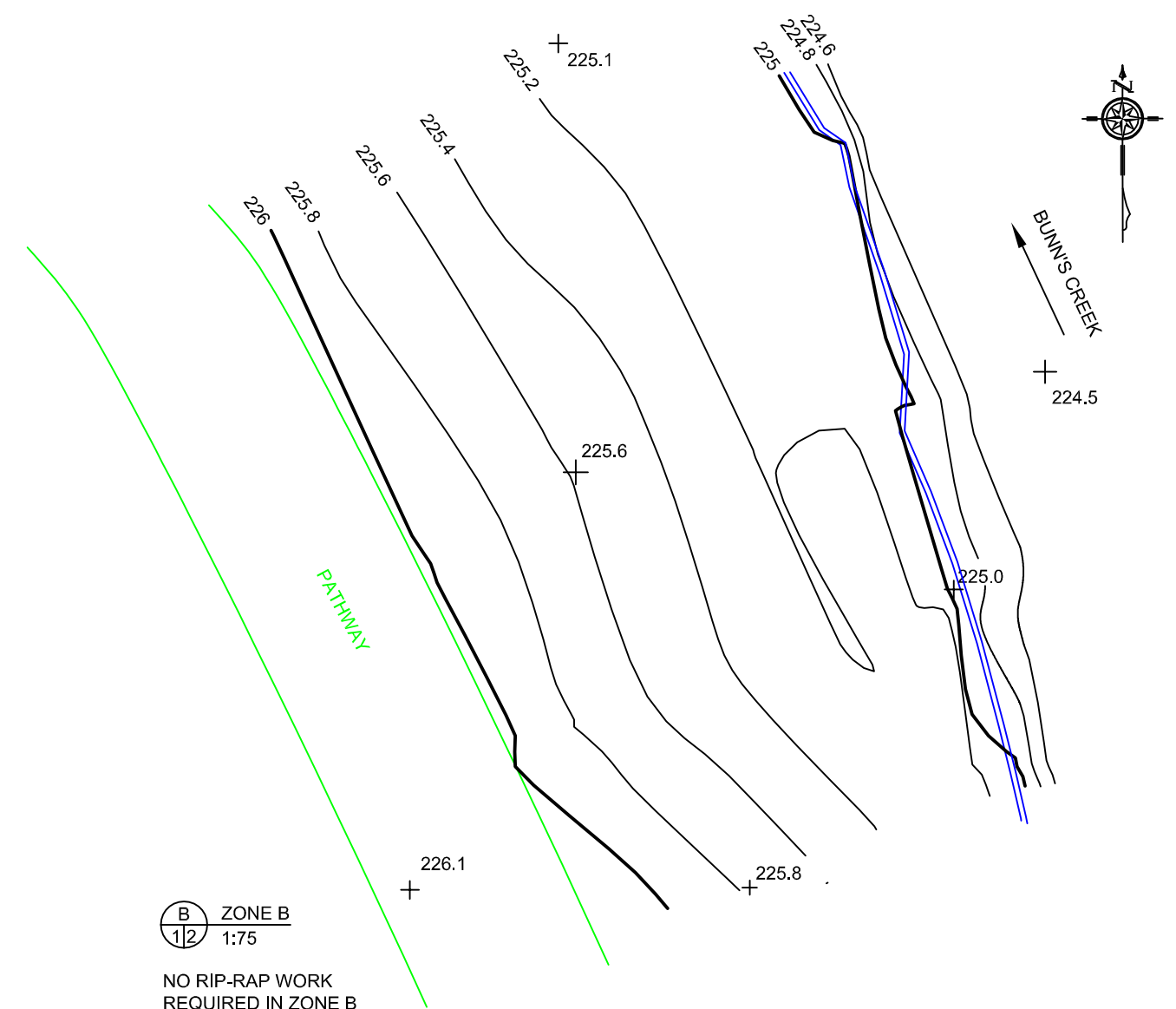


**A** ZONE A  
1/2 1:75

**1**  
2/2

PLACE RIP-RAP,  
0.5 m ON BOTH SIDES OF  
CULVERT



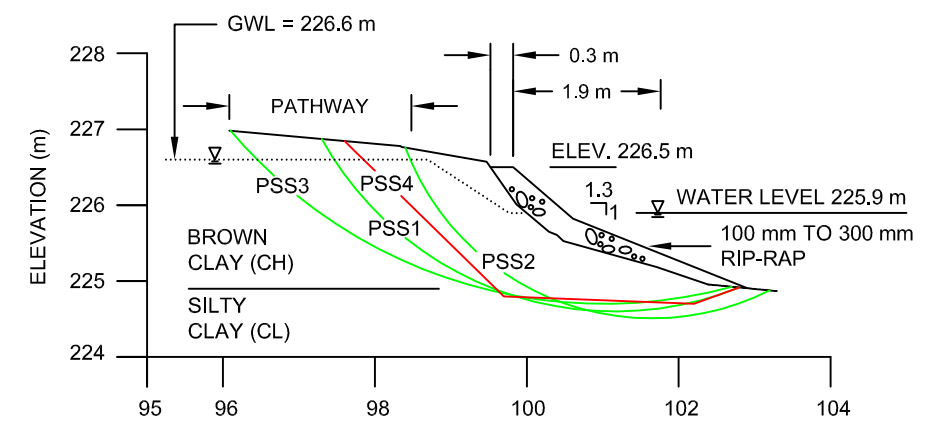
**B** ZONE B  
1/2 1:75

NO RIP-RAP WORK  
REQUIRED IN ZONE B

SOIL STRENGTH PARAMETER VALUES USED IN MODELLING			
SOIL TYPE & CLASSIFICATION	BULK DENSITY $\gamma$ (kN/m <sup>3</sup> )	EFFECTIVE COHESION $c'$ (kPa)	EFFECTIVE FRICTION ANGLE $\phi'$ (°)
BROWN CLAY (CH)	18	3	12
SILTY CLAY (CL)	19	1	18
RIP-RAP	20	0	5

FACTOR OF SAFETY (FS)		
POTENTIAL SLIP SURFACE (PSS)	EXISTING CONDITIONS	RIP-RAP
PSS1 <sup>†</sup>	1.06	1.14
PSS2	1.26	1.18
PSS3	1.12	1.22
PSS4 <sup>‡</sup>	1.07	1.23

<sup>†</sup> CRITICAL SLIP SURFACE.  
<sup>‡</sup> BLOCK SLIDE.



**1**  
2/2 SECTION 1  
DISTANCE (m)  
SCALE 1:100

**LEGEND**

- SECTION/DETAIL No. 1
- SECTION / DETAIL PAGE LOCATION 1 | 2
- SECTION / DETAIL PAGE REFERENCE
- 225.6 SPOT ELEVATION
- CULVERT
- SHORELINE
- 100 mm to 300 mm RIP-RAP
- PROPOSED ELEVATION (226.5)

**NOTES**

- ZONE A = 19 TONNES OF RIP-RAP.
- CONTOUR INTERVAL IS 0.2 m.

No.	DATE	ISSUE / REVISION
0	Aug 2015	Report/ Tender

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**APEGM**  
Certificate of Authorization  
ENG-TECH Consulting Limited  
No.2475 Expiry: April 30, 2016

CLIENT:  
DEAN SPEARMAN  
LANDSCAPE ARCHITECT

PROJECT:  
SLOPE STABILITY ASSESSMENT AND  
EROSION PROTECTION, BUNN'S  
CREEK PATHWAY, WINNIPEG, MB

DWG DESCRIPTION:  
ZONE A AND B  
PLAN AND SECTION

SCALE:  
AS SHOWN

DRAWN BY:  
ERM DATE:  
AUGUST 2015

FILE No.:  
15-330-01 CLIENT DWG/FIG. No.:

ENG-TECH DWG/FIG. No.:  
G2 No.: