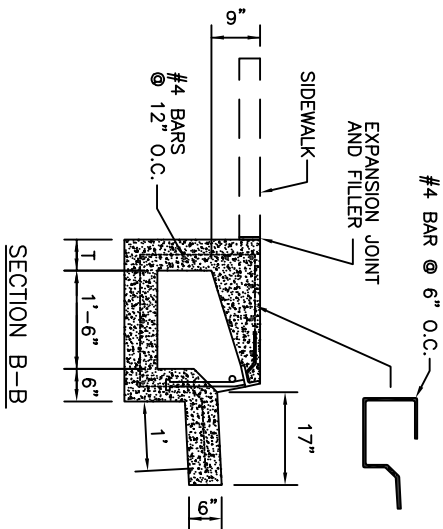
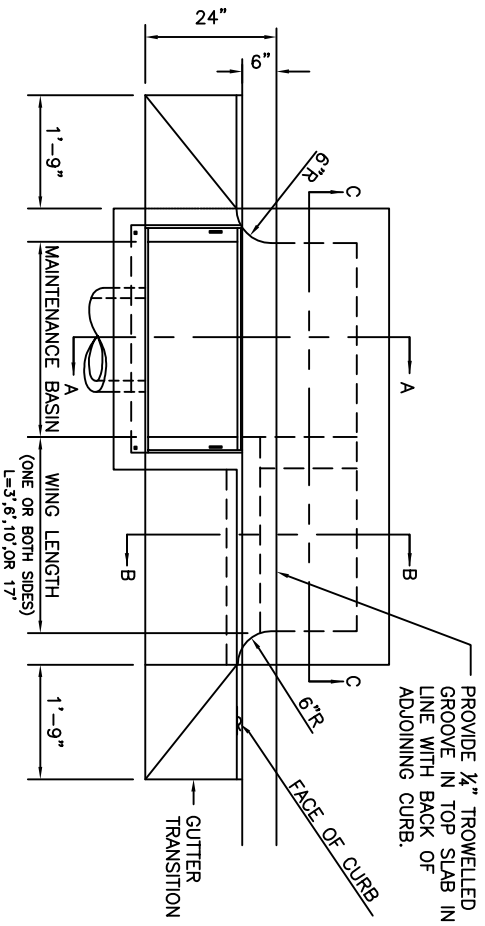
7/3/00
 DATE

DETAIL NO.
 P1581

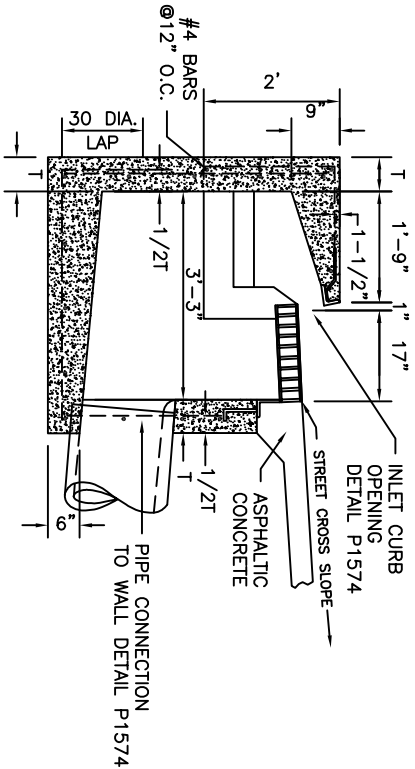


- GENERAL NOTES:**
1. ALL CONCRETE SHALL BE CLASS "A".
 2. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM TO A.S.T.M. SPECIFICATION NO. 615.
 3. CONNECTOR PILES MAY BE PLACED IN ANY WALL AS PER PLAN.
 4. FLOOR OF BASIN SHALL BE TROWELLED TO A HARD FINISH. SLOPE SHALL SLOPE FROM ALL DIRECTIONS TO OUTLET.
 5. CONNECTOR PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.
 6. THE FRAME SHALL BE DETAIL P1564, TYPE 2 AND THE GRATE SHALL BE DETAIL P1565, TYPE 2.
 7. TYPE IS DESIGNATED AS FOLLOWS:
CATCH BASIN WALL THICKNESS & DEPTH
1-6" IF V ≤ 4'
1-8" IF V > 4' TO 8'
V=4' UNLESS OTHERWISE SPECIFIED.





SECTION C-C



SECTION A-A

SECTION B-B

PLAN VIEW

1. ALL CONCRETE SHALL BE CLASS "A".
2. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM TO A.S.T.M. SPECIFICATION NO. 615.
3. CONNECTOR PIPES MAY BE PLACED IN ANY WALL AS PER PLAN.
4. FLOOR BASIN SHALL BE TROWELLED TO A HARD SMOOTH SURFACE AND SHALL SLOPE FROM ALL DIRECTIONS TO OUTLET.
5. CONSTRUCTION DRAINS SHALL BE INSTALLED IN ALL INLETS BUILT WITH PAVING PROJECTS (SEE DETAIL P1575).
6. CONNECTOR PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE THE CONCRETE IS POURED.
7. THE FRAME SHALL BE DETAIL P1564, TYPE 2 AND THE GRATE SHALL BE DETAIL P1565, TYPE 2.
8. TYPES ARE DESIGNATED AS FOLLOWS:
 "R" MODIFIED -- NO WING;
 "R-1" MODIFIED -- ONE WING;
 "R-2" MODIFIED -- TWO WINGS.

CATCH BASIN WALL THICKNESS & DEPTH	
T=6"	IF V=8' OR LESS.
T=8"	IF V=8'-1" TO 16'
V=4'-0" UNLESS OTHERWISE SPECIFIED.	

DETAIL NO.
P1584



CATCH BASIN - TYPE "R" MODIFIED
(WITH WING AND OFFSET OPENING)

APPROVED
ACTING CIVIL ENGINEER
7/31/08
DATE

DETAIL NO.
P1584

REVISED 4/14/08