

CONTRACT NO. 24-3117-D

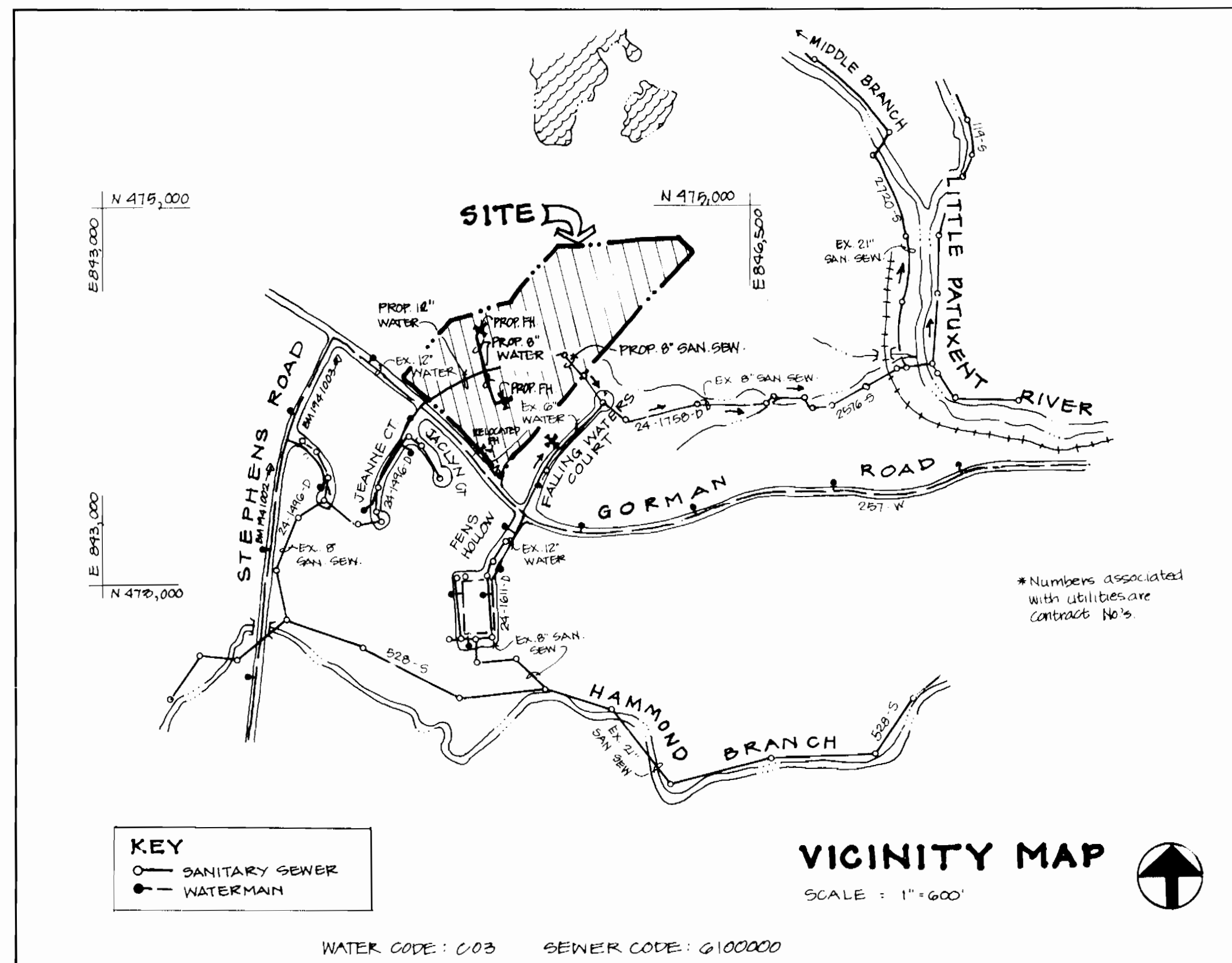
SOUTHEASTERN ELEMENTARY SCHOOL WATER & SEWER EXTENSIONS

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 6TH ELECTION DISTRICT

QUANTITIES			
ITEM	EST'D.	AS-BUILT	SUPPLIED
6" WATER	70 LF	59 LF	GORMAN
8" WATER	993 LF	316 LF	"
12" WATER	267 LF	282 LF	"
6" VALVES	3 EA	3 EA	KENNEDY
12" VALVES	1 EA	1 EA	"
8" x 6" REDUCER	2 EA	2 EA	"
12" x 6" REDUCER	1 EA	1 EA	"
12" x 12" TAPPING GREECE	1 EA	1 EA	CLAW
8" - 90° HB	1 EA	1 EA	GRIFFIN
8" - 22 1/2° HB	1 EA	-	"
FIRE HYDRANT	2 EA	2 EA	KENNEDY
8" SAN. GEN.	165 LF	102 LF	"
6" HOUSE CONN.	25 LF	26 LF	"
MANHOLES INCLUDING FRAMING & COVERS	2 EA	1 EA	ATLANTIC
DROP CONN. INCLUDING 1/2" & BENDS	10 LF	1 LF	HARCO
TEST PIT	2 EA	2 EA	CONTRACTOR
8" VALVES	2 EA	2 EA	KENNEDY
12" x 8" CROSS	1 EA	1 EA	GRIFFIN

ABBREVIATIONS:

&	AND
AN	AS NOTED
APPROX	APPROXIMATE
B	BORING
BGSE	BALTIMORE GAS & ELECTRIC
BIT	BITUMINOUS
BM	BENCH MARK
BLDG	BUILDING
C&G	CURB AND GUTTER
CB	CONCRETE BUTTRESS
CLF	CENTER LINE
CO	CLEAN OUT
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTRACT
CONST	CONSTRUCTION
DI	DROP INLET
DIP	DUCTILE IRON PIPE
E	EAST
EA	EACH
EL	ELEVATION ABOVE SEA LEVEL
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ES	END SECTION
ESMT.	EASEMENT
EX	EXISTING
FF	FINISHED FLOOR
FN	FIRE HYDRANT
G	NATURAL GAS
GAL	GALLON
GPM	GALLONS PER MINUTE
HB	HORIZONTAL BEND
INCLUD.	INCLUDING
INV	INVERT
L	LENGTH OF CURVE
LAT	LATERAL
LF	LINEAR FOOT
LOC	LOCATION
MCH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
N	NORTH
NA	NOT APPLICABLE
NO	NUMBER
OP	OVERHEAD POWER
OP&T	OVERHEAD POWER AND TELEPHONE
OT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REV	REVISION
S	SOUTH
SAN	SANITARY
SOP	SITE DEVELOPMENT PLAN
SEW	SEWER
SHT	SHEET
SMH	SANITARY MANHOLE
STA	STATION
STM	STORM
T	TANGENT
TB	TEST BORING
TELE	TELEPHONE
TP	TEST PIT
TRNS	TRANSFORMER
TS&V	TAPPING GREECE & VALVE
TYP	TYPICAL
UP	UNDERGROUND POWER
UT	UNDERGROUND TELEPHONE
V	VALVE
W	WATER
W	WEST
W	WITH
WF	WIRE FENCE
WM	WATER MAIN
W/O	WITH OUT



TYPE & LOT: ONE, ELEMENTARY SCHOOL

NO. OF WATER HOUSE CONNECTIONS: 1

NO. OF SEWER HOUSE CONNECTIONS: 1

DRAINAGE/TREATMENT BASIN: LITTLE PATUXENT

WATER AND SEWER CODE FOR COUNTY USE ONLY

SEWER NO.: 0100000

WATER NO.: 003

RECOVERY CARD	
STATION: 1941003	DATE: 04/28/77
BY: J.E.H.	BY: J.E.H.
REVISION: 10-20-81	BY: J.E.H.
REVISION: 11-2-82	BY: J.E.H.

GENERAL NOTES:

- 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.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM OF 1929.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL PIPES BY A MINIMUM OF 2". ANY COST INCURRED BY THE CONTRACTOR FOR REPAIRING OR TUNNELING SHALL BE INCLUDED IN THE BID FOR CONSTRUCTION OF WATER MAINS.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. 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 VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION - 531-5533
 - BALTIMORE GAS & ELECTRIC CO. - UNDERGROUND ELECTRICAL DISTRIBUTION - 685-0123
 - BALTIMORE GAS & ELECTRIC CO. - UNDERGROUND GAS DISTRIBUTION - 685-0123
 - ENGINEERING "DAMAGE CONTROL" - 234-5621
 - MISS UTILITY - 1-559-0100
 - COLONIAL PIPELINE CO. - 795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 919-4400
 - CHESAPEAKE & POTOMAC (CAP) TELEPHONE COMPANY - 725-9976
 - AMERICAN TELEPHONE AND TELEGRAPH (CABLE LOCATION DIVISION) - 393-3553
- 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.
- 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.
- THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES AND SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO ACCURATELY LOCATE ANY UNDERGROUND UTILITY, FACILITY OR STRUCTURE. THE CONTRACTOR SHALL LOCATE THE UTILITIES AT HIS OWN EXPENSE.
- SEDIMENT CONTROL MEASURES SECTION 219 WILL BE IMPLEMENTED IN ACCORDANCE WITH SDP 91 - 80.

Water Notes

- ALL WATER MAINS SHALL BE D.I.P. CLASS 52.
- TOP OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2' COVER UNLESS OTHERWISE NOTED.
- VALVES AND HYDRANTS ADJACENT TO TREES SHALL BE STRAPPED OR RESTRAINED.
- ALL FITTINGS TO HAVE CONCRETE THRUST BLOCKS.
- BURY LINE ELEVATIONS ON FIRE HYDRANTS SHALL BE SET TO THE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT TO 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 SYSTEM.

Sewer Notes

- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., 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.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G-5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.

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

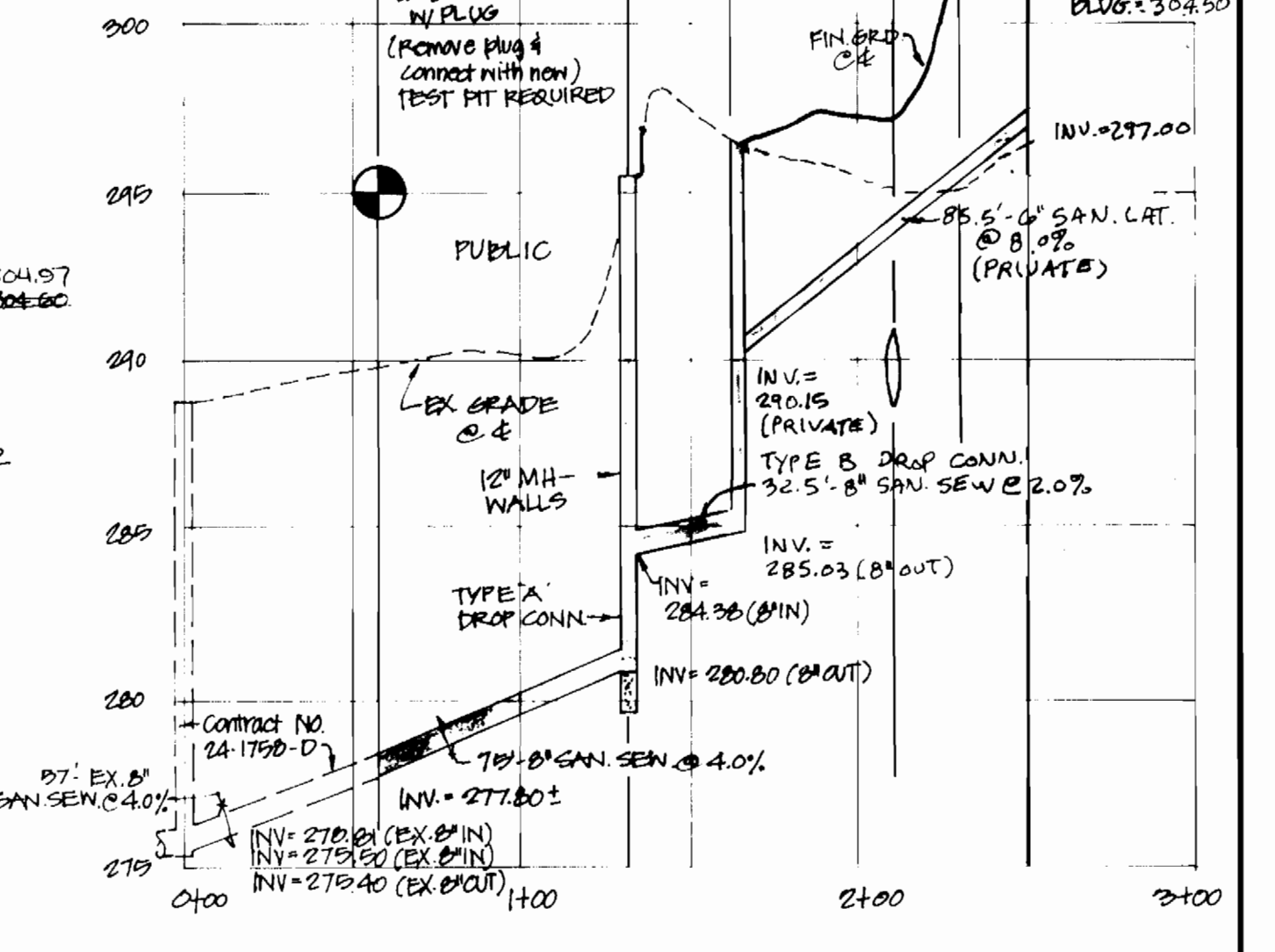
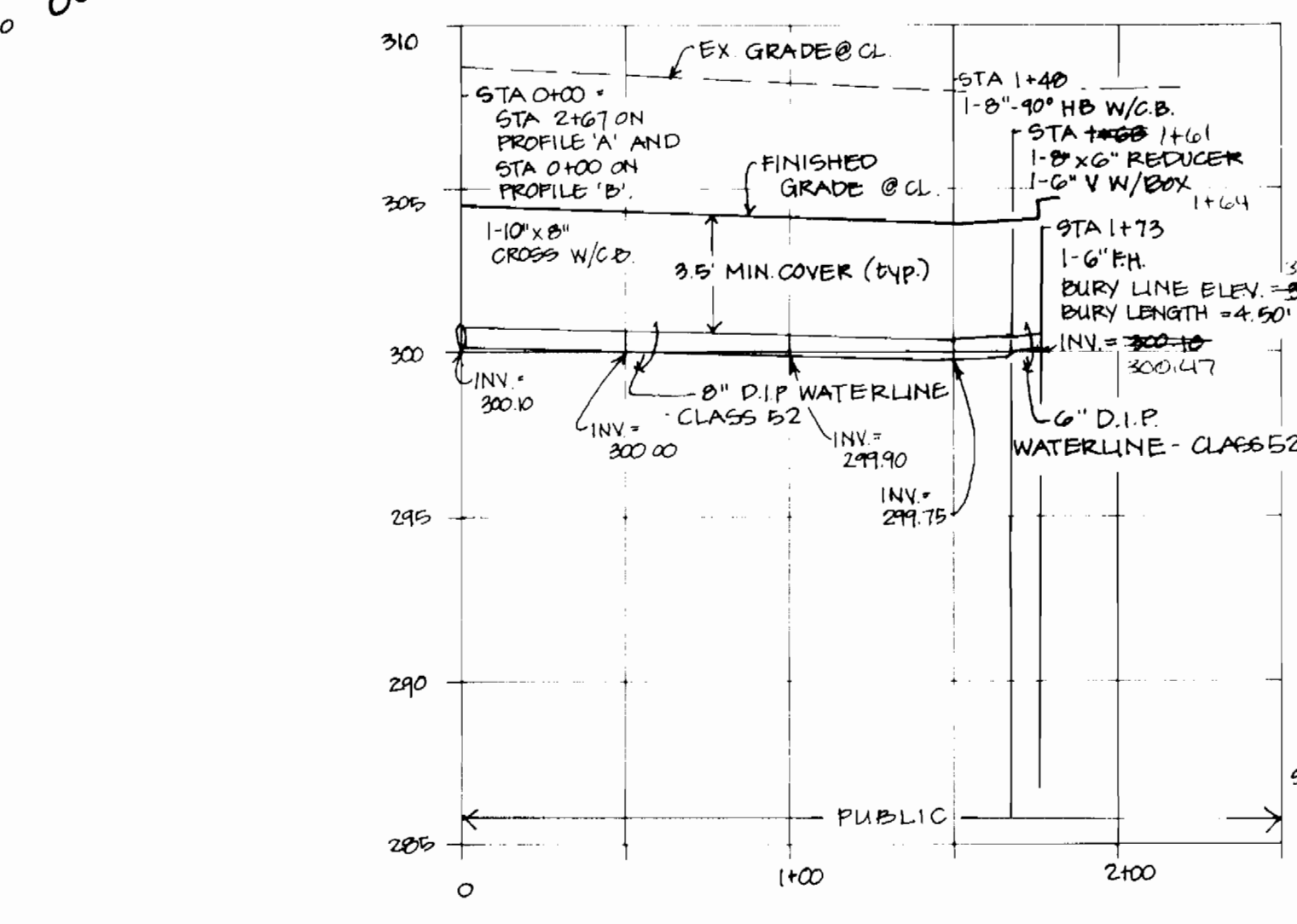
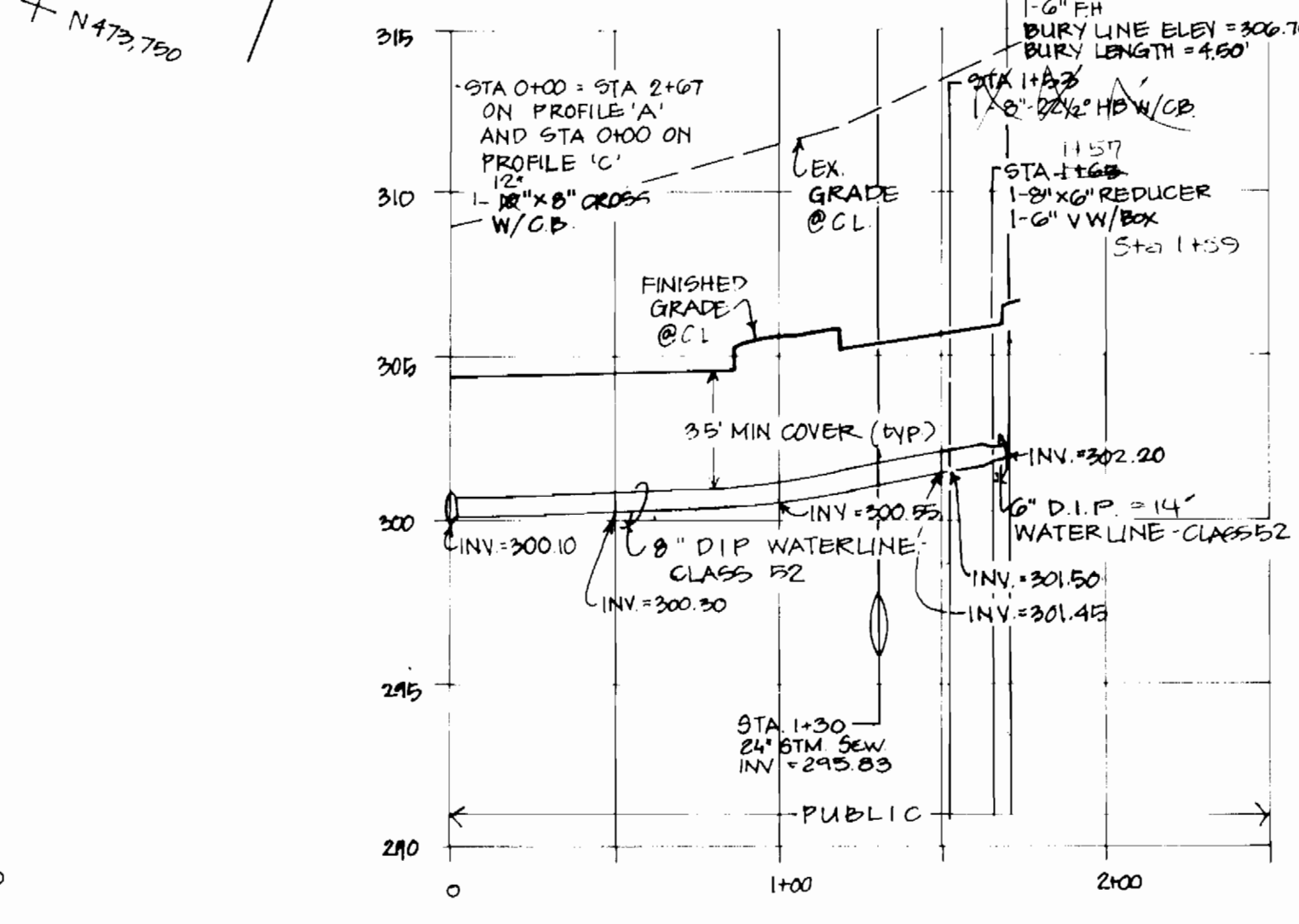
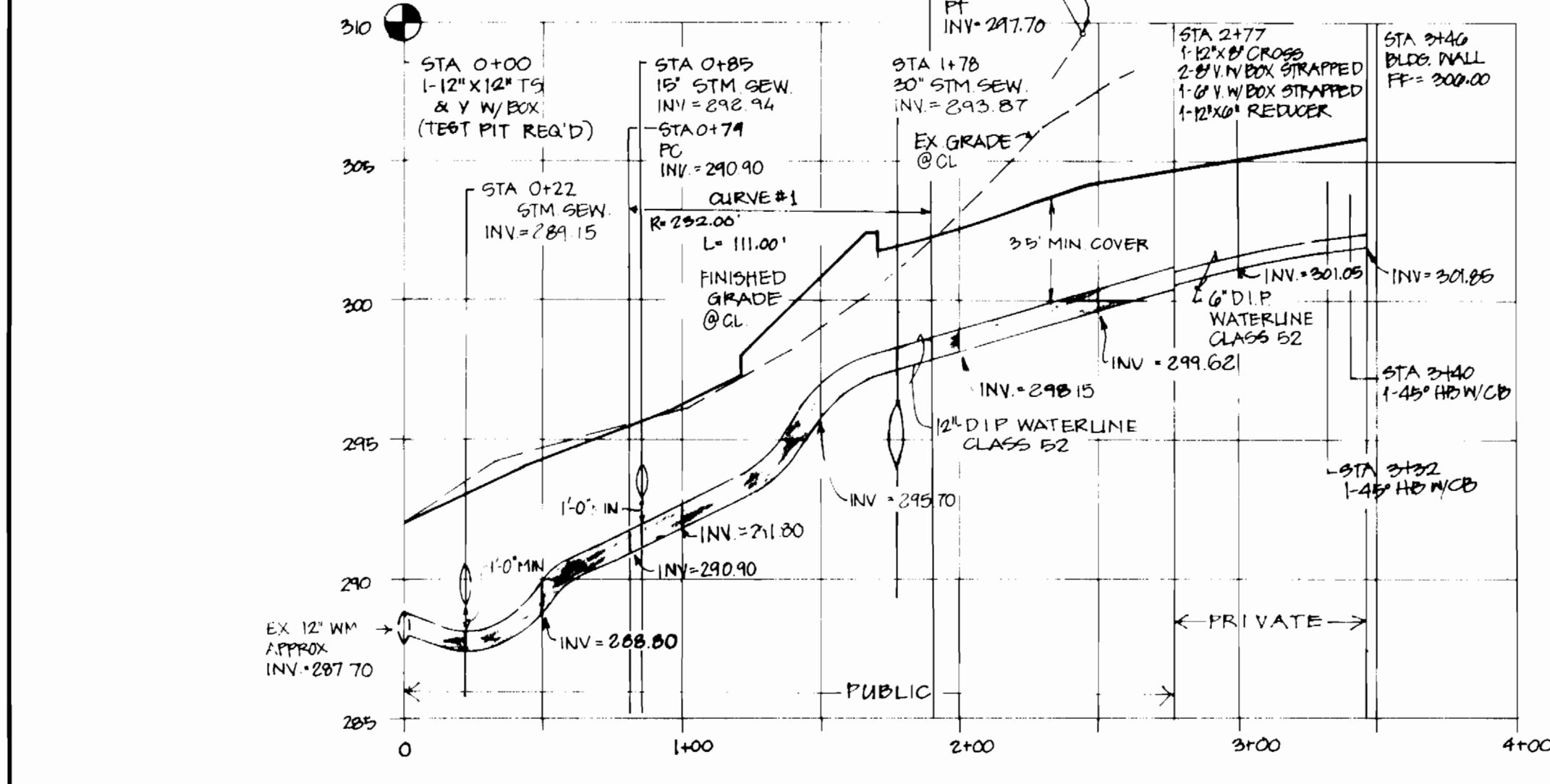
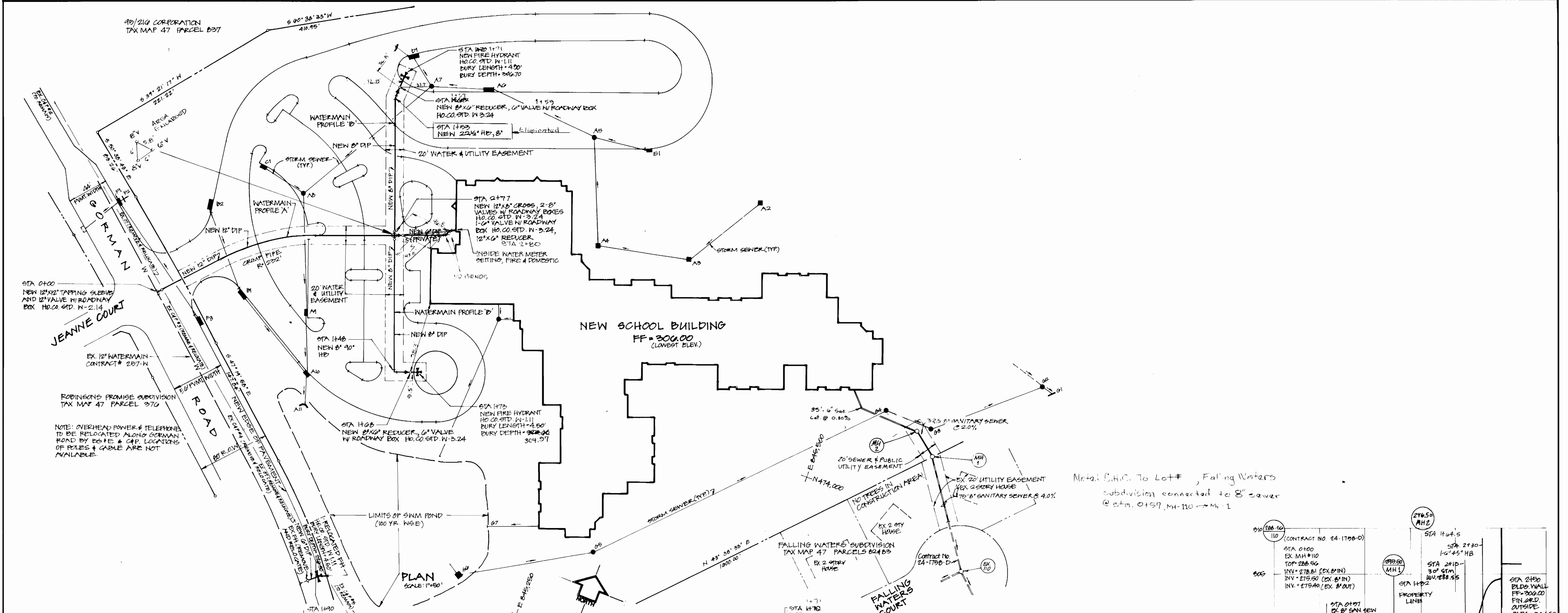
REVISED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

APPROVED: *[Signature]* DATE: 4/22/79

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HOWARD COUNTY SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works - DATE: 4-23-79 Chief, Bureau of Engineering - DATE: 4-23-79 Chief, Bureau of Utilities - DATE: 4-22-79 Chief, Land Development Div. - DATE: 4-22-79	NO. BY REVISION 1. J.E.H. 2. J.E.H.	DATE 03-10-91 03-12-91	 CAD-CON INCORPORATED STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL ENGINEERS 3025 HAMAKER COURT SUITE 201 FAIRFAX, VIRGINIA 22031 1703 290 - 2908	New Sanitary Sewer and Watermain Plan and Profile SDP 91-80 600 SCALE MAP NO. 41 BLOCK NO. 16	SOUTHEASTERN ELEMENTARY SCHOOL 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 24-3117-D	DES: RCM DRN: CLK CHK: RRS DATE: 12-5-90	SCALE: AS SHOWN SHEET 1 OF 2
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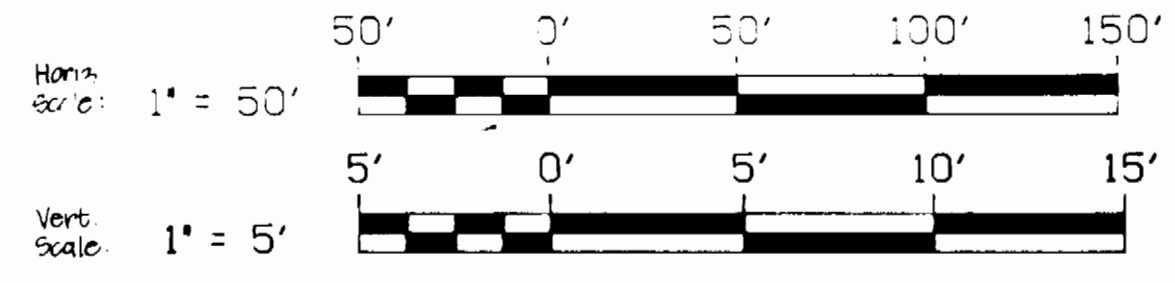


WATERMAIN PROFILE 'A':

WATERMAIN PROFILE 'B':

WATERMAIN PROFILE 'C':

SANITARY SEWER PROFILE



SITE DEVELOPMENT NO.: SEP 91-80
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. REVISED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT SHEETS TECHNICAL REQUIREMENTS.
 APPROVED: [Signature] DATE: 9/22-91
 HOWARD COUNTY SOIL CONSERVATION DISTRICT S. SOIL CONSERVATION SERVICE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works - DATE: 4-23-91
 Chief, Bureau of Engineering - DATE: 4-23-91
 Chief, Bureau of Utilities - DATE: 4-23-91
 Chief, Land Development Div. - DATE: 4-23-91

NO.	BY	REVISION	DATE
3		Revised San. Sew. Serv.	4-23-91
2		SECOND SUBMISSION	08-18-91
1		BID DOCUMENTS	08-12-91

CAD-CON INCORPORATED
 STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL ENGINEERS
 3025 HAMMER COURT SUITE 201
 FAIRFAX, VIRGINIA 22031
 (703) 280-2588

New Sanitary Sewer and Watermain Plan and Profile
 SEP 91-80
 600 SCALE MAP NO. 41 BLOCK NO. 16

SOUTHEASTERN ELEMENTARY SCHOOL
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT NO. 24-3117-D

DES: RCM	SCALE: AS SHOWN
DRN: CLK	SHEET
CHK: RRS	DATE: 12-8-90
DATE: 12-8-90	2 OF 2