

| QUANTITIES      |      |          |          |          |
|-----------------|------|----------|----------|----------|
| ITEM            | UNIT | ESTIMATE | AS BUILT | SUPPLIER |
| 8" WATER MAIN   | L.F. | 331      |          |          |
| 8" 1/2 H.B.     | EA.  | 2        |          |          |
| 8" 1/4 H.B.     | EA.  | 1        |          |          |
| 3/4" W.H.C.     | L.F. | 28       |          |          |
| 8" x 6" TEE     | EA.  | 1        |          |          |
| 8" CAP          | EA.  | 1        |          |          |
| 6" VALVE        | EA.  | 2        |          |          |
| 6" WATER MAIN   | L.F. | 10       |          |          |
| FIRE HYDRANT    | EA.  | 1        |          |          |
| 8" x 6" REDUCER | EA.  | 1        |          |          |

NOTE: CONTRACTOR SHALL VERIFY QUANTITIES TO HIS OWN SATISFACTION PRIOR TO BIDDING.

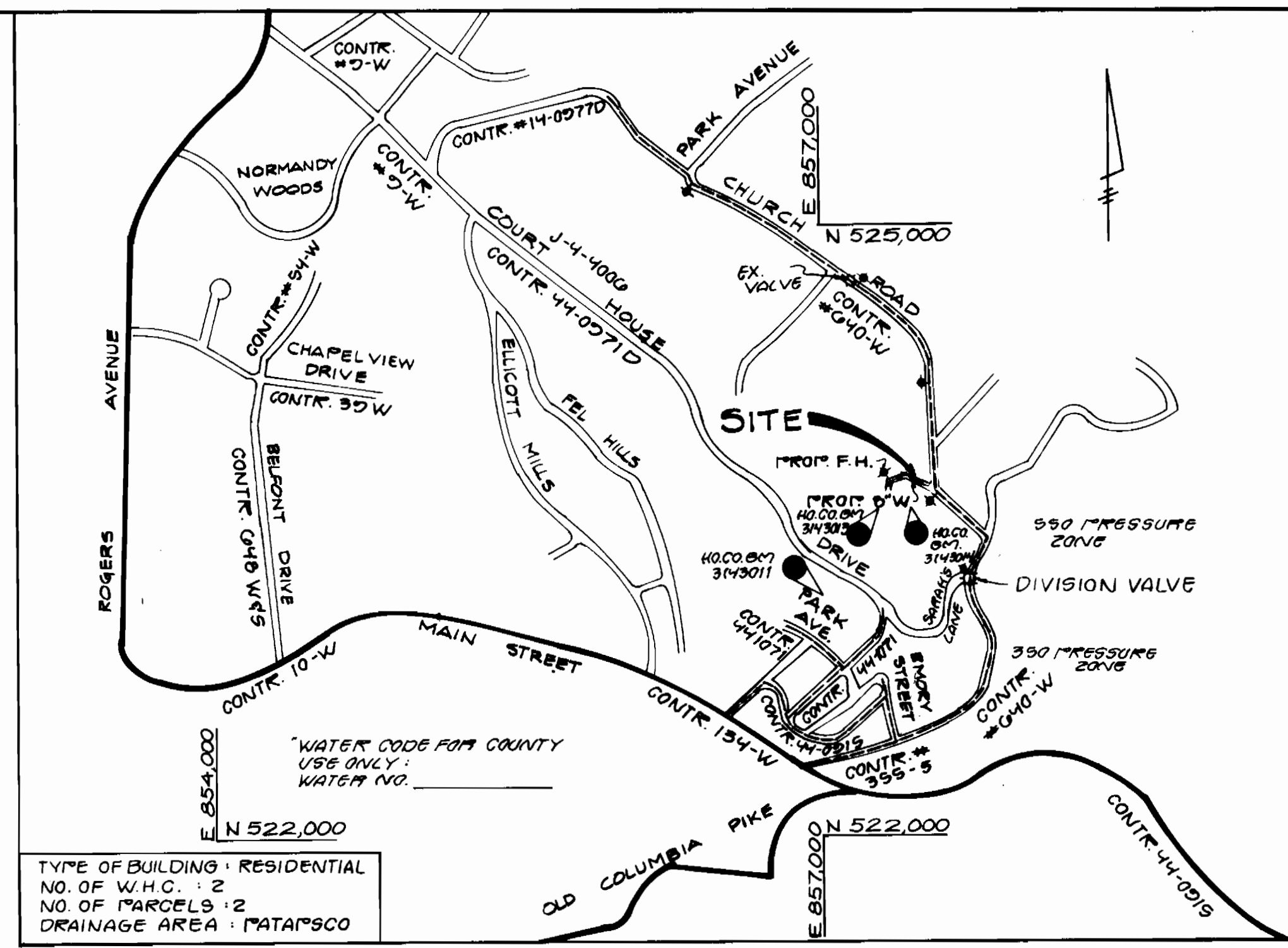
| RESTORATION SCHEDULE |          |                |
|----------------------|----------|----------------|
| LOCATION             | DISTANCE | TYPE           |
| STA. 0+00 TO 3+55    | 355 L.F. | PAVING RESTOR. |
| STA. 2+90 (W.H.C.)   | 10 L.F.  | SEED & MULCH   |
| STA. 3+34 (W.H.C.)   | 12 L.F.  | " "            |

- SEQUENCE OF CONSTRUCTION**
- EXCAVATE AND INSTALL PROPOSED WATER MAIN.
  - RESTORE PAVING AND EARTH TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD CO. STANDARDS.
  - FINE GRADE ALL DISTURBED AREAS AND STABILIZE WITH PERMANENT SEEDING.

| STAKEOUT TABLE        |                      |          |
|-----------------------|----------------------|----------|
| FITTING               | DISTANCE             | OFFSET   |
| 8" 1/2 H.B. STA. 0+11 | 24' NORTH OF T.I.#2  | 13' EAST |
| 6" VALVE STA. 0+03    | 30' NORTH OF T.I.#2  | 14' EAST |
| 8" 1/4 H.B. STA. 2+55 | 22' SOUTH OF T.I.#2  | 8' N.W.  |
| 8" 1/2 H.B. STA. 2+92 | 0' SOUTH OF T.I.#2   | 11' N.W. |
| 8" x 6" TEE STA. 3+40 | 112' SOUTH OF T.I.#2 | 11' N.W. |
| 8" CAP STA. 3+55      | 127' SOUTH OF T.I.#2 | 11' N.W. |

| TRAVERSE TABLE      |                                                       |
|---------------------|-------------------------------------------------------|
| H.E.C. TRAV. T.I.#1 | N 523,616.00<br>E 857,303.30<br>N 14°31'44" E 151.84' |
| H.E.C. TRAV. T.I.#2 | N 523,702.98<br>E 857,343.46<br>S 31°50'46" W 183.80' |
| H.E.C. TRAV. T.I.#3 | N 523,607.02<br>E 857,246.20                          |

19. All work will be in accordance with Howard County standards and specifications for soil erosion and sediment control section 219.



VICINITY MAP  
SCALE: 1" = 600'

| SURVEY CONTROL BENCH MARKS |               |               |         |
|----------------------------|---------------|---------------|---------|
| NO.                        | COORDINATES   |               | ELEV.   |
| HO. CO. STA. 3143011       | N 523,172.504 | E 856,962.007 | 277.406 |
| HO. CO. STA. 3143013       | N 523,541.336 | E 857,092.883 | N/A     |
| HO. CO. STA. 3143014       | N 523,477.264 | E 857,343.172 | 356.00  |

- Approximate location of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the contractor's expense.
- All Horizontal Controls shown are based on Maryland State Coordinates.
- All Vertical Controls are based on U.S.G.S. Datum.
- All pipe Elevations shown are invert Elevations.
- Clear all utilities by a minimum of 6". Clear all poles by 2'-0" minimum or tunnel as required.
- For Details Not shown on the Drawings, And for Materials And Construction Methods, use Howard County Design Manual, Volume IV, Standard Specification And Details For Construction. The Contractor Shall Have a Copy of Volume IV On The Job Site.
- Where Test Pits Have Been Made On Existing Utilities, They Are Noted By The Symbol  AT Location of Test Pit. A Note, or Notes, Containing the results of the Test Pit or Pits is included on the Drawings. Existing Utilities in The Vicinity of The Proposed Work for which Tests Have Not Been Dug Shall be Located, By The Contractor, Two Weeks In Advance of Construction Operations at The Contractor's Expense.
- Contractor shall notify the following Utility Companies or Agencies at least five working Days before starting work shown on this plan.
 

|                                                          |                |
|----------------------------------------------------------|----------------|
| C&P Telephone Company                                    | 597-8585       |
| State Highway Administration                             | 531-5533       |
| Baltimore Gas & Electric Co. Contractor Service          | 850-4620       |
| Baltimore Gas & Electric Co. Underground Damage Control  | 859-7004       |
| Baltimore Gas & Electric Co. Trouble Shooting            | 298-7001       |
| Miss Utility                                             | 1-800-251-7777 |
| Colonial Pipeline                                        | 795-1390       |
| Bureau of Utilities, Howard County Dept. of Public Works | 992-2366       |
- Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the Contractor.
- Contractor shall remove trees, stumps and roots along line of excavation. Payment for such removal shall be included in the unit price for construction of the main.
- All water mains shall be D.I.P. C152 Unless otherwise noted.
- Top of all water main pipe to have a minimum of 3 1/2" cover unless otherwise noted.
- Valves adjacent to tees shall be strapped to tees.
- All fittings shall be buttressed or anchored with concrete, in accordance with the Standard Details unless otherwise provided for on the drawings.
- Fire Hydrants shall be set to the buryline elevations shown on the drawings. All Fire Hydrants shall be strapped and buttressed with concrete in accordance with the Standard Details. Soil around the fire hydrants shall be compacted in accordance with Section 1003 of the Standard Specs.
- The Contractor shall not operate any water main valves on the Existing Water System. Call Howard Co. Bureau Of Utilities at 992-2366. Coordinate the tie-in to the existing 6" water at least five working days prior to scheduling.
- All Water House Connections shall be for Inside Meter setting, unless otherwise noted on Plans or in the Specifications.
- Trench repair to be in accordance with Howard Co. Std. Details.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
U.S. SOIL CONSERVATION SERVICE

This Construction Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
APPROVED: HOWARD S.C.D. DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DIRECTOR OF PUBLIC WORKS: 6/28/90  
CHIEF, BUREAU OF UTILITIES: 6-27-90

HICKS ENGINEERING CO., INC.  
ENGINEERS - SURVEYORS - PLANNERS  
200 E. JOPPA ROAD - SUITE 402  
TOWSON MARYLAND 21204



|               |                             |
|---------------|-----------------------------|
| DES:          |                             |
| DRN: E.A.S.   |                             |
| CHK: J.S.L.Q. |                             |
| DATE: 5-1-90  |                             |
| BY: NO.       | REVISION                    |
| E.A.S. 1      | REVISED PER COUNTY COMMENTS |
|               |                             |

8" WATER MAIN  
CONTRACT NO. 44-3042

PATAPSCO HEIGHTS ROAD WATER EXTENSION  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CAPITAL PROJECT W-8690

SCALE AS SHOWN  
SHEET 1 OF 1