

DESIGN FLOW TABULATION CHART

AREA SYMBOL	AREA ACRES	POPULATION ULTIMATE	ULT. AVG. NON-DOMESTIC SEWAGE FLOW (M.G.D.)	ULT. AVG. DOMESTIC SEWAGE FLOW (M.G.D.)	ULT. PEAK FLOW (M.G.D.)	PEAK INDUSTRIAL WASTE FLOW (M.G.D.)	DESIGN FLOW (M.G.D.)
A	1,818	7,400	0.019	0.835	2.620	0.075	2.695
B	1,980	6,641	0.002	0.757	2.530	0.010	2.540
A-B	3,798	14,041	0.021	1.590	4.680	0.085	4.765
C	172	1,278	0.032	0.117	0.470	0.120	0.590
A-C	3,970	15,319	0.053	1.707	5.010	0.213	5.223
D	553	3,813	0.010	0.478	1.620	0.040	1.660
A-D	4,523	19,132	0.063	2.185	6.060	0.254	6.314
E	809	5,232	0.059	0.545	1.965	0.236	2.201
A-E	5,332	24,364	0.122	2.730	7.270	0.492	7.762

1) Ultimate sewage flow incorporates effluent contributed to sanitary sewer by Hammond Park Middle and Elementary School of 1400 pupils using 35 gallons/day per student.

DESCRIPTION	QUANTITIES	"AS BUILT"
24 inch sewer	475 L.F.	471 L.F.
21 inch sewer	908 L.F.	905 L.F.
18 inch sewer	370 L.F.	348 L.F.
12 inch sewer	8020 L.F.	3003 L.F.
10 inch sewer	1055 L.F.	1,084 L.F.
8 inch sewer	4485 L.F.	4,497 L.F.
6 inch sewer	1030 L.F.	1,381 L.F.
Manholes	485 V.F.	454 L.F.

TYPE OF PIPE USED:
 Johns-Manville "Transite" A.C. pipe
 with "Ring-Tite" Joints.

CONTRACT NO. 530-S
HAMMOND BRANCH SANITARY SEWERS
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS



WS 530-S/1

"AS BUILT"
 NOV. 15, 1976

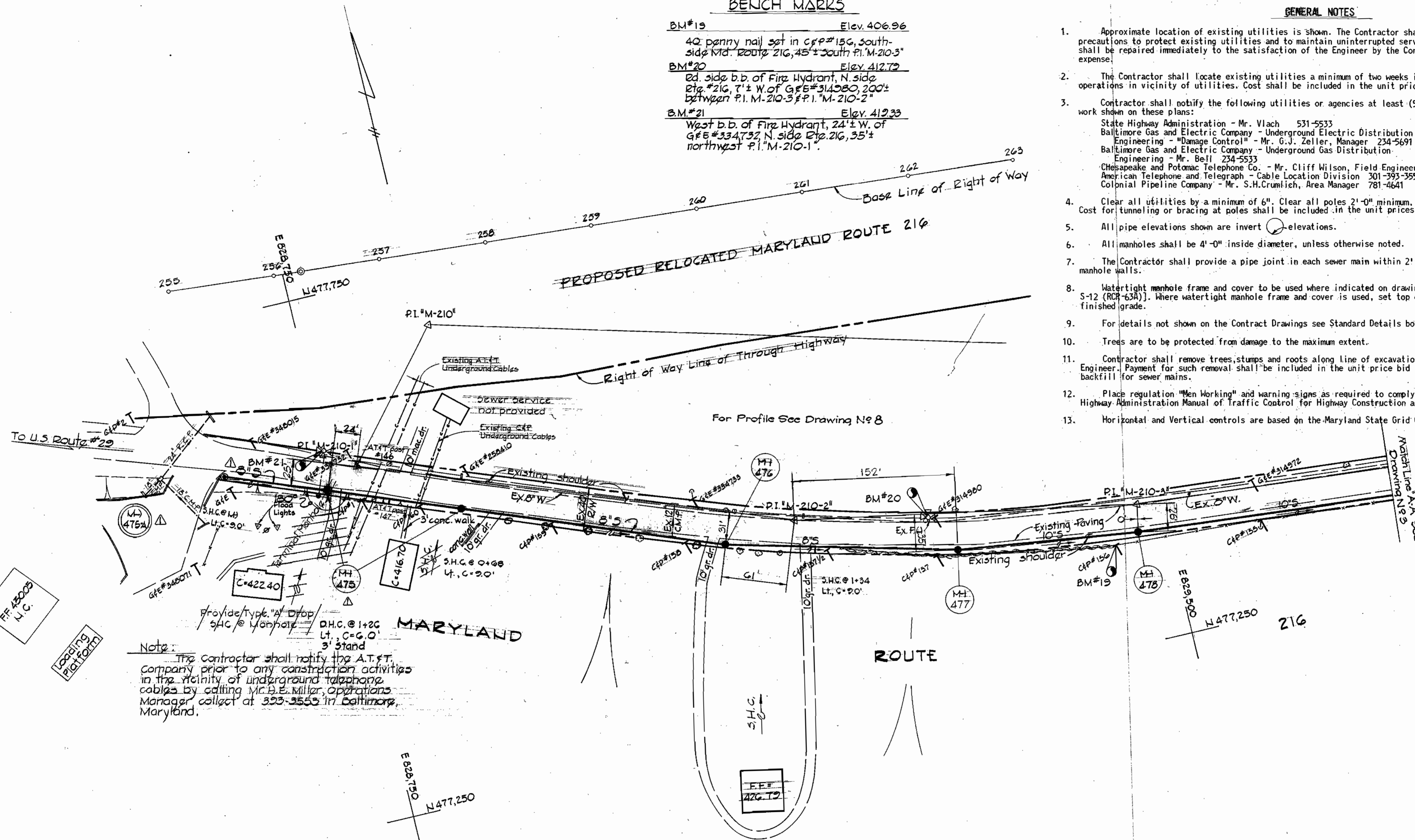
PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 8-7-73 DATE	CONTRACT NO. 530-S	LOCATION MAP OF SANITARY SEWERS	ELECTION DISTRICT NO. 6	DRAWING NO. 1 OF 11	SCALE AS SHOWN	POS. SHEETS 6, 7, 8, 12, 14 17, 21, 21-A, 22, 23, 27,
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BENCH MARKS

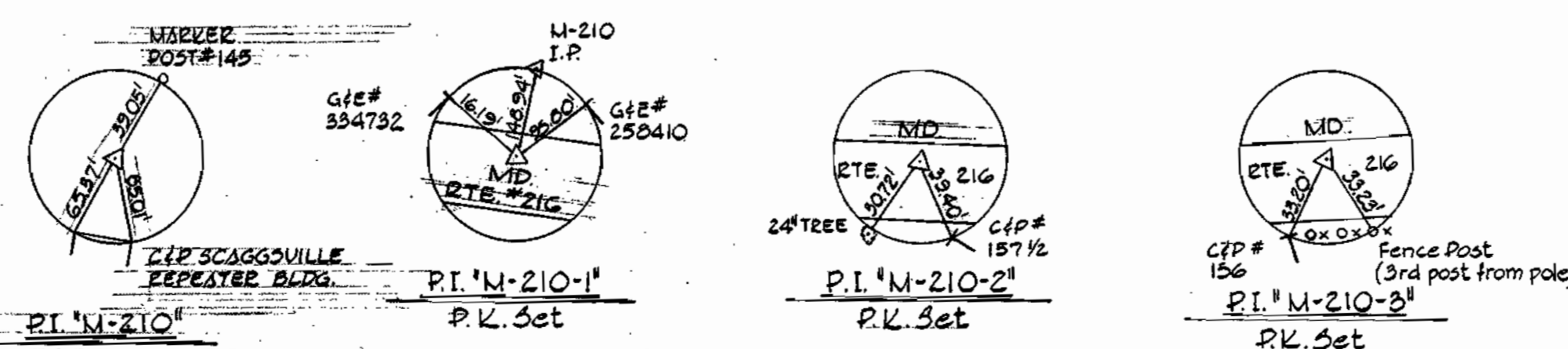
- BM#19 Elev. 406.96
40 penny nail set in C&P#156, South-side Md. Route 216, 45'± South P.I. M-210-3"
- BM#20 Elev. 412.72
Ed. side b.b. of Fire Hydrant, N. side Rte. #216, 7'± W. of G&E#314980, 200'± between P.I. M-210-3&P.I. M-210-2"
- BM#21 Elev. 412.33
West b.b. of Fire Hydrant, 24'± W. of G&E#334732 N. side Rte. 216, 35'± northwest P.I. M-210-1"

GENERAL NOTES

- Approximate location of existing utilities is shown. The Contractor shall take all necessary precautions to protect existing utilities and to maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer by the Contractor at the Contractor's expense.
- The Contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in vicinity of utilities. Cost shall be included in the unit prices bid for excavation.
- Contractor shall notify the following utilities or agencies at least (5) days before starting work shown on these plans:
State Highway Administration - Mr. Vlach 531-5533
Baltimore Gas and Electric Company - Underground Electric Distribution Engineering - "Damage Control" - Mr. G.J. Zeller, Manager 234-5691
Baltimore Gas and Electric Company - Underground Gas Distribution Engineering - Mr. Bell 234-5533
Chesapeake and Potomac Telephone Co. - Mr. Cliff Wilson, Field Engineer 725-9976
American Telephone and Telegraph - Cable Location Division 301-393-3553
Colonial Pipeline Company - Mr. S.H. Crumlich, Area Manager 781-4641
- Clear all utilities by a minimum of 6". Clear all poles 2'-0" minimum, or tunnel as required. Cost for tunneling or bracing at poles shall be included in the unit prices bid for excavation.
- All pipe elevations shown are invert elevations.
- All manholes shall be 4'-0" inside diameter, unless otherwise noted.
- The Contractor shall provide a pipe joint in each sewer main within 2'-0" of the exterior of manhole walls.
- Watertight manhole frame and cover to be used where indicated on drawings [Standard Detail S-12 (RCR-63A)]. Where watertight manhole frame and cover is used, set top of frame 1'-6" above finished grade.
- For details not shown on the Contract Drawings see Standard Details bound in the specifications.
- Trees are to be protected from damage to the maximum extent.
- Contractor shall remove trees, stumps and roots along line of excavation as directed by the Engineer. Payment for such removal shall be included in the unit price bid for excavation and backfill for sewer mains.
- Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
- Horizontal and Vertical controls are based on the Maryland State Grid Coordinate System.



Note:
The Contractor shall notify the A.T.&T. Company prior to any construction activities in the vicinity of underground telephone cables by calling Mr. D.E. Miller, Operations Manager collect at 353-3553 in Baltimore, Maryland.



REVISION	DATE	REMARKS
1	10-2-73	Added MH#475-A; Relocated MH#475

PURDUM & JESCHKE
ENGINEERS
1023 N. CALVERT ST.
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
8-7-73
DATE

CONTRACT NO. 530-S

PLAN
HAMMOND BRANCH SEWERS

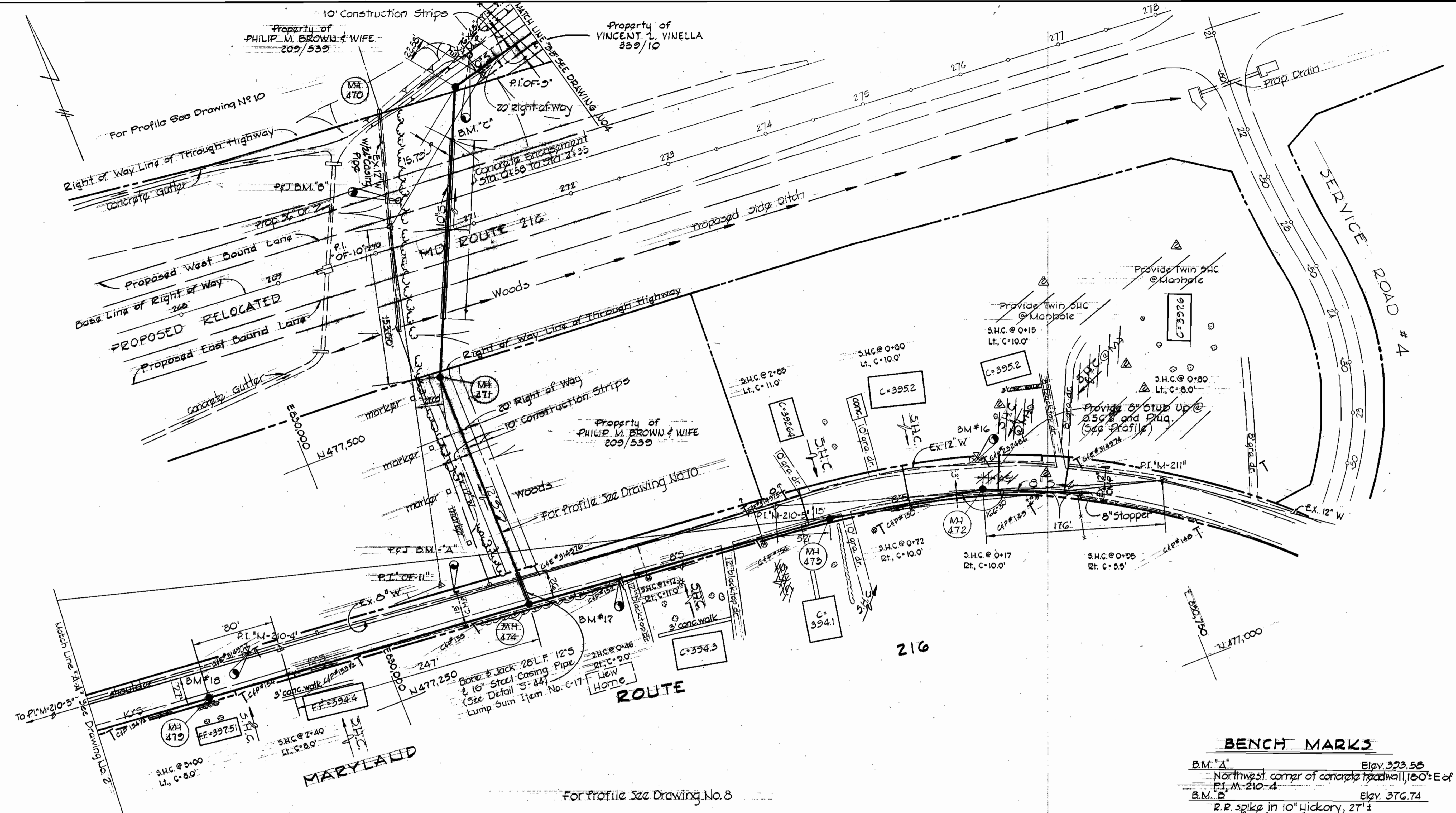
ELECTION DISTRICT
GUILFORD NO. 6

DRAWING NO. 2
SCALE 1" = 30'

DESIGNED: T.A.F.
DRAFTED: J.F.L.
CHECKED: T.A.F.

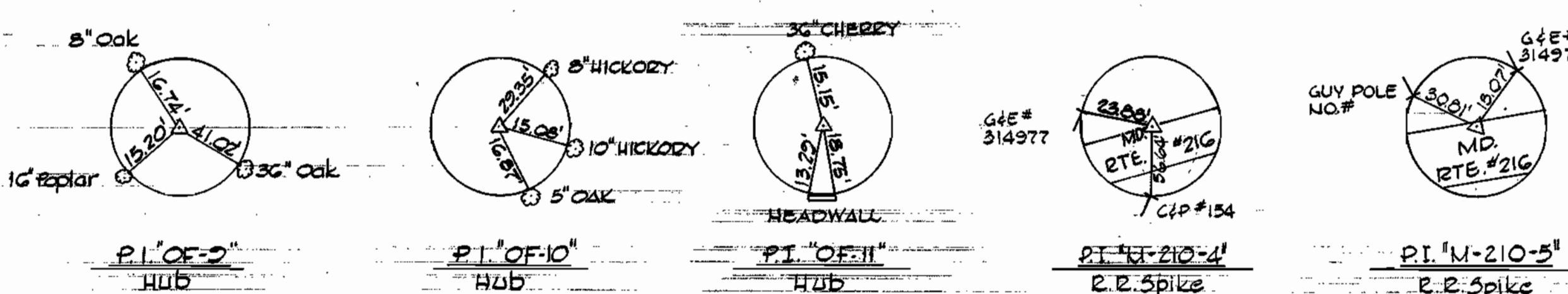
SUSPENDED

"AS BUILT"
NOV. 15, 1973



BENCH MARKS

B.M. #A	Elev. 323.58
Northwest corner of concrete headwall, 100' E of P.I. M-210-4	
B.M. #B	Elev. 376.74
R.R. spike in 10" Hickory, 27' NE of P.I. OF-10"	
B.M. #C	Elev. 371.35
R.R. spike in 5" Oak 20' North of P.I. OF-5"	
B.M. #16	Elev. 402.04
Rd. side b.b. of fire hyd., N. side rts. 216, 184' west of M-211	
B.M. #17	Elev. 325.58
10' nail set in C/P #152, S. side rts. 216, 170' from P.I. M-210-5 to M-210-4	
B.M. #18	Elev. 328.82
Rd. side b.b. of fire hyd., N. side rts. 216, 31' west of P.I. M-210-4	



REVISION	DATE	REMARKS
1	10/18/76	From MH #472 - Extended 8' 5" S.L.F. & plugged.



PURDUM & JESCHKE
ENGINEERS
1023 N. CALVERT ST.
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE: 8-7-73
W.D. Feltner
CHIEF ENGINEER

CONTRACT NO. 530-S

PLAN
HAMMOND BRANCH SEWERS

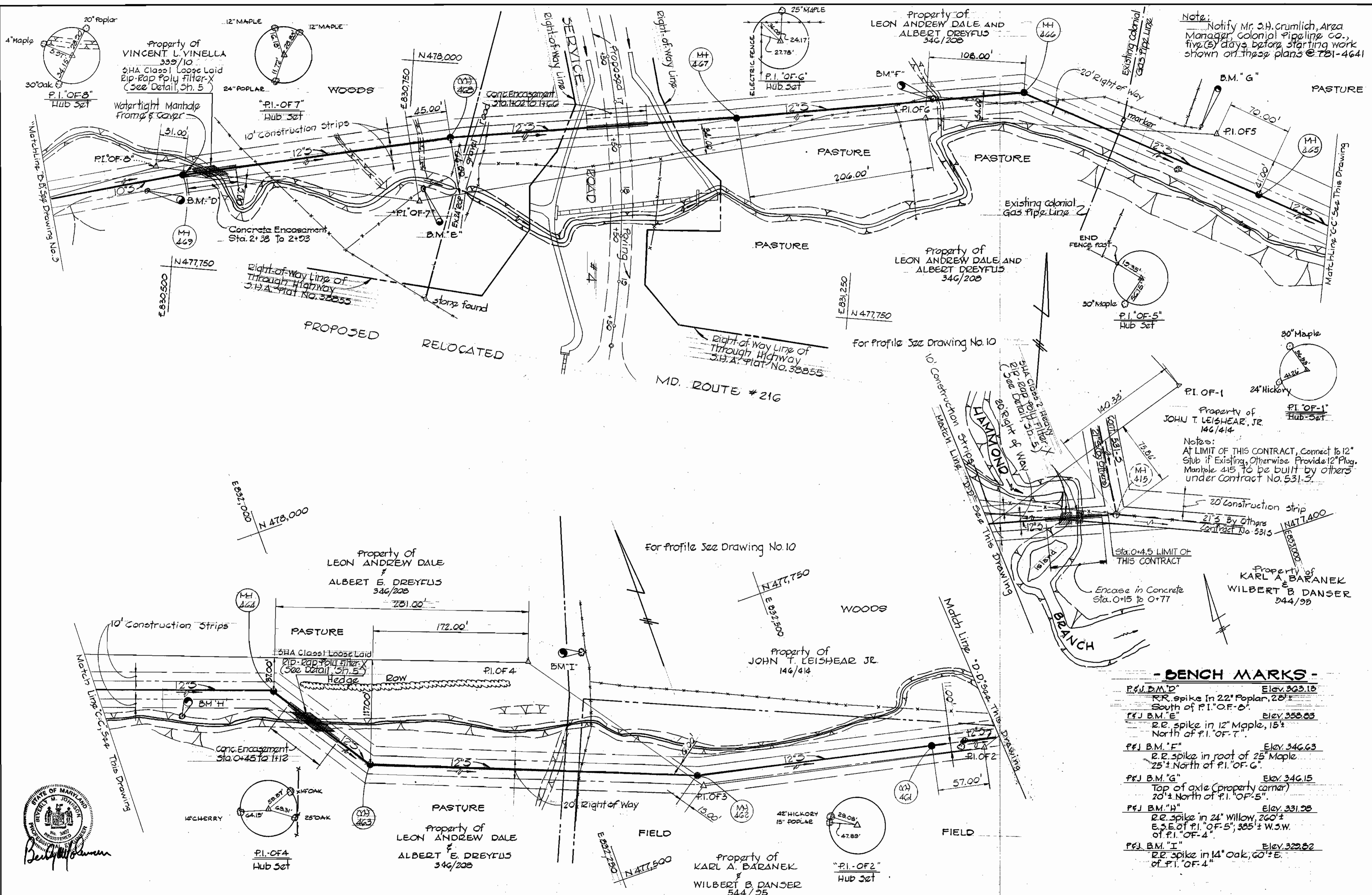
ELECTION DISTRICT
GUILFORD NO. 6

DRAWING NO. 3 OF 10
SCALE 1" = 50'

DESIGNED: T.A.F.
DRAFTED: T.A.F.
CHECKED: T.A.F.
PROJ. SHEETS #21 & 21-A

WS 530-S/3

"AS BUILT"
NOV. 15, 1976



Note: Notify Mr. S.H. Crumlich, Arza Manager, Colonial Pipeline Co., five (5) days before starting work shown on these plans @ 731-4641

Notes: AT LIMIT OF THIS CONTRACT, connect to 12" stub if existing, otherwise provide 12" Plug Manhole 415 to be built by others under Contract No. 531-S

- BENCH MARKS -**
- P&J B.M. "D" Elev. 329.18
R.R. spike in 22" Poplar, 28' South of P.I. "OF-8"
 - P&J B.M. "E" Elev. 358.83
R.R. spike in 12" Maple, 15' North of P.I. "OF-7"
 - P&J B.M. "F" Elev. 346.63
R.R. spike in root of 25" Maple 25' North of P.I. "OF-6"
 - P&J B.M. "G" Elev. 346.15
Top of axle (property corner) 20' North of P.I. "OF-5"
 - P&J B.M. "H" Elev. 331.28
R.R. spike in 24" Willow, 260' E.S.E. of P.I. "OF-5", 385'± W.S.W. of P.I. "OF-4"
 - P&J B.M. "I" Elev. 329.82
R.R. spike in 14" Oak, 60'± E. of P.I. "OF-4"



PURDUM & JESCHKE
ENGINEERS
1023 N. CALVERT ST.
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE 8-7-73

CONTRACT NO. 530-S

PLAN
HAMMOND BRANCH SEWERS

ELECTION DISTRICT
GUILFORD NO. 6

DRAWING NO. 4 OF 10

SCALE 1" = 50'
DESIGNED: J.F.L.
DRAFTED: R.A.Z.
CHECKED: T.A.F.
POS. SHEETS: 21 & 22

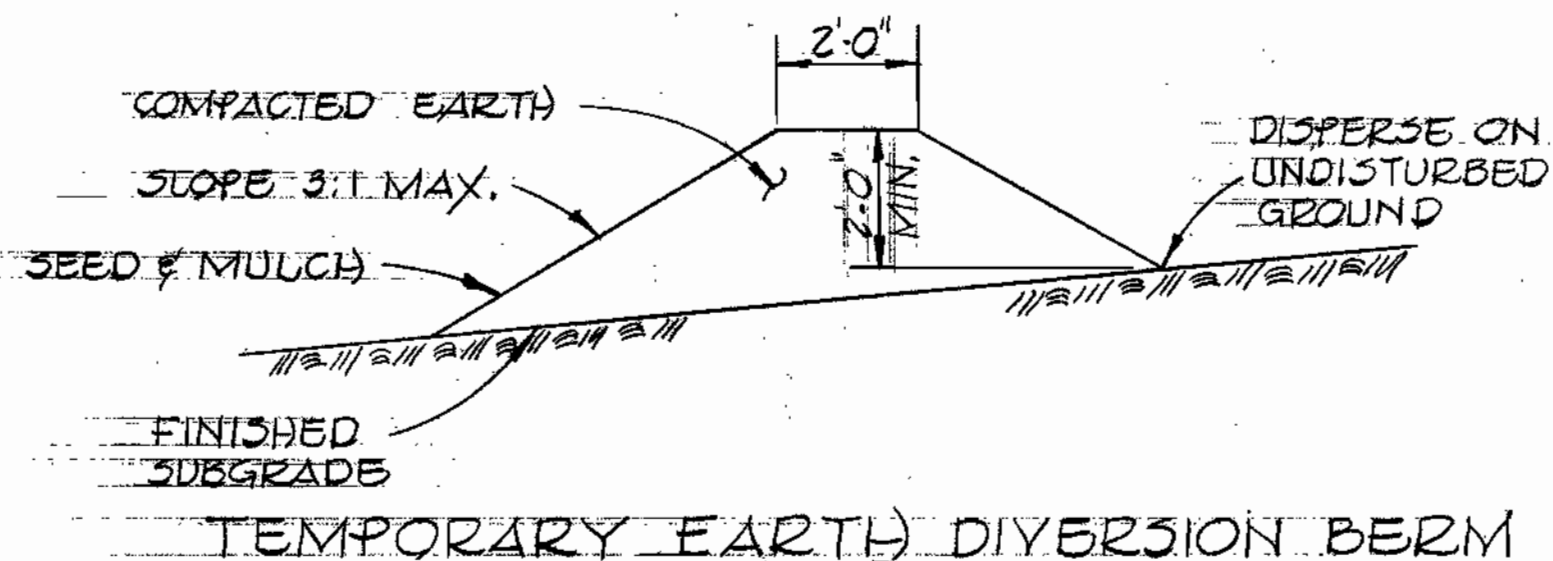
WS 530-S/4

"AS BUILT"
NOV. 15, 1976

BENCH MARKS

P&J B.M. "HB-48" Elev. 334.00
 R.R. spike set in 9" Ironwood,
 20' right of stream, 11¹/₂' E. of
 P.I. "M-418".

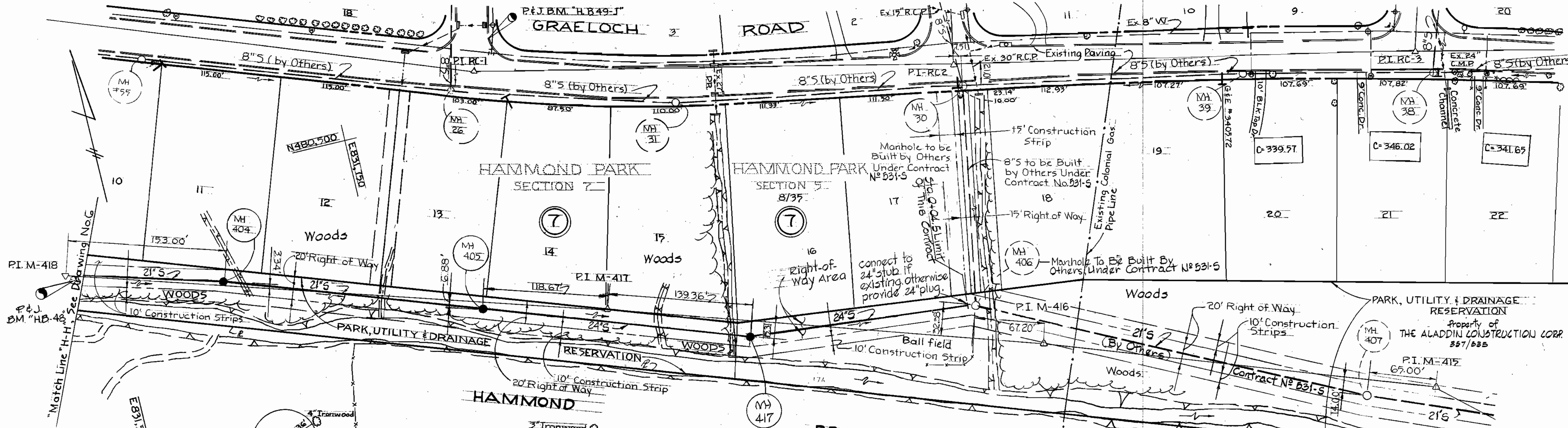
P&J B.M. "HB-49J" Elev. 339.51
 Pk. set in top curb (E. side)
 Crestview Lane @ Grae Loch
 Road @ street sign.



Diversion Berms are required every 300 feet on continuous slopes of 4% or greater. The berms shall conform to the typical section shown hereon and shall be constructed across the construction areas immediately after the backfilling of the pipe trench and prior to placing stabilization in order to prevent erosion of the backfilled areas.

TEMPORARY EARTH DIVERSION BERM

No. Scale



Rip-Rap to consist of dense rocks of random shapes and sizes, resistant to the action of air and water, and suitable for bank protection and shall conform to Section 20.03-6 Class 1 or Class 2 of the Maryland State Highway Administration specifications.

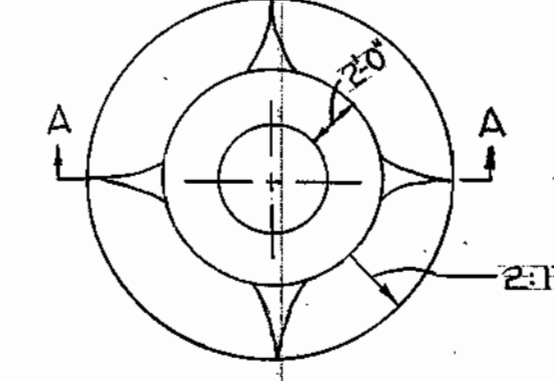
NOTE:
 Poly Filter X shall be as manufactured by Carthage Mills, Inc. Erosion Control Division, 124 W. 66th Street Cincinnati, Ohio, or approved equal.

Maintain 1'-0" minimum clearance between Rip-Rap and Top of Pipe

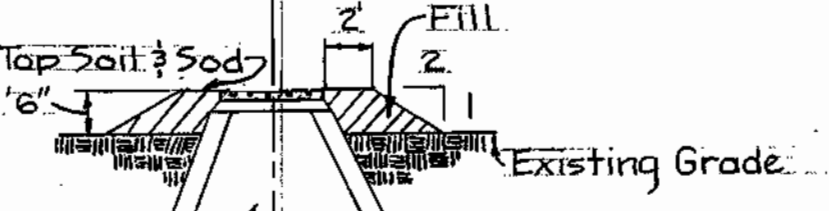
RIP-RAP DETAIL

Scale: 3/8" = 1'-0"

Note:
 Notify Mr. S.H. Crumlich, Area Manager, Colonial Pipeline Co. five (5) days before starting work shown on these plans @ 781-4641.



PLAN



SECTION "A-A"

FILL AT MANHOLE

No. Scale



PURDUM & JESCHKE
 ENGINEERS
 1023 N. CALVERT ST.
 BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 8-7-73 DATE
 W. O. Falbert
 CHIEF-BUREAU OF ENGINEERING

CONTRACT NO. 530-S

PLAN
 HAMMOND BRANCH SEWERS

ELECTION DISTRICT
 GUILBORD NO. 6

DRAWING
 NO. 5
 OF 10

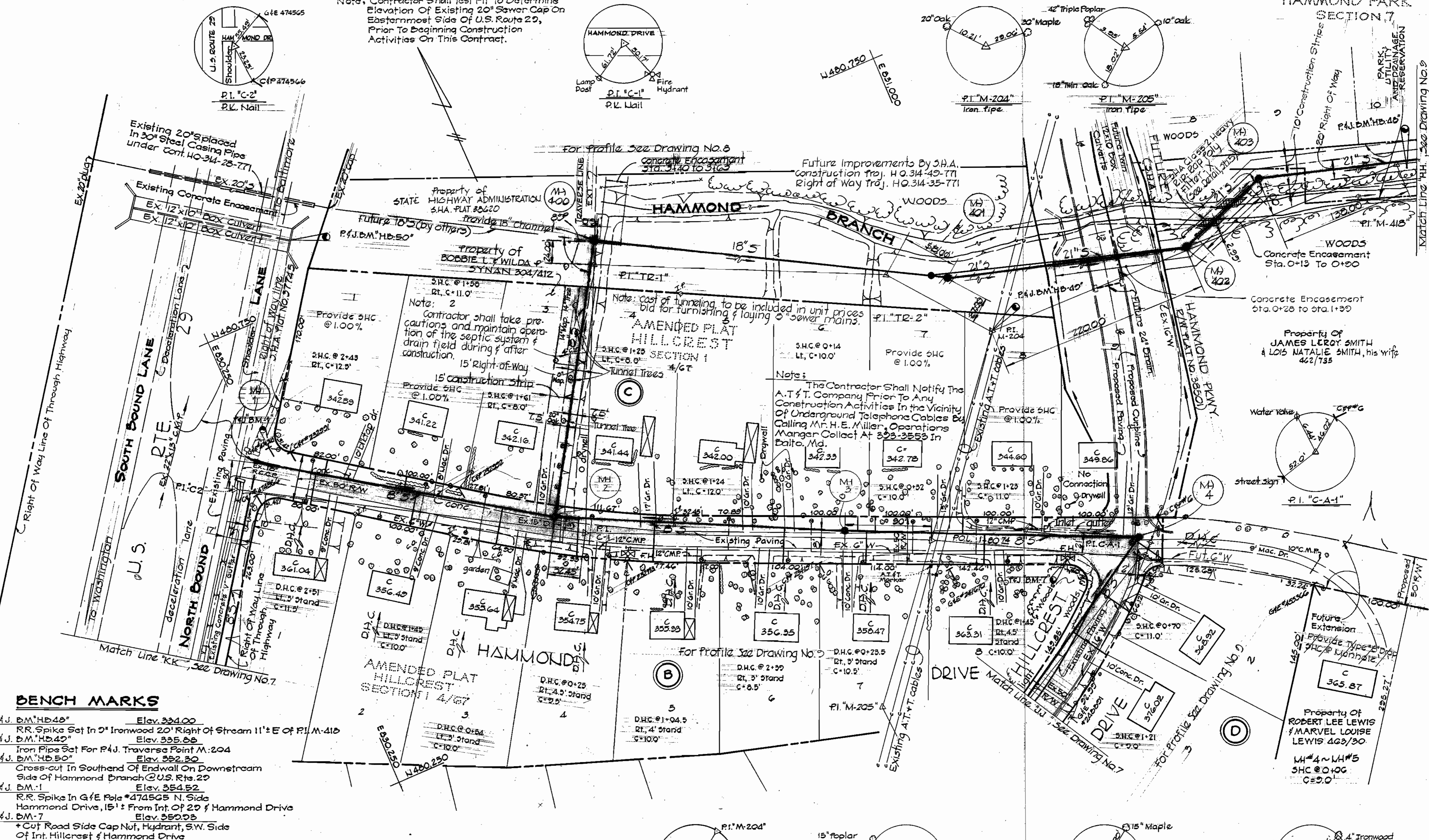
SCALE
 1" = 50'

Designed: TAF
 Drafted: ARZ
 Checked: TAF

WS 530-S/5

"AS BUILT"
 NOV. 15, 1976

Note: Contractor Shall Test Pit To Determine Elevation Of Existing 20" Sewer Cap On Easternmost Side Of U.S. Route 29, Prior To Beginning Construction Activities On This Contract.



BENCH MARKS

- P&J D.M. HB-48" Elev. 334.00
- RR Spike Set In 2" Ironwood 20' Right Of Stream 11' E Of P.I. M-418 Elev. 335.88
- P&J D.M. HB-42" Elev. 335.88
- Iron Pipe Set For P&J Traverse Point M-204 Elev. 332.30
- P&J D.M. HB-50" Elev. 332.30
- Cross-cut In Southend Of Endwall On Downstream Side Of Hammond Branch @ U.S. Rte. 29
- P&J D.M.-1 Elev. 334.52
- RR Spike In G&E Pole #474565 N. Side Hammond Drive, 15' From Int. Of 29 & Hammond Drive
- P&J D.M.-7 Elev. 332.33
- * Cut Road Side Cap Nuf, Hydrant, S.W. Side Of Int. Hillcrest & Hammond Drive



WS 530-S/6

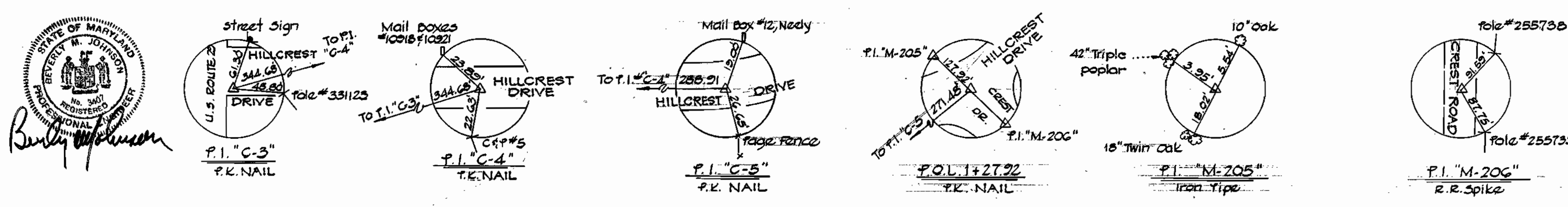
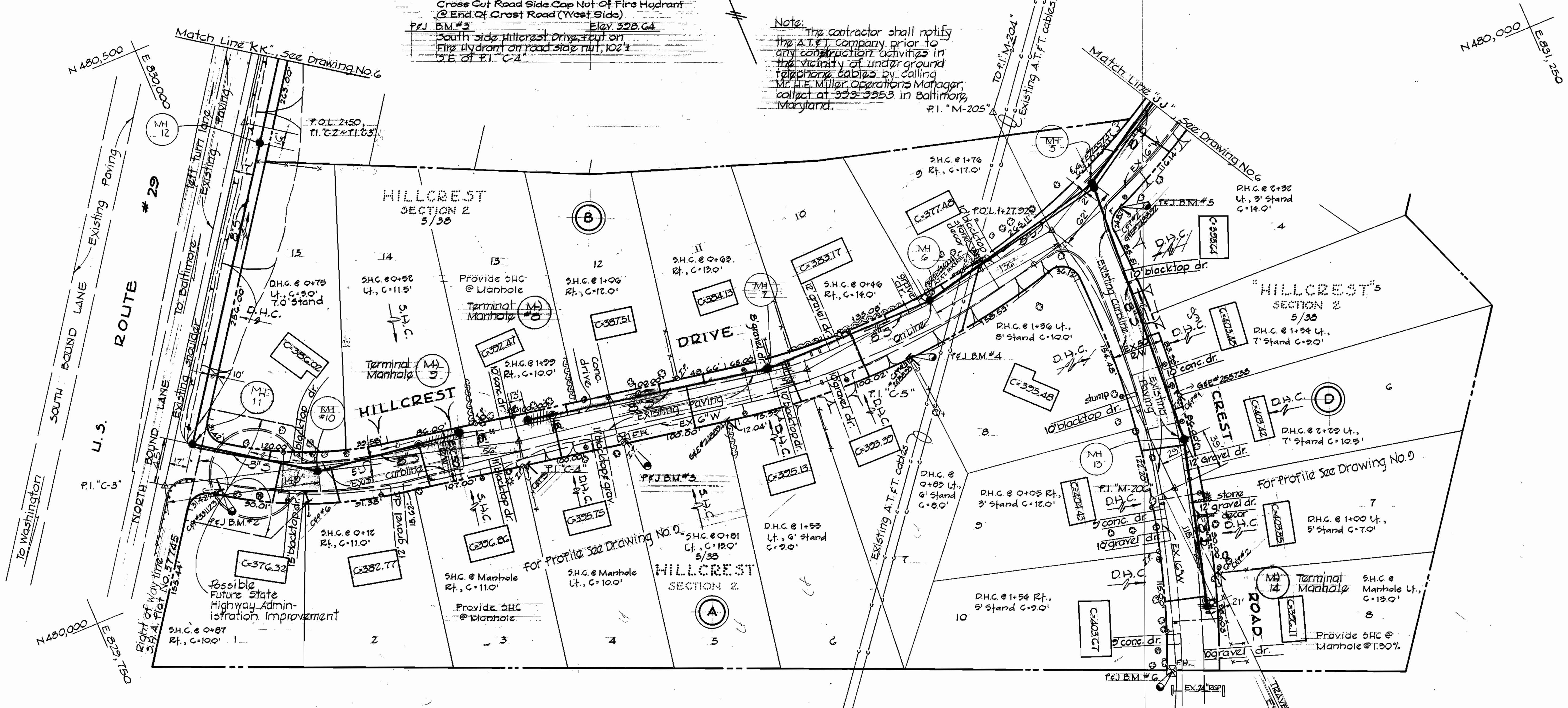
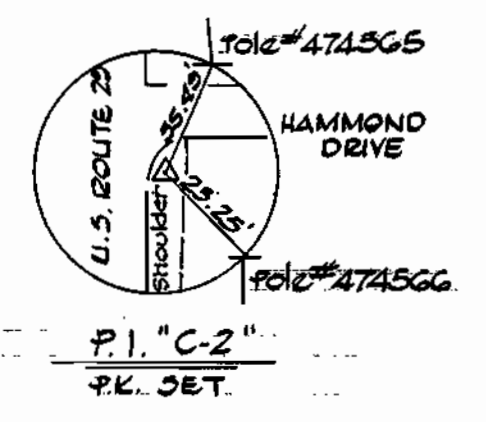
PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 8-7-73 DATE	CONTRACT NO. 530-S	PLAN HAMMOND BRANCH SEWERS	ELECTION DISTRICT GUILFORD NO. 6	DRAWING NO. 6 OF 10 SCALE 1" = 50' DESIGNED: T.A.F. DRAFTED: R.D.B. CHECKED: T.A.F. P.S. SHEET: 67
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"AS BUILT"
NOV. 15, 1976

BENCH MARKS

- PFJ B.M.#2 Elev. 380.18
Spike in G&E pole #331123 on
south side Hillcrest Drive @ Int. with
U.S. Route 29.
- PFJ B.M.#4 Elev. 393.03
E. R. spike in G&E pole #248523; 100' SE P.I. C-5
- PFJ B.M.#5 Elev. 386.70
E. R. spike set in G&E pole #248522
@ inter. of Crest Dr. & Hillcrest Dr.
- PFJ B.M.#6 Elev. 406.04
Cross Cut Road Side Cap Not of Fire Hydrant
(@ End of Crest Road (West Side))
- PFJ B.M.#3 Elev. 328.64
South side Hillcrest Drive, cut on
fire hydrant on road side nut, 102' S
SE of P.I. C-4

Note: The contractor shall notify the A.T.F.T. Company prior to any construction activities in the vicinity of underground telephone cables by calling Mr. H.E. Miller, Operations Manager, collect at 353-3553 in Baltimore, Maryland.



PURDUM & JESCHKE
ENGINEERS
1023 N. CALVERT ST.
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
8-7-73
DATE

CONTRACT NO. 530-S

PLAN
HAMMOND BRANCH SEWERS

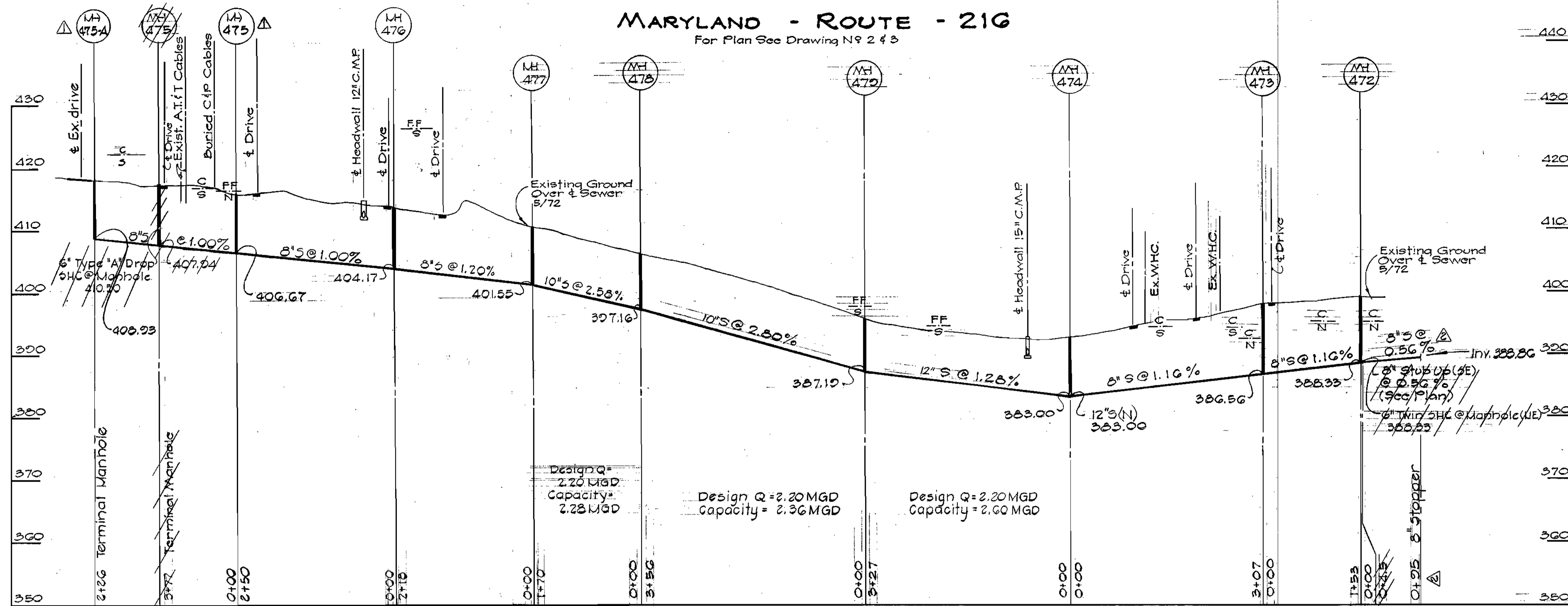
ELECTION DISTRICT
GUILFORD NO. 6

DRAWING NO. 7 OF 10
SCALE 1" = 50'

DESIGNED: T.A.F.
DRAFTED: R.D.B.
CHECKED: T.A.F.
P.S. SHEETS: 11
PG. 7 & 12

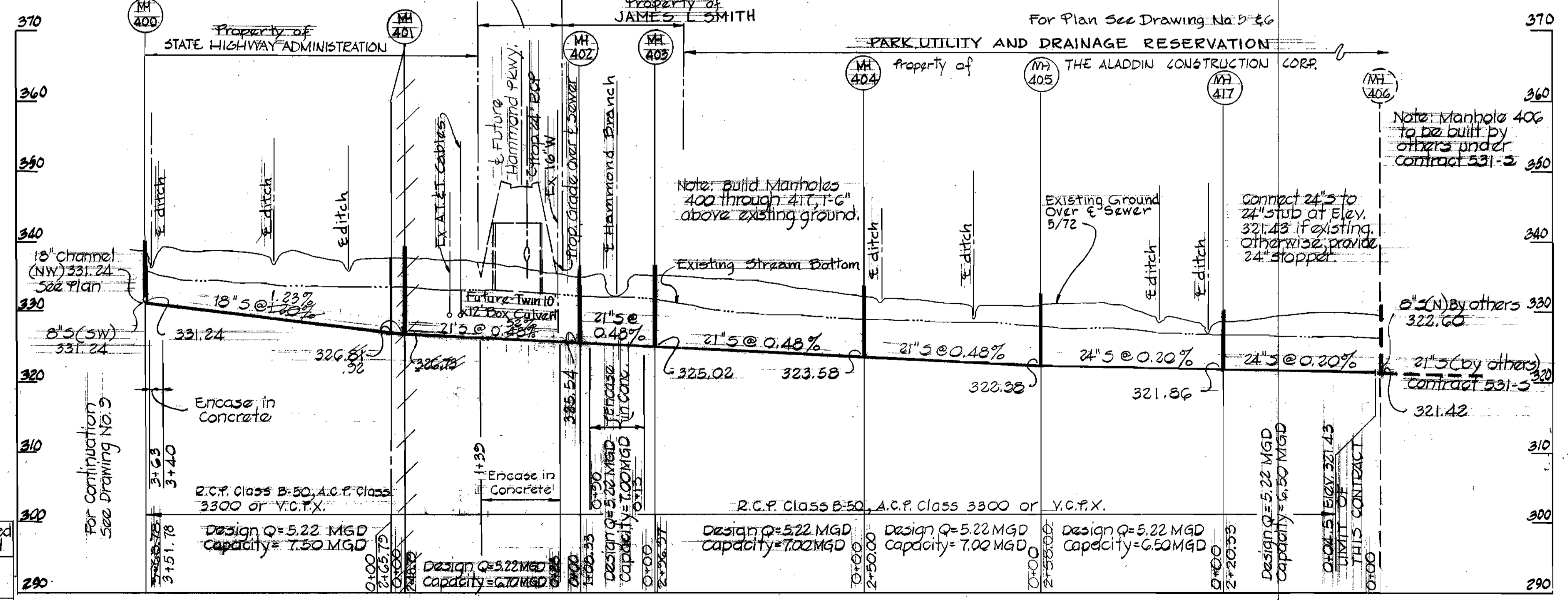
WS 530-S/7

MARYLAND - ROUTE - 216
For Plan See Drawing No. 2-43



SUSCEPTIBLE

HAMMOND BRANCH INTERCEPTOR
For Plan See Drawing No. 5-26



"AS BUILT"
NOV. 15, 1976

REVISION	DATE	REMARKS
△	10-18-76	From MH# 476-Extended 8" S 95' L.F. & plugged
△	10-8-76	Added MH# 475-A; Relocated MH# 475



PURDUM & JESCHKE
ENGINEERS
1023 N. CALVERT ST.
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
8-7-73
DATE

CONTRACT NO. 530-S

PROFILE
HAMMOND BRANCH SEWERS

ELECTION DISTRICT
GUILFORD NO. 6

DRAWING NO. 8 OF 10

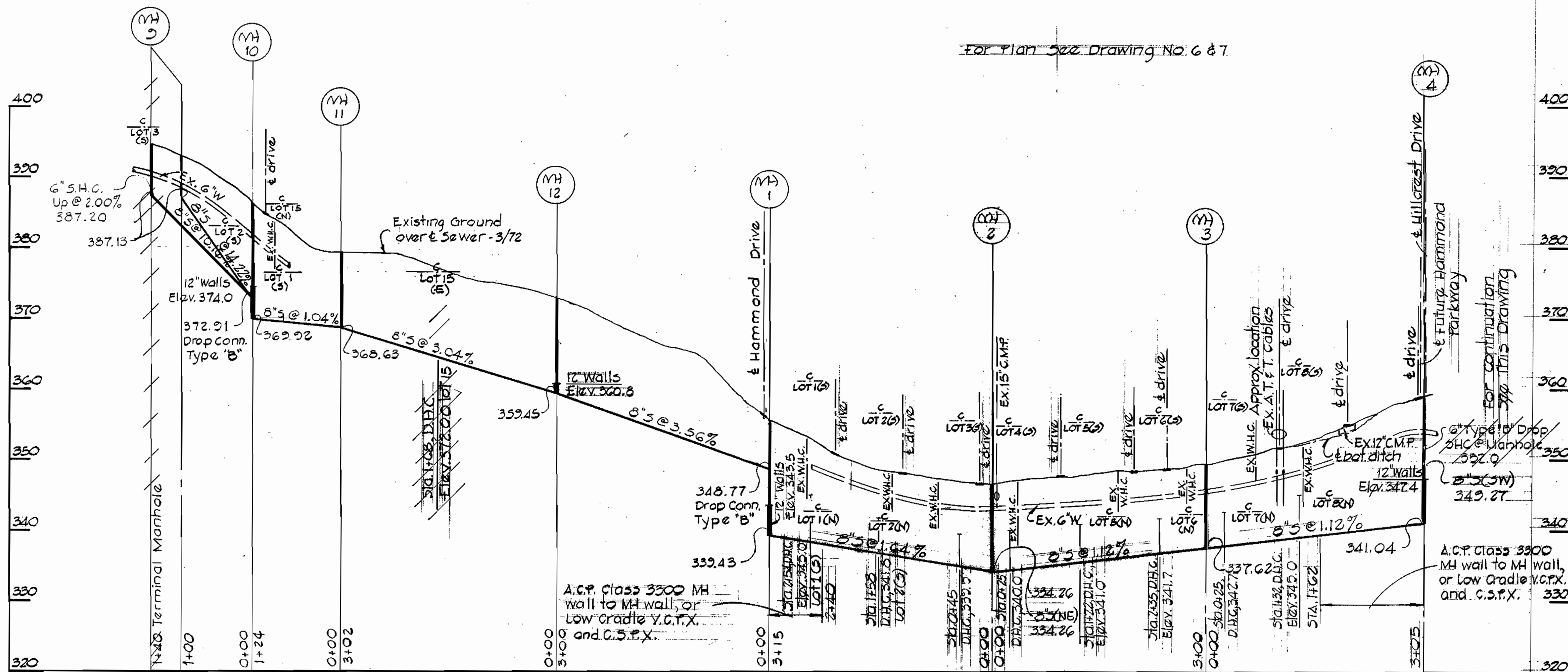
SCALE
HORIZ.: 1" = 100'
VERT.: 1" = 10'

DESIGNED: T.A.J.
DRAFTED: L.A.J.
CHECKED: T.A.J.

WS 530-S/8

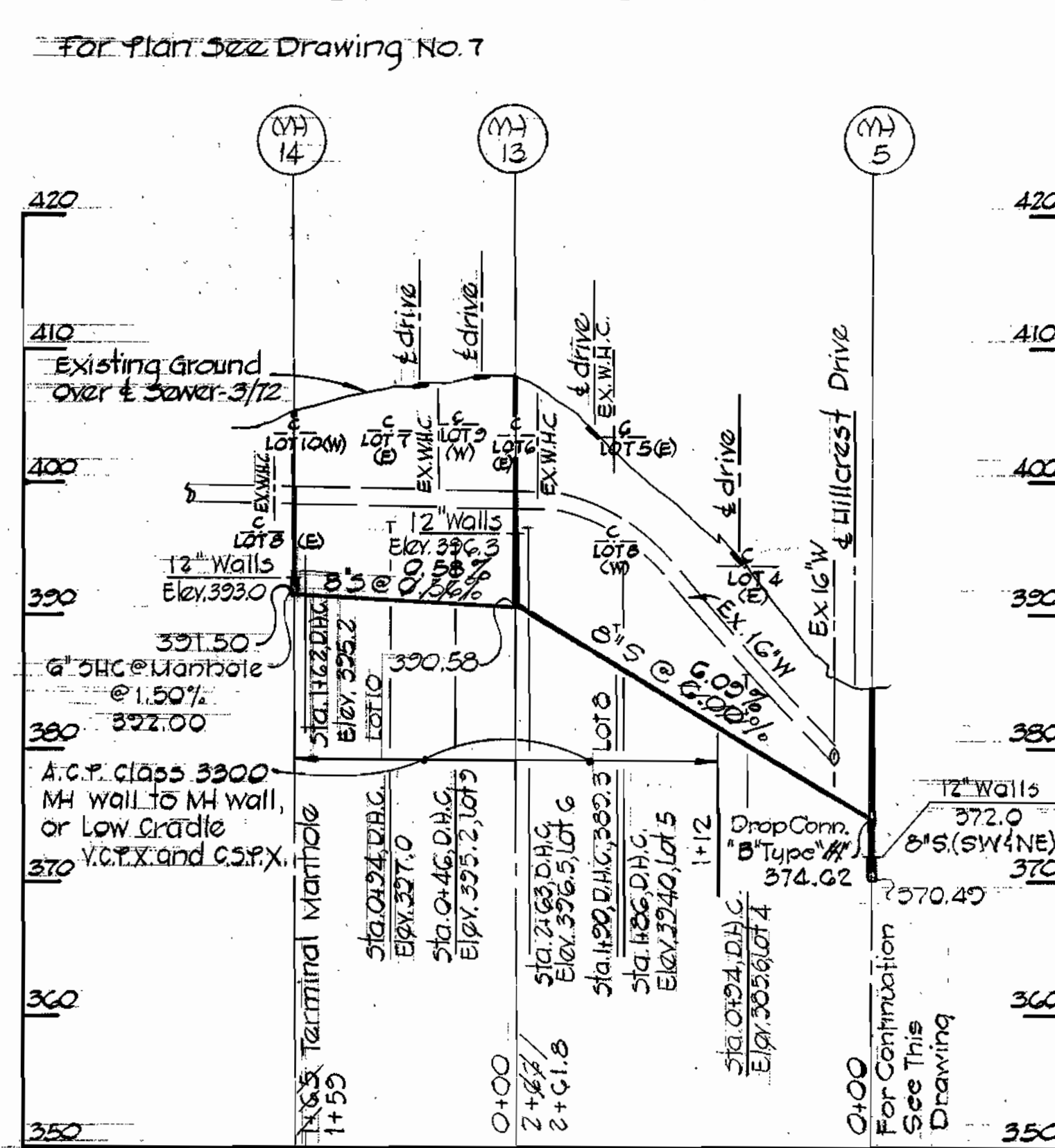
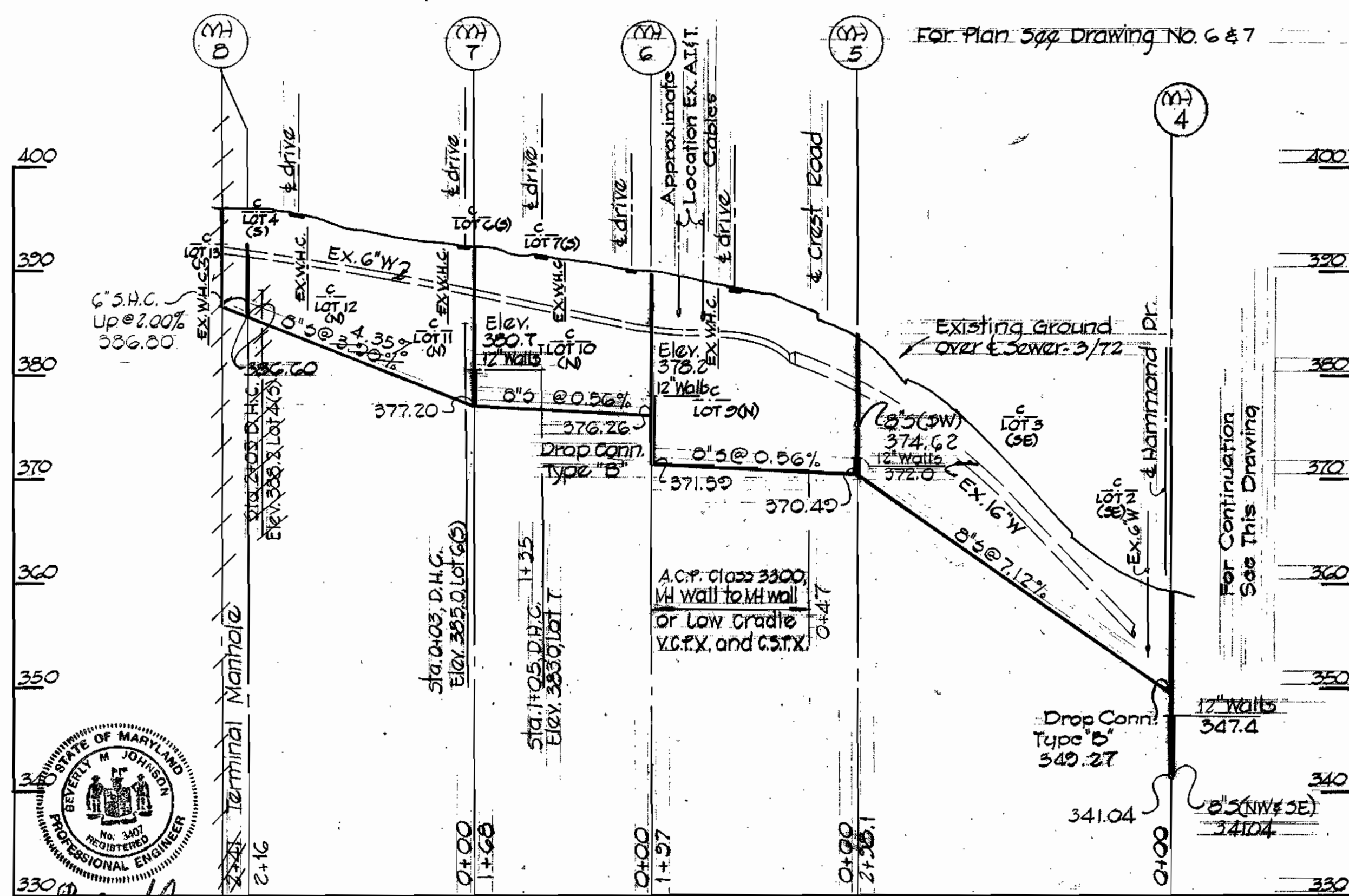
HILLCREST DRIVE U.S. ROUTE #29 HAMMOND DRIVE

FOR PLAN 522 DRAWING NO. 6 & 7



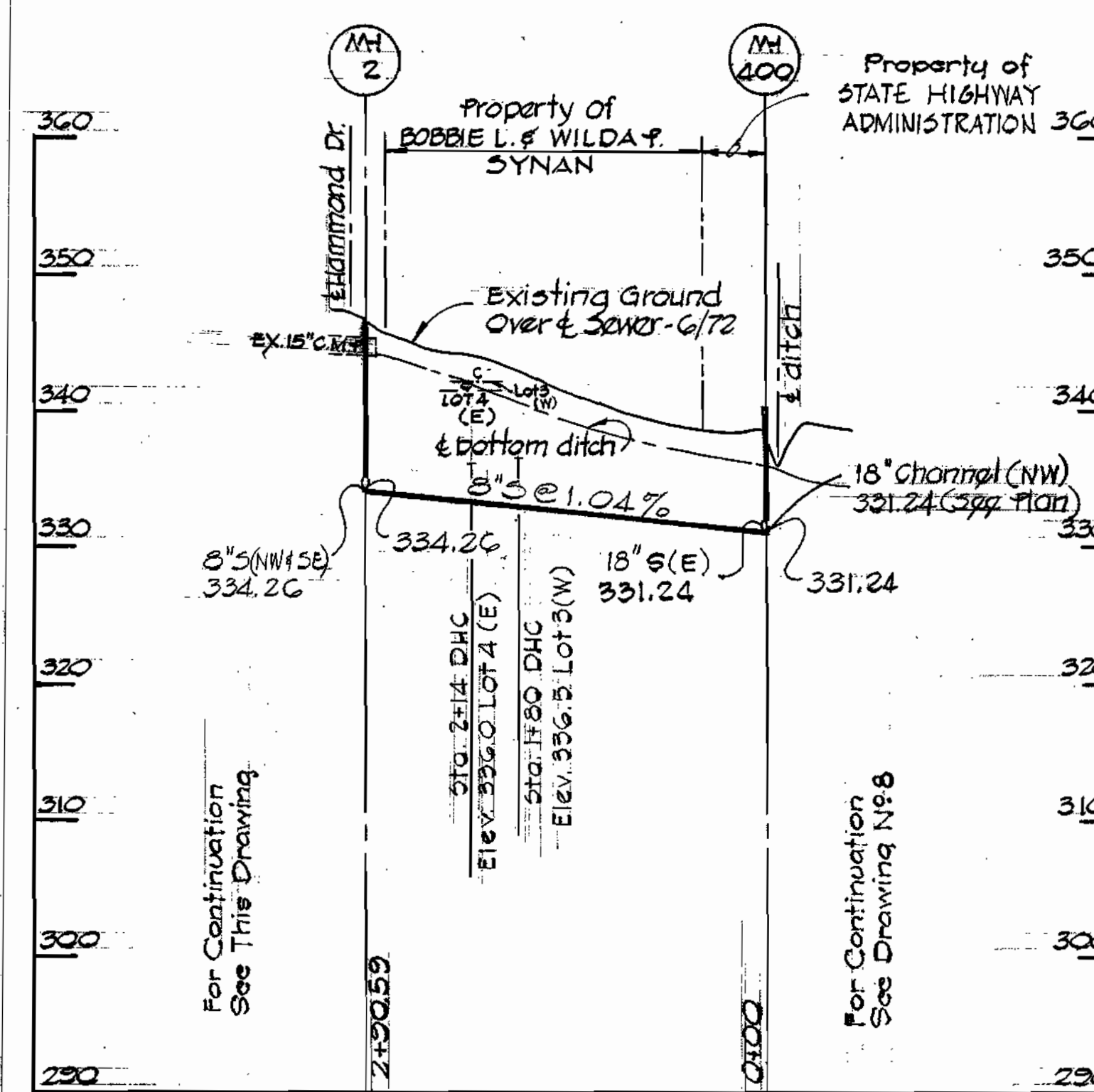
HILLCREST DRIVE CREST DRIVE

FOR PLAN 522 DRAWING NO. 6 & 7



OUTFALL THROUGH LOT 3

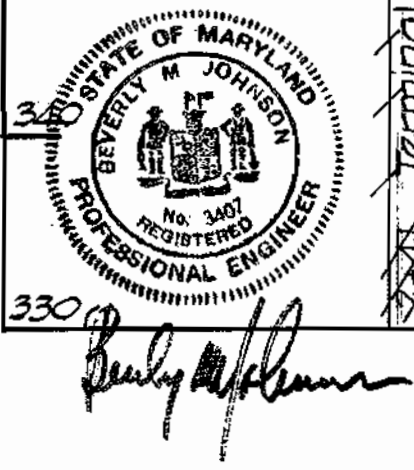
FOR PLAN SEE DRAWING NO. 6



WS 530-S/9

SUPERVISOR

SUPERVISOR



John J. Purdum
 JOHN J. PURDUM
 PROFESSIONAL ENGINEER
 No. 12345

PURDUM & JESCHKE
 ENGINEERS
 1023 N. CALVERT ST.
 BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 8-7-73
 DATE

CONTRACT NO. 530-S

PROFILE
 HAMMOND BRANCH SEWERS

ELECTION DISTRICT NO. 6
 HILLCREST HEIGHTS

DRAWING
 NO. 9
 OF 10

SCALE
 HORIZ: 1" = 100'
 VERT: 1" = 10'

DESIGNED T.A.F.
 DRAFTED R.D.B.
 CHECKED T.A.F.

"AS BUILT"
NOV. 15, 1976

WS 530-S/10

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PURDUM & JESCHKE
ENGINEERS
1023 N. CALVERT ST.
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
8-7-73
DATE

CONTRACT NO. 530-S

PROFILE
HAMMOND BRANCH SEWERS

ELECTION DISTRICT
GUILFORD NO. 6

DRAWING NO. 10 OF 10
SCALE
HORIZ.: 1" = 100'
VERT.: 1" = 10'

DESIGNED: T.A.F.
DRAFTED: L.A.H.
CHECKED: T.A.F.

MAY 11, 1976

"AS BUILT"
NOV 15, 1976

