NOTES
ALL OUTSIDE WALL SURFACES SHALL BE WATERPROOFED
PER STANDARD SPECIFICATION SECTION 54.

DIMENSION TABLE

<table>
<thead>
<tr>
<th>No.</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
<th>L</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
<th>T1</th>
<th>T2</th>
<th>W1</th>
<th>INLET TYPE</th>
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<td>1.770</td>
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<td>4.757</td>
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<td>SEE STD PLAN B3-1</td>
<td>0.300</td>
<td>7.000</td>
<td>PIPE</td>
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</table>

EMERGENCY OVERFLOW

INFLOW PIPE
OR CIVIL PER PLAN

SECTION A-A

LEVEL LINE

TYPE 1 RW
SEE STD PLAN B3-1
WATER LEVEL AT CONST JOINT

OUTLET PIPE
PER PLAN

SECTION 2

SEE STD PLN D-31

25mm WEEP HOLES
AT IN C-C

LIGHT CLASS RSP
LOCATION ONLY

LIGHT CLASS RSP
LOCATION ONLY

TYPE 1 SAND FILTER

PERFORATED RISER SCHEDULE

<table>
<thead>
<tr>
<th>PIPE DIa</th>
<th>150 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERT. HOLE SPACING</td>
<td>64 mm</td>
</tr>
<tr>
<td>PERFORATIONS PER ROW</td>
<td>9</td>
</tr>
<tr>
<td>DIa OF PERFORATION</td>
<td>25 mm</td>
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</tbody>
</table>

AS BUILT
NO CORRECTIONS THIS SHEET

DATE ACCEPTED: 8-20-99
DATE COMPLETED: 8-20-99

DRAINAGE DETAILS
NO SCALE

ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE NOTED

D-23
GENERAL NOTES

1. RISERS MAY BE MADE UP OF 150 mm, 200 mm, 450 mm, 600 mm, or 1200 mm diam.
2. EACH RISER SHALL HAVE A LADDER, AS DETAILED ON Std PLAN D74C, WHICH SHALL BE SUSPENDED INTO BASE STIR.
3. ALL PRECAST COMPONENTS FOR UPPER PORTION TYPE MH SHALL BE Reinforced 6 mm Dia STEEL MOUND SPIRAILLY 100 mm CENTERS.
4. BOTTOMS SHALL HAVE A WOOD TROWEL FINISH.
5. H AND HD SHALL BE AS SPECIFIED ON PLANS.
6. Reinforced steel shall be #13 bars @ 450 mm CENTERS PLACED 40 mm CLEAR TO INSIDE OF BOX UNLESS OTHERWISE SHOWN.
7. PIPE(S) MAY BE PLACED IN ANY WALL.
8. NO DEDUCTION IN Std Conc QUANTITIES WILL BE MADE FOR PIPE OPENINGS.
9. DESIGN UNIT STRESSES: $f_p = 140$ MPa, $f_c = 10$, $f_y = 10$ MPa.
10. UPPER PORTION OF TYPE MH WILL BE PAINTED FOR AS 900 mm RISER.
11. CENTER OF RISER SHALL BE LOCATED OVER CENTERLINE OF MAIN STORM DRAIN.
12. THICKNESS OF DECK SHALL VARY WHEN NECESSARY TO PROVIDE LEVEL MANHOLE SEAT.

---

**FLUME TABLE**

<table>
<thead>
<tr>
<th>DRAINAGE SYSTEM</th>
<th>UNIT</th>
<th>INFLOW</th>
<th>OUTFLO W</th>
<th>FLOW TYPE AND SIZE</th>
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<tr>
<td>1</td>
<td>I</td>
<td>X</td>
<td></td>
<td>300 mm LOW FLOW PALMER BONUS D=1.22 cm</td>
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<tr>
<td>1</td>
<td>I</td>
<td>X</td>
<td></td>
<td>300 mm LOW FLOW PALMER BONUS D=1.52 cm</td>
</tr>
<tr>
<td>2</td>
<td>I</td>
<td>X</td>
<td></td>
<td>250 mm LOW FLOW PALMER BONUS D=1.22 cm</td>
</tr>
<tr>
<td>2</td>
<td>I</td>
<td>X</td>
<td></td>
<td>250 mm LOW FLOW PALMER BONUS D=1.52 cm</td>
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<tr>
<td>3</td>
<td>I</td>
<td>X</td>
<td></td>
<td>200 mm LOW FLOW PALMER BONUS D=1.02 cm</td>
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<td>I</td>
<td>X</td>
<td></td>
<td>200 mm LOW FLOW PALMER BONUS D=1.52 cm</td>
</tr>
</tbody>
</table>

---

**MONITORING MANHOLE**

- MINOR Conc (MINOR STIR)
- MAY BE ANY DESIGNATED Std STIR
- 500 mm PLASTIC PIPE (LOG TO BE FIELD DETERMINED)
- NOT TO EXCEED 450 mm WITHOUT STEPS, ADJUST REQUIRED WITH Conc RINGS.

**UPPER STRUCTURE**

- FOR USE W/ EITHER TYPE X OR TYPE Y BASE STIR
- 0.6 m OR 0.9 m CONE, IF REQUIRED

---

**AS BUILT**

- NO CORRECTIONS THIS SHEET
- DEWELL ENGINEER'S CERTIFICATION: 8.4.500

---

**DRAINAGE DETAIL**

- D-25
- NO SCALE
1. Cut 14 mm off ends of bolts thru boxed grate or drain. Grates lock into one nut to bolt or pin threads to hold one nut.

2. Grates - none required when 'H' is 1.05 m or less. Install one step 400 mm above floor when 'H' is more than 1.05 m and less than 1.50 m. Where 'H' is more than 1.50 m, grates shall be evenly spaced 0.300 m intervals from 400 mm above floor to within 350 mm of the top of the box. Place steps in wall without pipe coatings. See Stc Plan 74C for stair detail.

3. Pile ories can be placed in any wall.

4. Reinforcement steel not required in walls when 'H' = 1.50 m or less.

5. Reinforcement steel in walls shall be 1.0 bars @ 300 mm centers placed 40 mm in rear of 1½ dia. of box.

6. Grate type shall be 600-12 unless otherwise shown on drainage plan.

**MISCELLANEOUS IRON & STEEL**

<table>
<thead>
<tr>
<th>Single Type</th>
<th>Grate Type</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>G0-1 &amp; G0-2</td>
<td>600-12</td>
<td>283</td>
</tr>
<tr>
<td>G0-1 &amp; G0-2</td>
<td>600-10</td>
<td>173</td>
</tr>
<tr>
<td>G0-1 &amp; G0-2</td>
<td>600-10</td>
<td>191</td>
</tr>
<tr>
<td>G0-1 &amp; G0-2</td>
<td>600-12</td>
<td>296</td>
</tr>
<tr>
<td>G0-1 &amp; G0-2</td>
<td>600-13</td>
<td>160</td>
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</table>

**NOTES**

- 'H' is the difference in level between the dutail plate flow line and the flow line of the grate.
- Stairs must be at least 1.8 m wide if the section is less than 1.50 m high.
- Grates shall be evenly spaced 300 mm apart from 400 mm above floor to within 350 mm of the top of the box.
- Place steps in wall without pipe coatings.

**DIAGRAM DETAILS**

- Section A-A (For pipe diameters 975 mm or less)
- Section A-A (For pipe diameters 1200 mm or less)

**Drainage Details**

- No scale
SECTION A - A

2.0 x 2.0 CONCRETE PAD DETAILS

PLAN

C C BARS -2 ABOVE AND 2 BELOW
OPENING VARIABLE TO MEET END OF PIPE

PLAN

C C BARS -2 ABOVE AND 2 BELOW OPENING

PLAN

CORNER CONNECTION

NOTES:
1. ROUND EDGE OF OUTLET TO 75 mm RADIUS.
2. RAINTROUGH SHALL BE 40 mm CLEAR FROM THE FACE OF CONCRETE.
3. IN CONNECTING TO AN EXISTING DRAIN, BREAK OUT PORTIONS OF THE EXISTING DRAIN TO ALLOW FOR ITS INTERSECTION WITH THE NEW CONNECTION. BEND ENDS OF #10 BARS OVER CONNECTION OPENING AS REQUIRED.

MONOLITHIC CATCH BASIN CONNECTION

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

AS BUILT
NO CONNECTIONS THIS SHEET

DRainage DETAILS
NO SCALE

D-30
GENERAL NOTES:

1. STRUCTURAL CONCRETE SHALL BE CLASS 'I'.
2. ALL LATERAL CONCRETE WALLS SHALL BE AS SHOWN.
   PLACE BARS IN BOTTOM SLAB SYMMETRICALLY ABOUT CENTERLINE. PLACE BARS IN WALLS STARTING AT TOP
   WITH 50MM CLEAR COVER.
3. CLEAR COVER FOR STEEL SHALL BE 50MM FOR WALLS AND
   70MM EACH FACE FOR BOTTOM SLAB.
4. STEEL IS DIMENSIONED TO BACK OF BEND.
5. FOR CONSTRUCTION ON CURVES, STRAIGHT TRANSVERSE BARS
   SHALL BE ALIGNED RADIIALLY WITH SPACING MEASURED AT FACE
   OF WALL. FOR L-BARS IN WALLS, SPACING SHALL BE MEASURED
   BETWEEN THE VERTICAL LEGS OF BARS.
6. ALL TRANSVERSE CONSTRUCTION JOINTS SHALL BE IN A VERTICAL
   PLANE NORMAL TO THE CENTERLINE AND THE SPACING THEREOF
   SHALL NOT EXCEED 0.25 METER OR BE LESS THAN 0.15 METER. CONTINUOUS KEYS SHALL BE PERMISSIBLE AS SHOWN.
   IN DETAIL A, A COMPLETE CURTAIN OF TRANSVERSE STEEL SHALL BE PLACED
   FROM EACH FACE OF THE JOINTS AND LONGITUDINAL STEEL WILL NOT BE CONTINUOUS THROUGH THE JOINTS.
   IN ADDITION, RESTRAINT JOINTS SHALL BE CONSTRUCTED BETWEEN
   REINFORCED CONCRETE CHANNELS OR REINFORCED CONCRETE BOX
   SECTIONS AS SHOWN IN DETAIL B. DOOMES SHALL BE PLACED AT
   300MM SPACING CENTERED IN THE MIDDLE THIRD OF THE
   BOTTOM SLAB AND THE TOP THIRD OF THE SIDE WALLS. A MINIMUM
   OF 3 DOOMES PER SLAB AND WALLS SHALL BE PLACED.

7. ALL QUANTITIES SHOWN ARE APPROXIMATE.
8. ALL SPLICES ARE SUBJECT TO APPROVAL BY THE RESIDENT ENGINEER.
9. THE BAR LENGTH SHALL VARY UNIFORMLY THROUGHOUT TRANSITIONS.

TRANSVERSE CONSTRUCTION JOINT

DETAIL A

DESIGN DATA:

LIVE LOAD = 2.46 Kilonewton
SOIL DENSITY = 1.76 Tonnes/m3
ALLOWABLE STRESSES:

f_y = 28 MPa
f_t = 414 MPa
f_s = 65 MPa

MIN LAP:

- 0.0m = 400 mm
- 0.0m = 450 mm
- 0.0m = 775 mm
- 0.0m = 400 mm

DATE ACCEPTED: 8-20-99
DATE COMPLETED: 8-20-99

AS BUILT

DRAINAGE DETAILS

NO SCALE

D-31
### Alamend: Pipe Material and Protection

<table>
<thead>
<tr>
<th>Size (MP)</th>
<th>AWP</th>
<th>AIW</th>
<th>MFP</th>
<th>FJP</th>
<th>SJP</th>
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### Alternative Pipe Culverts

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#### Legend and Abbreviations
- **COP**: Concrete Pipe
- **CL**: Clay Pipe
- **CJP**: Clay Joint Pipe
- **SJP**: Steel Joint Pipe
- **CRP**: Clay Reinforced Pipe
- **MRP**: Metal Reinforced Pipe
- **SRP**: Steel Reinforced Pipe
- **SSP**: Steel Spiral Rib Pipe

#### Flumes

<table>
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<tr>
<th>Item</th>
<th>Type</th>
<th>Material</th>
<th>Size (MP)</th>
<th>AWP</th>
<th>AIW</th>
<th>MFP</th>
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<th>SJP</th>
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<tbody>
<tr>
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<td>Composite</td>
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#### Drainage Quantities D-33

<table>
<thead>
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<th>Item</th>
<th>Description</th>
<th>Unit</th>
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<tbody>
<tr>
<td>1</td>
<td>North-Western drain</td>
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<td>2</td>
<td>South-Eastern drain</td>
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**Note:** This document includes a table and diagram related to drainage systems, with specific measurements and materials listed. The text is precise and technical, typical of engineering reports or specifications.
## SUMMARY OF QUANTITIES

<table>
<thead>
<tr>
<th>LOCATION NO</th>
<th>LOCATION</th>
<th>REMOVE CONCRETE (CUBED)</th>
<th>REMOVE CONCRETE (GUTTER)</th>
<th>REMOVE AC / CORR / PIPE</th>
<th>REMOVE TREE</th>
<th>REMOVE STONEFENCE</th>
<th>ASPHALT CONCRETE DIKE</th>
<th>ASPHALT CONCRETE BASE (CLASS I)</th>
<th>ASPHALT CONCRETE BASE (CLASS III)</th>
<th>CL SATE</th>
<th>CL FENCE</th>
<th>RELOCATE IRRIGATION SYSTEM</th>
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</tbody>
</table>

* NOT A SEPARATE PAY ITEM FOR THIS LOCATION, SEE SPECIAL PROVISIONS

**ELIMINATED FROM CONTRACT SEE CALTRANS CONTRACT NO. 11-059104, CCO NO. 8**

**SUMMARY OF QUANTITIES**

Q-1
**Electrical Panel Mounting Support**

- **Cond Size As Shown On Plan**
- **Pull Box Mounting Detail**

**Steel Elbow Thru Floor Detail**

- **Area Subject To Use By Cars Or Trucks**
- **Conduit Installation**

**Typical Underground Conduit Installation**

- **Grade Level**
- **Type 3 Cond**

**Typical Underground Conduit Installation (Unpaved Area)**

**Notes:**
1. Equip metal pull box exposed to weather with weather proof removable cover.
2. Use threaded watertight hubs for top entry.
3. Use knockout for bottom entry only.

**Fire Stop Detail**

**Electrical Details**

No Scale

**Note:** This plan accurate for electrical work only.
ESCONDIDO MAINTENANCE STATION

SINGLE LINE DIAGRAM

FOR REVISION OF DRAWING SCALE IS IN MILLIMETERS
NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
E-5