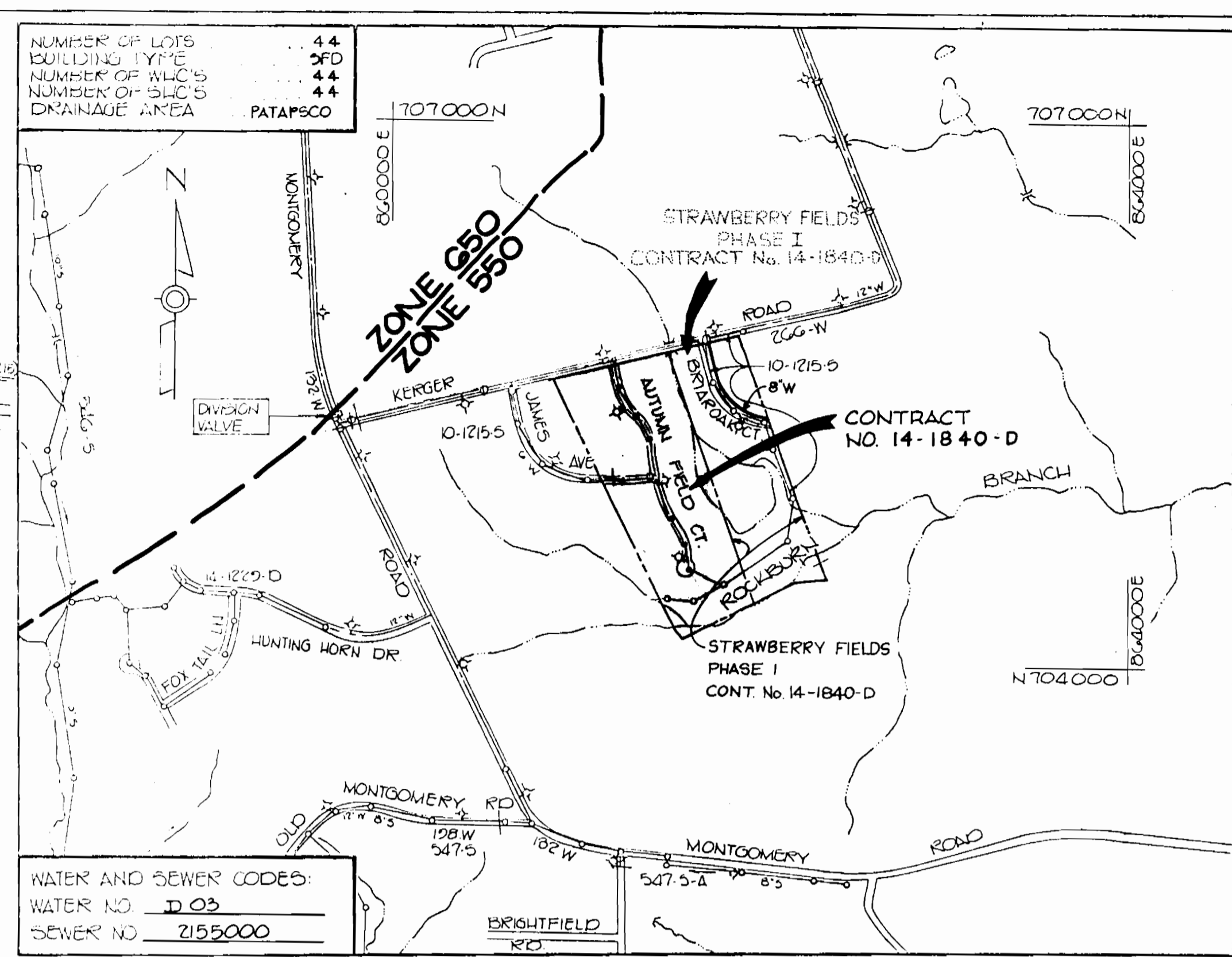


BENCH MARK DESCRIPTION

HC BM #2744000 ELEV 419262
 3/4" REBAR 0.5' BELOW SURFACE 10 ± WEST
 EDGE OF ROUTE #103 AND 50' NORTH OF E
 OF KERGER ROAD

HC BM #2744004 ELEV 419267
 3/4" REBAR 0.5' BELOW SURFACE 7 ± WEST
 OF ROUTE #103 AND 1400 ± SOUTH OF INTERSECT
 INTERSECTION WITH ILCHESTER ROAD



WATER AND SEWER CODES:
 WATER NO. D 03
 SEWER NO. 2155000

- 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.C. DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT "O" 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, ANY COST INCURRED BY THE OWNER FOR 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 DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- SHORT 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 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.
- 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. CONTRACTOR SERVICES - 850-4620
 - BALTIMORE GAS & ELECTRIC CO. UNDER GROUND DAMAGE CONTROL - 859-9004
 - BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING - 298-9001
 - MIS; UTILITY - 1-549-0100
 - COLORADO PIPELINE CO. - 795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366
- TREES ARE TO BE PROTECTED TO MAXIMUM EXTENT. TREES 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 AS DIRECTED BY THE ENGINEER. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EXCAVATION AND BACKFILL.
- 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.
- ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
- TOP OF ALL WATER MAINS TO HAVE A MINIMUM OF 3" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- BLOCKED FITTINGS WITH CONCRETE.
- BURY LINE ELEVATIONS OR 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 1005 OF THE GENERAL REQUIREMENTS FOR WATER AND SEWER.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR AN INSIDE METER SETTING.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.
- ALL SERVICE CONNECTIONS SHALL BE IN ACCORDANCE WITH SPECIFICATION C-155 DUCTILE IRON COMPACT FITTINGS, 5-1/2" FOR WATER AND OTHER LIQUIDS.
- ALL SEWER MAINS SHALL BE C.S.P.X., V.C.P.X., 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 G5.52 VOLUME I; WHEN WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE.
- HOUSES WITH THE SYMBOL "C.N.S." INDICATES THE CELLAR CANNOT BE SERVED.
- ALL WATER MAIN CONNECTIONS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 12" ABOVE ALL SANITARY SEWER CROSSINGS.
- ALL SANITARY SEWER CONNECTIONS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 12" BELOW ALL WATER MAIN CROSSINGS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO SUBGRADE.

- NOTES:**
- LOTS 1 THRU 3 AND LOT 44 HAVE EXISTING PLUGGED 8" C-TEES ONLY WHICH WERE BUILT UNDER CONTRACT 10-1215. THE CONTRACTOR TO REMOVE EXISTING C-PLUGS AND CONSTRUCT 6" SEWER HOUSE CONNECTIONS AS SHOWN ON PLAN.
 - LOTS 4 THRU 43 ARE TO HAVE 4" SHC.

PLAN
 SCALE 1" = 50'

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

James M. Hahn 7/27/90
 S.O. SOIL CONSERVATION DISTRICT

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

John R. Roberts 7/27/90
 HOWARD SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER ROAD CONSTRUCTION PLANS #F-09-20

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James M. Hahn 7/27/90
 DIRECTOR OF PUBLIC WORKS DATE

John R. Roberts 7/27/90
 CHIEF, BUREAU OF UTILITIES DATE

CHIEF, BUREAU OF ENGINEERING DATE

John M. Tamm 7/27/90
 CHIEF, LAND DEVELOPMENT DIVISION DATE

TRACY, SCHULTE & ASSOCIATES, INC.
 planning · architecture · engineering
 8480 Baltimore National Pike, Suite 418
 Ellicott City, Maryland 21043

John M. Tamm

DES	RJW				
ORN	CRS				
CHK	JKT				
DATE	4/26/90	ES	Δ	CHANGE CONT. No.	11-29-90
		BY	NO	REVISION	

QUANTITIES			
ITEM	ESTIMATED	AS-BUILT	SUPPLIER
6" Water	1291 LF	1286 LF	Guthrie Pipe Products
6" Water	400 LF	376 LF	Guthrie Pipe Products
12"x8" T&V	1 EA	1 EA	Baldwin Pipe Supply, Ltd. Pipe & Foundry
Fire Hydrants	3 EA	3 EA	Baldwin Pipe Supply, Ltd. Pipe & Foundry
1" W.H.C.	488 LF	459 LF	Baldwin Pipe Supply, Ltd. Pipe & Foundry
3/4" W.H.C.	304 LF	482 LF	Baldwin Pipe Supply, Ltd. Pipe & Foundry
8" Sewer	1547 LF	1358 LF	Baldwin Pipe Supply, Ltd. Pipe & Foundry
Manholes	75 VF	70 VF	Atchafalaya Concrete
6" S.H.C.	124 LF	69 LF	Baldwin Pipe Supply, Ltd. Pipe & Foundry
8" Saddles	3 EA	3 EA	Baldwin Pipe Supply, Ltd. Pipe & Foundry

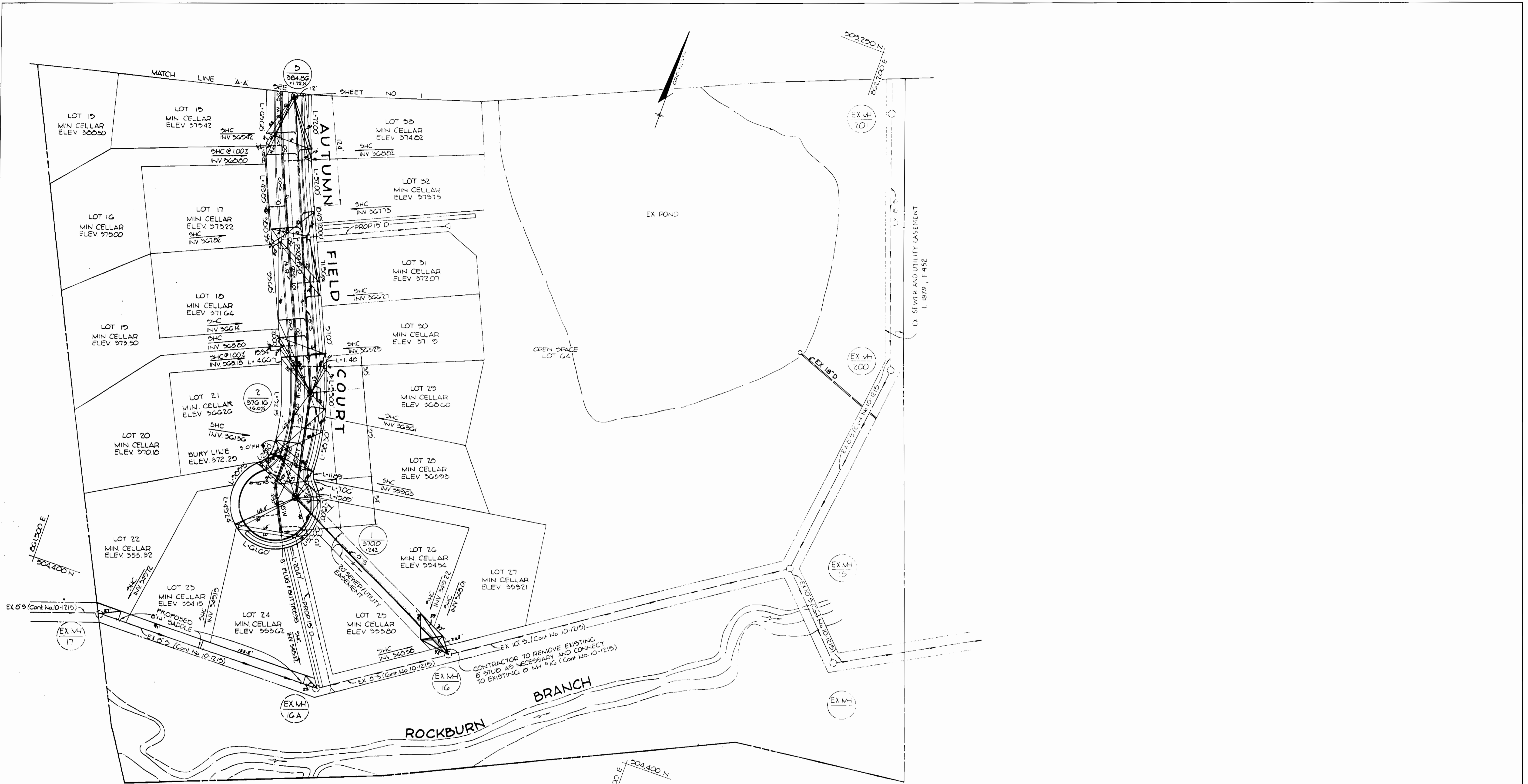
QUANTITIES (CONT.)			
8" VALVE	1 EA	1 EA	Baldwin Pipe Supply, Ltd. Pipe & Foundry
6" Valves, Excl. FH Valves	1 EA	1 EA	Baldwin Pipe Supply, Ltd. Pipe & Foundry
4" S.H.C.	811 LF	1189 LF	Baldwin Pipe Supply, Ltd. Pipe & Foundry

PLAN OF WATER AND SEWER MAINS

PHASE I
 STRAWBERRY FIELDS
 SECTION I, AREA I
 LOTS 1-44
 ELECTION DISTRICT NO. 1
 CONTRACT NO. 14-1840-D
 AS-BUILT 8-9-91

SCALE AS SHOWN

SHEET 1 OF 3



PLAN
SCALE 1"=50'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Michael A. Drayton 8/1/90
DIRECTOR OF PUBLIC WORKS DATE

Oliver M. ... 7/31/90
CHIEF, BUREAU OF ENGINEERING DATE

Oliver M. ... 7/31/90
CHIEF, LAND DEVELOPMENT DIVISION DATE

TRACY, SCHULTE
& ASSOCIATES, INC.
planning · architecture · engineering
8480 Baltimore National Pike · Suite 418
Ellicott City, Maryland 21043

Peter O. ...

DES: RJW					
DRN: CRS					
CHK: JKT					
DATE: 4-26-90	ES	Δ	CHANGE CONT No.	11-29-90	
	BY	NO.	REVISION	DATE	

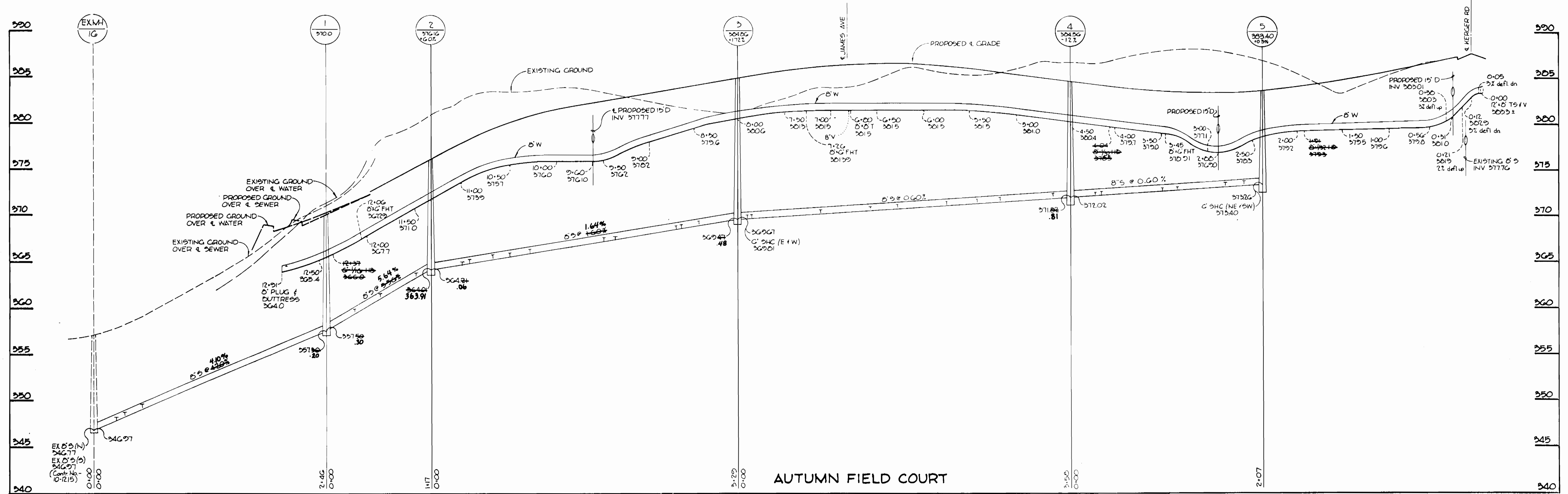
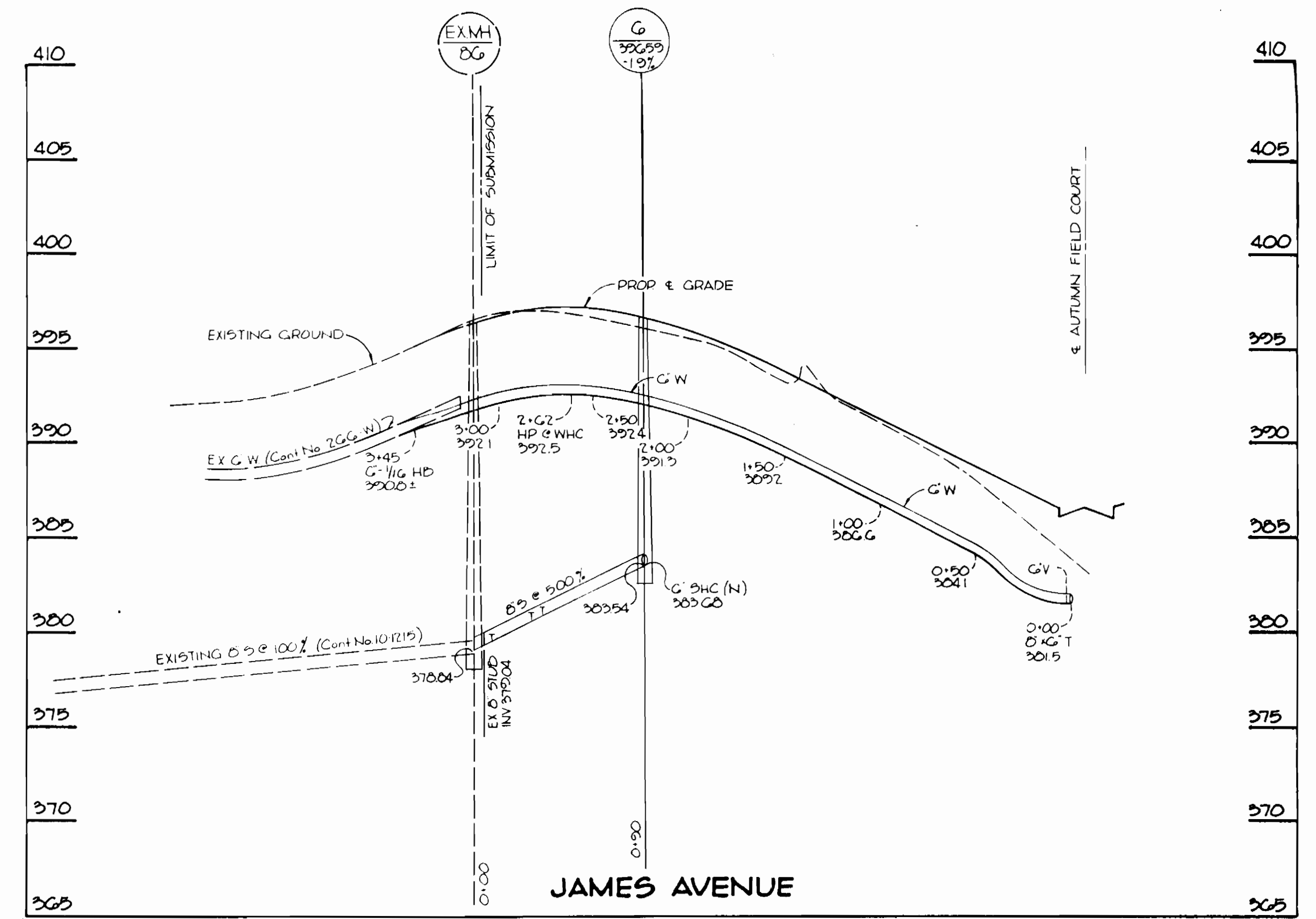
PLAN OF
WATER AND SEWER MAINS

MAP NO. 31 BLOCK NO. 21

PHASE I
STRAWBERRY FIELDS
SECTION 1, AREA 1
LOTS 1-44
ELECTION DISTRICT NO. 1
CONTRACT NO. 14-1840-D
AS BUILT 8-2-91

SCALE
AS
SHOWN

SHEET
2 OF 3



PROFILE
SCALE H 1"=50'
V 1"=5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Van... 8/1/90
DIRECTOR OF PUBLIC WORKS DATE

... 7/30/90
CHIEF, BUREAU OF UTILITIES DATE

... 7/30/90
CHIEF, LAND DEVELOPMENT DIVISION DATE

TRACY, SCHULTE
& ASSOCIATES, INC.
planning · architecture · engineering
8480 Baltimore National Pike, Suite 418
Ellicott City, Maryland 21043

Peter A. Selig...

DES: JLR			
DRN: JLT			
CHK: RJW			
DATE: 4-26-90	ES	Δ	CHANGE CONT. No. 11-29-90
BY NO.			REVISION

PROFILES OF
WATER AND SEWER MAINS

600' SCALE MAP NO. 31 BLOCK NO. 21

PHASE I
STRAWBERRY FIELDS
SECTION I, AREA I
LOTS 1-44
ELECTION DISTRICT NO. 1
CONTRACT NO. 14-1840-D

SCALE AS SHOWN
SHEET 3 OF 3

AS-BUILT 8-9-91