STORM SEWER & DRAINAGE
C-500 TO C-509
NOTES:
1. FULL DEPTH EXPANSION JOINT EXTENDED THROUGH CURB AND GUTTER (TYP.).
   EXPANSION JOINT FILLER SHALL BE 1/2" BITUMINOUS PRE FORMED EXPANSION JOINT
   FILLER ASTM D-1751. (FULL DEPTH).
2. CONTRACTION JOINT.
3. STORM DRAIN INLET MARKER PER C-508.
4. FOR OPENINGS GREATER THAN 4 FT., SEPARATE CHAMBERS WILL BE CONSTRUCTED IN
   4 FT. INCREMENTS WITH A CONTRACTION JOINT OVER EACH INTERIOR SUPPORT.
5. STEEL MAT TO BE SUPPORTED ON CHAIRS PRIOR TO CONCRETE PLACEMENT. MINIMUM
   CONCRETE COVER TO BE 1 1/2" OVER REINFORCING BAR.
6. EXPOSED ANGLE IRON TO BE PAINTED WITH ONE SHOP COAT OF NO. 1-D PAINT AND
   TWO FIELD COATS OF NO. 10 PAINT AS PER MAG. Sect. 790.
7. 6" - 12" COBBLE TO BE USED FOR SPLASH PAD.
8. TOP SHALL BE MONOLITHIC INCLUDING 4' WINGS.
9. CONCRETE SHALL BE CLASS 'A' PER MAG SECTION 725.
10. A SAFETY RAIL PER MAG STD. DTL. 145 IS REQUIRED WHEN DROP EXCEEDS 30°.
MODIFIED FLAT-BOTTOM MANHOLE CONE. MORTAR TO C.I. RING

MIN. 30" DIA. BOLTED C.I. RING AND GRATE.

MIN. 30" DIA. BOLTED C.I. RING AND COVER WITH THE RAISED LETTERS 'STORMWATER ONLY'.

3. GRADED PARKWAY, OR A.C. PAVING.

5. COMPACTED ABC IN PAVED AREAS.

6. DEBRIS SHIELD: ROLLED 16 GA. x 24" LENGTH W/ VENTED ANTI-SIPHON AND INTERNAL 0.265" MAX. S.W.O FLATTENED EXPANDED STEEL SCREEN x 12" LENGTH, FUSION-BONDED EPOXY.

7. PRECAST CONCRETE LINER, 4000 PSI 48" ID, 54" OD.

8. MIN. 6" DIA. DRILLED SHAFT.

9. SUPPORT BRACKET (TYP), FORMED 12 GA. STEEL FUSION BONDED EPOXY COATED.

10. 6" DIA. SCHEDULE 40 PVC OVERFLOW PIPE.

11. 6" DIA. CORRUGATED HDPE PER MAG SECT. 738 INJECTION PIPE, NO PERFORATIONS BELOW SETTLING CHAMBER.

12. NONWOVEN GEOTEXTILE FABRIC MIRIFL 140NL OR APPROVED EQUAL PLACED AFTER OVERFLOW PIPE HAS BEEN INSTALLED. RETAIN WITH A FEW SPRINKLES OF ROCK AROUND PERIMETER.

13. 3/8" TO 1-1/2" WASHED ROCK.

14. DRAINAGE SCREEN: 5CH. 40 PVC 0.12" SLOTTED WELL SCREEN 32 SLOTS PER ROW/FT.

15. MIN. 4" DRILLED SHAFT.

16. FABRIC SEAL, UV RESISTANT GEOTEXTILE. COVER GRATE UNTIL UNTIL PAVING AND/OR LANDSCAPING IS COMPLETE.

17. 4" DIA. 5CH. 40 PVC CONNECTOR PIPE W/ VENTED ANTI-SIPHON INTAKE & FLOW REGULATOR.

18. MIN. 4 QUART CAPACITY ABSORBENT.

19. 1 SACK ABC SLURRY EXCEPT IN LANDSCAPED INSTALLATIONS WITH NO PIPE CONNECTIONS.

20. 8 PERFORATIONS PER LINEAR FOOT FOR BOTTOM 3 FEET OF INJECTION CHAMBER.

21. 6 MIL PLASTIC LINER WATER STOP.

22. INTAKE SCREEN, SCH 40 PVC 0.12" MODIFIED SLOTTED WELL SCREEN WITH 32 SLOTS PER ROW/FT. 48" OVERALL LENGTH WITH TRI-C END CAP.

* NOTE - OVERFLOW DEPTHS AND INVERT OF CONNECTOR PIPE MUST BE BELOW THE INVERTS OF ALL UPSTREAM STORM DRAIN PIPE.

** NOTE - RIM ELEVATION SHALL BE FLUSH TO ROAD SURFACE OR TURF. RIM ELEVATION SHALL BE 1/8" ABOVE DECOMPOSED GRANITE (DG) LANDSCAPED AREAS.

BASED UPON 'MAXWELL PLUS' BY TORRENCE RESOURCES.

DETAIL NO. C-501
CITY OF CHANDLER STANDARD DETAIL

DRYWELL SYSTEM DETAIL AND SPECIFICATIONS

APPROVED: __________ CITY ENGINEER
DATE: 05-10-2018

DETAIL NO. C-501
NTS
1. MODIFIED FLAT-BOTTOM MANHOLE CONE, MORTAR TO C.I. RING.
2. 2 SACK ABC SLURRY BACKFILL
3. MIN. 30" Ø BOLTED C.I. RING AND GRATE
4. MIN 30" Ø BOLTED C.I. RING AND COVER WITH WORKING 'STORMWATER ONLY' IN RAISED LETTERS
5. GRADED BASIN OR PAVING
6. COMPACTED ABC IN PAVED AREAS
7. DEBRIS SHIELD: ROLLED 1 6 GA. x 24" LENGTH W/ VENTED ANTI-SIPHON AND INTERNAL 0.265" MAX. SWO FLATTENED EXPANDED STEEL SCREEN x 12" LENGTH, FUSION-BONDED EPOXY.
8. PRECAST CONCRETE LINER, 4000 PSI 48" ID, 54" OD
9. MIN 6" DRILLED SHAFT
10. SUPPORT BRACKET, FORMED 12 GA. STEEL. FUSION BONDED EPOXY COATED STEEL.

11. 10" Ø SCH 40 PVC OVERFLOW PIPE
12. 6" DIA. CORRUGATED HDPE PER MAG SECT. 738 INJECTION PIPE, NO PERFORATIONS BELOW SETTLING CHAMBER.
13. 4" THICK CONCRETE BASE
14. 3/8" TO 1 1/2" WASHED ROCK
15. DRAINAGE SCREEN: SCH. 40 PVC 0.12" SLOTTED WELL SCREEN 32 SLOTS PER ROW/FT.
16. MIN 4" Ø DRILLED SHAFT
17. FABRIC SEAL, UV RESISTANT GEOTEXTILE. COVER GRATE UNTIL PAVING AND/OR LANDSCAPING IS COMPLETE.
18. 4" Ø SCH 40 PVC CONNECTOR PIPE
19. absorbed (NOT USED)
20. SLURRY BACKFILL
21. absorbed (NOT USED)
22. ABSORBENT - HYDROPHOBIC IMBIBER PILLOW, MIN. 128 OZ. CAPACITY.

23. FILTRATION CHAMBER - MIN 833 GAL. CAPACITY
24. PRIMARY SEPARATOR CHAMBER - MIN 833 GAL. CAPACITY
25. IMBIBATION CHAMBER - MIN 833 GAL. CAPACITY
26. TREATMENT INTERCEPTOR - MIN 2500 GAL TOTAL CAPACITY
27. SILT FILTER (2 EACH) - MIN 3600 G.S.I. POLYPYROLE FABRIC MESH
28. FASTFLO ASSEMBLY (2 EACH) - HYDROPHOBIC IMBIBER BEAD DRAIN FIELD
29. OVERFLOW PIPE - 4" Ø SCH 40 PVC WITH ANTI-SIPHON VENT, FLOW REGULATOR AND SCREEN.

BASED UPON ENVIRONMENT 20" BY TORRENT RESOURCES

DETAIL NO. C-502

CITY OF CHANDLER
STANDARD DETAIL

PRETREATMENT DRYWELL SYSTEM

APPROVED: CITY ENGINEER

DATE: 05-10-2016

DETAIL NO. C-502

NTS
TRASH RACK HINGE

SECTION A-A

TYPICAL DIMENSIONS

<table>
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<th>TYPE</th>
<th>PIPE DIA.</th>
<th>NO. OF BARS (I.D./4 + 1&quot;)</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
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<td>A</td>
<td>1 1/2&quot;</td>
<td>5</td>
<td>2 1/2&quot;</td>
<td>25&quot;</td>
<td>PIPE DIA + 4&quot; (TYP)</td>
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<tr>
<td></td>
<td>1 1/8&quot;</td>
<td>6</td>
<td>2 5/8&quot;</td>
<td>23&quot;</td>
<td>PIPE DIA + 4&quot; (TYP)</td>
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* ROUND UP TO NEXT FULL NUMBER

OTHER BAR SIZES

<table>
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<th>TYPE</th>
<th>PIPE DIA.</th>
<th>NO. OF BARS (I.D./4 + 1&quot;)</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
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X = (# BARS X 4") + 1"
Y = X + 4"
Z = I.D. + 3" + 8" (UP TO 4"

NOTES:
1. THIS DETAIL IS APPLICABLE AT ALL OPEN ENDS OF PIPE 1 1/2" OR MORE IN DIAMETER.
2. COAT ALL WELD AREAS WITH ZINC RICH PAINT.
3. DESIGN ENGINEER TO PROVIDE DETAILS FOR PIPE I.D.'S GREATER THAN 4" IN DIAMETER.

DETAIL NO. C-503 NTS
**Plan**

**Section B-B**

- Grate frame: 29" x 29" I.D.
- B: 8" x 24"
- C: Beveled sides

**Detail of Angle Frame Grate Support**

- 3/4" 1/4" Clearance
- 3" x 2" 1/2" x 1/2" L.V.
- 1/2" x 3" 1/2" Bolt or welded lug, 4 each - one on each corner
- 1/2" Dia x 1" Eye Bolt
- 2 3/8" x 3 1/8" x 1/4" beveled sides for welds
- Weld into 2nd space
- Bike safe

**Bar Grate**

- 1/4" x 1 3/4" x 24" Chain

**Section A-A**

- Slope floor to outlet
- Outlet to drywell pipe size as required by plans

**Section C-C**

- 1/4" x 1 3/4" x 24" chain to 1" x 6" eye bolt in wall. Bend bolt 1" on end.
- 3 1/2" 3/4" 1/4"
- 1/2" R
- 1/2" L.V.
- 1/4" Clearance

**Double Grate**

- Plan

**Single Grate**

- Plan

**Retention Basin Inlet**

Detail No. C-504

City of Chandler Standard Detail

Approved: City Engineer

Date: January 11, 2002

Detail No. C-504
(2) 2 1/2" x 1/4" x 24" END BARS

(7) 1/2" Dia. x 24" TRANSVERSE RODS, 5" ON CENTER
F LUSH WITH GRATE SURFACE

(16) 3 1/2" x 1/2" x 39 1/2" BEARING BAR
APPROXIMATELY 1 7/8" ON CENTER

3/16" EACH BAR & ROD

23 5/8"

40"

39 1/2"

1 1/4"

1 1/4"

2 1/2"

3 1/2"

TYPE 1

* DIMENSION WILL VARY DEPENDING UPON CATCH BASIN PIPE SIZE.

NOTES:
1. ALL STEEL SHALL BE IN ACCORDANCE WITH ASTM A-36.
2. WELDING SHALL BE IN ACCORDANCE WITH AWS 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 MAG SECTION 790.
5. THE GRATE SHALL BE FABRICATED TO WITHIN 1/8" OF SPECIFIED DIMENSIONS.
NOTES:
1. ALL CONCRETE SHALL BE M.A.G. CLASS 'A'.
2. CONNECTOR PIPES MAY BE PLACED IN ANY WALL AS PER PLAN.
3. FLOOR BASIN SHALL BE TROWELLED TO A HARD, SMOOTH SURFACE AND SHALL SLOPE FROM ALL DIRECTIONS TO OUTLET.
4. CONNECTOR PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.
5. PLANS SHOULD SPECIFY GRATE ELEVATION AND INVERT ELEVATION.
6. RETENTION BASIN INLET MAY BE PREFabricATED PROVIDING A SHOP DRAWING IS APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
7. THE FRAME SHALL BE MAG STD DETAIL 540-2, PLAN II, GRATE PER CHANDLER DET. #C-506.

BELOW GRADE RETENTION BASIN INLET (BUCKET BOX)
**SINGLE CATCH BASIN**

- **FLOW:**
- **GRATE FRAME AND FRAME ANCHORS:** MAG STD. DTL. #540-2 PLAN-2

**DOUBLE CATCH BASIN**

- **12' PIPE**
- **SIDE BY SIDE BOXES WITH 12' CONNECTOR PIPE**

**NOTES:** (CONT)

8. **STEPS (MAG DET. 428 POLYPROPYLENE)**
   - V = 3' (INCL) PLACE ONE STEP 12' ABOVE THE FLOOR OF THE BASIN.
   - V OVER 3', PLACE STEPS AT 12' INTERVALS FROM THE FLOOR OF THE BASIN WITH THE TOP STEP AT 12' (MIN) BELOW THE TOP OF GRATE.

9. **ALL EXPOSED METAL HARDWARE SHALL BE GIVEN ONE SHOP COAT OF NO. 1 PAINT AND 2 FIELD COATS OF NO. 10 PAINT AS PER M.A.G. SECTION 790.**

10. **ALL METAL UNITS SHALL BE FABRICATED FROM STRUCTURAL STEEL EXCEPT AS NOTED. STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH ASTM A-36.**

11. **WELDING SHALL BE IN ACCORDANCE WITH MAG WELDING SPECIFICATIONS.**
CONTINUOUS CURB OPENING
FRONT AND BACK. SEE DETAIL THIS SHEET

5' MIN (TYP)
F.G @ 4:1 MAX
STORM DRAIN INLET PIPE. SEE PLANS FOR SIZE # INVERT

SECTION A-A

12' Ø PIPE TO DRYWELL INTERCEPTOR CHAMBER. SEE PLANS FOR INVERT
LOOSE RIP-RAP (D50=9") 18' DEEP x 5' WIDE COLLAR AROUND STRUCTURE
FINISHED GRADE

SECTION B-B

3"x4"x1/2" L FRAME
CURB OPENING

2 x 1/2" ANCHOR BOLTS EACH END OF BEAM

CATCH BASIN WALL THICKNESS
T = 8" IF V IS UP TO 8'
(IF V EXCEEDS 8', SPECIAL DESIGN IS REQUIRED)
V = 3'-0" UNLESS OTHERWISE NOTED

P. G @ 4:1 MAX
1/2" STOVE BOLT, 2 PER FRAME EACH END (COUNTER SINK BOLT HEADS)
5 W 19
L = 3' - 0”

BELOW GRADE RETENTION BASIN INLET (BUBBLER BOX)
NOTES

1. MATERIAL: CAST ALUMINUM
2. THE WIDTH OF INDIVIDUAL LETTERS SHALL BE SELECTED SO THAT LETTERS AND WORDS ARE EQUALLY SPACED AND BALANCED.
3. LETTERS SHALL BE 1/2" IN HEIGHT. MARKER LAYOUT SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
4. MARKERS SHALL BE ALIGNED WITH THE CENTER OF DRAINAGE INLETS AT THE TOP OF CURB.

DETAIL NO. C-508
CITY OF CHANDLER STANDARD DETAIL

STORM DRAIN INLET MARKER

APPROVED: CITY ENGINEER
DATE: 01/08/69

DETAIL NO. C-508
NTS
<table>
<thead>
<tr>
<th>DIAM (D)</th>
<th>TRENCH SETBACK</th>
<th>SPACING WIDTH</th>
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<tr>
<td>96&quot;</td>
<td>18&quot;</td>
<td>30&quot;</td>
</tr>
<tr>
<td>&gt; 96&quot;</td>
<td>21&quot;</td>
<td>36&quot;</td>
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**NOTES:**

1. TRENCH EXCAVATION, BACKFILLING AND COMPACTION SHALL BE PER MAG SECTION 601, UNLESS OTHERWISE SPECIFIED.

2. GRANULAR MATERIAL SHALL BE 3/8" MINUS OPEN-GRADED CRUSHED ROCK DEPOSITED IN 8" LIFTS UNIFORMLY ON EACH SIDE OF THE PIPE AND COMPACTED USING VIBRATING COMPACTOR.

3. AGGREGATE BASE COURSE (ABC) MATERIAL CONFORMING TO MAG SECTION 702 MAY BE SUBSTITUTED FOR THE GRANULAR MATERIAL WITH CITY APPROVAL. IN THAT CASE, COMPACTION SHALL BE AT LEAST 95% OF AASHTO T-99 STANDARD PROCTOR DENSITY, AND THE SEPARATION FABRIC MAY BE OMITTED.

4. BACKFILL PLACEMENT AND COMPACTION SHALL BE MONITORED AND CERTIFIED BY A GEOTECHNICAL ENGINEERING FIRM RETAINED BY THE OWNER OR CONTRACTOR.

5. SEPARATION FILTER FABRIC SHALL BE NON-WOVEN, MODERATE SURVIVABILITY SUCH AS CONTECH C-45, MIRAFI 160N, US FABRICS US 160NW, CARTHAGE MILLS FX-60HS, OR APPROVED EQUAL.