

TEST PIT 1 WAS PERFORMED BY "UTILITY LOCATING SERVICES" ON 9/11/02. THE EXISTING 10" GAS MAIN WAS LOCATED 4.34' BELOW EXISTING PAVEMENT AND 23.60' FROM ISLAND CURB ALONG U.S. ROUTE 1.

TEST PIT 2 WAS PERFORMED BY "UTILITY LOCATING SERVICES" ON 10/12/02. THE EXISTING 12" C.I. WATERLINE WAS LOCATED 4.99' BELOW THE EXISTING PAVEMENT AND 19.80' FROM ISLAND CURB ALONG U.S. ROUTE 1. THE EXISTING WATER AND GAS ARE 1.80' APART HORIZONTALLY ON CENTER.

BAL./WASH. INDUSTRIAL PARK PARCEL "A" - BLOCK "B" P.B.22 / 112

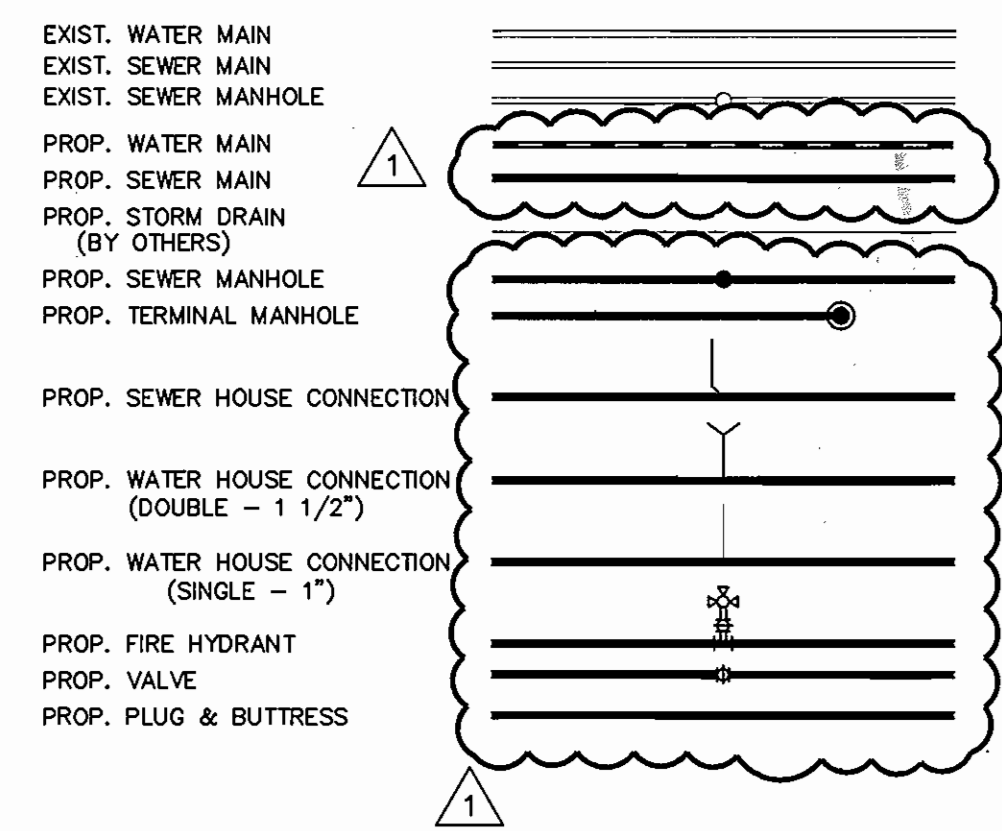
INSTALL 6" FH, ONTO 6" W N 539490.10 - E 1367245.39 BURY LG.=4.0'±, BURY EL.=289.5±

EX. FH TO BE REMOVED (RETURN EX. FH TO BUREAU OF UTILITIES)

SANITARY STRUCTURE SCHEDULE					
NO.	RIM	INV. IN	INV. OUT	NORTH	EAST
EX MH-3	260.00±	246.54	246.40	539,299.80	1,366,772.37
MH 120	268.80	258.64	248.39	539,331.20	1,366,801.66
MH 121	274.30	262.04	261.94	539,218.36	1,366,923.57
MH 122	281.40	266.64	266.54	539,377.09	1,367,082.61
MH 123	282.40	267.50	267.40	539,376.15	1,367,102.59
MH 124	288.70	275.80	275.70	539,529.35	1,367,256.41
MH 125	292.40±	280.68	280.58	539,663.27	1,367,350.88

~PLAN~
SCALE: 1"=50'

~LEGEND~



GENERAL NOTES

- ~PART 1 - GENERAL~
- 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 (NAD '83).
 - 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 DAMAGED POLES 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 [] 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 FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION 410-531-5533
 - BALTIMORE GAS & ELECTRIC CO. 410-850-4620
 - CONTRACTOR SERVICES 410-291-4607
 - BALTIMORE GAS & ELECTRIC CO. 410-291-4607
 - MESS UTILITY 1-800-257-7777
 - COLONIAL PIPELINE CO 410-549-4120
 - HOWARD CO. DEPT. OF PUBLIC WORKS 410-313-4800
 - BUREAU OF UTILITIES 1-800-446-5266
 - VERIZON 1-800-446-5266
 - 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 AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
 - PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE OPERATIONS.
 - THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY AT (410) 313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS DOES NOT CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18114(a) OF THE HOWARD COUNTY CODE.
- ~PART 2 - 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 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.
- ~PART 3 - SEWER~
- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
 - THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2' - 0" OF EXTERIOR MANHOLE WALL.
 - 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 WATER-TIGHT FRAME AND COVERS, STANDARD DETAIL G.52, WHERE WATER-TIGHT MANHOLE FRAME AND COVER IS USED. SET TOP OF FRAME 1" - 6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 - HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
 - 12" MINIMUM VERTICAL CLEARANCE FROM OTHER UTILITIES IS REQUIRED.
 - HOUSE(S) WITH SYMBOL "C.N.S." INDICATES THAT THE CELLAR CAN NOT BE SERVED.
 - PROVIDE 20' MINIMUM RADIUS FOR MANHOLE CENTERLINE CHANNEL.

(FOR COUNTY USE ONLY)
~WATER AND SEWER COUNTY CODE~
WATER CODE: B-03
SEWER CODE: 4250000
TEST GRADIENT: 550

TYPE OF BUILDING: _____ COMMERCIAL
NUMBER OF PARCELS: _____ 2
NUMBER OF SHCS: _____ 2
NUMBER OF WHCS: _____ 2
DRAINAGE AREA: _____ LITTLE PATUXENT
TREATMENT PLANT: _____

~VICINITY MAP~
SCALE: 1" = 600'

QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
8" SEWER	664 L.F.±			
8" S.S. PLUG	1 EACH			
4" SHC	10 L.F.±			
4" SHC PLUG	1 EACH			
S.S. MANHOLES	6 EACH			
8" SHC	10 L.F.±			
12"x8" TSV	1 EACH			
8"x6" TEE	2 EACH			
8" WATER	613 L.F.±			
8"x4" TEE	1 EACH			
8"-45" BEND	3 EACH			
8" CAP & BUTT.	1 EACH			
4" WATER	10 L.F.±			
4" VALVE	1 EACH			
4" WHC PLUG	2 EACH			
4" CAP & BUTT.	1 EACH			
6"x4" TSV	0 EACH			
6" WATER	25 L.F.±			
6" VALVE	2 EACH			
6" FH	3 EACH			

NAME OF UTILITY CONTRACTOR: _____
SURVEY AND DRAFTING DIVISION AS-BUILT DATE: _____

HOWARD SOIL CONSERVATION DISTRICT:
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Jim Myer 12/10/02
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS PLAN IS APPROVED FOR SOIL CONSERVATION DISTRICT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Roberts 12/10/02
HOWARD SOIL CONSERVATION DISTRICT DATE

SEEDING CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER SITE DEVELOPMENT PLANS SDP-01-103 AND SDP-02-95.

⚠ SHEETS 1, 2, & 3 OF 3 REPLACE IN FULL, CONTRACT 24-3901-D, SIGNED ON JUNE 6, 2001 BY CHIEF, DEVELOPMENT ENGINEERING DIVISION.

STV Incorporated
7125 Ambassador Road, Suite 200
Baltimore, Maryland 21244-2722
(410)944-9112 fax: (410)298-2794

Engineers / Architects / Planners / Construction Managers

DES: GBZ
DRN: VDH
CHK: KTL
DATE: 11/15/02

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

R. B. B... 12-9-02
CHIEF, BUREAU OF UTILITIES DATE

John D... 12/10/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK ENGINEERING, INC.
9480 BALTIMORE NATIONAL PIKE & SUITE 418
ELICOTT CITY, MARYLAND 21043
phone: 410-465-6105 & fax: 410-465-8844
email: Benchmark@ecolts.com

Donald M... 12/10/02
PROFESSIONAL ENGINEER

DES: DAM/MCR
DRN: MCR
CHK: DAM
DATE: 5/24/01

BY	NO.	REVISIONS	DATE
STV	1	AS-BUILT DATA SHOWN ON PLAN Add Public Easement for Water and Sewer Main.	1/23/06
VDH	1	REVISE SCOPE OF WORK; REMOVE PROPOSED BLDG. A & REPLACE w/EXTENDED STAY HOTEL (CONTRACT #24-4070-D).	1/24/04
			11/02

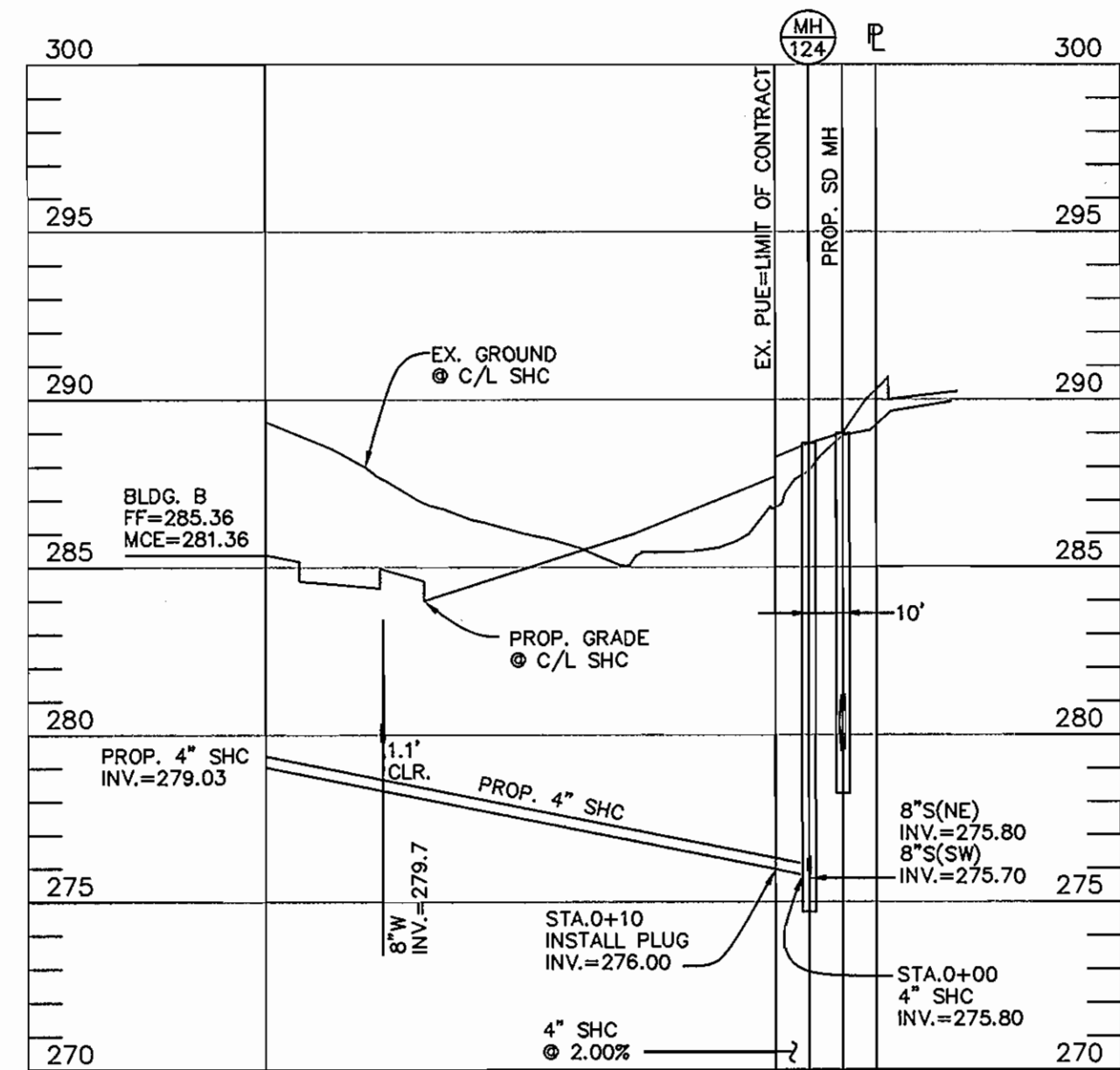
WATER AND SEWER PLAN AND DETAILS

600 SCALE MAPS: W48 & S48
BLOCK: 1

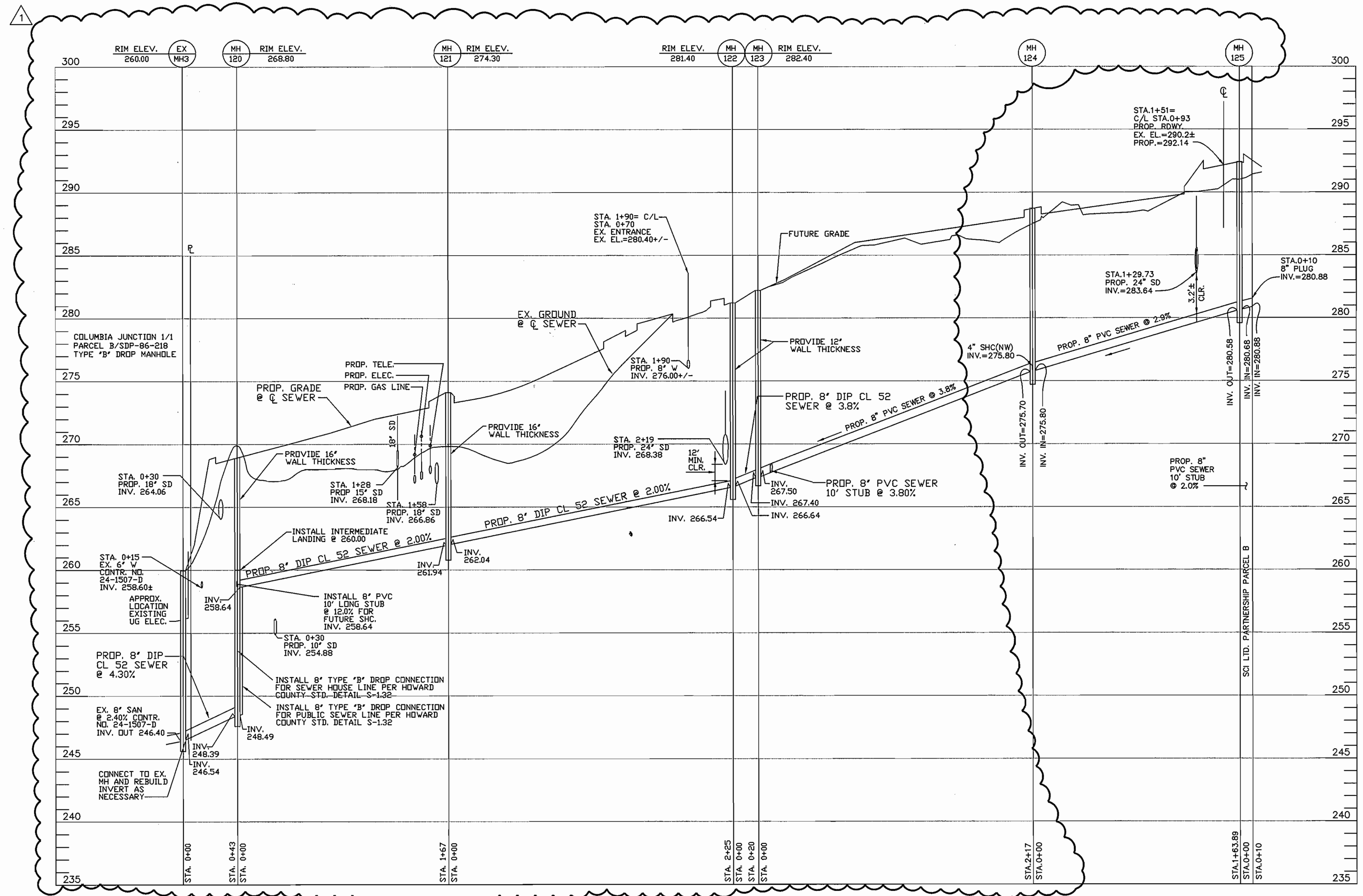
COLUMBIA JUNCTION SECTION THREE PARCEL "A" & "B" BUILDINGS A & B ELECTION DISTRICT NO.6
CONTRACT NO.24-3901-D

SCALE: AS SHOWN
SHEET NO. 1 OF 3

IN PROJECTS: 10725 GRAYVALE DRIVE VDH 12-6-02 14:00



~SEWER PROFILE~
 ~SHC-BLDG B~
 HORIZONTAL SCALE: 1"=50'
 VERTICAL SCALE: 1"=5'



~SEWER PROFILE~
 HORIZONTAL SCALE: 1"=50'
 VERTICAL SCALE: 1"=5'

I:\PROJECTS\10725\GRAY\atSewer\dwg PROFILE(2).VDH 12-6-02 14:18

1 SHEETS 1, 2, & 3 OF 3 REPLACE IN FULL, CONTRACT 24-3901-D, SIGNED ON JUNE 6, 2001 BY CHIEF, DEVELOPMENT ENGINEERING DIVISION.

CERTIFICATION NOTE:
 BENCHMARK ENGINEERING, INC. REMAINS RESPONSIBLE FOR DESIGN PREVIOUSLY APPROVED JUNE, 2001. NEW INFORMATION (SHOWN WITH BUBBLES) SHALL BE THE RESPONSIBILITY OF STV INCORPORATED AND WAS ADDED TO THIS PLAN BY WAY OF A RED-LINE REVISION.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

[Signature] 12-9-02
 CHIEF, BUREAU OF UTILITIES DATE

[Signature] 12/11/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

STV Incorporated
 7125 Ambassador Road, Suite 200
 Baltimore, Maryland 21244-2722
 (410)944-9112 fax: (410)298-2794
 Engineers / Architects / Planners / Construction Managers

BENCHMARK ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELICOTT CITY, MARYLAND 21043
 phone: 410-465-8105 & fax: 410-465-8644
 email: Benchmark@bca.com

[Professional Engineer Seal: Donald Mason, State of Maryland, License No. 121402]

DES: GBZ
 DRN: VDH
 CHK: KTL
 DATE: 11/15/02

DES: DAM/MCR
 DRN: MCR
 CHK: DAM
 DATE: 5/24/01

12/11/02

DES:	GBZ
DRN:	VDH
CHK:	KTL
DATE:	11/15/02
DES:	DAM/MCR
DRN:	MCR
CHK:	DAM
DATE:	5/24/01
BY:	NO.
REVISIONS:	
DATE:	600 SCALE MAPS: W48 & S48

REVISIONS

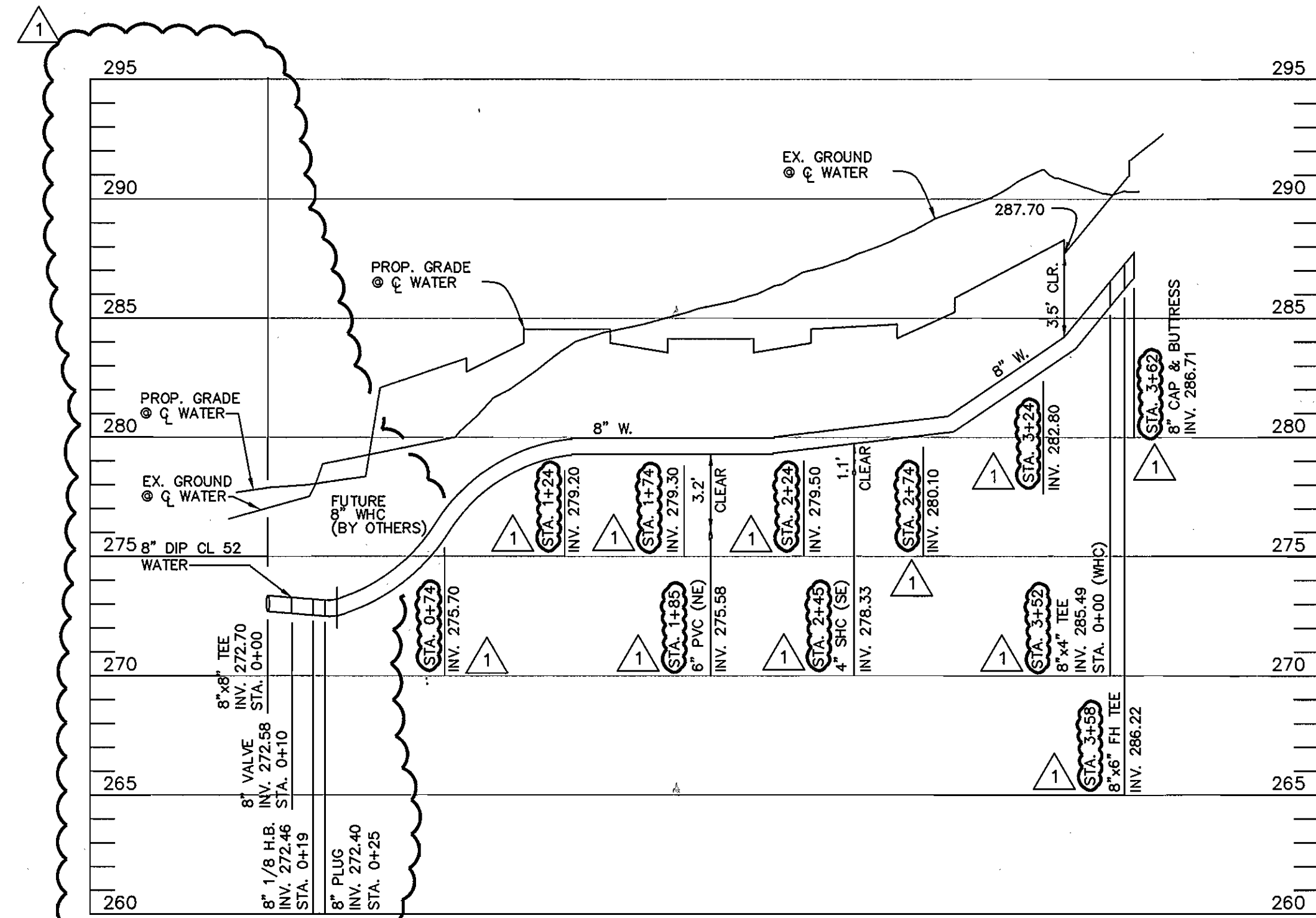
VDH 12/11/02 REVISE SCOPE OF WORK; REMOVE PROPOSED BLDG. A & REPLACE w/EXTENDED STAY HOTEL (CONTRACT #24-4070-D).

DATE: 600 SCALE MAPS: W48 & S48

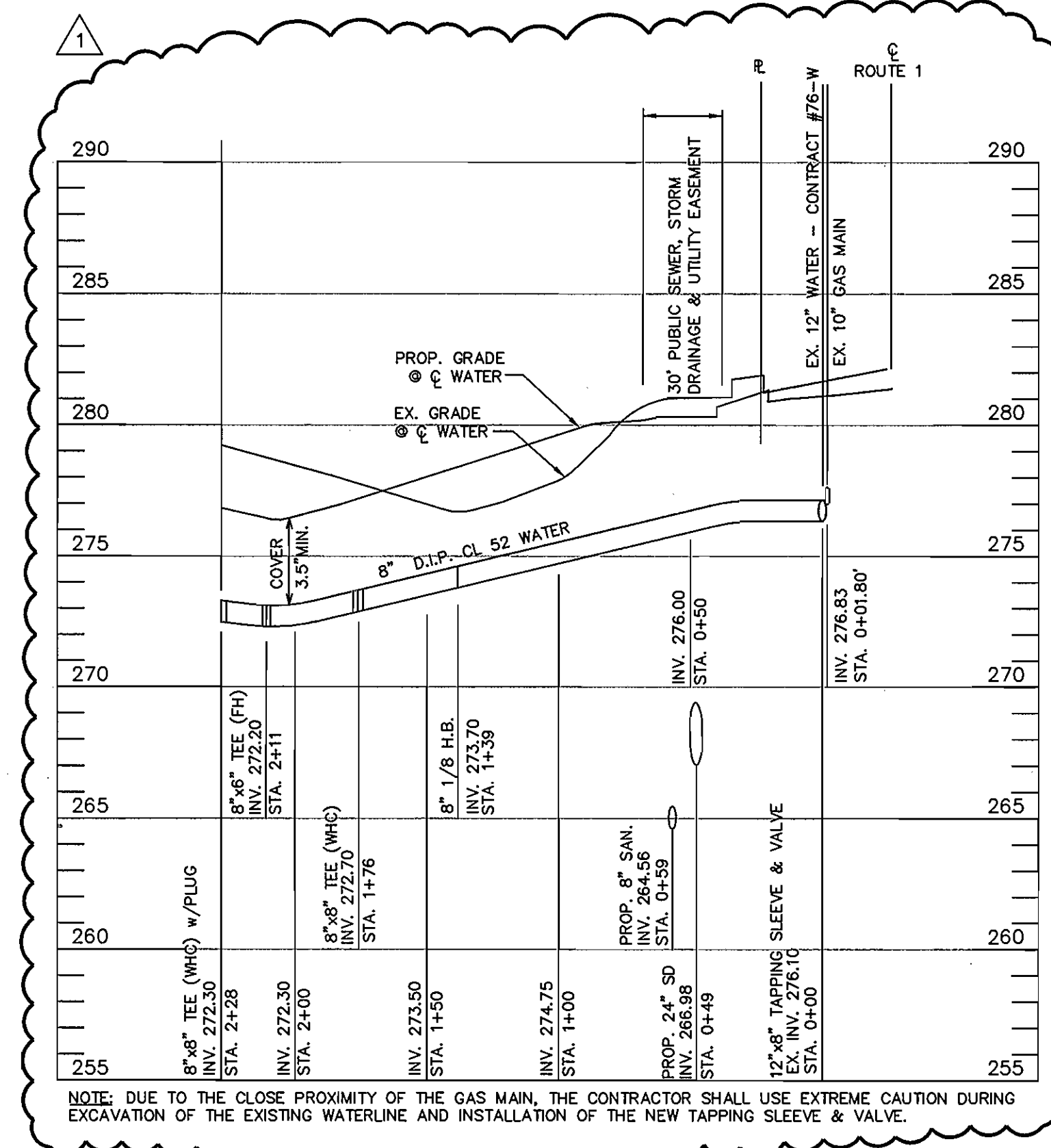
COLUMBIA JUNCTION
 SECTION THREE
 PARCEL "A" & "B"
 BUILDINGS A & B
 ELECTION DISTRICT NO. 6
 CONTRACT NO. 24-3901-D

SCALE:
 AS SHOWN

SHEET NO.
 2 OF 3

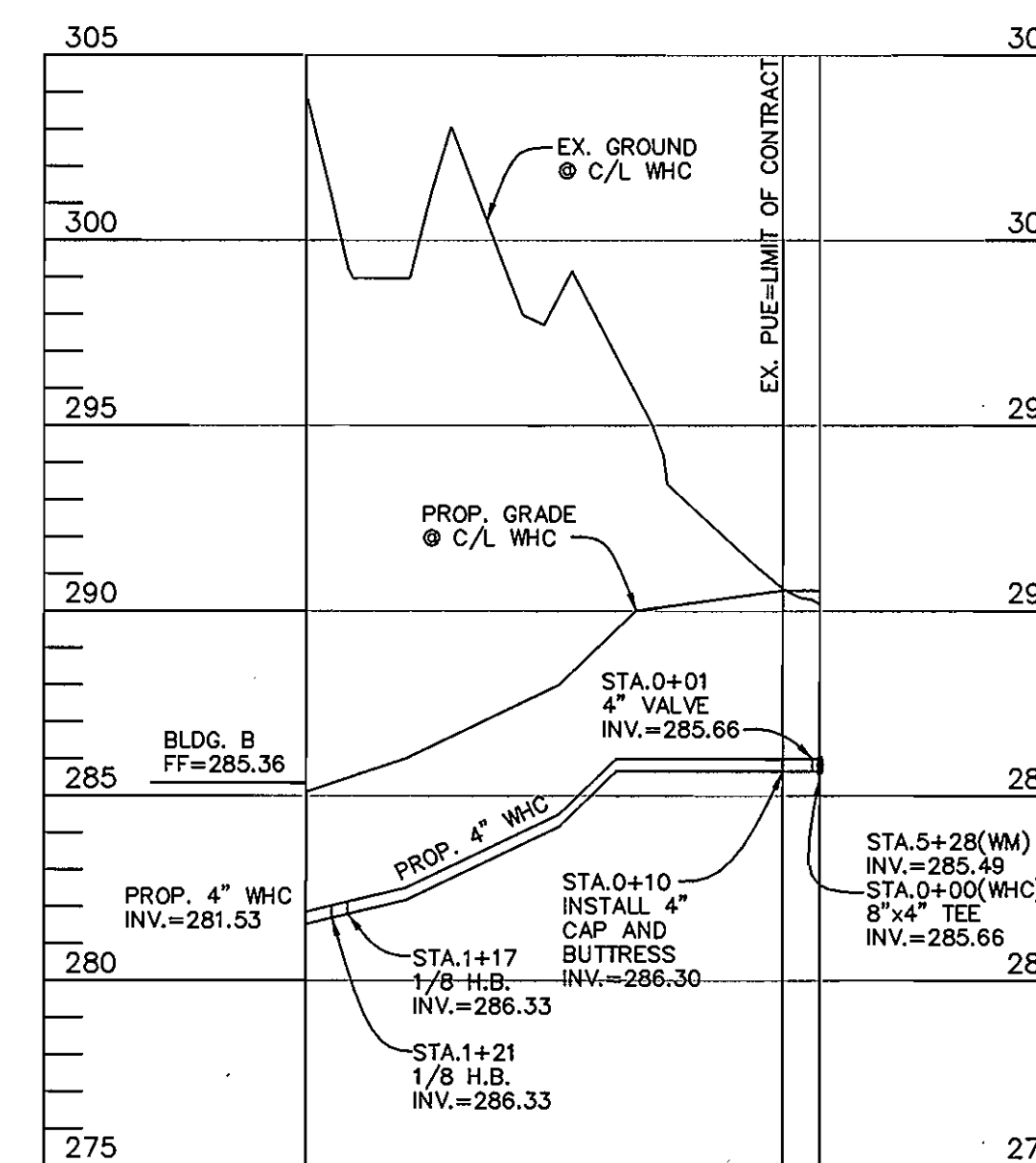


~WATER PROFILE~
 HORIZONTAL SCALE: 1"=50'
 VERTICAL SCALE: 1"=5'



~WATER LINE PROFILE~
 HORIZONTAL SCALE: 1"=50'
 VERTICAL SCALE: 1"=5'

NOTE: DUE TO THE CLOSE PROXIMITY OF THE GAS MAIN, THE CONTRACTOR SHALL USE EXTREME CAUTION DURING EXCAVATION OF THE EXISTING WATERLINE AND INSTALLATION OF THE NEW TAPPING SLEEVE & VALVE.



~WATER PROFILE~
 ~WHC-BLDG. B~
 HORIZONTAL SCALE: 1"=50'
 VERTICAL SCALE: 1"=5'

▲ SHEETS 1, 2, & 3 OF 3 REPLACE IN FULL, CONTRACT 24-3901-D, SIGNED ON JUNE 6, 2001 BY CHIEF, DEVELOPMENT ENGINEERING DIVISION.

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DES: GBZ
 DRN: VDH
 CHK: KTL
 DATE: 11/15/02

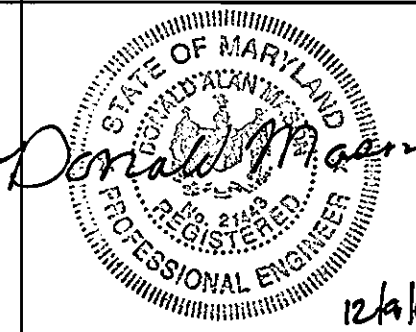
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

Ruth B.
 CHIEF, BUREAU OF UTILITIES
 12-9-02
 DATE

John P.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 12/11/02
 DATE

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE A SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 phone: 410-465-6105 fax: 410-465-6644
 email: Benchmark@cois.com



DES: DAM/MCR
 DRN: MCR
 CHK: DAM
 DATE: 5/24/01

BY	NO.	REVISIONS	DATE
VDH	1	REVISE SCOPE OF WORK; REMOVE PROPOSED BLDG. A & REPLACE W/EXTENDED STAY HOTEL (CONTRACT #24-4070-D).	11/02

WATER PROFILES

DATE 600 SCALE MAPS: W48 & S48

BLOCK: 1

COLUMBIA JUNCTION
 SECTION THREE
 PARCEL "A" & "B"
 BUILDINGS A & B
 ELECTION DISTRICT NO.6
 CONTRACT NO.24-3901-D

SCALE:
 AS SHOWN

SHEET NO.
 3 OF 3

PROJECTS:10725:GRAY:Wat:Stw:ing PROFILE VDH 12-6-02 14:35