

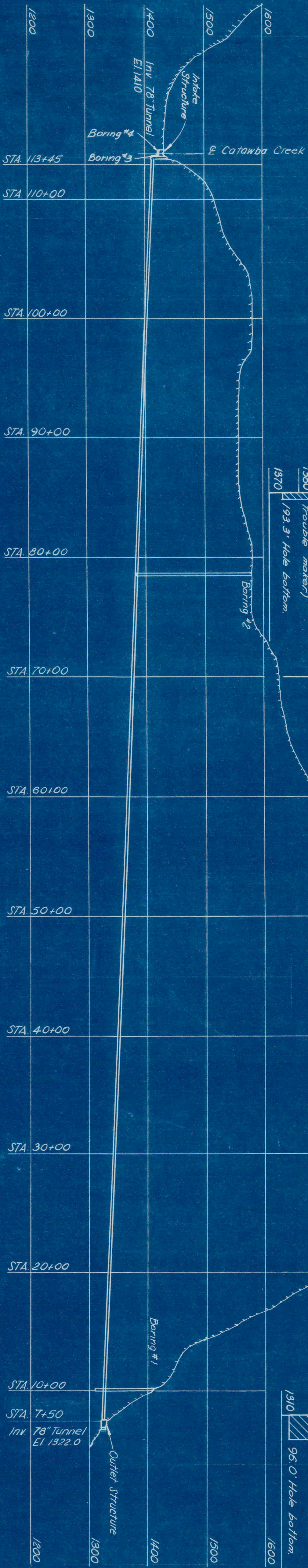
Boring Elevations	
1430	Dark, sandy, clayey, silt-sand & sandstone boulders. (Flood Plan)
1425	Gray to black shale, medium hard-w/ calcite streaks along bedding plane. (The fractures are of a mechanical nature.)
1415	Note: Some weathering on top of rock.
1410	
1405	
1400	30.5' Hole bottom.

Boring Elevations	
1430	Dark, sandy, clayey-silt-sand & sandstone boulders. (Flood Plan) (5'-0" W.L.)
1425	Gray to black shale, medium hard w/ calcite streaks.
1420	6'-0" - 1'-0" Fractured
1415	Some weathering
1410	11'-0" Calcite filled joint.
1405	
1400	30.2' Hole bottom.

Note: The borings shown on this drawing were made by the Cunningham Core Drilling & Grouting Corp. Full reports of the borings are on file in the offices of the Water Department and the Engineer and are available for examination and reference.

Boring Elevations	
1560	OVERBURN
1550	Gray and dark grey laminated limy shale medium hard
1540	3.5'-5.0' Fractured & Stained
1530	82.8-85' Fractured & Stained
1520	20.0'-22.8' Fractured
1510	27.8'-28' Fractured
1500	16'-18' - 3.3' - 11.2' Stress cracks thru out.
1490	44.2' - 48.3' High Angle Fracture.
1480	73.6' - 76.0' Fractured
1470	10.6' - 11.2' Fractured
1460	direction flow @ 84.0' in depth. The flow was fairly constant thru out - note that flow stopped when casing was pulled. Exact depth of flow unknown. No indication on core @ 84.0'.
1450	Dark gray to black laminated
1440	limy shale medium hard.
1430	
1420	
1410	155.2' - 155.4' Fracture w/ calcite deposit
1400	156.5' - 156.6' Some
1390	162.6' Hi Angle Joint
1380	Calcite deposit (Possible Slickenside)
1370	168.2' - 176.8' Fractured, random Calcite streaks, some folding. (Possible trouble maker)
1360	
1350	193.3' Hole bottom.

Boring Elevations	
1400	OVERBURN & Sandstone boulders
1400	Gray to gray-brown coarse grain weathered porous sandstone, medium to soft, w/ some joints.
1395	Note: Extreme weathering in joints.
1390	Brown body weathered sandstone thin bedded stained
1385	Blue-gray massive limestone - medium hard
1380	Brown to light gray sandstone, badly weathered & stained, medium to coarse grain - broken, jointed w/ staining, soft (20.0' W.L.)
1375	Blue-gray limestone, thin bedded, hard, w/ some staining
1370	Light gray, fine grain sandstone very hard w/ some jointing, slight weathering
1365	
1360	Medium dark to very light gray hard to very hard sandstone. Medium to fine grain. Generally speaking, the lighter in color the harder the material (The transition is a gradual change)
1355	56.8'-62.8' Joint weathered, some staining
1350	70.2' " " " " " "
1345	73.5' " " " " " "
1340	74.7' - 75.2' Sandstone has a slight red overcast
1335	73.9' Joint weathered, some staining
1330	55.6' " " " " " "
1325	93.8' " " " " " "
1320	Note: The very light material may be a Quartz.
1310	96.0' Hole bottom.



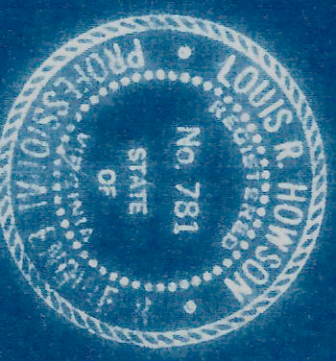
PROFILE

Scale: Vert. 1"=100'
HORIZ. 1"=300'



PLAN

Scale: 1"=500'



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CATAMBA CREEK
DIVERSION PROJECT
PROFILE, PLAN
AND SOIL BORINGS
CITY OF ROANOKE WATER DEPT.
ROANOKE, VIRGINIA

ALLIARD, EUREDDICK & HOUNSON
ENGINEERS
CHICAGO