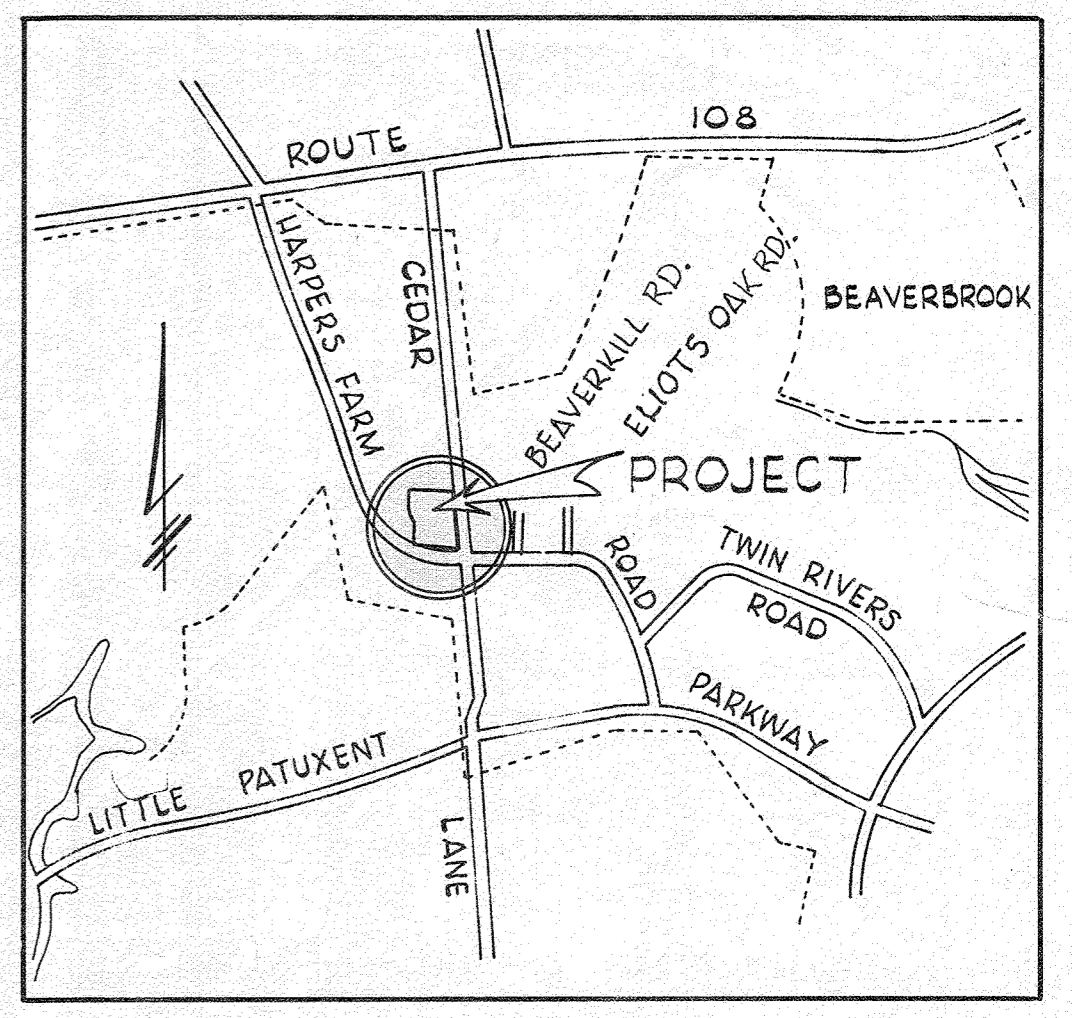


BENCH MARKS
 P&J Elev. 482.68
 PK. nail in int. Harpers Farm Rd
 and Beaverkill Rd.
 J-R 7 Elev. 474.97
 Pipe 90' Left of Sta. 63+28 on
 Harpers Farm Rd. near
 Eliots Oak Rd.

E831.000
 N506.250

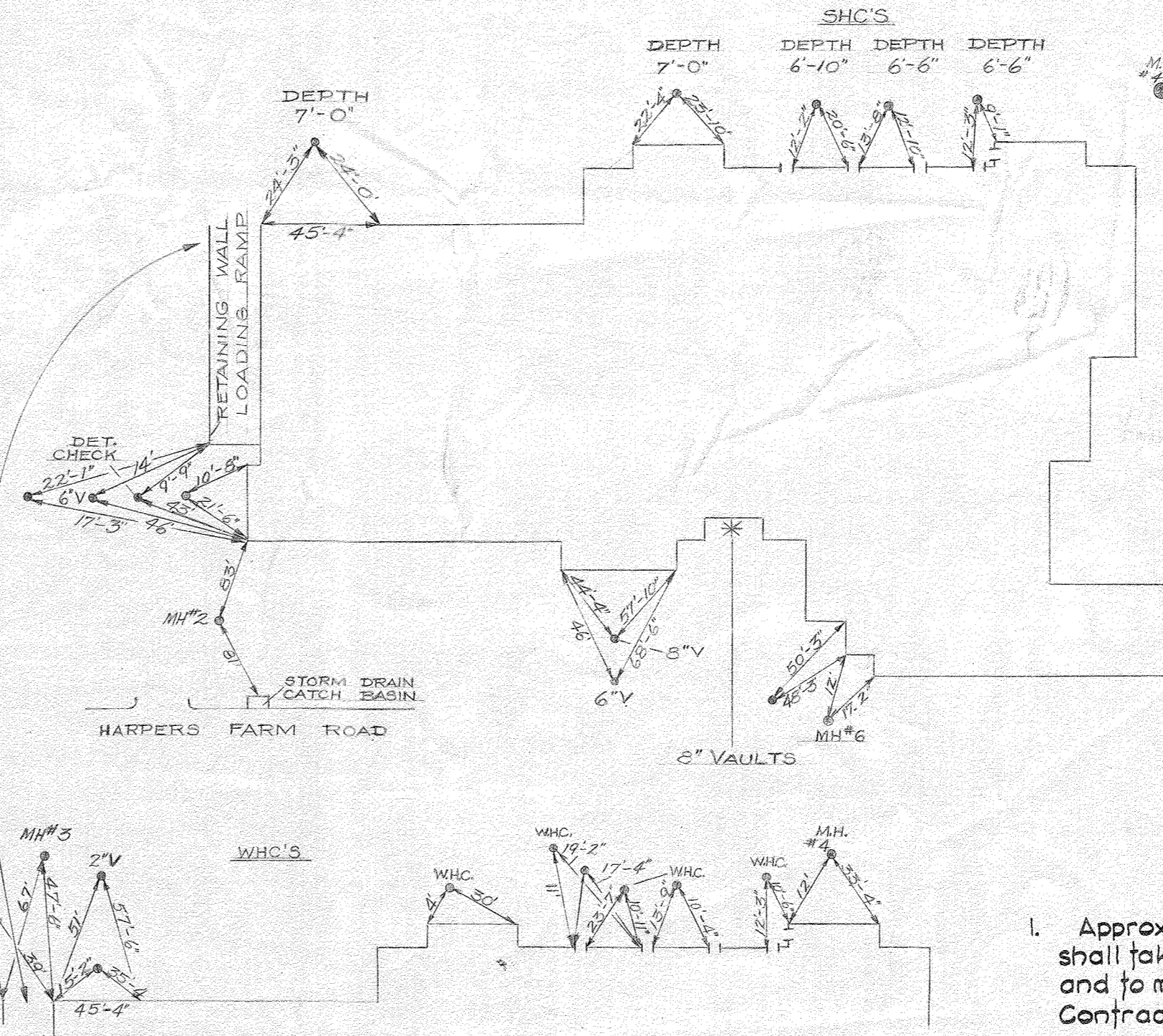
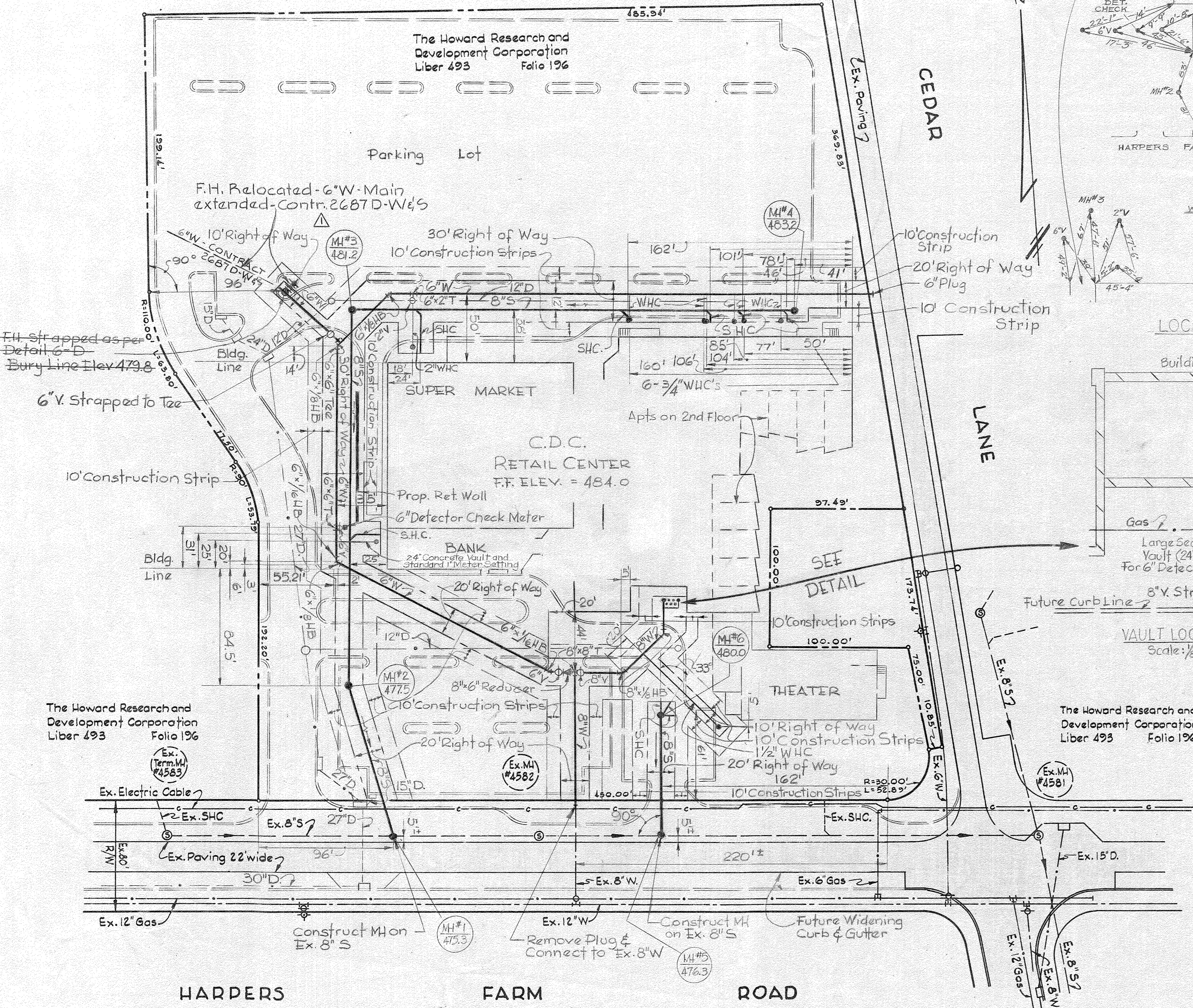
E831.500
 N506.250



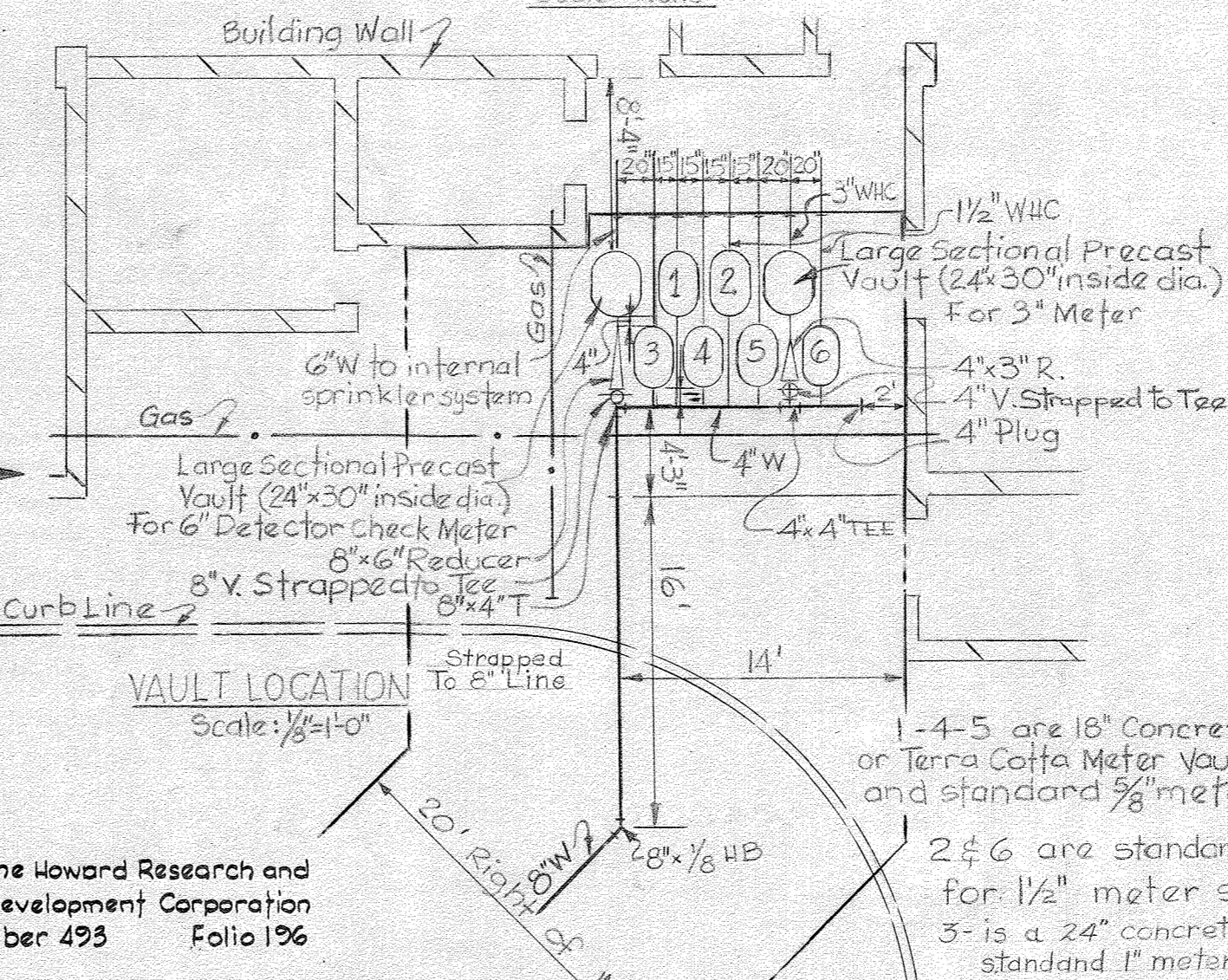
VICINITY MAP
 SCALE: 1" = 2100'

GENERAL NOTES

1. Approximate locations 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 Contractors' operations shall be repaired immediately at the Contractors' expense.
2. All pipe elevations shown are invert elevations.
3. The Contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in the vicinity of utilities.
4. For all standard details see standards bound in specifications.
5. Block all water main fittings with concrete, see standards bound in specifications.
6. Clear all utilities by a minimum of 6', clear all poles by 2'-0" minimum or tunnel as required.
7. The Contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole walls.
8. All manholes to be 4'-0" inside diameter.
9. All sewer house connections to be 6" diameter.
10. All horizontal & vertical control is based on Md. State B.C.S. system.



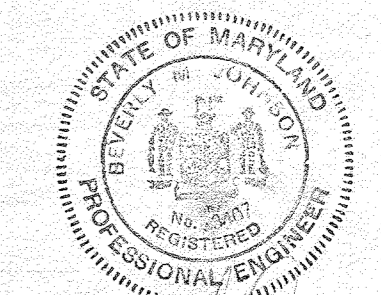
LOCATION OF W.H.C. - S.H.C. - M.H. & VALVES
 Scale: None



VAULT LOCATION
 Scale: 1/8" = 1'-0"

Notes

1. The approved and signed original sheets 1A, 2A & 3A of Contract 400-D-W&S-A are part of Contract 400-D-W&S approved and signed on January 19, 1971 by Chief Bureau of Engineering.
2. For realignment of sewer main and water, sewer house connections and fire hydrants locations, refer to these plans: 1A, 2A and 3A, approved and signed by chief D.E.D on 2/11/71.



Becky W. Johnson
 Contract No. 400 W&S

WS 400-D-W&S/1

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

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 1-19-71
W.O. Palled
 CHIEF - BUREAU OF WATER AND SEWER

CONTRACT NO. 400-D-W&S

PLAN OF WATER & SEWER MAINS

COLUMBIA HARPERS CHOICE VILLAGE CENTER
 CLARKVILLE ELECTION DISTRICT NO. 5

DRAWING NO. 1 OF 2 SCALE AS SHOWN

QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" x 6" Inceaser	2 Ea.	2	MJ	US PIPE & FOUNDRY
8" x 6" F.H.T.	1 Ea.	1	MJ	" "
8" x 6" T.S.F.	1 Ea.	1	MJ	MUELLER CO.
6" x 6" F.H.T.	3 Ea.	3	MJ COMPACT	US PIPE & FOUNDRY
2" W.H.C.	72 L.F.	74	" K"	READING TUBE
Fire Hydrant	5 Ea.	5	BURER	MUELLER CO.
6" Valve	7 Ea. 7 Eq.	7	GATE	US PIPE & FOUNDRY
6" Cut-in sleeves	4 Ea.	4	MJ COMPACT	" "
8" 1/2 H.B.	3 Ea.	3	" "	" "
8" 1/2 H.B.	1 Ea.	1	" "	" "
6" 1/2 H.B.	1 Ea.	1	" "	" "
8" Cap	2 Ea. 2 Ea.	2	MJ	MUELLER CO.
8" Water	304 L.F.	240'	CL. 52	US PIPE & FOUNDRY
6" Water	201 L.F.	238'	CL. 52	" "
8" Sewer	101 L.F.	165'	PVC SDR 35	JJA MANUFACTURING
6" Sewer	44 L.F.	43'	" "	" "
4" Sewer	10 L.F.	8'	" "	" "
Manholes	34 Ea.	3	PRECAST	ATLANTIC CONCRETE INC.
8" - 1/2 V.P.	2 Ea.	2	MJ COMPACT	US PIPE & FOUNDRY
2" Valve	1 Ea.	1	BALTYPE	D&K INDUSTRIES
1" COPPER	20 L.F.	20'	K' COPPER	READING
1" Valve	1 Ea.	1	BALTYPE	READING

NAME OF UTILITY CONTRACTOR: GTC CONSTRUCTION

SURVEY AND DRAFTING DIV. CHECKBOX: AS-BUILT DATE: 3-3-98

TYPE OF BUILDING	Commercial
NUMBER OF UNITS	3 Parcels
NUMBER OF S.H.C.'s	Prop: 2
NUMBER OF W.H.C.'s	Prop: 2
DRAINAGE AREA	Little Patuxent
TREATMENT PLANT	Little Patuxent Reclamation Plant

GENERAL NOTES

- PART I**
- 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 are based on Maryland State Coordinates [North American Datum 1927 (NAD 27)].
 - All vertical controls are based on U.S.G.S. data.
 - 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. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the contractor's work requires the bracing of additional poles or damages shall be deducted from money owed the contractor. The contractor shall coordinate with the utility companies to schedule the bracing of the poles.
 - For details not shown on the drawings, and for materials and construction methods use Howard County Design Manual, Volume IV, Standard Specifications and Detail for Construction (Latest Edition). The contractor shall have a copy of Volume IV on the job.
 - Where test pits have been made on existing utilities, they are noted by the symbol [square with X] at the location of the 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 test pits have not been dug shall be located by the contractor two weeks in advance of construction operations at his own expense.
 - The contractor shall notify the following utility companies or agencies at least (5) working days before starting work shown on these plans:

State Highway Administration	531-5533
BGE Contractor Services	850-4620
BGE Under Ground Damage Control	787-9068
Miss Utility	1-800-257-7777
Colonial Pipeline Co.	795-1390
Howard County Department of Public Works Bureau of Utilities	313-4900

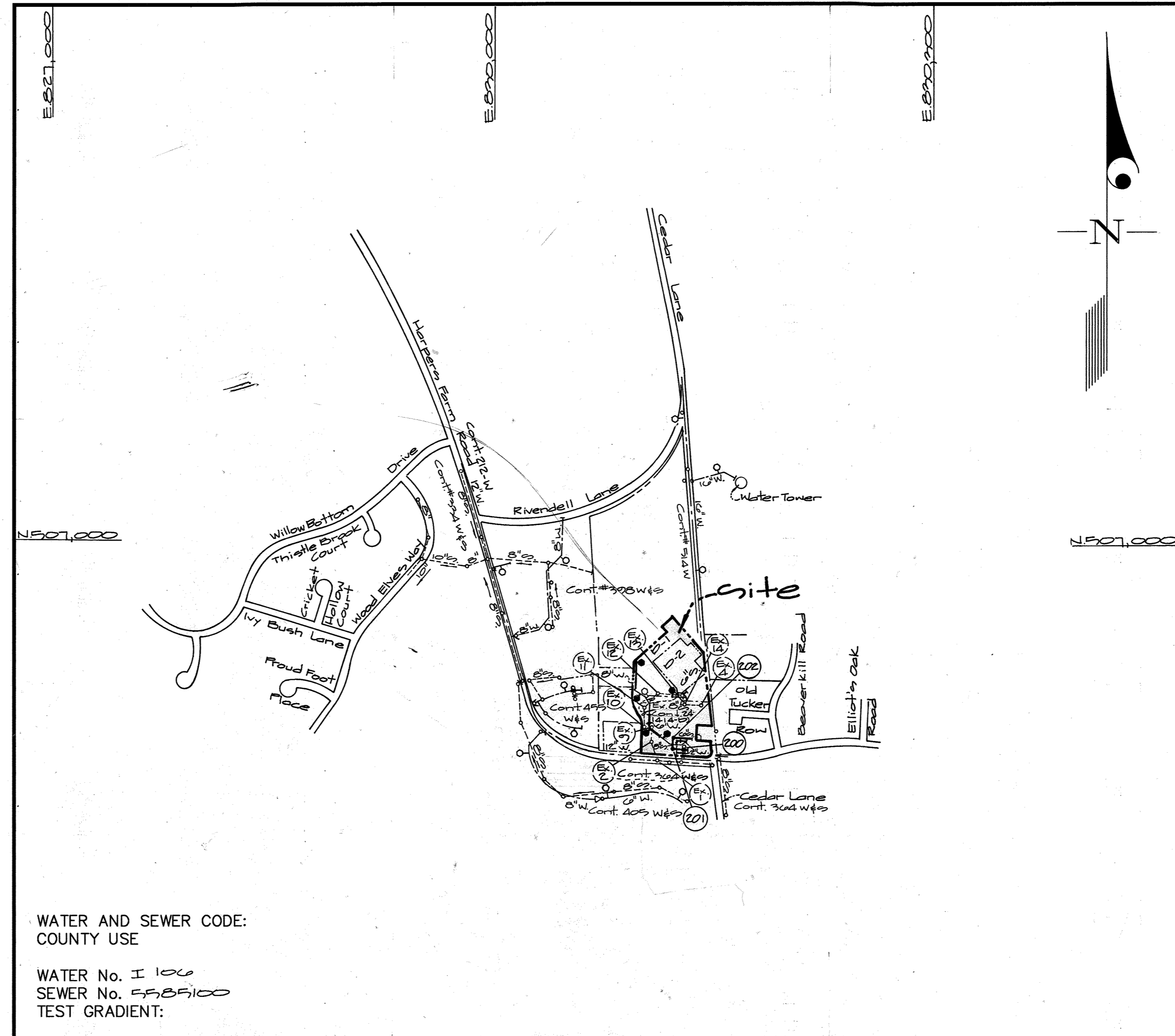
- Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the contractor.
- Contractor shall remove trees, stumps and roots along line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.
- The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-2450 at least five (5) working days before any open cut of any County road or boring/jacking operation on County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirement per Section 18.114(a) of the Howard County Code.

PART II - WATER

- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains 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 bury line elevations shown on the drawings. All fire hydrants shall be restrained and buttressed with concrete in accordance with the Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
- The contractor shall not operate any water main valves on the existing water system.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- For sprinkler system for all townhomes or multi-family dwelling units should have a minimum of 1' connection with a 3/4" meter.

PART III - SEWER

- All sewer mains shall be DIP and P.V.C. unless otherwise noted.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 16" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Detail G5.52. Where watertight frame and cover is used, set top of frame 1'-6" above finished grade unless otherwise noted on drawings.
- House(s) with the symbol "C.N.S." indicates that cellar cannot be served.



VICINITY - MAP
SCALE: 1"=600'

WATER AND SEWER CODE:
COUNTY USE

WATER No. I 100
SEWER No. 55, 65, 100
TEST GRADIENT:

Notes:

- The approved and signed original sheets 1A, 2A + 3A of Contract 400-D-W&S-A are part of Contract 400-D-W&S approved and signed on January 19, 1977, by Chief, Bureau of Engineering.
- For realignment of sewer main and water, sewer house connections and fire hydrants locations, refer to these plans: 1A, 2A and 3A, approved and signed by Chief D.E.D. on 3/11/77.

CONTRACT No. 400-D-W&S-A
Village of Harper's Choice
Village Center
Section 5 Area 2
Parcel D-1&D-2

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

Sediment Control Measures will be implemented in accordance with Section 219 of the Specifications & with Road Drawings Plan 1-1; Drawings GPP 97-40 for Sediment & Erosion Control.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT.

C. Cheryl Simmons 3/10/97
SIGNATURE DATE

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *John R. Robertson* 3/10/97
HOWARD S.C.D. DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert B. Berman 3-6-97
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Howard S. Dorman 3/11/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MARYLAND 20866

TEL: (410) 880-1820 ~ FAX: (301) 421-4186

DES:				
DRN:	W&J			
CHK:	GT	2	Revise Quantities	11/2/96
DATE:	GT	A	Revise Quantities Box	2/28/97
BY	NO		REVISION	DATE

Title sheet
scale: 1"=600'

600' SCALE MAP NO. 27 BLOCK NO. 27

GLW FILE No. 96-045

WATER & SEWER AS-BUILT

Village of Harper's Choice
Village Center
Section 5 Area 2
Parcel D

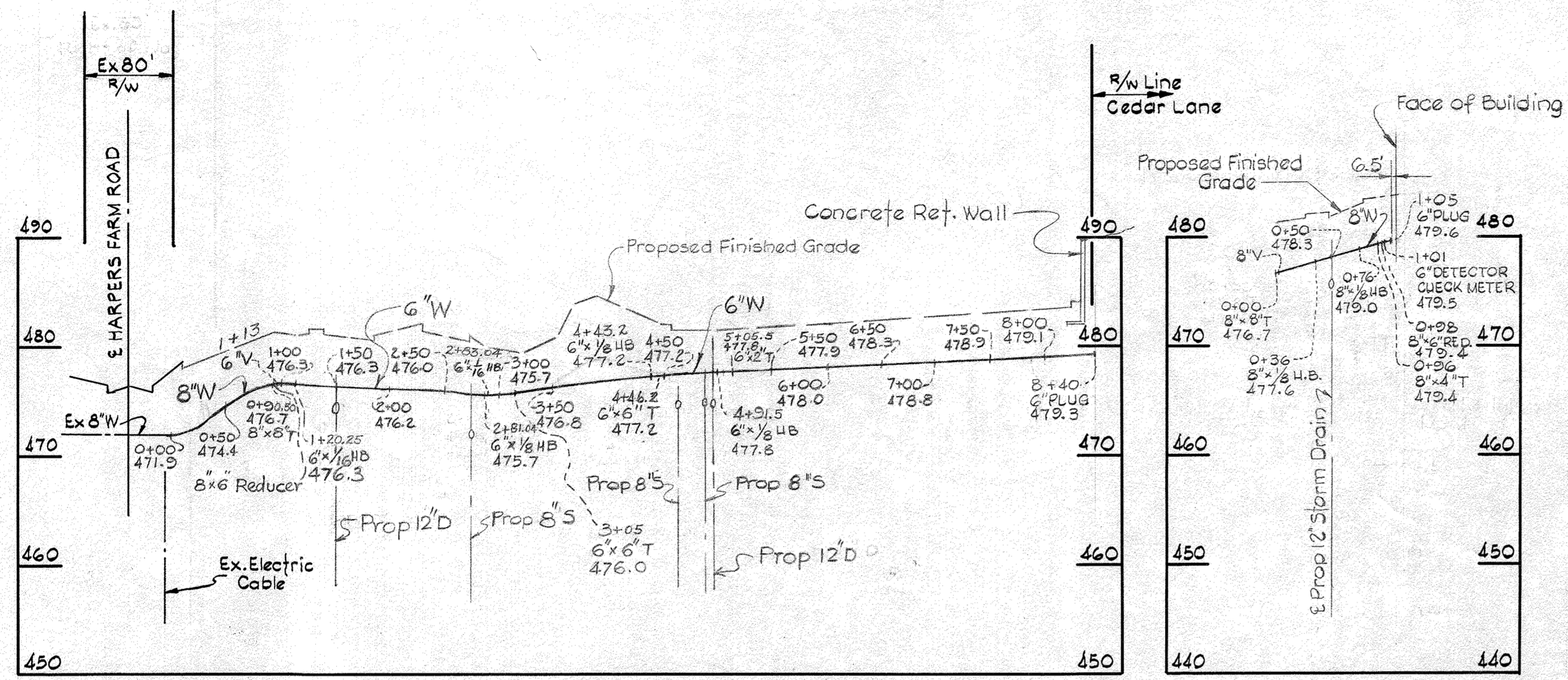
5th. Elec. District - Howard County, Maryland
Contract No.: 400-D-W&S-A

SCALE AS SHOWN
SHEET 1A OF 22

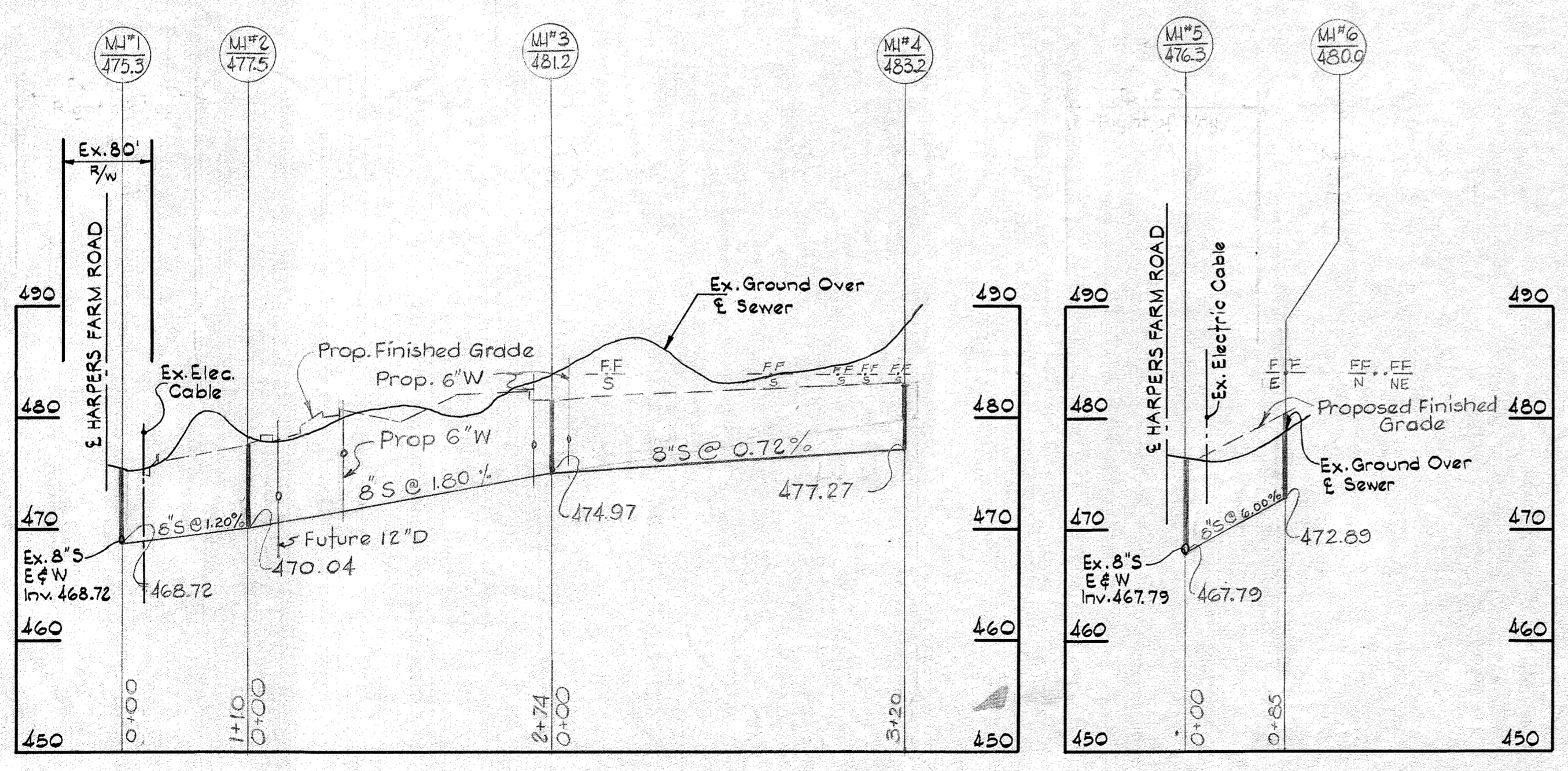
400-D-W&S-A

Notes

1. The approved and signed original sheets 1A, 2A & 3A of Contract 400-D-W&S-A are part of Contract 400-D-W&S approved and signed on January 19, 1971, by Chief, Bureau of Engineering.
2. For realignment of sewer main and water, sewer house connections, and fire hydrants locations refer to these plans: 1A, 2A and 3A, approved and signed by Chief P.E.D. on 3/11/71

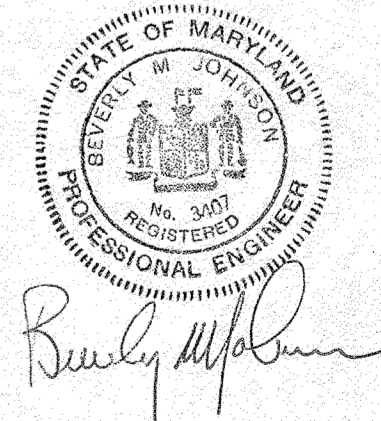


WATER MAIN PROFILES



SEWER MAIN PROFILES

WS 400-D-W&S/2



Contract No. 400 W & S

PURDUM & JESCHKE ENGINEERS 1023 N. CALVERT ST. BALTIMORE MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>W.O. P. West</i> CHIEF - BUREAU OF WATER AND SEWER DATE: 1-19-71	CONTRACT NO. 400-D-W&S	PROFILES OF WATER & SEWER MAINS	COLUMBIA HARPERS CHOICE VILLAGE CENTER CLARKSVILLE ELECTION DISTRICT NO. 5	DRAWING NO. 2	SCALE: H:1"=100'
					OF 2	V:1"=10'

Notes

- Remove ex. manhole no. 6. Remove ex. 8" sewer to proposed manhole 200 outlet.
- Remove ex. 1 1/2" w.h.c. and plug at ex. 8" water main (built under contract #400-D).
- Ex. easement to be vacated.
- Proposed limit of public water & sewer.
- Private 6" sewer. Connect to existing sewer house connection (S) from building. (2% min. slope).
- Private 8" water. Remove ex. 8" 1/2" B. and connect to ex. 8" water. (Built under contract #400-D proposed private 8" water).
- Ex. 12" storm drain to be removed from existing terminal manhole between existing building & proposed building to new manhole west of proposed 8" sewer.
- Ex. 8" water built under contract #400-D to be abandoned and removed.
- Ex. 8" water built under contract #400-D W4s to be lowered from it = sta. 0+00 to sta. 0+14 (see profile).

Note: Contractor is responsible for replacing existing paving removed during construction of proposed water & sewer mains. See Howard County Ord. G.4.01

Note: Contractor shall sequence the construction of this contract to avoid any possible conflicts with sediment control measures installed under GDF 77-28 & 77-40.

Property of
The Howard Research &
Development Corporation
L.1535 F.1973

Legend

	Ex. Curb/Paving
	Prop. Curb/Paving
	Notes (see above)
	Prop. Public Sewer
	Prop. Public Water
	Prop. Private Sewer
	Prop. Private Water
	Prop. Public Storm Drain

Note: Existing manhole No. 113: Rechannel existing bench for new G" SHC (type A drop).

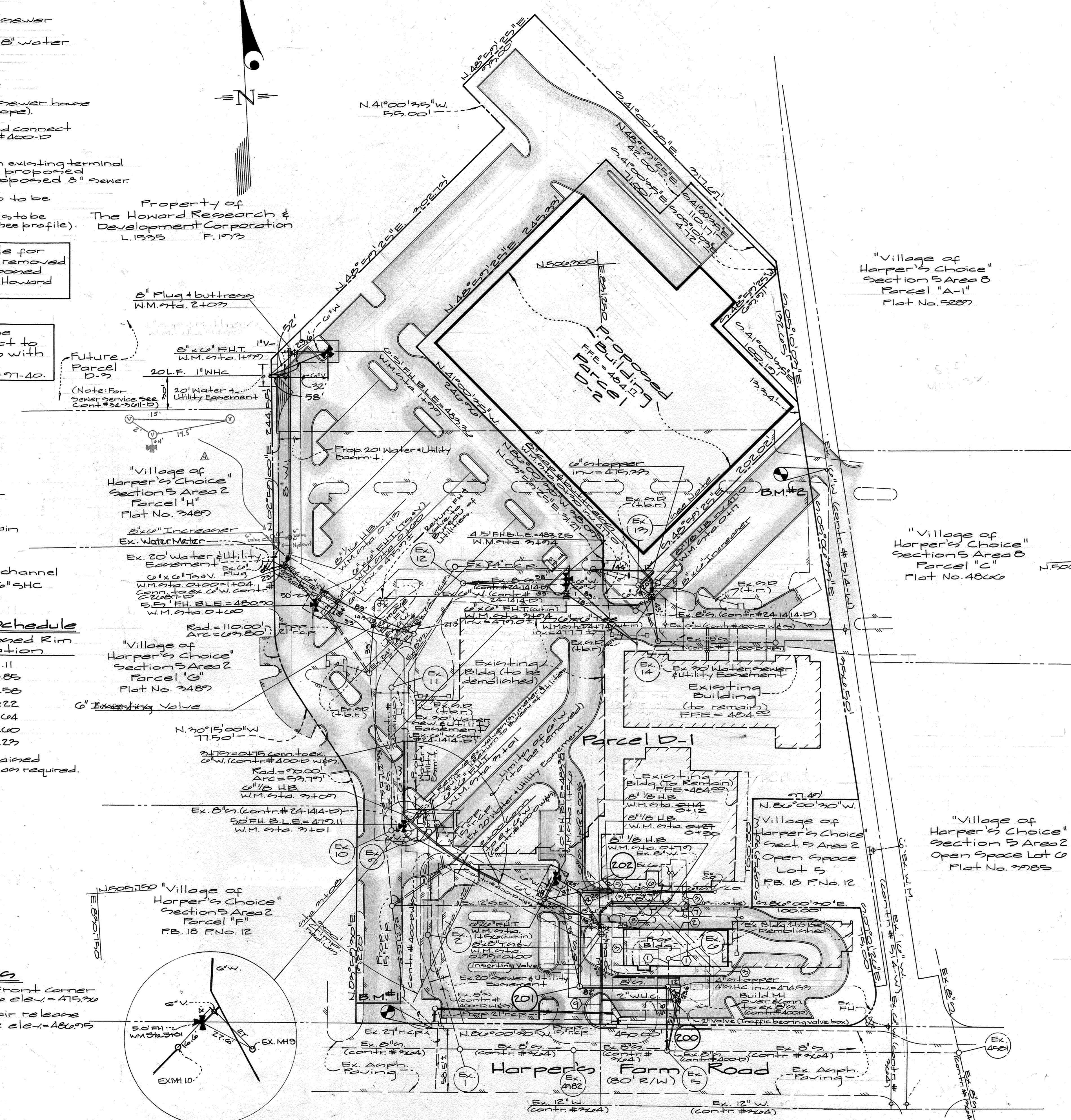
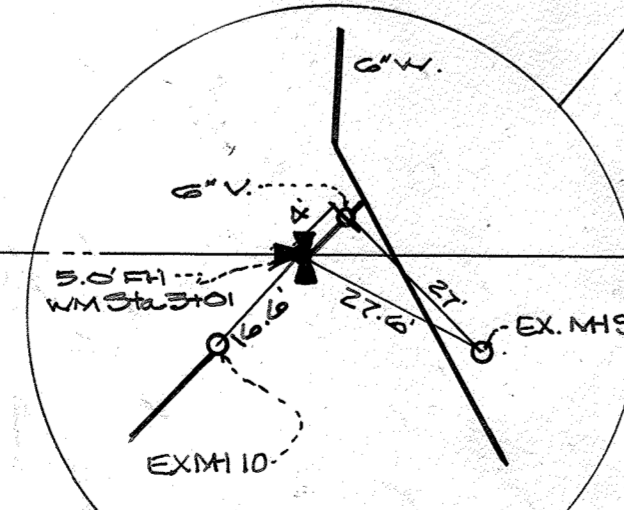
Ex. structure Modification Schedule

Structure	Ex. Rim Elevation	Proposed Rim Elevation
2.	478.17	478.11
9.	482.00	478.85
10.	479.47	478.58
11.	482.00	480.22
12.	482.04	481.04
13.	482.10	483.00
14.	489.78	489.23

Note: All existing valve boxes to be raised or lowered to proposed grade as required.

Bench Marks

- B.M. #1 Right Front corner in lot I to elev. = 475.20
- B.M. #2 Rim ex. air release manhole elev. = 480.95



Existing 8" Water Abandonment Procedure

- Install 8"x8" T&V, 8" 1/2" horizontal bends and associated piping and blocking. Test new main line.
- After blocking has obtained the minimum compressive strength and all tenants have been notified that the water will be turned off (48 hours prior to shut down), notify the Bureau of Utilities to close the existing valve east of the existing tee (service to the existing building).
- Remove existing 1 1/2" water house connection and existing 8" water east of existing valve to the point that the new 8" 1/2" H.B. will connect to the existing 8" main (at or near the existing 8" 1/2" horizontal bend). Connect the new 8" main to the existing 8" main. Plug existing valve.
- Notify the Bureau of Utilities to open the new 8" valve north of the existing tee to reestablish service.

Existing Fire Hydrant Abandonment Procedure

- Note: This abandonment and the following lowering are not to be under construction simultaneously. Contractor shall maintain continuous service to Parcels G & H.
- Notify the Bureau of Utilities to close existing valves to the east and west of the existing fire hydrant.
 - Remove existing fire hydrant and 6" valve and return to the Bureau of Utilities. Plug existing 6"x6" tee.
 - Install proposed 6"x6" FHT and valve and 6"x6" tee and valve using cut-in sleeves at stations 7+94 and 4+74. Block as required.
 - Install fire hydrant and 8" service to new building as indicated. Test line.
 - Notify the Bureau of Utilities to re-open existing valves.

Existing 6" Water Lowering Procedure

- Install 6" inserting valve as indicated on plan in existing 6" main.
- Notify the Bureau of Utilities to close the new 6" inserting valve and the existing 6" valve to the west of the new 8"x8" T&V constructed above.
- Remove existing 6" water, valves, water meter and vault as indicated on the plans (return valves, water meter and vault to the Bureau of Utilities).
- Install proposed 6" water as indicated on the plans and profiles. Install 6"x6" FHT and valve using a cut-in sleeve at station 1+50. Block as required. Install proposed fire hydrant. Test line.
- Notify Bureau of Utilities to re-open valves.

Notes

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- For realignment of sewer main and water sewer house connections and fire hydrant locations, refer to these plans: 1A, 2A and 3A, approved and signed by Chief D.E.D on 3/11/97.

Dept. of Public Works
Howard County, Maryland

Dept. of Planning & Zoning
Howard County, Maryland

R. Benjamin 3-6-97
Chief, Bureau of Utilities Date

John P. ... 3/11/97
Chief, Development Engineering Div. Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS

3909 NATIONAL DRIVE, SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MD. 20886
(301) 421-4024



DES: W.S.J.					
DRN: W.S.J.	WRA	Δ	Add Hydrant		3/11/97
CHK: <i>WJ</i>	WJ	Δ	Add 1" NHC For Future Parcel D-3		1/12/98
	WJ	Δ	Rev. Bldg. FFE, F.H. BLEs & add str. exch.		4/16/97
	GT	Δ	Add 8" W to be lowered, note ① Inserting Valve		3/28/97
DATE:	BY	NO.	REVISION	DATE	

Water & Sewer Construction Plans
Scale: 1" = 50'

600' SCALE MAP NO. 29 BLOCK NO. 22

Village of Harper's Choice
Village Center
Section 5 Area 2
Parcel A-1#D-2
5th Elec. District - Howard County, Maryland
Contract No.: 400-D-W4s-A

SCALE AS SHOWN
SHEET 2A OF 22

