

PERMANENT SEEDING

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED. SEEDBED PREPARATION: LOOSEN UPPER 3" OF SOIL BY RAZING, DISCING, OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

- SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USING ONE OF THE FOLLOWING SCHEDULES:
- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ. FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS. PER 1000 SQ. FT.) BEFORE SEEDING. BARROW OR DISC INTO UPPER 3" OF SOIL AT TIME OF SEEDING. APPLY 400 LBS. PER ACRE 38-0-0 UREAFORM FERTILIZER (9 LBS. PER 1000 SQ. FT.)
 - ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ. FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS. PER 1000 SQ. FT.) BEFORE SEEDING. BARROW OR DISC INTO UPPER 3" OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (14 LBS. PER 1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (0.5 LBS. PER 1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE 300. OPTION (3) SEED WITH 60 LBS. PER ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE WELL ANCHORED STRAW.

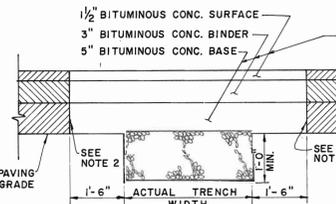
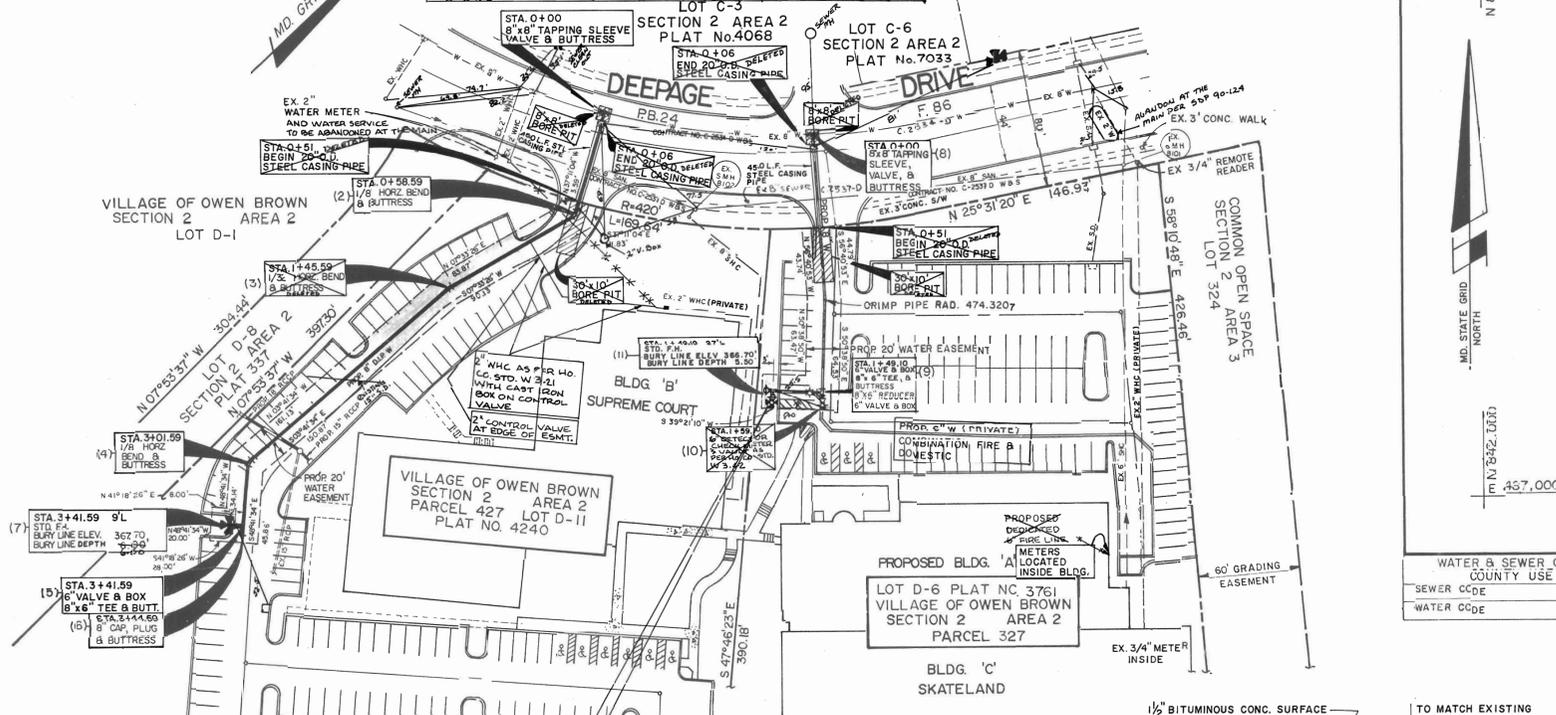
MULCHING - APPLY 1 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ. FT.) OF UN-ROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL, OR 216 GALLONS PER ACRE (5 GAL. OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT. OR HIGHER, USE 348 GAL. PER ACRE (5 GAL. PER 1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS, AND RESEEDING.

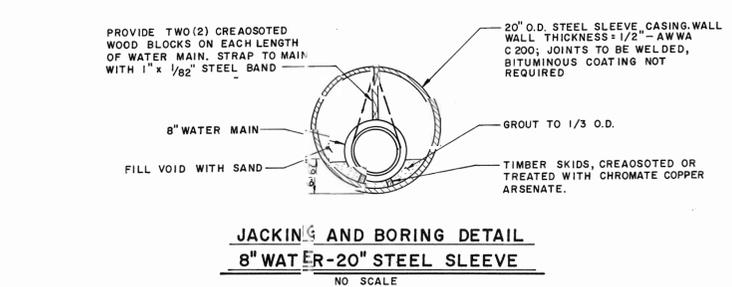
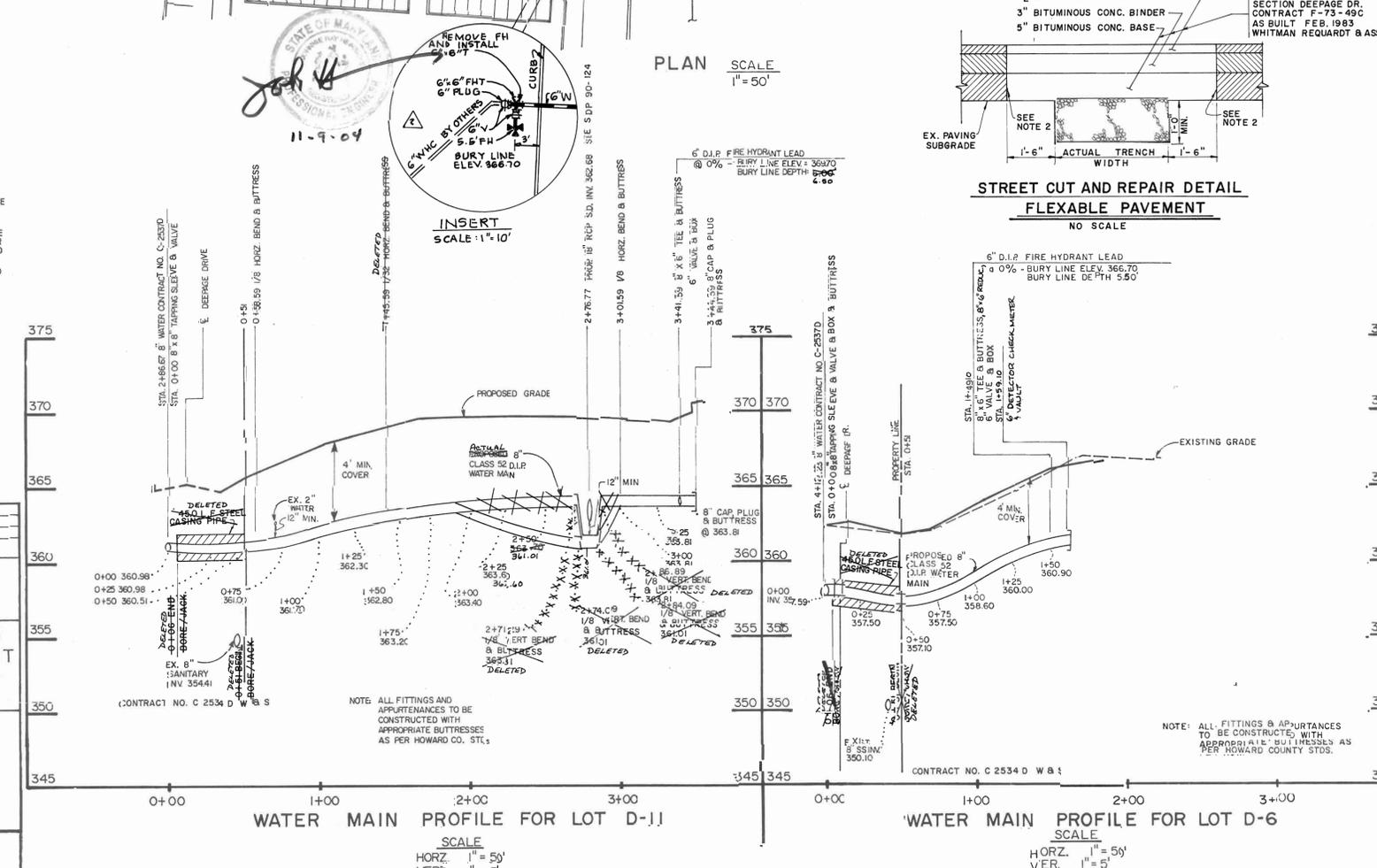
GENERAL NOTES

- 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 TO EXISTING MAINS 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.S. DATUM.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6".
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE THE HOWARD COUNTY DESIGN MANUAL VOLUME II, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, AMENDED 1989. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME II 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 TEST PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN MADE 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. - CONTRACTOR SERVICES: 850-4620
 - BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL: 859-9004
 - BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING: 298-9013
 - MISS UTILITY: 1-859-0100
 - COLONIAL PIPELINE COMPANY: 795-1390
 - BUREAU OF UTILITIES, HOWARD DEPARTMENT OF PUBLIC WORKS: 992-2366
 - C & P TELEPHONE COMPANY: 1-800-257-7777, OR 1-800-282-8555.
- 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.
- 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 STRAPPED 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 THE PLANS OR IN THE SPECIFICATIONS (STD. DETAIL W.3.21).
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED SO AS TO HAVE AT LEAST ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- 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.
- ALL SEWER MAINS SHALL BE C.S.P.X., 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 FOR BRICK MANHOLES ONLY.
- MANHOLES LOCATED WITHIN PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAME AND COVER, STANDARD DETAIL G5.51.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH A.W.W.A. SPECIFICATION C-153 DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.

ITEM	ESTIMATED	AS-BUILT	MATERIAL / SUPPLIER
6" D.I.P. CL. 52 - WATER	300.0 L.F.	39 L.F.	Giffin Pipe Products
8" D.I.P. CL. 52 - WATER	505.0 L.F.	502 L.F.	"
FIRE HYDRANT	2	1 EA	KENNEDY - WISSELER
8" TAPPING SLEEVE & VALVE	1	2 EA	KENNEDY - OLSON
8" x 6" REDUCER	2	1 EA	Giffin Pipe
8" VALVE (EXCLUDING F.H.)	1	1 EA	KENNEDY
20" O.D. STEEL CASING PIPE	90.0 L.F.	DELETED	LAMBERTSON



- NOTES:**
- PAVEMENT PATCH MATERIALS AND COURSE THICKNESS SHALL BE EQUAL TO EXISTING PAVING SECTION OR AS APPROVED BY D.P.W. THE MINIMUM PAVING PATCH SHALL CONSIST OF 3" BIT CONC. SURFACE MATERIAL PLACED INTO 1/2" COURSES. BITUMINOUS CONC. BASE MATERIAL WHEN PLACED, SHALL NOT EXCEED 5" THICKNESS PER COURSE. STONE BASE MATERIAL SHALL NOT EXCEED 5" THICKNESS PER COURSE.
 - PLACE HOT LIQUID ASPHALT SEALER (A1-5 OR AS APPROVED BY D.P.W.) ALONG VERTICAL FACE OF EXISTING PAVING PRIOR TO PLACING NEW MATERIAL TO INSURE CONTINUOUS BOND. UPON COMPLETION OF PAVING PATCH, EXCESS LIQUID ASPHALT SHALL BE BRUSHED INTO THE JOINT BETWEEN OLD AND NEW PAVING SURFACES TO PREVENT EXCESS LIQUID ASPHALT FROM BEING TRACKED BY TRAFFIC.
 - SEE HOWARD COUNTY DESIGN MANUAL VOLUME II STANDARD DETAILS 6.4.01.
- SEQUENCE OF UTILITY CONSTRUCTION**
- NOTIFY HOWARD COUNTY DEPT. OF PUBLIC WORKS.
 - NOTIFY TRAFFIC DEPT.
 - SEDIMENT AND EROSION CONTROL MUST BE IN PLACE.
 - STAKE OUT LIMITS OF EASEMENT AND WATER MAIN.
 - DIG NO MORE TRENCH THAN CAN BE BACKFILLED AND STABILIZED BY THE END OF EACH WORK DAY. (SEE PAVEMENT REPAIR DETAIL).
 - INSTALL 8" x 8" TAPPING SLEEVE AND VALVE.
 - USE APPROPRIATE BUTTRESSES AND STRAPPING AS DESCRIBED IN HOWARD COUNTY STANDARD DETAILS FOR TRENCH AND PIPE INSTALLATION.
 - CHLORINATE AND FIELD TEST WATER MAIN.
 - OBTAIN APPROVAL AND ACCEPTANCE FROM HOWARD COUNTY DEPT. OF PUBLIC WORKS.



STRUCTURE		SCHEDULE	
FITTING NUMBER	NORTHING	EASTING	STATION
1	489385.1479	845533.6328	0+00
2	489338.4700	845569.2433	0+58.59
3	489252.2257	845557.8014	1+45.59
4	489096.5496	845567.8487	3+01.59
5	489070.1457	845597.8960	3+41.59
6	489068.1654	845600.1495	3+44.59
7	489063.3850	845591.9551	3+41.59
8	489476.4397	845619.1497	0+00
9	489389.9357	845740.4125	1+49.10
10	489385.5948	845748.1451	1+59.10
11	489369.0577	845723.2920	1+49.10

DATE	NO.	REVISION	DESCRIPTION
6-18-90	1	REVISED PER DPW COMMENTS	
10-20-04	2	REVISED FIRE HYDRANT LOCATION	

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS AND AS PER SITE DEVELOPMENT PLAN FINAL PLAT FDP 118 A-1 & 118 B PART II F-79-60 & F-75-61 SDP 90-124

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT ANTI-EROSION TECHNICAL REQUIREMENT

SIGNATURE: *[Signature]* DATE: 9/16/90
U.S. SOIL CONSERVATION SERVICE

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

APPROVED: *[Signature]* DATE: 9/15/90
HOWARD S.C.D. DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS: *[Signature]* DATE: 9/17/90
CHIEF - BUREAU OF ENGINEERING

Michaela Baranowski, P.E. 8-29-90
CHIEF - BUREAU OF UTILITIES

DATE: 9/16/90
CHIEF - LAND DEVELOPMENT DIVISION

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS - PLANNERS
TOWSON, MARYLAND 21204

CONTRACT NO. 44-3054-D
SDP - 90-124

VILLAGE OF OWEN BROWN
SECTION 2 AREA 2
LOT'S D-6 & D-11
6th ELECTION DISTRICT

DRAWING NO. 1 OF 1
SCALE: AS SHOWN

DATE: 9/23/90
PROFESSIONAL ENGINEER

PERMANENT SEEDING

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SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USING ONE OF THE FOLLOWING SCHEDULES:
 1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ. FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS. PER 1000 SQ. FT.) BEFORE SEEDING. BARROW OR DISC INTO UPPER 3" OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 38-0-0 UREA-FORM FERTILIZER (9 LBS. PER 1000 SQ. FT.).
 2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ. FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS. PER 1000 SQ. FT.) BEFORE SEEDING. BARROW OR DISC INTO UPPER 3" OF SOIL.

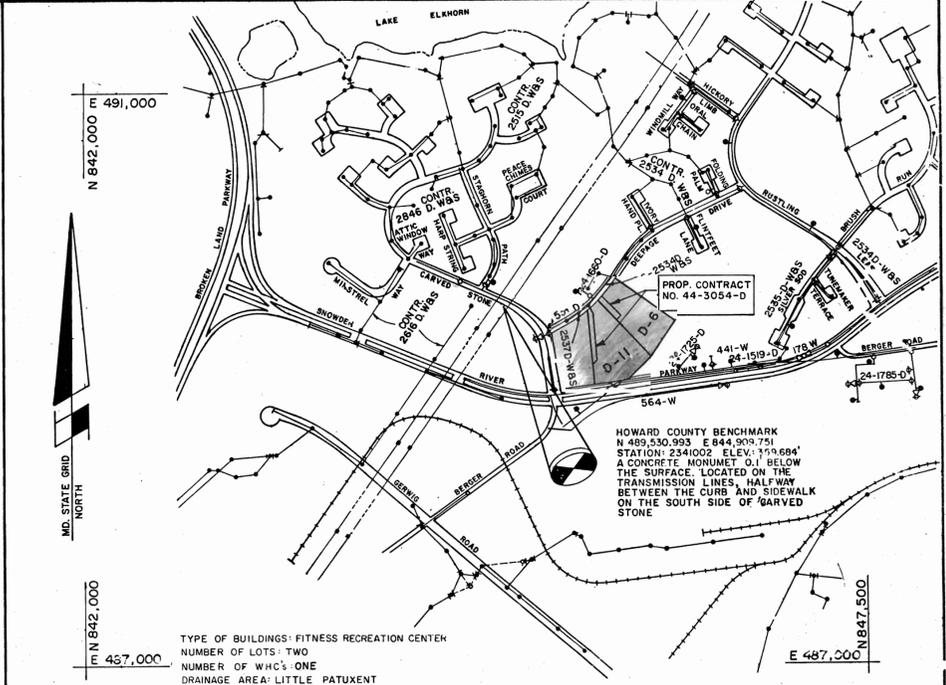
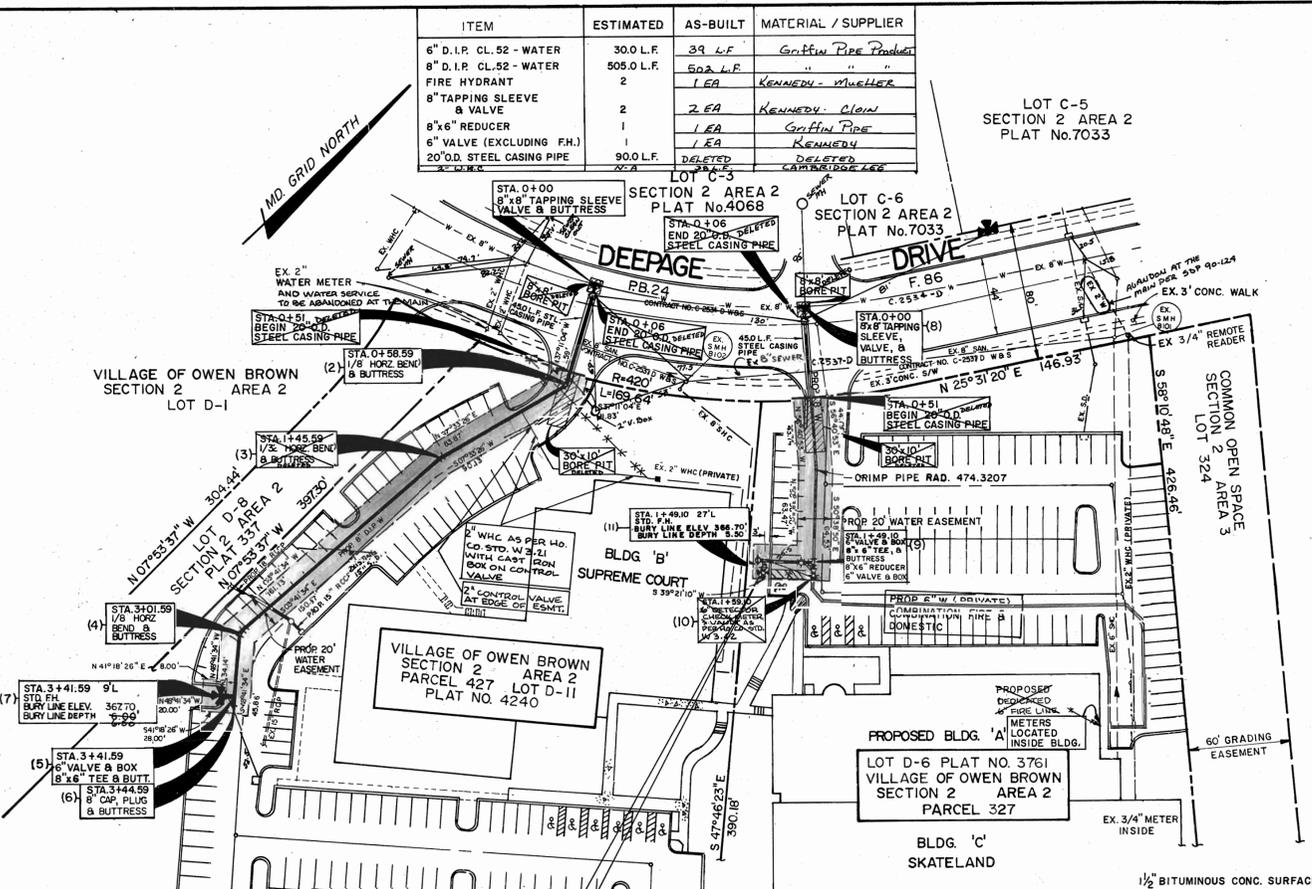
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ITEM	ESTIMATED	AS-BUILT	MATERIAL / SUPPLIER
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8" D.I.P. CL. 52 - WATER	505.0 L.F.	502.0 L.F.	"
FIRE HYDRANT	2	1 EA	KENNEDY - WHEELER
8" TAPPING SLEEVE & VALVE	2	2 EA	KENNEDY - CLOIN
8"x6" REDUCER	1	1 EA	Goffin Pipe
6" VALVE (EXCLUDING F.H.)	1	1 EA	KENNEDY
20" O.D. STEEL CASING PIPE	90.0 L.F.	DELETED	CAMPBELL/DEE LEE

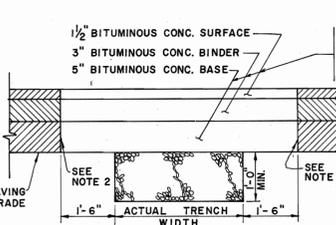
LOT C-5
SECTION 2 AREA 2
PLAT No. 7033



WATER & SEWER CODE COUNTY USE
 SEWER CODE 53303006
 WATER CODE E-11

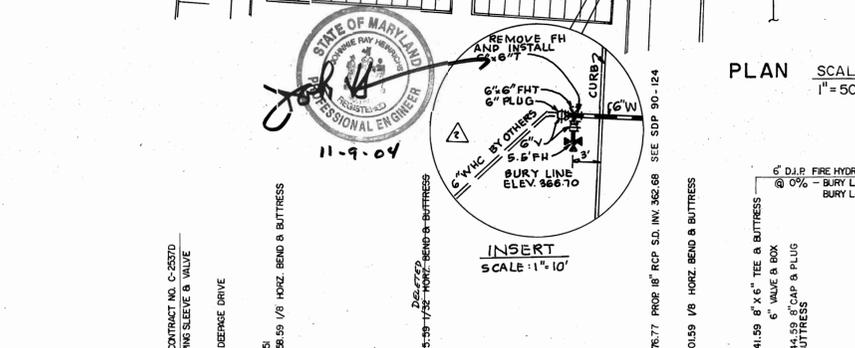
VICINITY MAP
SCALE: 1"=600'

TYPE OF BUILDINGS: FITNESS RECREATION CENTER
 NUMBER OF LOTS: TWO
 NUMBER OF WHO'S ONE
 DRAINAGE AREA: LITTLE PATUXENT

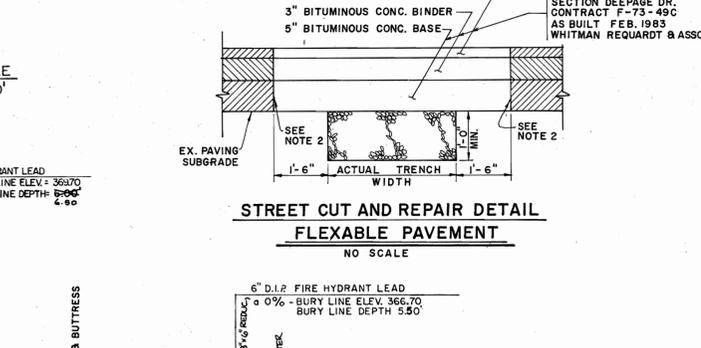


STREET CUT AND REPAIR DETAIL
FLEXIBLE PAVEMENT
NO SCALE

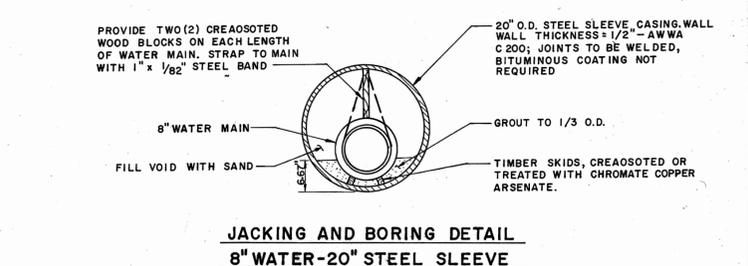
- NOTES:**
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 - PLACE HOT LIQUID ASPHALT SEALER (AE-5 OR AS APPROVED BY D.P.W.) ALONG VERTICAL FACE OF EXISTING PAVING PRIOR TO PLACING NEW MATERIAL TO INSURE CONTINUOUS BOND. UPON COMPLETION OF PAVING PATCH, EXCESS LIQUID ASPHALT SHALL BE BRUSHED INTO THE JOINT BETWEEN OLD AND NEW PAVING SURFACES TO PREVENT EXCESS LIQUID ASPHALT FROM BEING TRACKED BY TRAFFIC.
 - SEE HOWARD COUNTY DESIGN MANUAL VOLUME II STANDARD DETAILS G.4.01.
- SEQUENCE OF UTILITY CONSTRUCTION**
- NOTIFY HOWARD COUNTY DEPT. OF PUBLIC WORKS.
 - NOTIFY TRAFFIC DEPT.
 - SEDIMENT AND EROSION CONTROL MUST BE IN PLACE.
 - STAKE OUT LIMITS OF EASEMENT AND WATER MAIN.
 - DIG NO MORE TRENCH THAN CAN BE BACKFILLED AND STABILIZED BY THE END OF EACH WORK DAY. (SEE PAVEMENT REPAIR DETAIL)
 - INSTALL 8"x8" TAPPING SLEEVE AND VALVE.
 - USE APPROPRIATE BUTTRESSES AND STRAPPING AS DESCRIBED IN HOWARD COUNTY STANDARD DETAILS FOR TRENCH AND PIPE INSTALLATION.
 - CHLORINATE AND FIELD TEST WATER MAIN.
 - OBTAIN APPROVAL AND ACCEPTANCE FROM HOWARD COUNTY DEPT. OF PUBLIC WORKS.



WATER MAIN PROFILE FOR LOT D-II
SCALE: HORIZ. 1"=50', VERT. 1"=5'



WATER MAIN PROFILE FOR LOT D-6
SCALE: HORIZ. 1"=50', VERT. 1"=5'



JACKING AND BORING DETAIL
8" WATER-20" STEEL SLEEVE
NO SCALE

FITTING NUMBER	STRUCTURE			SCHEDULE		
	NORTHING	EASTING	STATION	NORTHING	EASTING	STATION
1	489385.1479	845533.8328	0+00			
2	489338.4700	845569.2433	0+58.59			
3	489252.2257	845557.8014	1+45.59			
4	489096.5496	845567.8487	3+01.59			
5	489070.1457	845597.8960	3+41.59			
6	489068.1654	845600.1495	3+44.59			
7	489063.3850	845591.9551	3+41.59			
8	489476.4397	845619.1497	0+00			
9	489389.9357	845740.4125	1+49.10			
10	489383.5948	845748.1451	1+59.10			
11	489369.0577	845723.2920	1+49.10			

6-18-90 1 REVISED PER DPW COMMENTS
 10-20-04 2 REVISED FIRE HYDRANT LOCATION

DATE NO. REVISION DESCRIPTION

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS AND AS PER SITE DEVELOPMENT PLAN FINAL PLAT FDP 118-A-1 & 118-B PART II F-79-60 & F-75-81 SDP 90-124

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND METS TECHNICAL REQUIREMENT

SIGNATURE: *[Signature]* DATE: 9/6/90
 U.S. SOIL CONSERVATION SERVICE

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

APPROVED: *[Signature]* DATE: 9/5/90
 HOWARD S.C.D.
 DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

9/2/90
 DIRECTOR OF PUBLIC WORKS - DATE
 8-29-90
 CHIEF - BUREAU OF UTILITIES - DATE

9/2/90
 CHIEF - BUREAU OF ENGINEERING - DATE
 9/6/90
 CHIEF - LAND DEVELOPMENT DIVISION - DATE

CENTURY ENGINEERING, INC.
 CONSULTING ENGINEERS - PLANNERS
 TOWSON, MARYLAND 21204

CONTRACT NO. 44-3054-D
 SDP - 90-124

VILLAGE OF OWEN BROWN
 LOTS D-6 & D-II
 6th ELECTION DISTRICT

SECTION 2 AREA 2
 HOWARD COUNTY, MD.

DRAWING NO. 1 OF 1
 SCALE AS SHOWN
 AS BUILT

7/23/90

 PROFESSIONAL ENGINEER