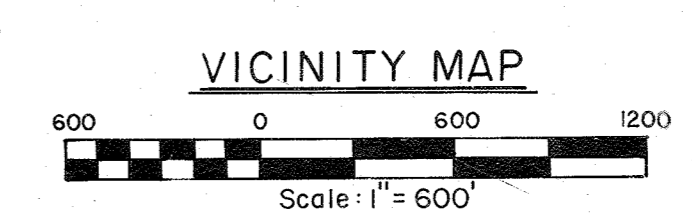


KEY

- Project Location
- Existing Fire Hydrant
- ⊕ Proposed F.H.
- ⊖ Existing Valve

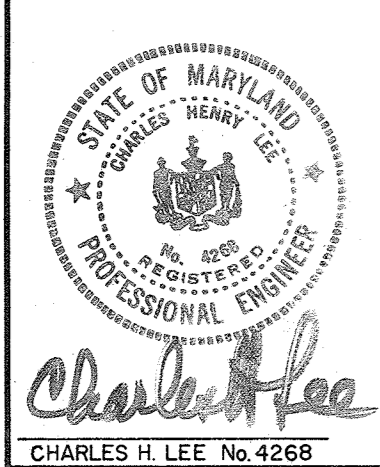


QUANTITIES

ITEM	ESTIMATED	AS-BUILT	SUPPLIER
12" Valve	19 Each		
10" Valve	7 Each		
8" Valve	11 Each		
6" Valve	47 Each		
Fire Hydrant	38 Each		
6" Water	625 L.F.		

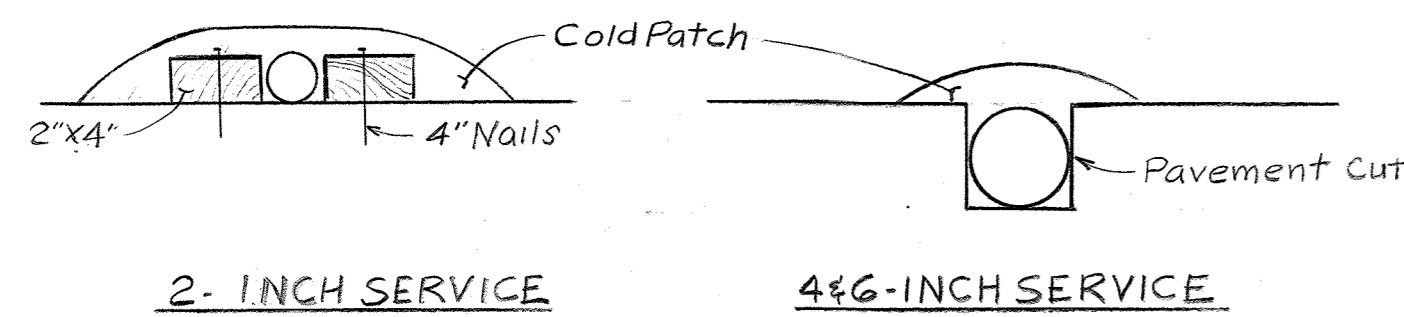
CAPITAL PROJECT W-6-8087
CONTRACT NO. 44-0906
WATER MAIN CLEANING AND LINING PROJECT
ELKRIDGE WATER MAIN DISTRIBUTION SYSTEM
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

CONTRACT NO. 44-0906
 CAPITAL PROJECT NO. W-6-8087
 WATER MAIN CLEANING AND LINING PROJECT
 ELKRIDGE WATER MAIN DISTRIBUTION SYSTEM
 HOWARD COUNTY, MARYLAND

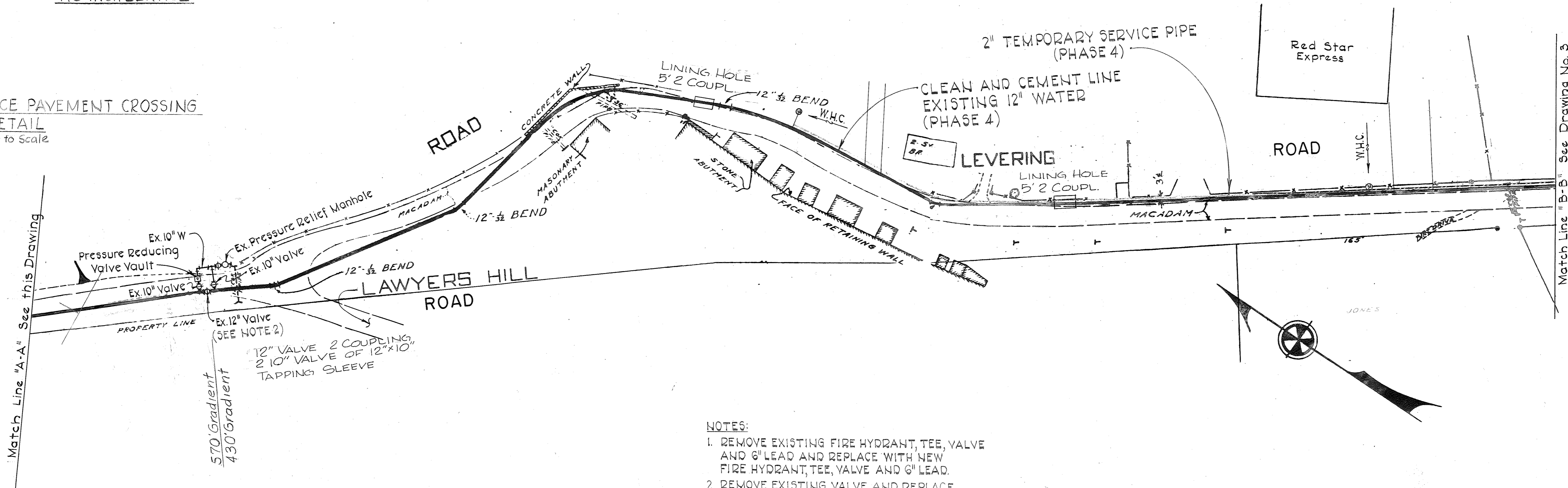


1 / W-7060 SM

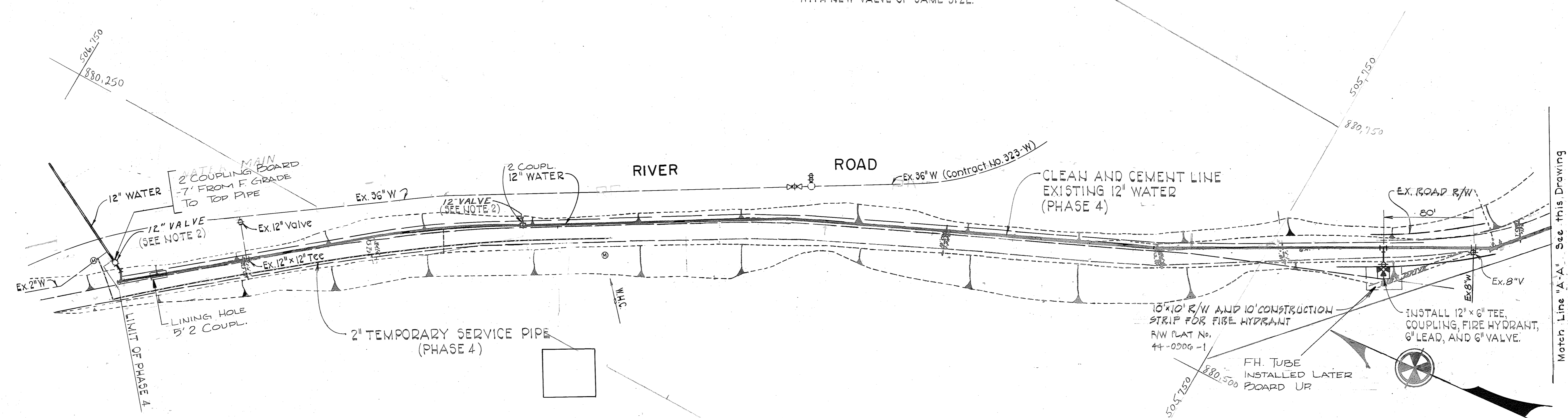
PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief-Bureau of Utilities - DATE Director of Public Works - DATE	CONTRACT NO. 44-0906 CAPITAL PROJECT NO. W-6-8087	VICINITY MAP	ELKRIDGE CLEANING AND LINING WATER MAINS	DRAWING NO. 1 OF 9	SCALE 1" = 50'	Design: GPD Drafted: ARZ Checked: RHB
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TEMPORARY SERVICE PAVEMENT CROSSING
DETAIL
Not to Scale



- NOTES:
1. REMOVE EXISTING FIRE HYDRANT, TEE, VALVE AND 6" LEAD AND REPLACE WITH NEW FIRE HYDRANT, TEE, VALVE AND 6" LEAD.
 2. REMOVE EXISTING VALVE AND REPLACE WITH NEW VALVE OF SAME SIZE.



REV.	DATE	REMARKS
▲	5-21-80	FIRE HYDRANT RELOCATED
▲	5-21-80	FIRE HYDRANT RELOCATED

CONTRACT NO. 44-0906
CAPITAL PROJECT NO. W-6-8087
WATER MAIN CLEANING AND LINING PROJECT
ELKRIDGE WATER MAIN DISTRIBUTION SYSTEM
HOWARD COUNTY, MARYLAND



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HOWARD COUNTY, MARYLAND
4-28-80
DIRECTOR OF PUBLIC WORKS

CONTRACT NO. 44-0906
CAPITAL PROJECT NO. W-6-8087

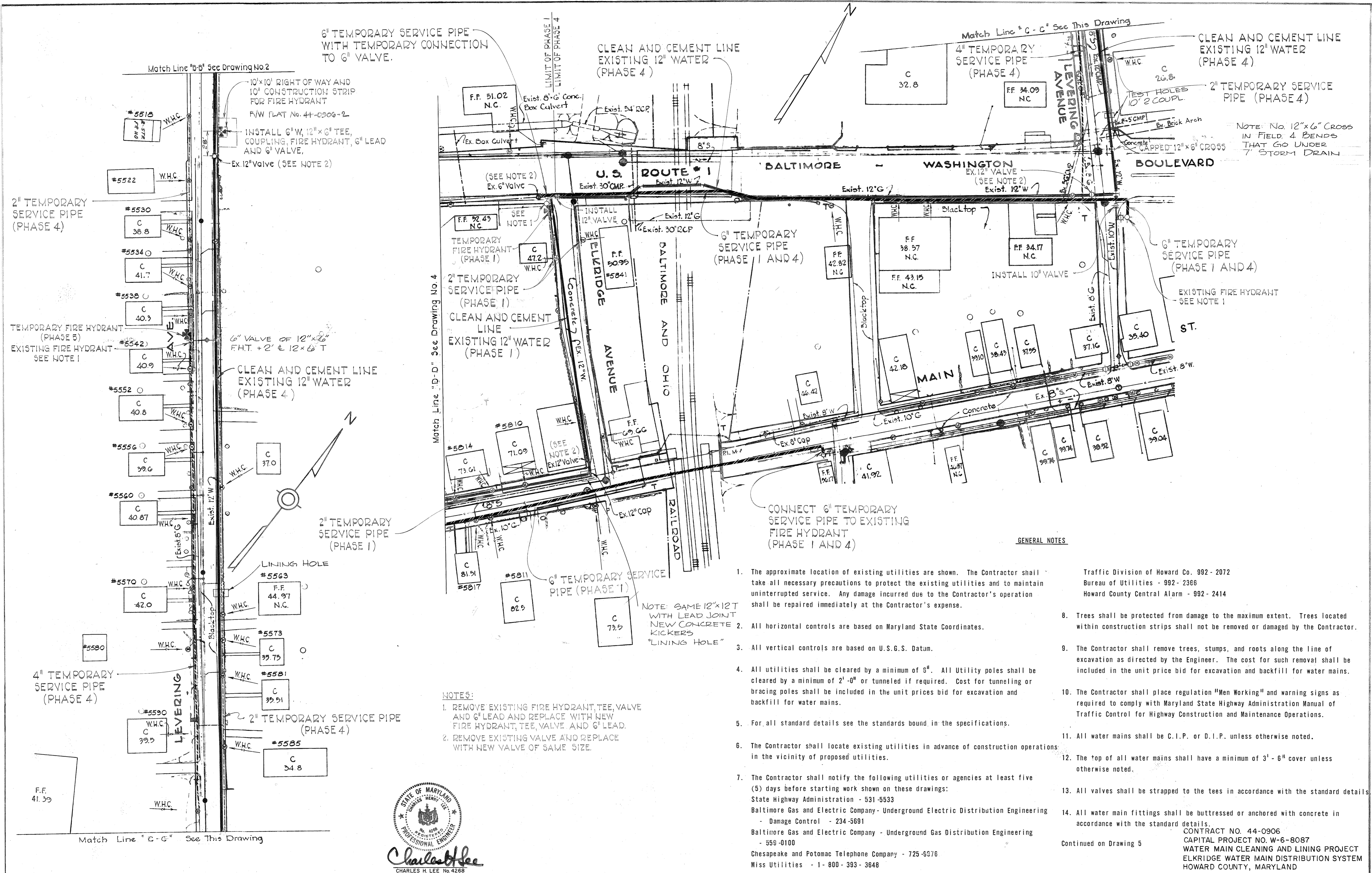
WATER MAIN PLAN

ELKRIDGE CLEANING
AND LINING WATER MAINS

DRAWING NO. 2 OF 9
SCALE 1" = 50'
Design: G.P.D.
Drafted: ARZ
Checked: RHB
4-21-80

WS 0906 - W 12

WS 0906-W/3



6" TEMPORARY SERVICE PIPE WITH TEMPORARY CONNECTION TO 6" VALVE.

CLEAN AND CEMENT LINE EXISTING 12" WATER (PHASE 4)

4" TEMPORARY SERVICE PIPE (PHASE 4)

CLEAN AND CEMENT LINE EXISTING 12" WATER (PHASE 4)

2" TEMPORARY SERVICE PIPE (PHASE 4)

2" TEMPORARY SERVICE PIPE (PHASE 4)

TEMPORARY FIRE HYDRANT (PHASE 5)
EXISTING FIRE HYDRANT SEE NOTE 1

INSTALL 6" W, 12" X 6" TEE, COUPLING, FIRE HYDRANT, 6" LEAD AND 6" VALVE.

Ex. 12" Valve (SEE NOTE 2)

CLEAN AND CEMENT LINE EXISTING 12" WATER (PHASE 4)

2" TEMPORARY SERVICE PIPE (PHASE 1)

2" TEMPORARY SERVICE PIPE (PHASE 1)
CLEAN AND CEMENT LINE EXISTING 12" WATER (PHASE 1)

6" TEMPORARY SERVICE PIPE (PHASE 1 AND 4)

6" TEMPORARY SERVICE PIPE (PHASE 1 AND 4)

CONNECT 6" TEMPORARY SERVICE PIPE TO EXISTING FIRE HYDRANT (PHASE 1 AND 4)

6" TEMPORARY SERVICE PIPE (PHASE 1)

NOTE: SAME 12" X 12" WITH LEAD JOINT NEW CONCRETE KICKERS "LINING HOLE"

- NOTES:
1. REMOVE EXISTING FIRE HYDRANT, TEE, VALVE AND 6" LEAD AND REPLACE WITH NEW FIRE HYDRANT, TEE, VALVE AND 6" LEAD.
 2. REMOVE EXISTING VALVE AND REPLACE WITH NEW VALVE OF SAME SIZE.

GENERAL NOTES

1. The approximate location of existing utilities are shown. The Contractor shall take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to the Contractor's operation shall be repaired immediately at the Contractor's expense.
2. All horizontal controls are based on Maryland State Coordinates.
3. All vertical controls are based on U.S.G.S. Datum.
4. All utilities shall be cleared by a minimum of 6". All Utility poles shall be cleared by a minimum of 2'-0" or tunneled if required. Cost for tunneling or bracing poles shall be included in the unit prices bid for excavation and backfill for water mains.
5. For all standard details see the standards bound in the specifications.
6. The Contractor shall locate existing utilities in advance of construction operations in the vicinity of proposed utilities.
7. The Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these drawings:
State Highway Administration - 531-5533
Baltimore Gas and Electric Company - Underground Electric Distribution Engineering - Damage Control - 234-3691
Baltimore Gas and Electric Company - Underground Gas Distribution Engineering - 559-0100
Chesapeake and Potomac Telephone Company - 725-9076
Miss Utilities - 1-800-393-3648
8. Trees shall be protected from damage to the maximum extent. Trees located within construction strips shall not be removed or damaged by the Contractor.
9. The Contractor shall remove trees, stumps, and roots along the line of excavation as directed by the Engineer. The cost for such removal shall be included in the unit price bid for excavation and backfill for water mains.
10. The Contractor shall 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.
11. All water mains shall be C.I.P. or D.I.P. unless otherwise noted.
12. The top of all water mains shall have a minimum of 3' - 6" cover unless otherwise noted.
13. All valves shall be strapped to the tees in accordance with the standard details.
14. All water main fittings shall be buttressed or anchored with concrete in accordance with the standard details.

Traffic Division of Howard Co. 992-2072
Bureau of Utilities - 992-2366
Howard County Central Alarm - 992-2414

Continued on Drawing 5

CONTRACT NO. 44-0906
CAPITAL PROJECT NO. W-6-8087
WATER MAIN CLEANING AND LINING PROJECT
ELKRIDGE WATER MAIN DISTRIBUTION SYSTEM
HOWARD COUNTY, MARYLAND



Charles H. Lee
CHARLES H. LEE No. 4268

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
4-28-80

CONTRACT NO. 44-0906
CAPITAL PROJECT NO. W-6-8087

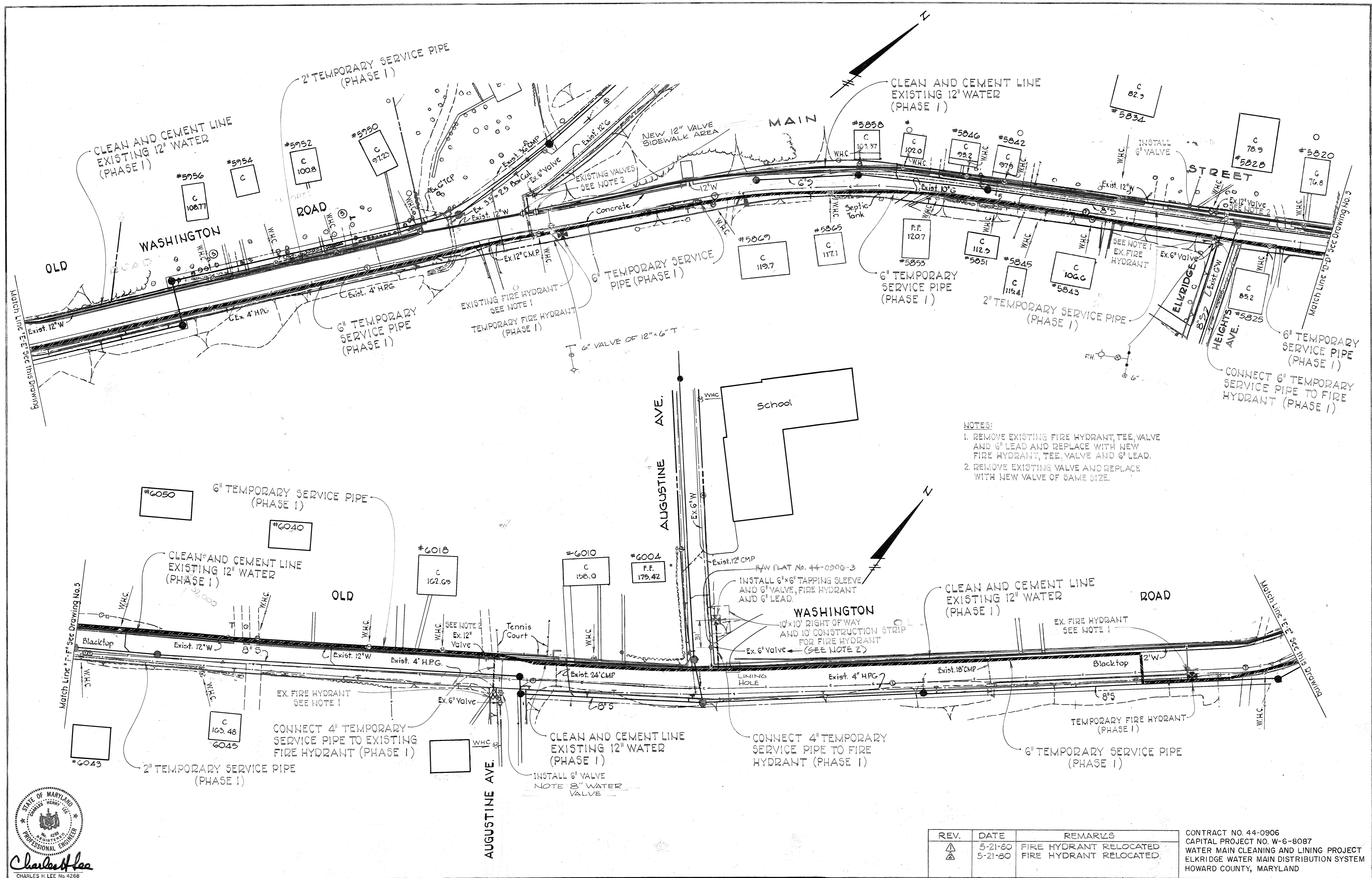
WATER MAIN PLAN

ELKRIDGE CLEANING
AND LINING WATER MAINS

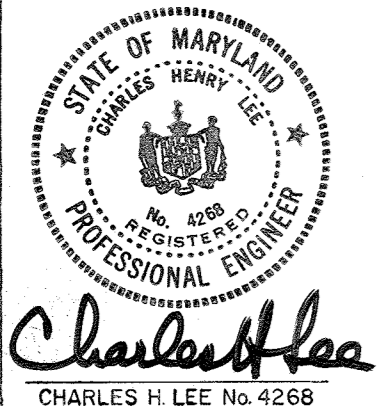
DRAWING NO. 3 OF 9
SCALE 1" = 50'

Designed: GPD
Drafted: ARZ
Checked: RHB
4-21-80

WS 0906-W/4



NOTES:
 1. REMOVE EXISTING FIRE HYDRANT, TEE, VALVE AND 6" LEAD AND REPLACE WITH NEW FIRE HYDRANT, TEE, VALVE AND 6" LEAD.
 2. REMOVE EXISTING VALVE AND REPLACE WITH NEW VALVE OF SAME SIZE.



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 ENGINEERS
 1023 N. CALVERT ST.
 BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 CHIEF BUREAU OF UTILITIES - DATE
 Director of Public Works - DATE

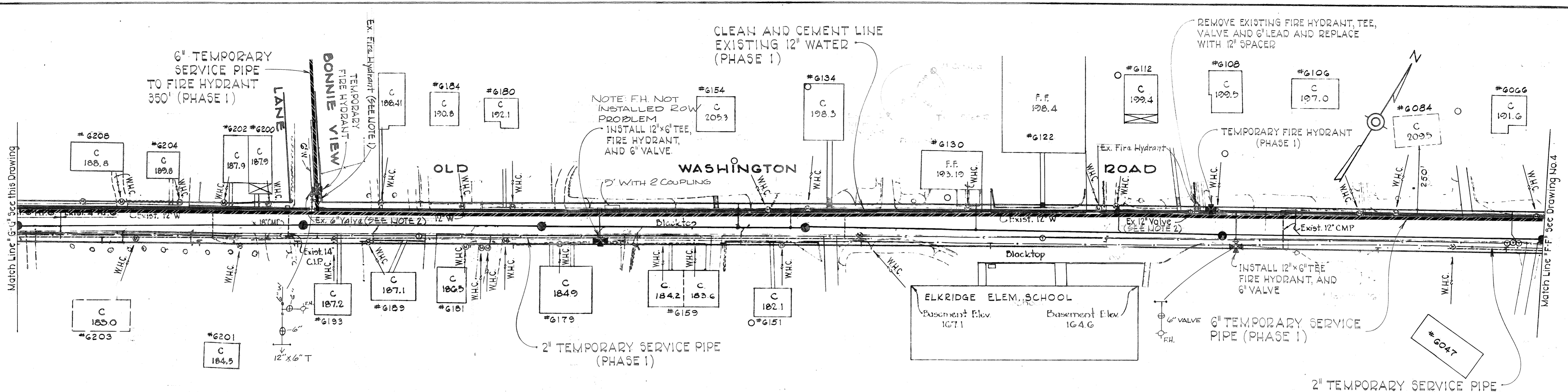
CONTRACT NO. 44-0906
 CAPITAL PROJECT NO. W-6-8087

WATER MAIN PLAN

REV.	DATE	REMARKS
1	5-21-80	FIRE HYDRANT RELOCATED
2	5-21-80	FIRE HYDRANT RELOCATED

CONTRACT NO. 44-0906
 CAPITAL PROJECT NO. W-6-8087
 WATER MAIN CLEANING AND LINING PROJECT
 ELKRIDGE WATER MAIN DISTRIBUTION SYSTEM
 HOWARD COUNTY, MARYLAND

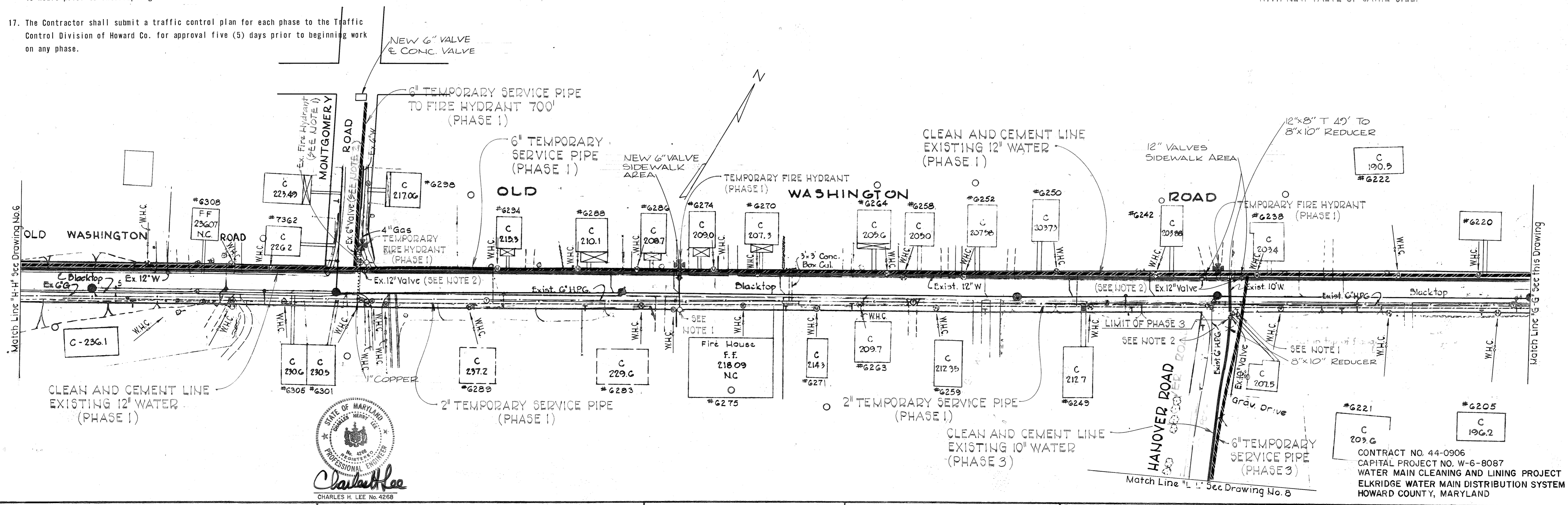
DRAWING NO. 4 OF 9
 SCALE 1" = 50'
 Design: GPD
 Drafted: ARZ
 Checked: RHB
 Date: 4-21-80



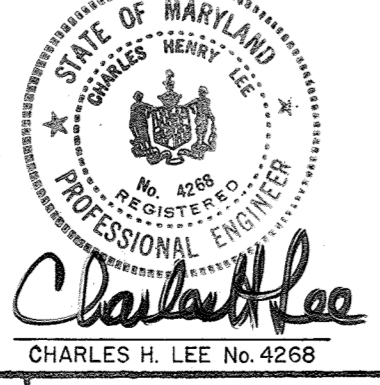
GENERAL NOTES CONTINUED

- 15. All fire hydrants shall be strapped to the tees and shall be buttressed with concrete in accordance with the standard details. The cost of strapping fire hydrants and valves shall be included in the unit price bid for installing fire hydrants. The soil around fire hydrants shall be compacted in accordance with Section 5-15 of the Standard Specifications. Fire hydrant bury line shall be set to existing grade.
- 16. The Contractor shall notify all customers affected by the planned outages at least 48 hours prior to interrupting service.
- 17. The Contractor shall submit a traffic control plan for each phase to the Traffic Control Division of Howard Co. for approval five (5) days prior to beginning work on any phase.
- 18. New Fire hydrants for which rights-of-way have not been acquired before one month of the contract completion date shall be eliminated from the contract. The tee and valve for the fire hydrants shall be installed and capped by the Contractor at the location of the fire hydrant.

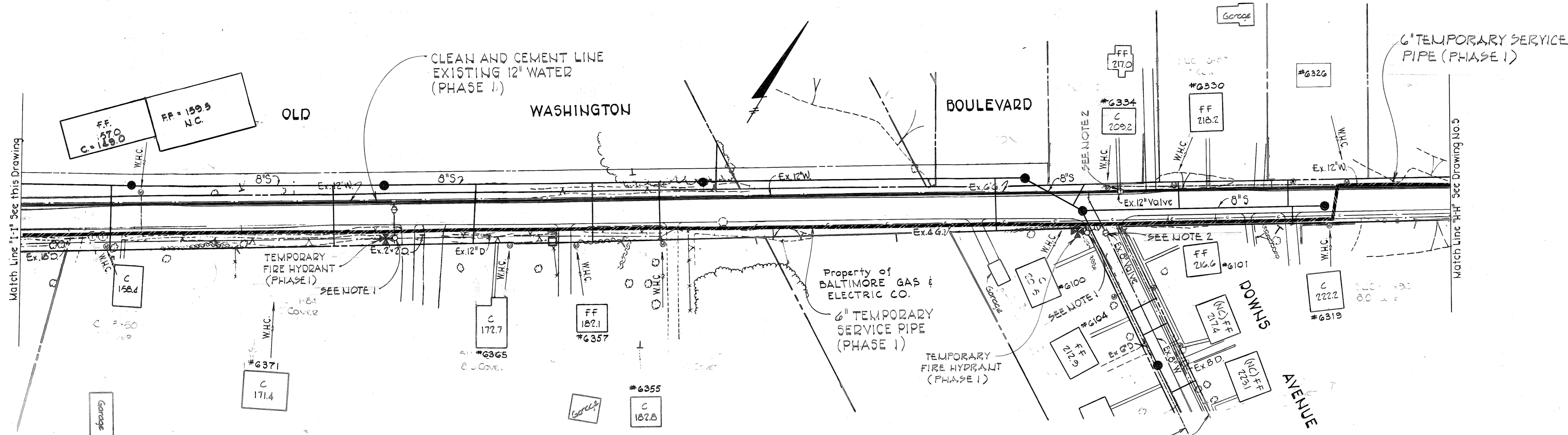
- NOTES:
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 2. REMOVE EXISTING VALVE AND REPLACE WITH NEW VALVE OF SAME SIZE.



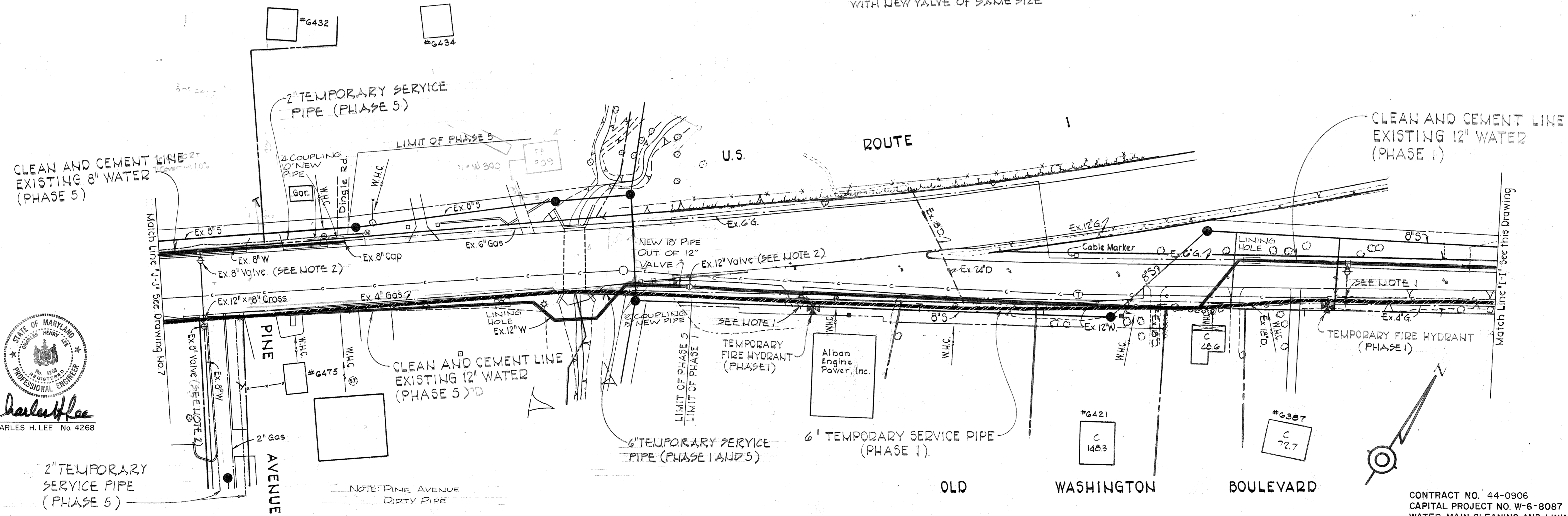
WS 0906-W/5



<p>PURDUM & JESCHKE ENGINEERS 1023 N CALVERT ST BALTIMORE, MARYLAND</p>	<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND CHIEF BUREAU OF UTILITIES - DATE DIRECTOR OF PUBLIC WORKS - DATE CHIEF BUREAU OF ENGINEERING - DATE</p>	<p>CONTRACT NO. 44-0906 WATER MAIN PLAN CAPITAL PROJECT NO. W-6-8087</p>	<p>ELKRIDGE CLEANING AND LINING WATER MAINS</p>	<p>DRAWING NO. 5 OF 9 SCALE 1" = 50'</p>	<p>Designed: GPD Drafted: ARZ Checked: RHB 4-21-80</p>
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NOTE 1: REMOVE EXISTING FIRE HYDRANT, TEE, VALVE AND 6" LEAD AND REPLACE WITH NEW FIRE HYDRANT, TEE, VALVE AND 6" LEAD
 NOTE 2: REMOVE EXISTING VALVE AND REPLACE WITH NEW VALVE OF SAME SIZE



STATE OF MARYLAND
 CHARLES H. LEE No. 4268
 PROFESSIONAL ENGINEER

CONTRACT NO. 44-0906
 CAPITAL PROJECT NO. W-6-8087
 WATER MAIN CLEANING AND LINING PROJECT
 ELKRIDGE WATER MAIN DISTRIBUTION SYSTEM
 HOWARD COUNTY, MARYLAND

9 / M-1060 SM

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 ENGINEERS
 1023 N. CALVERT ST.
 BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 CHIEF - BUREAU OF UTILITIES - DATE
 DIRECTOR OF PUBLIC WORKS - DATE

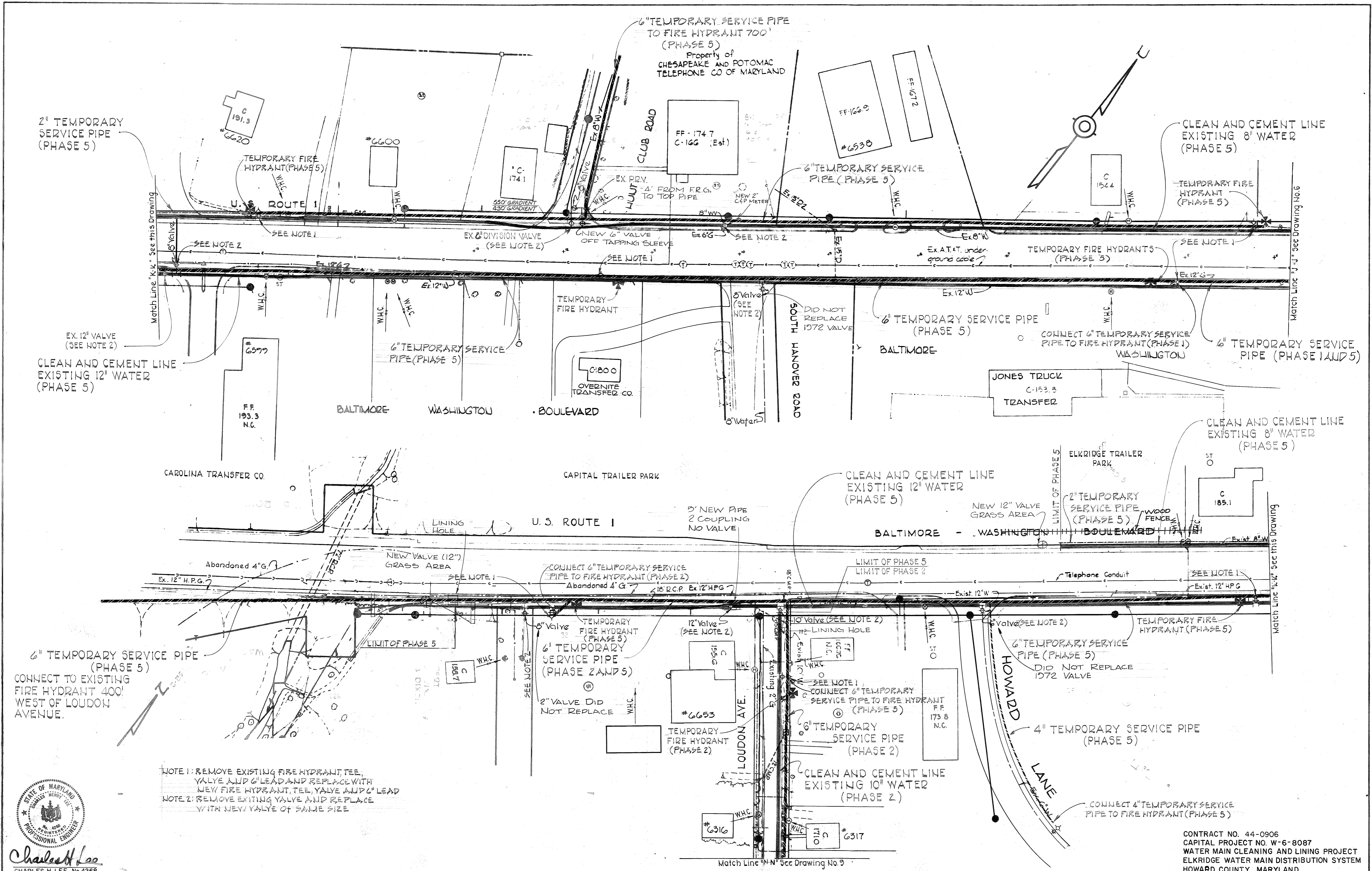
CONTRACT NO. 44-0906
 CAPITAL PROJECT NO. W-6-8087

WATER MAIN PLAN

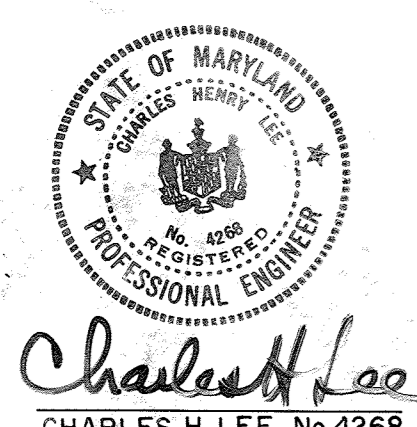
ELKRIDGE CLEANING
 AND LINING WATER MAINS

DRAWING NO. 6 OF 9
 SCALE 1" = 50'
 Designed: GPD
 Drafted: ARZ
 Checked: RHB
 4-21-80

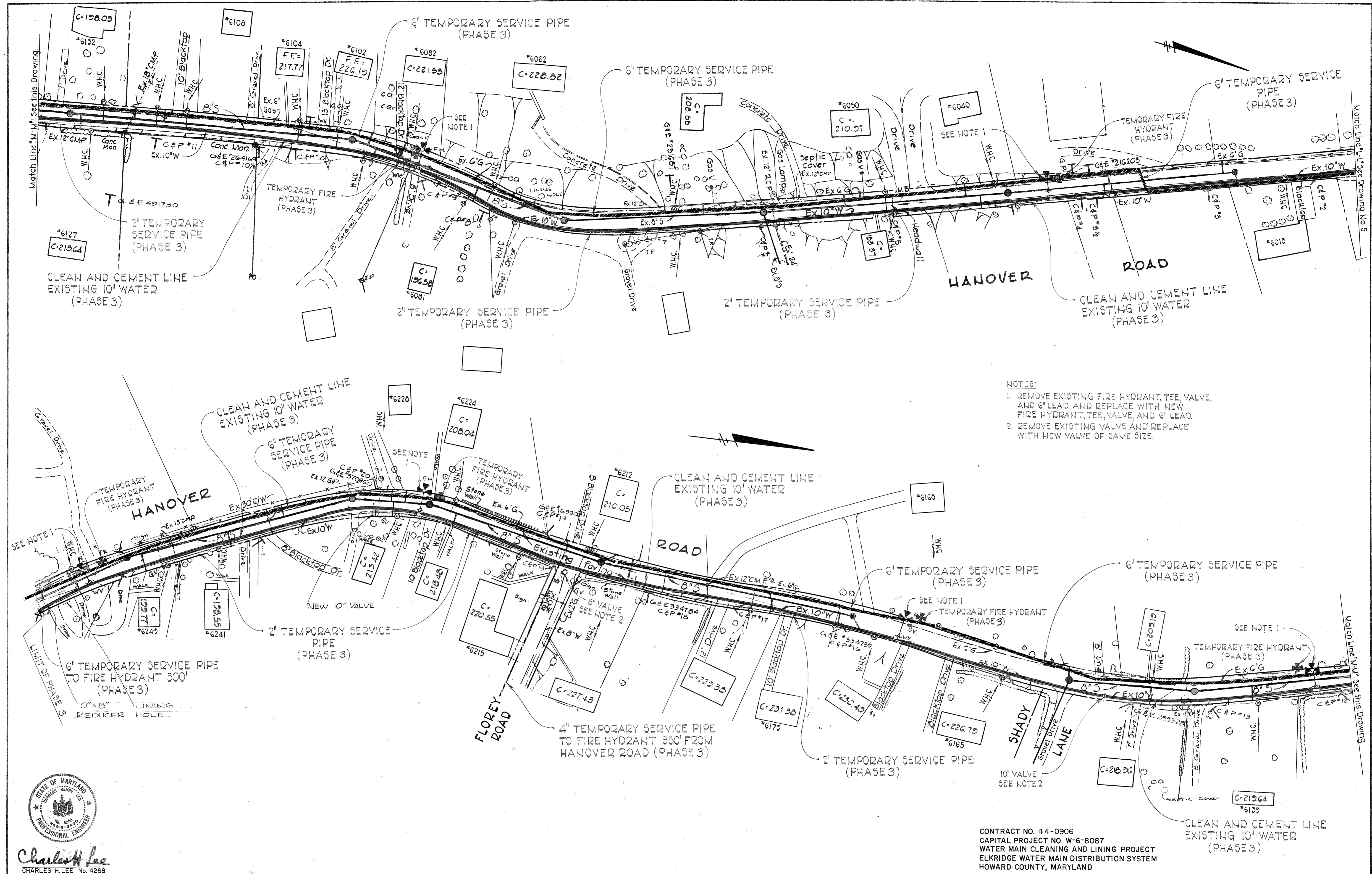
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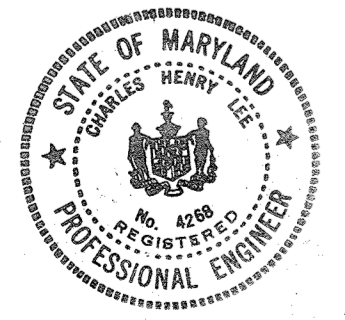
NOTE 1: REMOVE EXISTING FIRE HYDRANT, TEE, VALVE AND 6" LEAD AND REPLACE WITH NEW FIRE HYDRANT, TEE, VALVE AND 6" LEAD
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PURDUM & JESCHKE ENGINEERS 1023 N CALVERT ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND CHIEF BUREAU OF UTILITIES DATE: 4-28-80 DIRECTOR OF PUBLIC WORKS	CONTRACT NO. 44-0906 CAPITAL PROJECT NOW-6-8087	WATER MAIN PLAN	ELKRIDGE CLEANING AND LINING WATER MAINS	CONTRACT NO. 44-0906 CAPITAL PROJECT NO. W-6-8087 WATER MAIN CLEANING AND LINING PROJECT ELKRIDGE WATER MAIN DISTRIBUTION SYSTEM HOWARD COUNTY, MARYLAND DRAWING NO. 7 OF 9 SCALE 1" = 50' Designed: GPD Drafted: ARZ Checked: RHB 4-21-80
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- NOTES:
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CHARLES H. LEE No. 4268

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BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE: 4-28-80
DIRECTOR OF PUBLIC WORKS

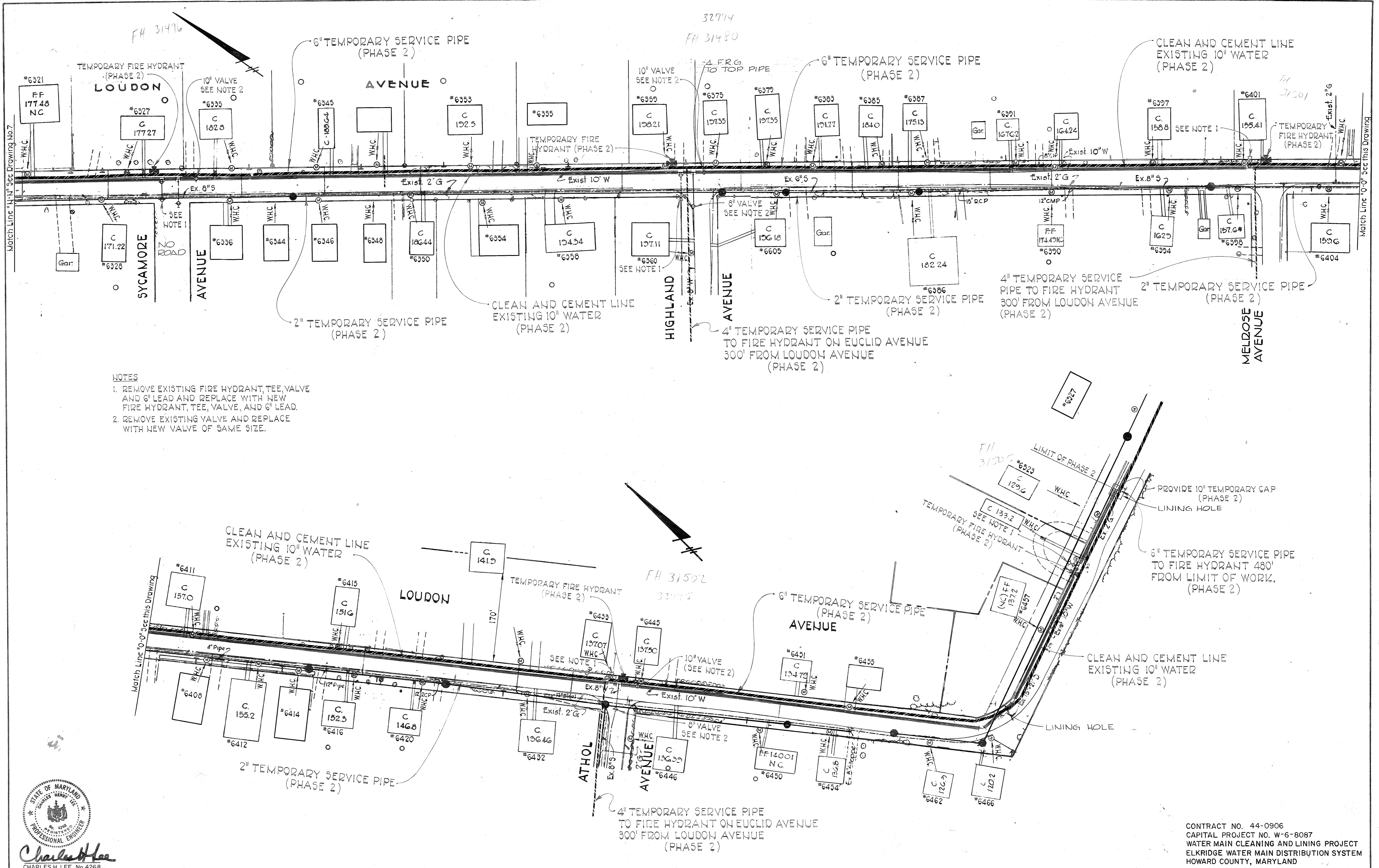
CONTRACT NO. 44-0906
WATER MAIN PLAN
CAPITAL PROJECT NO. W-6-8087

ELKRIDGE CLEANING
AND LINING WATER MAINS

CONTRACT NO. 44-0906
CAPITAL PROJECT NO. W-6-8087
WATER MAIN CLEANING AND LINING PROJECT
ELKRIDGE WATER MAIN DISTRIBUTION SYSTEM
HOWARD COUNTY, MARYLAND

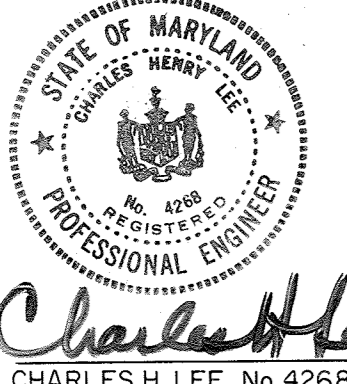
DRAWING NO. 8 OF 9	SCALE 1" = 50'	Designed: GPD Drafted: ARZ Checked: RHB 4-21-80
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WS 0906-M-18



- NOTES
1. REMOVE EXISTING FIRE HYDRANT, TEE, VALVE AND 6" LEAD AND REPLACE WITH NEW FIRE HYDRANT, TEE, VALVE, AND 6" LEAD.
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W-2060-19



Charles H. Lee
CHARLES H. LEE No. 4268

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BALTIMORE MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Chief - Bureau of Utilities - DATE
John F. Nunnery 4-28-80
Director of Public Works

CONTRACT NO. 44-0906
CAPITAL PROJECT NOW-6-8087

WATER MAIN PLAN

ELKRIDGE CLEANING
AND LINING WATER MAINS

DRAWING NO. 9	SCALE 1"=50'	Designed: GPD
OF 9		Drafted: ARZ
		Checked: RHB
		4-21-80