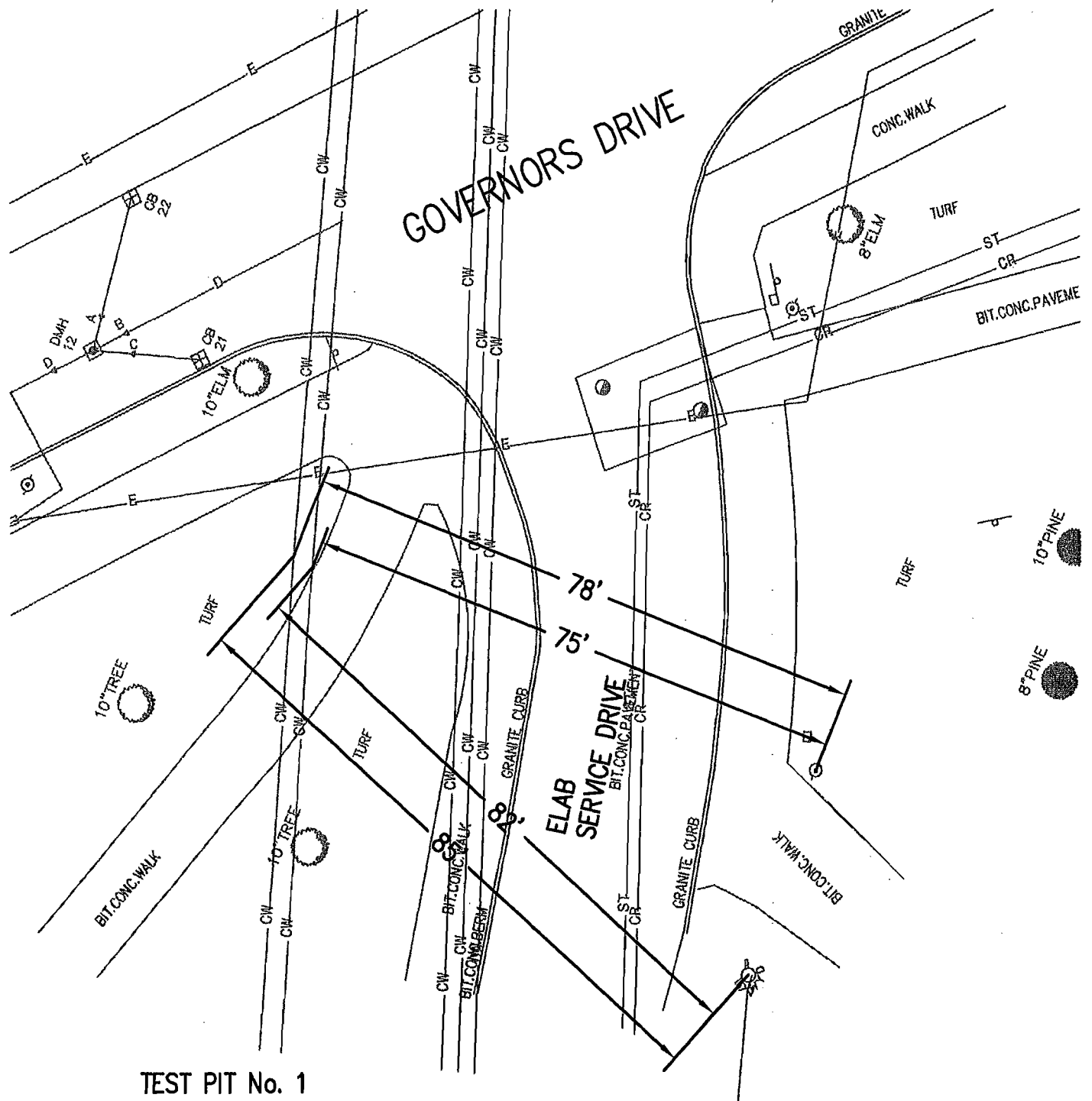


APPENDIX B

Geotechnical Data

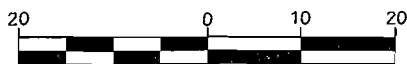


TEST PIT No. 1

- 0'-4' Brown medium sand with gravel, some silt, non-native soil material.
- 4'-5' Larger fine sand.
- 5'-8' Same as (0'-4'). Area around pipe medium coarse brown sand.
- Top of pipe (N) 7'-10" BFG.
- Top of pipe (S) 7'-8" BFG.
- No PID Detections (0.0 ppm).



GRAPHIC SCALE



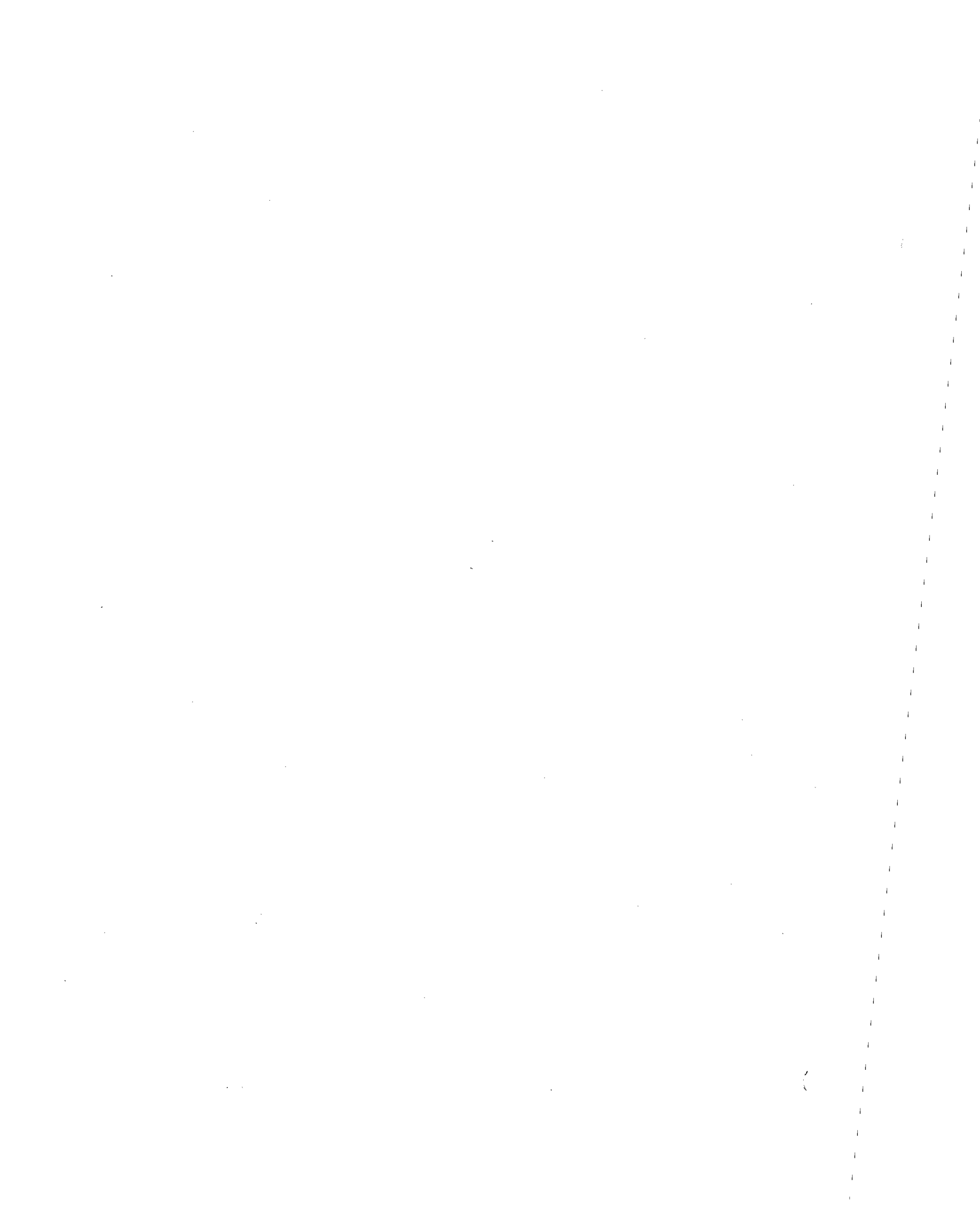
(IN FEET)

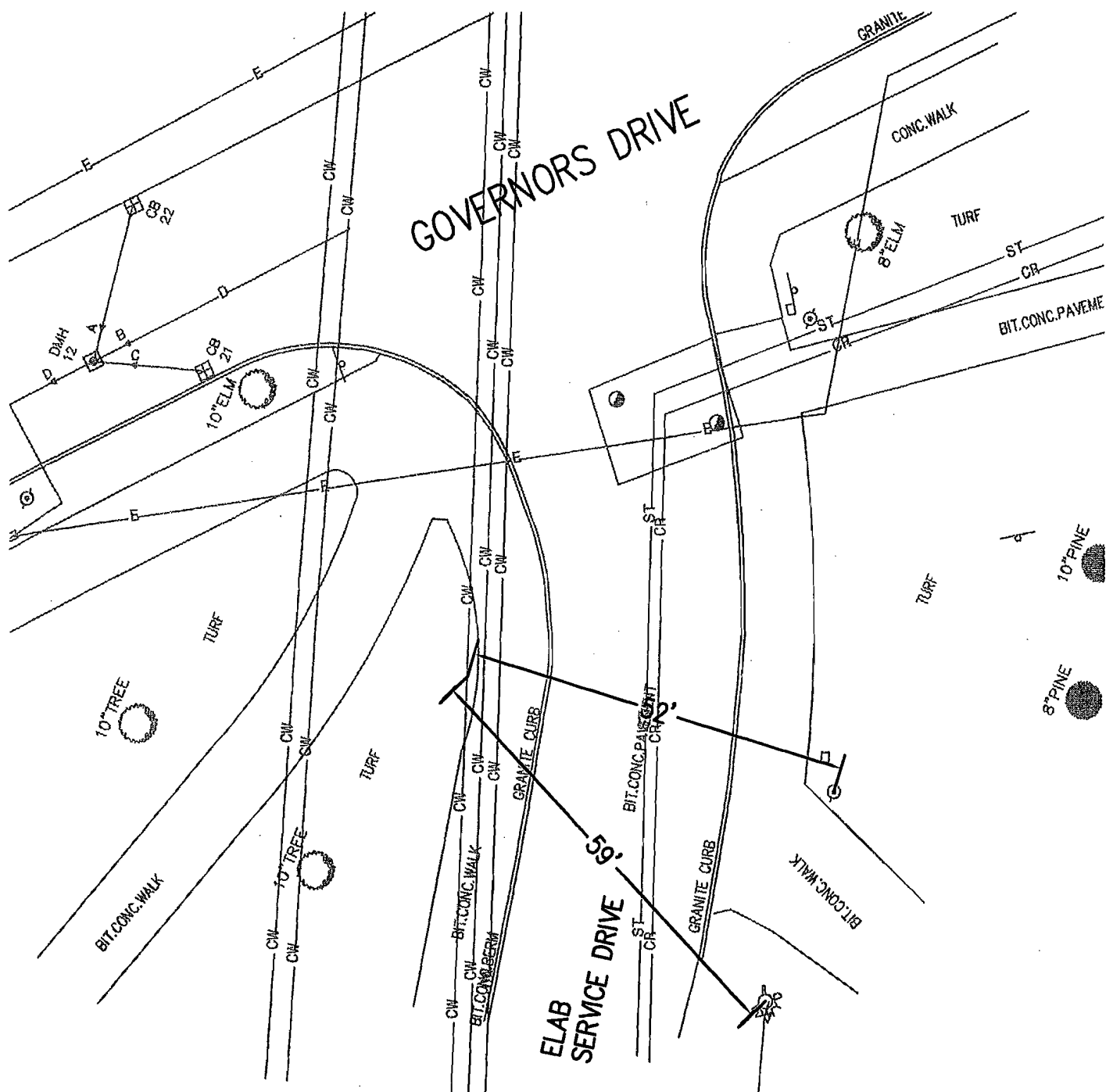
TEST PIT No. 1

PLATE 1

UMASS Amherst
Amherst, Massachusetts
Contract No. UMA 12-20

UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1



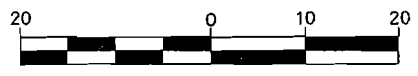


TEST PIT No. 2

- 0'-4' Brown medium sand with gravel, some silt, non-native soil material.
- 4'-5' Larger fine sand.
- 5'-7' Same as (0'-4'). Area around pipe medium coarse brown sand.
- Top of pipe 6'-0" BFG.
- No PID Detections (0.0 ppm).



GRAPHIC SCALE



(IN FEET)

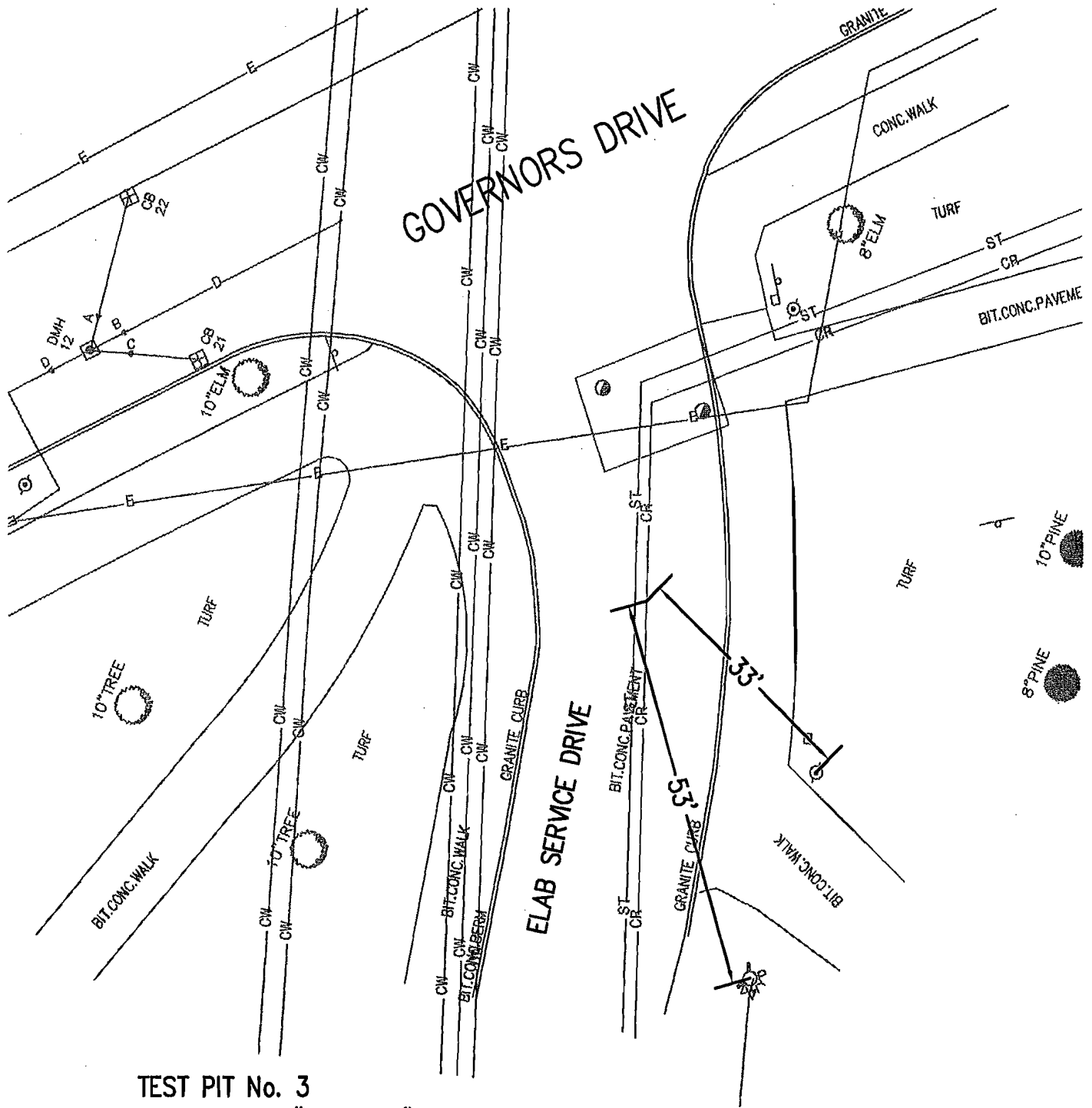
TEST PIT No. 2

UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

PLATE 2

UMASS Amherst
Amherst, Massachusetts
Contract No. UMA 12-20



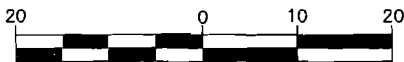


TEST PIT No. 3

- Asphalt is 5" thick. 3" of gravel base material.
- 0'-6' Brown medium sand with gravel, some silt. Area around pipe is coarse brown sand.
- Top of pipe 6'-2" BFG.
- No PID Detections (0.0 ppm).



GRAPHIC SCALE



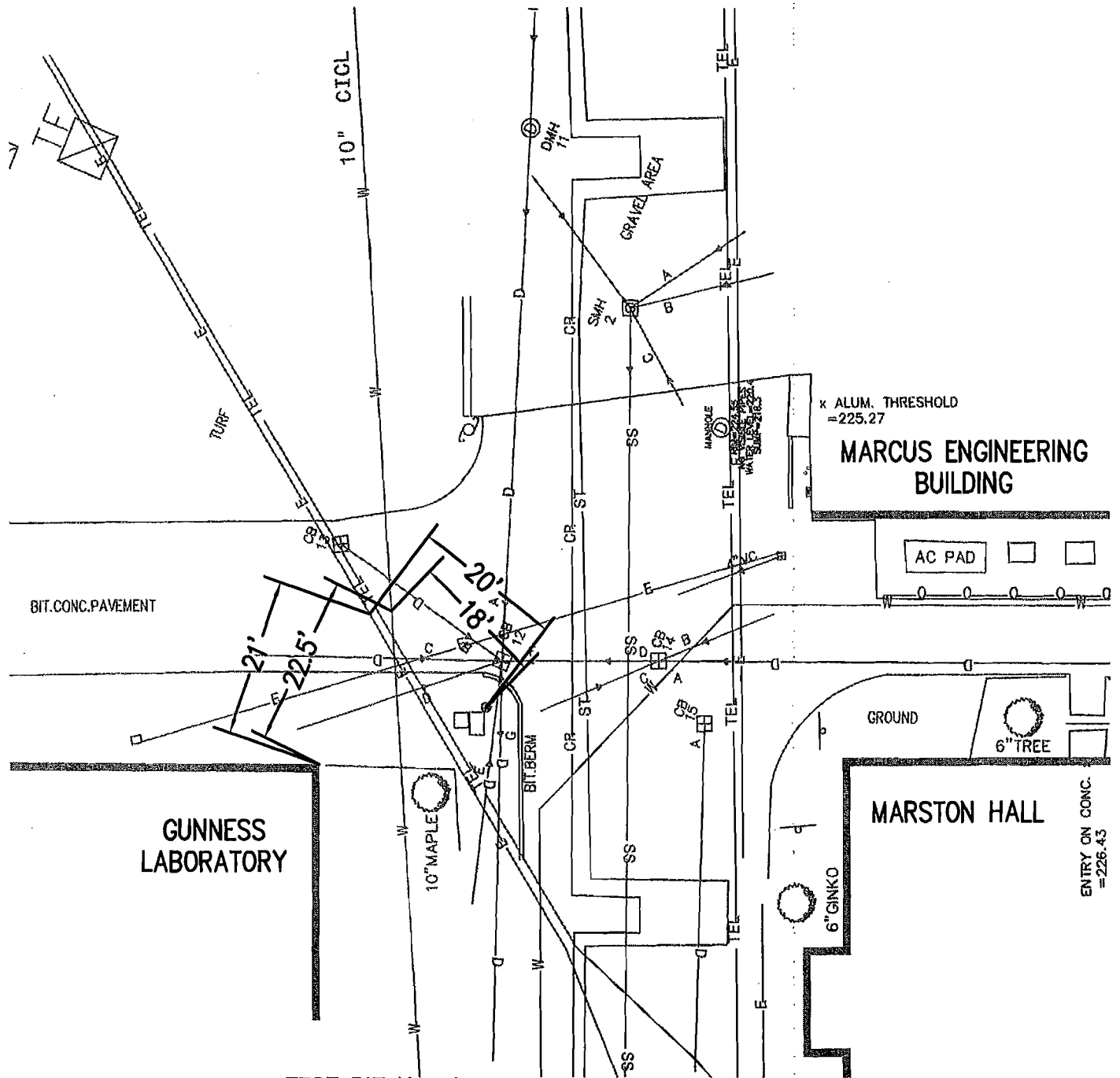
(IN FEET)

TEST PIT No. 3

UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

PLATE 3

UMASS Amherst
Amherst, Massachusetts
Contract No. UMA 12-20

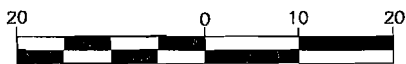


TEST PIT No. 4

- Asphalt is 5" thick.
- Brown medium sand with gravel and rock encountered.
- Concrete poured on top of electric and phone lines is 4" thick.
- Top of concrete over electric/ telephone lines 30" BFG.
- Top of pipe (water) 5'-9" BFG.



GRAPHIC SCALE



(IN FEET)

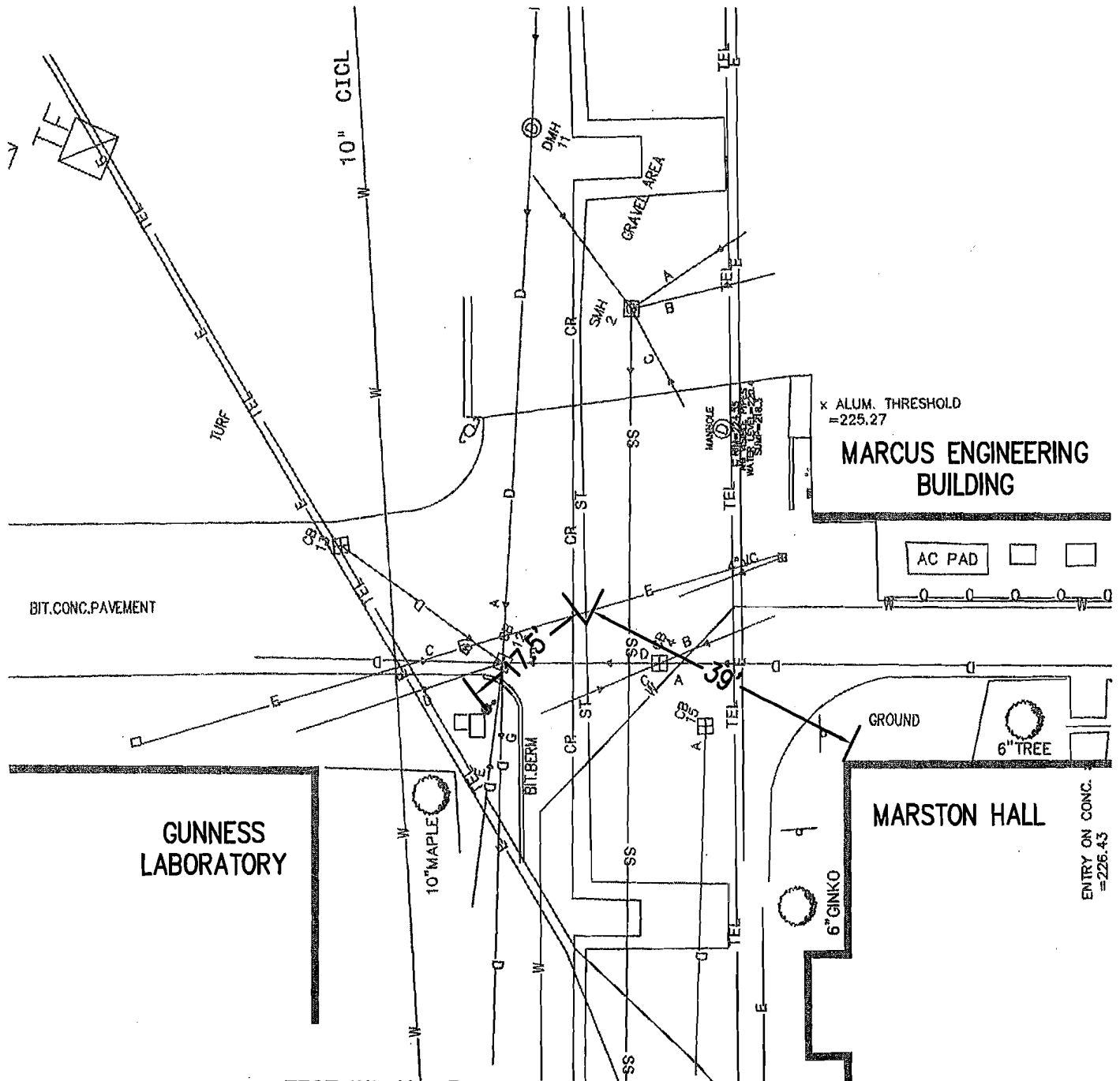
TEST PIT No. 4

UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

PLATE 4

UMASS Amherst
Amherst, Massachusetts
Contract No. UMA 12-20



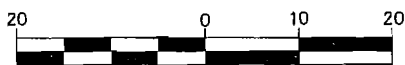


TEST PIT No. 5

- Asphalt is ≈3" thick.
- 0-5' Brown medium sand with gravel, some rock, and some silt.
- Abandoned electric line for a light pole found at 15".
- Top of pipe 48" BFG.
- Bottom of pipe 68" BFG.
- No PID detections (0.00ppm)
- Pipe is asbestos wrapped.



GRAPHIC SCALE



(IN FEET)

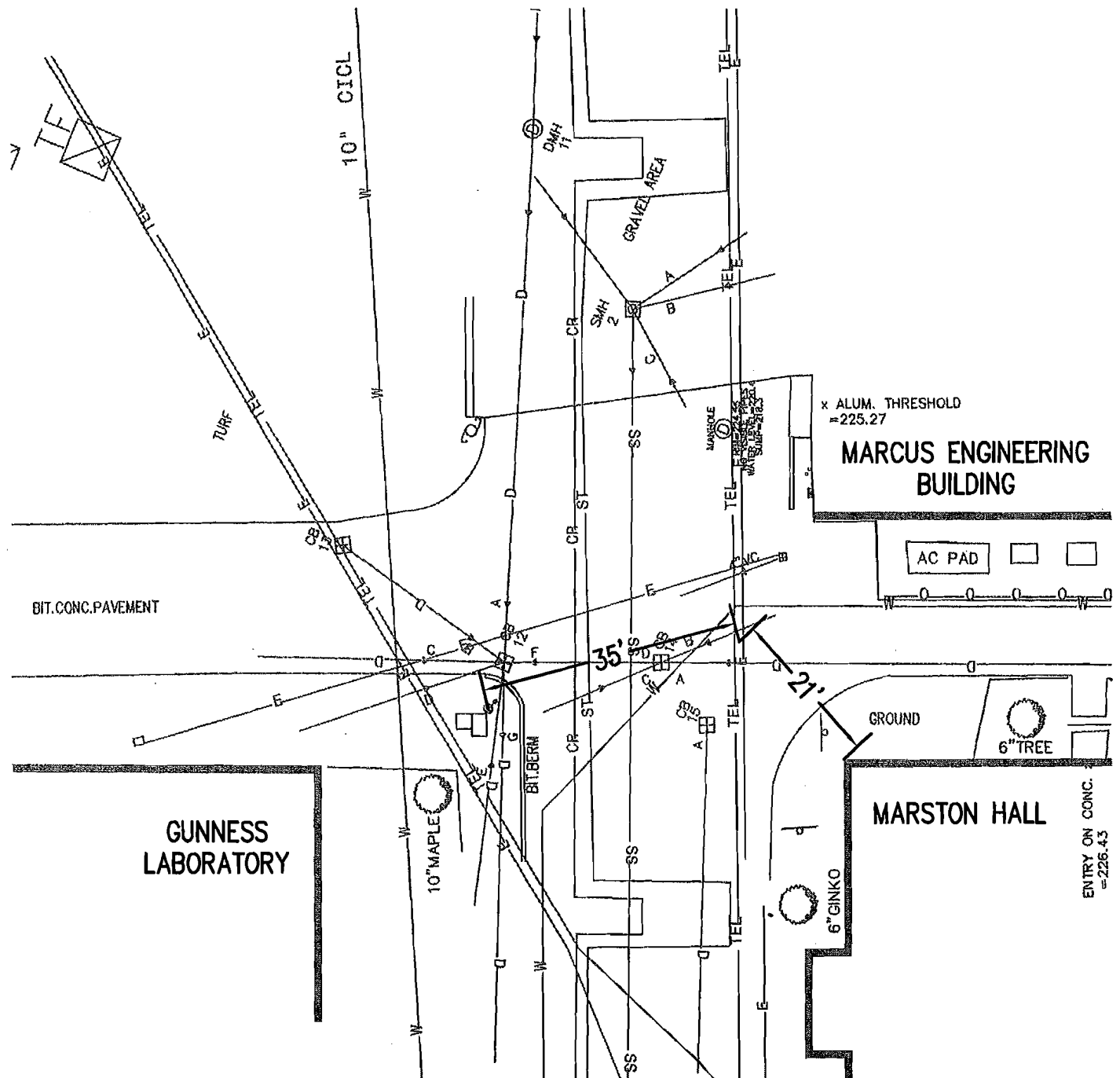
TEST PIT No. 5

UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

PLATE 5

UMASS Amherst
Amherst, Massachusetts
Contract No. UMA 12-20



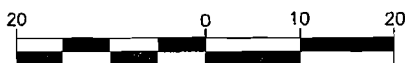


TEST PIT No. 6

- Asphalt is 4" thick.
- 0-3' Brown medium sand with gravel, some rock, and some silt.
- Top of electric duct 3'-0" BFG.
- Bottom of electric duct 5'-6" BFG.
- No PID Detections (0.0 ppm).



GRAPHIC SCALE



(IN FEET)

TEST PIT No. 6

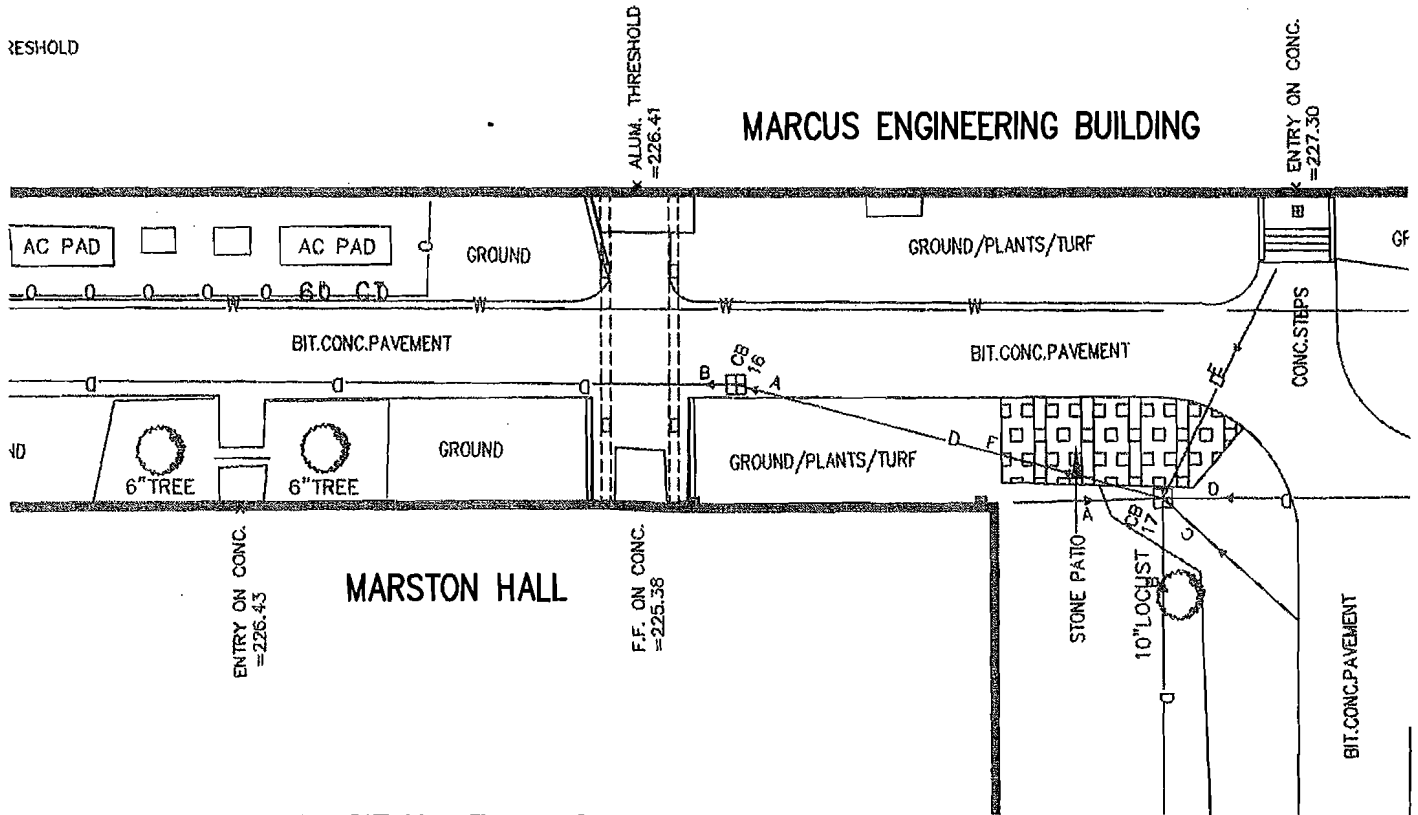
UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

PLATE 6

UMASS Amherst
Amherst, Massachusetts
Contract No. UMA 12-20

RESHOLD

MARCUS ENGINEERING BUILDING



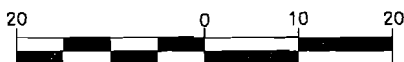
TEST PIT No. 7 and 8

(Note: Test pit 7 and 8 were combined and are located under the foot bridge between Marston Hall and Marcus Engineering Building. It spans from the southeastern column to the edge of the southwestern retaining wall.)

- Asphalt is 4" thick.
- 0-4' Brown medium sand with gravel, rock up to 12", and some silt.
- Top of water line 4' BFG. The water line is 4' off the eastern column.
- A 3'x12' concrete slab was found running across the pit. It is assumed to be a cap for the electric lines.
- Top of storm sewer is 30" BFG. The centerline of the 12" RCP sewer is 38" off the western column.
- Top of foundation on the eastern building is 45".
- The foundation extends 4" out at 26" BFG at the western building.
- No PID Detections (0.0 ppm).



GRAPHIC SCALE



(IN FEET)

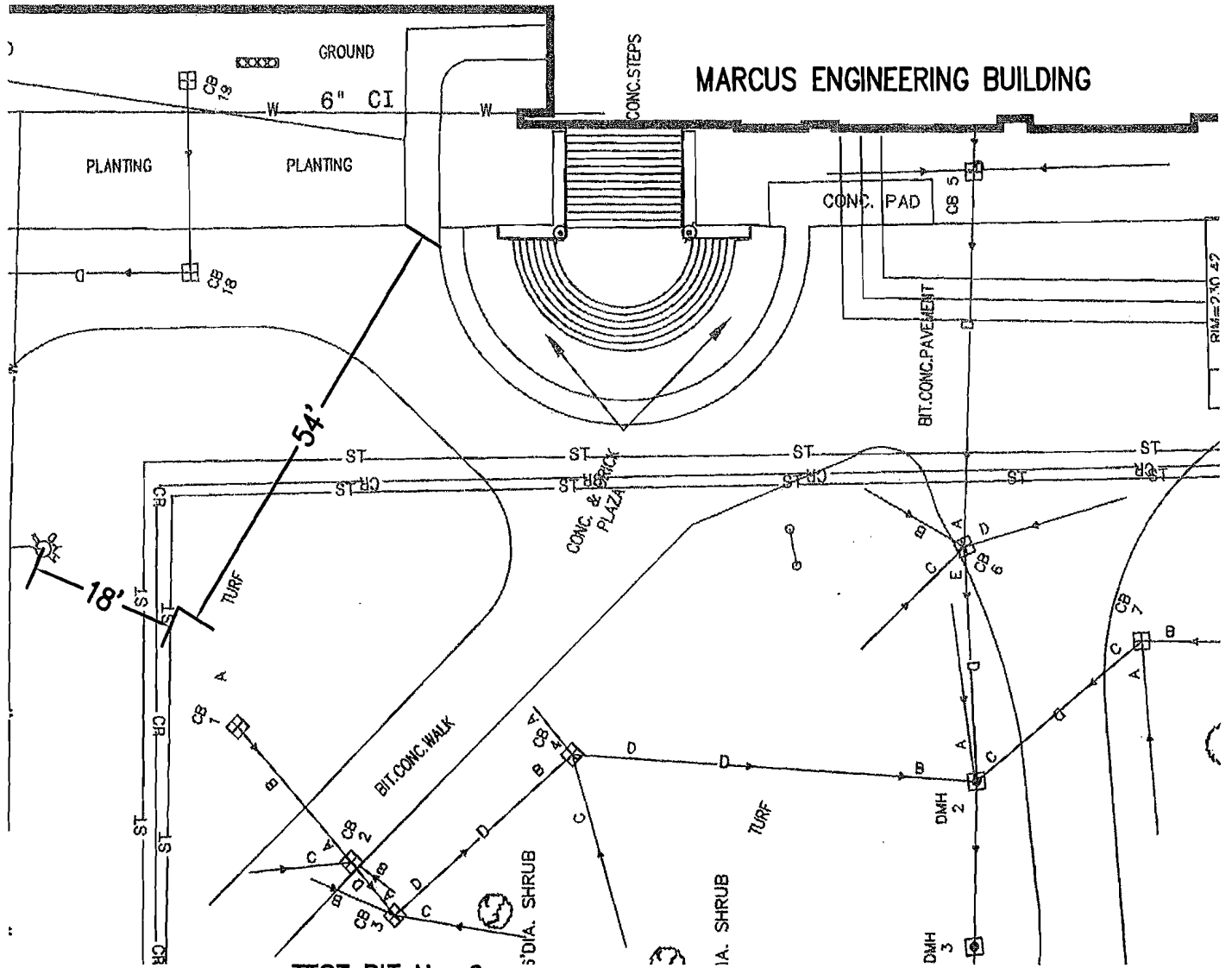
TEST PIT No. 7 AND 8

UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

PLATE 7

UMASS Amherst
Amherst, Massachusetts
Contract No. UMA 12-20



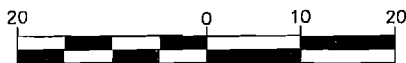


TEST PIT No. 9

- Top of steam pipe 37" BFG.
- Top of condensate return pipe 48" BFG.



GRAPHIC SCALE



(IN FEET)

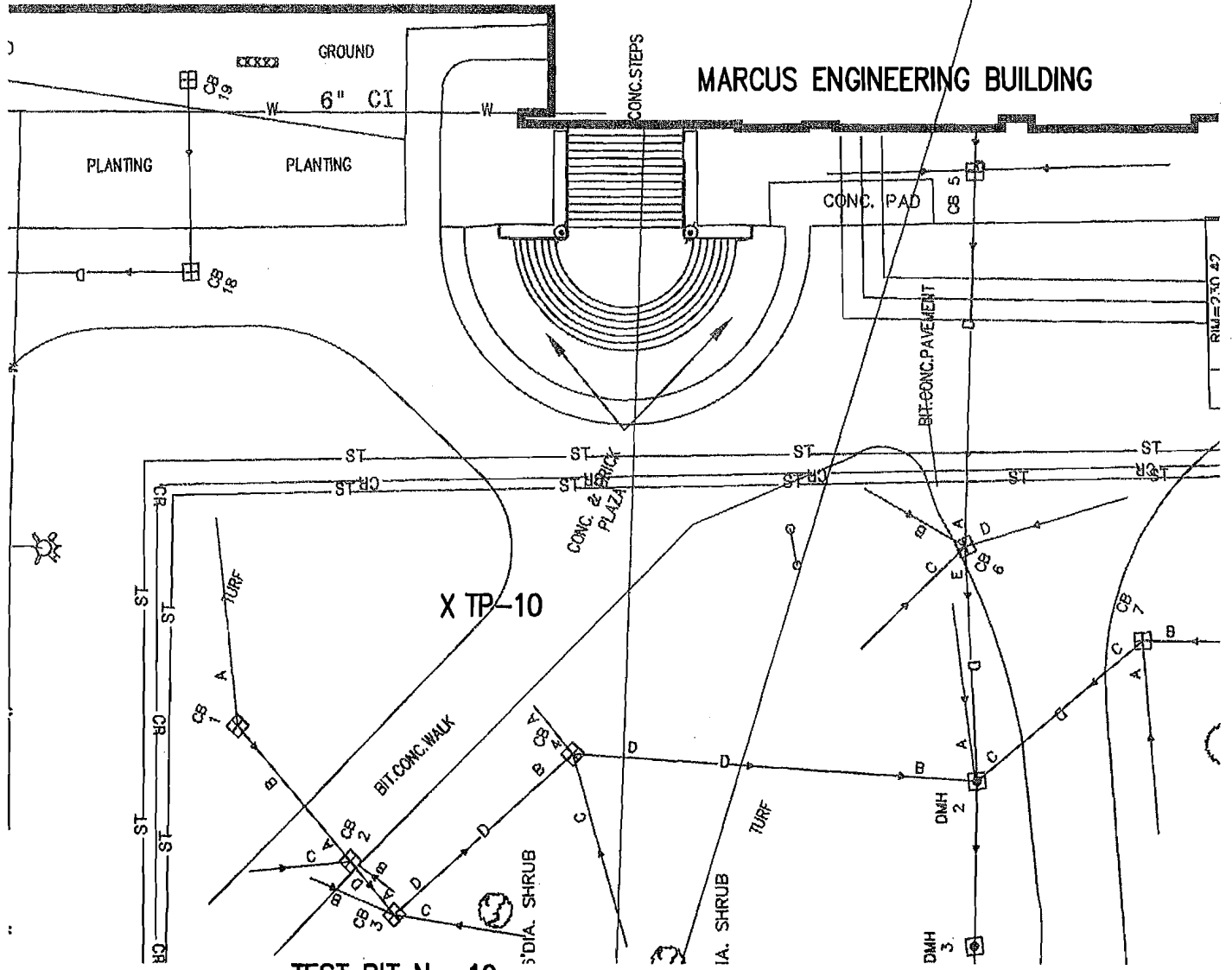
TEST PIT No. 9

UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

PLATE 8

UMASS Amherst
Amherst, Massachusetts
Contract No. UMA 12-20





TEST PIT No. 10
 • Dug 6' BG. No pipe was found.



GRAPHIC SCALE



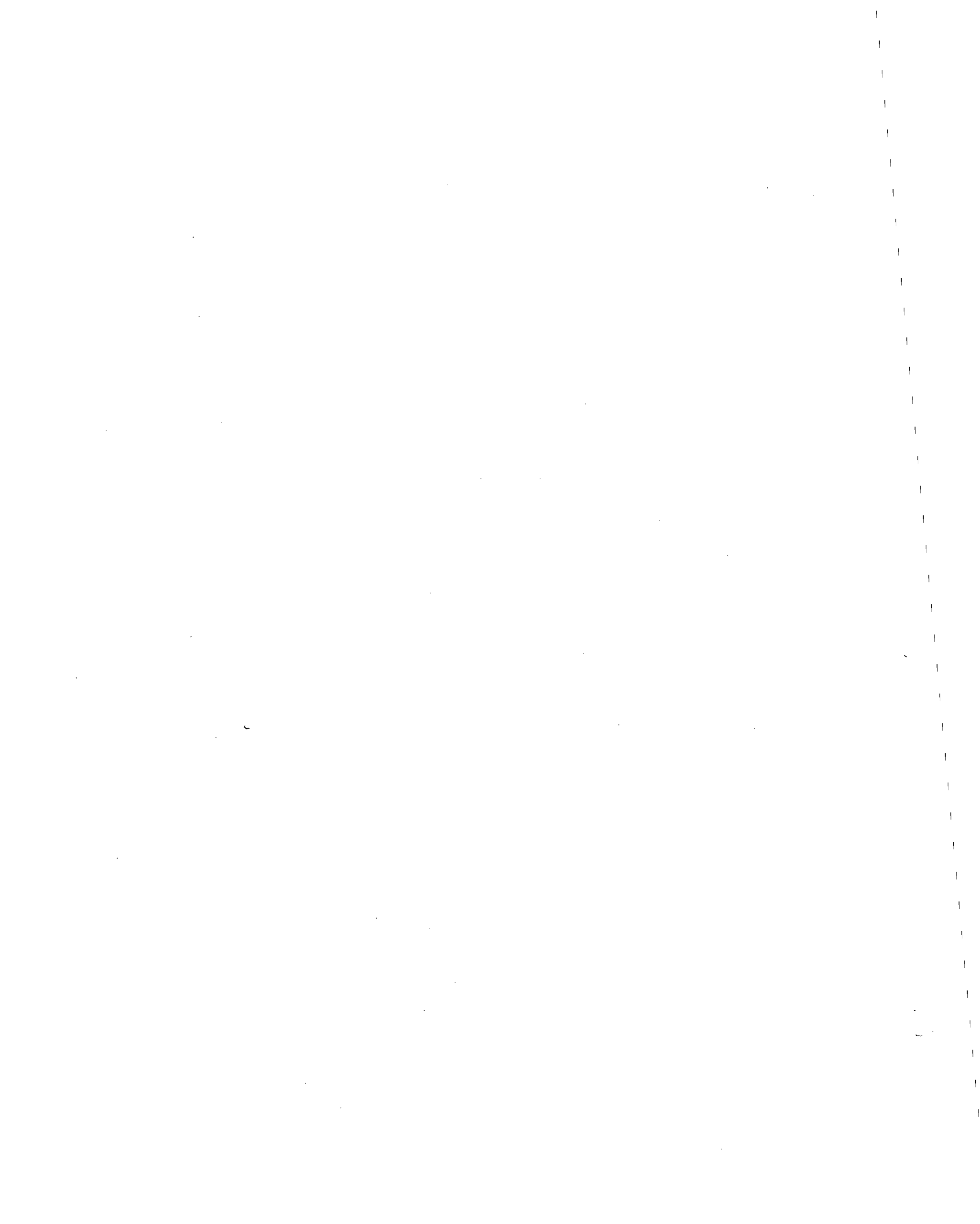
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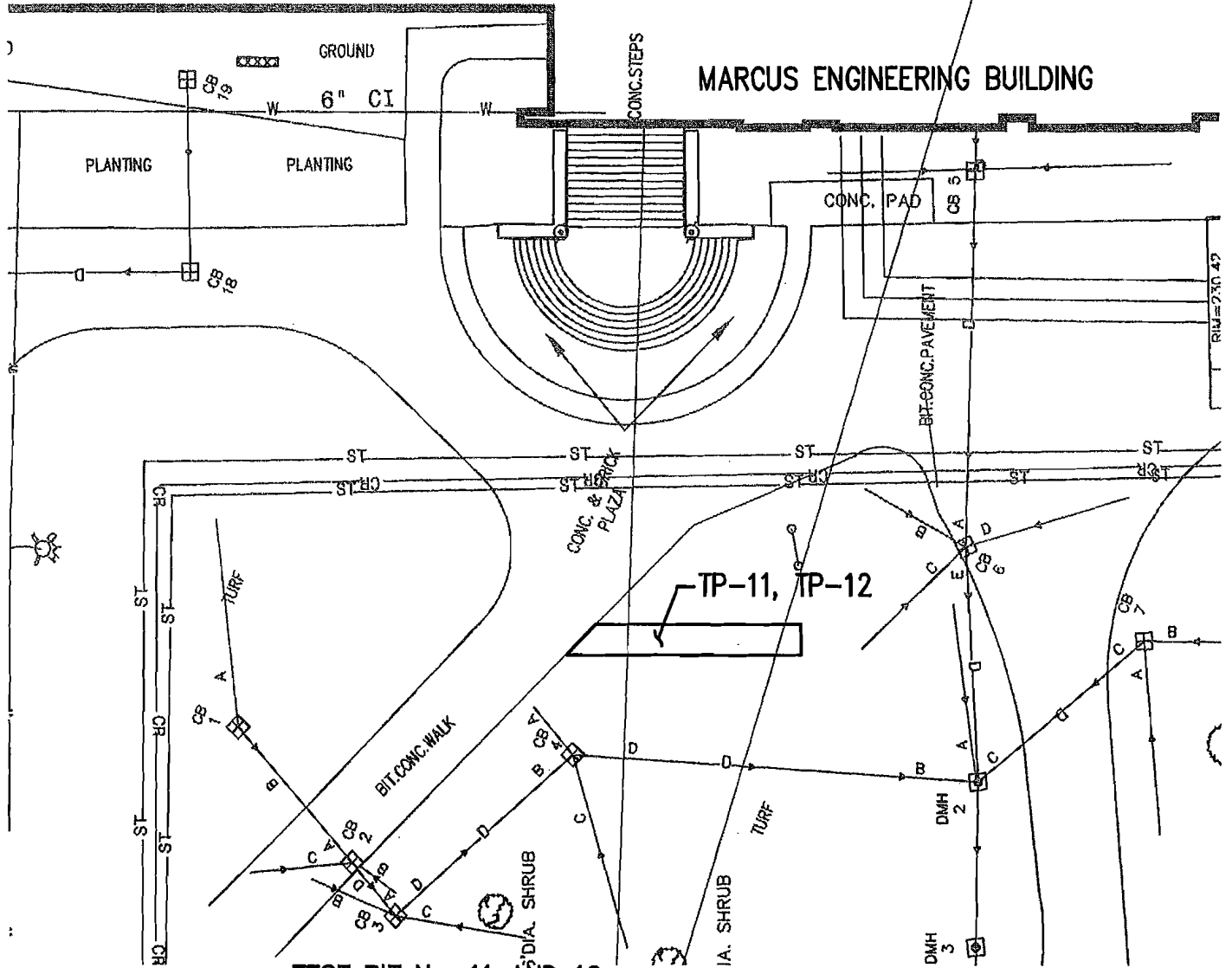
TEST PIT No. 10

UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

PLATE 9

UMASS Amherst
 Amherst, Massachusetts
 Contract No. UMA 12-20

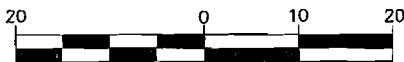




TEST PIT No. 11 AND 12
 • Dug 6' BG. No pipes were found.



GRAPHIC SCALE



(IN FEET)

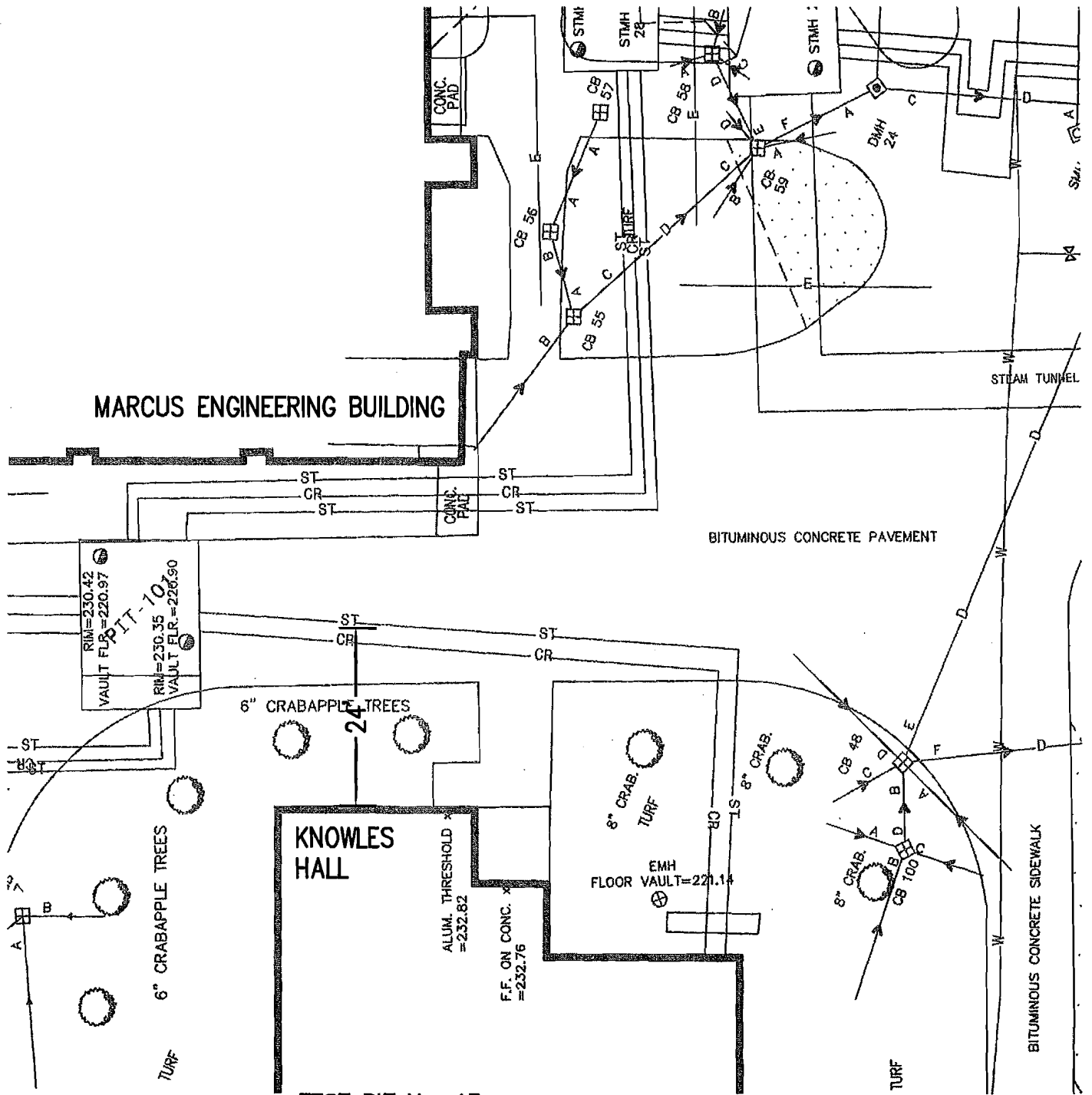
TEST PIT No. 11 AND 12

UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

PLATE 10

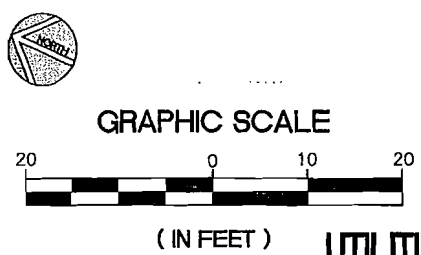
UMMA Amherst
 Amherst, Massachusetts
 Contract No. UMA 12-20





TEST PIT No. 13

- Top of steam pipe is 77" BFG.
- Top of condensate return is 77" BFG.

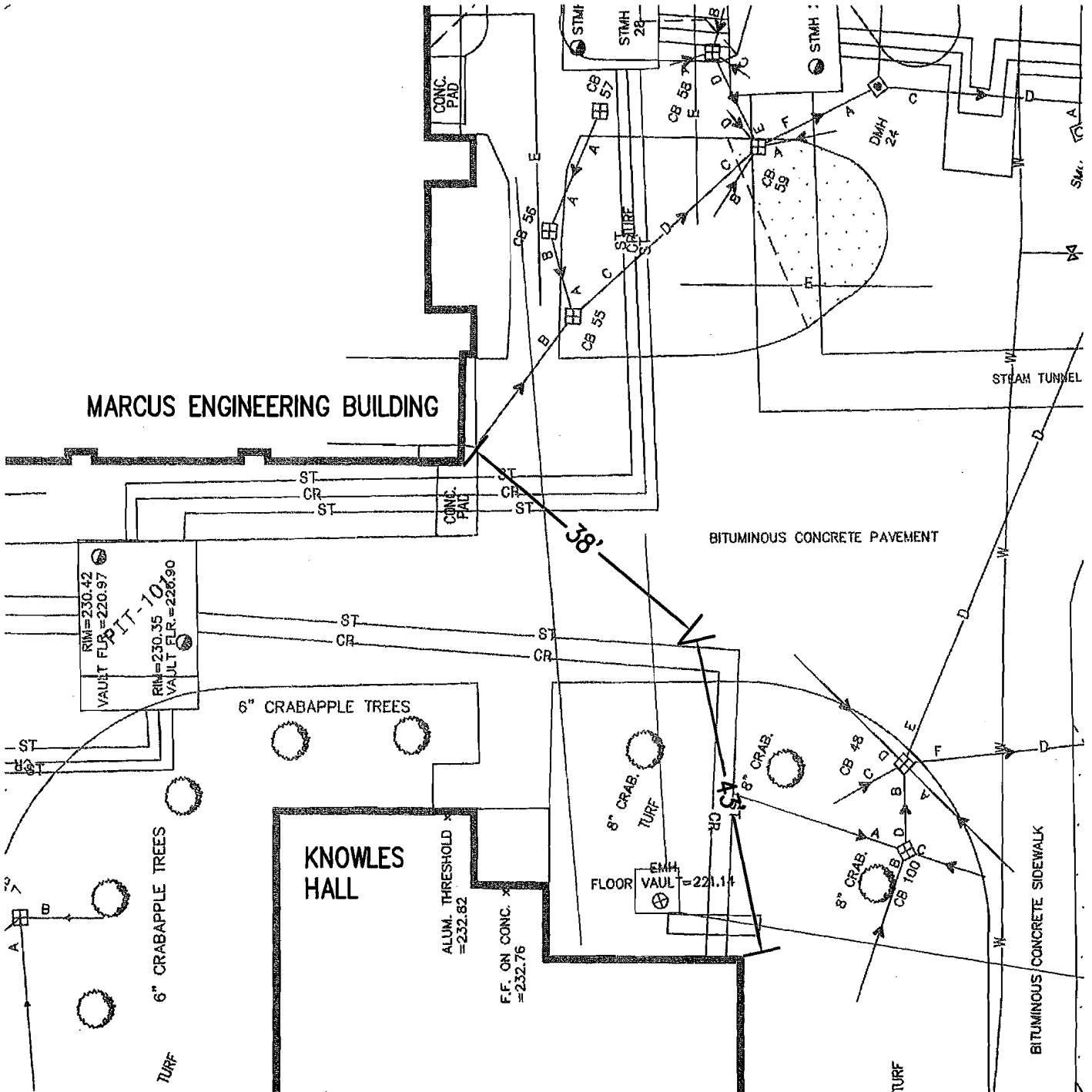


TEST PIT No. 13

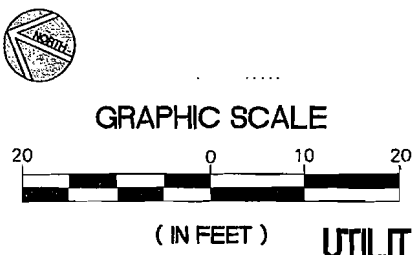
UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

PLATE 11
 UMASS Amherst
 Amherst, Massachusetts
 Contract No. UMA 12-20





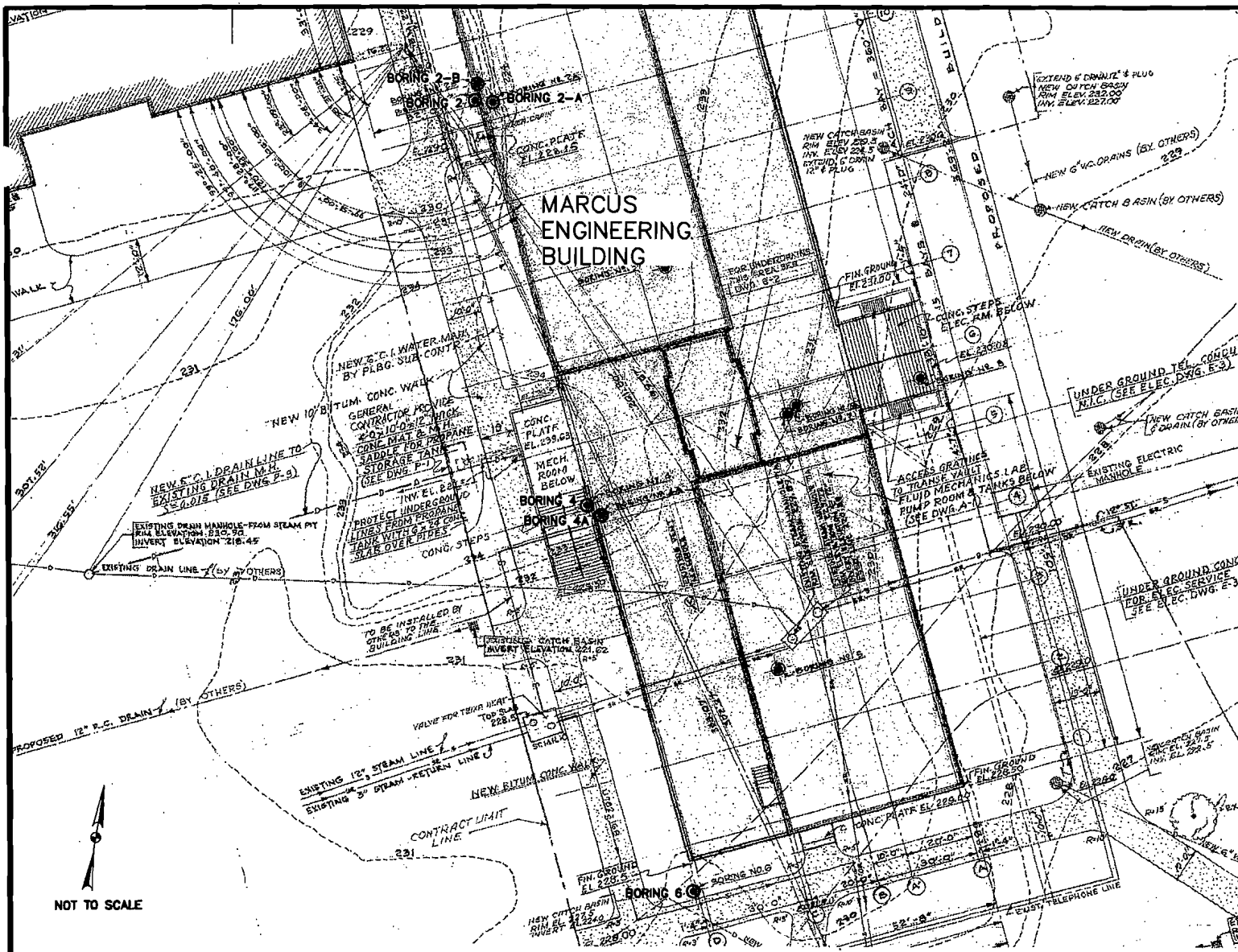
- TEST PIT No. 14**
- Top of 18"x24" duct bank 82" BFG.
 - Top of steam pipe 64" BFG.
 - Bottom of steam pipe 75" BFG.



TEST PIT No. 14

UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

PLATE 12
 UMASS Amherst
 Amherst, Massachusetts
 Contract No. UMA 12-20



NOT TO SCALE

BORING NO. 2
SRND. ELEV. 229.2

LOAM, SAND AND GRAVEL	
2'-0"	
VERY COMPACT MEDIUM TO FINE BROWN SILTY SAND, SOME GRAVEL, BOULDERS	30
NO WATER ENCLOSED REFUSAL	

BORING NO. 2A
SRND. ELEV. 229.2

LOAM, SAND AND GRAVEL	
2'-0"	
VERY COMPACT FINE TO MEDIUM BROWN SILTY SAND, SOME GRAVEL, BOULDERS	137
NO WATER ENCLOSED REFUSAL (BORING NO. 2A MOVED 5'-0" EAST OF BORING NO. 2)	

BORING NO. 2B
SRND. ELEV. 229.2

LOAM, SAND AND GRAVEL	
2'-0"	
VERY COMPACT MEDIUM TO FINE YELLOW-BROWN SAND, SOME GRAVEL, TRACE OF COARSE SAND AND SILT BOULDERS	171
NO WATER ENCLOSED REFUSAL (BORING NO. 2B MOVED 5'-0" NORTH OF BORING NO. 2)	

BORING NO. 4
SRND. ELEV. 229.0

SANDY LOAM, GRAVEL AND BOULDERS	
4'-0"	
MEDIUM TO FINE YELLOW-BROWN SAND, TRACE OF SILT, CLAY AND GRAVEL BOULDERS	23
NO WATER ENCLOSED REFUSAL	

BORING NO. 4A
SRND. ELEV. 229.0

SANDY LOAM, TRACE OF GRAVEL AND BOULDERS	
3'-0"	
FINE TO VERY FINE BROWN SILTY SAND, SOME MEDIUM YELLOW CLAY, TRACE OF GRAVEL	20
6'-0"	
COMPACT MEDIUM TO FINE BROWN SAND, SOME GRAVEL, TRACE OF SILT AND CLAY, BOULDERS	79
NO WATER ENCLOSED REFUSAL (BORING NO. 4A MOVED 5'-0" SOUTHWEST OF BORING NO. 4)	

BORING NO. 6
SRND. ELEV. 229.4

SANDY LOAM, SANDERS AND GRAVEL	
2'-0"	
FINE TO MEDIUM GRAY-BROWN SILTY SAND, TRACE OF GRAVEL AND CLAY	21
6'-0"	
COMPACT MEDIUM TO FINE YELLOW-GRAY SILTY SAND, SOME GRAVEL, TRACE OF CLAY, BOULDERS	64
NO WATER ENCLOSED REFUSAL	

Reference:
 1) 'L-1' Site and Utilities Plan.
 New Engineering Building University of Massachusetts. Project No. U59-6,
 Contract No. 1'
 1 W. Drummy, April 1963. Scale 20'.

2) 'L-2' Boring Logs and Site Details.
 New Engineering Building University of Massachusetts. Project No. U59-6,
 Contract No. 1'
 WM. W. Drummy, April 1963. NTS.

Boring Logs From Marcus Engineering Building Construction

UTILITIES, NORTHWEST CHILLED WATER LOOP PHASE 1

