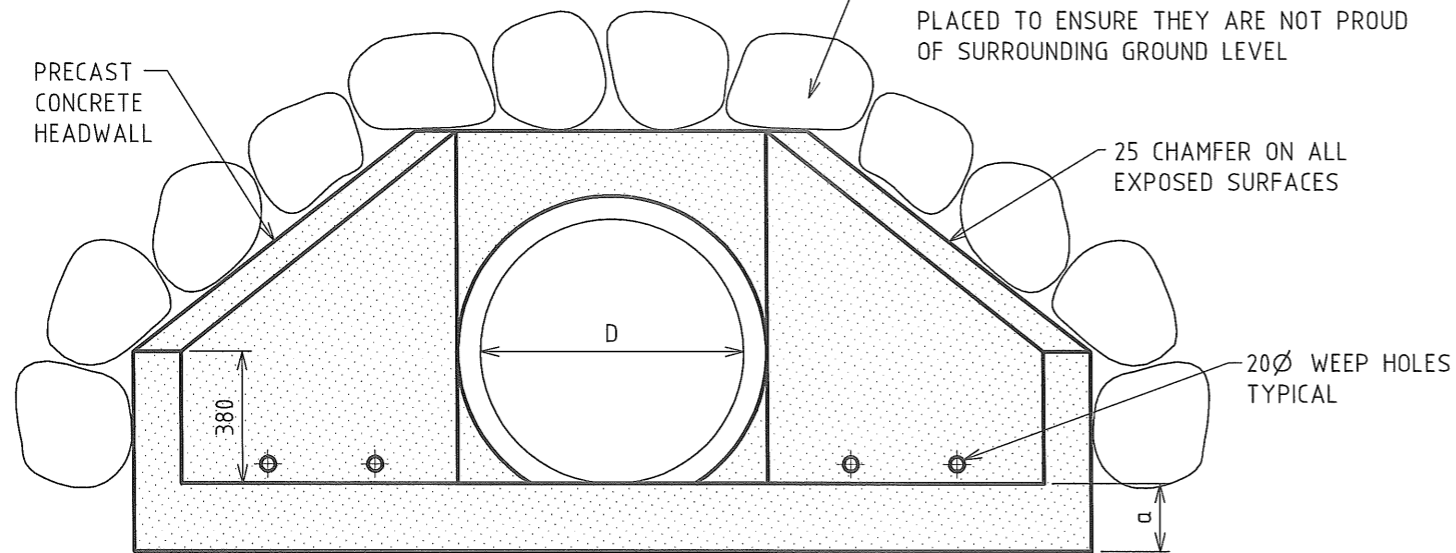
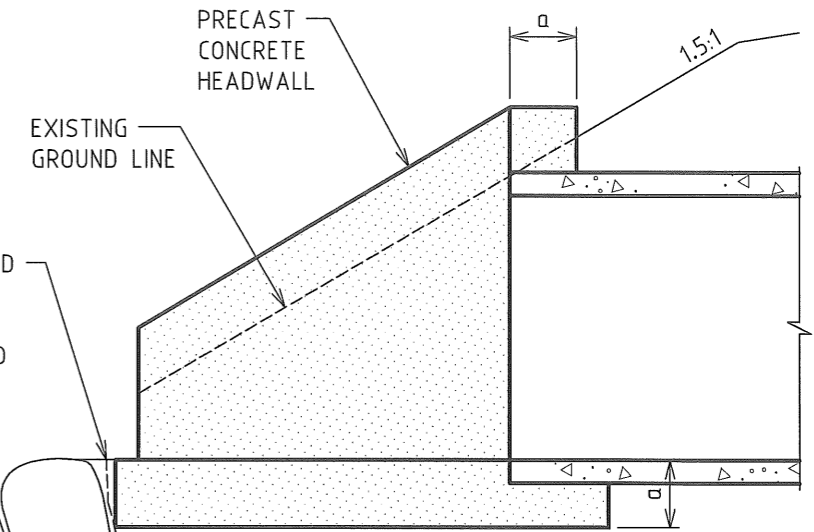


**PLAN**  
SCALE 1:25



**ELEVATION**  
SCALE 1:25



**LONGITUDINAL SECTION**  
SCALE 1:25

CONSTRUCT ROCK OUTLET IN ACCORDANCE WITH STANDARD DRAWINGS A2303 TO A2305

BIDUM A64 OR EQUAL UNDERLAY TO ALL ROCK MATERIAL

CONSTRUCT ROCK RIB. KEY INTO NATURAL GROUND 500 MIN BELOW BASE OF HEADWALL.

NOTE: PRECAST CONCRETE HEADWALL BY HUMES, ROCLA, HUNTER CONCRETE OR EQUAL

TABLE C: HEADWALLS			
D PIPE DIAMETER (mm)	600	750	900
a (mm) MINIMUM	150	175	200
B (mm)	790	1025	1260
W (mm)	1120	1450	1780
L (mm)	1100	1250	1400

**NOTES**

1. ALL DIMENSIONS ARE IN MILLIMETERS
2. DRAWINGS ARE NOT TO SCALE
3. COMPRESSIVE STRENGTH FOR CAST INSITU CONCRETE SHALL BE 25MPa AT 28 DAYS
4. ENERGY DISSIPATERS IN LIEU OF STANDARD HEAD WALL SHALL BE PROVIDED WHERE VELOCITIES EXCEED 2.0 M/S
5. WHERE ADDITIONAL HEIGHT TO RETAINING IS REQUIRED KERB HEIGHT, KERB WIDTH AND CURTAIN WALL HEIGHT SHALL BE ADJUSTED WITH THE PROVISION OF ADDITIONAL REINFORCEMENT
6. FOUNDING MATERIAL TO ACHIEVE A MINIMUM ALLOWABLE BEARING CAPACITY OF 150KPa.
7. SAFETY FENCING SHALL BE PROVIDED AROUND THE HEAD WALL WHERE DETERMINED BY THE ENGINEER.

<table border="1"> <tr> <td>1</td> <td>CONSTRUCTION</td> <td>11.06.13</td> <td>J.C.</td> </tr> <tr> <td>0</td> <td>PRELIMINARY - FOR REVIEW AND COMMENT ONLY</td> <td>14.12.12</td> <td></td> </tr> <tr> <td>No.</td> <td>AMENDMENT DETAILS</td> <td>DATE</td> <td>INITIALS</td> </tr> </table>			1	CONSTRUCTION	11.06.13	J.C.	0	PRELIMINARY - FOR REVIEW AND COMMENT ONLY	14.12.12		No.	AMENDMENT DETAILS	DATE	INITIALS	<p>SCALE <b>AS SHOWN</b></p>	<p>LIVEABLE CITY INFRASTRUCTURE MANAGEMENT SERVICES</p>	<p>APPROVED:</p> <p>SIGNED: ..... INFRASTRUCTURE MANAGEMENT SERVICES MANAGER DATE: 11/6/13</p>	<p><b>THE CITY OF NEWCASTLE</b></p> <p>HEADWALLS PRECAST CONCRETE FOR 600, 750 AND 900 PIPE CULVERTS</p>	<p>NCC PLAN No. <b>A2301</b></p>	<p>SHEET No. 1 OF 1 SHEETS</p>
1	CONSTRUCTION	11.06.13	J.C.																	
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No.	AMENDMENT DETAILS	DATE	INITIALS																	
A3 ORIGINAL THIS SHEET WAS PREPARED IN COLOUR AND WILL BE INCOMPLETE IF COPIED		COORDINATE SYSTEM:	HEIGHT DATUM: AHD	REVIEWED: J.C.	AMENDMENT No.															