

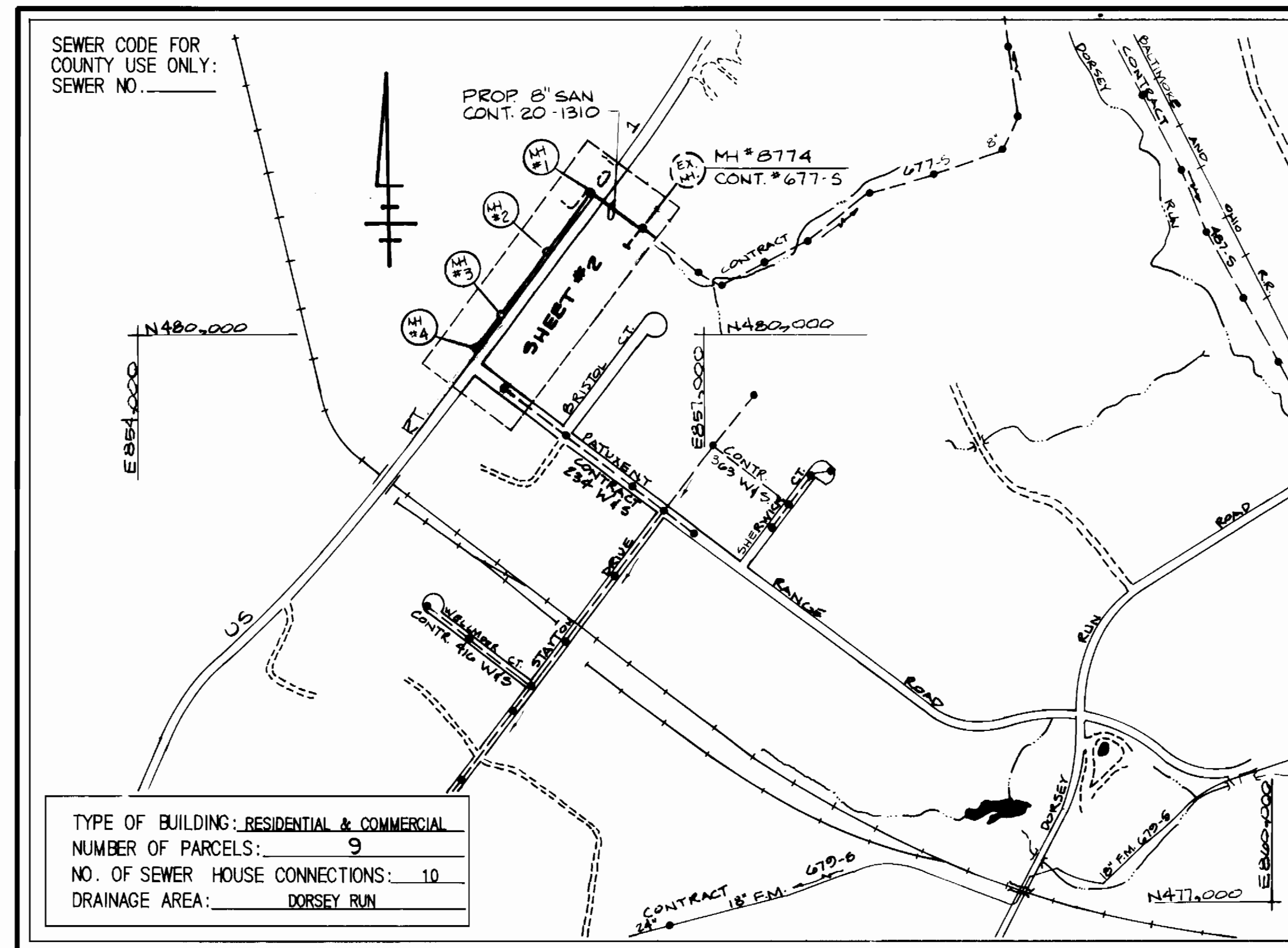
ROUTE 1 SEWER CAPITAL PROJECT NO. S-6137 CONTRACT NO. 20-1310

GENERAL NOTES

1. 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.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6".
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. 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.
8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
STATE HIGHWAY ADMINISTRATION - 531-5533
BALTIMORE GAS & ELECTRIC COMPANY - CONTRACTOR SERVICES - 850-4620
BALTIMORE GAS & ELEC. CO. - UNDERGROUND DAMAGE CONTROL - 859-9004
BALTIMORE GAS & ELEC. CO. - TROUBLE SHOOTING - 298-9001
"MISS UTILITY" - 1-559-0100
COLONIAL PIPELINE COMPANY - 795-1390
BUREAU OF UTILITIES HOWARD CO. DEPT. OF PUBLIC WORKS - 992-2366
9. 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.
10. 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.
11. ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., ACP CLASS 2400 OR P.V.C. UNLESS OTHERWISE NOTED.
12. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
13. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
14. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE BRICK MANHOLES ONLY.
15. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
16. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATE THAT CELLAR CANNOT BE SERVED.
17. FOR RESTORATION SCHEDULE SEE SHEET 3 OF 3

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR WILL COMPLY WITH ALL REQUIREMENTS OF SEDIMENT AND EROSION CONTROL SET FORTH IN THE CONTRACT DRAWINGS, THE USDA SOIL CONSERVATION SERVICE MANUAL, "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS", AND VOLUME IV - ARTICLE 15 OF THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV.
2. THE CONTRACTOR SHALL NOT PUMP FROM EXCAVATED AREAS DIRECTLY INTO THE HOWARD COUNTY STORM DRAINAGE SYSTEM OR ANY NATURAL WATER COURSE, WHERE GROUND WATER IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE PORTABLE OR EXCAVATED SEDIMENT TRAPS TO PREVENT SILTED TRENCH WATER FROM ENTERING STORM DRAINAGE SYSTEMS OR NATURAL WATERWAYS.
3. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH WATER WHENEVER POSSIBLE, AND CONFINED TO AN AREA WHERE IT WILL NOT OBSTRUCT THE NORMAL FLOW OR DRAINAGE COURSES.
4. ALL SWALES SHALL BE EQUIPPED WITH A SEDIMENT RETENTION DEVICE TO TRAP SEDIMENT AND FILTER WATER LEAVING THE RIGHT-OF-WAY PRIOR TO ENTERING ANY RUNNING STREAMS.
5. THE CONTRACTOR SHALL PROVIDE STRAW BALE DIKES NORMAL TO SURFACE WATER FLOW AND AROUND ALL VEHICLE AND EQUIPMENT STAGING AREAS AS SHOWN IN "DETAIL OF A STRAW BALE DIKE" ENCLOSED IN SPECIFICATIONS.
6. ROADSIDE DITCHES AND DRAINAGE PIPES SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION FOLLOWING COMPLETION OF CONSTRUCTION.
7. THE CONTRACTOR SHALL DISPOSE OF SPOILS IN ACCORDANCE WITH GOOD SOIL CONSERVATION PRACTICE AND IN SUCH A MANNER THAT NONE CAN BE CARRIED INTO ANY DRAINAGE FACILITY OR WATER COURSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ALL SPOIL OR EXCESS EXCAVATED MATERIAL ON A SITE APPROVED BY THE SOIL CONSERVATION DISTRICT. DOCUMENTATION OF APPROVAL AND SITE SHALL BE PROVIDED TO THE ENGINEER PRIOR TO BEGINNING WORK.
8. THE HOWARD COUNTY SOIL CONSERVATION DISTRICT MUST BE NOTIFIED IN WRITING BY THE CONTRACTOR AS TO WHERE EXCESS MATERIAL WILL BE DISPOSED OR BORROW MATERIAL WILL BE OBTAINED. PRIOR TO BEGINNING ANY WORK ON THIS PROJECT, COPIES SHALL BE PROVIDED TO THE ENGINEER.
9. CONTINUOUS INSPECTION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROL DEVICES WILL BE REQUIRED.
10. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL AS REQUIRED BY THE SEDIMENT CONTROL INSPECTOR, AS THE WORK PROGRESSES OR REQUIRES.
11. THE CONTRACTOR SHALL NOTIFY IN WRITING, A HOWARD COUNTY SEDIMENT CONTROL DIVISION REPRESENTATIVE AT LEAST THREE (3) DAYS PRIOR TO STARTING WORK. PLEASE CONTACT: HOWARD COUNTY - 992-2436. COPIES SHALL BE PROVIDED TO THE ENGINEER.
12. THE CONTRACTOR SHALL PLACE A STABILIZED CONSTRUCTION ENTRANCE AS SHOWN IN THE HOWARD COUNTY STANDARD DETAILS, G6.11, WHERE SHOWN ON THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
13. SEDIMENT REMOVAL - ALL TRAPPED SEDIMENT IS TO BE REMOVED AND DISPOSED OF AT THE AUTHORIZED LANDFILLS PRIOR TO THE REMOVAL OF SEDIMENT CONTROL STRUCTURES.
14. FOLLOWING INITIAL SOIL DISTURBANCE AND REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
A.) SEVEN (7) CALANDER DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
B.) FOURTEEN (14) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.



LOCATION MAP

SCALE: 1" = 600'

SIXTH ELECTION DISTRICT HOWARD COUNTY MARYLAND

ITEM	QUANTITIES		TYPE MATERIAL	SUPPLIERS
	ESTIMATE	AS BUILT		
8" SEWER	1297 LF	1301 LF	8" PVC	ATLANTIC CONCRETE PRODUCTS
8" SEWER	58 LF	70 LF	DIP CLASS 56	
6" S.H.C.	169 LF	200 LF	6" PVC	ATLANTIC CONCRETE PRODUCTS
MANHOLES	4 EA.	4 EA.	4 PRE-CAST	ATLANTIC CONCRETE PRODUCTS

DEVELOPER'S CERTIFICATION

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."

Frederick Ward Assoc. Inc.
BUREAU OF ENGINEERING 8 DATE
DEPARTMENT OF PUBLIC WORKS

ENGINEER'S CERTIFICATION

I CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Daniel R. Hall
DATE
FREDERICK WARD ASSOC. INC.
5 SOUTH MAIN STREET
BELAIR, MARYLAND 21014

REVIEWED FOR HOWARD COUNTY S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

James M. Helm 6/18/85
U.S. SOIL CONSERVATION SERVICE DATE

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

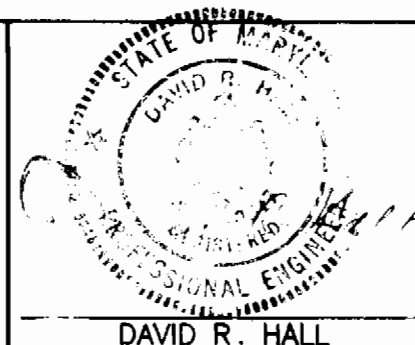
Stephen Z. Fisher 6/18/85
APPROVED DATE
HOWARD COUNTY S.C.D.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

David R. Hall 7/12/85
DIRECTOR OF PUBLIC WORKS DATE
Paul J. ... 7/12/85
CHIEF, BUREAU OF ENGINEERING DATE
... 7/12/85
CHIEF, UTILITY DESIGN DIVISION DATE

FREDERICK WARD ASSOC. INC.
ENGINEERS-ARCHITECTS-SURVEYORS.
5 SOUTH MAIN STREET
BEL AIR, MARYLAND 21014
838-7900 879-2090

David R. Hall
DATE: 8/13/85



DES: S.R.B.			
DRN: J.D.T.			
CHK: D.W.			
DATE: 8/13/85	BY: NO.	REVISION	DATE

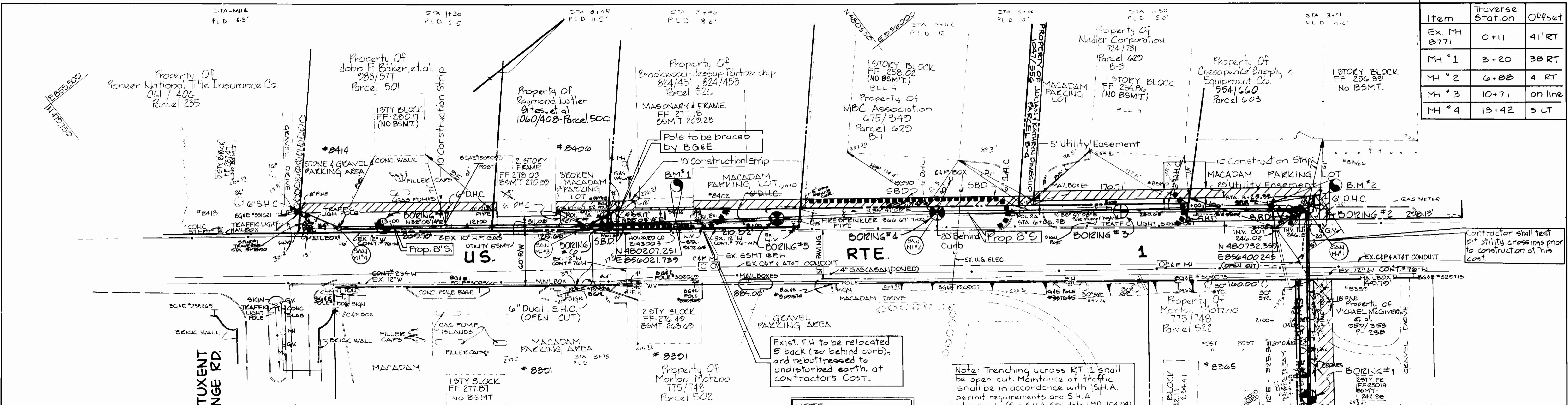
TITLE SHEET
SEWER LINE

600' SCALE MAP NO. S-43 BLOCK NO. 19

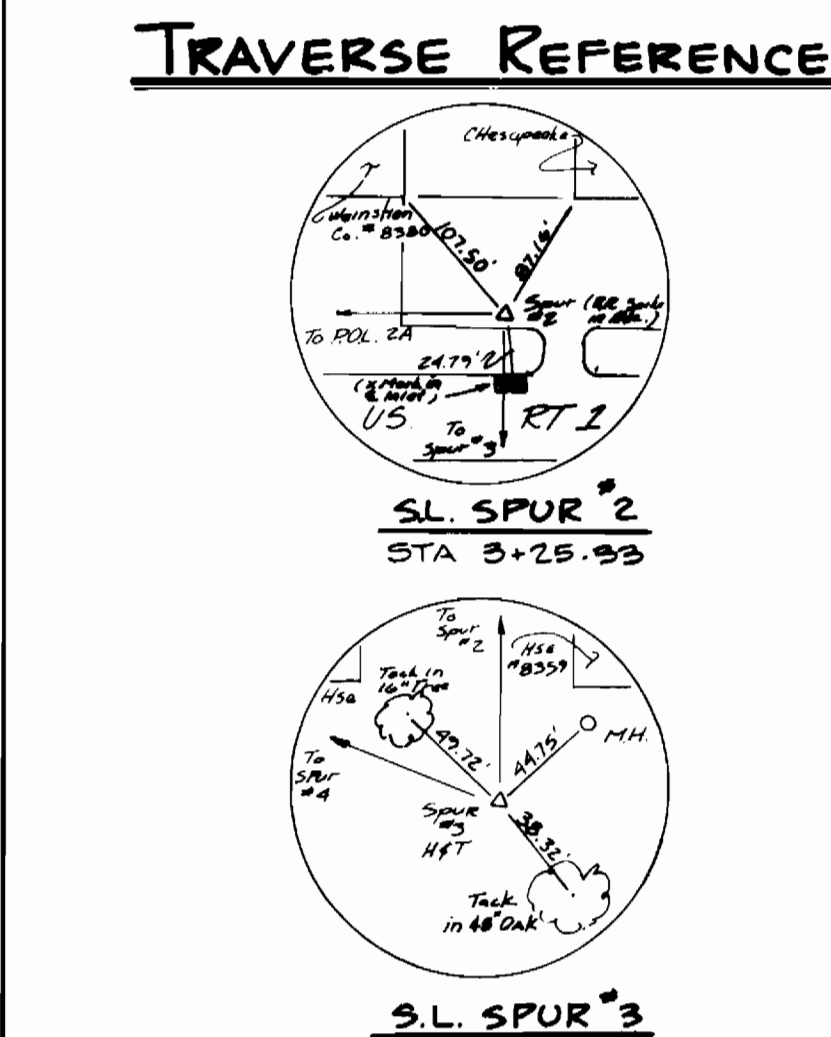
ROUTE 1 SEWER
CAPITAL PROJECT NO. S-6137
CONTRACT NO. 20-1310
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 3

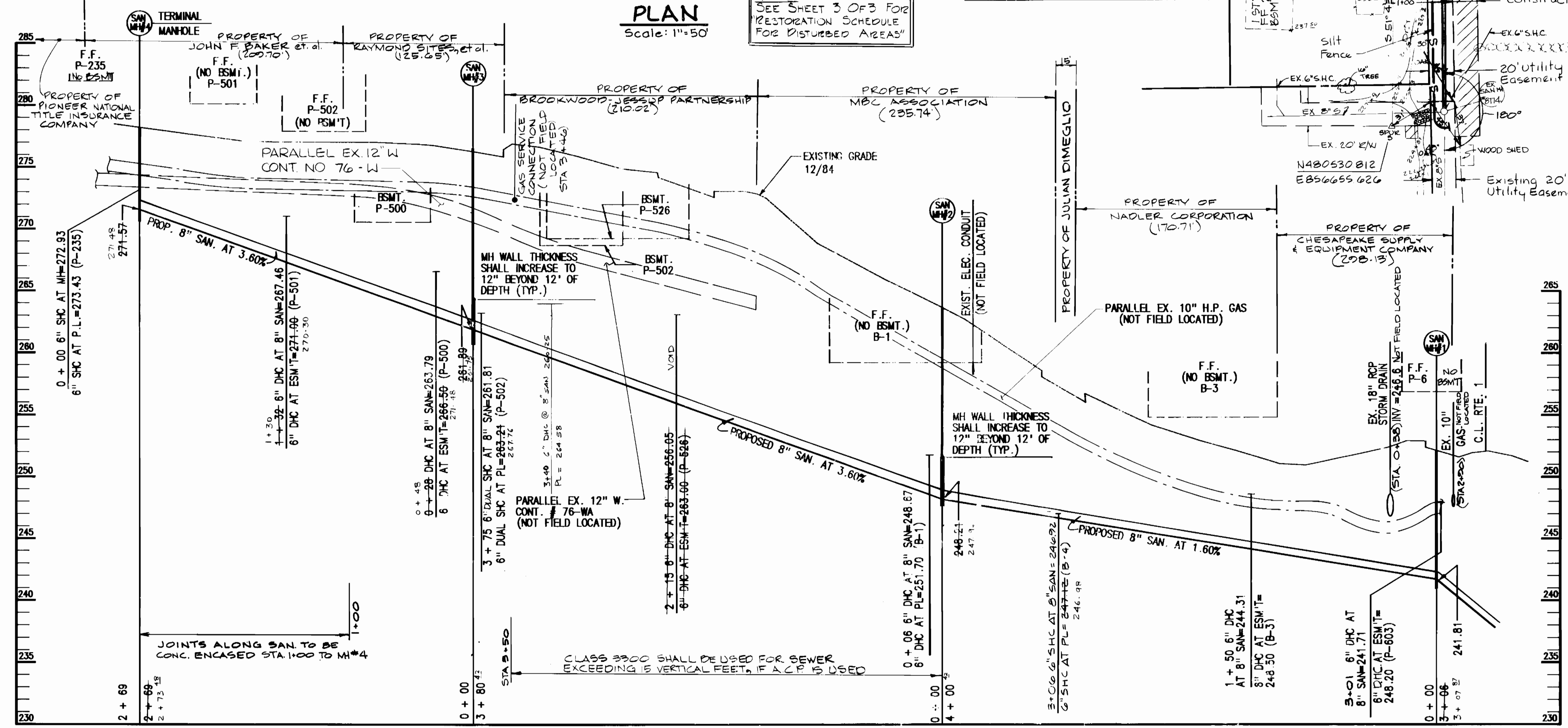
Item	Traverse Station	Offset
Ex. MH B771	0+11	41' RT
MH #1	3+20	38' RT
MH #2	6+88	4' RT
MH #3	10+71	on line
MH #4	13+42	5' LT



- BENCH MARKS**
- Howard County #2143003 Located 8' Behind North Curb of US RT. 1, 430 ± S.E. of the intersection of Patuxent Ranger Road and US RT. 1 Elev. 274.91
 - (Spur #2) R.R. Spike set in Macadam Lot 25 Behind North US RT. 1 Curb, 1080 ± S.E. of the intersection of Patuxent Ranger Road and US RT. 1 Elev. 274.90

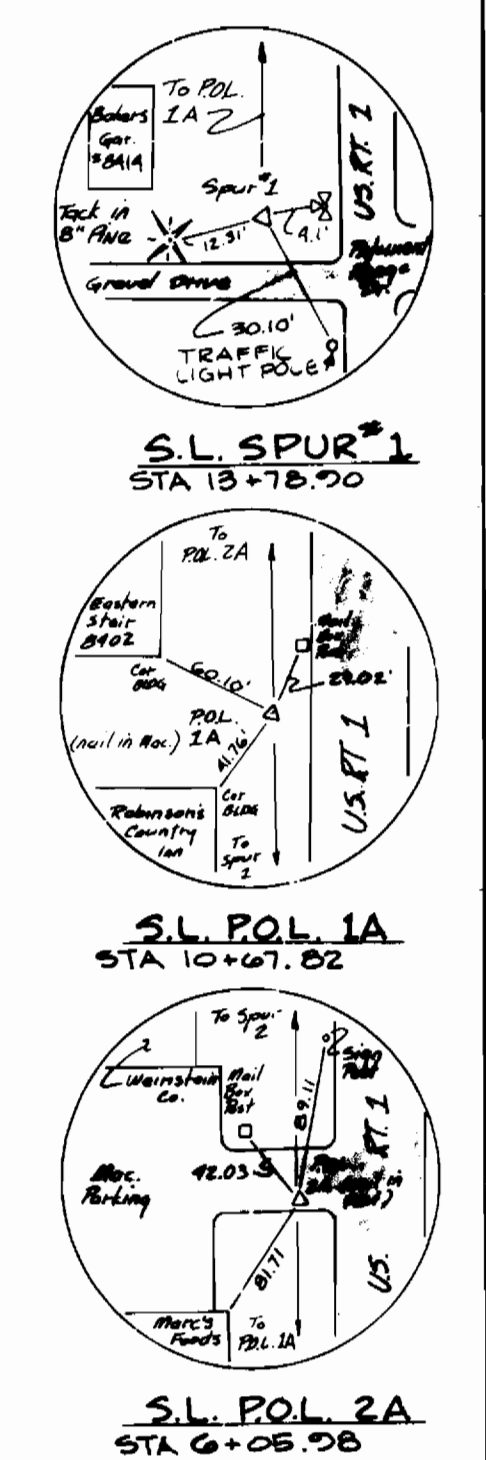


Note: It is the contractor's responsibility to provide necessary means during construction at his cost, to protect all underground utilities & buildings within close proximity of the proposed sanitary sewer.



- NOTE:**
- All disturbed grass areas will be sodded, all other disturbed unpaved areas will be seeded.
 - Contractor shall note that volume IV revisions dated MAR. CH. 1985 are in effect. Particular attention is directed to contingent price items, patching & paving.

TRAVERSE REFERENCES



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: Robert W. ...
Date: 7-17-85

Chief, Bureau of Engineering: ...
Date: 7/12/85

Chief, Utility Design Division: ...

FREDERICK WARD ASSOC. INC.
ENGINEERS-ARCHITECTS-SURVEYORS
5 SOUTH MAIN STREET
RFI, AIR, MARYLAND 21014
838-1900 879-2090

DAVID R. HAVI



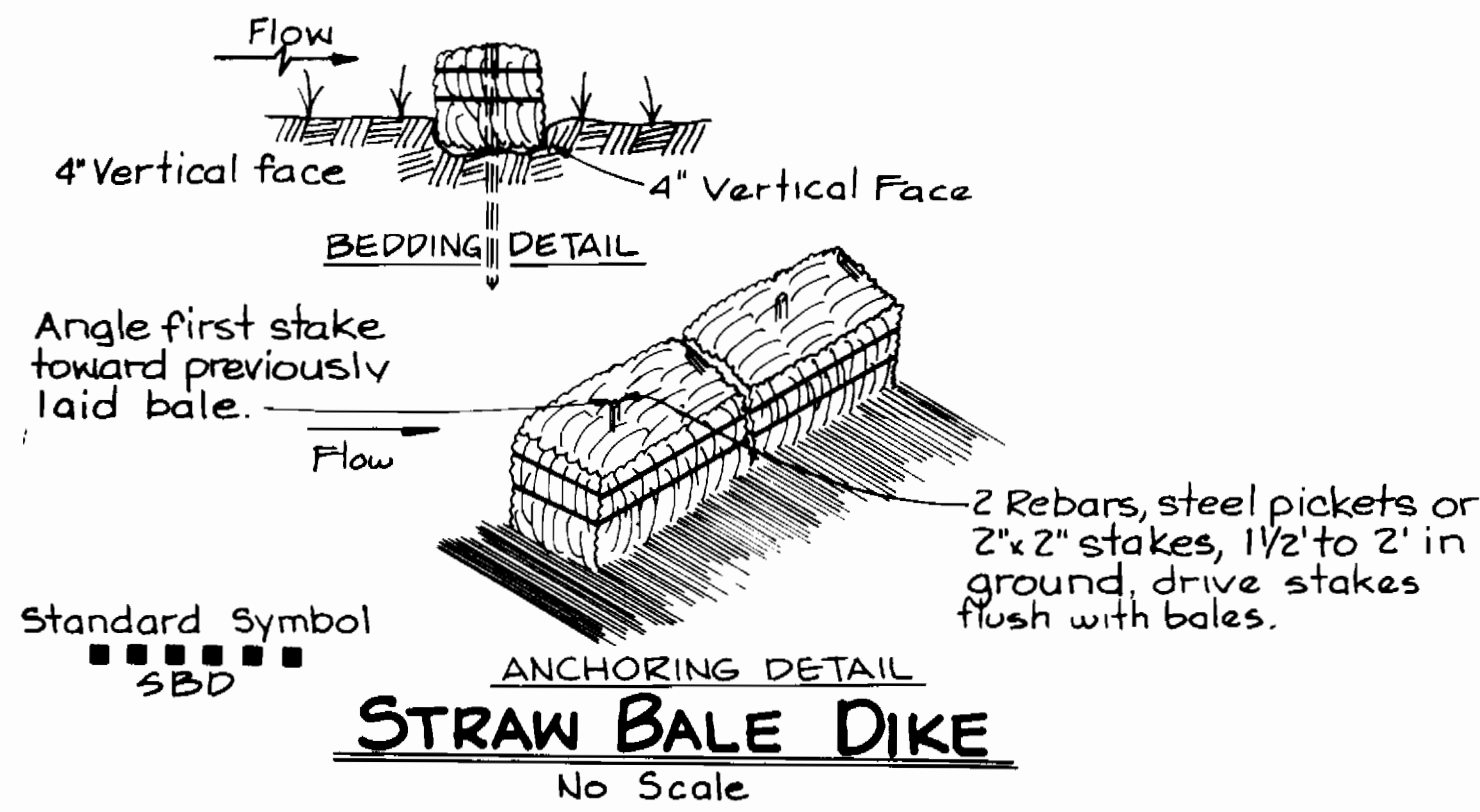
DES: S.R.B.	BY NO.	REVISION	DATE
DRN: J.D.I.			
CHK: D.W.			
DATE: 5/13/85			

PLAN AND PROFILE
SEWER LINE

600' SCALE MAP NO. 5-3 BLOCK NO. 19

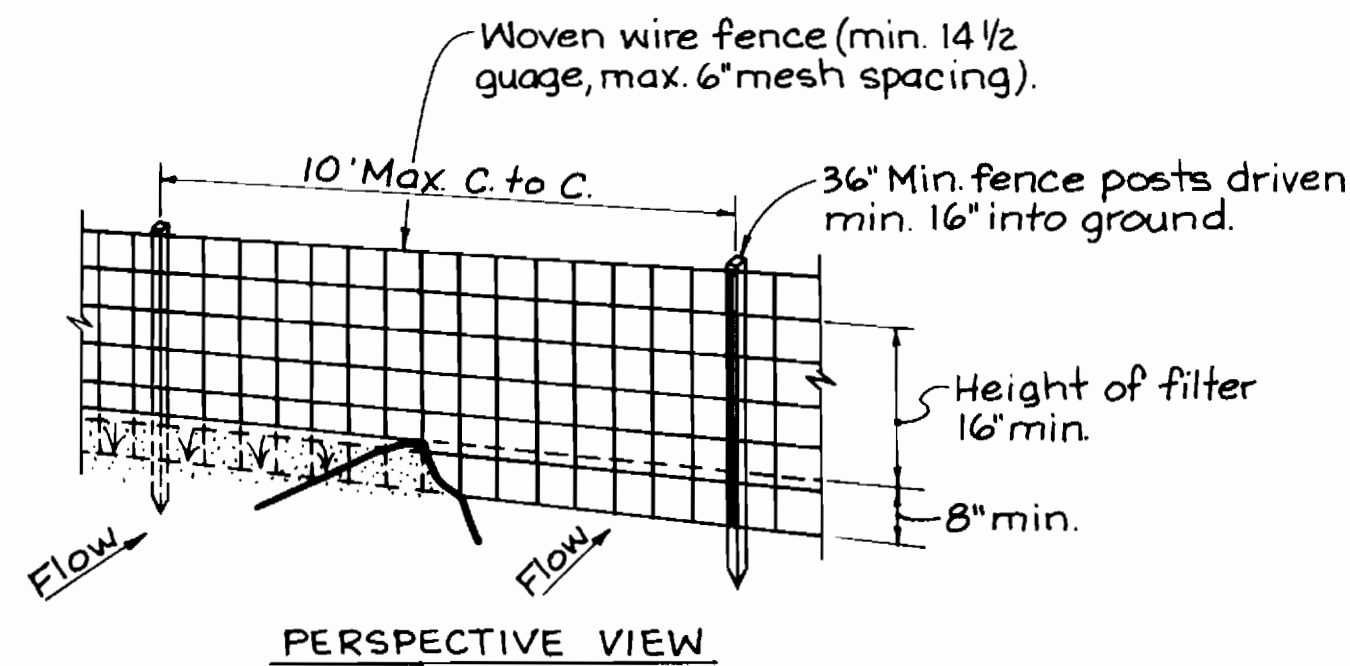
ROUTE 1 SEWER
CAPITAL PROJECT NO. S-6137
CONTRACT NO. 20-1310
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 3



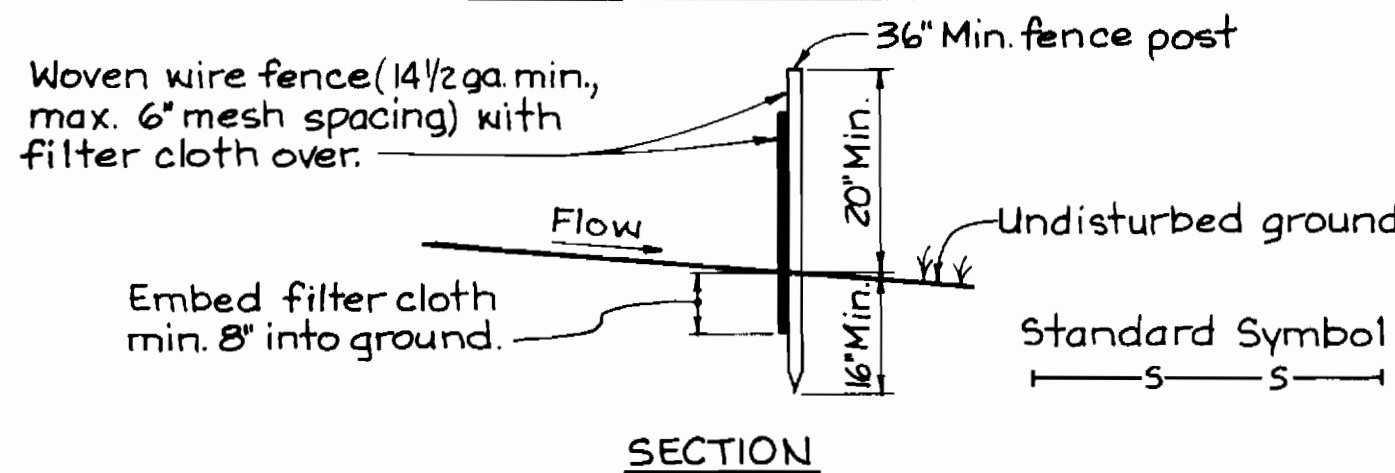
CONSTRUCTION SPECIFICATIONS FOR STRAW BALE DIKE

- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 - WHEN TWO SECTIONS OF FILTER CLOTH JOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
- POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD
- FENCE: WOVEN WIRE, 14 1/2 GA. 6" MAX. MESH OPENING
- FILTER CLOTH: FILTER X, MIRAFT 1000, STAB-LINKA 1140N OR APPROVED EQUAL
- PREFABRICATED UNIT: GEOFAB, ENVROFENCE, OR APPROVED EQUAL

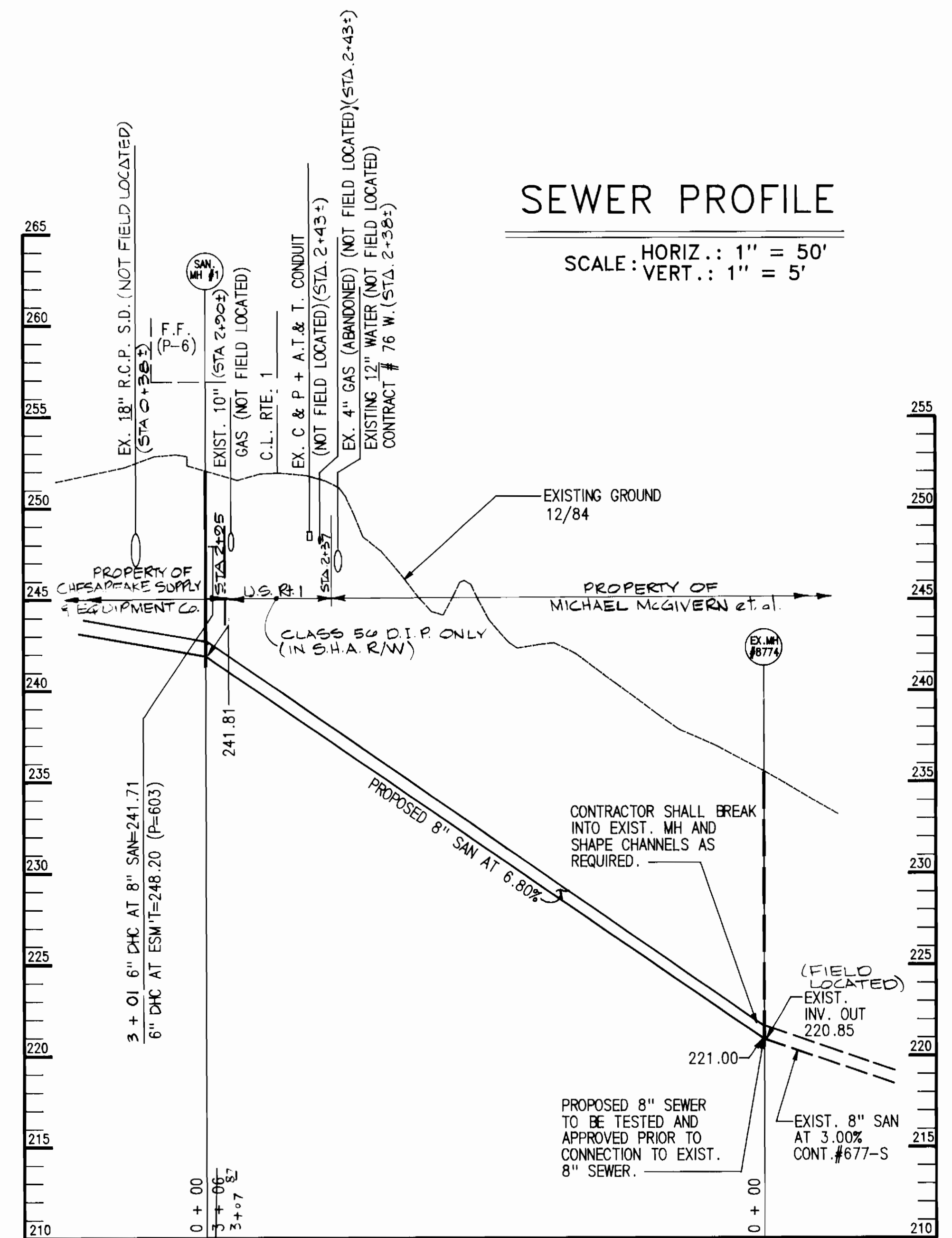


SILT FENCE

No Scale

RESTORATION SCHEDULE FOR DISTURBED AREAS

LOCATION		DESCRIPTION OF RESTORATION
FROM	TO	
EX. MH#5774	MH#1	(0+00 TO 2+40) SEED & MULCH (2+40 TO 3+06) BIT. CONC. ROADWAY & PARKING LOT
MH#1	MH#2	(0+00 TO 0+12) BIT. CONC. PARKING LOT & CURB (0+12 TO 2+86) SOD (2+86 TO 3+20) BIT. CONC. PARKING LOT & CURB (3+20 TO 4+00) SOD
MH#2	MH#3	(0+00 TO 1+83) SOD (1+83 TO 2+30) BIT. CONC. PARKING LOT & CURB (2+30 TO 3+53) SOD (3+53 TO 3+80) BIT. CONC. PARKING LOT & CURB
MH#3	MH#4	BIT. CONC. PARKING LOT

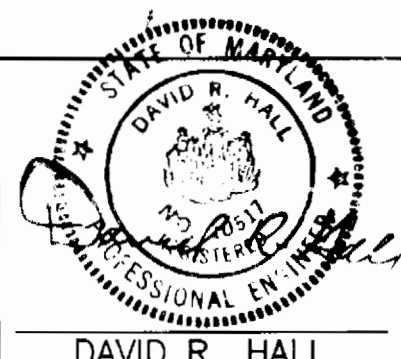


DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS
DATE 7-17-85

CHIEF, BUREAU OF ENGINEERING
DATE 7/12/85

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PROFILE AND DETAILS
SEWER LINE

600' SCALE MAP NO. S-43 BLOCK NO. 19

ROUTE 1 SEWER
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SCALE AS SHOWN
SHEET 3 OF 3