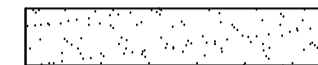

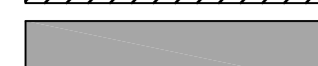






LEGEND

-  SURFACE 1 : TYPE 1 GRANULAR STRUCTURE
-  SURFACE 2 : TYPE 2 GRANULAR STRUCTURE
-  SURFACE 3 : TYPE 3 GRANULAR STRUCTURE
-  SURFACE 4 : TYPE 4 GRANULAR STRUCTURE
-  SURFACE 5 : TYPE 5 GRANULAR STRUCTURE
-  SURFACE 6 : TOPSOIL AND SEED
-  SURFACE 7 : RIPRAP

SURFACE 1 : TYPE 1 GRANULAR STRUCTURE
150mm OF DRAINAGE MATERIAL MEETING THE REQUIREMENTS OF CW3120.
WOVEN GEOTEXTILE MEETING THE REQUIREMENTS OF CW3130.

SURFACE 2 : TYPE 2 GRANULAR STRUCTURE
150mm - 20mm BASE COURSE MATERIAL MEETING THE REQUIREMENTS OF CW3110.

SURFACE 3 : TYPE 3 GRANULAR STRUCTURE
100mm - 20mm BASE COURSE MATERIAL MEETING THE REQUIREMENTS OF CW3110.
200mm - 50mm CRUSHED SUB-BASE MATERIAL MEETING THE REQUIREMENTS OF CW3110.

SURFACE 4 : TYPE 4 GRANULAR STRUCTURE
150mm - 50mm CRUSHED SUB-BASE MATERIAL MEETING THE REQUIREMENTS OF CW3110.
450mm - 150mm CRUSHED SUB-BASE MATERIAL MEETING THE REQUIREMENTS OF CW3110.
WOVEN GEOTEXTILE MEETING THE REQUIREMENTS OF CW3130.

SURFACE 5 : TYPE 5 GRANULAR STRUCTURE
75mm - 20mm BASE COURSE MATERIAL MEETING THE REQUIREMENTS OF CW3110.

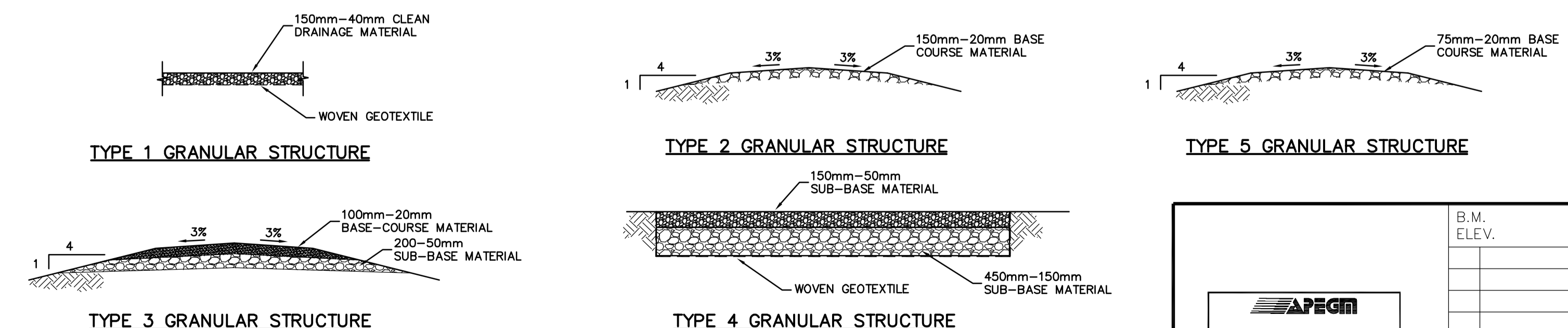
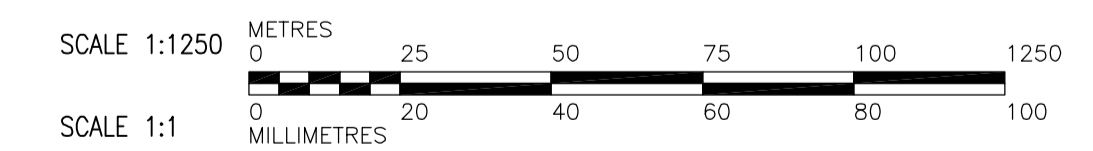
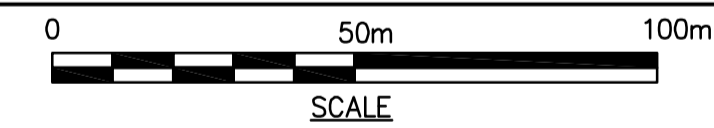
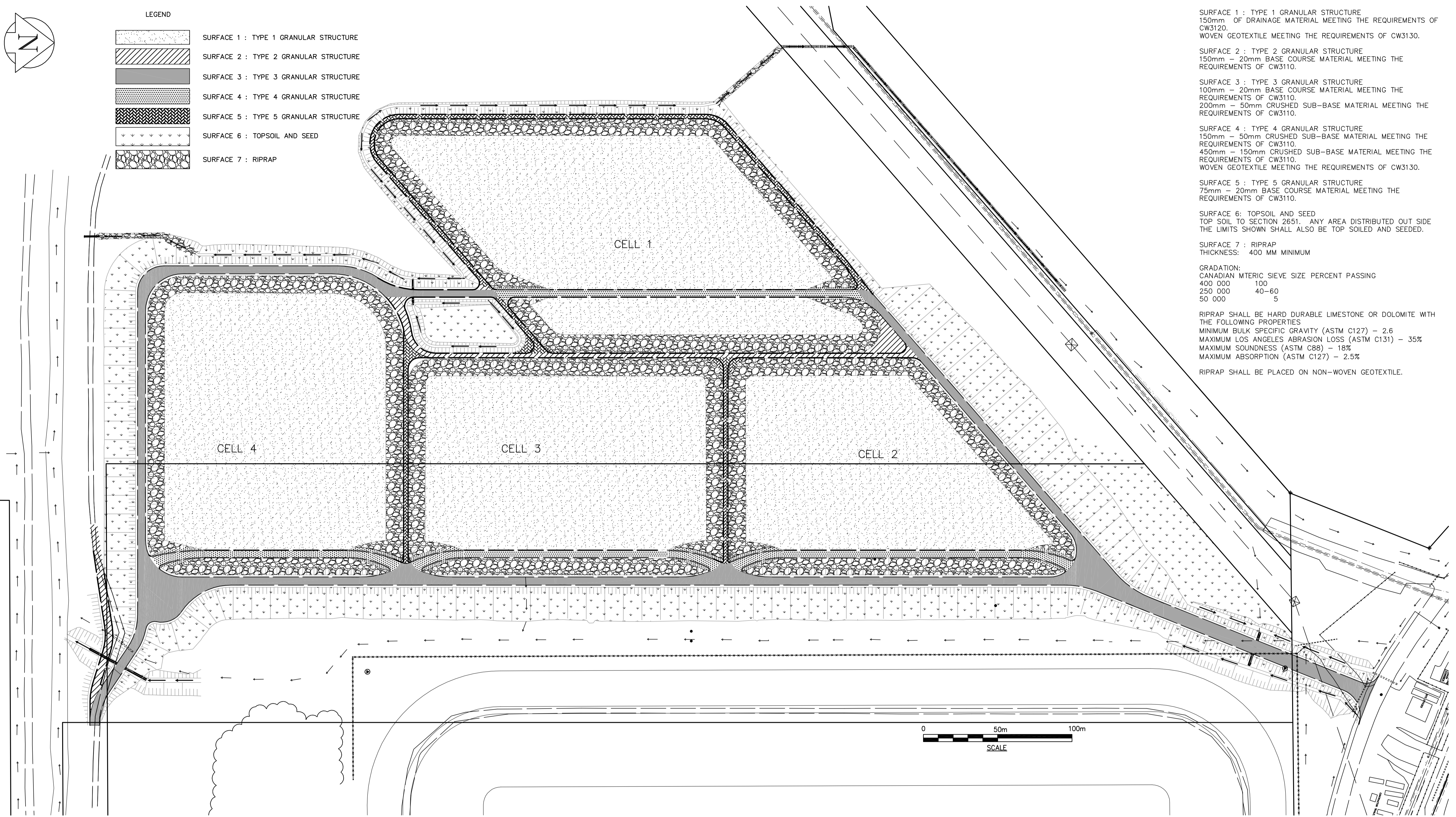
SURFACE 6 : TOPSOIL AND SEED
TOP SOIL TO SECTION 2651. ANY AREA DISTRIBUTED OUT SIDE THE LIMITS SHOWN SHALL ALSO BE TOP SOILED AND SEEDED.

SURFACE 7 : RIPRAP
THICKNESS: 400 MM MINIMUM





GRADATION:
CANADIAN METRIC SIEVE SIZE PERCENT PASSING
400 000 100
250 000 40-60
50 000 5

RIPRAP SHALL BE HARD DURABLE LIMESTONE OR DOLOMITE WITH THE FOLLOWING PROPERTIES
MINIMUM BULK SPECIFIC GRAVITY (ASTM C127) - 2.6
MAXIMUM LOS ANGELES ABRASION LOSS (ASTM C131) - 35%
MAXIMUM SOUNDNESS (ASTM C88) - 18%
MAXIMUM ABSORPTION (ASTM C127) - 2.5%

RIPRAP SHALL BE PLACED ON NON-WOVEN GEOTEXTILE.



ROAD CROSS SECTION
N.T.S.

| | | | | | | |
|---|------------------|--|--|---|--|------------------|
|  Certificate of Authorization Earth Tech Canada Inc. No. 730 Expiry: April 30, 2006 | B.M. ELEV. |  Frederickson Cooper ARCHITECTS |  A Tyco International Ltd. Company | ENGINEER'S SEAL |  THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION | CITY FILE NUMBER |
| | DESIGNED BY: GK | CHECKED BY: SRB | ORIGINAL SIGNED BY: S.R. BILEVIQUS | 2006/02/07 | | SHEET OF |
| DRAWN BY: GK | APPROVED BY: DJT | RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI | CONSULTANT DRAWING NO. WL-C0400 | CITY DRAWING NUMBER 1-0601L-D-C0400-001-000 | | |
| SCALE: 1:1250 | NO. REVISIONS | DATE: 2006/02/27 | DATE: 2006/02/07 | CIVIL GRANULAR STRUCTURES PLAN | | |