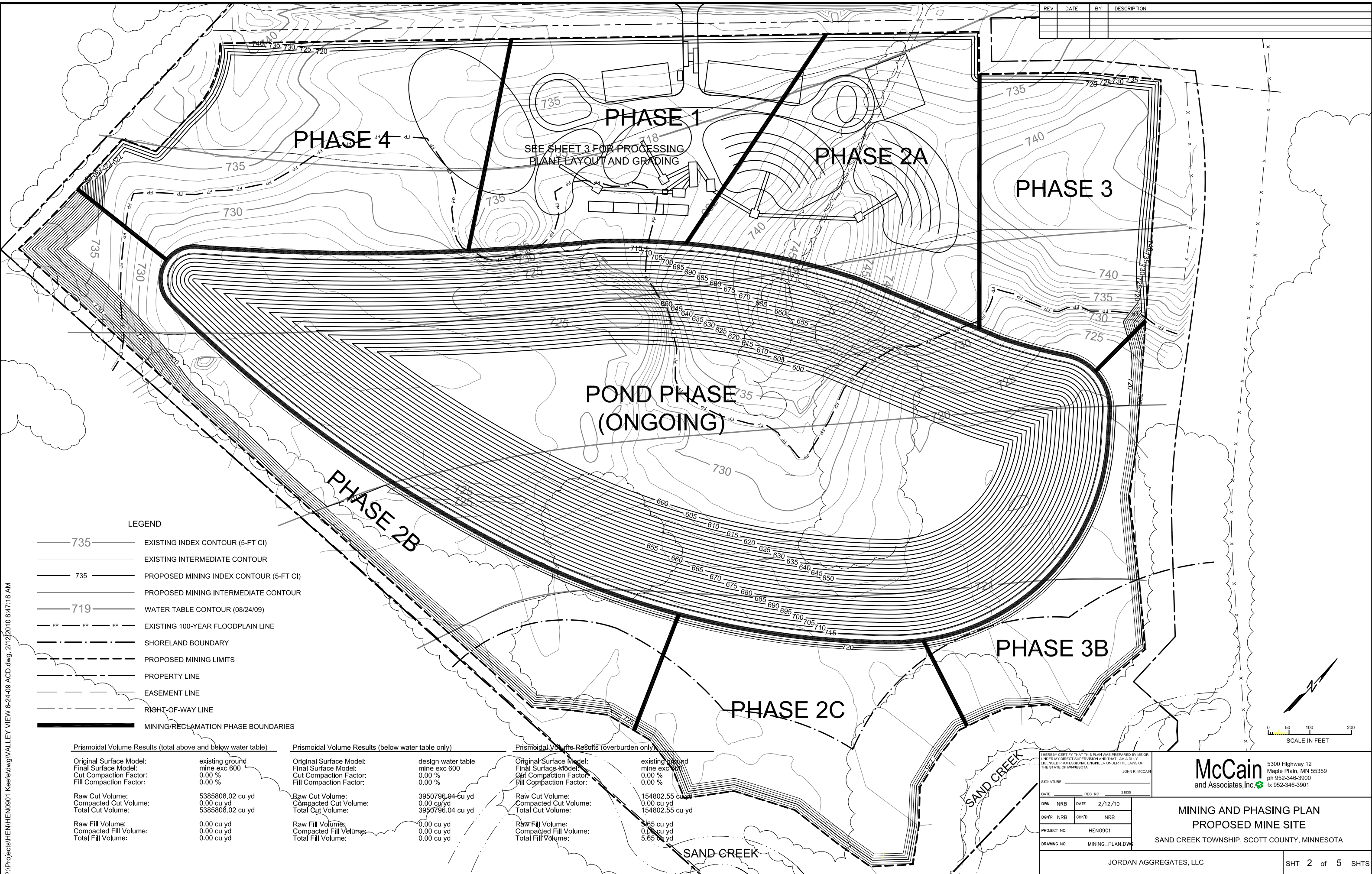


REV	DATE	BY	DESCRIPTION



**LEGEND**

- 735 — EXISTING INDEX CONTOUR (5-FT CI)
- — — EXISTING INTERMEDIATE CONTOUR
- 735 — PROPOSED MINING INDEX CONTOUR (5-FT CI)
- — — PROPOSED MINING INTERMEDIATE CONTOUR
- 719 — WATER TABLE CONTOUR (08/24/09)
- - - - - EXISTING 100-YEAR FLOODPLAIN LINE
- - - - - SHORELAND BOUNDARY
- - - - - PROPOSED MINING LIMITS
- - - - - PROPERTY LINE
- - - - - EASEMENT LINE
- - - - - RIGHT-OF-WAY LINE
- - - - - MINING/RECLAMATION PHASE BOUNDARIES

**Prismoidal Volume Results (total above and below water table)**

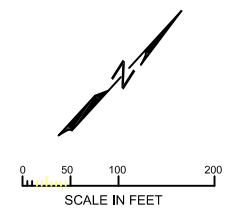
Original Surface Model:	existing ground
Final Surface Model:	mine exc 600
Cut Compaction Factor:	0.00 %
Fill Compaction Factor:	0.00 %
Raw Cut Volume:	5385808.02 cu yd
Compacted Cut Volume:	0.00 cu yd
Total Cut Volume:	5385808.02 cu yd
Raw Fill Volume:	0.00 cu yd
Compacted Fill Volume:	0.00 cu yd
Total Fill Volume:	0.00 cu yd

**Prismoidal Volume Results (below water table only)**

Original Surface Model:	design water table
Final Surface Model:	mine exc 600
Cut Compaction Factor:	0.00 %
Fill Compaction Factor:	0.00 %
Raw Cut Volume:	3950796.04 cu yd
Compacted Cut Volume:	0.00 cu yd
Total Cut Volume:	3950796.04 cu yd
Raw Fill Volume:	0.00 cu yd
Compacted Fill Volume:	0.00 cu yd
Total Fill Volume:	0.00 cu yd

**Prismoidal Volume Results (overburden only)**

Original Surface Model:	existing ground
Final Surface Model:	mine exc 600
Cut Compaction Factor:	0.00 %
Fill Compaction Factor:	0.00 %
Raw Cut Volume:	154802.55 cu yd
Compacted Cut Volume:	0.00 cu yd
Total Cut Volume:	154802.55 cu yd
Raw Fill Volume:	5.65 cu yd
Compacted Fill Volume:	0.00 cu yd
Total Fill Volume:	5.65 cu yd



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

JOHN R. MCCAIN  
REG. NO. 21835

DATE: 2/12/10

DWN: NRB DATE: 2/12/10

CHK'D: NRB

PROJECT NO.: HEN0901

DRAWING NO.: MINING\_PLAN.DWG

**McCain**  
and Associates, Inc.

5300 Highway 12  
Maple Plain, MN 55359  
ph 952-346-3900  
fx 952-346-3901

**MINING AND PHASING PLAN**  
**PROPOSED MINE SITE**  
SAND CREEK TOWNSHIP, SCOTT COUNTY, MINNESOTA

P:\Projects\HENHEN0901\_Keele\dwg\VALLEY VIEW 6-24-09 ACD.dwg, 2/12/2010 8:47:18 AM