DESIGN DETAILS

UNIVERSITY OF UTAH SUPPLEMENT

May 25, 2016
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1. BONNET FLANGES 600 LB. ANSI.
2. RADIAL FLANGE HTW. SUPPLY & RETURN 600 LB. ANSI.
3. DRAIN CONNECTION AS REQUIRED.
4. VENT CONNECTIONS AS REQUIRED.
5. TUBE SUPPORTS AS REQUIRED.
6. TRACK & TRACK SUPPORTS.
7. TUBE PASS PARTITIONS AS REQUIRED. (GASKETED)
8. TUBE SHEET.
9. TUBE BUNDLE.
10. SHELL.
11. WATER INLET & DISTRIBUTION PIPE. (BUTT WELD)
12. SPLASH BATTLE IF REQUIRED.
13. SEPARATOR.
14. CRADLE. MAKE PROVISIONS FOR EXPANSION OF UNIT.
15. CONCRETE OR STRUCTURAL SUPPORT PIER.
16. MINIMUM 1"x15" MAN-HOLE.
17. ROLLED 3"x3"x1/4" INSULATION RING. WELD BOTTOM HALF CONTINUOUS. TOP HALF 2" IN 4" TO SHELL.
18. STEAM OUTLET CONNECTION. MINIMUM 150 LB. ANSI.
19. BLOWDOWN CONNECTION. (BUTT WELD)
20. SAFETY VALVE CONNECTION.
21. COUPLING FOR PRESSURE CONTROL.
22. COUPLING FOR PRESSURE GAGE.
23. COUPLING FOR CHEMICAL FEED.
24. COUPLING FOR CONTINUOUS BLOWDOWN.
25. COUPLING FOR WATER COLUMN.
26. COUPLING FOR WATER LEVEL CONTROL.
27. COUPLING FOR HIGH LEVEL CONTROL.
28. COUPLING FOR LOW LEVEL CONTROL.
29. COUPLING FOR VENT CONNECTION.
30. FOR MATERIAL TO BE USED SEE SPECIFICATION.
31. FOR INSULATION OF UNIT SEE SPECIFICATION.
32. FOR PAINT SEE SPECIFICATION.
33. FOR REQUIRED DESIGN & TEST PRESSURES AND DESIGN TEMPERATURES, SEE SPECIFICATIONS.
34. SHOW DIMENSION FOR SPACE REQUIRED TO REMOVE BUNDLE.
35. STEAM SPACE TO OCCUPY 55% VOLUME OF SHELL.
FLOAT CAGE FOR LEVEL CONTROL, HIGH & LOW WATER LEVEL CONTROLS, ALARM SWITCHES, ETC.

PLUG (TYPICAL)
GLOBE DRAIN VALVE.
EXTEND TO EQUIPMENT DRAIN.
(DWG. NO. HTW-8)

NORMAL WATER LEVEL.
ISOLATING GATE VALVE.
UNION.

SINGLE POST

NOTE:
PIPE SIZES SHALL SUIT FLOAT CAGES & SWITCHES.

FLOAT CAGE FOR LEVEL CONTROL, HIGH & LOW WATER LEVEL CONTROLS, ALARM SWITCHES, ETC.

PLUG (TYPICAL)
GLOBE DRAIN VALVE.
EXTEND TO EQUIPMENT DRAIN.
(DWG. NO. HTW-8)

NORMAL WATER LEVEL.
ISOLATING GATE VALVE.
UNIONS.

MULTIPLE Floats FOR SAME TANK CONNECTIONS
HEAT EXCHANGE SYSTEM SCHEMATIC
UTILITY ROOM PIPING SCHEMATIC FOR HTW SPACE HEATING CONVERTER & HTW DOMESTIC HOT WATER GENERATOR

NOTES:
1. HTW DOMESTIC HOT WATER GENERATOR.
2. HTW SPACE HEATER CONVERTER.
3. TEMPERATURE CONTROLLER INSTRUMENT.
4. DOUBLE VALVED VENTS & DRAINS INSTALLED ON ALL CONVERTER HEADS AS REQUIRED FOR PROPER DRAINING & VENTING.
5. DOUBLE VALVED SEE SAVES FOR SPECIAL VALVE WELD J. LONG NIPPLE WITH FLANGE END INTO VALVE, DISCHARGE END OF NIPPLE TO HAVE MALE PIPE THREAD.
6. THREE VALVE BY-PASS
7. PROVIDE REQUIRED STRAIGHT RUN OF PIPE FOR PROPER FLOW MEASUREMENT AT ORIFICE PLATE OR SENSOR.
8. DOUBLE VALVED DRAIN PROVIDE AT ALL LOW POINTS.
9. SECONDARY SYSTEM LINES.
10. VENT AT HIGH POINT OF LINES. ORIFICE LINES TO HIGH POINT TYPICAL ALL HTW SUPPLY & RETURN LINES.
11. VALVED DRAIN EXTEND TO DRAIN OR FLOOR.
12. FOR TYPICAL HTW SERVICE ENTRANCE, DRAWING NO. HTW-61.
13. VENT EXTEND TO FLOOR.
14. PROVIDE TEMPERATURE WELLS & OTHER SENSING POINTS FOR CENTRAL CONTROL SYSTEM.
UTILITY ROOM PIPING SCHEMATIC FOR HTW STEAM GENERATOR

NOTES:

1. HTW STEAM GENERATOR.
2. CONDENSATE TANK.
3. CHEMICAL FEED TANK & PUMP. SEE SPECIFICATIONS.
4. WATER SOFTENER.
5. BRINE & SALT STORAGE TANK.
6. BLOWDOWN TANK.
7. HIGH LEVEL CUT-OFF & ALARM.
8. WATER LEVEL CONTROL CYCLES PUMPS.
9. LOW LEVEL CUT-OFF & ALARM.
10. MAKE-UP CONTROL VALVE.
11. LOW LEVEL PUMP CONTROL.
12. WATER METER.
13. DOUBLE VALVED VENTS & DRAINS INSTALLED ON ALL STEAM GENERATOR HEADS & PIPING AS REQUIRED FOR PROPER VENTING & DRAINING. WELD 3" LONG NIPPLE WITH PLAIN END INTO VALVE DISCHARGE END OF NIPPLE TO HAVE MALE PIPE THREAD.
14. DOUBLE VALVED, WELD 3" LONG NIPPLE WITH PLAIN END INTO VALVE DISCHARGE END OF NIPPLE TO HAVE MALE PIPE THREAD. SEE SPECS. FOR SPECIAL VALVES.
15. THREE VALVE BY-PASS.
16. SHUT-OFF VALVE OR NON-RETURN VALVE IF MORE THAN ONE HTW STEAM GENERATOR CONNECTED IN PARALLEL.
17. VALVED DRAINS AT LOW POINTS. EXTEND TO DRAIN.
18. DROP PAN ELBOWS WITH DRAINS.
19. FEED PUMPS. PROVIDE STAND-BY AS REQUIRED.
20. AUTOMATIC CONTINUOUS BLOWDOWN. SEE SPECIFICATIONS.
21. TEMPERATURE REGULATOR.
22. SAMPLE CONNECTION.
23. RELIEF VALVE OR ORIFICE TO SUIT TYPE PUMP FURNISHED.
24. RETURN TO CHEMICAL FEED TANK.
25. PROVIDE REQUIRED STRAIGHT RUN OF PIPE FOR PROPER FLOW MEASUREMENT AT ORIFICE PLATE.
27. OVERFLOW & VALVED DRAIN EXTEND TO DRAIN FUNNEL.
28. PRESSURE CONTROLLER.
29. FLOAT & GAGE SIGHT GLASS ASSEMBLY.
30. PROVIDE TEMPERATURE WELLS & OTHER SENSING POINTS FOR CENTRAL CONTROL SYSTEM.
31. REDUCTION PRESSURE BACKFLOW PREVENTER.
32. PRESSURE REGULATING VALVE.
33. BLOWDOWN HEAT RECOVERY FOR HUMIDIFICATION SYSTEM.
SEE SECTION B. IN DESIGN STANDARDS.
**NOTES:**

1. PIPING & GLOBE VALVES TO BE OF SAME PRESSURE CLASS AS MAIN PIPING.

2. ALL GAGES OR DEVICES MEASURING RAPIDLY FLUCTUATING OR PULSATING PRESSURES TO BE PROTECTED BY PRESSURE SNUBBERS.

3. REMOTE CONNECTED GAGES TO BE CALIBRATED TO COMPENSATE FOR STATIC FLUID HEAD IN GAGE WHEN DIRECTED BY ENGINEER.

**DIRECT CONNECTION**

**REMOTE CONNECTION**

**DETAIL "A"**
NOTES:
1. BONNET FLANGES: 600 LB, ANSI
2. RADIAL FLANGE HTW SUPPLY & RETURN 600 LBS, ANSI
3. INLET FLANGE
4. OUTLET FLANGE
5. TUBE SHEET
6. TUBE BUNDLE
7. SHELL
8. BATTLES
9. STAY RODS
10. SPACER
11. TUBE PASS PARTITIONS AS REQUIRED.
12. CRADLE (MAKE PROVISIONS FOR EXPANSION OF UNIT)
13. CONCRETE OR STRUCTURAL SUPPORT PIER
14. THERMOMETER WELL FOR CONTROL ELEMENT, ARRANGE PIPING TO PROVIDE WELL IMMEDIATELY ADJACENT TO CONVERTER OUTLET
15. SOCKET WELDED ELBOWS, LOCATE AS NEAR TO SHELL OUTLET AS POSSIBLE
16. THERMOMETER WITH SEPARABLE SOCKET
17. DRAIN CONNECTION
18. VENT CONNECTIONS AS REQUIRED
19. RELIEF VALVE CONNECTIONS
20. VENT
21. DIMENSION "L" NOT TO BE GREATER THAN 5 TIMES DIMENSION "D".
22. SHOW DIMENSION FOR SPACE REQUIRED TO REMOVE BUNDLE.
23. FOR MATERIAL TO BE USED, SEE SPECIFICATIONS
24. FOR INSULATION OF UNIT, SEE SPECIFICATIONS
25. FOR PAINT, SEE SPECIFICATIONS
26. FOR REQUIRED DESIGN & TEST Pressures & Design Temperatures, See Specifications
27. COUPLING FOR PRESSURE GAGE.

Notes 17 and 18:
Add "Socket weld fitting" to each note.
NOTES:

1. Bonnet flanges 600 lb. ANSI.
2. Radial flange HTW supply & return 600 lbs. ANSI.
3. Tube supports as required.
4. Tube pass partitions as required.
5. Vent connections as required.
6. Tube sheet.
7. Tube bundle.
8. Shell.
9. Drain connection as required.
10. Water inlet.
12. Cradle make provisions for expansion of unit.
13. Concrete or structural support pier.
14. Minimum 11" x 15" manhole.
15. Drain connection.
16. Relief valve connection.
17. Thermometer with separable socket.
18. Thermometer well for control element.
19. Show dimension for space required to remove bundle.
20. For material to be used, see specifications.

21. For paint, see specifications.
22. For insulations of unit, see specifications.
23. For required design & test pressure & design temperature, see specs.
24. Rolled 3" x 3" x 1/4" L insulation ring, weld bottom half continuous.
25. Top half 2" in 4" to shell.
26. Provide vent for shell.
27. Pressure gauge connection.
28. Provide suitable coating & corrosion protection for inside of tank.
29. Provide 1-1/4" threaded fitting on vessel with a 24" to 30" long magnesium sacrificial anode. Install with a center core weep detection hole. Install anode in front or back for easy accessibility.

NOTE: THIS DETAIL APPLIES TO BOTH STORAGE TYPE AND INSTANTANEOUS TYPE GENERATORS, EXCEPT MANWAY MAY BE DELETED ON INSTANTANEOUS SHELLS.

Notes 5 and 9:
Add "Socket weld fitting" to each note.
THERMOMETER WELL INSTALLATION IN VERTICAL PIPE

THERMOMETER WELL INSTALLATION IN HORIZONTAL PIPE
NOTES:

1. AIR VENTS AT HIGH POINTS.
2. THERMOMETER WITH SEPARABLE SOCKET.
3. PRESSURE GAUGE ASSEMBLY, MOUNT GAUGES ON BRACKETS.
4. BY-PASS GLOBE VALVE, PROVIDE OFFSETS OR LOOPS IN BY-PASS PIPING TO PERMIT FREE & UNRESTRICTED PIPE MOVEMENT DUE TO TEMPERATURE CHANGES. 1" FOR LINES TO 3", 1-1/4" FOR LINES 4" TO 6".
5. DRAINS EXTEND TO EQUIPMENT DRAINS.
6. HIGH TEMPERATURE WATER SUPPLY & RETURN IN CONDUIT WITH END SEAL.
7. ORIFICE & FLANGES FOR FLOW MEASUREMENT, PROVIDE REQUIRED STRAIGHT RUN OF PIPE PROPER MEASUREMENT FOR NEW OR FUTURE INSTALLATIONS.
3" LONG NIPPLE WELDED TO VALVE DISCHARGE. END OF NIPPLE TO HAVE MALE PIPE THREAD

FOR VENTS LOCATED > 8' FROM FLOOR, EXTEND SECOND VALVE AS SHOWN

PIPE AND PIPE COVERING SAME AS MAIN PIPE

REJECT AS REQ'D.

WELDOLET:

NOTE: HIGH POINTS OF ALL PIPING TO BE VENTED.

<table>
<thead>
<tr>
<th>PIPE SIZE (NOM.) A</th>
<th>DIAMETER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/2&quot; &amp; 1-1/4&quot;</td>
<td>1-1/2&quot; &amp; 1-1/4&quot;</td>
</tr>
<tr>
<td>2&quot;</td>
<td>2&quot;</td>
</tr>
<tr>
<td>2-1/2&quot;</td>
<td>2-1/2&quot;</td>
</tr>
<tr>
<td>3&quot;</td>
<td>3&quot;</td>
</tr>
<tr>
<td>4&quot;</td>
<td>4&quot;</td>
</tr>
<tr>
<td>6&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td>8&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td>10&quot;</td>
<td>6&quot;</td>
</tr>
</tbody>
</table>

LOCATE VALVE APPROX. 4'-6" FROM FLOOR
3" LONG NIPPLE WELDED TO VALVE DISCHARGE. EYDOT NIPPLE TO HAVE MALE PIPE THREAD

Drawing Title: AIR VENT DETAIL
Revision Date: DEC.1999
Drawing No.: HTW-18
FRONT PANEL
MPBP

BLACK BOX

RAMTEL MODEL RR833

COMMUNICATIONS

PHONE PANEL DETAIL

Date 05/09/16
Drawn by JH
Checked by Checker
Scale 6" = 1'-0"
NOTES:

1. TIE DUCT BUNDLES WITH PLASTIC TAPE. DO NOT USE METAL WIRE.

2. ANCHOR DUCT BUNDLES DOWN WITH HOLD-DOWN BARS WITH #3 REBAR DRIVEN INTO GROUND BETWEEN DUCTS.

3. COMMUNICATION DUCTS TO BE 4" I.D. TYPE-1 PLASTIC DUCTS.

4. THE LAST 10' OF DUCTS ENTERING MANHOLE OR BUILDING SHALL BE RIDGID GALVANIZED CONDUIT WITH FLUSH BELL ENDS (O.Z. GEDNEY TYPE INS OR EQUAL).
HANDLE DETAIL
(2-REQ'D.)

SECTION VIEW

FRAME - TOP VIEW

COVER
RING & COVER BY "CONCO FOUNDRY INC." CAT. NO. C-1380.
NOTES:
1. MAIN LINE PIPING SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. THRUST BLOCKS MUST BE POURED AGAINST UNDISTURBED SOIL.
3. ALL PIPE JOINTS MUST BE LEFT ACCESSIBLE.
4. CONCRETE MUST BE ALLOWED TO CURE FOR 5 DAYS PRIOR TO PRESSURIZING WATER LINES.
5. CONCRETE MUST HAVE A MINIMUM OF 2500 PSI COMPRRESSIVE STRENGTH IN 28 DAYS.
6. THRUST BLOCKS MUST BE POURED AS CLOSE AS POSSIBLE TO THE CONFIGURATION SHOWN.
7. BEARING AREAS FOR HORIZONTAL BEND THRUST BLOCKS ARE BASED ON TEST PRESSURE OF 200 PSI & AN ALLOWABLE SOIL BEARING STRESS OF 2000 LBS./SQ.FT.
8. BEARING AREAS, VOLUMES, & SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER THIS STANDARD.
9. BEARING AREAS FOR PIPE SIZES OR CONFIGURATION NOT SHOWN REQUIRE A SPECIAL DESIGN.
10. ALL WORK MUST BE INSPECTED BY IRRIGATION FOREMAN PRIOR TO BACKFILL.
THrust BLOCK sizing procedure:

1. Multiply the working pressure by the appropriate value shown in the following table to obtain total thrust in N(lb)

<table>
<thead>
<tr>
<th>pipe size</th>
<th>dead end or tee</th>
<th>90° elbow</th>
<th>45° elbow</th>
<th>22½° elbow</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>89</td>
<td>9.80</td>
<td>13.90</td>
<td>7.51</td>
</tr>
<tr>
<td>4</td>
<td>114</td>
<td>16.20</td>
<td>23.00</td>
<td>12.40</td>
</tr>
<tr>
<td>6</td>
<td>168</td>
<td>34.80</td>
<td>49.20</td>
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<td>8</td>
<td>219</td>
<td>59.00</td>
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<td>10</td>
<td>273</td>
<td>91.50</td>
<td>130.00</td>
<td>70.00</td>
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<td>12</td>
<td>324</td>
<td>129.00</td>
<td>182.00</td>
<td>98.50</td>
</tr>
</tbody>
</table>

2. Determine the bearing strength of the soil from the table below.

<table>
<thead>
<tr>
<th>soils and safe bearing loads</th>
<th>1b/sq.ft.</th>
<th>kpa</th>
</tr>
</thead>
<tbody>
<tr>
<td>sound shale</td>
<td>10,000</td>
<td>500</td>
</tr>
<tr>
<td>cemented gravel &amp; sand difficult to pick</td>
<td>4,000</td>
<td>200</td>
</tr>
<tr>
<td>coarse and fine compact sand</td>
<td>3,000</td>
<td>100</td>
</tr>
<tr>
<td>medium clay-can be spaded</td>
<td>2,000</td>
<td>150</td>
</tr>
<tr>
<td>soft clay</td>
<td>1,000</td>
<td>50</td>
</tr>
<tr>
<td>muck</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

3. Divide the total thrust obtained in step 1 by the bearing strength of the soil to get the area needed, m/sq.ft.
1. All work must be inspected by project manager prior to backfill.
2. Thrust blocks must be poured against undisturbed soil.
3. All pipe joints must be left accessible.
4. Concrete must be allowed to cure for 5 days prior to pressurizing water lines.
5. Concrete must have a minimum of 2500 P.S.I. compressive strength in 28 days.
6. Thrust blocks must be poured as close as possible to the configuration shown.
7. Bearing areas for horizontal bend thrust blocks are based on test pressure of 200 P.S.I. & an allowable soil bearing stress of 2000 LBS./SQ. FT. To compute bearing areas for different test pressures & soil bearing stress, use the following equation: Bearing area = (Test press./ 200) x (2000/Soil bearing stress) x (Table value).
8. Bearing areas, volumes, & special blocking details shown on plans take precedence over this standard.
9. Bearing areas for pipe sizes or configuration not shown require a special design.

### Minimum Bearing Area in Square Feet

<table>
<thead>
<tr>
<th>Size of Pipe</th>
<th>Tees, Valves Dead Ends</th>
<th>90 Deg. Bend</th>
<th>45 Deg. Bend</th>
<th>22.5 Deg. Bend</th>
<th>11.25 Deg. Bend</th>
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<tbody>
<tr>
<td>4&quot;</td>
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<td>21</td>
<td>29</td>
<td>16</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

*4 rebar, 12" min. Embedment. All exposed metal to be coated in Poly-FM grease & wrapped with Polyvinyl.*
KEEP HEADS A MINIMUM OF 2" FROM ALL HARDSCAPE

FINISH GRADE

TURF POP-UP SPRAY HEAD

SWING PIPE RAIN BIRD OR TORO

½" SWING PIPE ELL RAIN BIRD OR TORO

½" MARLEX STREET ELL

½" SWING PIPE ELL

LATERAL LINE WITH PVC TEE OR ELL
KEEP HEADS A MINIMUM OF 2" FROM ALL HARDSCAPE

FINISH GRADE

SET HEAD FLUSH WITH FINISH GRADE

TURF ROTATOR

SWING JOINT, PRE-FABRICATED WHERE POSSIBLE

7 CPM OR MORE
NOTES:

1. PREPARE A HOLE FOR FOUNDATION AND CONDUIT.

2. SEE FIGURE 1 POSITION SWEEP ALL CONDUIT SECTIONS IN HOLE AS SHOWN. COVER CONDUIT ENDS WITH TAPE TO SEAL OUT DIRT AND DEBRIS. BACKFILL SOIL TO ABOUT 12 INCHES BELOW FINISHED GRADE LEVEL.

3. USE 5/6" X 4-1/2" MOUNTING BOLTS AND 5/16-18 HEX NUTS SUPPLIED. PREPARE PLASTIC MOUNTING TEMPLATE AS SHOWN IN FIGURE 2. THREADED END BOLTS SHOULD PROTRUDE 1-1/8" TO 1-1/4" FROM TOP SURFACE OF TEMPLATE.

4. POUR CONCRETE INTO HOLE AND SMOOTH WITH TROWEL.

5. PRESS MOUNTING TEMPLATE INTO CONCRETE UNTIL FLUSH. CENTER TEMPLATE WITH CONDUIT AS SHOWN TO PREVENT PEDESTAL/CONDUIT INTERFERENCE. SEE FIGURE 3.

6. TO PREVENT POOLING AT BASE OF PEDESTAL, FINISH FOUNDATION WITH GRADUAL SLOPE AWAY FROM MOUNTING TEMPLATE.

OVERVIEW OF COMPLETED FOUNDATION

PEDESTAL INSTALLATION FOR TORO TC CONTROLLER

Drawing Title: AUTOMATIC CLOCK INSTALLATION

Revision Date: JUL. 1997

Drawing No: LS-10

MicroStation: Licensed For Academic Use Only
NOTES:

A. Use excavated trench material not to exceed 2" diameter rocks.

B. In cases where lateral line is installed in main line trench, use sand to backfill trench so that lateral line is 12" below finish grade.

C. Use sand to a depth of 2" to bed all main line pipe.

D. Minimum main line depth 18" to the top of pipe.

E. Minimum 6" distance between each pipe.

F. Irrigation control wire only. No other utilities may be buried in the same trench as irrigation.

GENERAL NOTE:
Locate all trenches 12" away from all buildings, sidewalks or any hard surfaces. Settle all trenches with water prior to installation of topsoil.
NOTE:
SEE TREE "PLANTING OPERATIONS" FOR ADDITIONAL DIRECTIONS.

STAKING:
USE (3) GALVANIZED TURNBUCKLES
USE (3) 1/2" X 18" REBAR STAKES
USE 14 GA. WIRE
USE (3) SECTIONS OF HOSE,
3' LONG @ CENTER OF TREE TRUNK, ALLOW SOME MOVEMENT.

FILL TO FINISH GRADE, SETTLE W/ WATER IN 12" LIFTS

DIA. = 3 X ROOTBALL DIA.

DO NOT PRUNE LEADER.
REMOVE ALL DEAD AND BROKEN BRANCHES.

BACKFILL:
SEE TREE "PLANTING OPERATIONS". INSURE THAT TREE IS VERTICAL BEFORE BACKFILLING.

REMOVE SOD AT DRIPLINE OF TREE TO FORM TREE WELL

4" MULCH

DIAMETER- DRIPLINE OF TREE

DO NOT PLANT LAWN IN TREE PIT

FINISHED GRADE

LOOSENED SOIL

UNDISTURBED SOIL

NOTE:
DO NOT USE AN AUGER FOR TREE HOLES.

* TREE FLARE 1" TO 2" ABOVE FINISH GRADE

O NO MULCH 1" TO 2" AROUND TRUNK

---

MicroStation: Licensed For Academic Use Only
CONSTRUCT WATERING DISH AT EACH PLANT USING TOPSOIL.

FINISH GRADE.

EXISTING GRADE

SET PLANT TO GRADE ON UNDISTURBED SOIL

4" LAYER OF MEDIUM COURSE BARK MULCH THAT HAS BEEN APPROVED FOR USE BY LANDSCAPE ARCHITECT, NOT UP TO PLANT STEM BASE.

4" LAYER OF TOPSOIL.

SETTLE PLANT BY FILLING PLANTING PIT WITH WATER USING HOSE OR BUCKET.

FILL ENTIRE PLANTING PIT WITH PREPARED TOPSOIL BACKFILL MATERIAL

DEEP WATER WITH HOSE ALL PLANTS

WATER PLANT IN POT PRIOR TO REMOVING PLANT FROM POT. DO NOT PLANT DRY PLANTS. ALL POTTED PLANTS MUST HAVE A MOIST ROOT SYSTEM.
PLAN VIEW

- **Typical Bubbler Locations**
- **Planter Details**
  - **Concrete Planter**
  - **Asphalt Paving**
  - **Loosened Soil**
  - **Undisturbed Soil**
  - **Mulch Layer**
  - **Weep Holes**
  - **Placement of Rootball on Undisturbed Soil**
  - **Firmly Tamped Soil to Prevent Settling**
  - **Trunk Flare, 1" to 2" Above Fin. Grade in Planter**

**Drawing Details**
- **Drawing Title:** Parking Lot Concrete Planter Detail
- **Revision Date:** Mar. 2003
- **Drawing No.:** LS-15

*MicroStation: Licensed For Academic Use Only*
CONCRETE MOWSTRIP

CONCRETE WALK W/ MEDIUM BROOM FINISH OR STAMPED CONCRETE, REINFORCE W/ POLY-PROPYLENE MULTIFILAMENT FIBERS.

CONCRETE PAVING

SCORE JOINT SECTION

CONCRETE PAVING

WALL OR RISER

P.R.C. POLYURETHANE SEALANT, 3/8" DEEP

COMPRESSIBLE FILLER 1/2" WIDE ASPHALT IMPREGNATED FIBER EXPANSION JOINT MATERIAL USE BOND BREAKER TAPE AT JOINT.

EXPANSION JOINT/SCORE LINE

CONCRETE, MEDIUM BROOM FINISH

PLANTING AREA/ FINISH GRADE

REBAR (2) #4 CONTINUOUS 2" CLEARANCE @ SIDES

COMPACTED ROAD BASE

NOTE:
WHEN MOWSTRIP IS ADJACENT TO BUILDING, EXPANSION JOINT SHALL BE USED. SLOPE 2% AWAY FROM BUILDING.