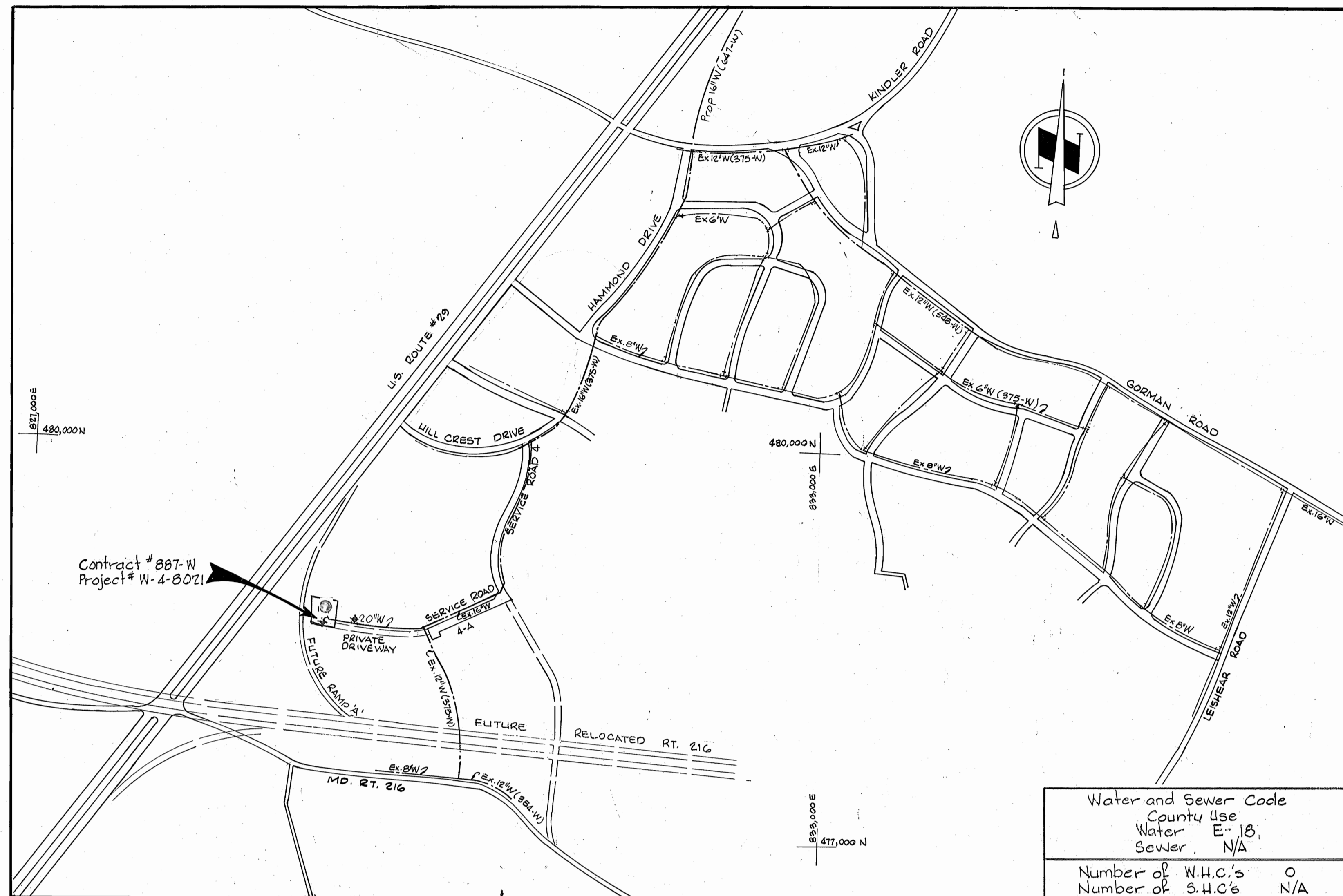


SYSTEM GRADIENT  
ELKRIDGE WATER PUMPING STATION



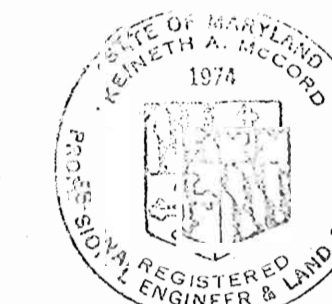
**CONTRACT NO. 887-W**  
**PROJECT NO. W-4-8021**  
**SCAGGSVILLE WATER STORAGE FACILITY**  
**HOWARD COUNTY, MARYLAND**  
**DEPARTMENT OF PUBLIC WORKS**

QUANTITIES			
Item	Bid	As-Built	Material Supplier
3 MG Tank	1	1	P.D.M.
20" Water	800 LF	800 LF	DIP-Atlantic States
6" Water	70 LF	63 LF	DIP-Atlantic States
16" Overflow	345 LF	345 LF	DIP-Atlantic States
Fire Hydrant	2	2	M&H
Altitude Valve	1	1	G.A. Ind., Inc.
Gate Valve	3	3	M&H

LIST OF DRAWINGS	
Drawing#	Title
1.-	Location Map and System Gradient.
2.-	Site Development Plan
3.-	Sediment Control Plan
4.-	Plan and Profiles
5.-	Altitude Valve Vault
6.-	Electrical.

**SPECIAL AS BUILT NOTE:**  
CATHODIC PROTECTION EQUIPMENT WAS INSTALLED AUG.-1983 BY HARCO CORPORATION - HATSBORO, PA. - MODEL # TASC V. Shop drawing of equipment available through Construction Inspection/Survey Div. or Bureau of Utilities.

Stakeout F.B.# 6248  
Diary F.B.# 6420 and 6508  
#6588



*Kenneth A. McCord*

Scaggsville Water Storage Facility  
Project No. W-4-8021  
Contract No. 887-W

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*James L. Ellis, III* 11/3/80  
CHIEF-BUREAU OF UTILITIES-DATE CHIEF-BUREAU OF ENGINEERING-DATE  
**WHITMAN, REQUARDT & ASSOCIATES**  
ENGINEERS  
1304 ST. PAUL ST.  
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*George F. Newman*  
DIRECTOR OF PUBLIC WORKS  
DATE 1-3-80

CONTRACT NO. 887-W  
PROJECT NO. W-4-8021

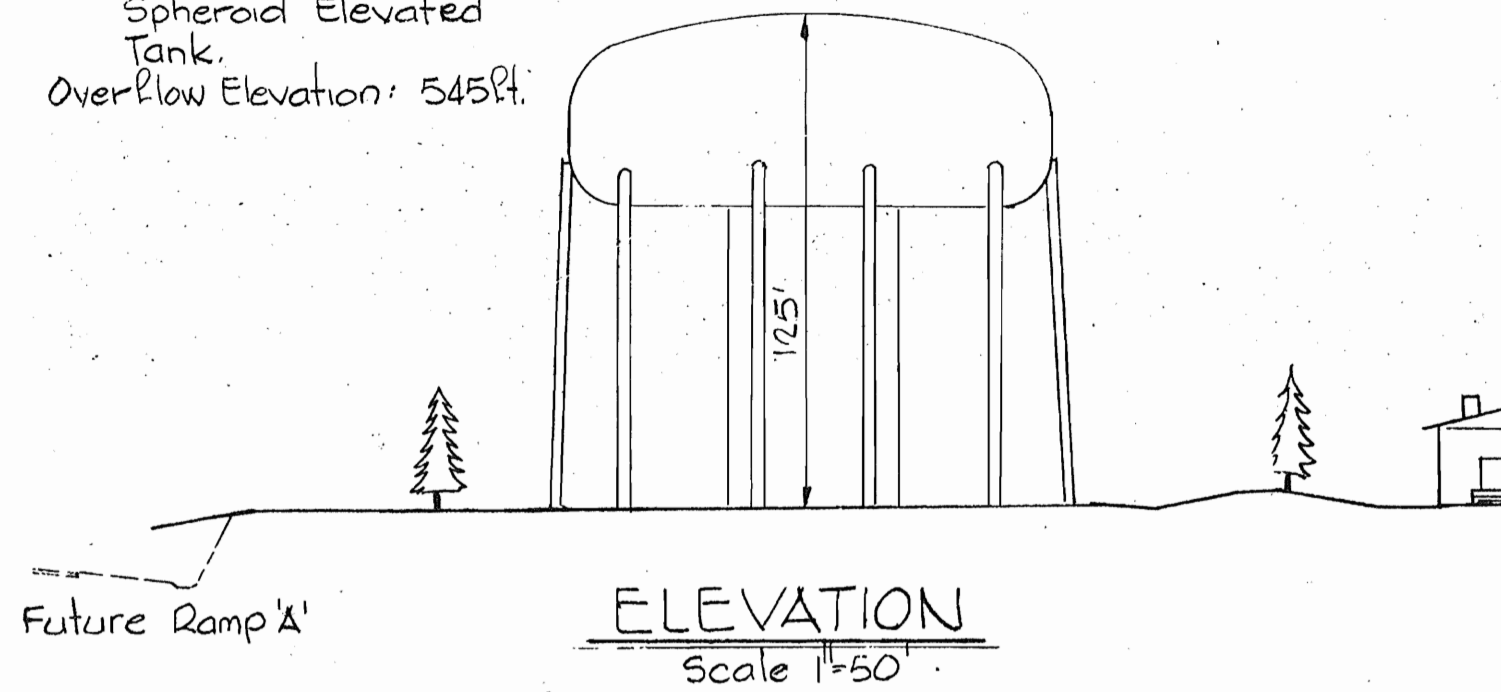
LOCATION MAP

ELECTION DISTRICT  
GUILFORD NO.6

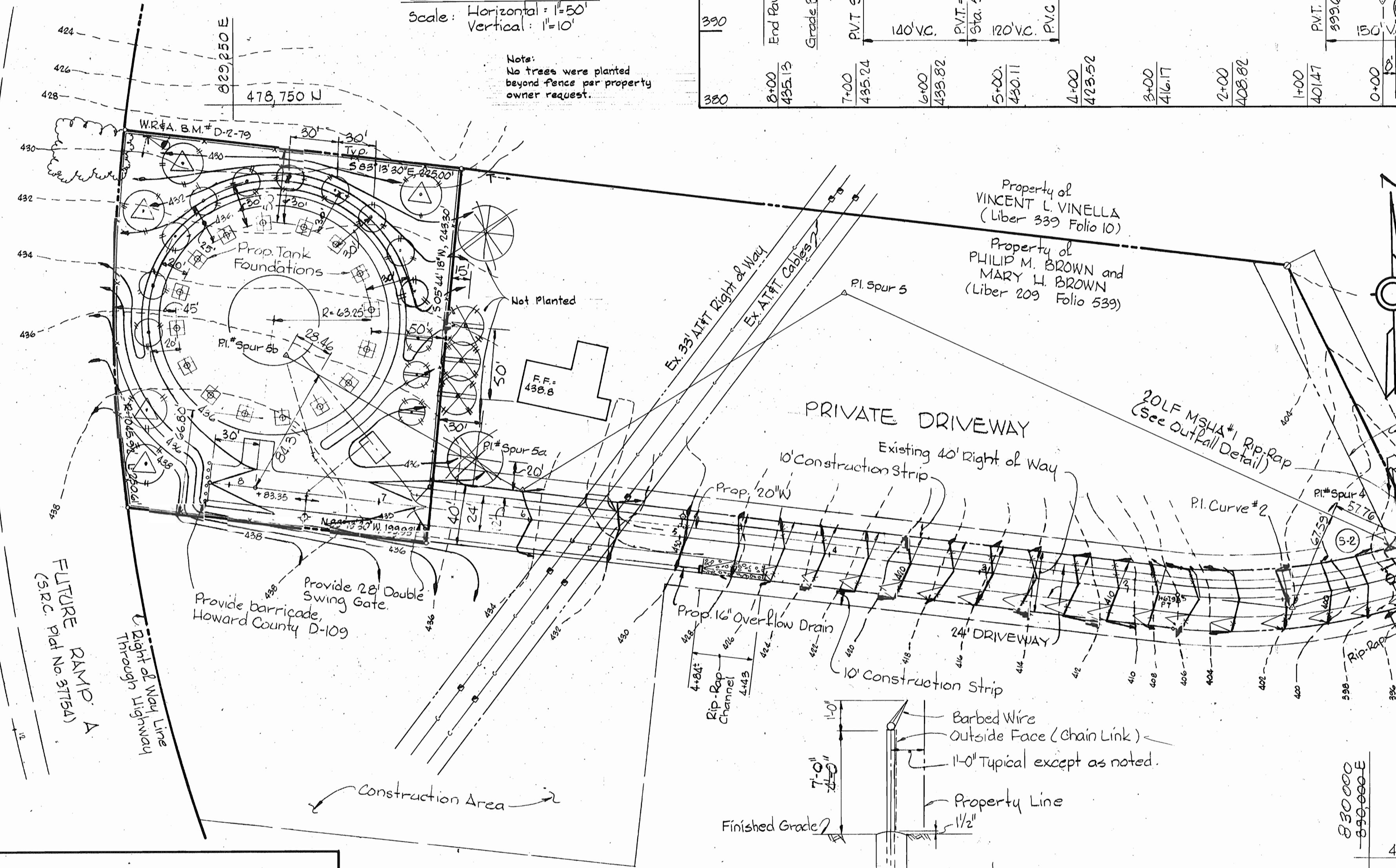
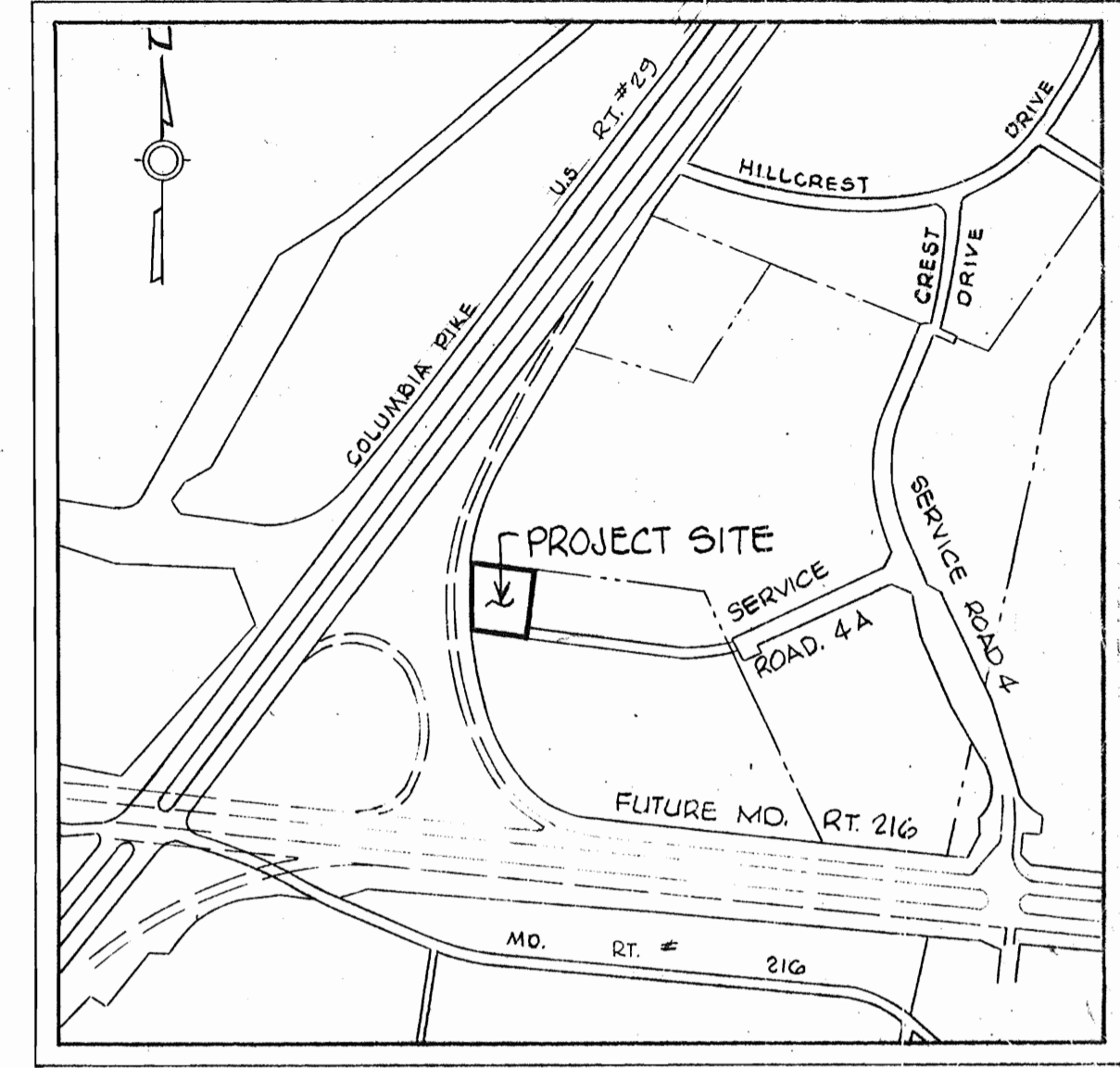
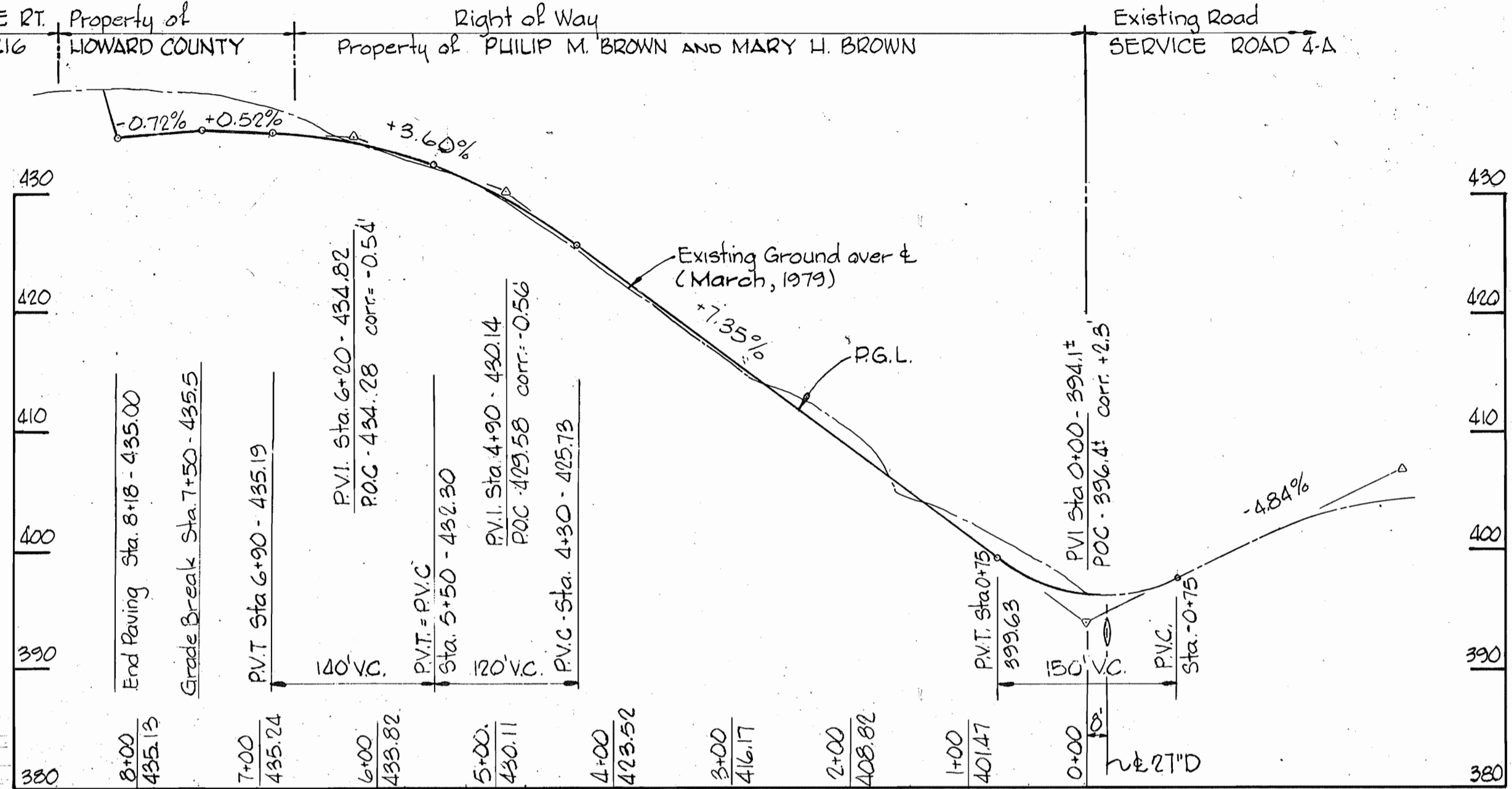
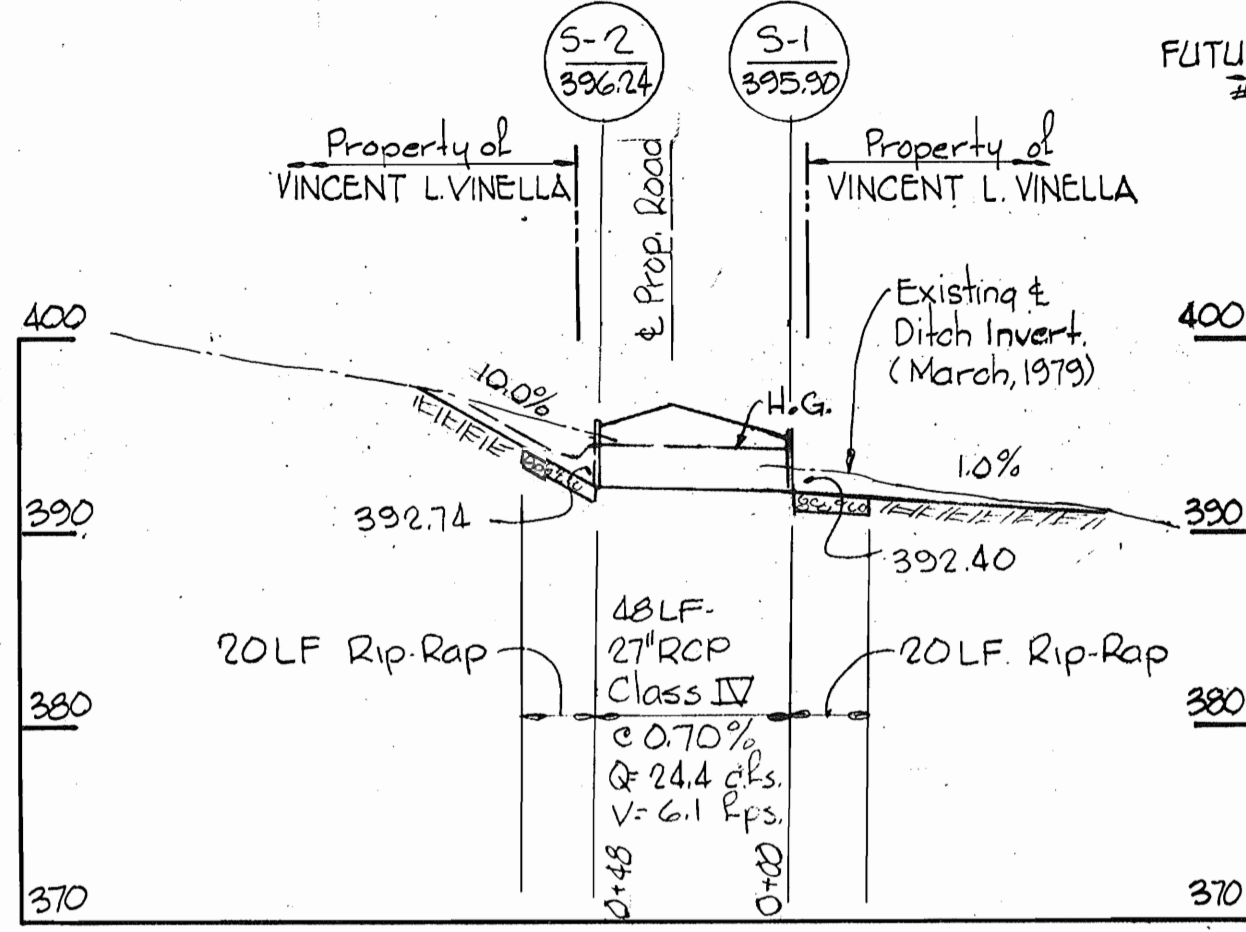
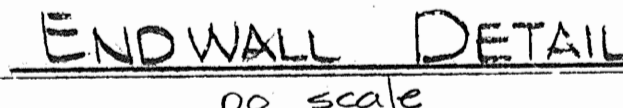
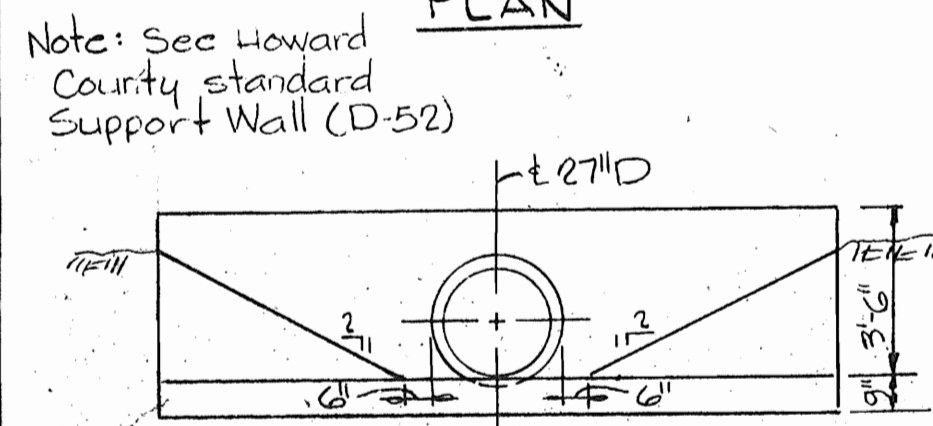
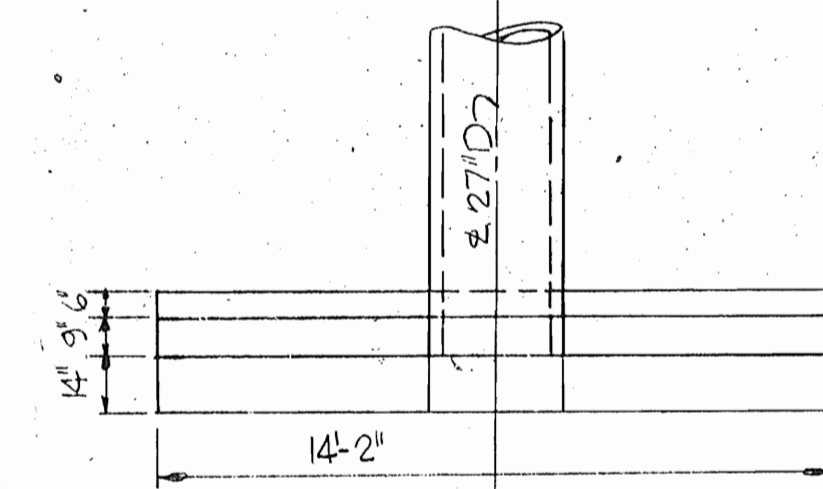
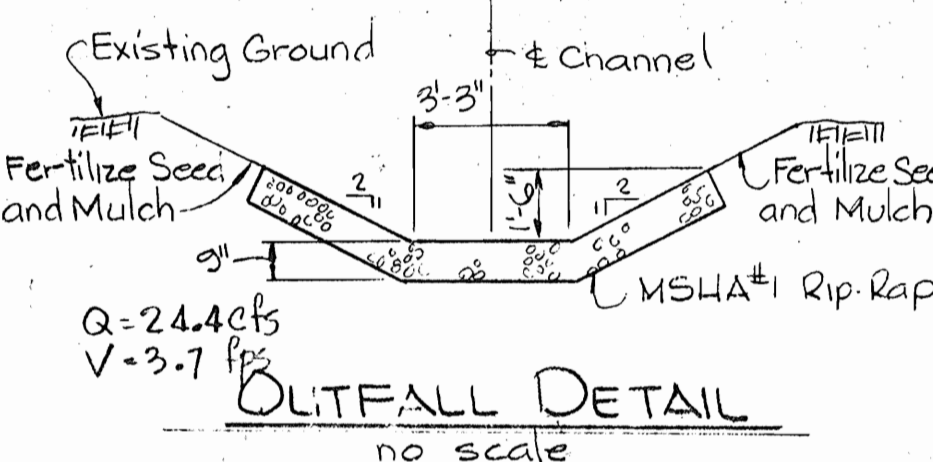
DRAWING NO. 1 OF 6 SCALE 1" = 600'

WS 887-W/1 SM

DATA:  
Capacity: 3 MG.  
Structure: Multi-Column  
Spheroid Elevated  
Tank.  
Overflow Elevation: 545.84.



W.R.#A. B.M. # D-2-79 Elev. 429.34  
22 Spike in G.E. Pole # 488168  
Northwest corner of Property  
(Howard County).



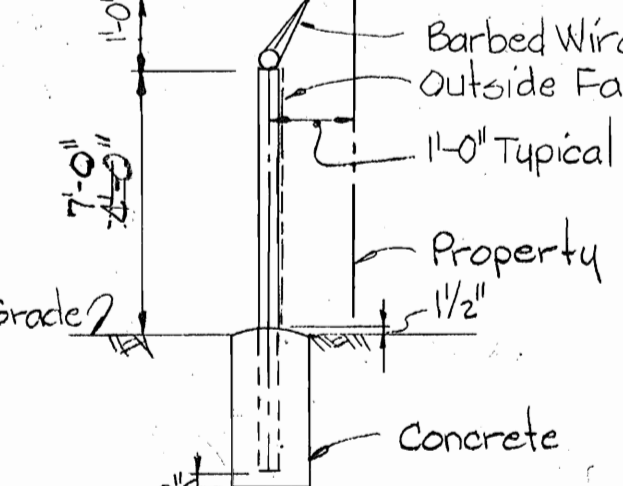
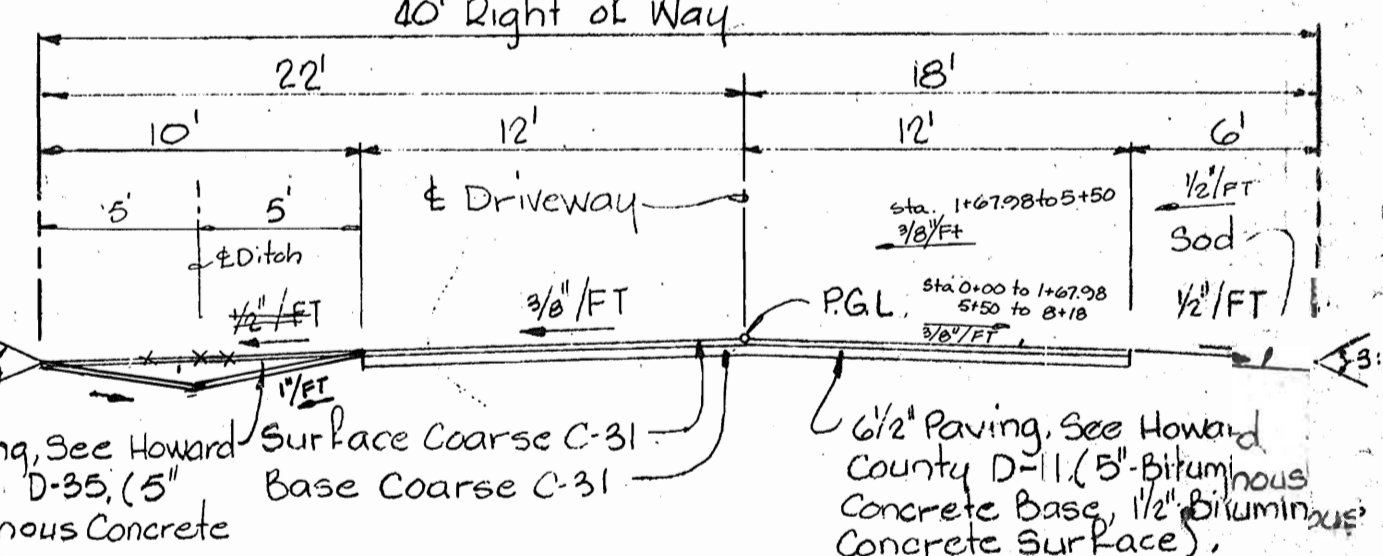
**PLANT LIST**

Code	Amount	Name	Size
10	10	PINUS STROBUS - WHITE PINE	2 3/4" H.
5	5	PSEUDOTSUGA TAXIFOLIA - DOUGLAS FIR	8/10" H.
3 (moved)	3	TSUGA CANADENSIS - CANADIAN HEMLOCK	6/8" H.
2	2	QUERCUS PALUSTRIS - PIN OAK - DELETED	2 1/2" SCAL.

**SITE ANALYSIS**

Area of site	1.24 Ac.
Number of Employees	0
Parking Required	0
Parking Provided	2
Area to be graded	0.79 Ac.
Area to be paved	0.09 Ac.
Area to be seeded	0.70 Ac.
Area to be undisturbed	0.10 Ac.
Zoned	R-20
Tax Map Number	46
See Council Resolution	154:8179

APPROVED  
DIVISION OF LAND DEVELOPMENT  
HOWARD COUNTY, MARYLAND  
DATE: 11-19-79  
TYPICAL PARKING



**CURVE DATA**

PC: -0+09.22 to PT: -0+59.28	PC: 0+25.35 to PT: 1+67.93
Δ = 08° 21' 47"	Δ = 23° 49' 03"
R = 25.08'	R = 72.34'
L = 50.07'	L = 142.58'
Chd = 50.02'	Chd = 141.56'
Chd. Brg. = N 68° 46' 33" E.	Chd. Brg. = S 84° 51' 58" W

WHITMAN, REQUARDT AND ASSOCIATES  
ENGINEERS  
1304 ST. PAUL STREET  
BALTIMORE, MARYLAND  
Kenneth A. McCord  
RE. & L.S. NO. 1974

HOWARD COUNTY, MARYLAND  
OWNER AND DEVELOPER  
Liber - 647, Folio - 24  
Tax Map 46, Parcel 292  
Zoned R-20

**SITE PLAN**  
Scale: 1"=50'

Reviewed for HOWARD S.C.D. Name  
and meets technical requirements  
Signature: J. Hehm Date: 12/28/78  
U.S. Soil Conservation Service

APPROVED FOR PUBLIC WATER SYSTEM  
HOWARD COUNTY HEALTH DEPARTMENT  
Signature: Gene W. Paul Date: 12-31-79  
COUNTY HEALTH OFFICER

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
Signature: Robert W. Zielon Date: 12/29/79  
APPROVED (HOWARD S.C.D.) DATE

APPROVED FOR STORM DRAINAGE SYSTEMS AND ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
Signature: Francis W. McNeel Date: 12/31/79  
DIRECTOR (acting) DATE

Signature: W. J. Libere Date: 12-31-79  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
Signature: Paul M. ... Date: 12-31-79  
PLANNING DIRECTOR, Acting DATE

Signature: Paul M. ... Date: 12-31-79  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

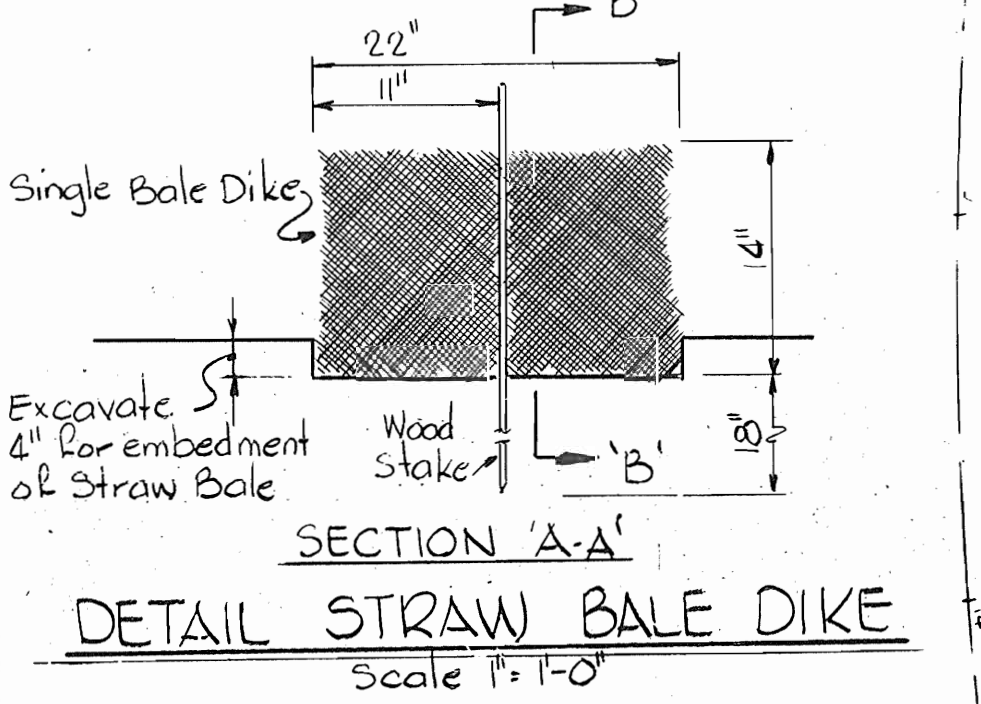
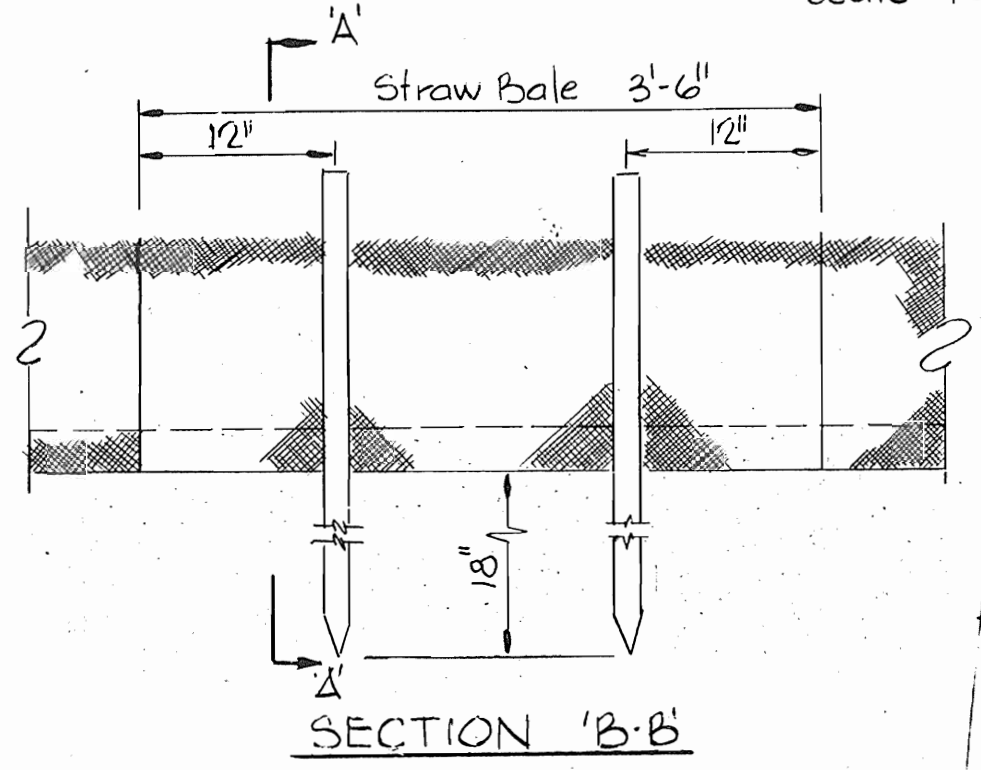
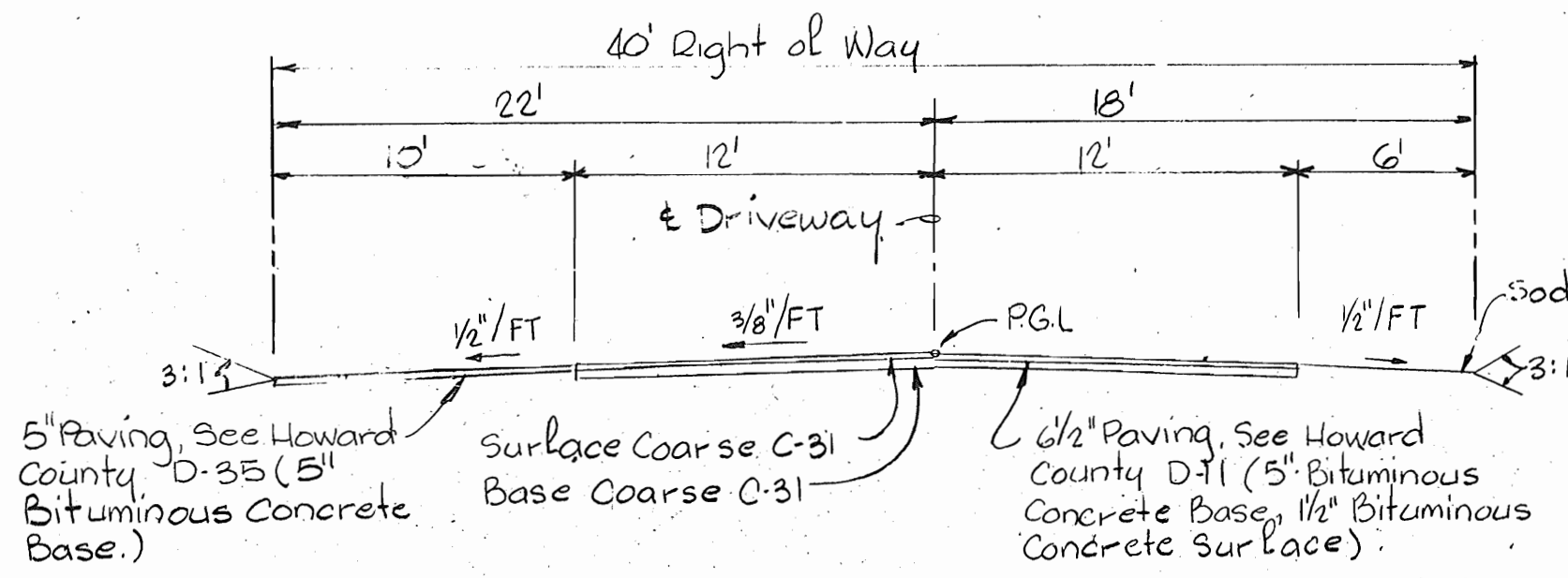
**CERTIFICATION BY THE ENGINEER**  
"I certify that this plan for Erosion and Sediment control represents a practical and workable plan based on my personal knowledge of the site condition and it was prepared in accordance with the requirements of the Howard Soil Conservation District"

Signature: Kenneth A. McCord Date: 5-25-79  
Signature of Engineer Date

**CERTIFICATION BY THE DEVELOPER**  
"I certify that all development and/or construction will be done according to these Plans of Development and Plans for Erosion and Sediment Control and I also authorize periodic on site inspection by the Howard Soil Conservation District or their authorized agents as are deemed necessary." Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.

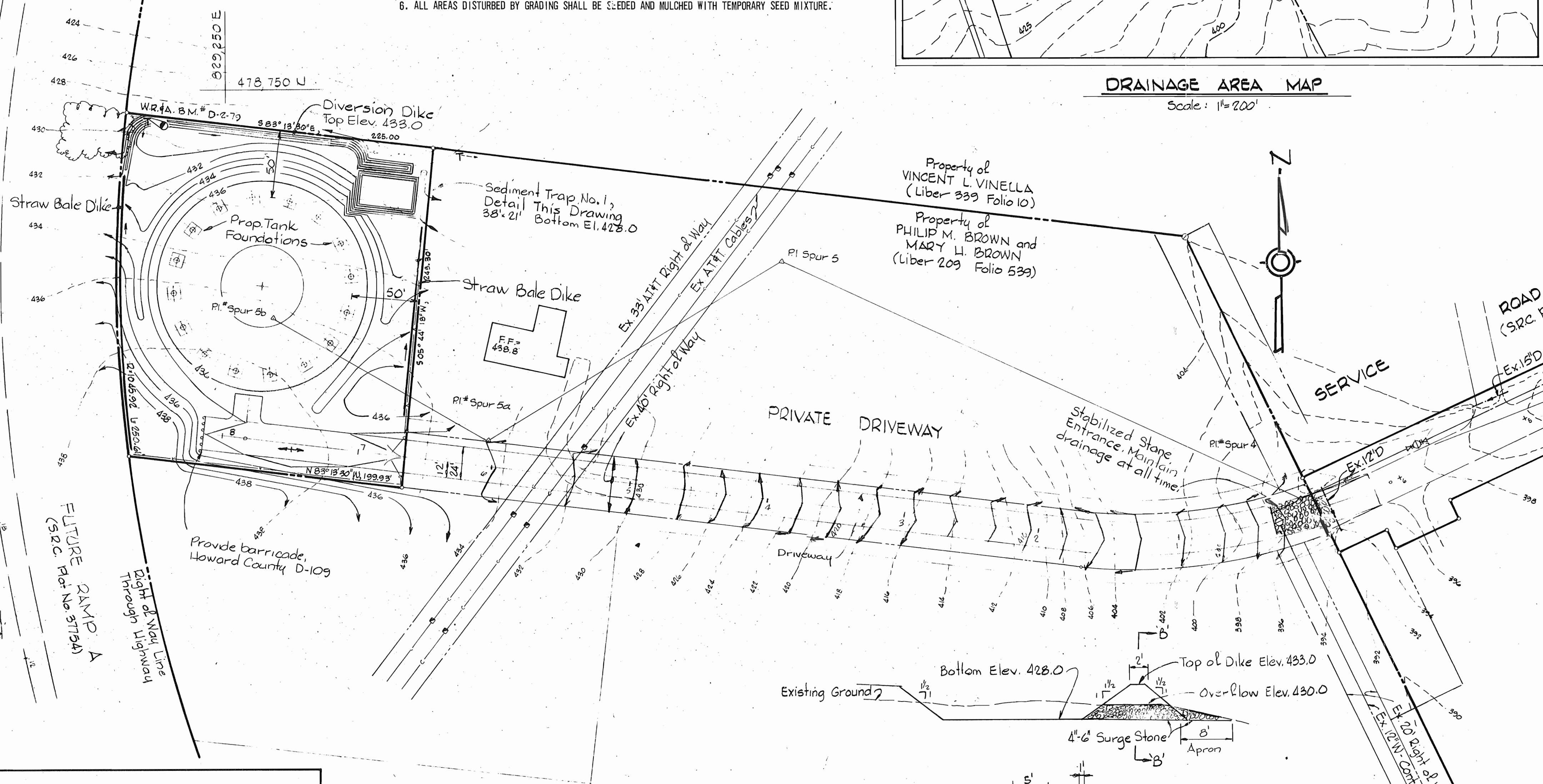
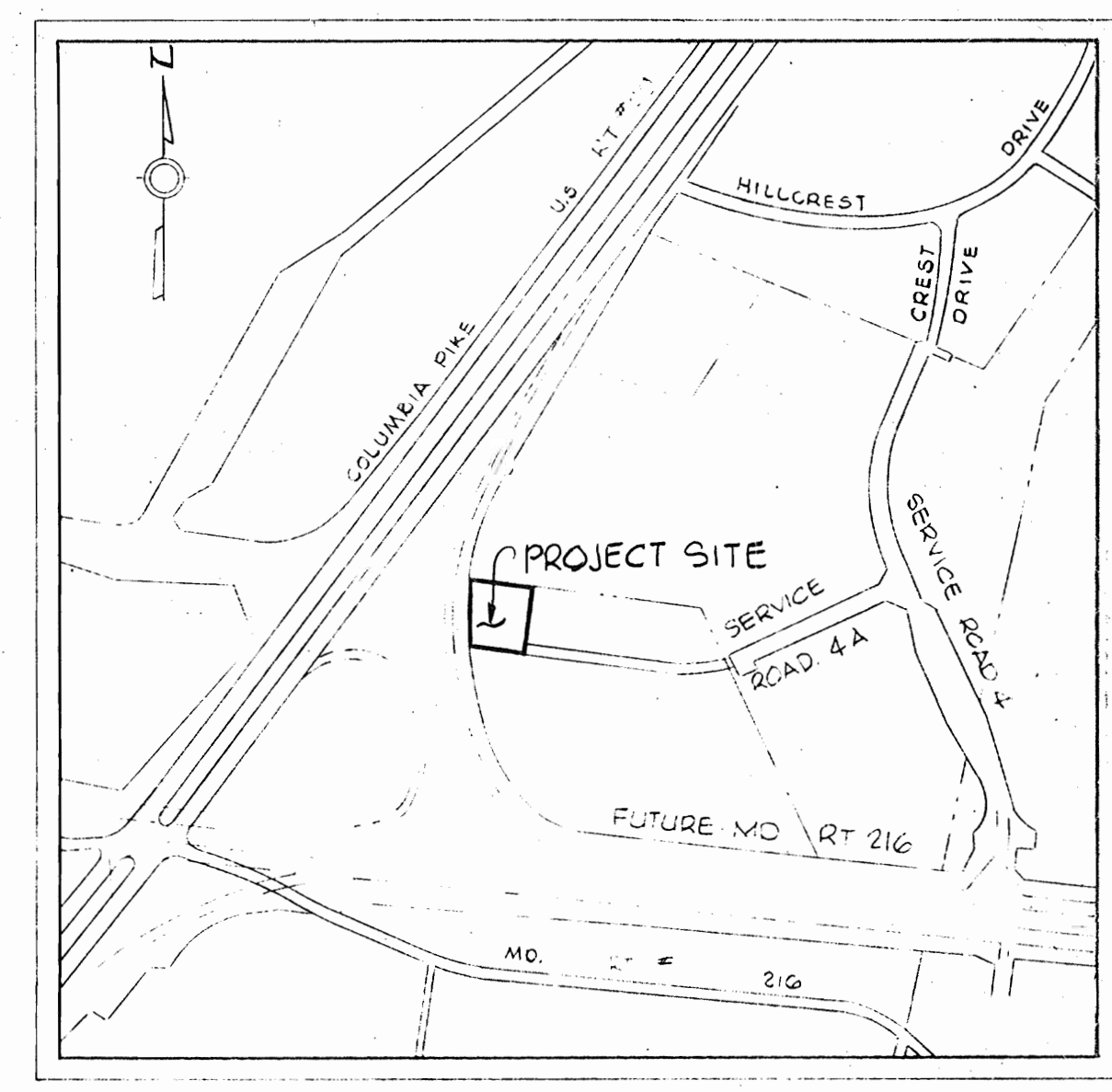
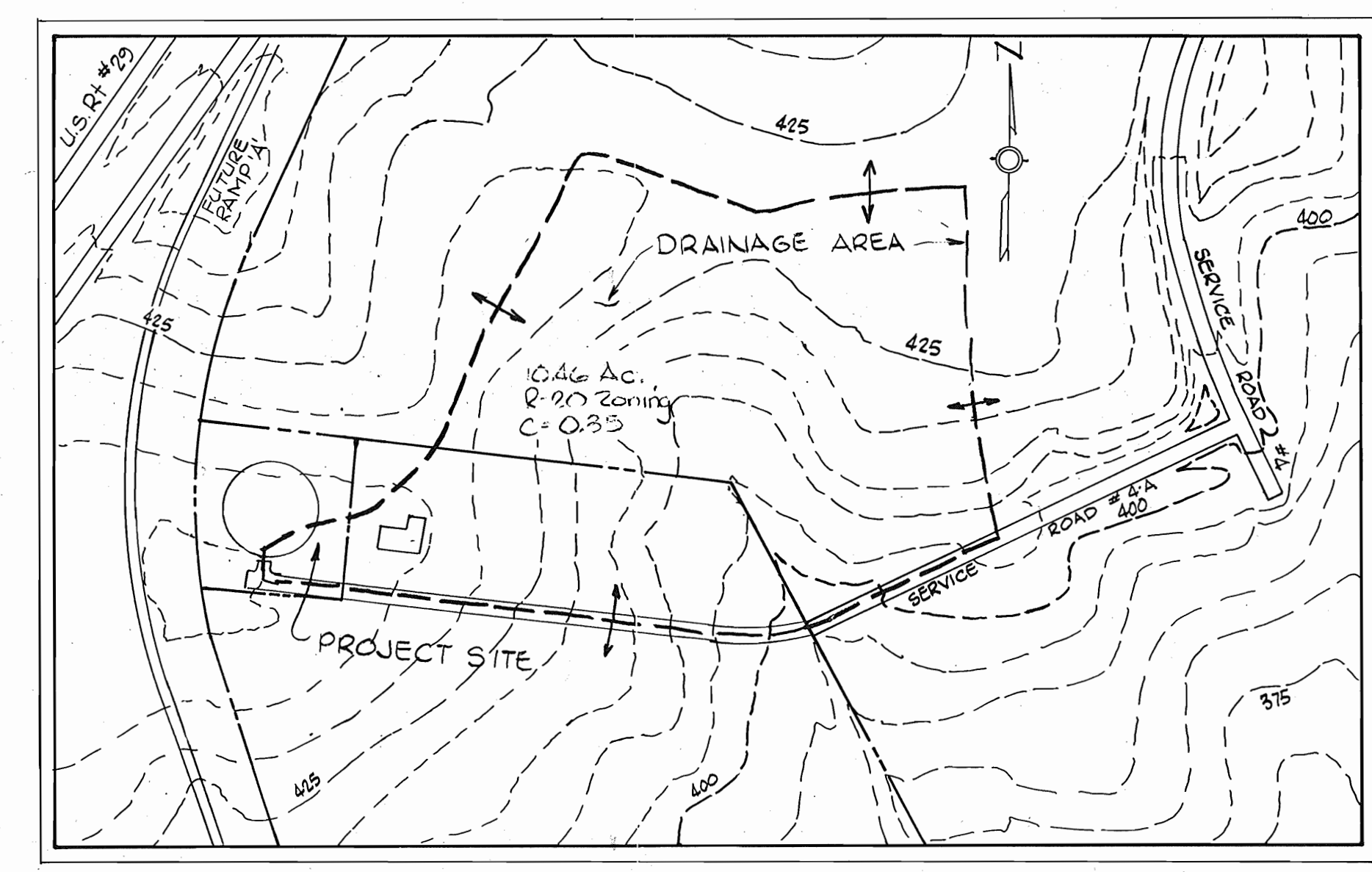
Signature: Gene W. Paul Date: 12-31-79  
Signature of Developer Date

**SITE DEVELOPMENT PLAN**  
FOR  
**SCAGGSVILLE WATER STORAGE FACILITY**  
PROJECT NO. W-4-8021  
CONTRACT NO. 887-W  
ELECTION DISTRICT GUILFORD NO. 6  
HOWARD COUNTY, MARYLAND  
Date: August 4, 1982  
Date: December 20, 1979  
Scale: As Shown

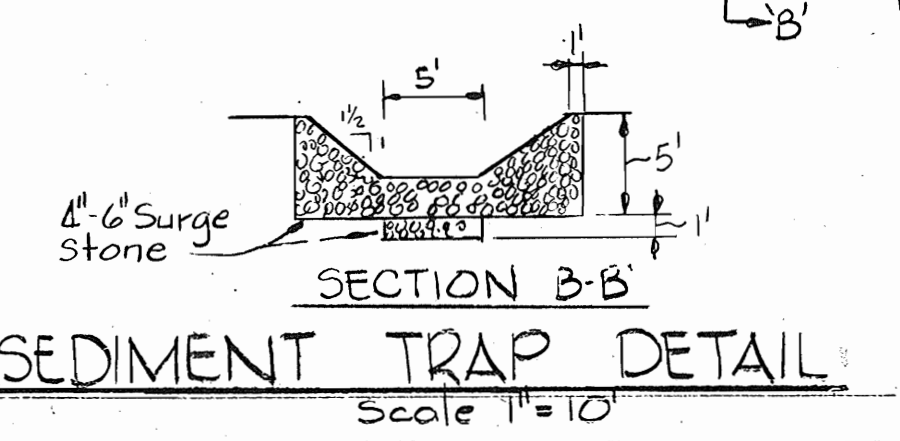
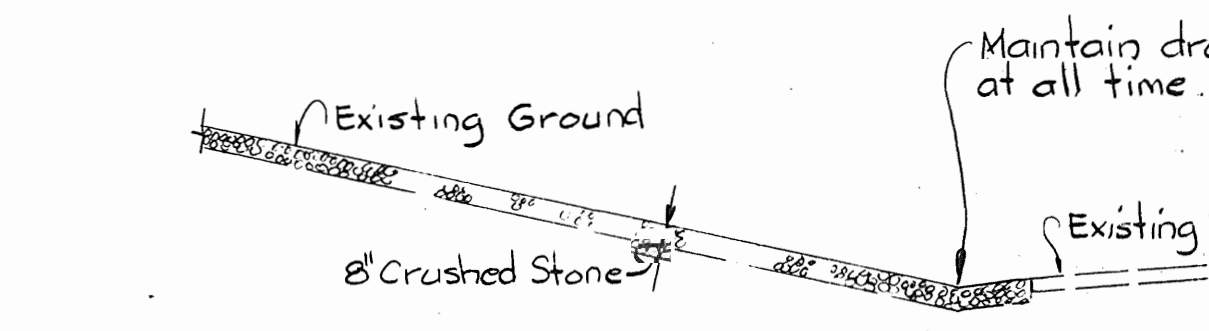


- CONSTRUCTION SPECIFICATION**
- Bales shall be placed in a row with ends tightly abutting the adjacent bales.
  - Each bale shall be embedded in the soil a minimum of 4".
  - Bales shall be securely anchored in place by stakes or re-bars driven through the bales. The first stake in each bale shall be angled toward previously laid bale to force bales together.
  - Inspection shall be frequent and repair or replacement shall be made promptly as needed.
  - Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

- SEDIMENT CONTROL NOTES**
- THE DEVELOPER SHALL NOTIFY THE HO. CO. OFFICE OF INSPECTIONS AND PERMITS AT LEAST 24-HOURS PRIOR TO BEGINNING ANY CONSTRUCTION SHOWN HEREON (992-2433).
  - DIKES, SEDIMENT TRAPS, ETC., TO BE CONSTRUCTED PRIOR TO ANY ONSITE GRADING OR DISTURBANCE TO ANY EXISTING SURFACE MATERIAL AND ARE TO BE STABILIZED AS SOON AS CONSTRUCTED.
  - ALL SEDIMENT STRUCTURES TO REMAIN IN PLACE UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS (992-2433).
  - ALL GRADED AREAS SHALL BE STABILIZED BY SEEDING AND MULCHING IN ACCORDANCE WITH THE FOLLOWING:
    - SITE PREPARATION:
      - HARROW OR DISC IN AREAS PROPOSED TO BE SEEDDED WITH THE FOLLOWING MATERIALS AT THE SPECIFIED RATE, TO A DEPTH OF 3":
        - PULVERIZED LIMESTONE AT 1-1/2 TONS/ACRE
        - COMMERCIAL FERTILIZER 10-10-10 AT 3/TONS/ACRE
        - SUPER PHOSPHATE OF 600 LBS./ACRE.
      - SEEDING:
        - SOW THE FOLLOWING SEED MIXTURE AT THE RATE OF 200 LBS./ACRE WITH A MECHANICAL SPREADER:
          - TEMPORARY: ITALIAN OR PERENNIAL RYE GRASS
          - PERMANENT: 40% MERION BLUE GRASS, 40% SOUTH DAKOTA BLUE GRASS & 20% PENN LAWN CREEPING RED FESCUE.
        - THE SEEDDED AREA SHALL THEN BE RAKED WITH A YOKE RAKE (MINIMUM OF 2 PASSES), COVERED AND COMPACTED WITH CULTIPACKER OR OTHER APPROVED METHOD.
      - MULCHING:
        - SEEDDED AREAS SHALL BE UNIFORMLY MULCHED IMMEDIATELY AFTER SEEDING WITH UNWEATHERED SMALL GRAIN STRAW AT THE RATE OF 1-1/2 TONS/ACRE.
        - TIE-MULCH SOWN WITH LIQUID ASPHALT AT 0.1 GAL./S.Y. OR EMULSIFIED ASPHALT AT 0.04 GAL./S.Y. ON MULCH NETTING.
    - ACCESS ROAD SHALL BE GRAVEL SURFACED IMMEDIATELY AFTER GRADING TO PREVENT SOIL EROSION.
    - ALL AREAS DISTURBED BY GRADING SHALL BE SEEDDED AND MULCHED WITH TEMPORARY SEED MIXTURE.



**SEDIMENT TRAP NO. 1**  
 Drainage Area = 0.945 Ac  
 Volume Required = 1710 cu.yds.  
 Volume Available = 1886 cu.yds.



WHITMAN, REQUARDT AND ASSOCIATES  
 ENGINEERS  
 1304 ST. PAUL STREET  
 BALTIMORE, MARYLAND  
 Kenneth A. McCord  
 RE. & L.S. NO. 1974

HOWARD COUNTY, MARYLAND  
 OWNER AND DEVELOPER  
 Liber - 647, Folio - 24  
 Tax Map 46, Parcel 232  
 Zoned R-20  
 WR#A. B.M. # D-2-79 Elev. 429.34  
 R.R. Spike in G.E. Pole # 488168 N.E.  
 corner of Howard County Property.

**SITE PLAN**  
 Scale: 1/4"=1'-0"

**SECTION B-B SEDIMENT TRAP DETAIL**  
 Scale 1/4"=1'-0"

APPROVED  
 DIVISION OF LAND DEVELOPMENT  
 HOWARD COUNTY, MARYLAND  
 DATE 11-19-79  
 JMM

Reviewed for HOWARD S.C.D. Name and meets technical requirements  
 J. Helms 12-28-79  
 U.S. Soil Conservation Service  
 APPROVED FOR PUBLIC WATER SYSTEM HOWARD COUNTY HEALTH DEPARTMENT  
 Lance M. Paul '82 12-31-79  
 COUNTY HEALTH OFFICER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 Robert W. Ziehm 12-28-79  
 APPROVED (HOWARD SCD) DATE

APPROVED FOR STORM DRAINAGE SYSTEMS AND ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.  
 Director 12-31-79  
 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 Planning Director, Acting 12-31-79  
 DATE

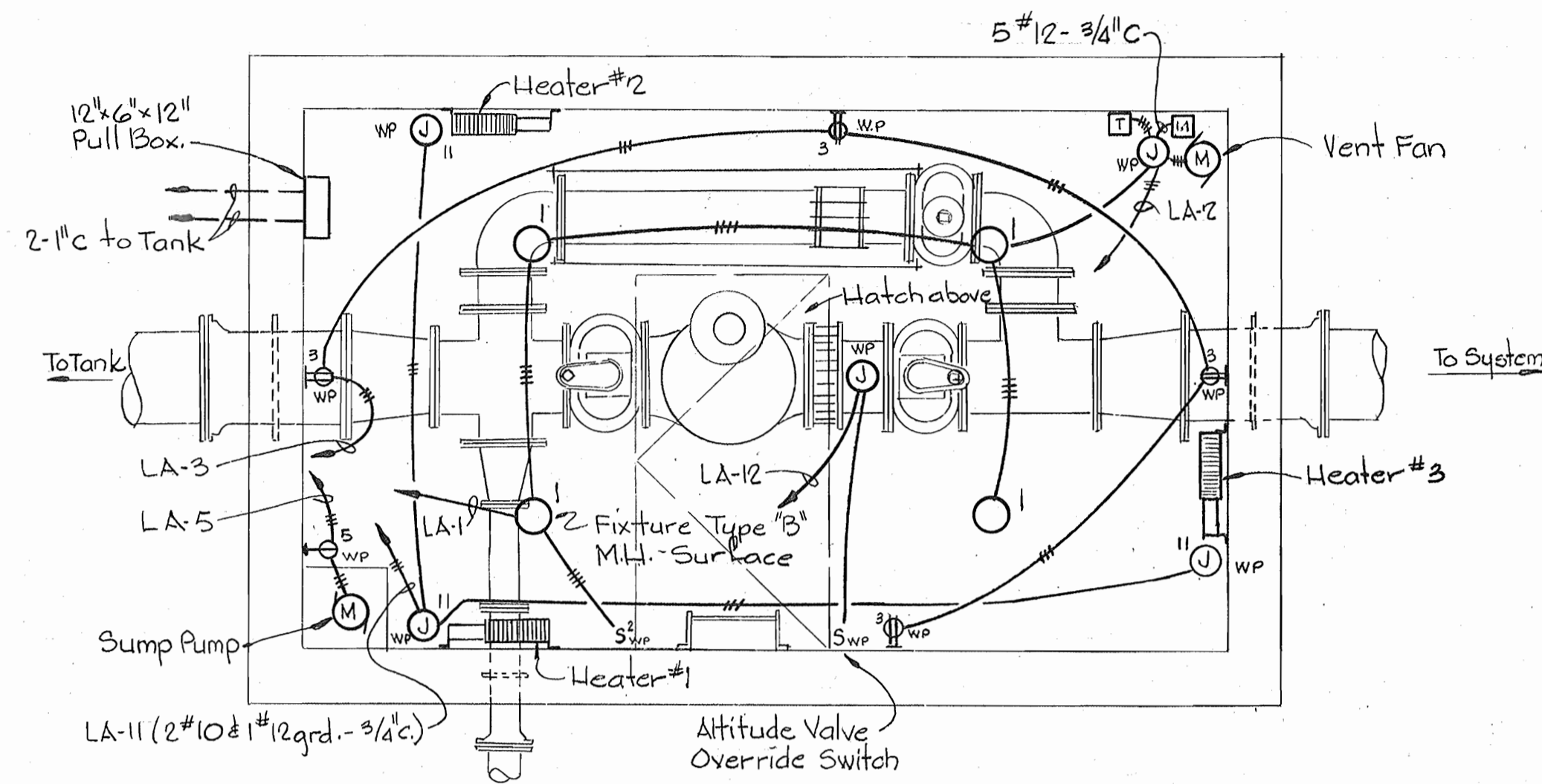
CERTIFICATION BY THE ENGINEER  
 "I certify that this plan for Erosion and Sediment control represents a practical and workable plan based on my personal knowledge of the site condition and it was prepared in accordance with the requirements of the Howard Soil Conservation District."  
 Signature of Engineer Date

CERTIFICATION BY THE DEVELOPER  
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 Signature of Developer Date

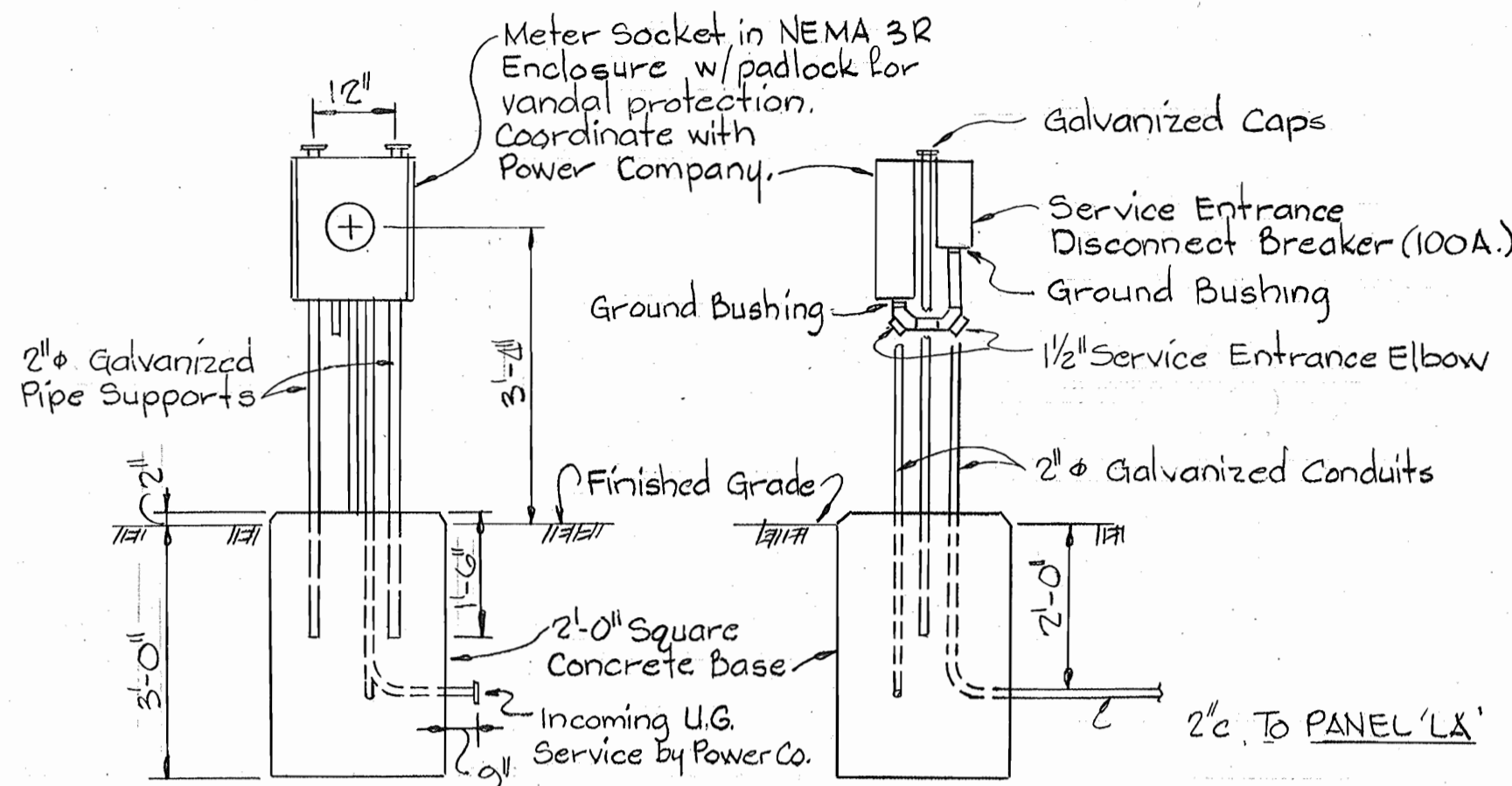
**SEDIMENT CONTROL PLAN**  
 FOR  
**SCAGGSVILLE WATER STORAGE FACILITY**  
 PROJECT NO. W-4-8021  
 CONTRACT NO. 887-W  
 ELECTION DISTRICT GUILFORD NO. 6  
 HOWARD COUNTY, MARYLAND  
 Date: December 20, 1979 Scale: As Shown



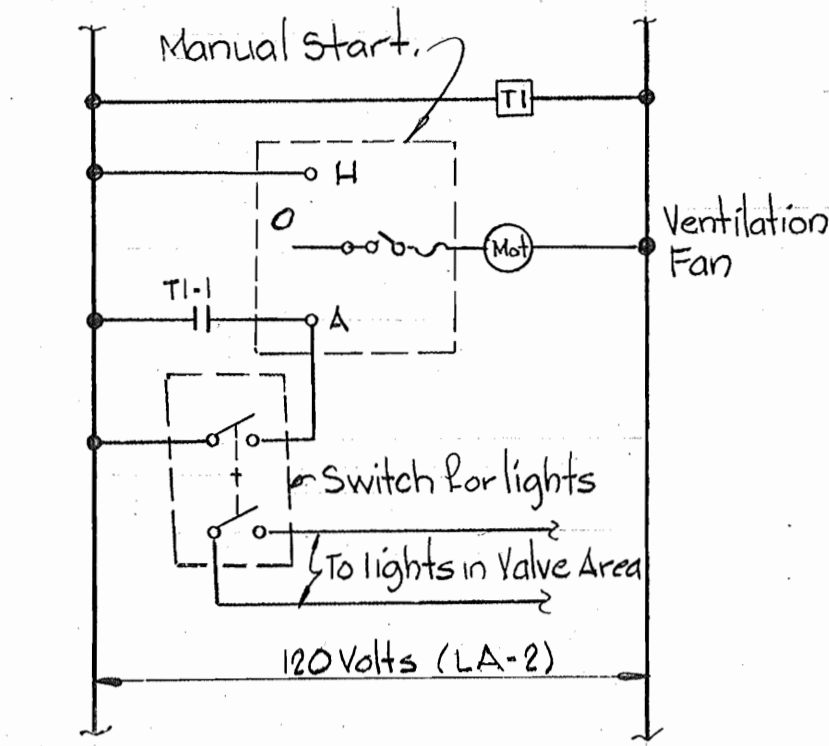




PLAN - ELECTRICAL  
ALTITUDE VALVE VAULT  
Scale 3/8"=1'-0"



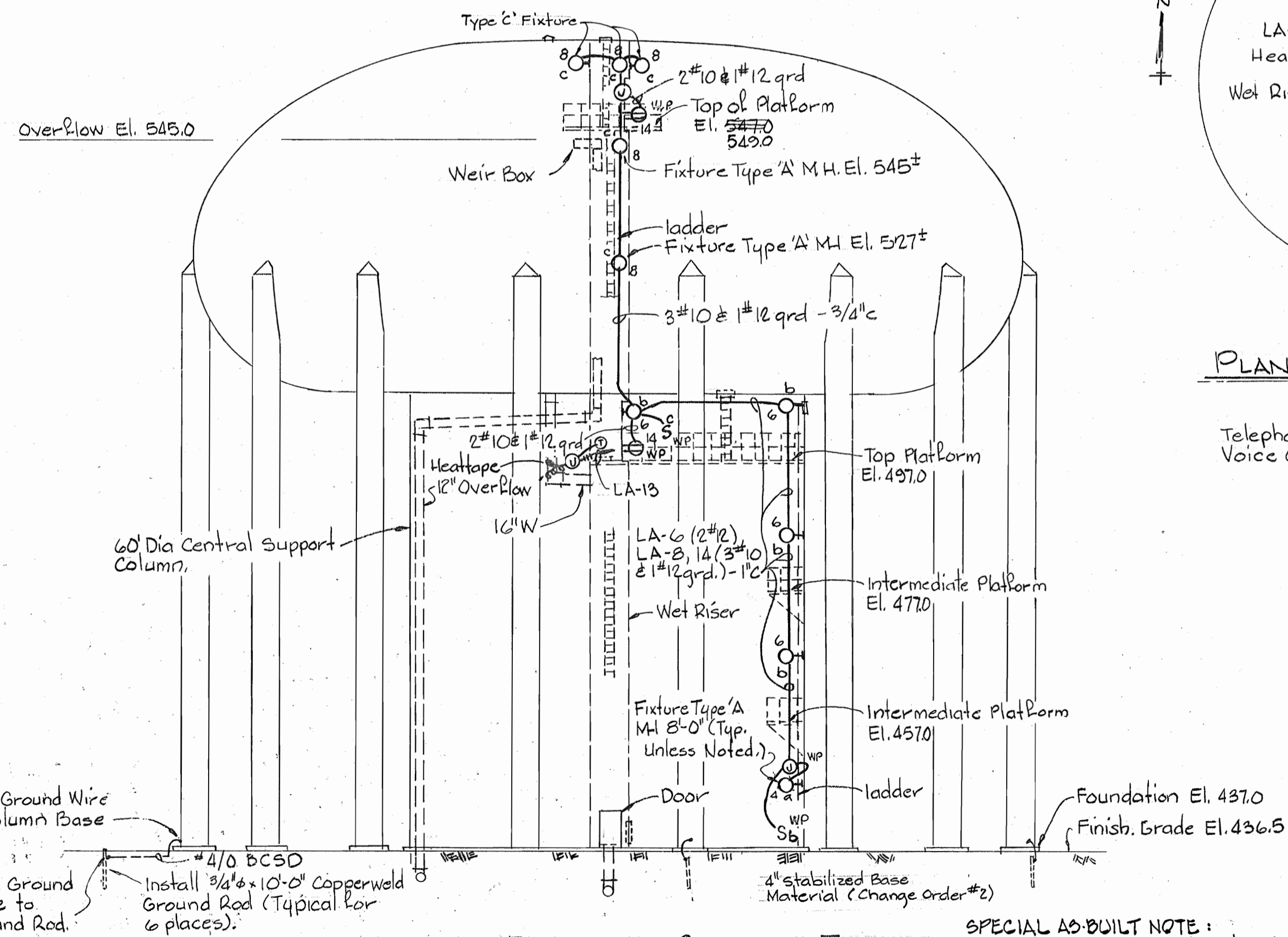
FRONT ELEVATION SIDE ELEVATION  
MOUNTING DETAIL FOR METER AND MAIN BREAKER  
Scale 1/2"=1'-0"



ELEMENTARY CONTROL DIAGRAM  
FOR VENTILATION FAN  
ALTITUDE VALVE VAULT.

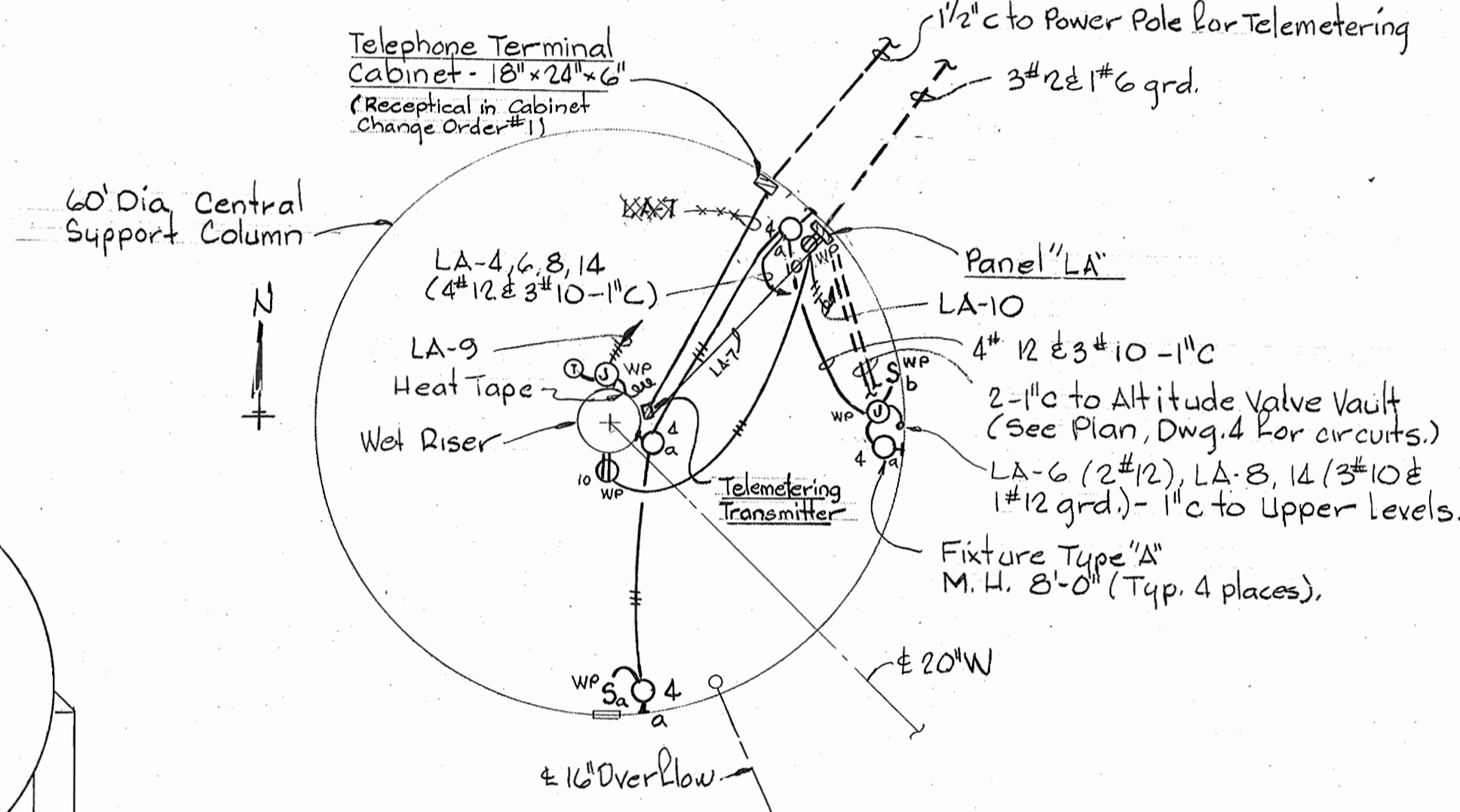
- ### ELECTRICAL LEGEND
- Outlet - Incandescent - Ceiling
  - Outlet - Incandescent - Bracketed
  - ⊖ Outlet - Incandescent Floor Type - Bracketed
  - ⊕ Outlet - Duplex Convenience Receptacle - MH30
  - S<sub>2</sub> Switch - Single Pole - Two Pole
  - S<sub>3</sub> Switch - Three Way
  - ⊕ Thermostat - Heating
  - ⊕ Motor
  - ⊕ Junction Box
  - Conduit - On Ceiling or Wall
  - Conduit - In or Under Floor
  - Home-run To Panelboard No. of Arrows Indicates No. of Circuits - No. of Cross Lines Indicates No. of Wires. Where No. Cross Lines Appear, 2 Conductors are Implied
  - WP Weatherproof
  - ⊕ Timer
  - ⊕ Motor Starter - Manual
  - Conduit - Turned Down
  - Conduit - Turned Up
  - ▨ Panelboard - 120/240 V, 1 φ, 3 W
  - ⊕ Outlet Single Convenience Receptacle - M.H. 30

- ### GENERAL ELECTRICAL NOTES
- For Panelboard Schedules, See Specifications, "Detailed Electrical Requirements".
  - For lighting Fixture Types, See Specifications, "Detailed Electrical Requirements".
  - Verify All Door Swings Before Installing Switches.
  - Mounting Heights for lighting Fixtures shall be From Finished Floor To Bottom of Fixture Unless Otherwise Noted.

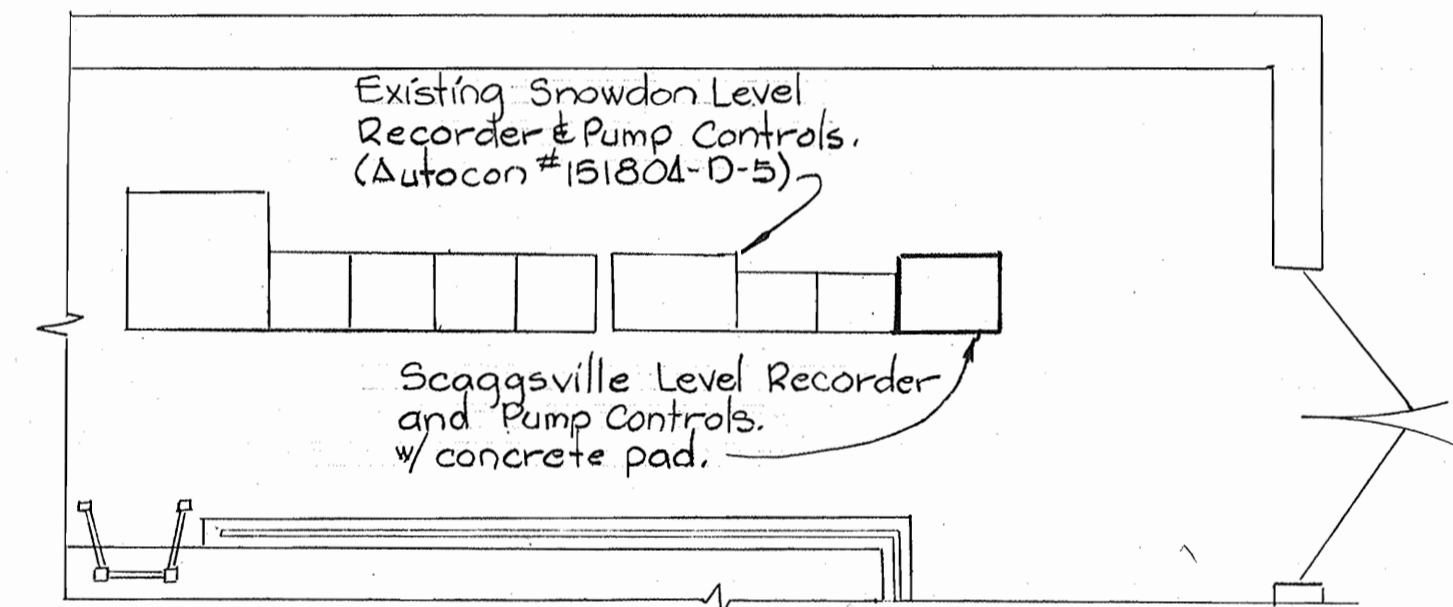


ELEVATION - ELEVATED STORAGE TANK  
Scale 1"=15'

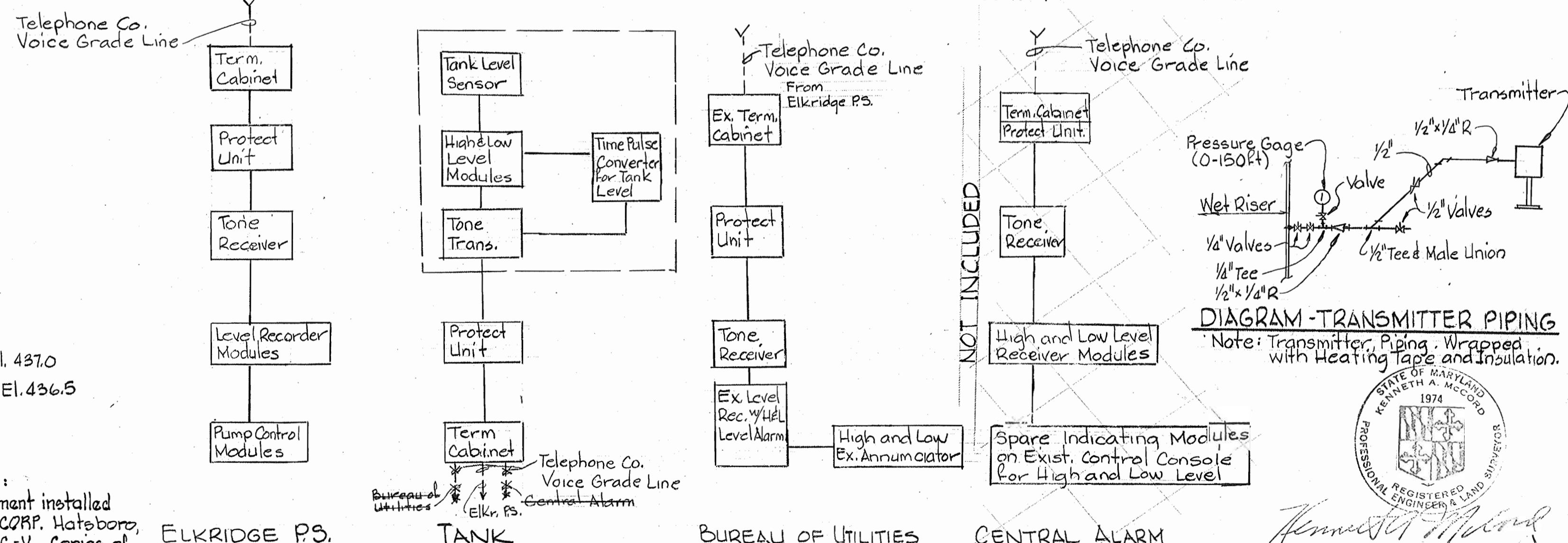
**SPECIAL AS-BUILT NOTE:**  
Cathodic Protection Equipment installed August 1983, by HARCO CORP. Hatesboro, Pennsylvania - Model TADC-V. Copies of shop drawings available through the Construction Inspection/Survey Div. - 792-7272 or Bureau of Utilities 992-2366



PLAN - TANK ELEVATION 437.0  
Scale 1"=15'



ELK RIDGE WATER PUMPING STATION - PART PLAN  
Scale 1/4"=1'-0"



TELEMETERING BLOCK DIAGRAM

Note: Contractor to coordinate Tone Frequency with Telephone Co., Howard County D.P.W., and Manufacture.

DIAGRAM - TRANSMITTER PIPING  
Note: Transmitter Piping - Wrapped with Heating Tape and Insulation.



Scaggsville Water Storage Facility  
Project No. W-4-8021  
Contract No. 887-W

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
James L. Ellis, 1/2/80  
CHIEF - BUREAU OF UTILITIES - DATE  
Whitman, Requardt & Associates  
ENGINEERS  
1304 ST. PAUL ST.  
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
John F. Nunnery  
DIRECTOR OF PUBLIC WORKS  
1-3-80  
DATE

CONTRACT NO. 887-W  
PROJECT NO. W-4-8021

ELECTRICAL

ELECTION DISTRICT  
GUILFORD NO. 6

DRAWING NO. 6 OF 6  
SCALE AS SHOWN  
SHEET E-1