ROADWAYS, STORM DRAINAGE AND STORM WATER MANAGEMENT

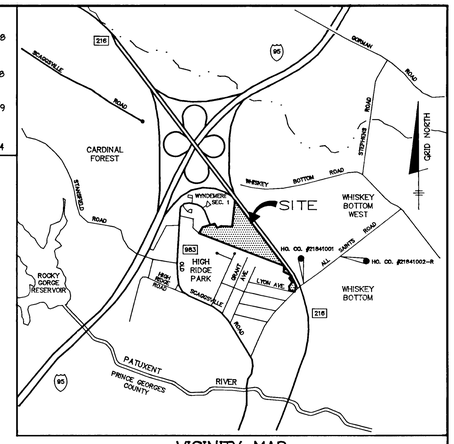
WYNDEMERE
SECTION TWO

6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

BENCH MARKS

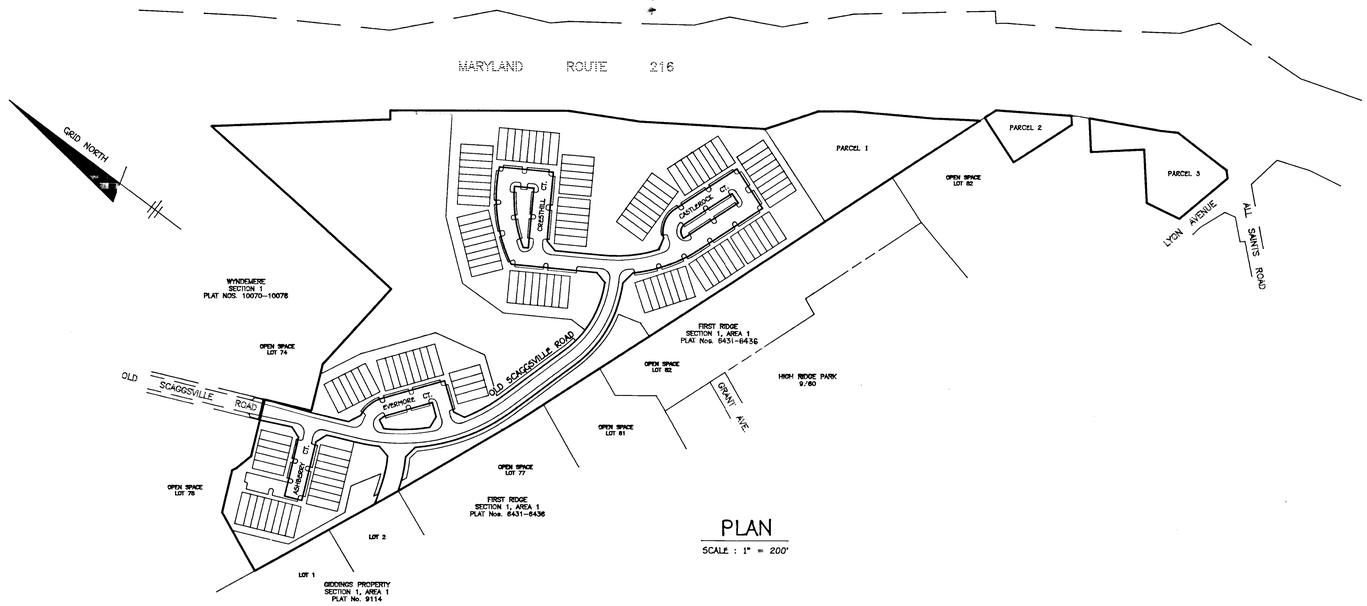
HO. CO. #21841001 ELEV. 228.138
R.B. 0.4' BELOW SURFACE
N 468156.503 E 841854.328

HO. CO. #21841002-R ELEV. 256.929
CONC. MONUMENT 1'± E. OF CONC. CURB AND 3' ± S. OF C.B. 0.8' BELOW SURF.
N 468957.312 E 843025.754



VICINITY MAP

SCALE : 1"=2000'



PLAN

SCALE : 1" = 200'

GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications of Howard County, Plus MSHA standards and specifications if Applicable.
2. The contractor shall notify the Department of Public Works/ Construction Inspection Division at (410) 313-1880 at least 24 hours prior to the start of work.
3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
4. Project Backround :
   Location : Tax Map 47 - Parcel 1003
   Zoning : R-SC
   Section 2
   Total Tract Area : 64.45 Ac.
   Section Area : 29.51 Ac.
   Number of Proposed Lots : 125 Parcels : 3
   Date Preliminary Plan Approved : August 4, 1993.
   DPZ Reference # : P-92-16
5. Traffic control devices, markings, and signing shall be in accordance with the most current edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
6. Topography taken from field run survey by The Riemer Group, Inc. dated 5/88. Contour interval is 2 feet.
7. Howard County monuments 21841001 and 21841002-R used for horizontal and vertical datum. Nad 27 used to remain consistent with Section 1 (F-90-41).
8. Light poles and fixtures for street lights shall be in accordance latest Howard County Design Manual, Volume III, Roads and Bridges.
9. Water and Sewer for this subdivision is public. Drainage area is Patuxent. Contract No. 24-3329-D .
10. Stormwater Management quantity control is by detention facility, with water quality provided by infiltration facilities.
11. 100-Year Floodplain Study compiled by TSA Group, Inc., 7/93. Approved 8/4/93.
12. Wetlands delineation study compiled by M.A. Dircks & Co., Inc., 5/92. Approved 8/4/93.
13. Traffic Study compiled by The Traffic Group, Inc., 5/92. Approved 8/4/93.
14. Noise Study compiled by Polysonics Inc., 4/92. Approved 8/4/93.
15. Geotechnical Report compiled by Earth Eng. & Sciences, Inc., 3/92. Approved 8/4/93.
16. Existing utilities were located by record drawings and field run survey by TSA Group, Inc. dated 2/92.
17. ALL STATE AND FEDERAL PERMITS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF APPLICABLE CONSTRUCTION.
18. ALL ROAD FILLS SHALL BE COMPACTED TO 95% AS DETERMINED BY AASHTO T-180.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94

CHIEF, BUREAU OF HIGHWAYS — DATE 6-20-94

CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION
1	8-3-94	HOA O+M FOR SWM FACILITY
2	9-9-94	REVISIONS PER DEPT. OF NATURAL RESOURCES DAM CONSTRUCTION PERMIT REQUIREMENTS.

SHEET INDEX

NOTES :

1. ALL STORMWATER MANAGEMENT FACILITIES ARE TO BE PUBLICLY MAINTAINED.
2. UNLESS NOTED AS "PRIVATE", ALL EASEMENTS SHOWN ARE "PUBLIC".
3. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN WETLANDS, STREAM BUFFERS OR FOREST CONSERVATION AREAS EXCEPT FOR THE WORK ASSOCIATED WITH THE OLD SCAGGSVILLE ROAD CROSSING AND STORMWATER MANAGEMENT FACILITIES.
4. THE PROPOSED OLD SCAGGSVILLE ROAD CROSSING AND STORMWATER MANAGEMENT IMPOUNDMENT HAVE NO OFFSITE IMPACT TO THE FLOODPLAIN UPSTREAM. THE 100-YEAR FLOODPLAIN UPSTREAM OF THE FACILITY IS REPRESENTED IN THE APPROVED FLOODPLAIN STUDY PREPARED UNDER P-92-16. NO INCREASE OF THE 100-YEAR FLOW RATE OCCURS DOWN-STREAM OF THE FACILITY, THEREFORE, THERE IS NO ADVERSE IMPACT DOWNSTREAM.
5. THE HOMEOWNERS ASSOCIATION SHALL REMOVE TRASH YEAR ROUND AND MOW THE THREE WATER QUALITY FACILITIES AND STORMWATER MANAGEMENT FACILITY ON A WEEKLY BASIS DURING THE MOWING SEASON IN CONJUNCTION WITH STANDARD GROUNDS MAINTENANCE.

PERMIT: DEPARTMENT OF NATURAL RESOURCES, DAM CONSTRUCTION PERMIT NUMBER 94-DO-8019 ISSUED FOR THE PROPOSED ROAD/ STORMWATER MANAGEMENT EMBANKMENT.

PERMITS : ACTIVITY IN FLOODPLAIN, WATERWAY, NONTIDAL WETLAND OR BUFFER

DEPARTMENT OF NATURAL RESOURCES, NONTIDAL WETLAND NUMBER : 92-NT-0491

CONSTRUCTION OF THE ROAD CROSSING INVOLVES IMPACTS TO NON-WETLAND "WATERS OF THE U.S." AND DOES NOT INVOLVE IMPACTS TO NON-TIDAL WETLANDS OR THE REGULATIONS; THEREFORE, THE PROJECT IS EXEMPT FROM THE PERMIT AND MITIGATION REQUIREMENTS OF THE STATE NONTIDAL WETLANDS PROTECTION ACT.

U.S. ARMY CORPS OF ENGINEERS

THE PROJECT QUALIFIES FOR AUTHORIZATION UNDER THE NATIONWIDE PERMIT (NW #14 & #12).

MARYLAND DEPARTMENT OF THE ENVIRONMENT

WATER QUALITY CERTIFICATION #92-WQ-0189 ISSUED FOR THIS PROJECT.

WP-92-216

ON OCTOBER 8, 1992, THE PLANNING DIRECTOR APPROVED THE REQUEST TO WAIVE SECTION 16.113(c)(10), TO ALLOW THE OLD SCAGGSVILLE ROAD (MD. ROUTE 983) CUL-DE-SAC STREET SYSTEM FROM ITS INTERSECTION WITH STANSFIELD ROAD TO EXCEED 1,200 FEET IN LENGTH AND TO ALLOW THE AVERAGE DAILY TRAFFIC COUNT TO EXCEED 1,000 VEHICLE TRIPS PER DAY FOR A CUL-DE-SAC STREET, SUBJECT TO THE FOLLOWING CONDITIONS:

1. THE DEVELOPER SHALL PAY A FEE OF $46,733.00 FOR FUTURE IMPROVEMENTS TO OLD SCAGGSVILLE ROAD.
2. THE DEVELOPER SHALL BE RESPONSIBLE FOR ANY ROAD IMPROVEMENTS THAT MAY BE REQUIRED ALONG OLD SCAGGSVILLE ROAD BY THE HOWARD COUNTY PLANNING BOARD DECISION AND ORDER FOR P.B. CASE No. 283.

PB-283

ON JANUARY 19, 1993, THE PETITION OF J.J.M., INC. FOR AN AMENDMENT TO THE DECISION AND ORDER OF PLANNING BOARD CASE No. 235 TO DELETE THE REQUIREMENT TO PROVIDE A SECOND MEANS OF VEHICULAR ACCESS TO SECTION 2 OF THE SUBDIVISION WAS GRANTED BY THE PLANNING BOARD OF HOWARD COUNTY PROVIDED THAT THE PETITIONER CONTRIBUTE $46,733.00 FOR FUTURE ROAD IMPROVEMENTS TO OLD SCAGGSVILLE ROAD. THE PROPOSED AMENDMENT OF THE DECISION AND ORDER OF PLANNING BOARD CASE No. 235 REGARDING THE SKETCH PLAN OF WYNDEMERE SATISFIES ALL OF THE STANDARDS FOR APPROVAL OF A SKETCH PLAN PROVIDED IN 108.E.3 OF THE HOWARD COUNTY ZONING REGULATIONS.

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

OWNER/DEVELOPER:

J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-252 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: TITLE SHEET
PB-235 PB-283 5-88-42 WP-92-216 P-92-16

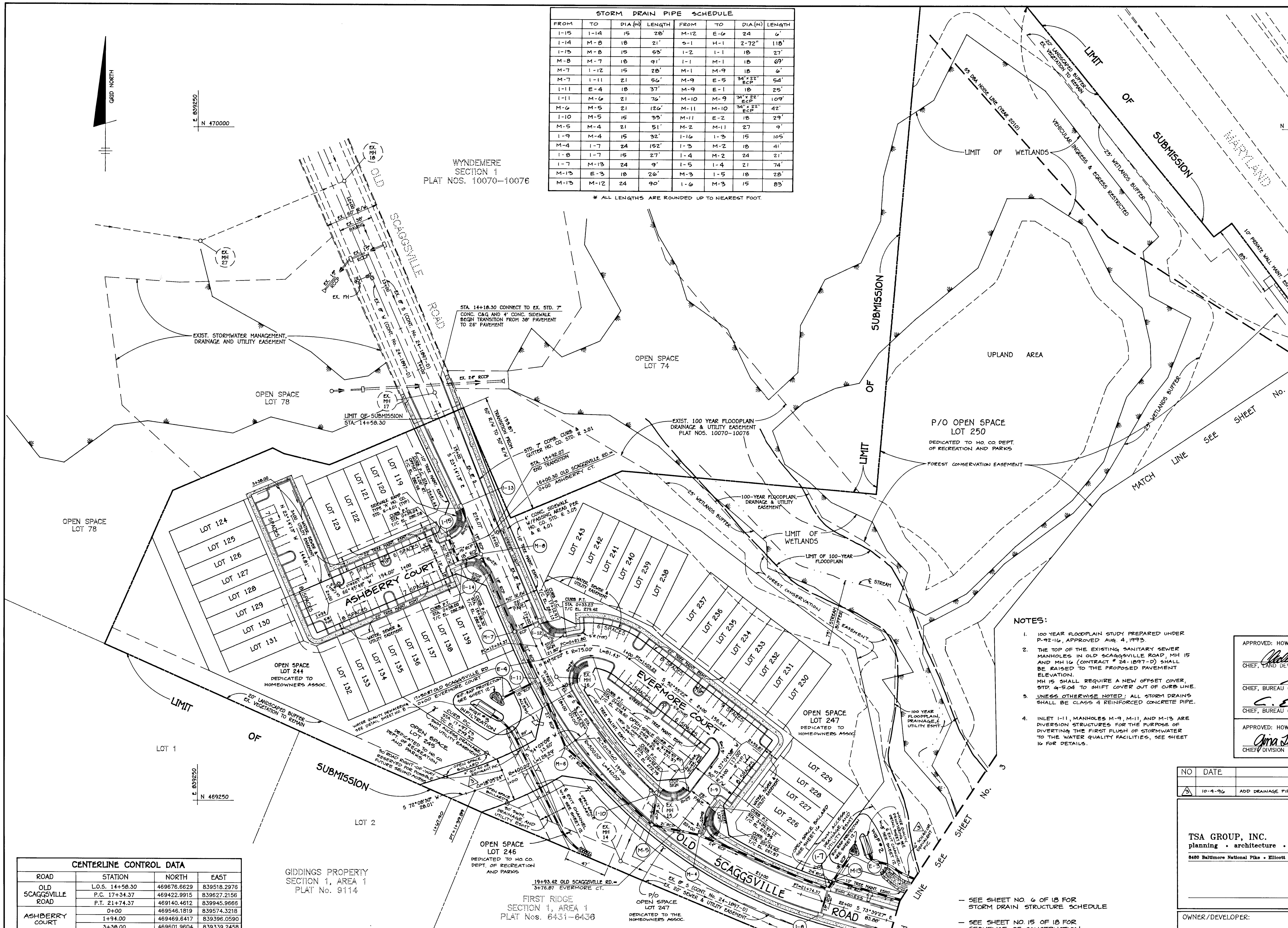
DATE: OCTOBER 15, 1993 / MAY 20, 1994

PROJECT NO. 0420

DES: JME/DRK DRN: DRK/DBT SCALE: AS SHOWN DRAWING 1 OF 18

1589

F-94-35



STORM DRAIN PIPE SCHEDULE

FROM	TO	DIA.(IN.)	LENGTH	FROM	TO	DIA.(IN.)	LENGTH
I-15	I-14	15	28'	M-12	E-6	24	6'
I-14	M-8	18	21'	S-1	H-1	2-72"	118'
I-13	M-8	15	53'	I-2	I-1	18	27'
M-8	M-7	18	91'	I-1	M-1	18	69'
M-7	I-12	15	28'	M-1	M-9	18	6'
M-7	I-11	21	56'	M-9	E-5	34" x 22" ECP	54'
I-11	E-4	18	37'	M-9	E-1	18	25'
I-11	M-6	21	76'	M-10	M-9	34" x 22" ECP	109'
M-6	M-5	21	126'	M-11	M-10	34" x 22" ECP	42'
I-10	M-5	15	33'	M-11	E-2	18	29'
M-5	M-4	21	51'	M-2	M-11	27	9'
I-9	M-4	15	32'	I-16	I-3	15	105'
M-4	I-7	24	152'	I-3	M-2	18	41'
I-8	I-7	15	27'	I-4	M-2	24	21'
I-7	M-13	24	9'	I-5	I-4	21	74'
M-13	E-3	18	26'	M-3	I-5	18	28'
M-13	M-12	24	90'	I-6	M-3	15	83'

* ALL LENGTHS ARE ROUNDED UP TO NEAREST FOOT.

ASHBERRY CT. – PARKING AREA CURB DATA

LEFT				RIGHT			
DESC.	℄ STA.	OFFSET	T/C EL.	DESC.	℄ STA.	OFFSET	T/C EL.
CURB P.C.	0+55.00	13' LT.	282.90	CURB P.C.	0+52.00	13' RT.	282.84
CURB P.I.	0+60.00	31' LT.	283.41	CURB P.I.	0+57.00	31' RT.	283.35
CURB P.I.	1+23.00	31' LT.	284.67	CURB P.I.	1+11.00	31' RT.	284.43
CURB P.I.	1+35.00	31' LT.	284.91	CURB P.I.	1+23.00	31' RT.	284.67
CURB P.I.	1+94.00	S 00°29'10"E 33.62'	286.09	CURB P.I.	1+68.00	31' RT.	285.57
CURB P.I.	1+94.00	S 44°00'43"W 33.62'	286.09	CURB P.T.	1+73.00	13' RT.	285.26
CURB P.I.	2+53.00	31' LT.	287.27	CURB P.C.	1+75.00	13' RT.	285.30
CURB P.I.	2+65.00	31' LT.	287.51	CURB P.T.	2+12.00	13' RT.	286.04
CURB P.I.	3+28.00	31' LT.	288.77	END CURB	3+38.00	13' RT.	288.56
CURB P.T.	3+33.00	13' LT.	284.46				
END CURB	3+38.00	13' LT.	288.56				

EVERMORE CT. – PARKING AREA CURB DATA

LEFT				RIGHT			
DESC.	℄ STA.	OFFSET	T/C EL.	DESC.	℄ STA.	OFFSET	T/C EL.
CURB P.C.	0+46.90	13' LT.	279.04	CURB P.C.	0+87.09	13' RT.	277.87
CURB P.I.	0+50.93	31' LT.	279.33	CURB P.I.	0+93.68	31' RT.	278.09
CURB P.I.	0+96.95	31' LT.	278.00	CURB P.I.	1+60.63	31' RT.	276.15
CURB P.I.	1+07.87	31' LT.	277.68	CURB P.I.	1+72.63	31' RT.	275.80
CURB P.I.	1+79.87	31' LT.	275.59	CURB P.I.	2+26.63	31' RT.	274.23
CURB P.I.	1+91.87	31' LT.	275.24	CURB P.T.	2+31.63	13' RT.	273.68
CURB P.I.	2+59.87	N 59°49'41"E 33.62'	273.27	CURB P.C.	2+31.87	13' RT.	273.68
CURB P.I.	2+59.87	N 59°49'41"E 33.62'	273.27	CURB P.T.	2+87.87	13' RT.	272.05
CURB P.I.	3+18.87	31' LT.	271.56				
CURB P.T.	3+23.87	13' LT.	271.00				

NOTES:

1. 100 YEAR FLOODPLAIN STUDY PREPARED UNDER P-92-16, APPROVED AUG. 4, 1993.
2. THE TOP OF THE EXISTING SANITARY SEWER MANHOLES IN OLD SCAGGSVILLE ROAD, MH 15 AND MH 16 (CONTRACT # 24-1897-D) SHALL BE RAISED TO THE PROPOSED PAVEMENT ELEVATION.
   MH 15 SHALL REQUIRE A NEW OFFSET COVER, STD. G-5.04 TO SHIFT COVER OUT OF CURB LINE.
3. UNESS OTHERWISE NOTED: ALL STORM DRAINS SHALL BE CLASS 4 REINFORCED CONCRETE PIPE.
4. INLET I-11, MANHOLES M-9, M-11, AND M-13 ARE DIVERSION STRUCTURES FOR THE PURPOSE OF DIVERTING THE FIRST FLUSH OF STORMWATER TO THE WATER QUALITY FACILITIES, SEE SHEET 16 FOR DETAILS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94

CHIEF, BUREAU OF HIGHWAYS — DATE 6-20-94

CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION
3	10-4-96	ADD DRAINAGE PIPES FOR WATER QUALITY FACILITIES

- SEE SHEET NO. 6 OF 18 FOR STORM DRAIN STRUCTURE SCHEDULE
- SEE SHEET NO. 15 OF 18 FOR SEQUENCE OF CONSTRUCTION
- SEE SHEET NO. 16 OF 18 FOR SIDEWALK RAMP, NOISE WALL, DIVERSION STRUCTURE DETAILS.
- SEE SHEET 8 THRU 12 FOR STORMWATER MANAGEMENT CONSTRUCTION DETAILS.

CENTERLINE CONTROL DATA

ROAD	STATION	NORTH	EAST
OLD SCAGGSVILLE ROAD	L.O.S. 14+58.30	469676.6629	839518.2976
	P.C. 17+34.37	469422.9915	839627.2156
	P.T. 21+74.37	469140.4612	839945.9666
ASHBERRY COURT	0+00	469546.1819	839574.3218
	1+94.00	469469.6417	839396.0590
	3+38.00	469601.9604	839339.2458
EVERMORE COURT	0+00	469407.9394	839633.9747
	P.C. 0+21.80	469417.1963	839653.7108
	P.T. 1+03.23	469409.1310	839730.7755
	2+59.87	469314.6926	839855.7492
	3+76.87	469221.3471	839785.2112

CENTERLINE CURVE DATA

ROAD	STATION	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
OLD SCAGGSVILLE ROAD	17+34.37 to 21+74.37	500.00'	440.00'	235.39'	425.94'	S 48°26'50" E	50°25'14"
EVERMORE COURT	0+21.80 to 1+03.23	75.00'	81.43'	45.25'	77.49'	N 84°01'31" W	62°12'18"

STREET LIGHT LEGEND

ROAD	℄ STATION	OFFSET	TYPE	SYM
ASHBERRY COURT	1+75	16' RIGHT	100 WATT HPS VAPOR TRADITIONARE POST TOP FIXTURE MOUNTED ON 14' BLACK FIBERGLASS EMBEDDED POLE	☼
EVERMORE COURT	1+65	16' RIGHT		
OLD SCAGGSVILLE ROAD	16+00	16' LEFT	150 WATT HPS VAPOR PENDANT FIXTURE MOUNTED ON A 25' GALVANIZED STEEL POLE	☼o
	17+90	16.5' LEFT		
	20+30	16' LEFT		

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OWNER/DEVELOPER:
J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: **WYNDEMERE**
SECTION 2
LOTS 119-252 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

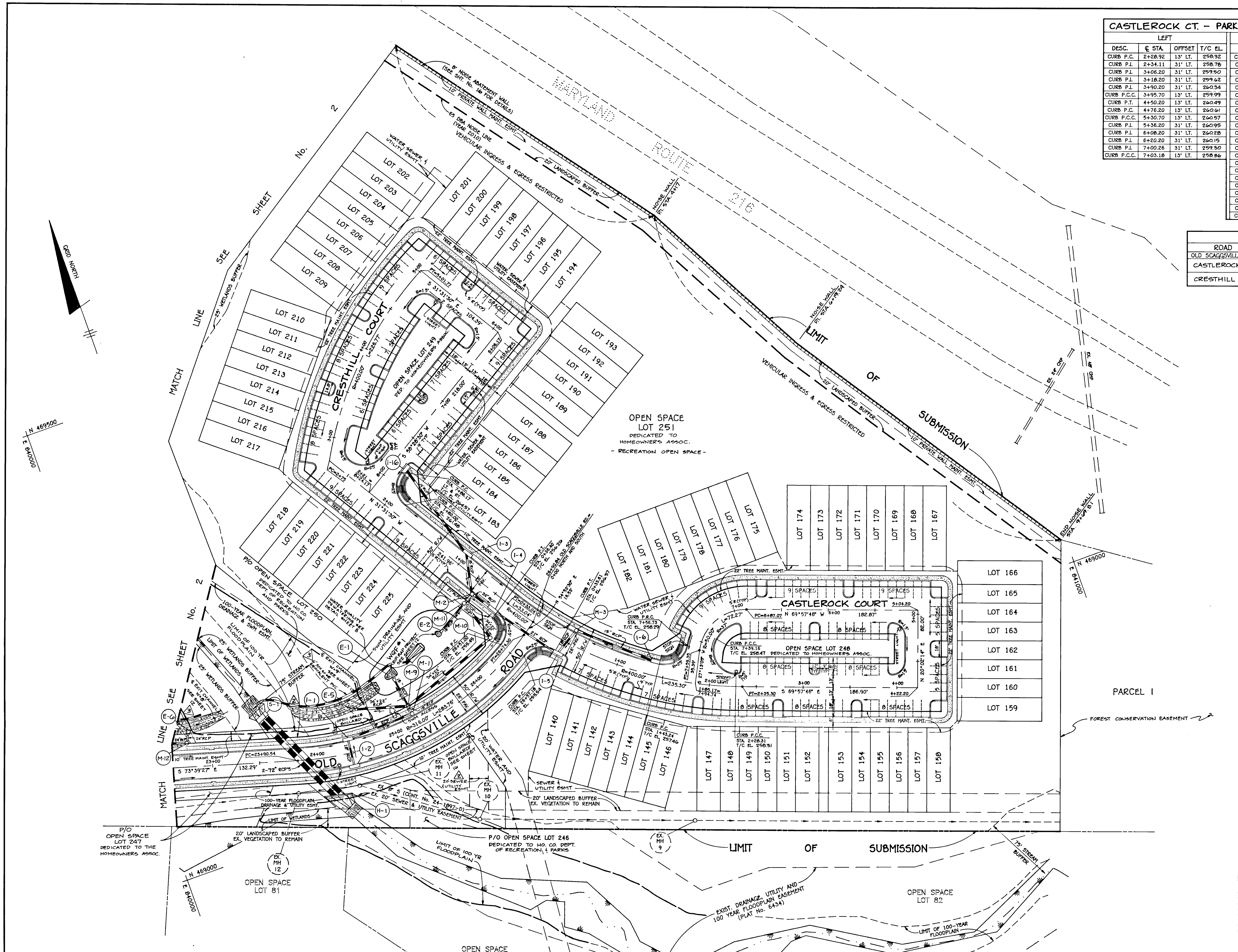
TITLE: **ROAD PLAN**
PB-235 PB-283 S-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993 / MAY 20, 1994 — PROJECT NO. 0420

DES: JME/DRK — DRN: DRK/DBT — SCALE: 1" = 50' —

F-94-35

1589



CASTLEROCK CT. – PARKING AREA CURB DATA							
LEFT				RIGHT			
DESC.	℄ STA.	OFFSET	T/C EL.	DESC.	℄ STA.	OFFSET	T/C EL.
CURB P.C.	2+28.92	13' LT.	258.32	CURB P.C.	0+46.40	13' RT.	256.49
CURB P.I.	2+34.11	31' LT.	258.78	CURB P.I.	0+51.19	31' RT.	256.95
CURB P.I.	3+06.20	31' LT.	259.50	CURB P.I.	1+12.20	31' RT.	257.56
CURB P.I.	3+18.20	31' LT.	259.62	CURB P.I.	1+23.82	31' RT.	257.68
CURB P.I.	3+90.20	31' LT.	260.34	CURB P.I.	1+84.84	31' RT.	258.29
CURB P.C.C.	3+95.70	13' LT.	259.99	CURB P.I.	1+96.46	31' RT.	258.40
CURB P.T.	4+50.20	13' LT.	260.49	CURB P.I.	2+67.20	31' RT.	259.11
CURB P.C.	4+76.20	13' LT.	260.61	CURB P.I.	2+79.20	31' RT.	259.23
CURB P.C.C.	5+30.70	13' LT.	260.57	CURB P.I.	3+51.20	31' RT.	259.95
CURB P.I.	5+36.20	31' LT.	260.95	CURB P.I.	3+63.20	31' RT.	260.07
CURB P.I.	6+08.20	31' LT.	260.28	CURB P.I.	4+22.20	S 02°42'50"E 33.62'	260.66
CURB P.I.	6+20.20	31' LT.	260.15	CURB P.I.	4+22.20	S 47°12'42"E 33.62'	260.66
CURB P.I.	7+00.26	31' LT.	259.30	CURB P.I.	4+54.20	31' RT.	260.92
CURB P.C.C.	7+03.18	13' LT.	258.86	CURB P.I.	4+72.20	31' RT.	261.01
				CURB P.I.	5+04.20	N 87°17'10"E 33.62'	261.05
				CURB P.I.	5+04.20	N 42°47'18"E 33.62'	261.05
				CURB P.I.	5+72.20	31' RT.	260.67
				CURB P.I.	5+84.20	31' RT.	260.54
				CURB P.I.	6+65.20	31' RT.	259.67
				CURB P.I.	6+77.20	31' RT.	259.54
				CURB P.I.	7+43.52	31' RT.	258.83
				CURB P.T.	7+47.20	13' RT.	258.38

CRESTHILL CT. – PARKING AREA CURB DATA							
LEFT				RIGHT			
DESC.	℄ STA.	OFFSET	T/C EL.	DESC.	℄ STA.	OFFSET	T/C EL.
CURB P.C.	1+01.01	13' LT.	258.05	CURB P.C.C.	2+57.00	13' RT.	264.97
CURB P.I.	1+06.01	31' LT.	258.65	CURB P.T.	2+92.47	13' RT.	266.57
CURB P.I.	1+87.01	31' LT.	262.23	CURB P.C.	3+13.26	13' RT.	267.51
CURB P.I.	1+99.01	31' LT.	262.77	CURB P.I.	3+18.50	31' RT.	268.15
CURB P.I.	2+75.00	S 67°40'07"E 31.40'	266.19	CURB P.I.	3+77.03	31' RT.	270.60
CURB P.I.	2+75.00	N 70°41'02"W 31.43'	266.19	CURB P.I.	3+90.04	31' RT.	271.03
CURB P.I.	3+39.72	31' LT.	269.11	CURB P.I.	4+58.33	31' RT.	272.55
CURB P.I.	3+53.88	31' LT.	269.72	CURB P.T.	4+63.57	13' RT.	272.20
CURB P.I.	4+23.61	31' LT.	271.94	CURB P.C.	4+73.35	13' RT.	272.30
CURB P.I.	4+35.24	31' LT.	272.18	CURB P.T.	5+29.18	13' RT.	272.38
CURB P.I.	5+01.77	N 05°41'01"W 33.38'	272.86	CURB P.C.	5+38.05	13' RT.	272.31
CURB P.I.	5+01.77	N 37°08'45"W 33.28'	272.86	CURB P.I.	5+43.05	31' RT.	272.68
CURB P.I.	5+43.66	31' LT.	272.67	CURB P.I.	5+61.05	31' RT.	272.45
CURB P.I.	5+56.16	31' LT.	272.52	CURB P.T.	5+66.05	13' RT.	271.96
CURB P.I.	6+06.17	N 81°13'35"E 33.62'	271.51	CURB P.C.	5+78.16	13' RT.	271.75
CURB P.I.	6+06.17	S 54°16'34"E 33.62'	271.51	CURB P.T.	6+34.17	13' RT.	270.23
CURB P.I.	6+74.17	31' LT.	269.20	CURB P.C.	6+37.17	13' RT.	270.13
CURB P.I.	6+89.17	31' LT.	268.65	CURB P.I.	6+42.17	31' RT.	270.36
CURB P.I.	7+70.17	31' LT.	265.72	CURB P.I.	7+05.17	31' RT.	268.07
CURB P.T.	7+75.17	13' LT.	265.13	CURB P.I.	7+17.17	31' RT.	267.64
				CURB P.T.	7+76.17	13' RT.	265.09

CENTERLINE CURVE DATA							
ROAD	STATION	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
OLD SCAGGSVILLE RD.	23+90.54 to 26+74.30	316.00'	283.76'	152.25'	274.33'	N 80°37'01" E	51°27'03"
CASTLEROCK CT.	0+00 to 2+35.30	400.00'	235.30'	121.17'	231.92'	S 53°06'38" E	33°42'16"
	6+87.07 to 7+59.35	50.00'	72.27'	44.10'	66.14'	S 68°37'40" W	82°49'09"
CRESTHILL CT.	0+00 to 0+33.04	400.00'	33.04'	16.53'	33.03'	N 33°53'30" W	04°44'00"
	2+75 to 5+01.77	400.00'	226.77'	116.52'	223.75'	N 45°27'34" E	32°28'58"

CENTERLINE CONTROL DATA			
ROAD	STATION	NORTH	EAST
OLD SCAGGSVILLE ROAD	P.C. 23+90.54	469079.6368	840153.3988
	P.T. 26+74.30	469124.3606	840424.0538
	26+90.84	469133.8700	840437.5800
CASTLEROCK COURT	P.C. 0+00	469133.8700	840437.5800
	P.T. 2+35.30	468994.6523	840623.0715
	4+22.20	468930.6144	840798.6592
	5+04.20	469007.6509	840826.7549
	P.C. 6+87.07	469070.3077	840654.9541
	P.T. 7+59.35	469046.2032	840593.3590
	7+94.74	469014.7316	840577.1722
CRESTHILL COURT	P.C. 0+00	469133.8700	840437.5800
	P.T. 0+33.04	469161.2919	840419.1591
	P.C. 2+75.00	469367.5389	840292.6467
	P.T. 5+01.77	469524.4792	840452.1241
	6+06.17	469435.4946	840506.7075
	8+24.17	469321.5086	840320.8817

STREET LIGHT LEGEND			
ROAD	℄ STATION	OFFSET	TYPE/SYMBOL
CASTLEROCK COURT	2+28	16' LEFT	100 WATT HPS VAPOR TRADITIONARE POST TOP FIXTURE MOUNTED ON 14' BLACK FIBERGLASS EMBEDDED POLE ☼
	4+85	19' LEFT	
OLD SCAGGSVILLE ROAD	24+33	16' RIGHT	150 WATT HPS VAPOR PENDANT FIXTURE MOUNTED ON A 25' GALVANIZED STEEL POLE ☼-o
CRESTHILL COURT	0+00	16' RIGHT	
	2+43	25' RIGHT	100 WATT HPS VAPOR TRADITIONARE POST TOP FIXTURE MOUNTED ON 14' BLACK FIBERGLASS EMBEDDED POLE ☼
	5+35	16' RIGHT	

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[signature] 6/22/94
CHIEF, LAND DEVELOPMENT DIVISION — DATE

[signature] for 6-20-94
CHIEF, BUREAU OF HIGHWAYS HS — DATE

[signature] for 6/23/94
CHIEF, BUREAU OF ENGINEERING — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[signature] 6/27/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA — DATE

NO	DATE	REVISION
2	9-9-94	REVISIONS PER DEPT. OF NATURAL RESOURCES DAM CONSTRUCTION PERMIT REQUIREMENTS.
3	10-4-96	ADD DRAINAGE PIPES FOR WATER QUALITY FACILITIES

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

OWNER/DEVELOPER:
J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: **WYNDEMERE**
SECTION 2
LOTS 119–252 PARCELS 1–3

LOCATION: TAX MAP 47 – PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **ROAD PLAN**
PB-235 PB-283 S-88-42 WP-92-216 P-92-16

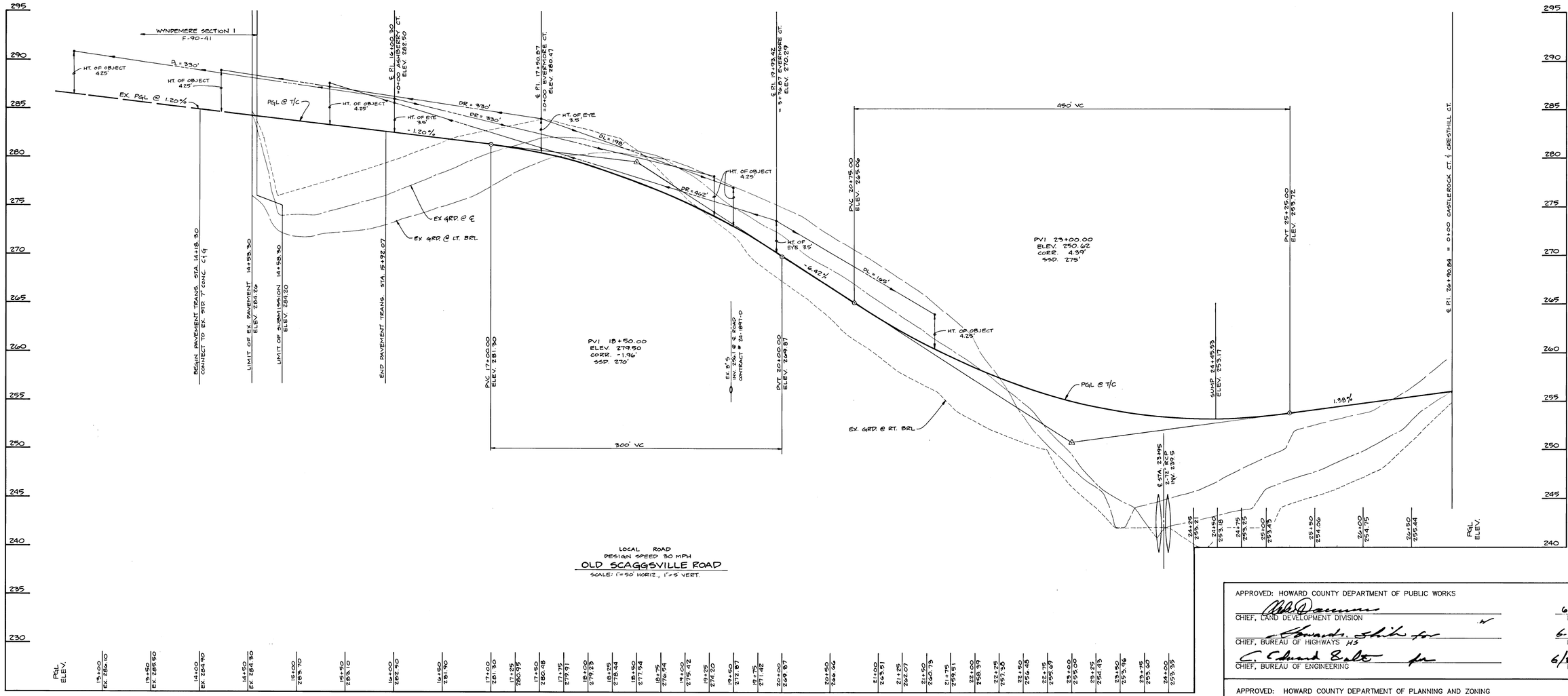
DATE: OCTOBER 15, 1993 / MAY 20, 1994 — PROJECT NO. 0420

DES: JME/DRK — DRN: DRK/DBT — SCALE: 1" = 50' — DRAWING 3 OF 18

NOTES:

1. SEE WATER AND SEWER CONTRACT 24-3329-D FOR CONSTRUCTION REQUIREMENTS: THE TOP OF EXISTING SANITARY SEWER MANHOLES MH-11 AND MH-12 ARE TO BE RAISED TO ELEV. 250.0 WITH WATER TIGHT CONNECTION, FRAME, AND COVER. CONTRACTOR SHALL REPAIR MANHOLES, IF REQUIRED, TO ENSURE WATER TIGHTNESS.
2. THE EXISTING 8" SEWER MAIN BETWEEN THE EXISTING MH-11 AND MH-12 SHALL BE EXCAVATED AND ENCASED (1' MIN. ALL AROUND) WITH FLOWABLE FILL (500 P.S.I. MIN. STRENGTH AND MAX. PERMEABILITY OF 8×10^{-6} CM/SEC.) BACKFILL @ 95% COMPACTION.

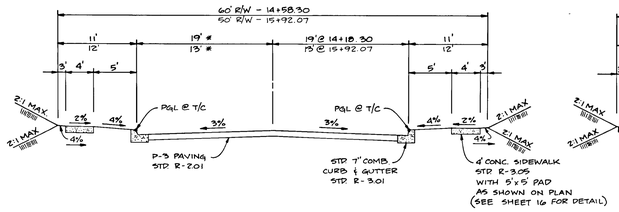
– SEE SHEET NO. 6 OF 18 FOR STORM DRAIN STRUCTURE SCHEDULE.
– SEE SHEET NO. 15 OF 18 FOR SEQUENCE OF CONSTRUCTION.
– SEE SHEET NO. 16 OF 18 FOR SIDEWALK RAMP, NOISE WALL, AND DIVERSION STRUCTURE DETAILS
– SEE SHEET 8 THRU 12 FOR STORMWATER MANAGEMENT CONSTRUCTION DETAILS.



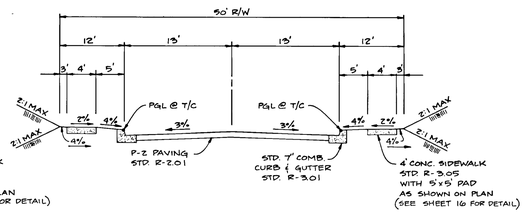
LOCAL ROAD
DESIGN SPEED 30 MPH

OLD SCAGGSVILLE ROAD

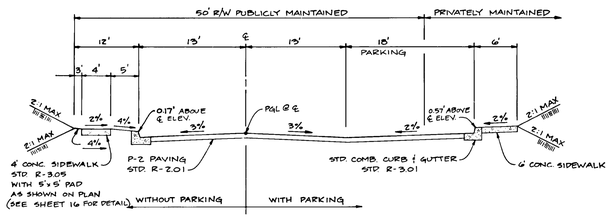
SCALE: 1"=50' HORIZ., 1"=5' VERT.



OLD SCAGGSVILLE ROAD
TRANSITION FROM STA. 14+18.30 TO STA. 15+92.07
TYPICAL SECTION
NOT TO SCALE



OLD SCAGGSVILLE ROAD
STA. 15+92.07 TO STA. 26+90.84
TYPICAL SECTION
NOT TO SCALE



ASHBERRY COURT
EVERMORE COURT
CASTLEROCK COURT
CRESTHILL COURT
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94

CHIEF, BUREAU OF HIGHWAYS — DATE 6-20-94

CHIEF, BUREAU OF ENGINEERING — DATE 6/28/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-8105

OWNER/DEVELOPER:

J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-252 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: ROAD PROFILES AND DETAILS

PB-235 PB-283 S-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993; MAY 20, 1994

PROJECT NO. 0420

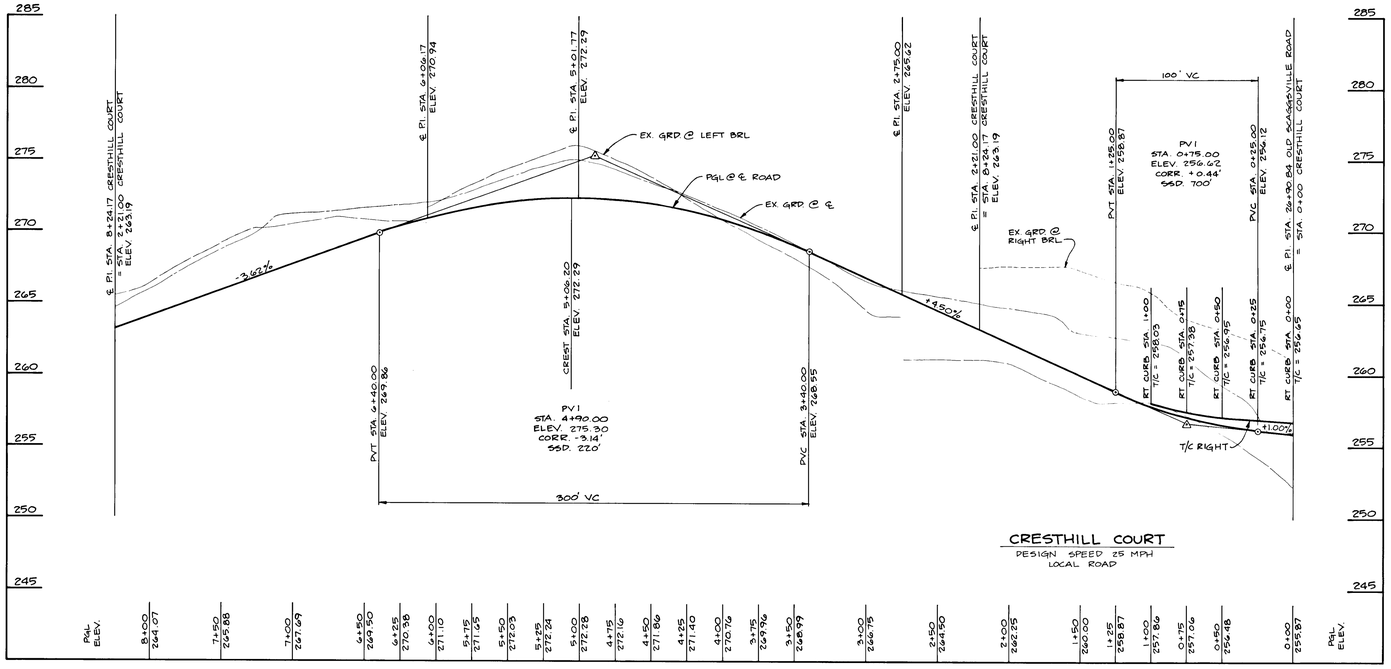
DES: JME DRN: DBT

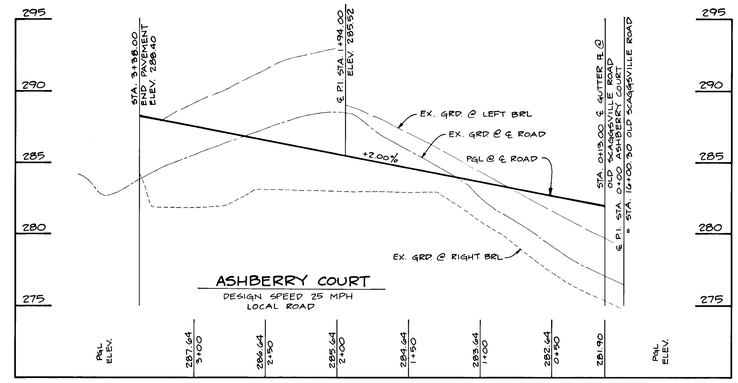
SCALE: AS SHOWN

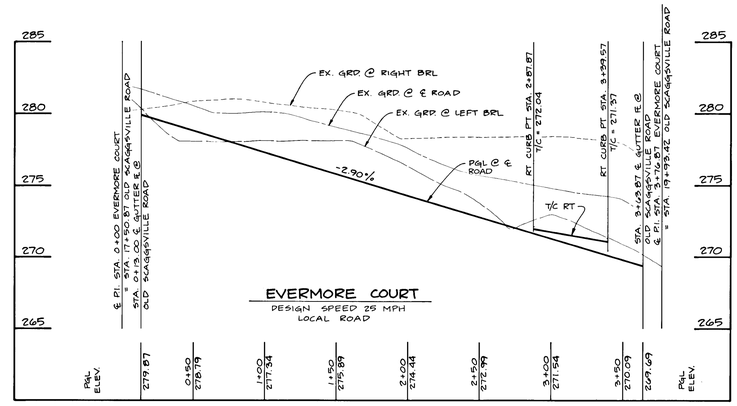
DRAWING 4 OF 18

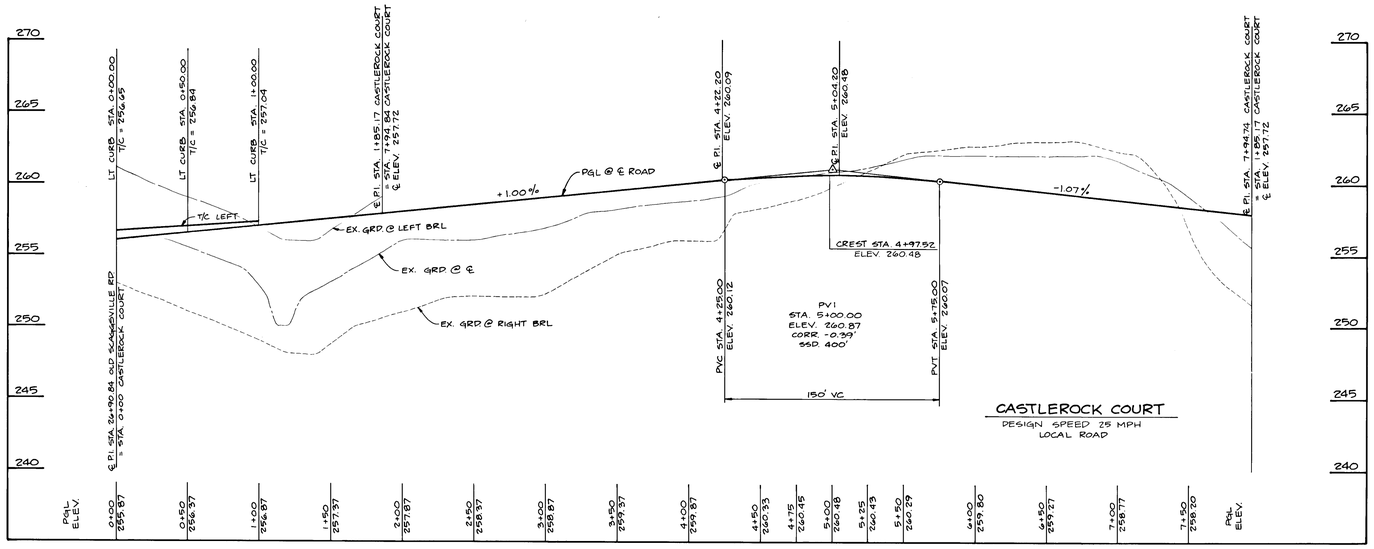
1589

F-94-35









APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/22/94

CHIEF, BUREAU OF HIGHWAYS — DATE 6-20-94

CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION

TSA GROUP, INC.
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OWNER/DEVELOPER:
J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-252 PARCELS 1, 2 & 3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: ROAD PROFILES

PB-235 PB-283 S-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993; MAY 20, 1994

PROJECT NO. 0420

DES: JME DRN: DBT

SCALE: 1" = 50' HORIZ. 1" = 5' VERT.

DRAWING 5 OF 18

1589

F-94-35

STORMWATER MANAGEMENT DATA

PRE-DEVELOPMENT

DRAINAGE AREA = 85.0 AC.
T_c = 0.30 Hr.
CN = 63

POST-DEVELOPMENT

DRAINAGE AREA = 85.0 AC. (ROUTED 79.6 AC.)
T_c = 0.30 Hr.
CN = 66

NOTE:

100 YEAR FLOODPLAIN STUDY PREPARED UNDER P-92-16. APPROVED AUG. 4, 1993

STORM RUNOFF DATA

INLET No.	AREA (Ac.)	% IMP.	C	Tc (MIN.)
I-1	0.46	43%	0.55	11
I-2	0.72	28%	0.44	11
I-3	0.61	59%	0.64	6
I-4	1.18	68%	0.70	13
I-5	1.15	70%	0.73	13
I-6	1.34	66%	0.70	11
I-7	0.28	50%	0.59	6
I-8	0.25	68%	0.70	5
I-9	1.03	68%	0.70	13
I-10	0.18	61%	0.68	5
I-11	0.20	55%	0.60	5
I-12	0.31	68%	0.70	5
I-13	0.45	68%	0.70	5
I-14	1.22	48%	0.57	12
I-15	0.39	77%	0.78	5
I-16	1.00	67%	0.71	12

UNLESS OTHERWISE NOTED:

1. ALL STORM DRAIN PIPE SHALL BE CLASS 4 REINFORCED CONCRETE.
2. ALL STORM DRAIN BEDDING BACKFILL & COMPACTION SHALL BE IN ACCORDANCE WITH HO. CO. STANDARDS.
3. TOP OF CURB ELEVATIONS GIVEN FOR ON GRADE INLETS ARE @ CENTER OF INLET.

SOILS CLASSIFICATION

SOILS GROUP		
C	BeB2	BELTSVILLE SILT LOAM, 1 TO 5 % SLOPES, MODERATELY ERODED
C	BeC3	BELTSVILLE SILT LOAM, 5 TO 10 % SLOPES, SEVERELY ERODED
C	CID2	CHILLUM GRAVELLY LOAM, 10 TO 15 % SLOPES, MODERATELY ERODED
C	IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 % SLOPES
D	LI	LEONARDTOWN SILT LOAM
B	MID3	MANOR LOAM, 15 TO 25 % SLOPES, SEVERELY ERODED.
B	MIE	MANOR LOAM, 25 TO 45 % SLOPES
B	RuB2	RUMFORD LOAMY SAND, 1 TO 5 % SLOPES, MODERATELY ERODED
B	SfC2	SASSAFRAS GRAVELLY SANDY LOAM, 5 TO 10 % SLOPES, MODERATELY ERODED
B	SfD2	SASSAFRAS GRAVELLY SANDY LOAM, 10 TO 15 % SLOPES, MODERATELY ERODED
B	SsE	SASSAFRAS SOILS, 15 TO 40 % SLOPES

INLET I-11, MANHOLES M-9, M-11, AND M-13 ARE DIVERSION STRUCTURES. SEE SHEET 16 FOR DETAILS.

STRUCTURE SCHEDULE

No.	TYPE	LOCATION	INV. IN	INV. OUT	TOP ELEV.	HO. CO. STD.
M-9	MANHOLE	25.00' LT. STA. 25+25.00 OLD SCAGGSVILLE RD.	249.00	248.90 (34"x22") 248.55 (18")	254.00	G-5.13
M-10	MANHOLE	26.53' LT. STA. 26+48.82 OLD SCAGGSVILLE RD.	249.65	249.55	255.20	G-5.13
M-11	MANHOLE	43.00' LT. STA. 0+69.55 CRESTHILL CT.	249.96	249.86 (34"x22") 249.24 (18")	254.70	G-5.13
M-12	MANHOLE	26.00' LT. STA. 22+74.63 OLD SCAGGSVILLE RD.	250.60	250.40	256.00	G-5.12
M-13	MANHOLE	26.00' LT. STA. 21+80.63 OLD SCAGGSVILLE RD.	254.54	254.50 (24") 254.08 (18")	259.90	G-5.12
E-5	27" CONC. END SECT.	43.00' LT. STA. 24+65.46 OLD SCAGGSVILLE RD.	——	246.45	——	SD-5.42A
E-6	24" CONC. END SECT.	33.88' LT. STA. 22+76.02 OLD SCAGGSVILLE RD.	——	250.20	——	SD-5.51

STRUCTURE SCHEDULE

No.	TYPE	LOCATION	INV. IN	INV. OUT	TOP ELEV.	HO. CO. STD.
I-1	A-10	13.00' LT. STA. 24+45.53 OLD SCAGGSVILLE RD.	249.46	249.56	253.17	SD 4.41
I-2	A-10	13.00' RT. STA. 24+45.53 OLD SCAGGSVILLE RD.	---	249.69	253.17	SD 4.41
I-3	A-10	13.00' RT. STA. 1+00.00 CRESTHILL CT.	251.03	250.83	258.03	SD 4.41
I-4	A-10	13.00' LT. STA. 0+41.90 CRESTHILL CT.	250.31	250.21	256.50	SD 4.41
I-5	A-10	13.00' RT. STA. 0+38.93 CASTLEROCK CT.	250.78	250.68	256.42	SD 4.41
I-6	A-10	13.00' LT. STA. 1+38.64 CASTLEROCK CT.	---	252.18	257.43	SD 4.41
I-7	A-5	13.00' LT. STA. 21+77.37 OLD SCAGGSVILLE RD.	254.70	254.58	259.41	SD 4.40
I-8	A-5	13.00' RT. STA. 21+77.37 OLD SCAGGSVILLE RD.	---	254.80	259.41	SD 4.40
I-9	A-10	13.00' LT. STA. 3+31.80 EVERMORE CT.	---	264.99	270.78	SD 4.41
I-10	A-5	13.00' LT. STA. 19+51.06 OLD SCAGGSVILLE RD.	---	267.07	272.82	SD 4.40
I-11	A-5	13.00' RT. STA. 17+68.86 OLD SCAGGSVILLE RD.	276.50	276.00 (18") 276.50 (21")	280.05	SD 4.40
I-12	A-5	13.00' LT. STA. 17+09.91 OLD SCAGGSVILLE RD.	---	277.17	281.17	SD 4.40
I-13	A-5	13.00' RT. STA. 15+58.44 OLD SCAGGSVILLE RD.	---	277.80	283.00	SD 4.40
I-14	A-10	13.00' LT. STA. 0+43.50 ASHBERRY CT.	277.73	277.63	282.67	SD 4.41
M-1	MANHOLE	15.84' LT. STA. 25+25.00 OLD SCAGGSVILLE RD.	249.13	249.03	253.82	G 5.12
M-2	MANHOLE	15.84' LT. STA. 0+69.55 CRESTHILL CT.	250.11	250.01	257.24	G 5.12
M-3	MANHOLE	15.84' LT. STA. 0+44.76 CASTLEROCK CT.	251.20	251.00	256.55	G 5.12
M-4	MANHOLE	7.18' LT. STA. 20+17.62 OLD SCAGGSVILLE RD.	262.14	261.94	268.27	G 5.12
M-5	MANHOLE	15.84' RT. STA. 19+69.08 OLD SCAGGSVILLE RD.	265.80	265.60	271.87	G 5.12
M-6	MANHOLE	27.00' RT. STA. 18+45.08 OLD SCAGGSVILLE RD.	273.20	273.00	279.05	G 5.12
M-7	MANHOLE	15.84' RT. STA. 17+09.91 OLD SCAGGSVILLE RD.	276.98	276.88	281.27	G 5.12
M-8	MANHOLE	16.45' RT. STA. 16+15.68 OLD SCAGGSVILLE RD.	277.53	277.43	281.68	G 5.12
E-1	18" CONC. END SECT.	52.00' LT. STA. 25+25.00 OLD SCAGGSVILLE RD.	——	247.00	---	SD 5.51
E-2	18" CONC. END SECT.	60.00' LT. STA. 0+69.55 CRESTHILL CT.	——	246.45	---	SD 5.51
E-3	18" CONC. END SECT.	52.00' LT. STA. 21+89.43 OLD SCAGGSVILLE RD.	——	253.00	---	SD 5.51
E-4	18" CONC. END SECT.	53.00' RT. STA. 17+68.86 OLD SCAGGSVILLE RD.	——	275.00	---	SD 5.51
H-1	HEADWALL	44.40' RT. STA. 24+26.82 OLD SCAGGSVILLE RD.	——	239.00	245.50	SEE SHT.10 FOR DET.
S-1	SWM CONTROL STRUCT.	51.82' LT. STA. 23+55.33 OLD SCAGGSVILLE RD.	SEE DETAIL	240.40	252.25	SEE SHT.10 FOR DET.
I-15	A-5	13.00' RT. STA. 0+42.04 ASHBERRY CT.	——	277.87	282.64	SD 4.40
I-16	A-10	13.00' LT. STA. 7+80.67 CRESTHILL COURT	——	259.25	264.75	SD 4.41

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94

CHIEF, BUREAU OF HIGHWAYS — DATE 6-20-94

CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION

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OWNER/DEVELOPER:
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5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: **WYNDEMERE**
SECTION 2
LOTS 119-252 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

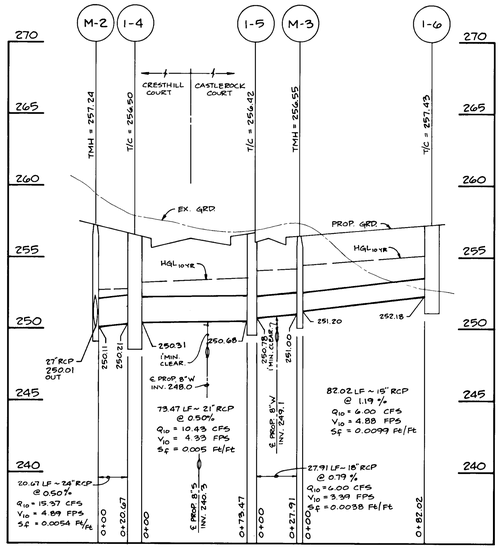
TITLE: **DRAINAGE AREA MAP**
PB-235 PB-283 S-88-42 WP-92-216 P-92-16

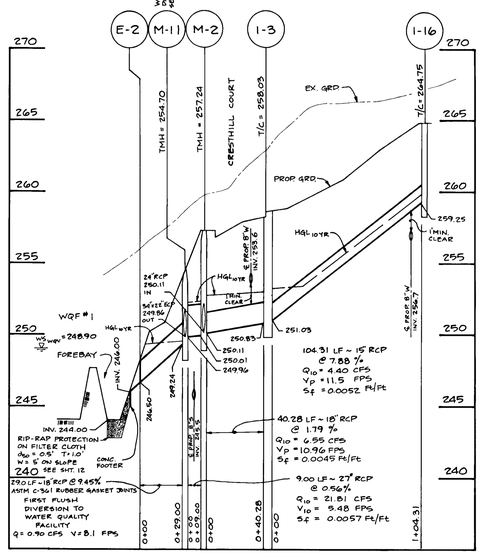
DATE: OCTOBER 15, 1993 / MAY 20, 1994 — PROJECT NO. 0420

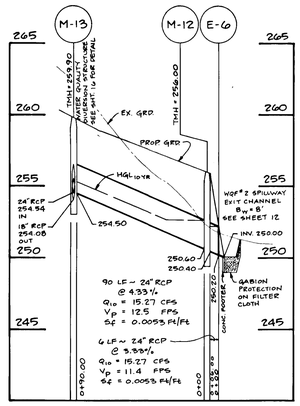
DES: JME — DRN: DRK/DBT — SCALE: 1" = 100' — DRAWING 6 OF 18

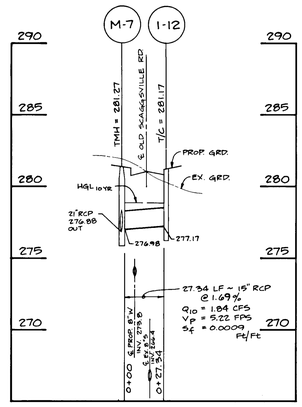
F-94-35

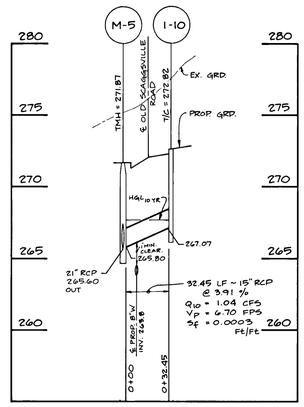
1589

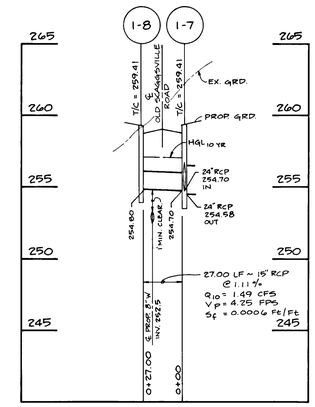


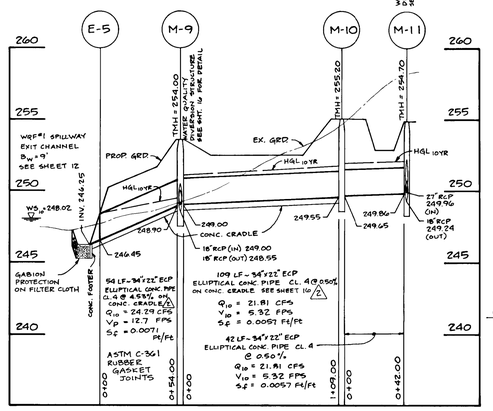


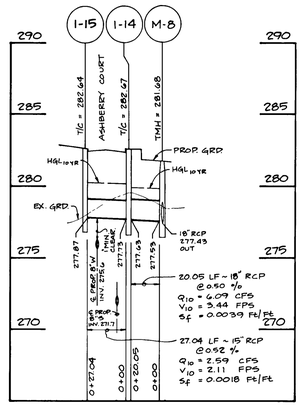


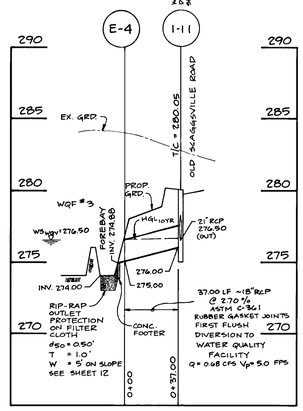


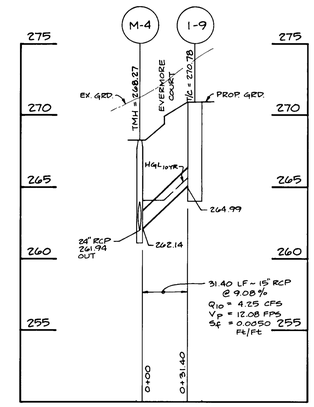


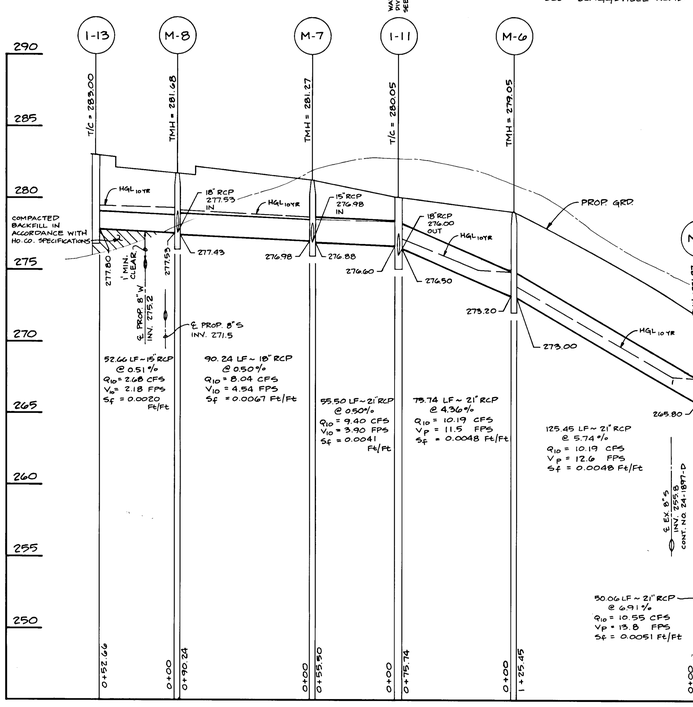


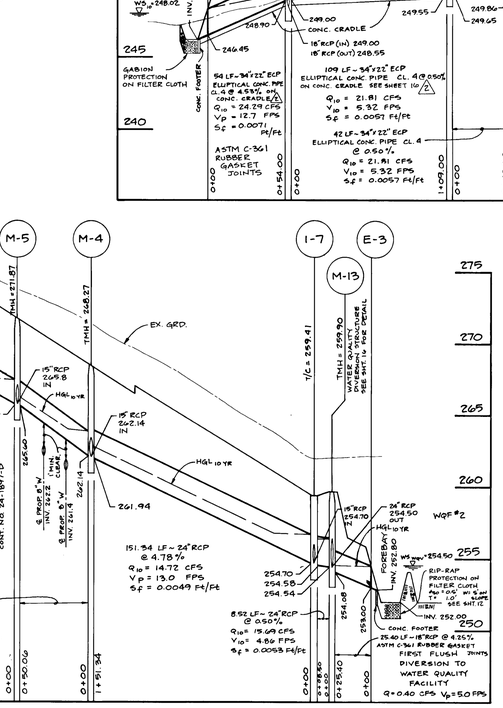


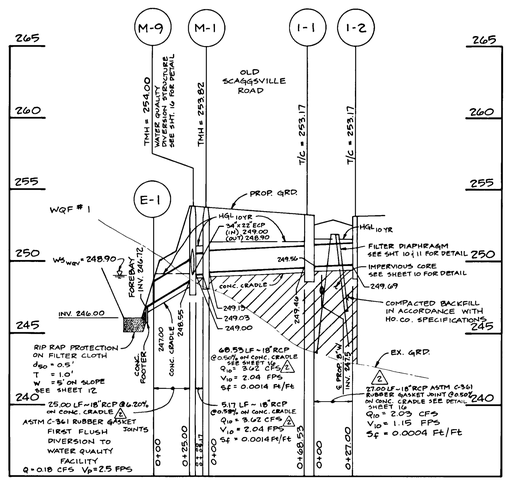












UNLESS OTHERWISE NOTED:

1. ALL STORM DRAIN PIPE SHALL BE CLASS 4 REINFORCED CONCRETE.
2. ALL STORM DRAIN BEDDING BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH HO. CO. STANDARDS.
3. TOP OF CURB ELEVATION GIVEN FOR ON GRADE INLETS IS @ CENTER OF INLET.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94

CHIEF, BUREAU OF HIGHWAYS — DATE 6-24-94

CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION
1	9-9-94	REVISIONS PER DEPT. OF NATURAL RESOURCES DAM CONSTRUCTION PERMIT REQUIREMENTS.

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

OWNER/DEVELOPER:
J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-252 PARCELS 1, 2 & 3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: STORM DRAIN PROFILES

PB-235 PB-283 S-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993; MAY 20, 1994

PROJECT NO. 0420

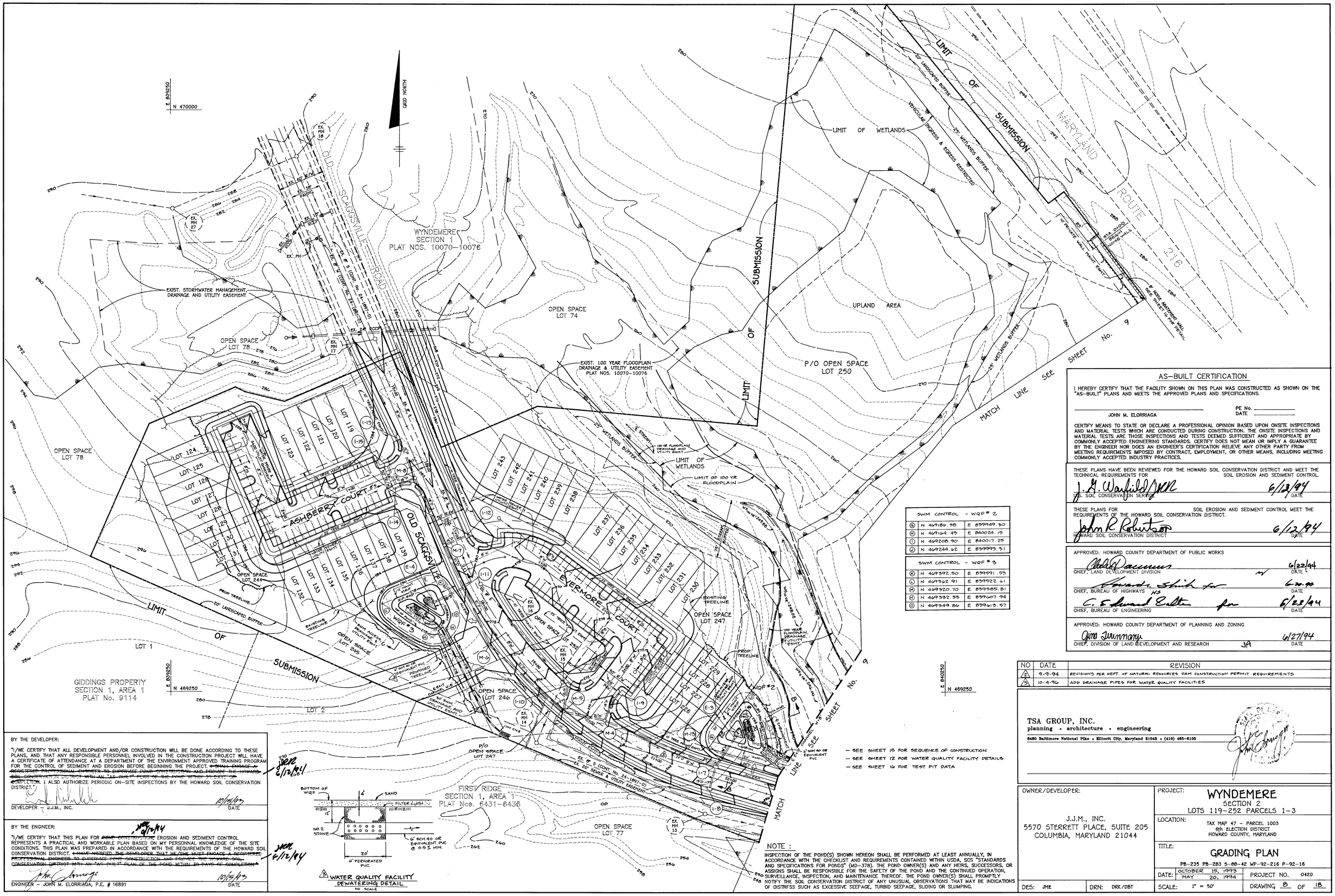
DES: JME DRN: DBT

SCALE: 1 = 50' HORIZ. 1" = 5' VERT.

DRAWING 7 OF 18

1589

F-94-35



SWM CONTROL - WQF # 2		
G	N 469186.38	E 839949.30
H	N 469164.45	E 840024.15
I	N 469208.90	E 840017.25
J	N 469244.62	E 839993.31

SWM CONTROL - WQF # 3		
K	N 469392.50	E 839591.93
L	N 469362.91	E 839522.61
M	N 469320.70	E 839585.81
N	N 469332.33	E 839607.94
O	N 469349.86	E 839613.57

NOTE :
INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

3 WATER QUALITY FACILITY DEWATERING DETAIL
NO SCALE

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. ~~I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.~~ I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER - J.J.M., INC. DATE 10/5/93

BY THE ENGINEER:

"I/WE CERTIFY THAT THIS PLAN FOR ~~SOME CONSTRUCTION~~, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONNAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. ~~I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.~~

ENGINEER - JOHN M. ELORRIAGA, P.E. # 16891 DATE 10/5/93

1589

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

JOHN M. ELORRIAGA — PE No. _____ DATE _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ONSITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

J. G. Warfield JMR — 6/13/94
U.S. SOIL CONSERVATION SERVICE — DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson — 6/12/94
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — 6/22/94 DATE
CHIEF, BUREAU OF HIGHWAYS — for — 6-20-94 DATE
CHIEF, BUREAU OF ENGINEERING — for — 6/28/94 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA — 6/27/94 DATE

NO	DATE	REVISION
1	9-9-94	REVISIONS PER DEPT. OF NATURAL RESOURCES DAM CONSTRUCTION PERMIT REQUIREMENTS
2	10-4-96	ADD DRAINAGE PIPES FOR WATER QUALITY FACILITIES

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

OWNER/DEVELOPER:
J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-252 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: GRADING PLAN

PB-235 PB-283 5-88-42 WP-92-216 P-92-16

DES: JME | DRN: DRK/DBT | DATE: OCTOBER 15, 1993 / MAY 20, 1994 | SCALE: 1" = 50' | PROJECT NO. 0420 | DRAWING 8 OF 18

F-94-35

NOTES:

1. SEE WATER AND SEWER CONTRACT 24-3329-D FOR CONSTRUCTION REQUIREMENTS: THE TOP OF EXISTING SANITARY SEWER MANHOLES MH-11 AND MH-12 ARE TO BE RAISED TO ELEV. 250.0 WITH WATER TIGHT CONNECTION, FRAME, AND COVER. CONTRACTOR SHALL REPAIR MANHOLES, IF REQUIRED, TO ENSURE WATER TIGHTNESS.
2. THE EXISTING 8" SEWER MAIN BETWEEN THE EXISTING MH-11 AND MH-12 SHALL BE EXCAVATED AND ENCASED (1'MIN. ALL AROUND) WITH FLOWABLE FILL (500 PS.I. MIN. STRENGTH AND MAX. PERMEABILITY OF 8×10^{-4} CM/SEC) BACKFILL @ 95% COMPACTION.

NOTES:

1. STORMWATER MANAGEMENT (QUANTITY CONTROL) PROVIDED BY DETENTION HAZARD CLASS 'B'. WATER QUALITY PROVIDED BY INFILTRATION.
2. STORMWATER MANAGEMENT AND WATER QUALITY FACILITIES ARE TO BE PUBLICLY OWNED AND MAINTAINED BY HOWARD COUNTY.
3. SEE SHEETS 10-12 FOR STORMWATER MANAGEMENT DETAILS.

SUMMARY

	POST-DEVELOPMENT DRAINAGE AREA	RCN	T_c	% IMPERVIOUS	PRE-DEVELOPMENT DRAINAGE AREA	RCN	T_c
SWMF	79.60 AC.	66(2×10 YR.) 80(100 YR.)	0.30 HR. 0.25 HR.	8.3% 35%	85.0 AC.	63	0.30 Hr.
UNMANAGED CREDIT	5.40 AC.	69	0.16 Hr.	5.6%			
WQF # 1	6.74 AC.		0.22 Hr.	58.2%	WQV = 7115 CF (MIN)		
WQF # 2	4.59 AC.		0.22 Hr.	57.5%	WQV = 2035 CF (MIN)		
WQF # 3	2.57 AC.		0.20 Hr.	99.1%	WQV = 2759 CF (MIN)		

STORM FREQUENCY	PRE-DEVELOPMENT RUN-OFF	POST-DEVELOPMENT RUNOFF	ROUTED DISCHARGE	WSEL	ROUTED+CREDIT TOTAL DISCHARGE
2	37.34 CFS	47.59 CFS	32.57 CFS	246.00	33.74 CFS
10	139.01 CFS	151.57 CFS	134.04 CFS	248.02	140.20 CFS
100		440.34 CFS	422.30 CFS	249.88	441.74 CFS

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

JOHN M. ELORRIAGA — PE No. ____ DATE ____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ONSITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

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DEVELOPER - J.J.M., INC. — DATE 10/15/93

BY THE ENGINEER:

"I/WE CERTIFY THAT THIS PLAN FOR ~~POND CONSTRUCTION~~ EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONNAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. ~~I FURTHER NOTIFIED THE DEVELOPER THAT HE SHALL MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.~~

ENGINEER - JOHN M. ELORRIAGA, P.E. # 16891 — DATE 10/15/93

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

U.S. SOIL CONSERVATION SERVICE — DATE 6/12/94

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE 6/12/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94

CHIEF, BUREAU OF HIGHWAYS — DATE 6.20.94

CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION
1	9-9-94	REVISIONS PER DEPT. OF NATURAL RESOURCES DAM CONSTRUCTION PERMIT REQUIREMENTS.
2	10-4-96	ADD DRAINAGE PIPES FOR WATER QUALITY FACILITIES

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-8105

SWM CONTROL - WQF #1		
A	N 469112.33	E 840258.11
B	N 469120.23	E 840316.81
C	N 469144.32	E 840370.91
D	N 469175.25	E 840351.94
E	N 469184.47	E 840326.36
F	N 469138.86	E 840282.01

NOTE:

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

OWNER/DEVELOPER:
J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-252 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

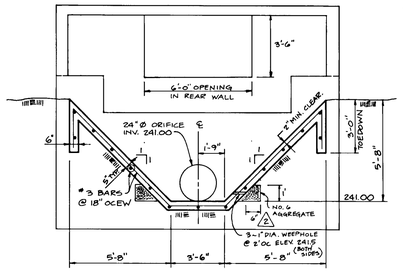
TITLE: GRADING PLAN
PB-235 PB-283 5-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993 / MAY 20, 1994 — PROJECT NO. 0420

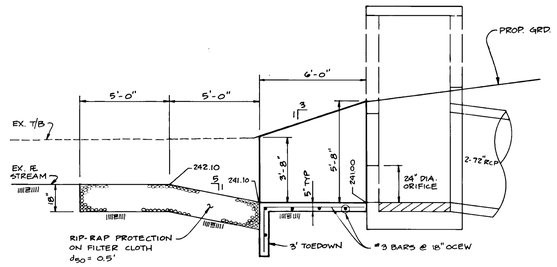
DES: JME/DRK — DRN: DRK/DBT — SCALE: 1" = 50' — DRAWING 9 OF 18

1589

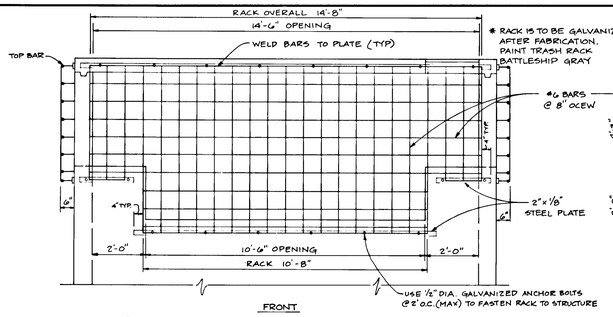
F-94-35

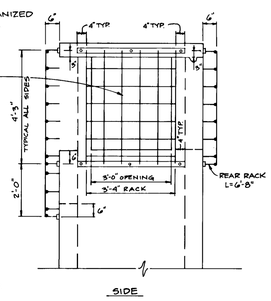


SECTION A-A
NOT TO SCALE

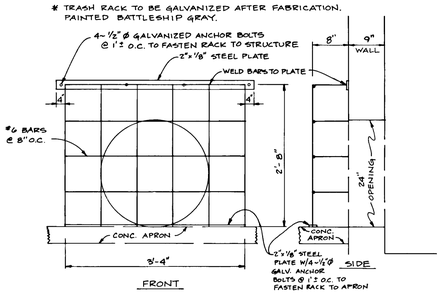


ELEVATION
NOT TO SCALE

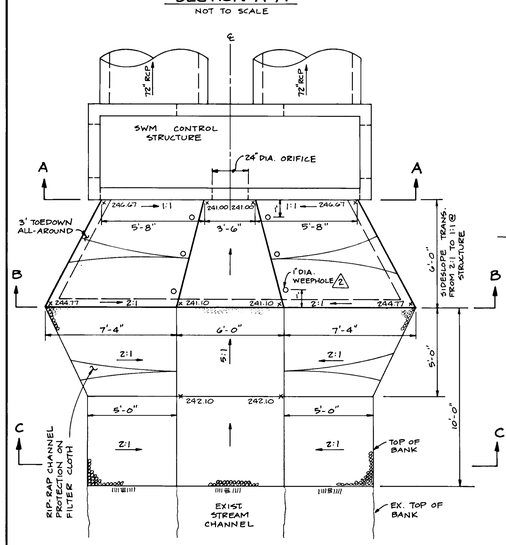




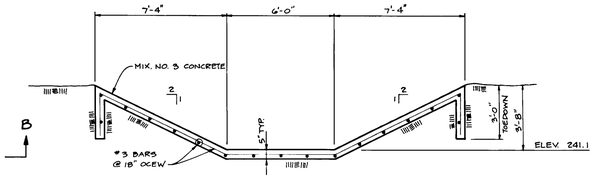
TRASH RACK DETAIL
SCALE : 3/8" = 1'-0"



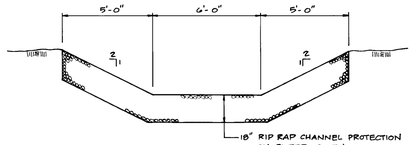
TRASH RACK DETAIL
24" LOW FLOW ORIFICE
SCALE : 3/4" = 1'-0"



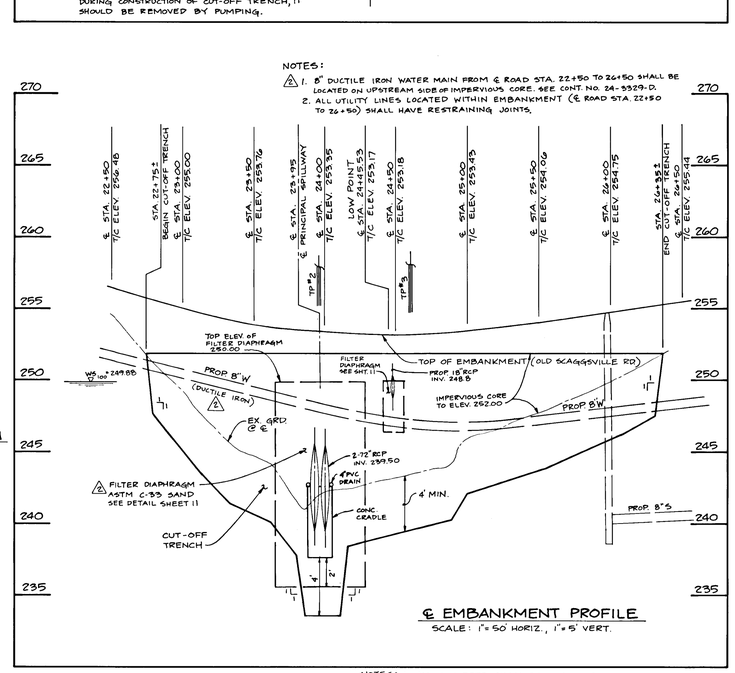
PLAN
NOT TO SCALE



SECTION B-B
SCALE : 1/4" = 1'-0"



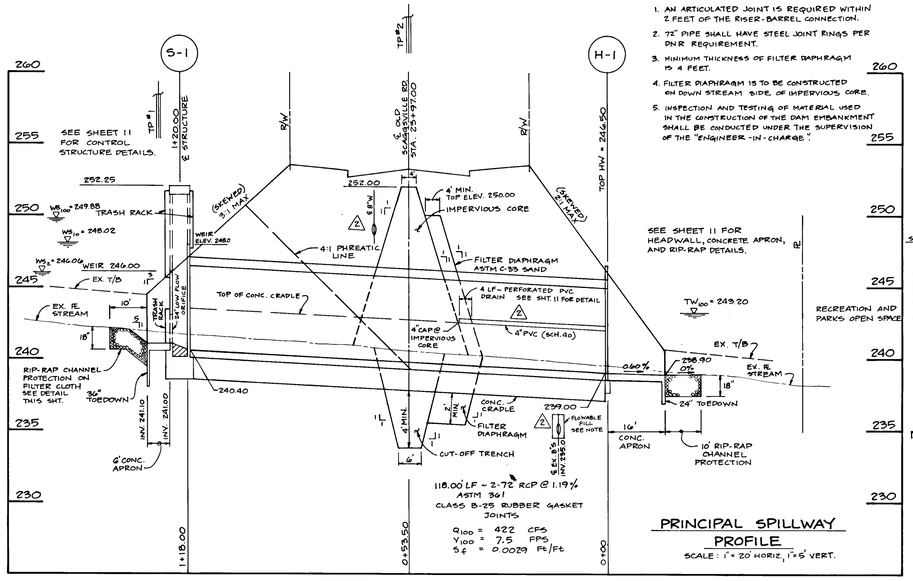
SECTION C-C
SCALE : 1/4" = 1'-0"



TYPICAL EMBANKMENT SECTION
SCALE : 1"= 20' HORIZ., 1"= 5' VERT.

℄ EMBANKMENT PROFILE
SCALE : 1"= 50 HORIZ., 1"= 5' VERT.

DETAILS
CONCRETE APRON @ CONTROL STRUCTURE



PRINCIPAL SPILLWAY PROFILE
SCALE : 1"= 20' HORIZ., 1"= 5' VERT.

SEE SHEET 11 FOR HEADWALL, CONCRETE APRON, AND RIP-RAP DETAILS.

RECREATION AND PARKS OPEN SPACE

⚠2 FILTER DIAPHRAGM GRADATION

SIEVE SIZE	MM.	% PASSING
3/8 IN.	9.50	100
NO 4	4.75	90-100
NO 10	2.00	70-100
NO 20	0.85	50-85
NO 50	0.30	25-50
NO 100	0.15	8-30
NO 140	0.106	0-15
NO 200	0.075	0-5

⚠2 NOTES:
1. ALL PIPES IN SWM EMBANKMENT SHALL HAVE RESTRAINING JOINTS.
2. ALL PIPES CROSSING THROUGH THE DAM SHALL HAVE FILTER DIAPHRAGMS ON DOWNSTREAM SIDE OF IMPERVIOUS CORE.
3. ALL UTILITY LINES NOT PART OF THIS CONTRACT, OR # 24-3529-D, (I.E. ELECTRIC, GAS, ETC.) SHALL BE ENCASED IN FLOWABLE FILL (MIN. 1 FOOT ALL AROUND) - 500 PSI MIN. STRENGTH AND MAX. PERMEABILITY OF 8×10^{-4} CM/SEC.
4. NO GRAVEL IS ALLOWED UNDER ANY UTILITY LINE WITHIN THE LIMIT OF THE DAM ℄ ROAD STA 22+50 TO 26+50.
5. THE PLACEMENT OF UTILITIES WITHIN THE EMBANKMENT IS TO BE SEQUENCED WITH THE CONSTRUCTION OF THE EMBANKMENT RATHER THAN BY TRENCHING.
6. NO TREE PLANTING IS ALLOWED IN THE EMBANKMENT, OLD SCAGGSVILLE RD ℄ STA. 22+50 TO 26+50. NO TREES ARE ALLOWED WITHIN 25 FEET OF THE EMBANKMENT.

NOTES: 1. ALL CONCRETE SHALL BE MIX NO. 3.
2. ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENT OF ASTM A615 GRADE 60.
3. ALL EXPOSED CORNERS ARE TO BE CHAMFERED 3/4 INCH.
4. SEE SHEET 15 FOR CONSTRUCTION SPECIFICATIONS AND NOTES.
5. SEE SHEET 16 FOR TEST PIT DATA.

NOTE :
INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

JOHN M. ELORRIAGA — PE No. _____ DATE _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ONSITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

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DEVELOPER — J.J.M., INC. — DATE 10/15/93

BY THE ENGINEER:

"I/WE CERTIFY THAT THIS PLAN FOR ~~POND CONSTRUCTION~~, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONNAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. ~~I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.~~"

ENGINEER — JOHN M. ELORRIAGA, P.E. # 16891 — DATE 10/15/93

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

U.S. SOIL CONSERVATION SERVICE — DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94
CHIEF, BUREAU OF HIGHWAYS — DATE 6.20.94
CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION
⚠2	9-9-94	REVISIONS PER DEPT. OF NATURAL RESOURCES. DAM CONSTRUCTION PERMIT REQUIREMENTS.

TSA GROUP, INC.
planning • architecture • engineering
8400 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-8105

OWNER/DEVELOPER:
J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-251 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS

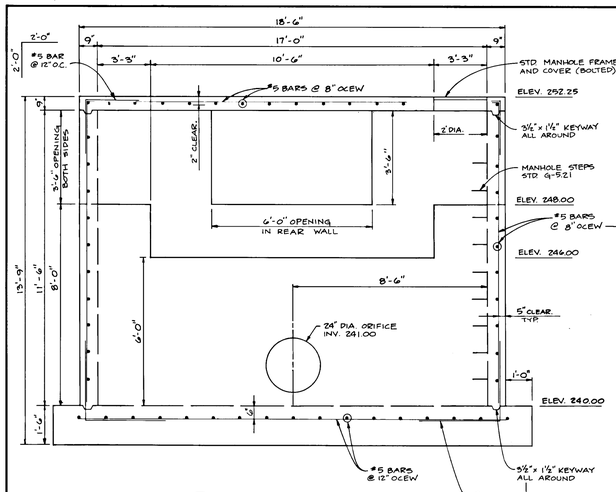
PB-235 PB-283 S-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993 / MAY 20, 1994 — PROJECT NO. 0420

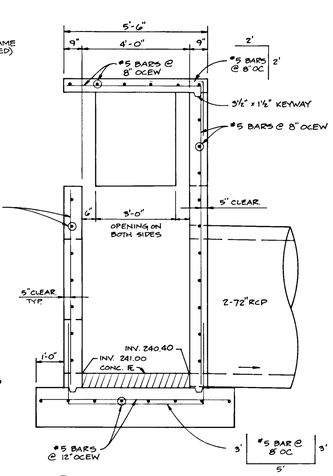
DES: JME — DRN: DBT — SCALE: AS SHOWN — DRAWING 10 OF 18

1589

F-94-35



S-1 FRONT ELEVATION
NOT TO SCALE



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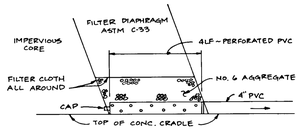
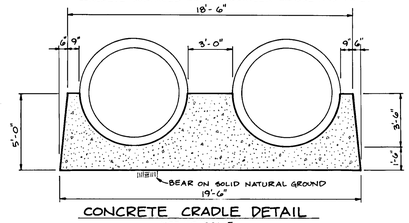


FILTER DIAPHRAGM DRAIN
NOT TO SCALE
2

CONCRETE APRON AT HEADWALL DETAIL
NOT TO SCALE

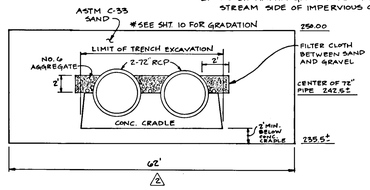
1. POUR CONCRETE TO UNDISTURBED EARTH. REMOVE SHEETING BEFORE POURING CONCRETE OR LEAVE LOWER PORTION OF SHEETING IN PLACE.
2. CONCRETE CRADLE TO BE PLACED FOR ENTIRE LENGTH OF 72" PIPES.
3. ASPHALT JOINT FILLER TO BE INSTALLED BETWEEN ALL CONCRETE SURFACES EXCEPT BETWEEN CRADLE AND PIPE.



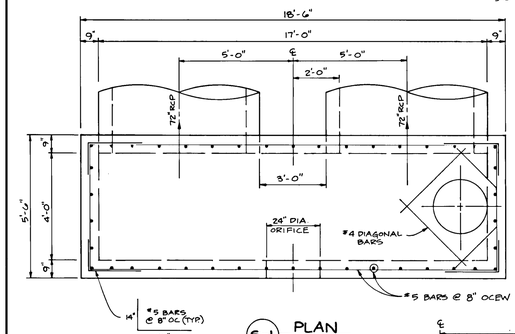
CONCRETE CRADLE DETAIL
NOT TO SCALE

SCS TR46 A-Z CRADLE MODIFIED FOR TWIN PIPES RE: ES-120

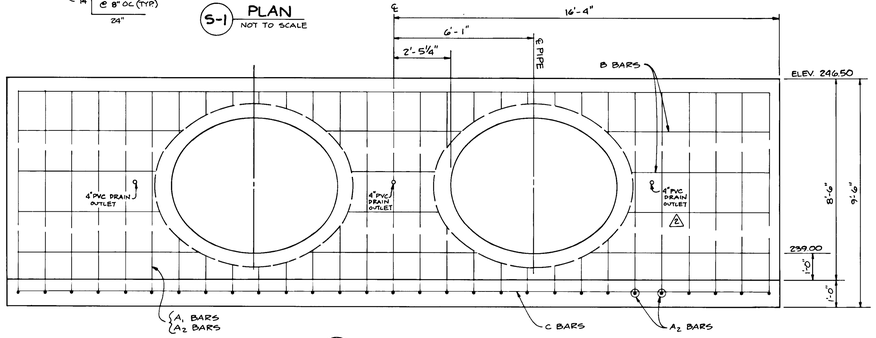
NOTES:
1. MINIMUM THICKNESS OF FILTER DIAPHRAGM IS 4'
2. FILTER DIAPHRAGM IS TO BE CONSTRUCTED ON DOWN STREAM SIDE OF IMPERVIOUS CORE.



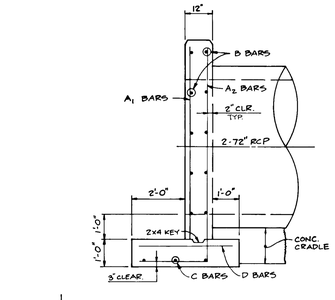
FILTER DIAPHRAGM SECTIONS
NOT TO SCALE
2



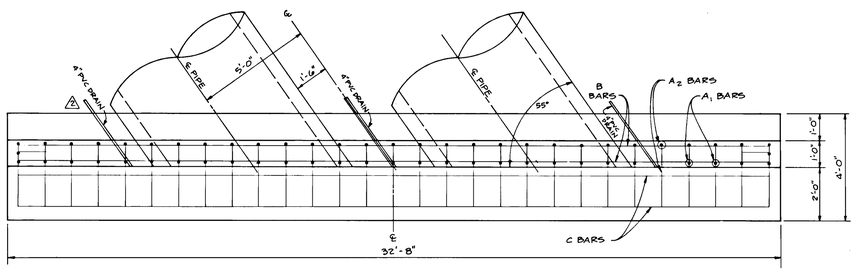
S-1 PLAN
NOT TO SCALE



H-1 ELEVATION
NOT TO SCALE



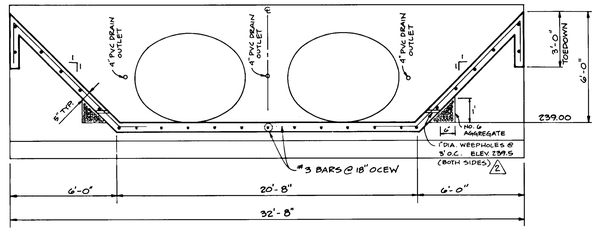
H-1 SECTION
NOT TO SCALE



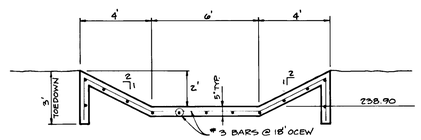
H-1 PLAN
NOT TO SCALE

HEADWALL STEEL SCHEDULE				
BAR	SIZE	SPACING	NO	LENGTH
A_1	#5	12" OC	33	8'-3" TYP
A_2	#5	12" OC	33	11'-6" TYP
B	#5	18" OC	12	32'-4" TYP
C	#4	14" OC	9	32'-4" TYP
D	#4	12" OC	33	3'-6" TYP

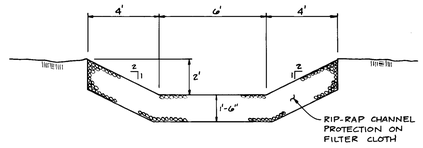
NOTES:
1. ALL CONCRETE SHALL BE MIX NO. 3
2. ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENT OF ASTM A615 GRADE 60.
3. ALL EXPOSED CORNERS ARE TO BE CHAMFERED 3/4 INCH.



SECTION A-A
NOT TO SCALE



SECTION B-B
SCALE: 1/4" = 1'-0"



SECTION C-C
SCALE: 1/4" = 1'-0"

NOTE :
INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

JOHN M. ELORRIAGA — PE No. _____ DATE _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ONSITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. ~~I SHALL ENGAGE A~~ ~~REGISTERED~~ PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND ENSURE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN ~~30 DAYS OF~~ COMPLETION." I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER - J.J.M., INC. — DATE 12/15/93

BY THE ENGINEER:

"I/WE CERTIFY THAT THIS PLAN FOR ~~SOIL EROSION AND~~ EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONNAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. ~~I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND ENSURE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.~~"

ENGINEER - JOHN M. ELORRIAGA, P.E. # 16691 — DATE 10/15/93

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

U.S. SOIL CONSERVATION SERVICE — DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94

CHIEF, BUREAU OF HIGHWAYS — DATE 6.20.94

CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA — DATE 6/27/94

NO	DATE	REVISION
2	9-12-94	REVISIONS PER DEPT OF NATURAL RESOURCES DAM CONSTRUCTION PERMIT REQUIREMENTS.

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OWNER/DEVELOPER:
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5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-251 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS

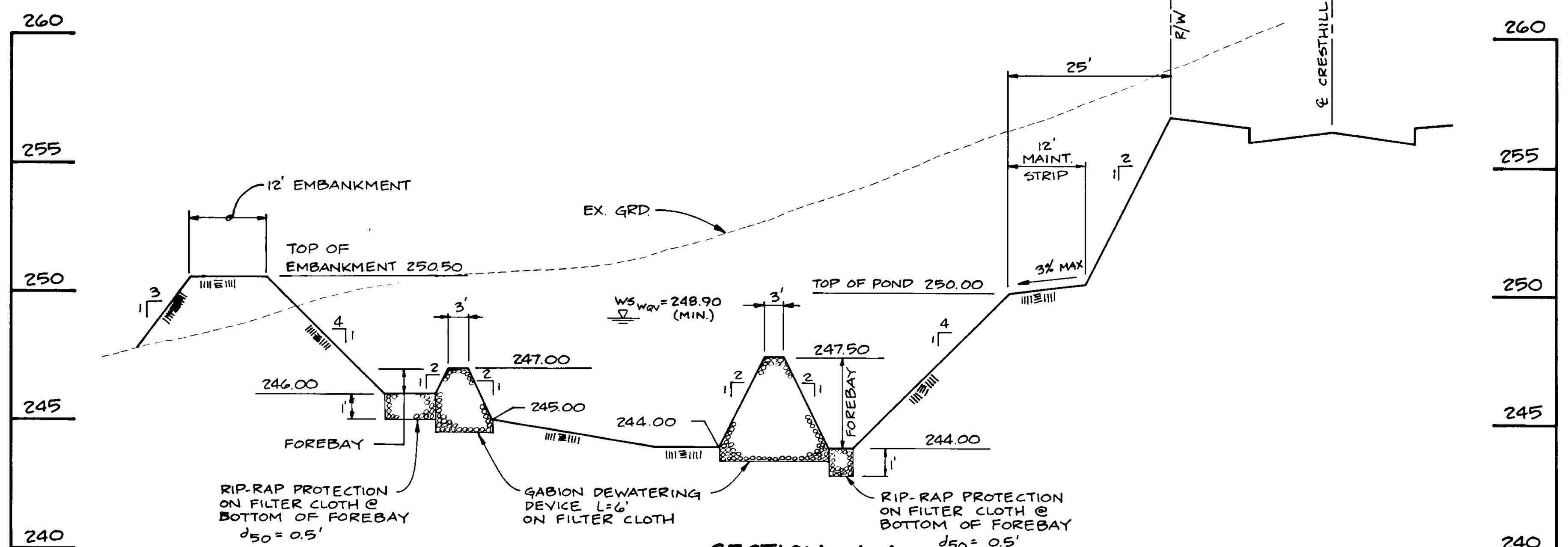
PB-235 PB-283 S-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993 / MAY 20, 1994 — PROJECT NO. 0420

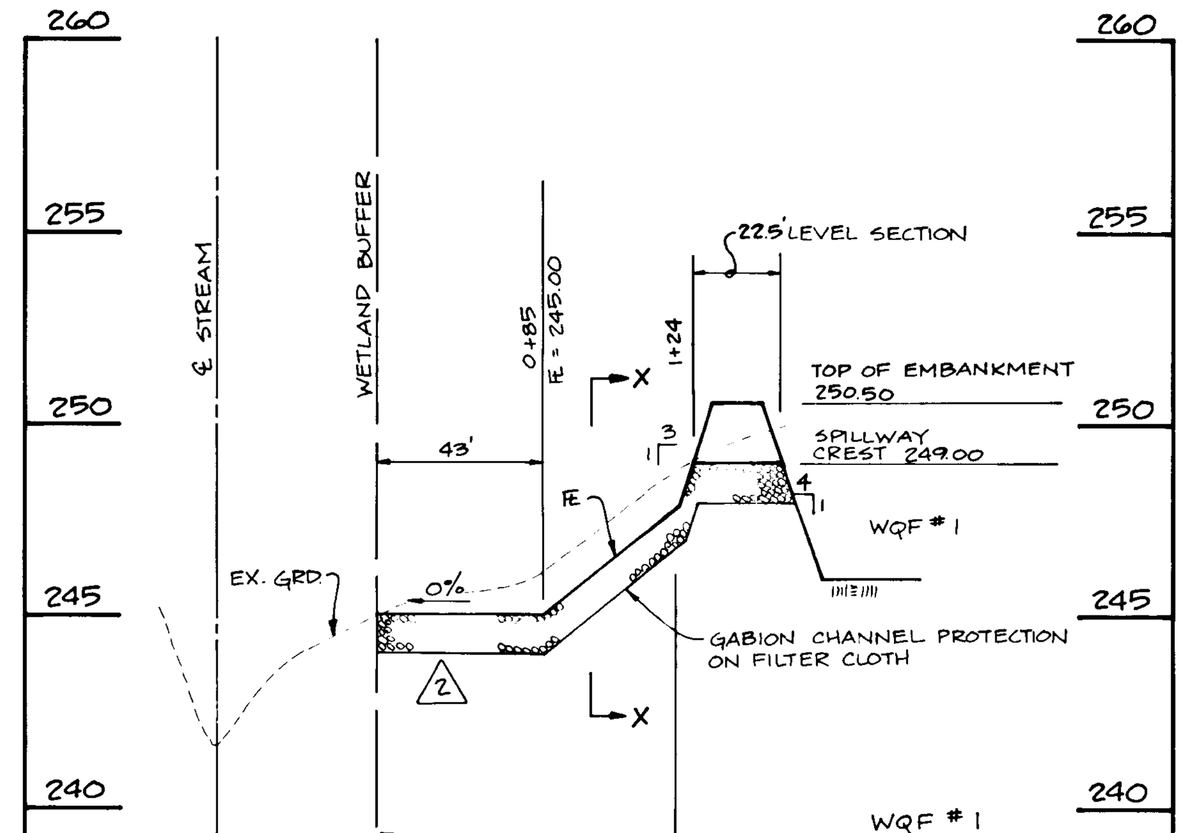
DES: JME — DRN: DBT — SCALE: AS SHOWN — DRAWING 11 OF 18

1589

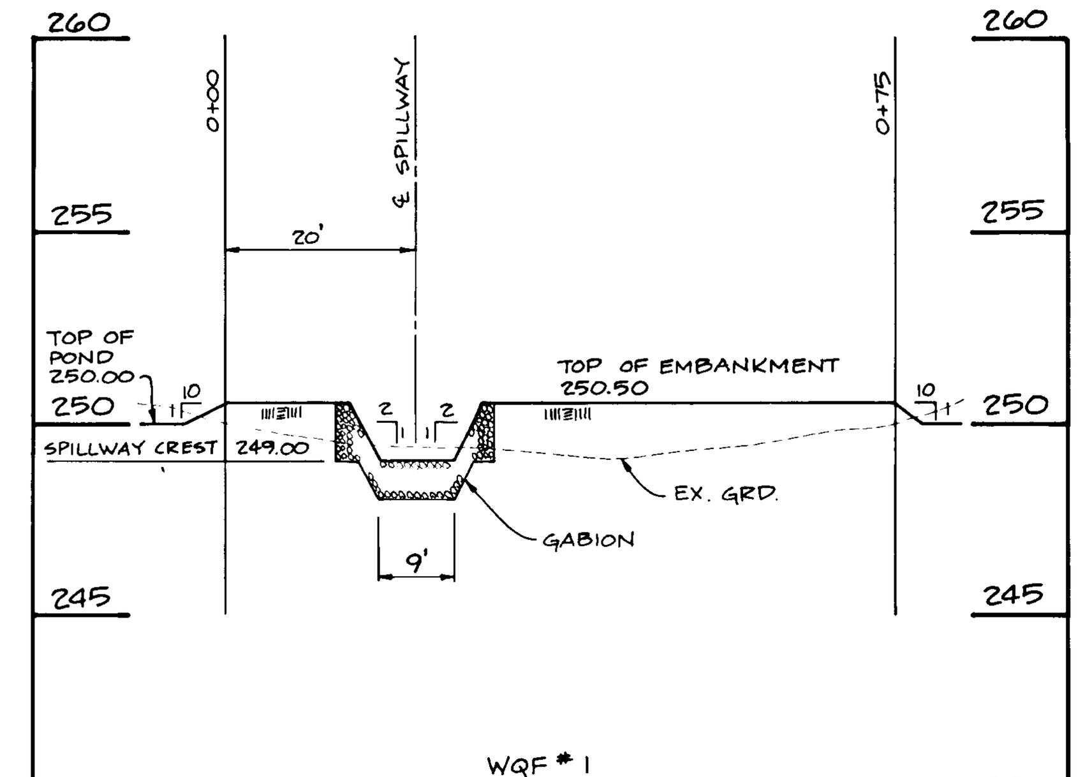
F-94-35



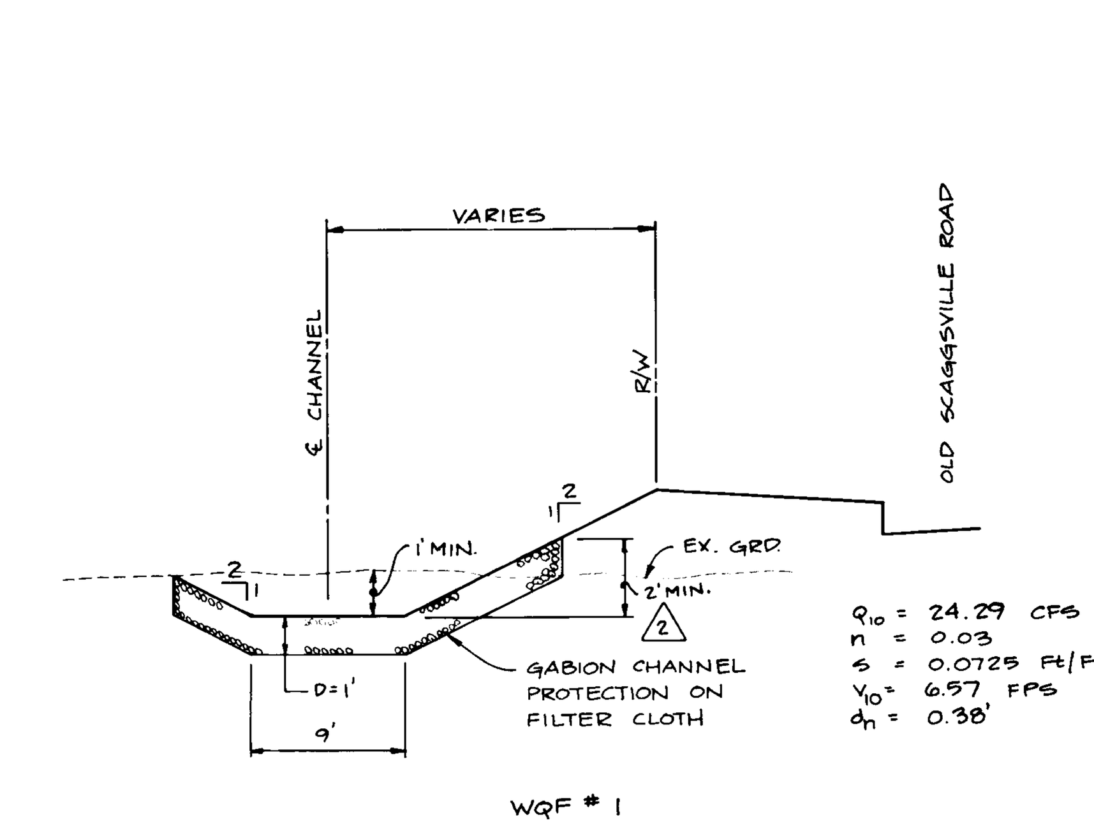
SECTION A-A
WATER QUALITY FACILITY # 1
INFILTRATION
SCALE: 1" = 20' HORIZ., 1" = 5' VERT.



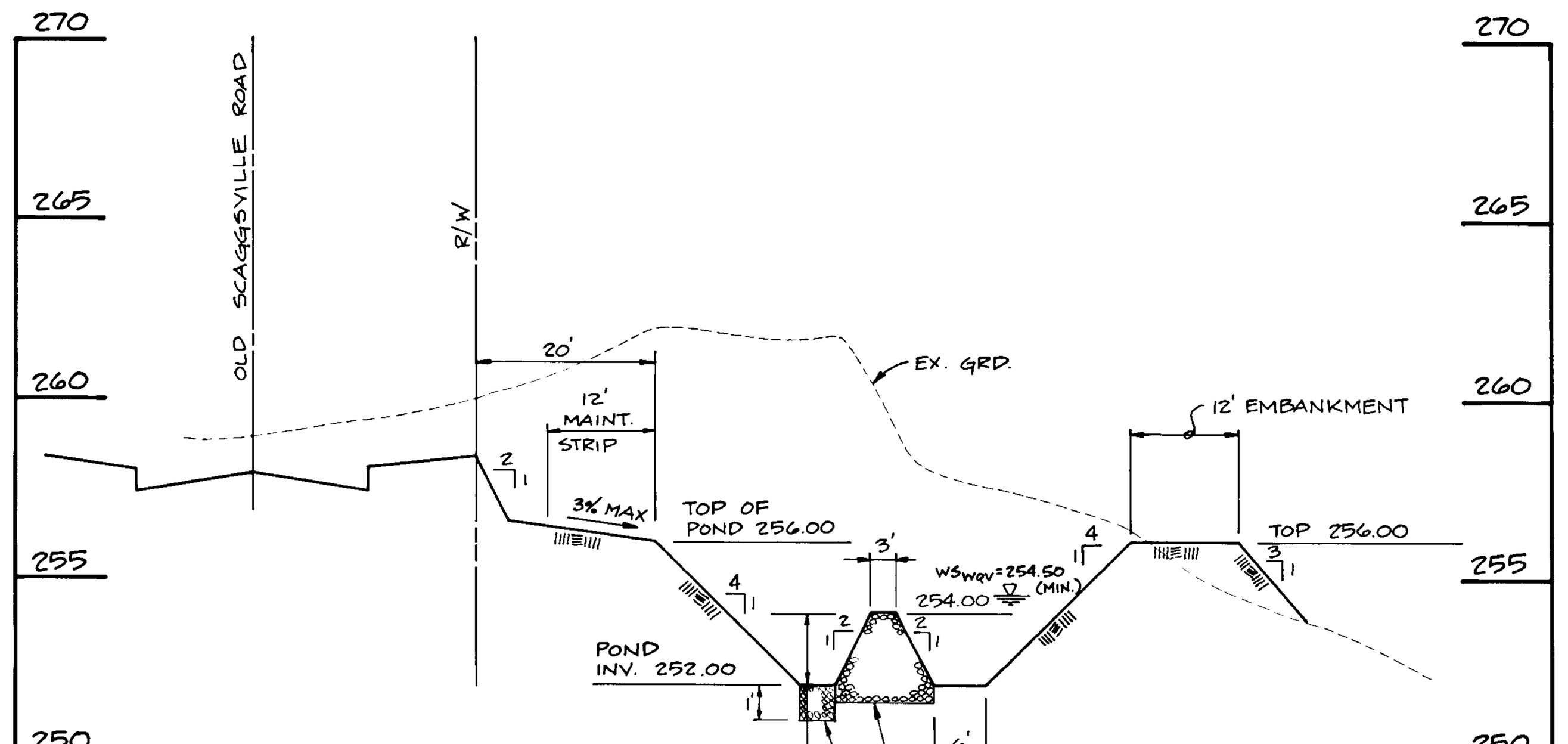
WQF # 1
SPILLWAY PROFILE
SCALE: 1" = 50' HORIZ., 1" = 5' VERT.



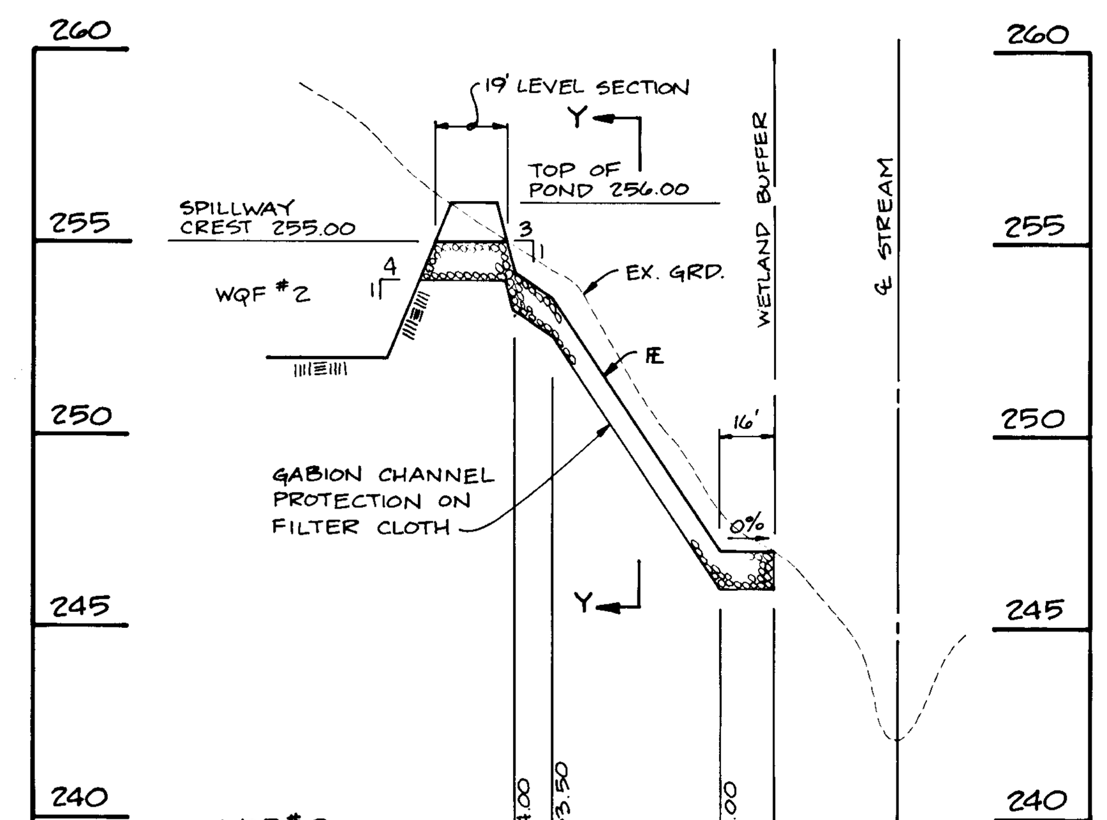
WQF # 1
℄ EMBANKMENT
PROFILE
SCALE: 1" = 20' HORIZ., 1" = 5' VERT.



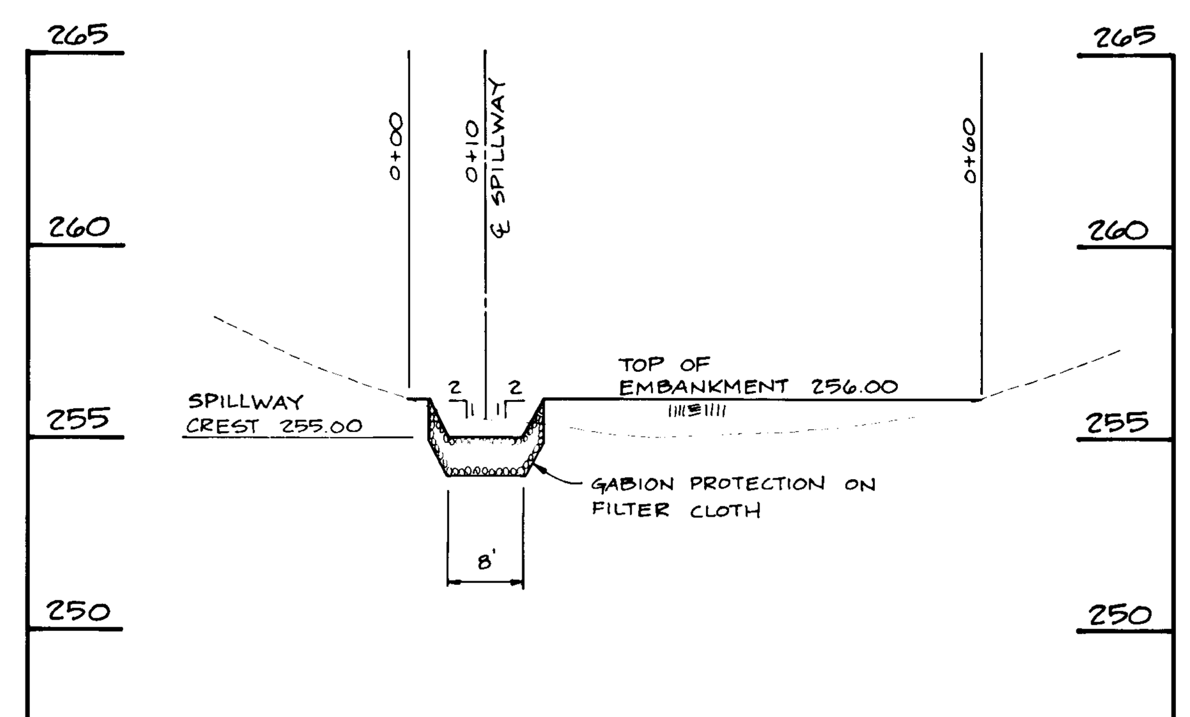
WQF # 1
EXIT CHANNEL SECTION X-X
NOT TO SCALE



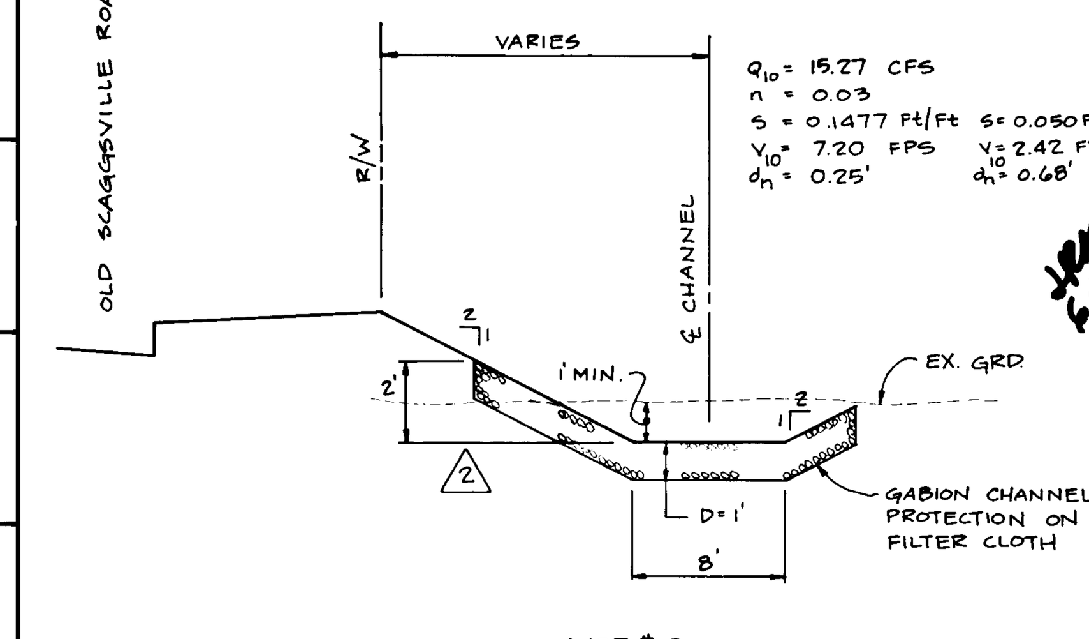
SECTION B-B
WATER QUALITY FACILITY # 2
INFILTRATION
SCALE: 1" = 20' HORIZ., 1" = 5' VERT.



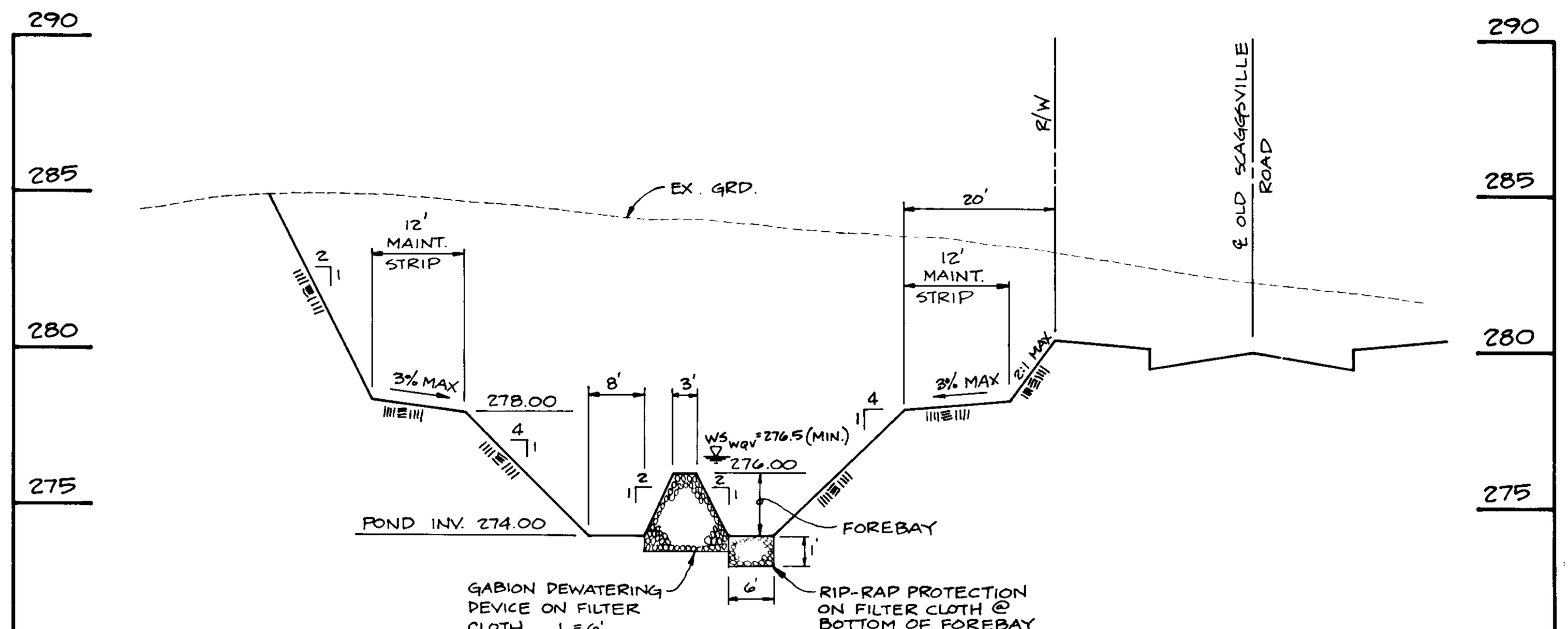
WQF # 2
SPILLWAY PROFILE
SCALE: 1" = 50' HORIZ., 1" = 5' VERT.



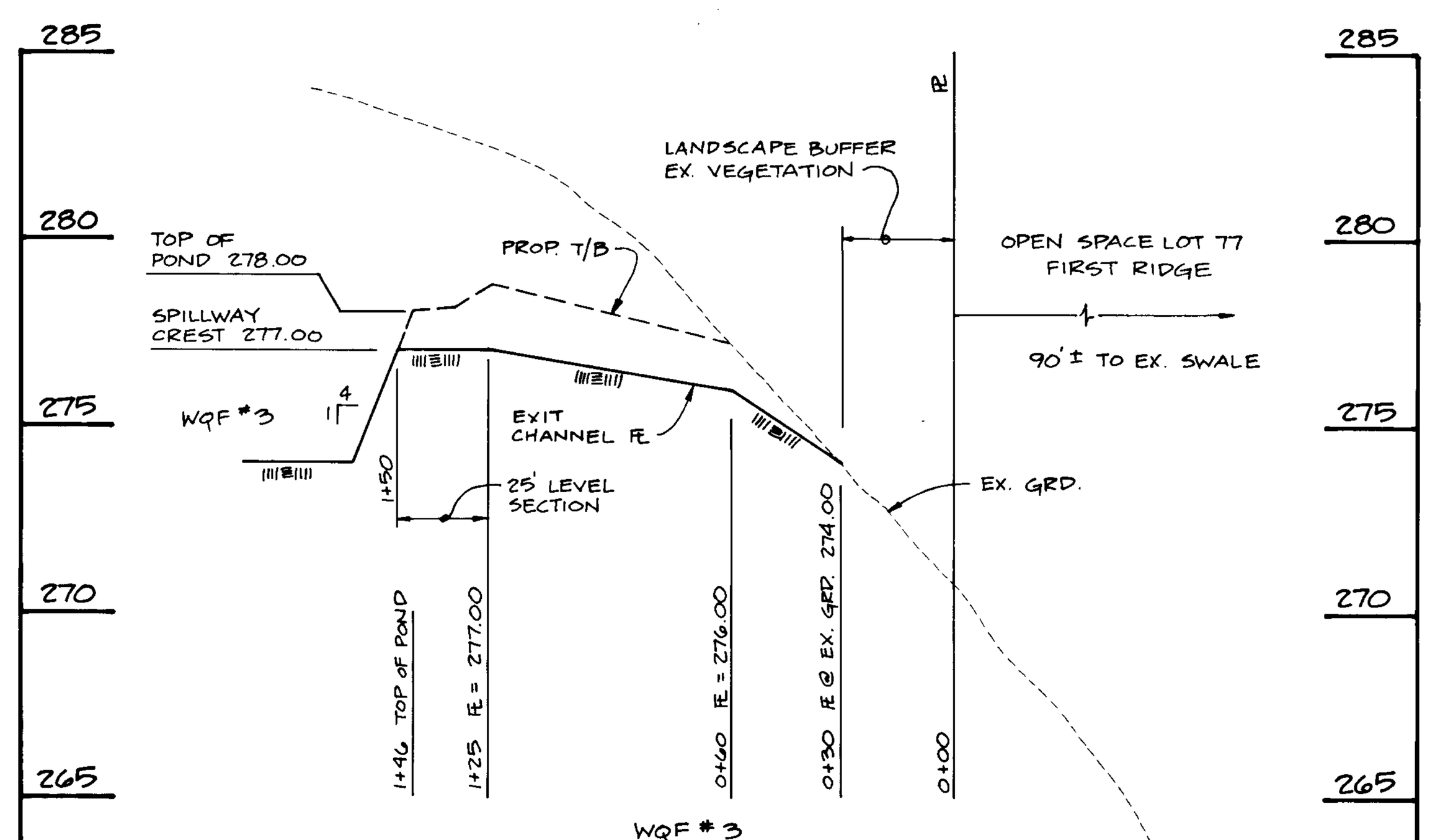
WQF # 2
℄ EMBANKMENT PROFILE
SCALE: 1" = 20' HORIZ., 1" = 5' VERT.



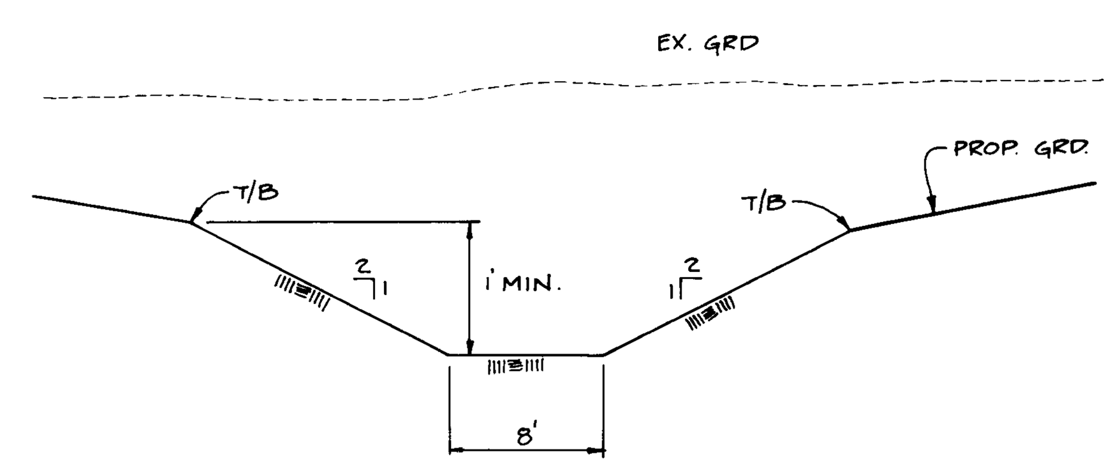
WQF # 2
EXIT CHANNEL SECTION Y-Y
NOT TO SCALE



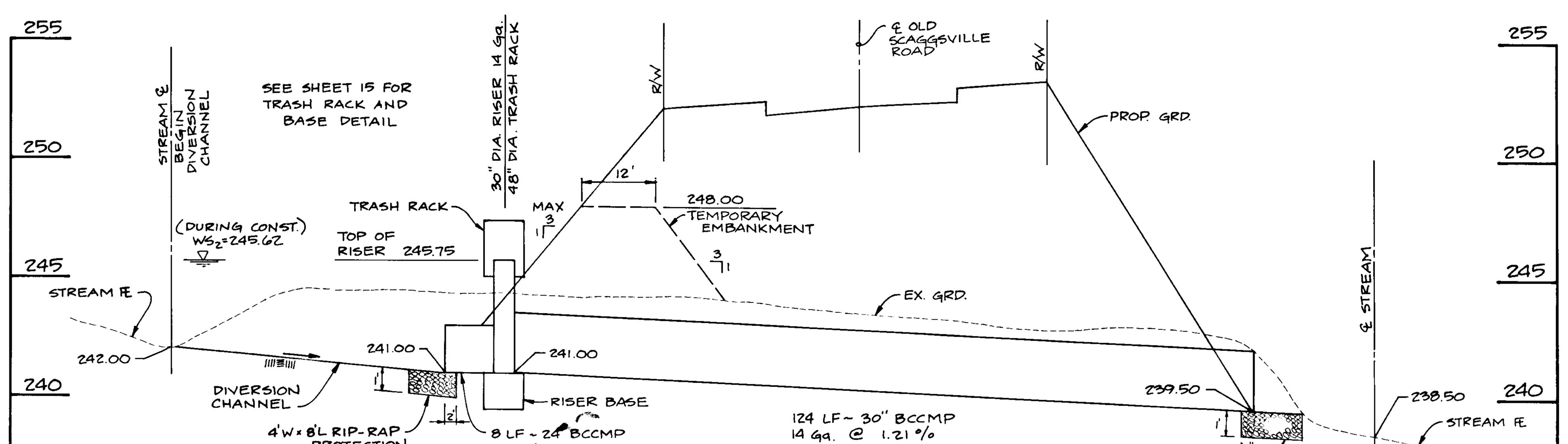
SECTION C-C
WATER QUALITY FACILITY # 3
INFILTRATION
SCALE: 1" = 20' HORIZ., 1" = 5' VERT.



WQF # 3
SPILLWAY PROFILE
SCALE: 1" = 50' HORIZ., 1" = 5' VERT.



WQF # 3
EXIT CHANNEL SECTION
NOT TO SCALE



TEMPORARY SWM PIPE AND RISER
SCALE: 1" = 20' HORIZ., 1" = 5' VERT.

NOTE
MATERIAL FOR EMBANKMENT CONSTRUCTION IS TO BE USCS GC, SC, CH, OR CL.

NOTE :
INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

JOHN M. ELORRIAGA — PE No. ______ DATE ______

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ONSITE INSPECTIONS AND MATERIAL TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. ~~I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.~~ I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER — J.J.M., INC. — DATE

BY THE ENGINEER:

"I/WE CERTIFY THAT THIS PLAN FOR ~~POND CONSTRUCTION~~, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. ~~I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.~~"

ENGINEER — JOHN M. ELORRIAGA, P.E. # 16891 — DATE

~~THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.~~

U.S. SOIL CONSERVATION SERVICE — DATE

~~THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.~~

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94
CHIEF, BUREAU OF HIGHWAYS — DATE 6-20-94
CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION
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OWNER/DEVELOPER:
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PROJECT: WYNDEMERE
SECTION 2
LOTS 119-251 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS
PB-235 PB-283 5-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993 / MAY 20, 1994 — PROJECT NO. 0420

DES: JME — DRN: DBT — SCALE: AS SHOWN — DRAWING 12 OF 18

F-94-35

1589

BY THE DEVELOPER:

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JME 6/12/94

DEVELOPER - J.J.M., INC. 10/15/93
DATE

BY THE ENGINEER:

"I/WE CERTIFY THAT THIS PLAN FOR ~~POND CONSTRUCTION,~~ EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONNAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. ~~[illegible] COMPLETION.~~"

JME 6/12/94

ENGINEER - JOHN M. ELORRIAGA, P.E. # 16891 10/15/93
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

J. H. Warfield / JMK 6/12/94
U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson 6/12/94
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND [illegible] DIVISION 6/22/94
DATE

Howard S. [illegible] for 6.20.94
CHIEF, BUREAU OF HIGHWAYS DATE

C. Edward Walter for 6/23/94
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

6/27/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA DATE

NO	DATE	REVISION
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LOTS 119-252 PARCELS 1-3

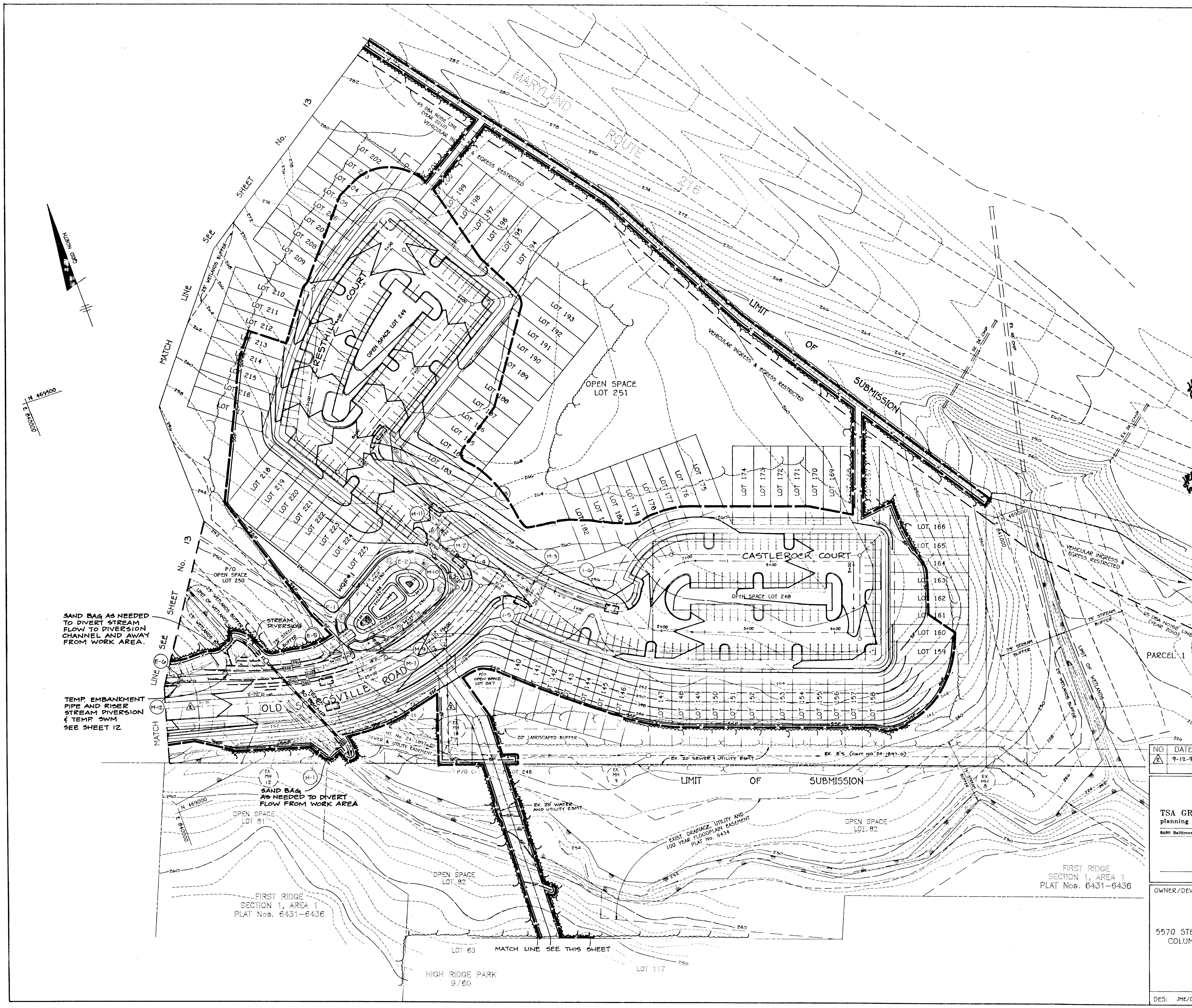
LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

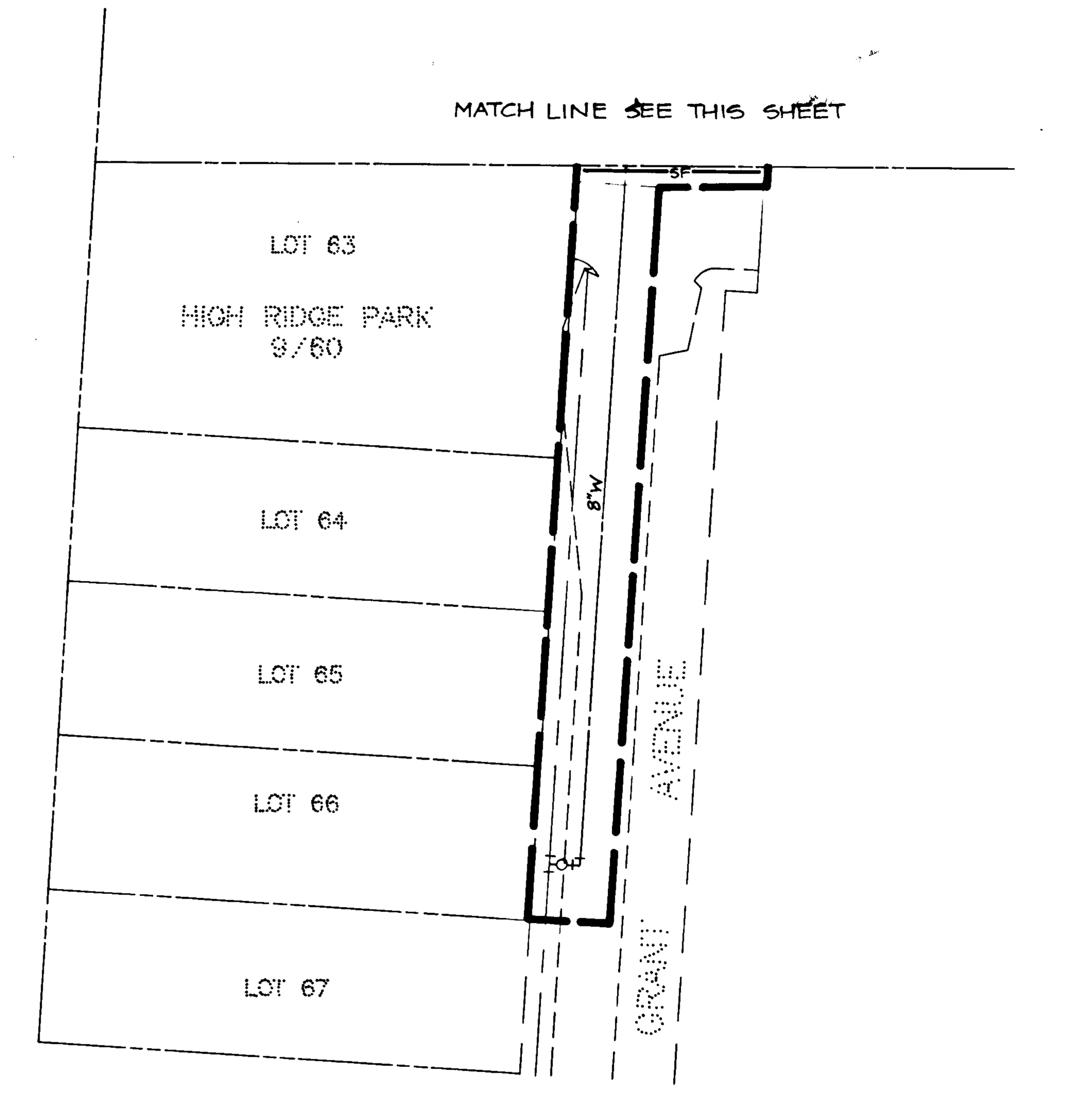
TITLE: SEDIMENT CONTROL PLAN
PB-235 PB-283 5-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993 / MAY 20, 1994 — PROJECT NO. 0420
DES: JME — DRN: DRK/DBT — SCALE: 1" = 50' — DRAWING 13 OF 18

F-94-35

1589





BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. ~~I SHALL ENGAGE A REGISTERED PROFESSIONAL [illegible]~~ I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

JRR 6/12/94

DEVELOPER – J.J.M., INC. 10/15/93 DATE

BY THE ENGINEER:

"I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONNAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. ~~I HAVE NOTIFIED THE DEVELOPER [illegible]~~"

JRR 6/12/94

ENGINEER – JOHN M. ELORRIAGA, P.E. # 16891 10/15/93 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

J. G. Warfield / JRR 6/12/94

U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson 6/12/94

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION 6/22/94 DATE

Howard L. Shirk for HS — CHIEF, BUREAU OF HIGHWAYS 6-20-94 DATE

C. Edward Walter for — CHIEF, BUREAU OF ENGINEERING 6/23/94 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Gina Tournany — CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA 6/27/94 DATE

NO	DATE	REVISION
2	9-12-94	REVISION PER DEPT. OF NATURAL RESOURCES DAM CONSTRUCTION PERMIT REQUIREMENTS

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

OWNER/DEVELOPER:
J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: **WYNDEMERE**
SECTION 2
LOTS 119-252 PARCELS 1-3

LOCATION: TAX MAP 47 – PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **SEDIMENT CONTROL PLAN**
PB-235 PB-283 S-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993 / MAY 20, 1994 — PROJECT NO. 0420

DES: JME/DRK — DRN: DRK/DBT — SCALE: 1" = 50' — DRAWING 14 OF 18

F-94-35

1587

STORMWATER MANAGEMENT NOTES

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material – The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement – Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction – The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench – The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe – All of the following criteria shall apply for corrugated metal pipe:

1. Materials – (Steel Pipe) – This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nexon, Plasti-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

   Materials – (Aluminum Coated Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

   Materials – (Aluminum Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. Connections – All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

   All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 48" in diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 48" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24". Helically corrugated pipe shall have either continuously welded seams or have lock seams.

4. Bedding – The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

5. Backfilling shall conform to "Structure Backfill."

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe – All of the following criteria shall apply for reinforced concrete pipe:

1. Materials – Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361. An approved equivalent is AWWA Specification C-302.
2. Bedding – All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.
3. Laying pipe – Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.
4. Backfilling shall conform to "Structure Backfill".
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Polyvinyl Chloride (PVC) Pipe – All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. Materials – PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.
2. Joints and connections to anti-seep collars shall be completely watertight.
3. Bedding – The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Backfilling shall conform to "Structure Backfill."
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 608, Mix No. 3.

Rock Riprap

All rock shall be dense, sound, and free from cracks, seams, and other defects conducive to accelerated weathering. The rock fragments shall be angular to subrounded in shape. The least dimension of an individual rock fragment shall be not less than one third the greatest dimension of the fragment.

The rock shall have the following properties:

1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.
2. Absorption not more than three percent.
3. Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 88.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

Care of Water during Construction

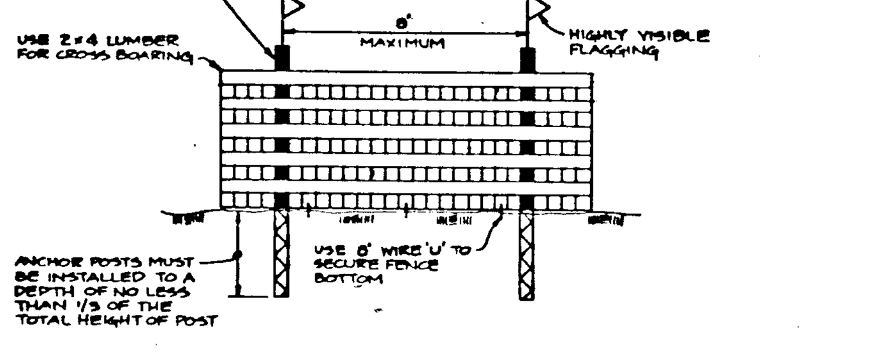
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level qt the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.



1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLATION.
4. ROOT DAMAGE SHOULD BE AVOIDED
5. PROTECTIVE SIGNAGE MAY ALSO BE USED
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION FENCE

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1850).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL", REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	29.51	ACRES
AREA DISTURBED	11.80	ACRES
AREA TO BE ROOFED OR PAVED	4.00	ACRES
AREA TO BE VEGETATIVELY STABILIZED	7.80	ACRES
TOTAL CUT (7,900 CY - TOPSOIL)	26,000	CY TOTAL
TOTAL FILL	24,700	CY
OFFSITE WASTE/BORROW AREA LOCATION	HSCD APPROVED	LOCATION

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

TEMPORARY SEEDBED PREPARATION

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDBED PREPARATION

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ON OF THE FOLLOWING SCHEDULES:

1. PREFERRED – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0- UREAFORM FERTILIZER (9 LBS/1000 SQ FT).
2. ACCEPTABLE – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH 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 SOD. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

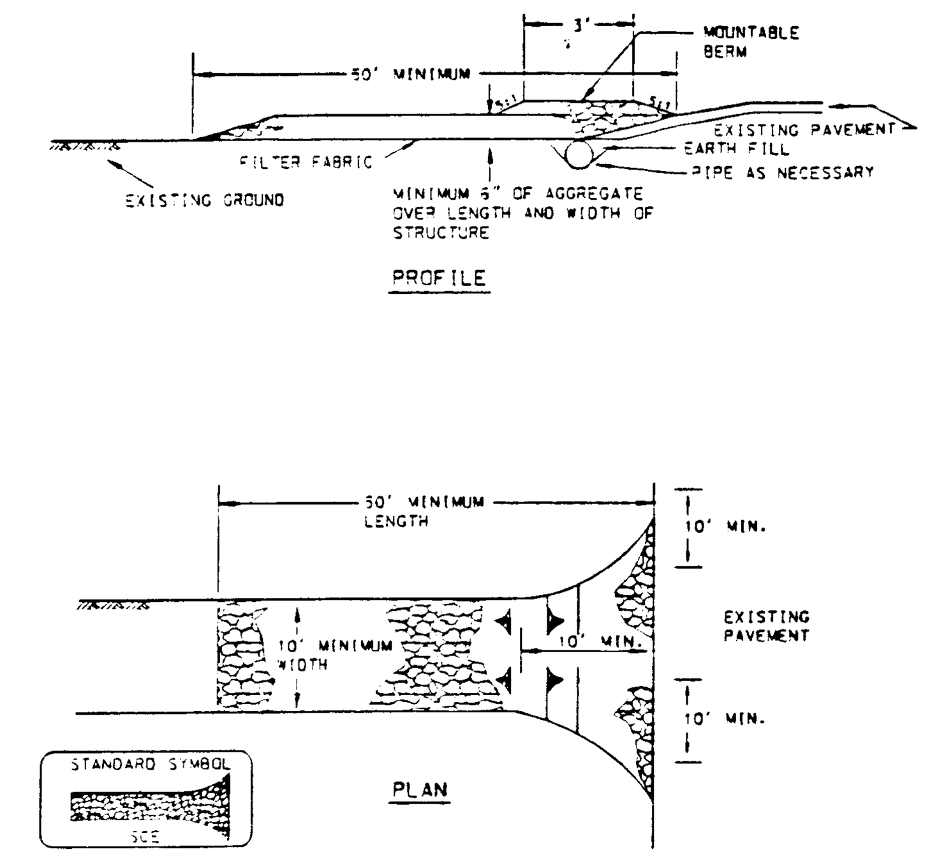
MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

NOTE: ⚠2 STORM DRAINS AND UTILITY LINES WITHIN THE SWM EMBANKMENT (STA. 22+50 TO 26+50) SHALL BE BUILT WITH THE EMBANKMENT RATHER THAN BY TRENCHING.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, TREE PROTECTION FENCE, SILT FENCE AND SUPER SILT FENCE. SILT FENCE SHOWN AROUND WATER QUALITY FACILITIES IS TO BE INSTALLED LATER. ALL SEDIMENT CONTROL DEVICES ARE TO BE PROPERLY MAINTAINED DURING CONSTRUCTION. (DAY 1-3)
3. BEGIN SELECT GRADING FOR CONSTRUCTION OF TEMPORARY BERM, PIPE, RISER AND STREAM DIVERSION CHANNEL. STABILIZE ALL DISTURBED AREAS ADJACENT TO STREAM. UPON COMPLETION OF THE TEMPORARY BERM, PIPE AND RISER, THE REQUIRED STORMWATER MANAGEMENT DURING CONSTRUCTION IS PROVIDED. (DAY 3-6)
4. COMMENCE SITE GRADING. (DAY 7)
5. CONSTRUCT CUTOFF TRENCH IN OLD SCAGGSVILLE ROAD FOR PERMANENT STORMWATER MANAGEMENT FACILITY. (DAY 7-12)
6. CONSTRUCT PERMANENT STORMWATER MANAGEMENT CONTROL STRUCTURE AND OUTFALL (CONCRETE CRADLE, FILTER DIAPHRAGM, ETC.). STABILIZE ALL DISTURBED AREAS. DAY 12-22)
7. WHEN THE MINIMUM ROAD ELEVATION ALONG OLD SCAGGSVILLE ROAD IS AT 246.0 OR GREATER, REMOVE THE TEMPORARY STREAM DIVERSION, PIPE AND RISER. STABILIZE DISTURBED AREAS. STORMWATER MANAGEMENT IS NOW PROVIDED BY THE PERMANENT STRUCTURE. (DAY 23)
8. COMPLETE IMPERVIOUS CORE AND FILTER DIAPHRAGM, GRADE CROSSING TO ALLOW FOR SETTLEMENT OF THE EMBANKMENT. STABILIZE DISTURBED AREA. (DAY 24-30)
9. RAISE THE TOP OF THE EXISTING SANITARY SEWER MANHOLES IN OLD SCAGGSVILLE ROAD TO NEW GRADES. (DAY 30)
10. COMPLETE GRADING OF REMAINING ROADWAYS TO SUBGRADE AND SITE GRADING AS NECESSARY. STABILIZE. (DAY 30-44)
11. INSTALL SANITARY SEWER. (DAY 44-72)
12. PROVIDE SEDIMENT CONTROL FOR OFFSITE WATER MAIN. INSTALL WATER MAINS. STABILIZE DISTURBED AREAS AND REMOVE OFFSITE SEDIMENT CONTROL. (DAY 73-101)
13. CONSTRUCT STORM DRAIN SYSTEM AND WATER QUALITY FACILITIES. INSTALL INLET PROTECTION ON ALL INLETS AND PLACE SILT FENCE AROUND THE WATER QUALITY FACILITIES TO CONTROL SEDIMENT INTO THE FACILITIES. CONSTRUCT EXIT CHANNELS. STABILIZE ALL DISTURBED AREAS. (DAY 102-130)
14. CONSTRUCT CONCRETE CURB AND GUTTER. (DAY 131-138)
15. CONSTRUCT PAVING. (DAY 139-148)
16. COMPLETE FINAL GRADING OF SITE AND STABILIZE IN ACCORDANCE WITH THE PERMANENT SEEDBED NOTES. (DAY 149-152)
17. INSTALL SIDEWALK, STREET TREES AND NOISE WALL. (DAY 153-167)
18. * IF PONDING IS OCCURRING IN THE WATER QUALITY FACILITIES DUE TO SEDIMENT DEPOSITS, THE CONTRACTOR SHALL EXCAVATE 2 FEET BELOW THE INVERT OF THE FACILITIES AND REPLACE WITH SAND WITH 2 INCHES OF TOPSOIL. PERMANENTLY STABILIZE. (DAY 168-170)
19. UPON APPROVAL OF THE HOWARD COUNTY SEDIMENT INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND PERMANENTLY STABILIZE AS NEEDED. (DAY 171-172)

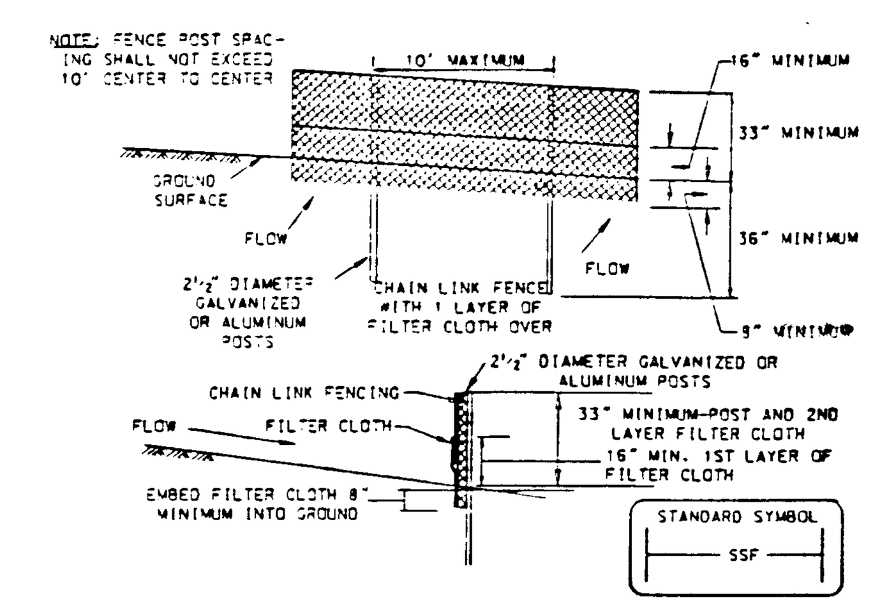
* UPON REMOVAL OF SURFACE SEDIMENT, THE INFILTRATION FACILITIES SHALL BE ROTARY TILLED.



Construction Specification

1. Length – minimum of 50' (30' for single residence lot).
2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residence to use geotextile.
4. Stone – crushed aggregate (2" to 3"), or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

STABILIZED CONSTRUCTION ENTRANCE

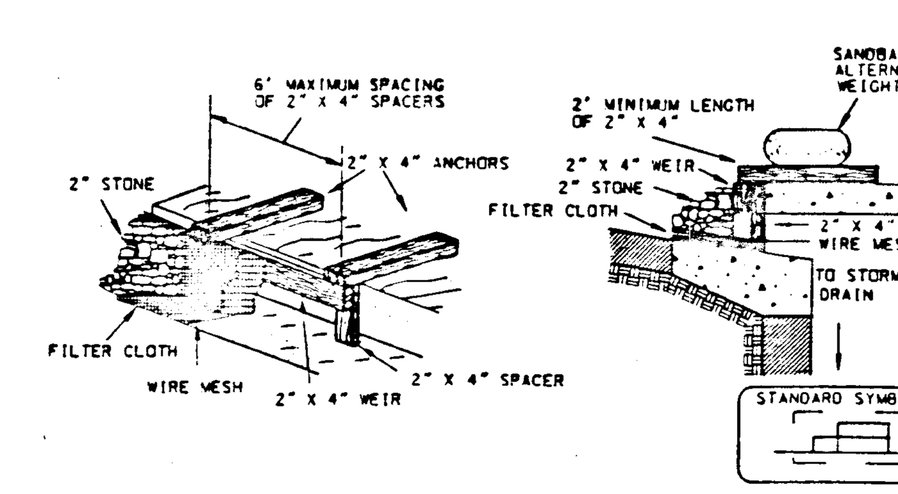


Construction Specifications

Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6 foot fence shall be used, substituting 42 inch fabric and 6 foot length posts.

1. The poles do not need to set in concrete.
2. Chain link fence shall be fastened securely to the fence posts with wire ties or staples.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence.

SUPER SILT FENCE



Construction Specifications

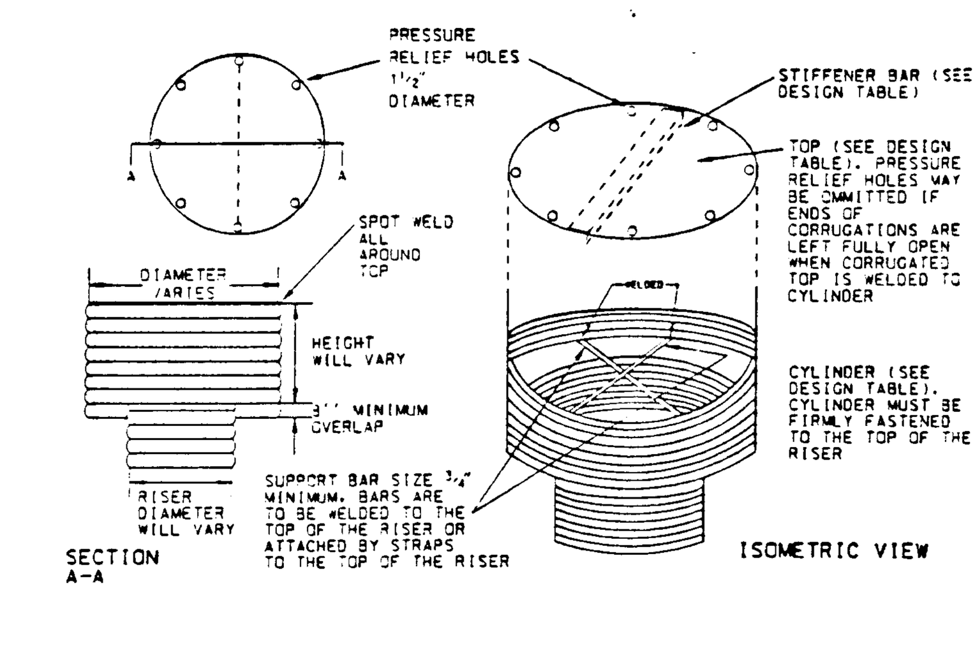
A. Materials

1. Wooden frame is to be constructed of 2" x 4" construction grade lumber.
2. Wire mesh size must be of sufficient strength to support filter fabric and stone for curb inlets with water fully impounded against it.
3. Filter cloth must be of a type approved for this purpose: resistant to ultraviolet light with an equivalent opening size 40 - 80 sieve, to allow sufficient passage of water and removal of sediment.
4. Washed stone 3/4" to 1 1/2" in size is to be used.

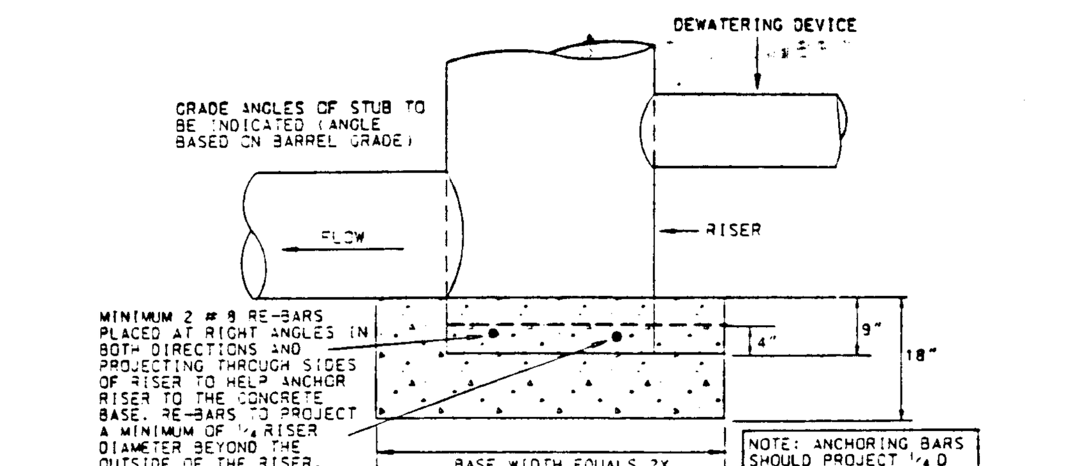
Curb Inlet Protection

1. Attach a continuous piece of wire mesh (30" minimum width by throat length, plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
2. Place a continuous piece of approved filter cloth (40 - 80 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 6' apart).
4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the 1/2" x 1/2" wire mesh and the filter cloth to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter cloth in such a manner to prevent water from entering the inlet under or around the filter cloth.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

CURB INLET PROTECTION DETAIL



CONCENTRIC TRASH RACK AND ANTI- VORTEX DEVICE



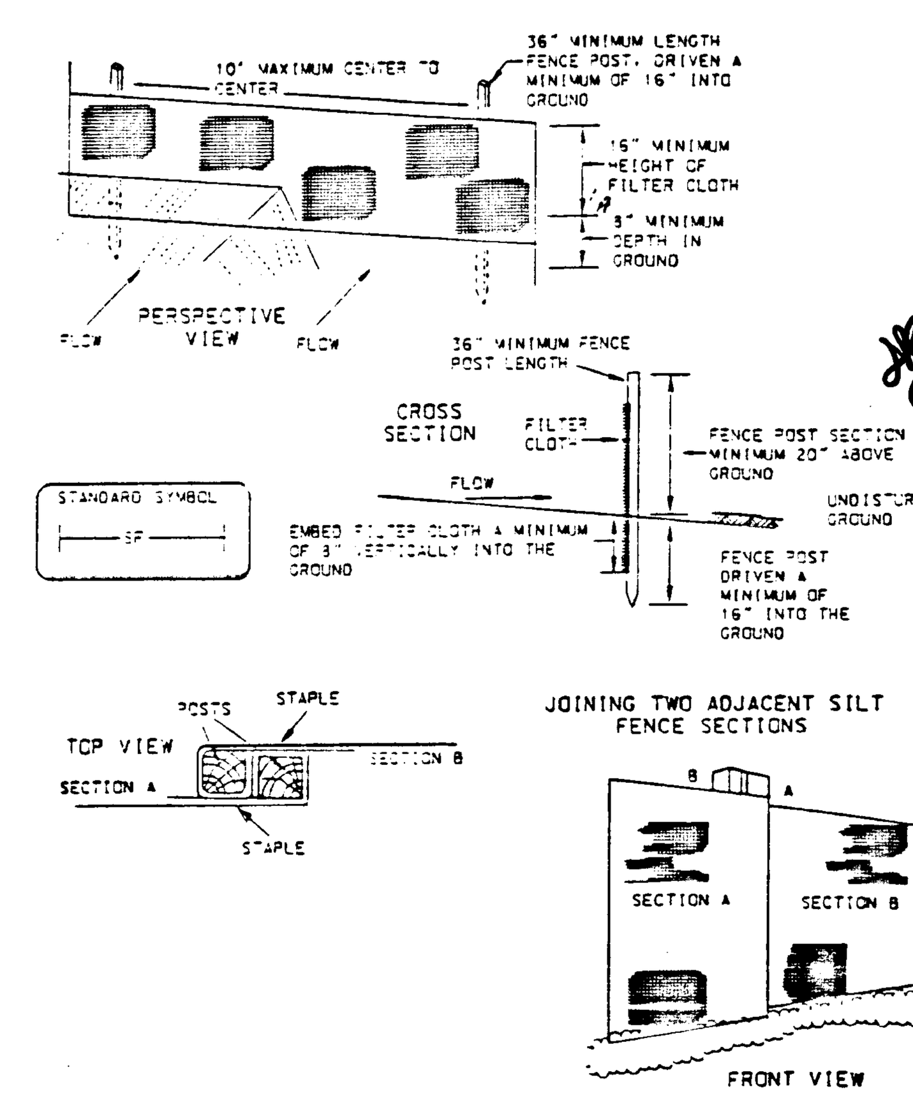
CONSTRUCTION SPECIFICATIONS

The riser shall have a base attached with a watertight connection and shall have sufficient weight to prevent flotation of the riser. Two approved bases for risers ten feet or less in height are:

1. A concrete base 18" thick with the riser embedded 9" in the base.
2. A ¼" minimum thickness steel plate attached to the riser by a continuous weld around the circumference of the riser to form a watertight connection. The plate shall have 2.5 feet of stone, gravel, or compacted earth placed on it to prevent flotation. In either case, each side of the square base shall be twice the riser diameter.

NOTE:
For risers greater than ten feet high computations shall be made to design a base which will prevent flotation. The minimum factor of safety shall be 1.20 (Downward forces = 1.20 x upward forces).

RISER BASE DETAIL



Construction Specifications

1. A detail of the silt fence shall be shown on the plan, and contain the following minimum requirements:
   a. The type, size, and spacing of fence posts.
   b. The type of filter cloth used.
   c. The method of fastening the filter cloth to the fencing support.
   d. Accumulated sediment must be removed when it reaches 50% of the height of the fabric.
2. Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
3. Design computations are not required.
4. All silt fences shall be placed as close to the contour as possible.
5. The area below the fence must be undisturbed or stabilized.
6. Silt Fence Fabric: The fabric shall meet the Filter fabric specifications listed in Table 27.
7. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts, 2"x 2", with a minimum cross sectional area of 3.0 square inches will be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pound per linear foot.

SILT FENCE

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. ~~I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.~~ I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT." JRN 6/12/94

DEVELOPER – J.J.M., INC. — DATE 10/15/93

BY THE ENGINEER:

"I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONNAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. ~~I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.~~" JRN 6/12/94

ENGINEER – JOHN M. ELORRIAGA, P.E. # 16891 — DATE 10/15/93

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

J. G. Warfield / JRN — U.S. SOIL CONSERVATION SERVICE — DATE 6/12/94

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson — HOWARD SOIL CONSERVATION DISTRICT — DATE 6/12/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94

Howard S. Shih for — CHIEF, BUREAU OF HIGHWAYS HS — DATE 6-20-94

C. Edward Walter for — CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA — DATE 6/27/94

NO	DATE	REVISION
2	9-12-94	REVISIONS PER DEPT. OF NATURAL RESOURCES. DAM CONSTRUCTION PERMIT REQUIREMENTS.

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

OWNER/DEVELOPER:
J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-252 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

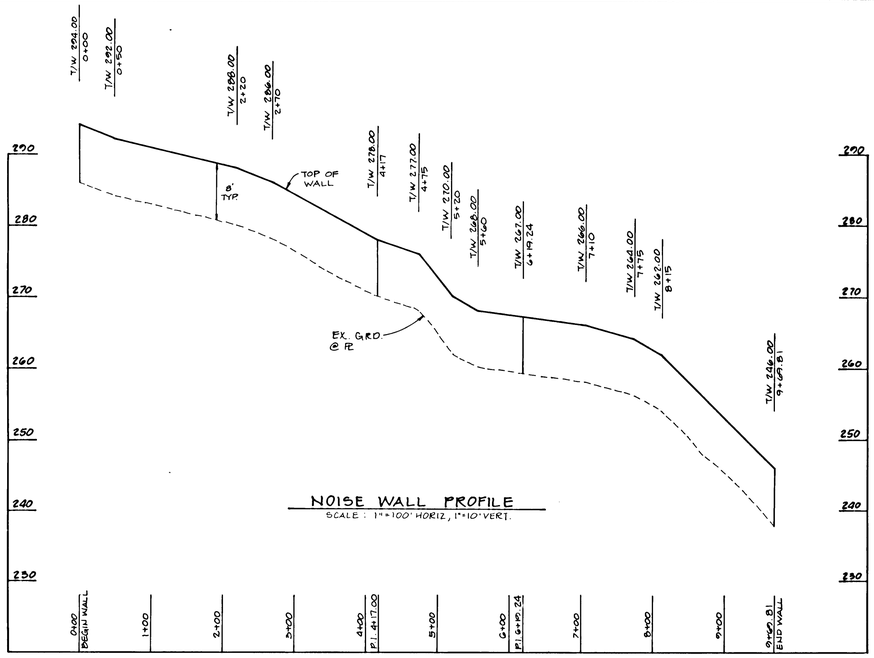
TITLE: STORMWATER MANAGEMENT NOTES, SEDIMENT CONTROL NOTES AND DETAILS
PB-235 PB-283 S-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993 / MAY 20, 1994 — PROJECT NO. 0420

DES: JME — DRN: DBT — SCALE: AS SHOWN — DRAWING 15 OF 18

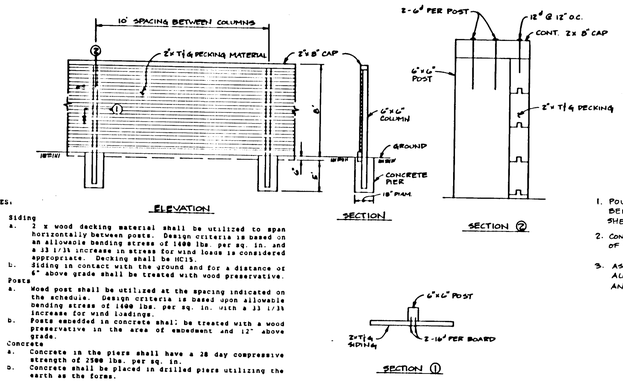
F-94-35

1587



NOISE WALL PROFILE

SCALE : 1"=100' HORIZ., 1"=10' VERT.

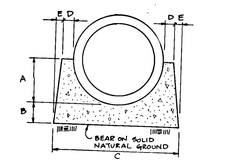


NOTES.

1. Siding
   a. 2 x wood decking material shall be utilized to span horizontally between posts. Design criteria is based on an allowable bending stress of 1400 lbs. per sq. in. and a 33 1/3% increase in stress for wind loads is considered appropriate. Decking shall be HC#1S.
   b. Siding in contact with the ground and for a distance of 6" above grade shall be treated with wood preservative.
2. Posts
   a. Wood post shall be utilized at the spacing indicated on the schedule. Design criteria is based upon allowable bending stress of 1400 lbs. per sq. in. with a 33 1/3% increase for wind loadings.
   b. Posts embedded in concrete shall be treated with a wood preservative in the area of embedment and 12" above grade.
3. Concrete
   a. Concrete in the piers shall have a 28 day compressive strength of 2500 lbs. per sq. in.
   b. Concrete shall be placed in drilled piers utilizing the earth as the forms.

NOISE WALL DETAIL

NO SCALE



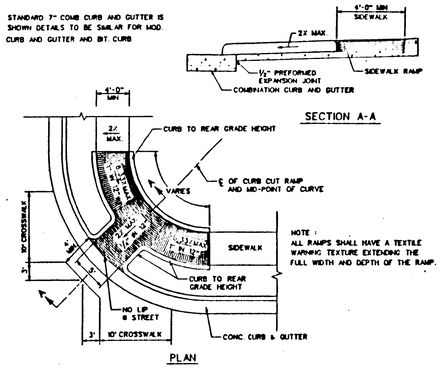
1. POUR CONCRETE TO UNDISTURBED EARTH. REMOVE SHEETING BEFORE POURING CONCRETE OR LEAVE LOWER PORTION OF SHEETING IN PLACE.
2. CONCRETE CRADLE TO BE PLACED FOR ENTIRE LENGTH OF PIPE.
3. ASPHALT JOINT FILLER TO BE INSTALLED BETWEEN ALL CONCRETE SURFACES EXCEPT BETWEEN CRADLE AND PIPE.

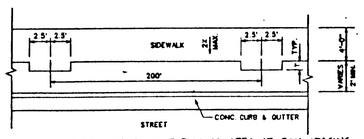
PIPE SIZE	A	B	C	D	E
18"RCP	12"	6"	3'-3"	6"	1.5"
36"x 22" ECP	14"	6"	4'-8"	6"	2"

SCS TR 46 CRADLE RE: ES-120

CONCRETE CRADLE DETAIL

NOT TO SCALE





- ALL SIDEWALKS TO HAVE PASSING AREA AT 200' SPACING.

HO. CO. STD DETAIL NO. R-4.01

SIDEWALK RAMP DETAIL

TYPE A

NO SCALE

Wyndemere Section II
Roadway Embankment For SWM Pond
Test Pit Logs
(JANUARY, 1994)

Test Pit #1 (ELEVATION 244.6)

0.0' to 0.5' Topsoil
0.5' to 2.5' Brown moist silty SAND, some gravel
2.5' to 5.0' Gray-Brown moist micaceous silty SAND (residual)
5.0' to 7.0' Gray-Brown moist micaceous silty SAND, some weathered rock fragments
7.0' to 9.0' Gray moist micaceous silty SAND (Saprolite)

Backhoe Refusal @ 9.0' Depth
Groundwater @ 8.0' Depth

Test Pit #2 (ELEVATION 241.9)

0.0' to 1.5' Topsoil and Root Mat
1.5' to 3.0' Brown moist silty SAND
3.0' to 5.5' Gray very moist silty SAND, GRAVEL and large Cobbles
5.5' to 9.0' Gray moist micaceous silty SAND, some weathered rock fragments (Saprolite)

Backhoe Refusal @ 9.0' Depth
Inflow of Perched Groundwater at 5.5' Depth

Test Pit #3 (ELEVATION 245.5)

0.0' to 0.5' Topsoil and Root Mat
0.5' to 3.5' Brown-Gray very moist silty SAND with some gravel
3.5' to 6.0' Gray-Brown moist micaceous silty SAND (residual)
6.0' to 9.5' Gray moist micaceous silty SAND, some weathered rock fragments

Backhoe Refusal @ 9.5' Depth
Inflow of Perched Groundwater at 3.5' Depth

WYNDEMERE SECTION 2
TEST PIT LOGS

Test Pit # 1 (Elevation 283.0) March 1993

0.0' to 0.4' Topsoil and Root Mat
0.4' to 5.5' Brown clayey fine sand, trace small gravel (alluvial)
5.5' to 6.0' Gray-tan silty clay, some sand and gravel (alluvial)
6.0' to 12.0' Brown-gray micaceous silty fine-medium (residual)

- Groundwater table below 271.0
- Infiltration rate 1.0 m/hr +

Test Pit # 2 (Elevation 259.0) March 1993

0.0' to 0.5' Topsoil and Root Mat
0.5' to 3.0' Brown micaceous clayey silt, some sand (residual)
3.0' to 5.0' Brown-gray micaceous silty sand (residual)
5.0' to 7.0' Red-brown-gray micaceous silty sand (residual - hard, cemented)
7.0' to 9.0' Brown micaceous silty sand (residual)

- Groundwater below 250.0
- Infiltration rate 0.52 m/hr +

Test Pit # 3 (Elevation 248.5) March 1993

0.0' to 0.8' Topsoil and Root Mat
0.8' to 5.5' Gray-brown micaceous silty sand (residual)
5.5' to 7.5'* Brown micaceous silty sand (hard saprolite)

* Very hard digging at 7.5 feet.

- Groundwater below 241.0
- Infiltration rate 0.6 - 2.5 m/hr

Test Pit # 84 (Elevation 259.0) March 1992

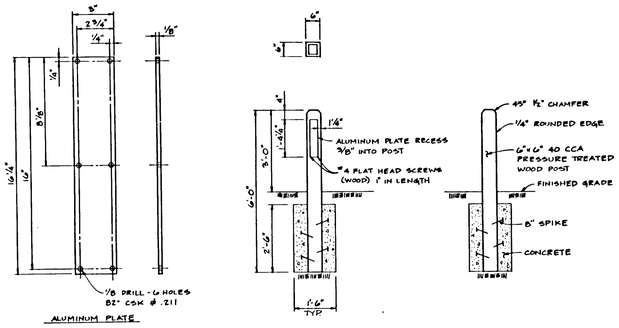
0.0' to 0.5' Topsoil and Roots
0.5' to 3.5' Brown moist clayey silt, some sand and gravel
3.5' to 9.5' Gray-brown moist micaceous silty sand (saprolite-hard)

- Groundwater below 249.5
- Infiltration rate 2.5 m/hr

Test Pit # 87 (Elevation 249.5) March 1992

0.0' to 0.3' Topsoil and Roots
0.3' to 2.5' Brown moist clayey micaceous sand, trace gravel
2.5' to 5.0' Brown clayey silt, some sand
5.0' to 5.2' Gray sandy clay (fragipan)
5.2' to 9.0' Gray-brown moist micaceous silty sand, trace weathered rock fragments (saprolite-hard)

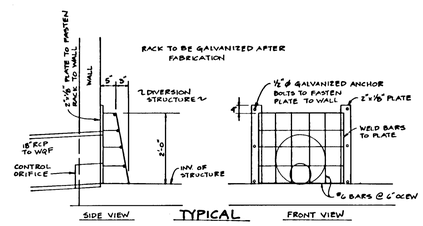
- No groundwater encountered
- Infiltration rate 1.3 m/hr



1. BOLLARDS WILL BE PLACED AT THE FOUR CORNERS OF THE OPEN SPACE ACCESS STRIP.
2. THE ALUMINUM PLATE WILL ONLY BE REQUIRED ON THE FRONT RIGHT BOLLARD DIRECTLY FACING THE ROAD.
3. PLATE TO BE SCREWED AND GLUED INTO PLACE.
4. SCREWS ARE TO BE COUNTERSUNK.

OPEN SPACE BOLLARD DETAIL

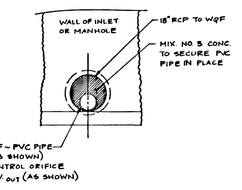
NO SCALE



TYPICAL

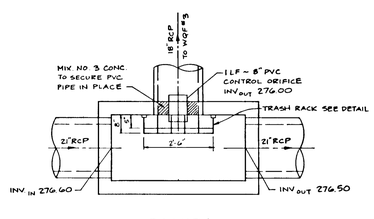
TRASH RACK FOR DIVERSION STRUCTURES

NOT TO SCALE.



TYPICAL SECTION

NOT TO SCALE



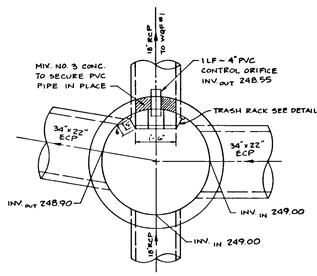
PLAN VIEW

INLET I-11

HO. CO. STD A-5 INLET SD - 4.40

NOT TO SCALE

(PRECAST)



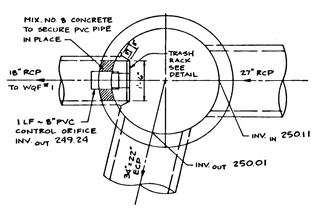
PLAN VIEW

MANHOLE M-9

HO. CO. STD. G-5.13

NOT TO SCALE

(PRECAST)



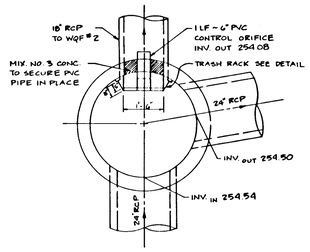
PLAN VIEW

MANHOLE M-11

HO. CO. STD. G-5.13

NOT TO SCALE

(PRECAST)



PLAN VIEW

MANHOLE M-13

HO. CO STD. G-5.12

NOT TO SCALE

(PRECAST)

DIVERSION DETAILS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94

CHIEF, BUREAU OF HIGHWAYS — DATE 6-20-94

CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION
2	9-12-94	REVISIONS PER DEPT. OF NATURAL RESOURCES. DAM CONSTRUCTION PERMIT REQUIREMENTS.

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

OWNER/DEVELOPER:

J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-251 PARCELS 1, 2 & 3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: DETAILS

PB-235 PB-283 S-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993; MAY 20, 1994 — PROJECT NO. 0420

DES: JME/DRK — DRN: DBT/DRK — SCALE: 1" = 50' HORIZ., 1" = 5' VERT. — DRAWING 16 OF 18

1589

F-94-35

E 839250
N 470000

GRID NORTH

OLD SCAGGSVILLE ROAD

WYNDEMERE
SECTION 1
PLAT NOS. 10070-10076

OPEN SPACE
LOT 74

OPEN SPACE
LOT 78

OPEN SPACE
LOT 78

LIMIT OF SUBMISSION

SUBMISSION OF LIMIT

UPLAND AREA

P/O OPEN SPACE
LOT 250

MARYLAND ROUTE 216

MATCH LINE SEE SHEET No. 18

LOT 124
LOT 125
LOT 126
LOT 127
LOT 128
LOT 129
LOT 130
LOT 131
LOT 132
LOT 133
LOT 134
LOT 135
LOT 136
LOT 137
LOT 138
LOT 139
LOT 119
LOT 120
LOT 121
LOT 122
LOT 123

ASHBERRY COURT

OPEN SPACE
LOT 244

OPEN SPACE
LOT 245

WQF # 3

LOT 243
LOT 242
LOT 241
LOT 240
LOT 239
LOT 238
LOT 237
LOT 236
LOT 235
LOT 234
LOT 233
LOT 232
LOT 231
LOT 230

EVERMORE COURT

OPEN SPACE LOT 252

TREELINE TO REMAIN

OPEN SPACE
LOT 247

LOT 229
LOT 228
LOT 227
LOT 226

WQF # 2

OLD SCAGGSVILLE ROAD

OPEN SPACE
LOT 246

LIMIT OF SUBMISSION

TREELINE TO REMAIN

LOT 1

LOT 2

GIDDINGS PROPERTY
SECTION 1, AREA 1
PLAT No. 9114

E 839250
N 469250

E 840250
N 469250

FIRST RIDGE
SECTION 1, AREA 1
PLAT Nos. 6431-6436

P/O OPEN SPACE LOT 247

OPEN SPACE
LOT 77

MATCH LINE SEE SHEET No. 18

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94

CHIEF, BUREAU OF HIGHWAYS — DATE 6.20.94

CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION
1	9-12-94	REVISIONS PER DEPT. OF NATURAL RESOURCES DAM CONSTRUCTION PERMIT REQUIREMENTS.

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planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

OWNER/DEVELOPER:

J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-252 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: LANDSCAPE PLAN

PB-235 PB-283 S-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993
MAY 20, 1994

PROJECT NO. 0420

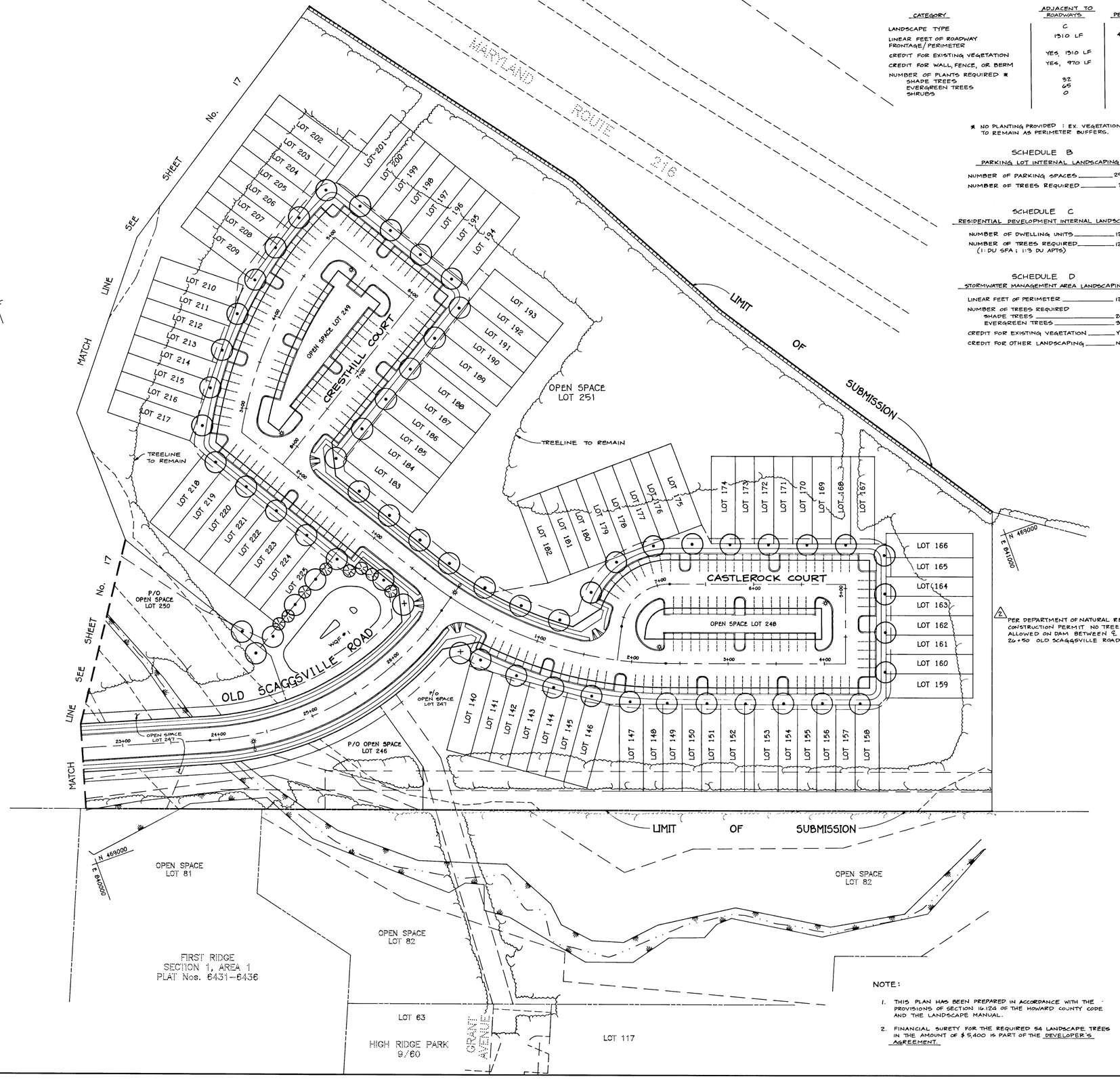
DES: DRK DRN: DRK/DBT

SCALE: 1" = 50'

DRAWING 17 OF 18

1589

F-94-35



SCHEDULE A
PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	
	C	B	A
LANDSCAPE TYPE			
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	1310 LF	400 LF	820 LF
CREDIT FOR EXISTING VEGETATION	YES, 1310 LF	YES, 1220 LF	
CREDIT FOR WALL, FENCE, OR BERM	YES, 970 LF	NO, —	
NUMBER OF PLANTS REQUIRED *			
SHADE TREES	32	8	13
EVERGREEN TREES	65	10	0
SHRUBS	0	0	0

* NO PLANTING PROVIDED : EX. VEGETATION TO REMAIN AS PERIMETER BUFFERS.

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES _____ 299
NUMBER OF TREES REQUIRED _____ 30

SCHEDULE C
RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS _____ 125
NUMBER OF TREES REQUIRED _____ 125
(1 DU SFA ; 1/3 DU APTS)

SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER _____ 1200
NUMBER OF TREES REQUIRED
SHADE TREES _____ 24
EVERGREEN TREES _____ 30
CREDIT FOR EXISTING VEGETATION _____ YES,
CREDIT FOR OTHER LANDSCAPING _____ NO

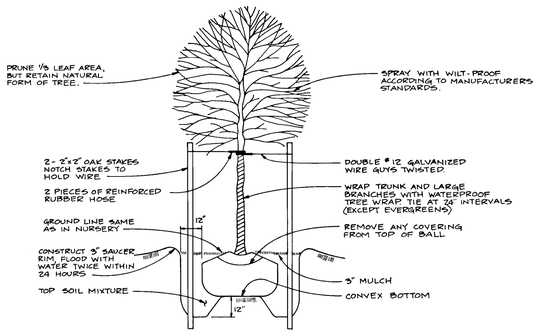
PLANT LIST

SYMBOL	QUANTITY	NAME	REMARKS
⊙	99	QUERCUS RUBRA (Red Oak)	2½ MIN. CALIPER B&B FULLHEAD
⊕	35	ACER RUBRUM (Red Maple)	2½ MIN. CALIPER B&B FULLHEAD
⊗	33	PINUS STROBUS (White Pine)	4'-6' HEIGHT B&B;B

2

LANDSCAPE NOTES

1. PERIMETER LANDSCAPING SHALL BE PROVIDED BY THE EXISTING VEGETATION TO REMAIN.
2. THE BUILDER SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL INTERNAL LANDSCAPING TO BE SHOWN ON THE SITE DEVELOPMENT PLAN.
3. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE STREET TREES, STORMWATER MANAGEMENT POND PLANTING, AND THE PRESERVATION OF THE PERIMETER VEGETATION.
4. ALL STREET TREES ARE TO BE LOCATED A MINIMUM OF 4' FROM SIDEWALK.



TREE PLANTING DETAIL

2 PER DEPARTMENT OF NATURAL RESOURCES DAM CONSTRUCTION PERMIT NO TREE PLANTING IS ALLOWED ON DAM BETWEEN ℄ STA. 22+50 TO 26+50 OLD SCAGGSVILLE ROAD.

NOTE:

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
2. FINANCIAL SURETY FOR THE REQUIRED 54 LANDSCAPE TREES IN THE AMOUNT OF $ 5,400 IS PART OF THE DEVELOPER'S AGREEMENT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 6/22/94
CHIEF, BUREAU OF HIGHWAYS — DATE 6/22/94
CHIEF, BUREAU OF ENGINEERING — DATE 6/23/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 6/27/94

NO	DATE	REVISION
2	9-12-94	REVISIONS PER DEPT OF NATURAL RESOURCES DAM CONSTRUCTION PERMIT REQUIREMENTS

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

OWNER/DEVELOPER:
J.J.M., INC.
5570 STERRETT PLACE, SUITE 205
COLUMBIA, MARYLAND 21044

PROJECT: WYNDEMERE
SECTION 2
LOTS 119-252 PARCELS 1-3

LOCATION: TAX MAP 47 - PARCEL 1003
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: LANDSCAPE PLAN
PB-235 PB-283 S-88-42 WP-92-216 P-92-16

DATE: OCTOBER 15, 1993 / MAY 20, 1994
PROJECT NO. 0420

DES: JME | DRN: DRK/DBT | SCALE: 1" = 50' | DRAWING 18 OF 18

1589

F-94-35