STRATIGRAPHY

- Stratigraphy:
  - process of recording and analysis
- Stratification:
  - the physical layering of deposits on a site

STRATIGRAPHY

Governed by 3 principles (for sedimentary deposits):

- Principle of Superposition
  - the oldest layer will be at the bottom and the youngest at the top of a stratigraphic sequence or profile
- Principle of Original Horizontality
  - sediments are deposited horizontally
- Principle of Original Continuity
  - sedimentary layers are originally deposited as laterally continuous sheets that naturally terminate against basin margins or barriers or which grade into other sedimentary layers

STRATIGRAPHY

Key Terms:

- **Deposit**
  - the assembling and laying down of sediment and its inclusions
- **Contexts**:
  - a layer as defined by the excavator
  - May represent a single deposit, as we typically excavate
  - May also be arbitrarily defined, e.g., 0.2' layers removed from homogenous feature fill
  - In Roskams = "stratigraphic units"
- **Interface**:
  - boundary between two or more deposits
- **Correlation:**
  - the relationship between two non-contiguous contexts
- **Features:**
  - non-portable artifacts

TYPES OF STRATIGRAPHY

- Lithostratigraphy
  - defined through geological/pedological principles
- Biostratigraphy
  - defined through presence/absence of life forms
- Ethnostratigraphy
  - defined through evidence of cultural activities

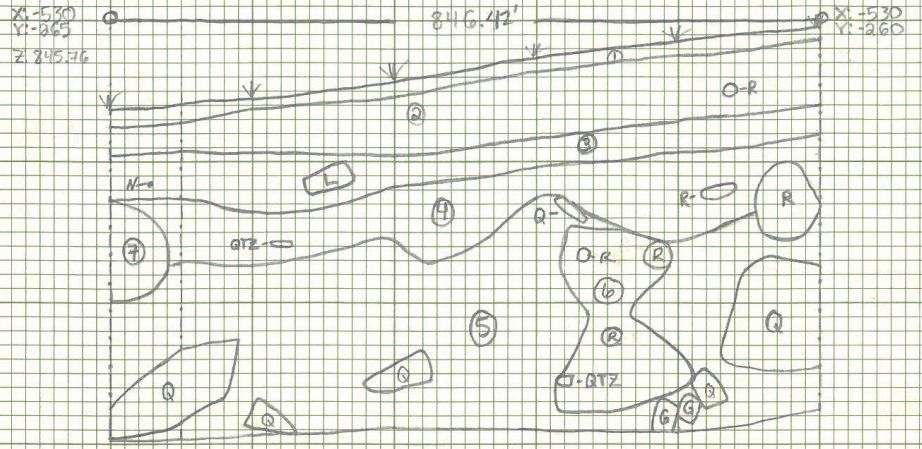
MAPPING ON SITE

- Goals
  - Show the natural and arbitrary boundaries of the excavation and differentiate between these interfaces
  - Show stratigraphic relationships
    - Physical relationship between units of stratigraphy
      - i.e. seals/sealed by; intrudes/intruded by; contains/within
    - Chronological construction of the sequence
      - A record of the order in which depositions of successive units took place
- Plan Drawings
  - Single level plan (top plan)
  - Phase plan
  - Single context plan
- Section Drawings
- Harris Matrix
  - Built from a record of all unequivocal relationships between layers, interfaces, and features
  - Purpose is to show sequence of deposits, features, and interfaces in time, not their physical relationships

MONTICELLO DEPT. OF ARCHAEOLOGY
44ABH65 JOINER'S SHOP 2014
QUADRAT 2404 WEST PROFILE
D-2404-002
SEW, SCP, KAS 6-24-14

0 5' 1'

2404 West Profile



Q=MODIFIED QUARTZITE (QTZ)=UNMODIFIED QUARTZ (N)=NAIL
G=UNMODIFIED GREENSTONE (R)=ROOT (L)=UNMODIFIED LIMESTONE

(1) 99% REDDISH BROWN (2.5YR 4/3) SILTY CLAY LOAM, WITH <1% UNMODIFIED STONE (SIZE 2) EXCAVATED AS CTX A

(2) 98% DARK REDDISH BROWN (2.5YR 3/3) SILTY CLAY LOAM, WITH 2% UNMODIFIED STONE (SIZE 2) EXCAVATED AS CTX B and D

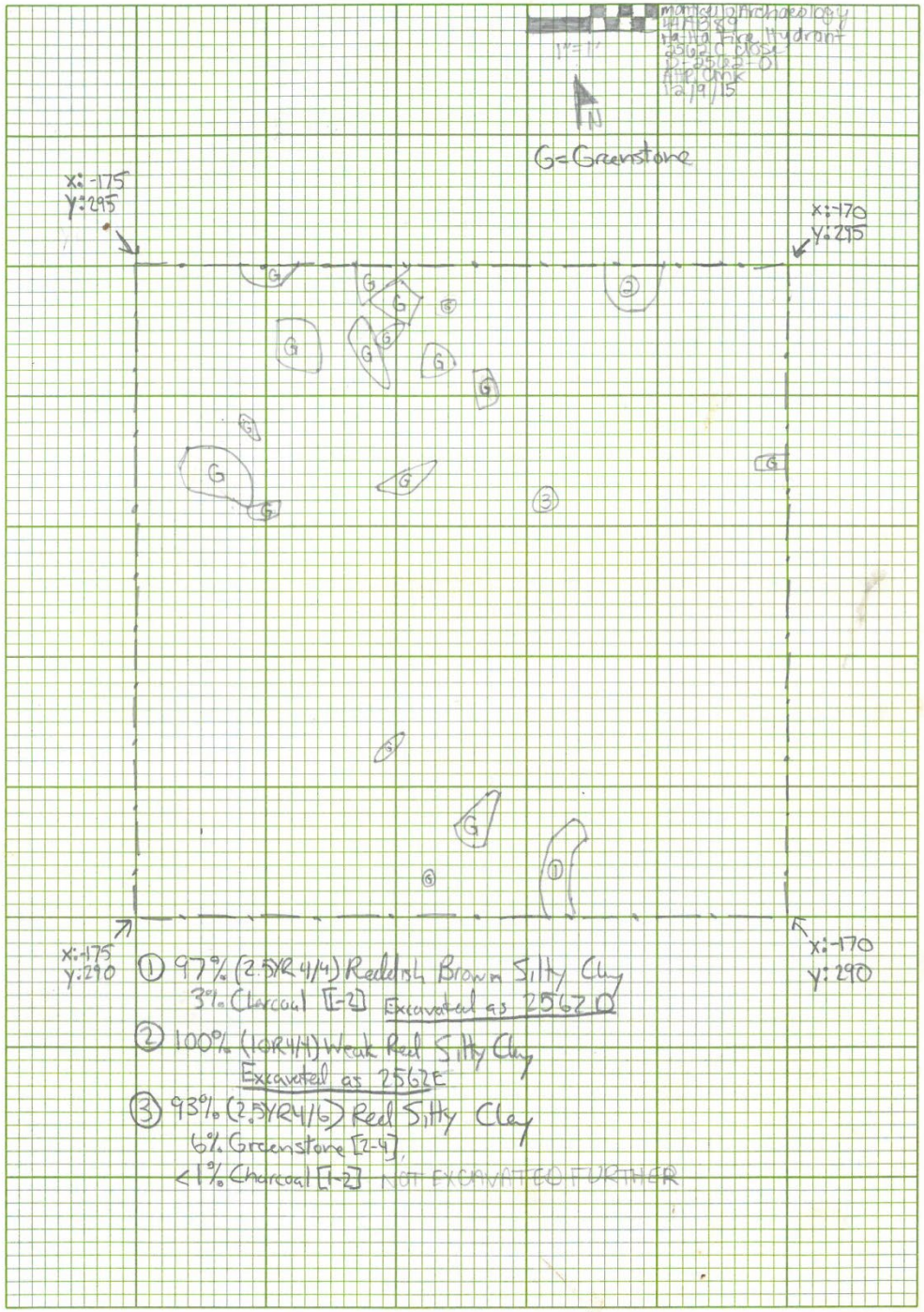
(3) 67% DARK REDDISH BROWN (2.5YR 3/3) SILTY CLAY LOAM, 30% REDDISH BROWN (2.5YR 4/4) SILTY CLAY LOAM, WITH 3% UNMODIFIED LIMESTONE (SIZE 4) EXCAVATED AS CTX E

(4) 68% WEAK RED (10R 4/4) SILTY CLAY LOAM, 30% REDDISH BROWN (2.5YR 4/4) SILTY CLAY LOAM, WITH 2% UNMODIFIED STONE (SIZE 2) EXCAVATED AS CTX F

(5) 90% WEAK RED (10R 4/4) CLAY LOAM, WITH 8% MODIFIED QUARTZITE (SIZE 4-5), 2% UNMODIFIED GREENSTONE (SIZE 2-3) EXCAVATED AS CTX G, H, I and J

(6) 50% REDDISH BROWN (2.5YR 4/4) SILTY CLAY LOAM, 49% REDDISH BROWN (2.5YR 4/3) SILTY CLAY LOAM, WITH 1% UNMODIFIED QUARTZ (SIZE 2) EXCAVATED AS CTX G, H, I and J

(7) 100% REDDISH BROWN (2.5YR 4/3) SILTY CLAY LOAM EXCAVATED AS CTX F and G

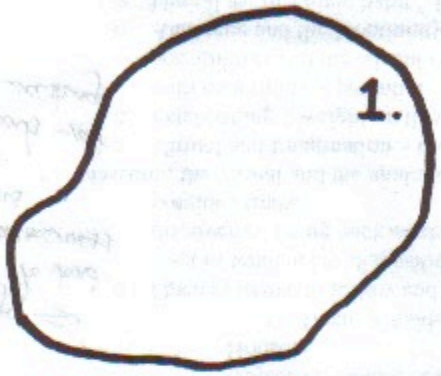


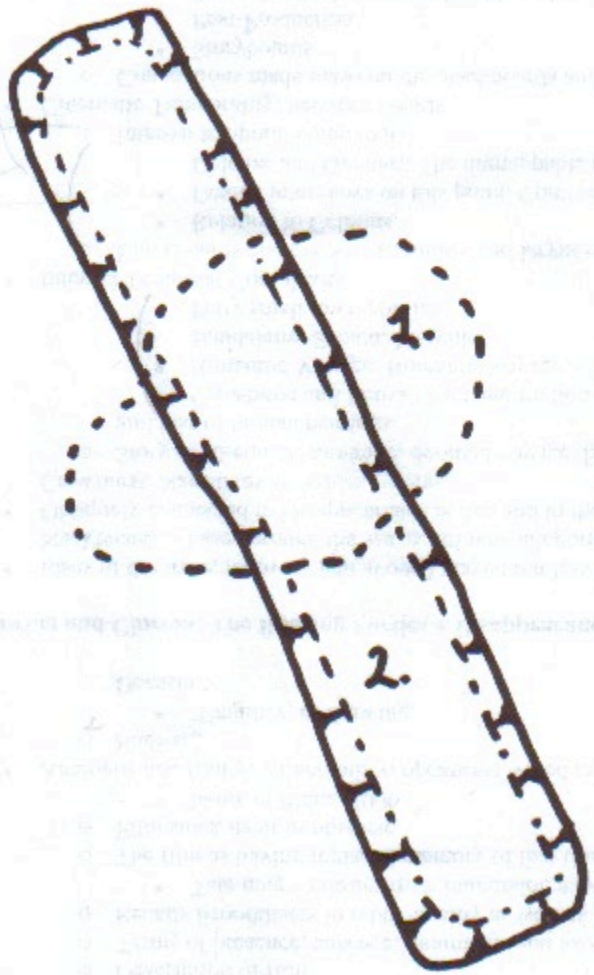
DESCRIPTION AND INTERPRETATION

- What methods of stratigraphy do we use to describe and interpret the stratification at Site 30?

- Field focus on description
- Single context records (specific to each quadrat and deposit)
- Lithostratigraphy (incipient A-horizon, B-horizon, sediment descriptions in general)
- Biostratigraphy (pollen, phytoliths)
- Ethnostratigraphy (artifacts, features)
- Plan drawings
- Section/profile drawings
- Correlation of individual contexts into larger or site-wide deposits

SINGLE CONTEXT RECORDING & HARRIS MATRIX

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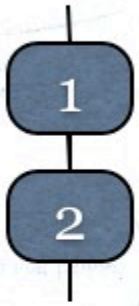
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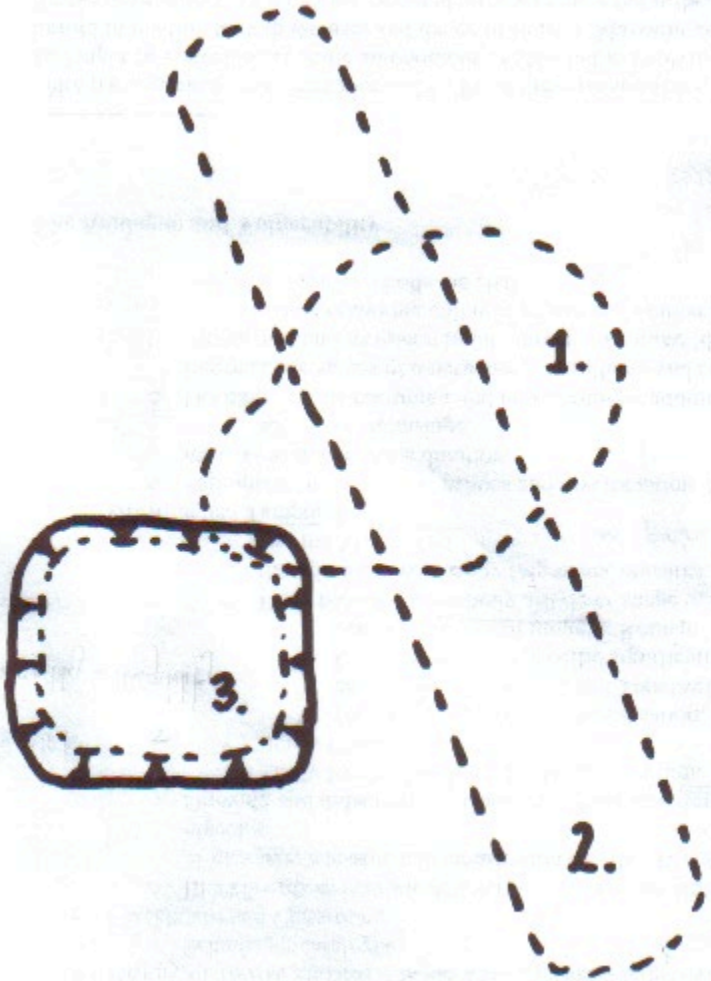
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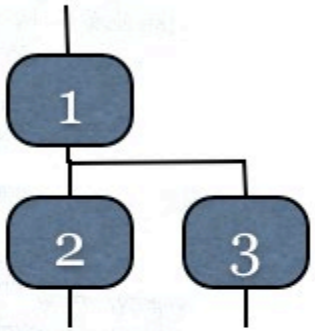
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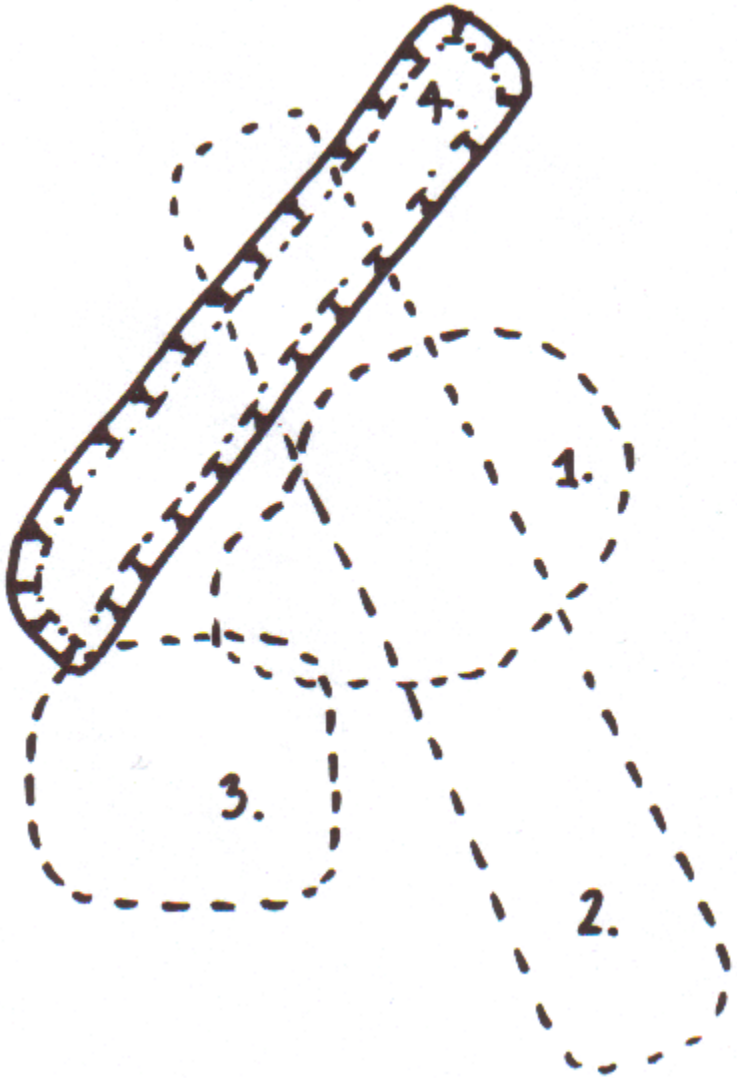
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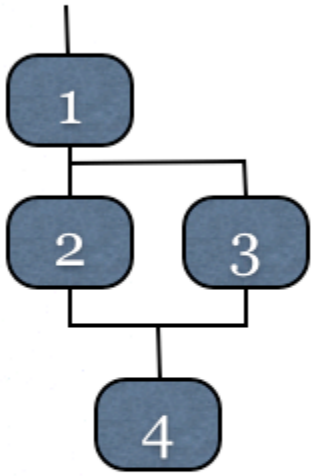
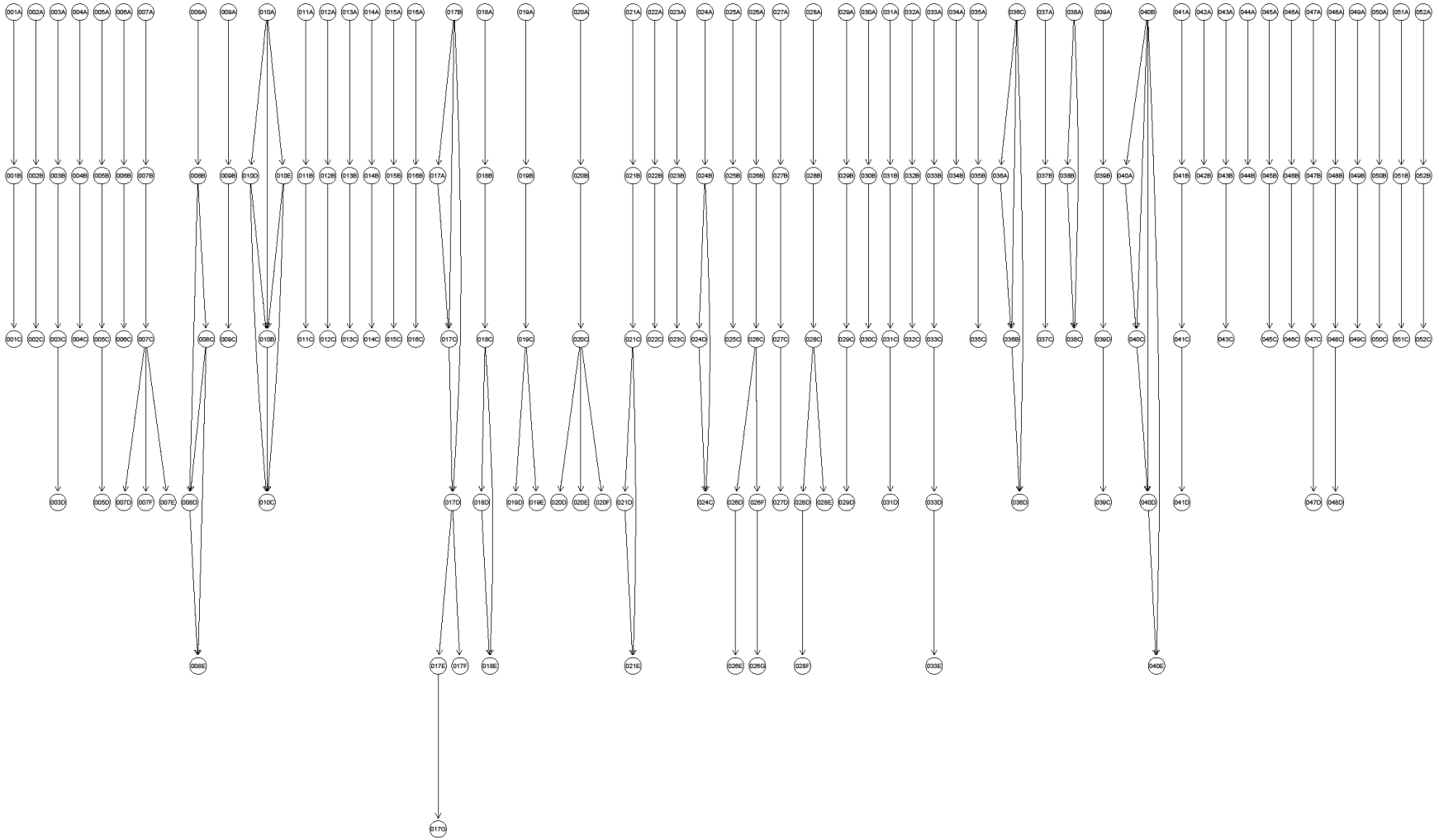
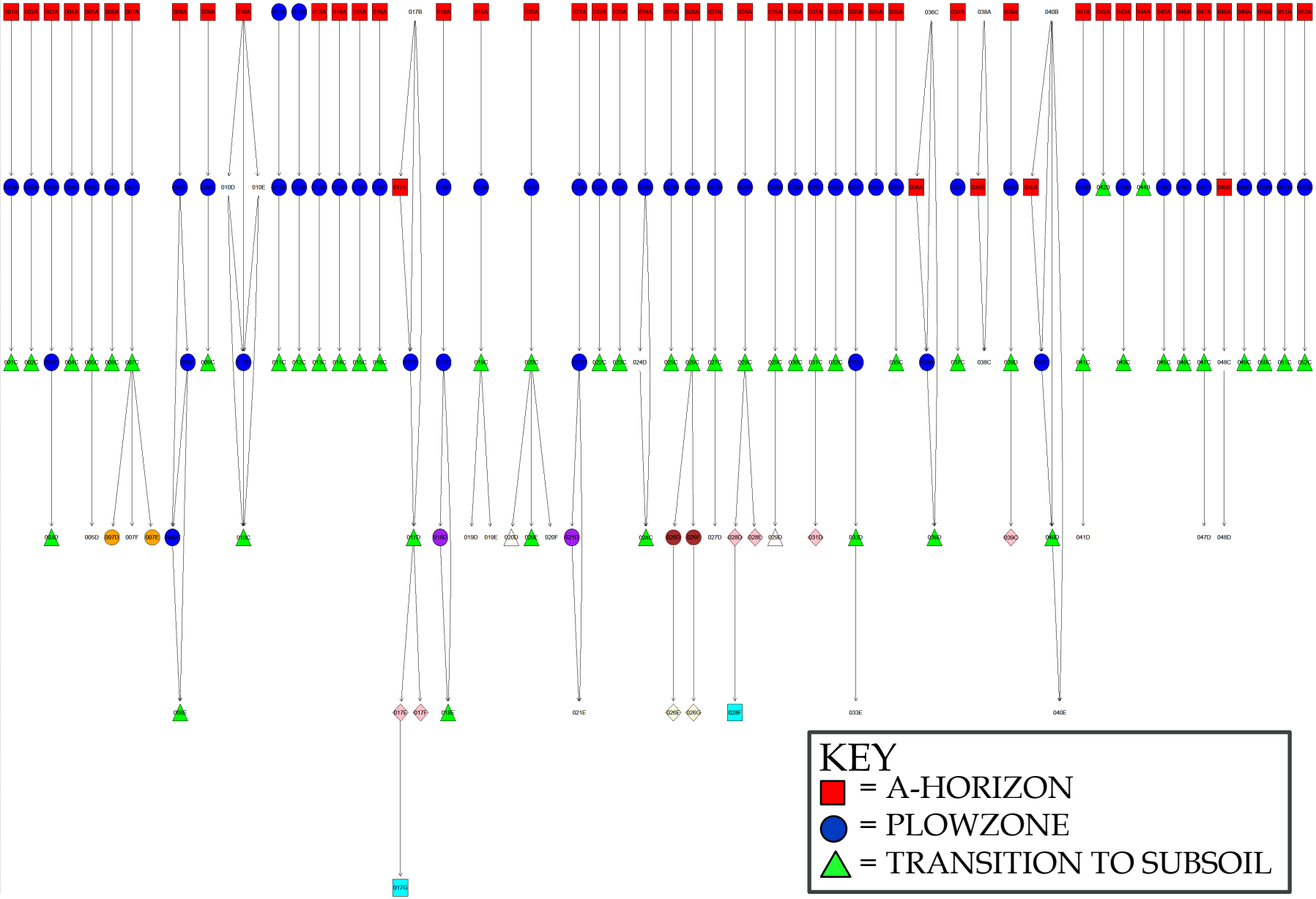

1
2
3
4

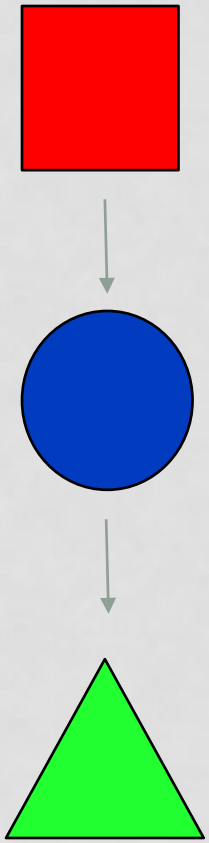
SITE 30 HARRIS MATRIX



SITE 30 HARRIS MATRIX



SITE 30 HARRIS MATRIX



KEY
= A-HORIZON
= PLOWZONE
= TRANSITION TO SUBSOIL