

Equations Used:

$$q_f = a + p'_f \tan \psi'$$

$$\sin \phi' = \tan \psi'$$

$$c' = \frac{a}{\cos \phi'}$$

$$\psi' = \arctan \left[\frac{5380 - 216}{10000} \right] = 27.3$$

$$\phi' = \arcsin(\tan(27.3)) = 31.1$$

$$c' = \frac{216}{\cos(31.1)} = 252 \text{ psf}$$

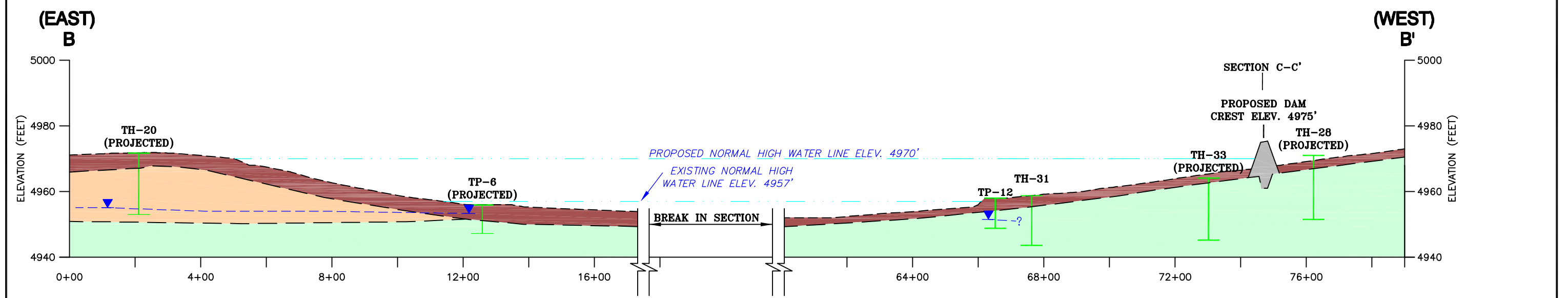
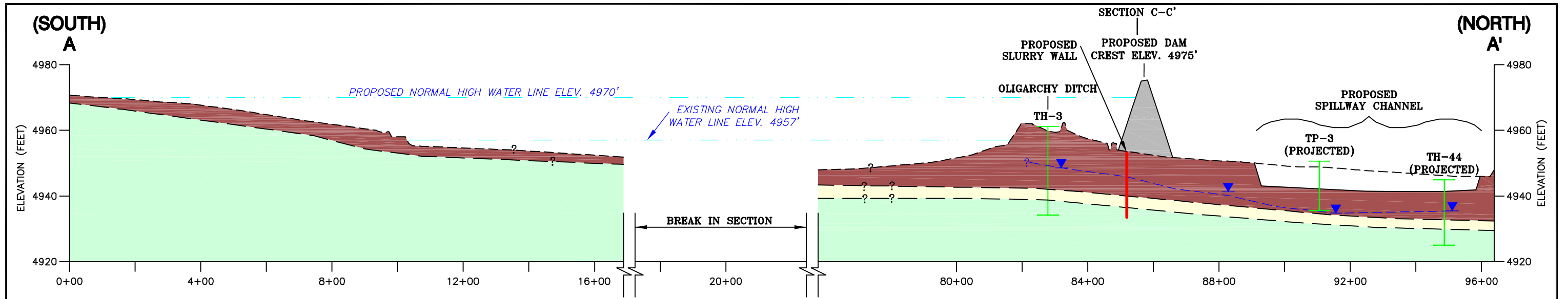
JOB NO. 19-0033.283.00

UNION RESERVOIR
 TRIAXIAL STRESS PATH PLOT
 TP-2



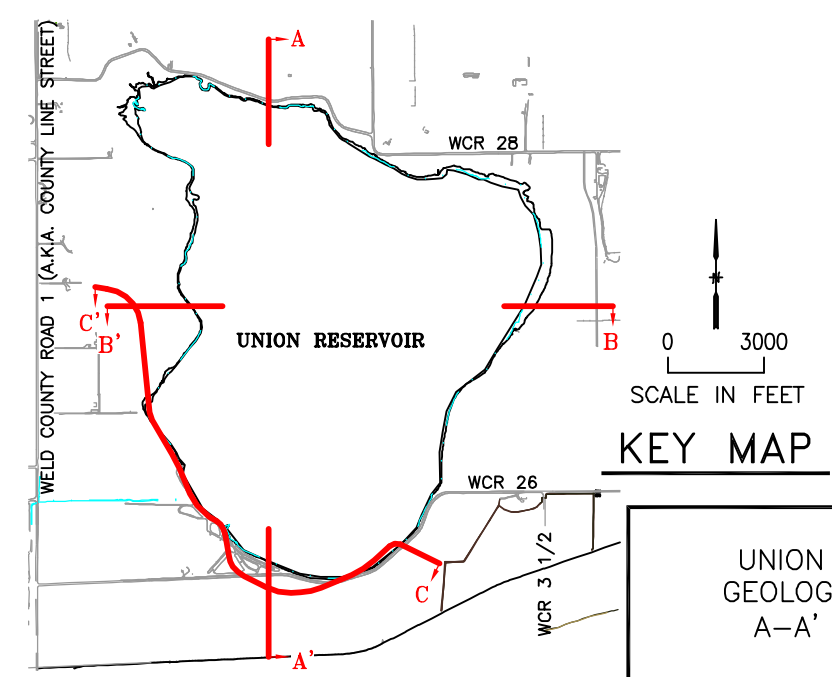
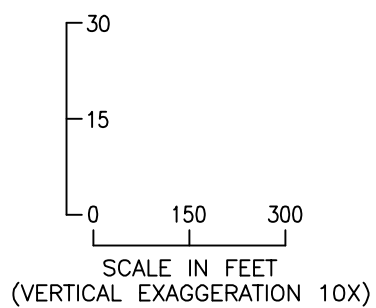
FIGURE:

3.12



LEGEND

- EMBANKMENT FILL
- OVERBURDEN: CLAYS AND SANDY CLAY LOCALLY GRADING TO VERY CLAYEY SAND AND SILT WITH SAND, EOLIAN DEPOSIT
- SAND AND GRAVEL: POORLY TO WELL GRADED, ALLUVIAL DEPOSIT
- SANDSTONE: VERY FINE TO MEDIUM GRAINED, SILTY, LOCALLY CLAYEY
- CLAYSTONE: UPPER 3 TO 5 FEET COMMONLY WEATHERED TO RESIDUAL CLAY SOIL, LOCALLY SILTY, LOCALLY SANDY, LOCAL INDURATED SHALE
- SLURRY WALL
- APPROXIMATE CONTACT
- INFERRED CONTACT
- APPROXIMATE GROUNDWATER LEVEL

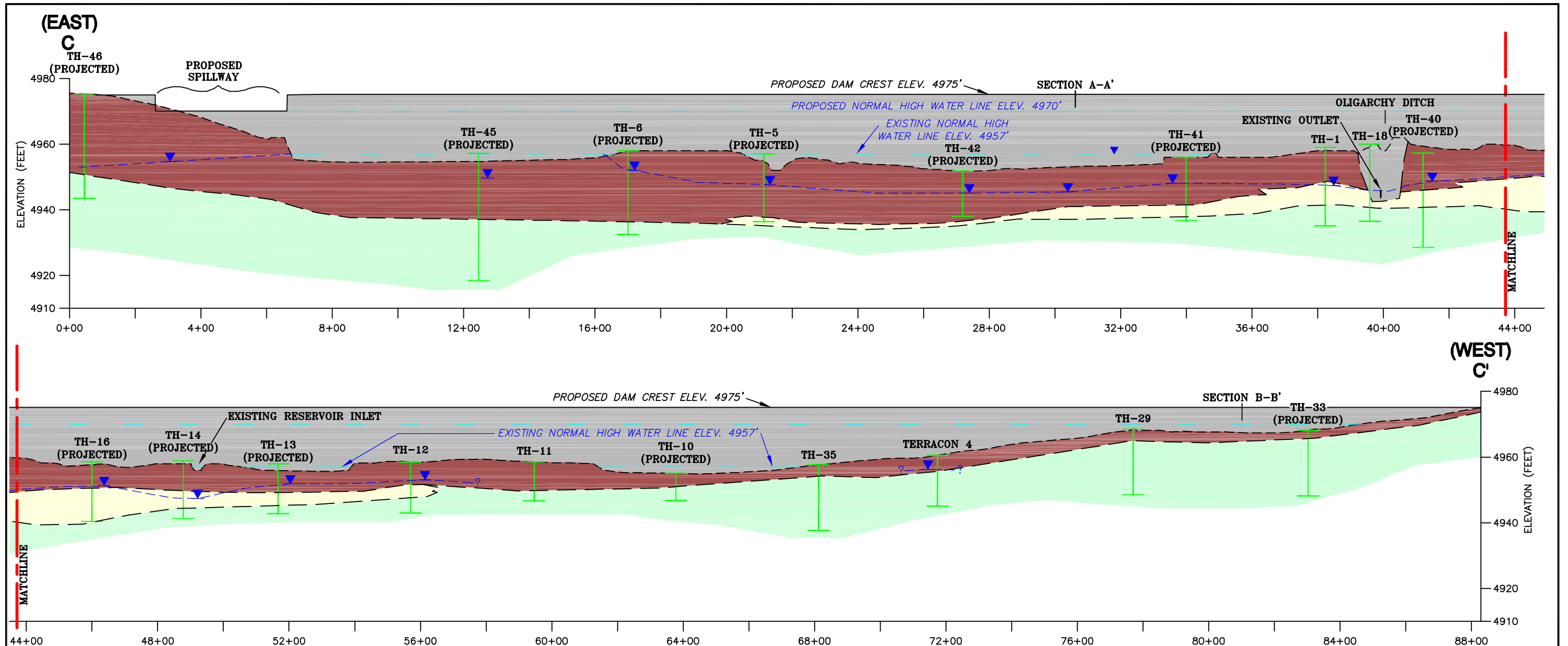


KEY MAP

UNION RESERVOIR
GEOLOGIC SECTIONS
A-A' AND B-B'

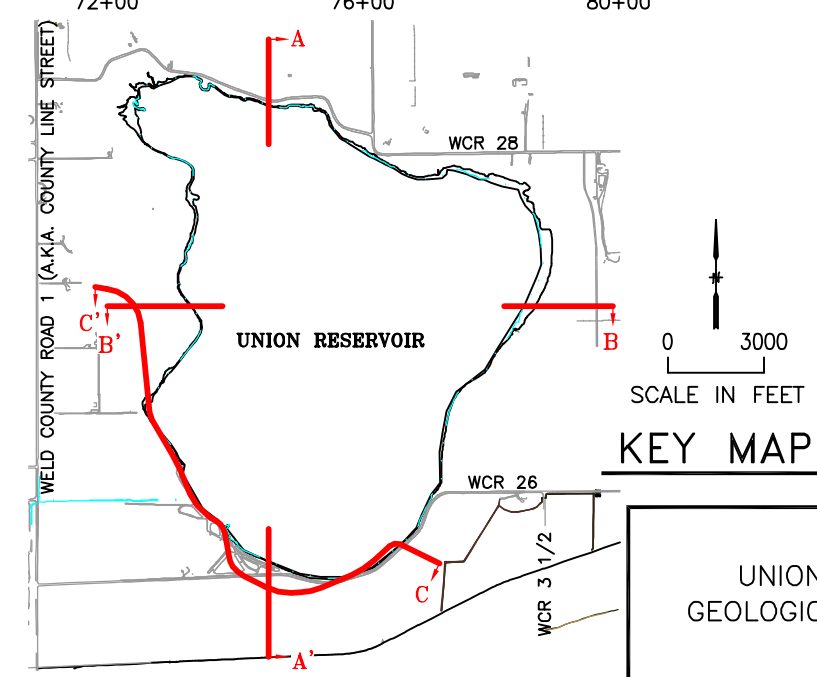
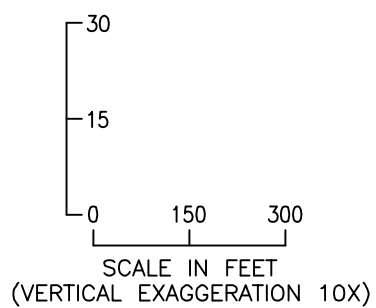
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RMC
FIGURE:
3.13



LEGEND

- EMBANKMENT FILL, PROPOSED DAM AND ABOVE EXISTING OUTLET
- OVERBURDEN: CLAYS AND SANDY CLAY LOCALLY GRADING TO VERY CLAYEY SAND AND SILT WITH SAND, EOLIAN DEPOSIT
- SAND AND GRAVEL: POORLY TO WELL GRADED, ALLUVIAL DEPOSIT
- CLAYSTONE: UPPER 3 TO 5 FEET COMMONLY WEATHERED TO RESIDUAL CLAY SOIL, LOCALLY SILTY, LOCALLY SANDY, LOCAL INDURATED SHALE
- APPROXIMATE CONTACT
- INFERRED CONTACT
- APPROXIMATE GROUNDWATER LEVEL



KEY MAP

JOB NO. 43-0033.283.00

UNION RESERVOIR
GEOLOGIC SECTION C-C'

RMC

FIGURE:
3.14