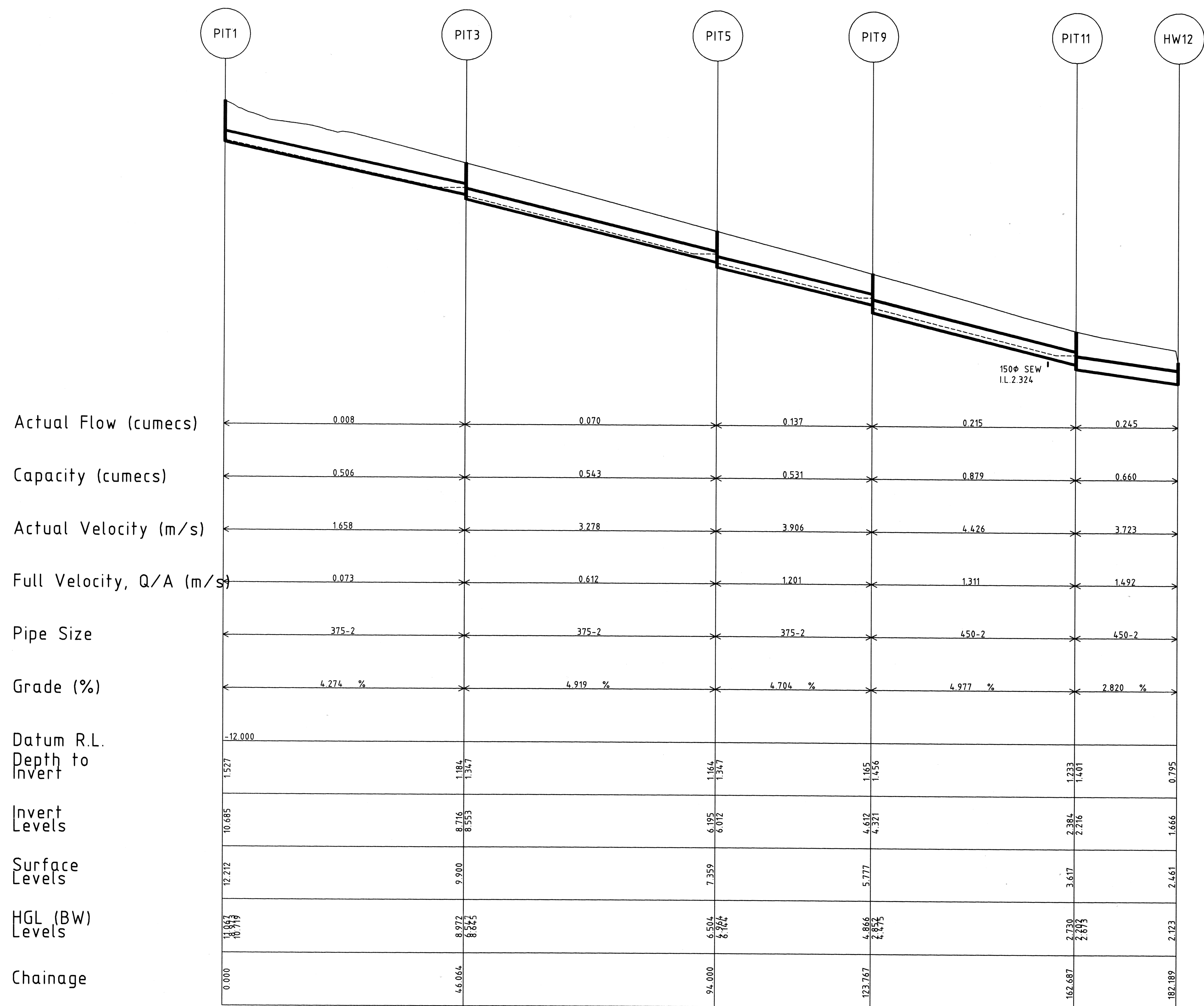
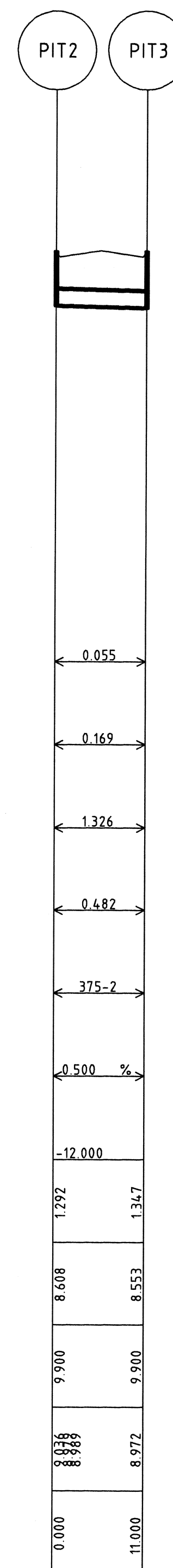
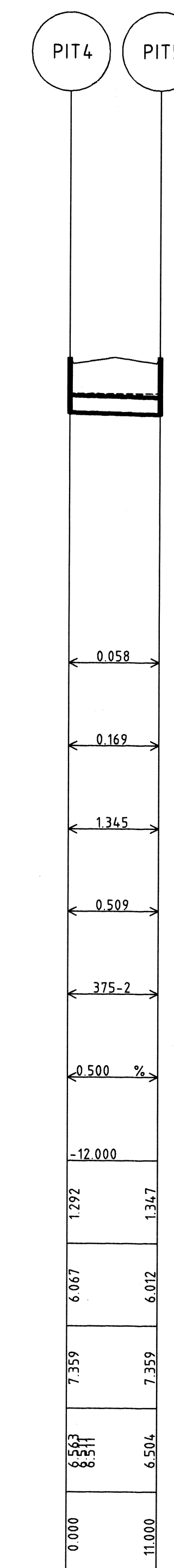




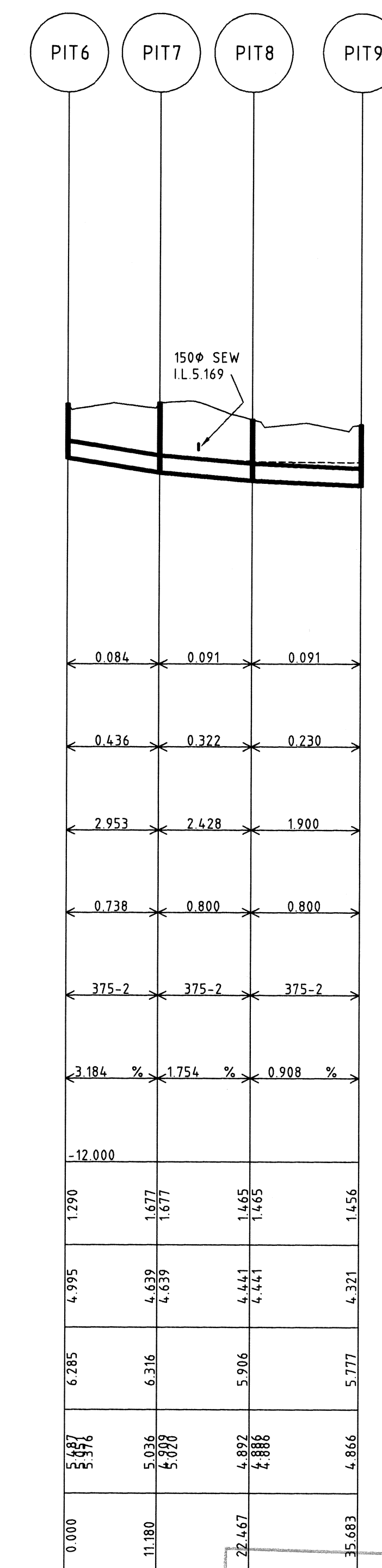
LINE 1 TO 12



LINE 2 TO 3



LINE 4 TO 5



LINE 6 TO 9

BALLINA SHIRE COUNCIL
APPROVED
 THESE PLANS HAVE BEEN TAKEN TO SITE AND CHECKED, AND ARE APPROVED IN ACCORDANCE WITH COUNCIL D/A 1999/248 CONDITIONS AND STANDARD ENGINEERING REQUIREMENTS.
 SIGNED *PLW*
 FOR CHIEF ENGINEER
 DATED 25 Nov 99

No.	Date	Amendment	Design T.J.C.	CLIENT: R. and J. PIDCOCK		PROJECT: PACIFIC PINES ESTATE STAGES 3a & 3b LENNOX HEAD	TITLE: STORMWATER DRAINAGE SHEET 1	DAVID ARDILL & ASSOCIATES PTY. LIMITED CONSULTING CIVIL AND STRUCTURAL ENGINEERS PROJECT MANAGERS AND TOWN PLANNERS	31 DE-HAVILLAND CRES. BALLINA NSW 2478 A.C.N. 002 400 528	P.O. BOX 20 Ph. 02 6686 3280 Fax 02 6686 7920 e-mail: daa@sturtweb.net.au	DWG. No. C.09	JOB No. 88/1087/3
			Drawn T.J.C.	Date SEPT. '99	Dwg Filename 1087-3-H1							
			Checked <i>[Signature]</i>	Datum A.H.D.	Disk Name							
			Approved <i>[Signature]</i>	Scale 1:500 H; 1:100 V	Sheet of Sheets							

Actual Flow (cumecs)

Capacity (cumecs)

Actual Velocity (m/s)

Full Velocity, Q/A (m/s)

Pipe Size

Grade (%)

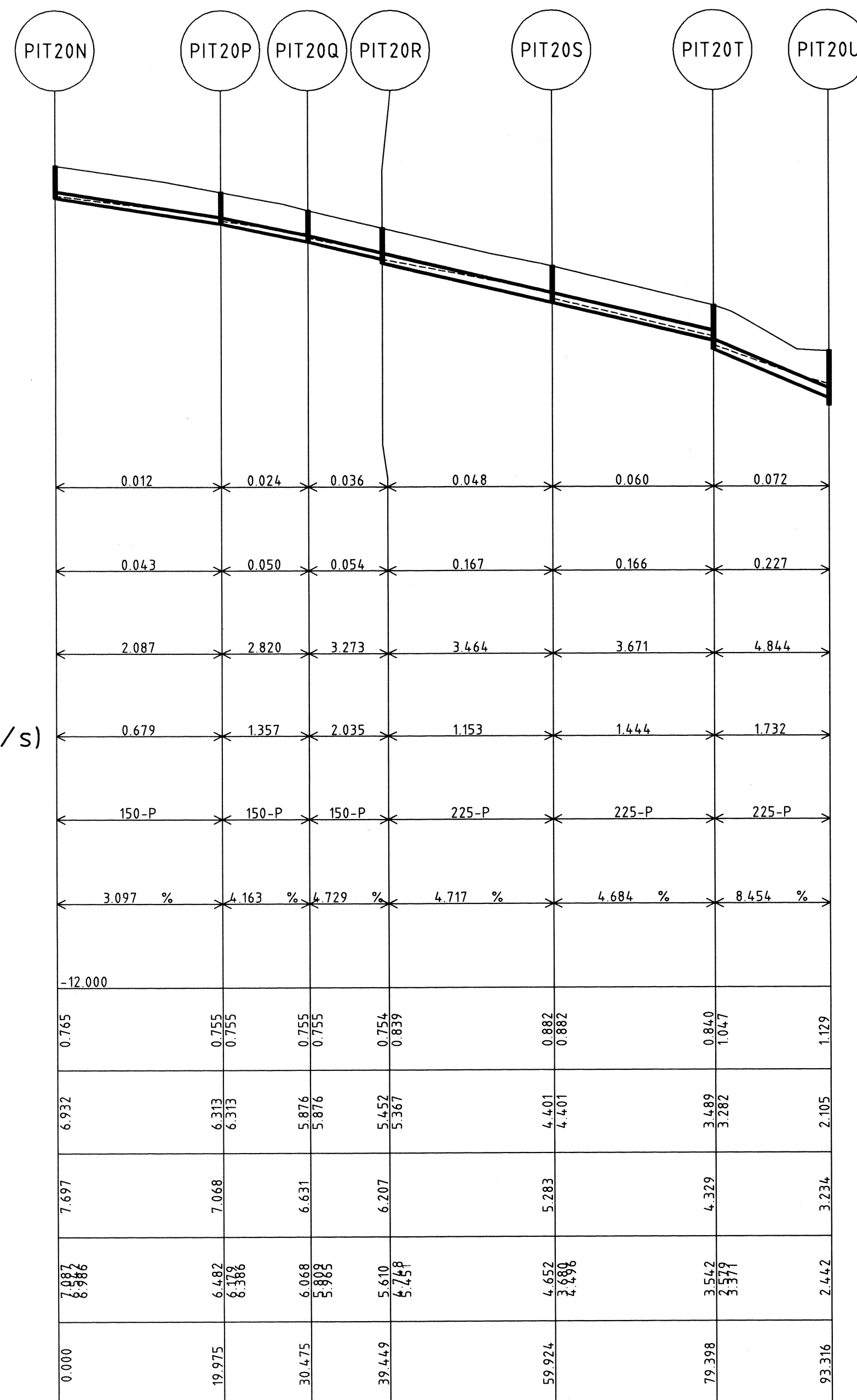
Datum R.L.
Depth to
Invert

Invert
Levels

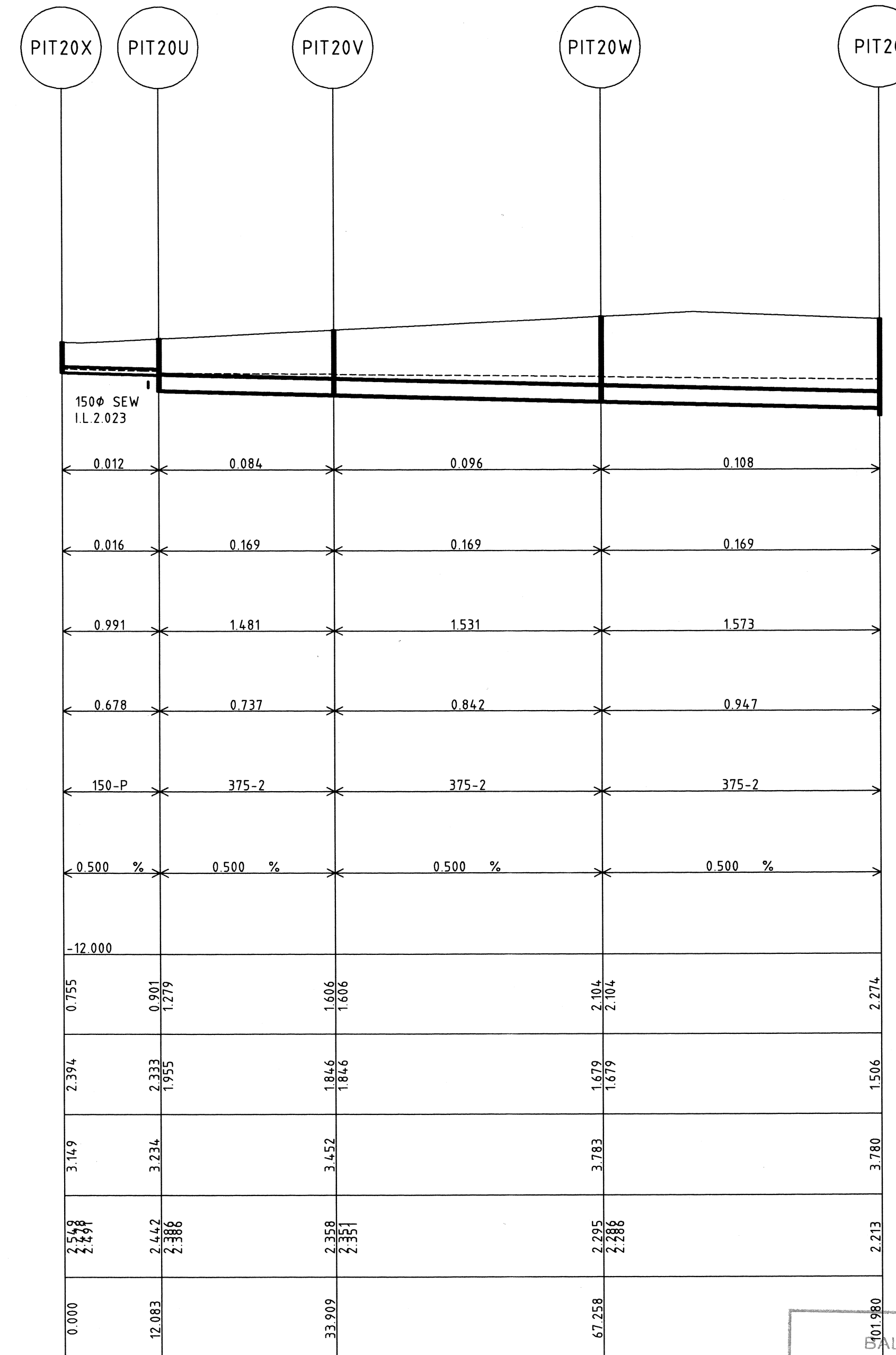
Surface
Levels

HGL (BW)
Levels

Chainage



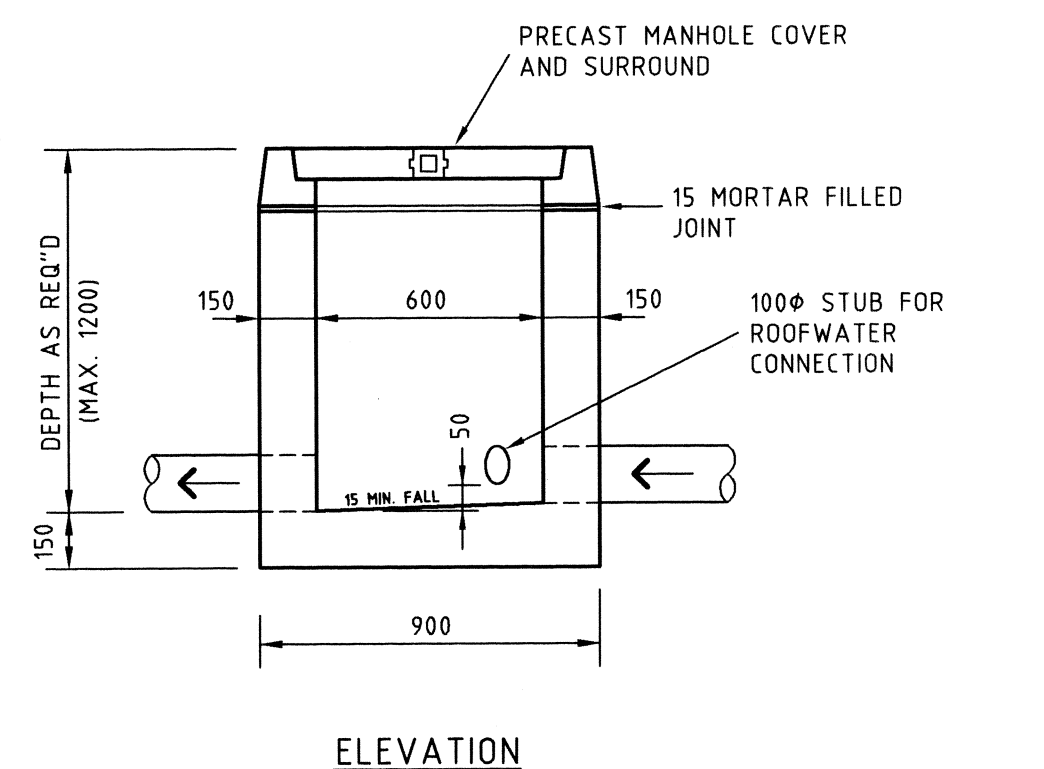
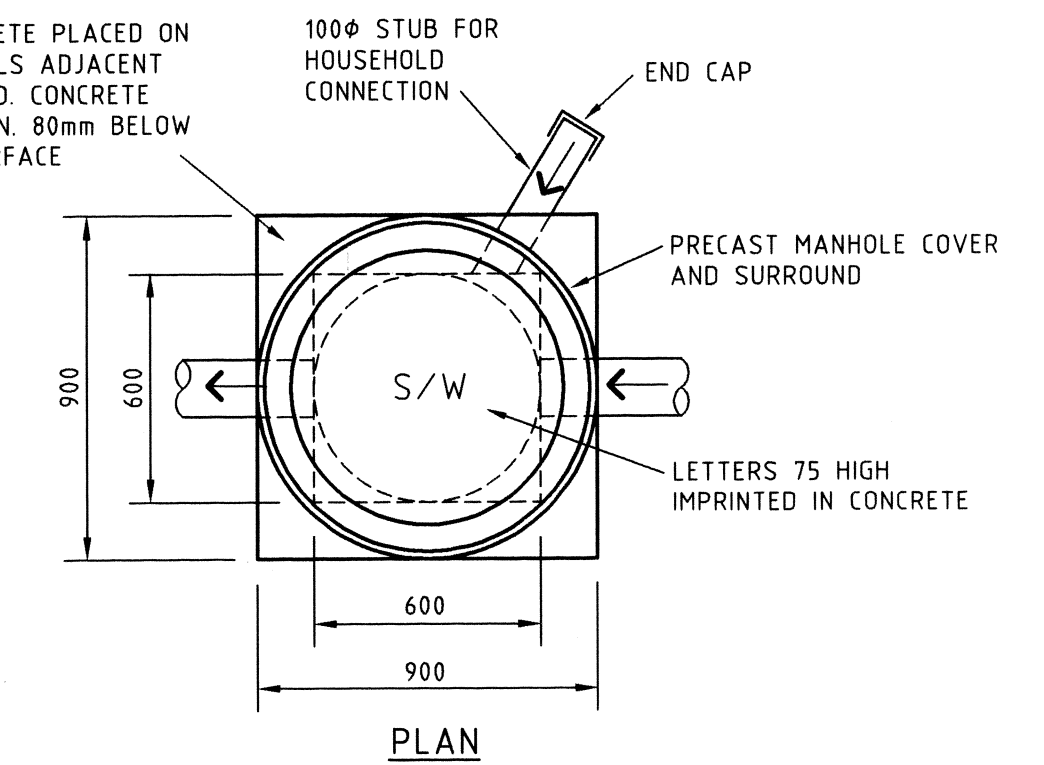
LINE 20N TO 20U



LINE 20X TO 20

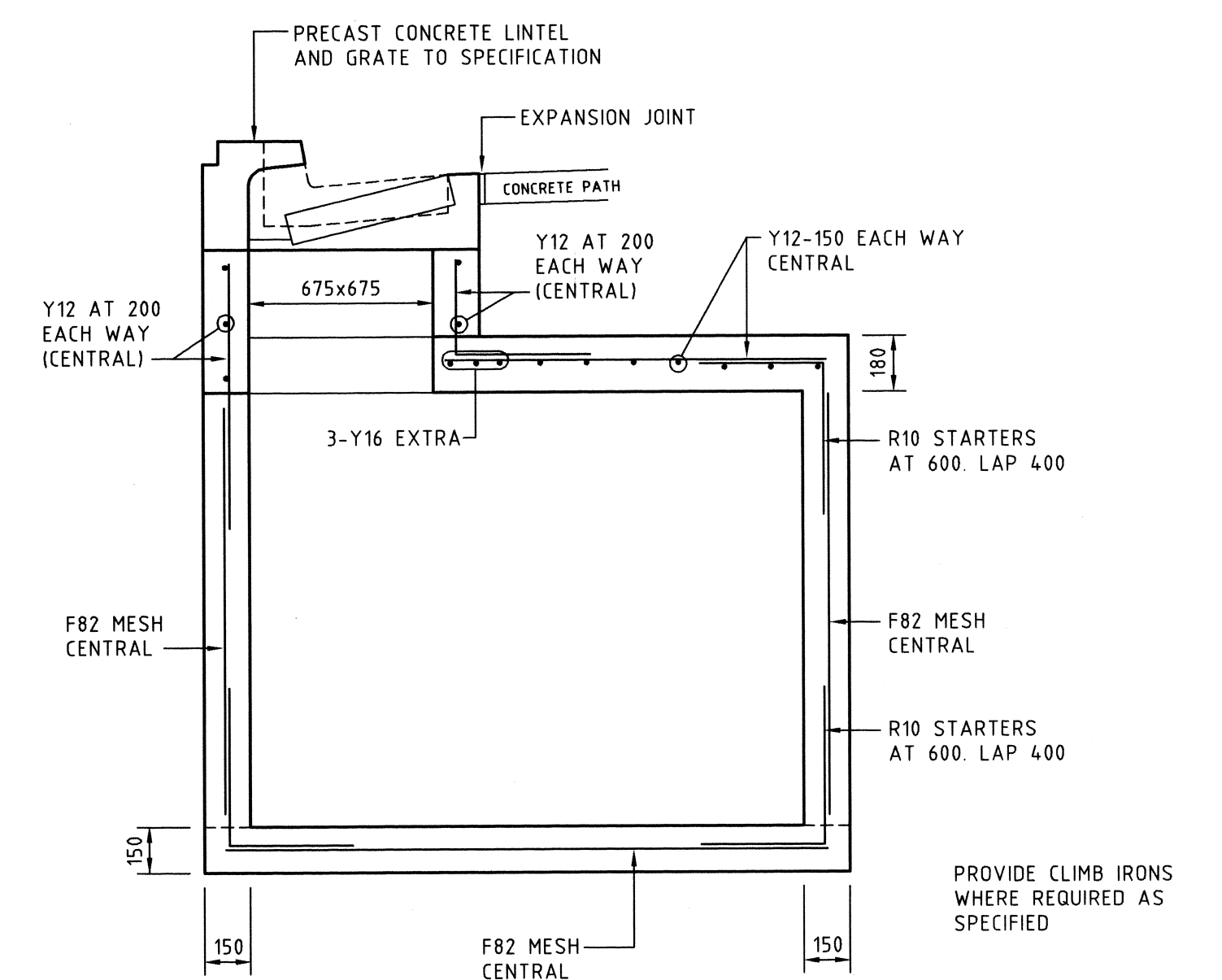
NOTE:

1. LID TO MATCH FINISHED SURFACE LEVEL AND SLOPE. PROVIDE HEAVY DUTY LID IN ROADS.
2. ALTERNATIVE PIT IS CIRCULAR 600mm INTERNAL DIAMETER, WALLS 150mm THICK.
3. CONCRETE TO BE GRADE N20.
4. PITS GREATER THAN 12m DEEP SHALL BE MIN. 675mm SQUARE AND HAVE GALV. CLIMB IRONS AT 450 CRS.



600 x 600 ROOFWATER PIT
(JUNCTION PIT DETAIL SIMILAR)

SCALE 1:20



TYPICAL SECTION

DRAINAGE PITS No.14 & No. 20

NOTES:

- CONSTRUCTION IN ACCORDANCE WITH BALLINA SHIRE COUNCIL'S STANDARDS FOR STORMWATER PIT CONSTRUCTION.
- CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:
- i) CLASS OF CONCRETE SHALL BE NORMAL.
 - ii) MAXIMUM SLUMP SHALL BE 80mm.
 - iii) MAXIMUM AGGREGATE SIZE SHALL BE 20mm.
 - iv) PRODUCTION ASSESSMENT OF CONCRETE STRENGTHS IS SUFFICIENT.
 - v) CHARACTERISTIC 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 20MPa.
 - vi) MINIMUM CLEAR COVER SHALL BE 40mm.

BALLINA SHIRE COUNCIL
APPROVED

THESE PLANS HAVE BEEN TAKEN TO SITE AND CHECKED, AND ARE APPROVED IN ACCORDANCE WITH COUNCIL D/A 1999/448 CONDITIONS AND STANDARD ENGINEERING REQUIREMENTS.

SIGNED *R. Will*
FOR CHIEF ENGINEER
DATED 24 Nov 99

A	10-11-98	PIT DETAILS ADDED	Design T.J.C.	CLIENT: R. and J. PIDCOCK	PROJECT: PACIFIC PINES ESTATE STAGES 3a & 3b LENNOX HEAD	TITLE: INTERALLOTMENT DRAINAGE SHEET 2 AND PIT DETAILS	DAVID ARDILL & ASSOCIATES PTY. LIMITED CONSULTING CIVIL AND STRUCTURAL ENGINEERS PROJECT MANAGERS AND TOWN PLANNERS	31 DE-HAVILLAND CRES. BALLINA NSW 2478 A.C.N. 002 400 526	P.O. BOX 20 Ph. 02 6686 3280 Fax 02 6686 7920 e-mail: daa@nurboweb.net.au	DWG. No. C.12 A	JOB No. 88/1087/3
			Drawn T.J.C.								
No.	Date	Amendment	Scale 1:500 H, 1:100 V	Datum A.H.D.	Sheet of Sheets						

Actual Flow (cumecs)

Capacity (cumecs)

Actual Velocity (m/s)

Full Velocity, Q/A (m/s)

Pipe Size

Grade (%)

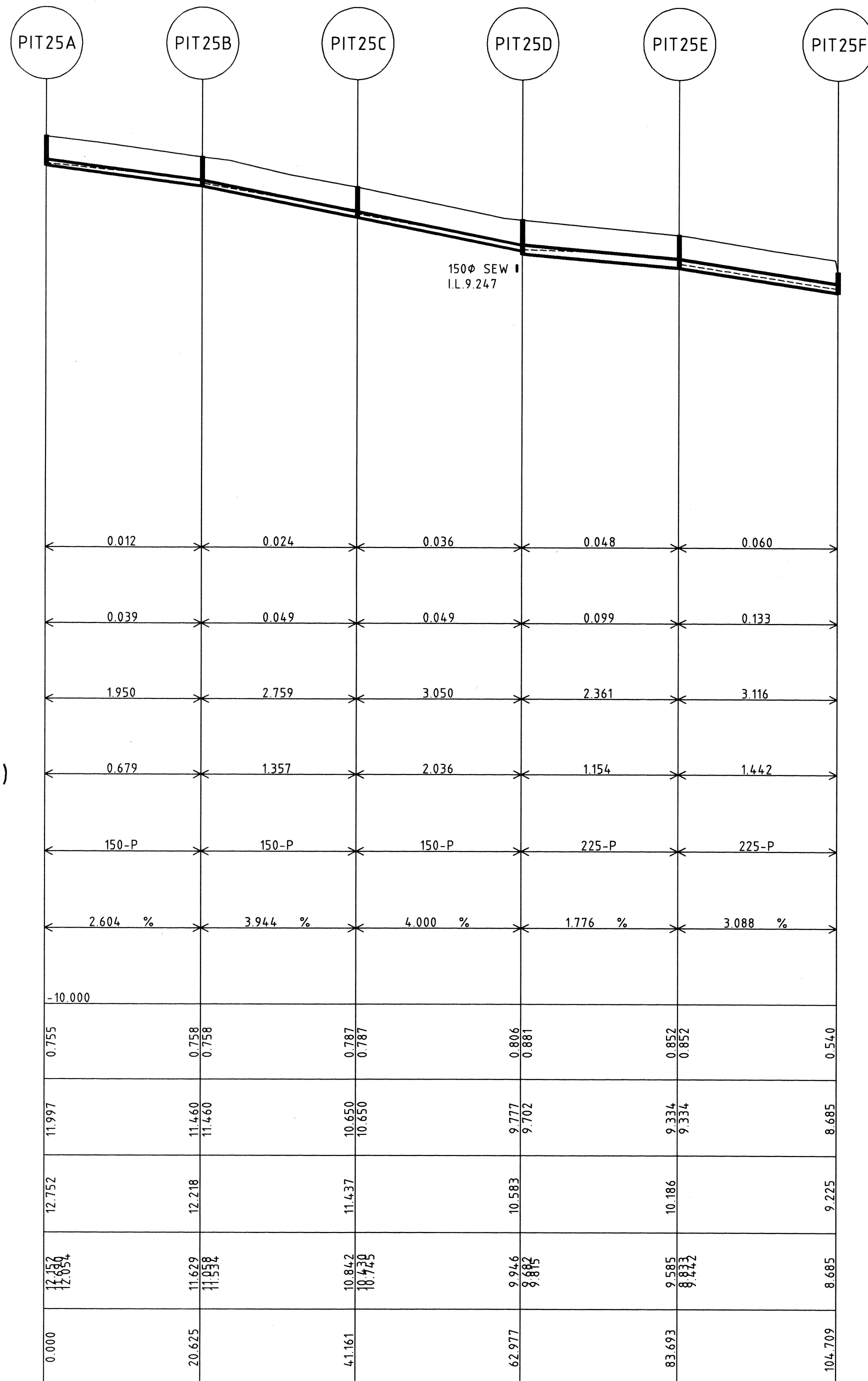
Datum R.L.
Depth to
Invert

Invert
Levels

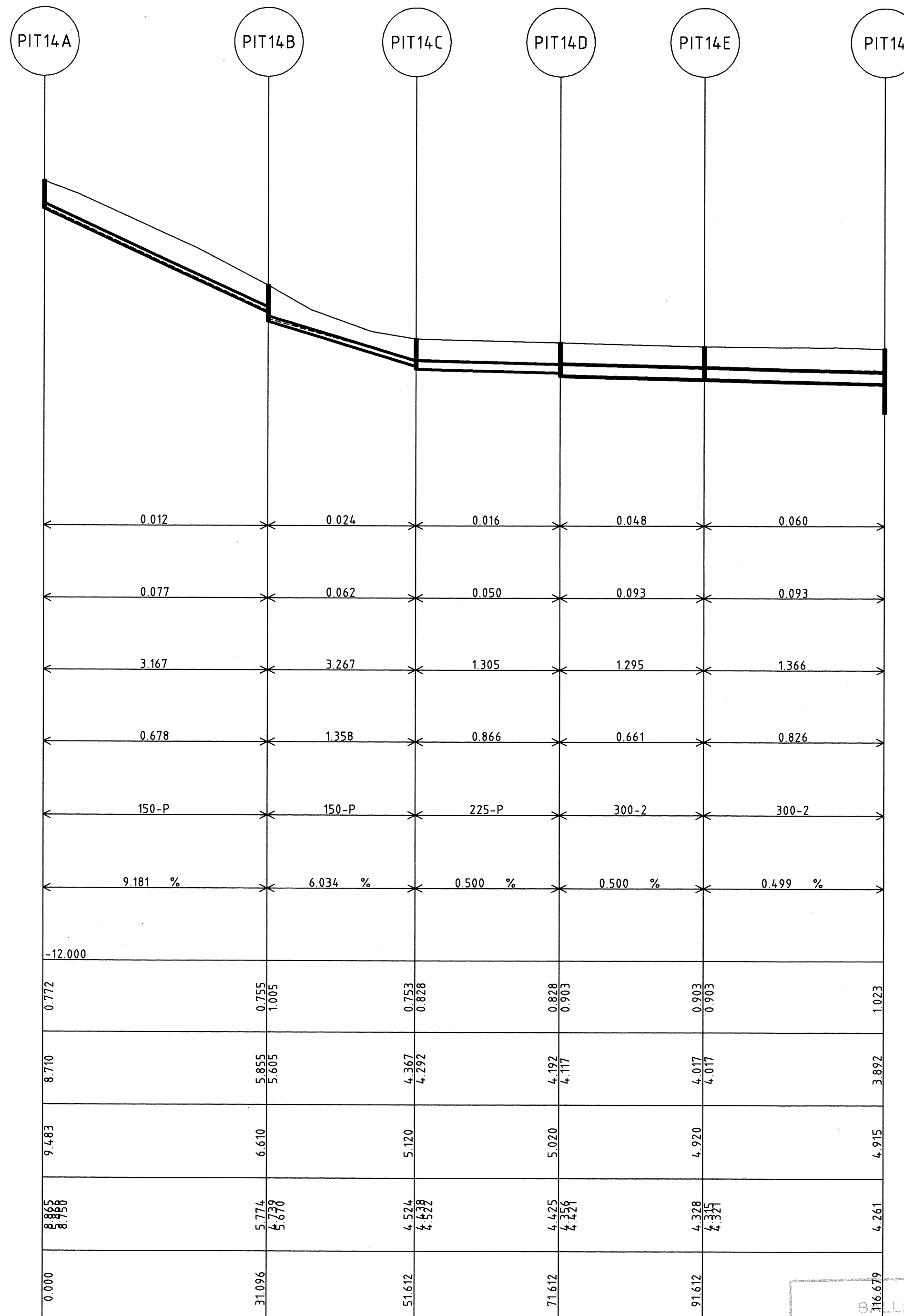
Surface
Levels

HGL (BW)
Levels

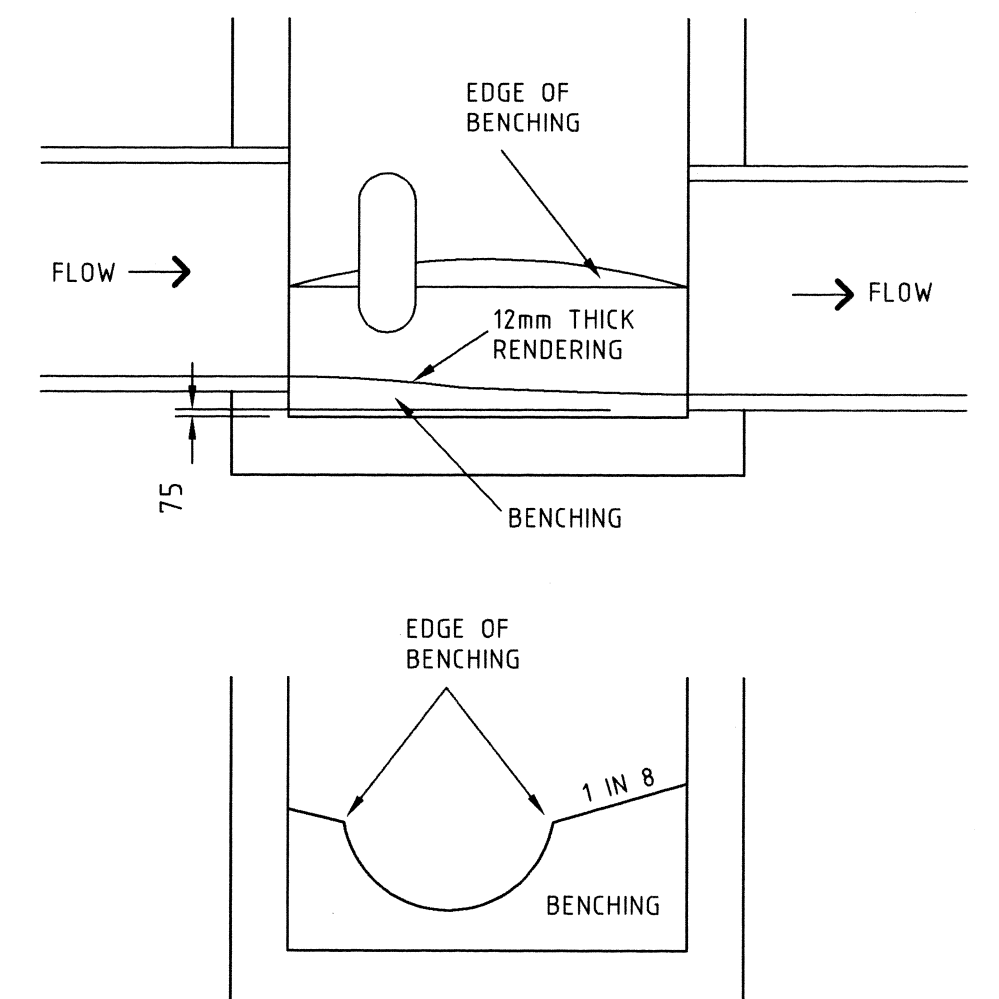
Chainage



LINE 25A TO 25F



LINE 14A TO 14



METHOD OF BENCHING

- BENCHING NOTES FOR S/W PITS**
1. THE EDGE OF BENCHING SHALL BE FORMED AT THE HEIGHT OF THE MID-POINT OF THE DOWNSTREAM PIPE
 2. THE FLOOR SHALL BE TRANSITIONED SMOOTHLY BETWEEN INVERTS OF PIPES
 3. CONCRETE GRADE N20

BALLINA SHIRE COUNCIL
APPROVED

THESE PLANS HAVE BEEN TAKEN TO SITE AND CHECKED, AND ARE APPROVED IN ACCORDANCE WITH COUNCIL DA 1999/248 CONDITIONS AND STANDARD ENGINEERING REQUIREMENTS.

SIGNED *R. Will*
FOR CHIEF ENGINEER
DATED 25 Nov 99

A	11-11-99	BENCHING DETAIL ADDED	Design	T.J.C.	CLIENT: R. and J. PIDCOCK		PROJECT: PACIFIC PINES ESTATE STAGES 3a & 3b LENNOX HEAD		TITLE: INTERALLOTMENT DRAINAGE SHEET 3		DAVID ARDILL & ASSOCIATES PTY. LIMITED CONSULTING CIVIL AND STRUCTURAL ENGINEERS PROJECT MANAGERS AND TOWN PLANNERS				
			Drawn	T.J.C.											
			Checked		Date	SEPT. '99					Dwg Filename	1087-3-H5			
			Approved	 T.J.C. A.H.D.	Datum	A.H.D.					Disk Name				
No.	Date	Amendment	Scale	1:500 H; 1:100 V	Sheet	of	Sheets								

31 DE-HAVILLAND CRES. BALLINA NSW 2478		P.O. BOX 20 Ph. 02 6686 3280 Fax 02 6686 7920 e-mail: daa@turboweb.net.au		DWG. No. C.13 A	JOB No. 88/1087/3
A.C.N. 002 400 526					