

SITE ANALYSIS

AREA OF DRAINAGE AREA:	1.6 AC.
TOTAL DISTURBED AREA:	0.11 AC.
ZONING:	R-20
USE:	RESIDENTIAL

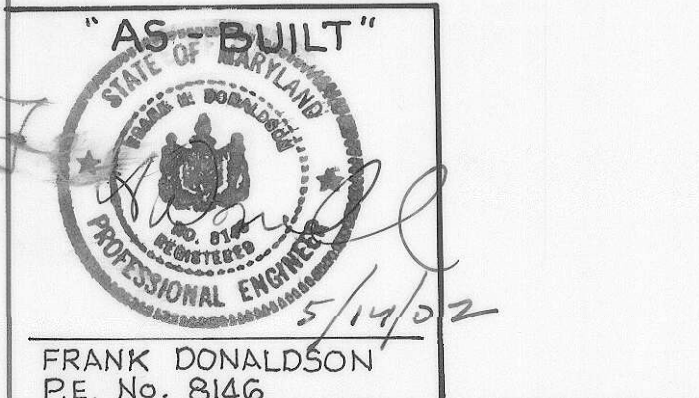
- SEQUENCE OF CONSTRUCTION**
- OBTAIN GRADING PERMIT.
 - INSTALL STORM DRAIN, INLETS AND MANHOLES. (2 WEEKS).
 - ABANDON EXISTING STORM DRAINS. (1 WEEK)
 - INSTALL CURB. (1 WEEK).
 - STABILIZE DISTURBED AREA. (1 DAY).
 - COMPLETE CONSTRUCTION AND CLEAN UP. (2 DAYS).

LEGEND

R.O.W. LINE	---	EX. MAILBOX	MB
PROPERTY LINE	---	EX. MANHOLE (SANITARY)	SM
EX. FENCE LINE	---	EX. CLEANOUT (SANITARY)	CF
EX. CONTOUR	--- 338 --- --- 340 ---	EX. SANITARY SEWER	---
L.O.D.	--- L.O.D. --- L.O.D. ---	EX. WATER MAIN	---
PROP. RIPRAP	--- RIPRAP ---	EX. STORMDRAIN	---
PROP. EASEMENT	---	EX. INLET	□
PROP. CURB	---	EX. WATER METER	⊙
PROP. STORM DRAIN	---	EX. FIRE HYDRANT	⊕
PROP. MANHOLE	MH 1	EX. WATER VALVE	⊕
PROP. INLET	I 1	EX. PROPERTY CORNER	□ ○
PROP. END WALL	---	EX. GAS	---
EX. TREE LINE	---	EX. PAVEMENT	---
EX. STREETLIGHT	---		
EX. ELEC. BOX	---		

GENERAL NOTES

- Existing utilities are shown for the convenience of the Contractor and the completeness or accuracy of the same is not guaranteed. The Contractor shall determine the location and elevation of the existing utilities before trench excavation begins. The Contractor shall protect service connections and maintain their uninterrupted service. Any damage caused by the Contractor shall be repaired immediately. The cost of such repairs shall be borne by the Contractor.
- Roadside drainage ditches, culverts and underdrains which are damaged or destroyed by construction will be restored to a condition at least equal to that prior to the start of construction at the Contractor's expense.
- All areas disturbed within Easements and Right-Of-Ways shall be restored to a condition of at least equal to that which existed prior to the start of construction. The cost of such shall be borne by the Contractor.
- All horizontal controls are based on NAD 83.
- Vertical controls are based on U.S.G.S. datum.
- All pipe elevations shown are invert elevations.
- Clear all utilities by a minimum of 12". Clear all poles by 3'-0" minimum or tunnel as required. Coordinate with the utility companies to schedule any necessary bracing of the poles.
- Storm drains shall have a minimum cover of 18" except where greater depths are indicated.
- For details not shown on the drawings, and for materials required, refer to Howard Co. Design Manual Vol. IV, Standard Specifications and Details for Construction.
- Contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:
AT&T 410-393-3553
Baltimore Gas & Electric Co. Contractor Services 410-850-4820
Baltimore Gas & Electric Co. Underground Damage Control 410-787-9068
Miss Utility 1-800-257-7777
Bureau of Utilities, Howard County Department of Public Works 410-313-4900
- Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs located on private property within the construction strip, and outside the immediate line of excavation are not to be removed or damaged by the Contractor.
- Contractor shall remove trees, stumps and roots along the immediate line of excavation. Payment for such removal shall be included in the unit price bid for construction of the stormdrain.
- Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.
- Sediment control to be provided as shown and shall be approved by the Sediment Control Inspector before starting any site grading. Trench length is limited to three (3) pipe lengths at any one time, to be stabilized immediately.
- The construction of this project shall be in accordance with the latest standards and specifications of Howard County Design Manual Volume IV.
- All work shall comply with all applicable provisions of the "1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control" issued Boundary and topographic information shown here is based on County deeds and field surveys by Reimer Muegge & Associates, Inc. dated January 1999.
- It shall be distinctly understood that failure to mention specifically any work which would be required to complete the project shall not relieve the Contractor of his responsibility to perform such work.
- The Contractor shall note that in the case of a discrepancy between the scaled and the figured dimensions shown on the plans, the figured dimensions shall govern.
- At the end of each working day, all sediment control measures will be inspected and left in operational condition.
- Contractor shall immediately remove all spoil material from site to an approved location.



BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER: *Frank Donaldson* 8/23/00 DATE

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

ENGINEER: *Frank Donaldson* 5/1/2000 DATE

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

NATURAL RESOURCES CONSERVATION DATE: *n/a*

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

HOWARD SOIL CONSERVATION DISTRICT DATE: *n/a*

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS: *Raymond* 9/1/00 DATE
CHIEF, BUREAU OF HIGHWAYS

CHIEF, BUREAU OF ENGINEERING: *Robert Syman* 8/23/00 DATE
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT

RIEMER MUEGGE & ASSOCIATES INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.8982

FRANK DONALDSON #8146
5/1/2000

DES: T.D.	
DRN: R.J.C.	
CHK: G.C.L.	
MAY, 2000	
BY NO.	REVISION
	DATE

600' SCALE MAP NO.	25	BLOCK NO.	13
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OVERLOOK DRIVE
STORM DRAIN IMPROVEMENT
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. D-1118-FFF

SCALE AS SHOWN
SHEET 1 OF 2

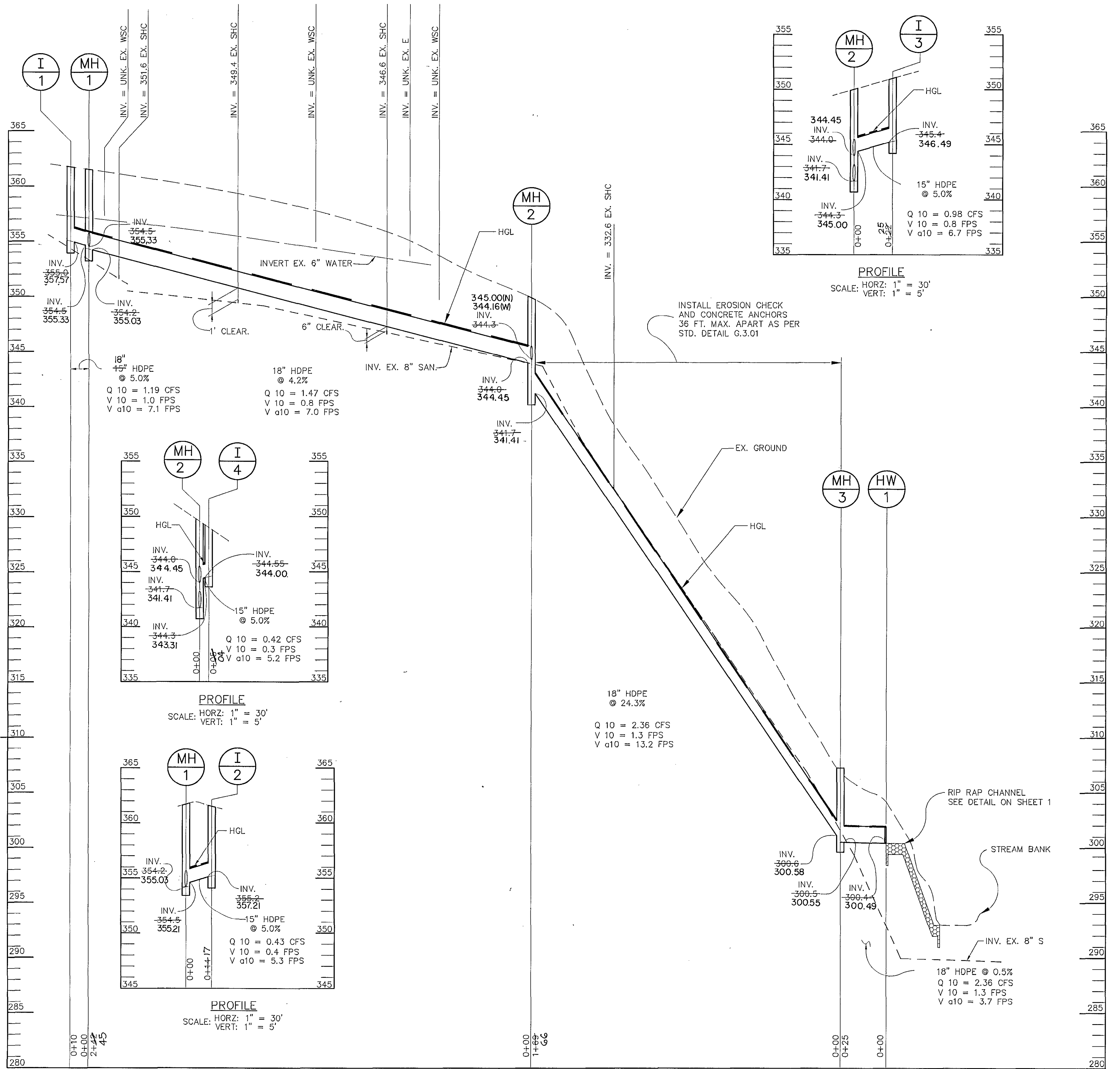
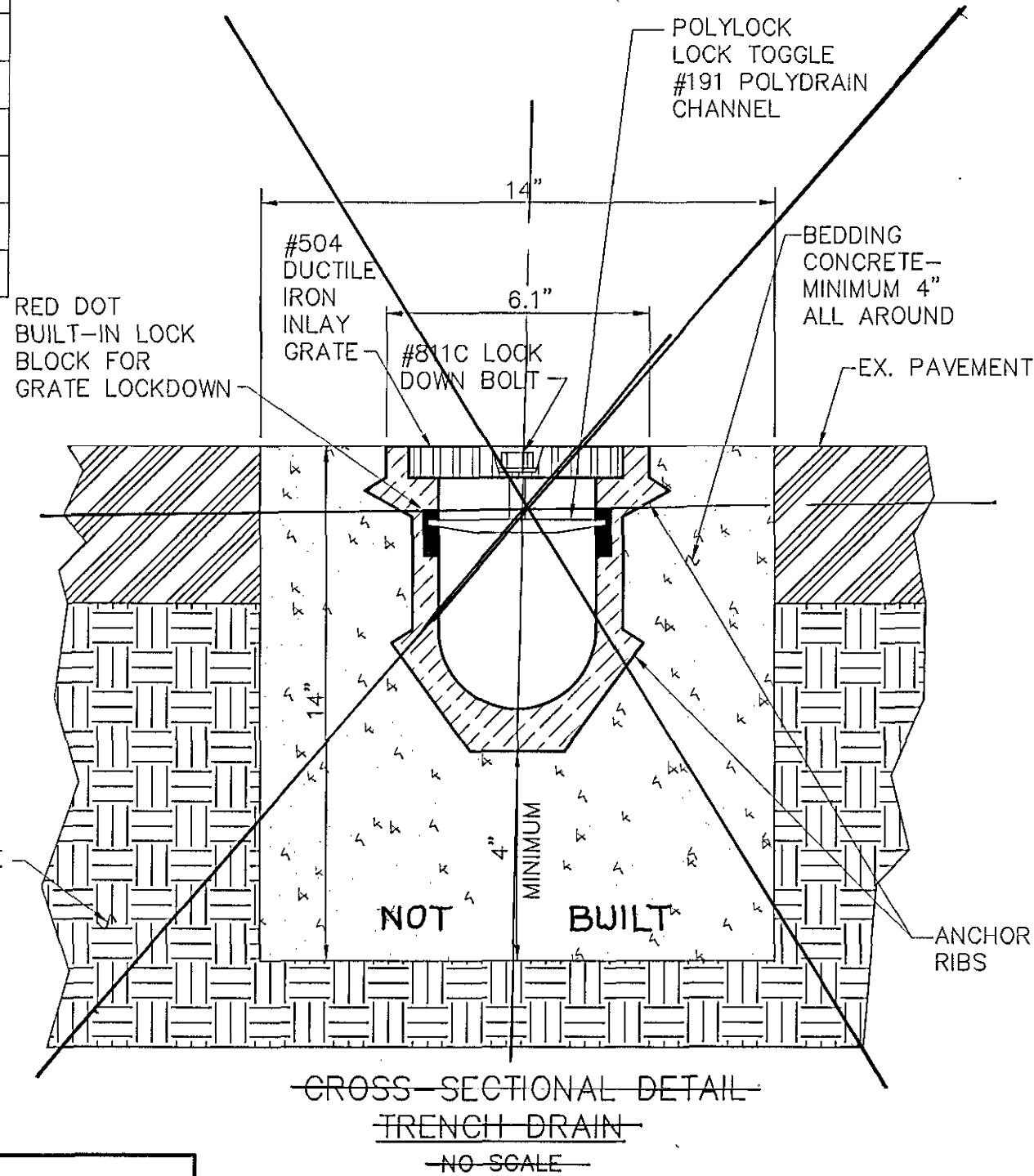
"AS-BUILT" 01/02

STRUCTURE SCHEDULE						
STRUCTURE NUMBER	LOCATION	TYPE	TOP GRADE ELEV.	INV. IN	INV. OUT	REMARKS
I-1	N 580,556.00 E 1,366,756.07	S COMBO.	361.8 ±361.3	---	357.57 355.0	HO. CO. STD. SD-4.32 N 580588.49 E 1366756.34
I-2	N 580,565.92 E 1,366,770.24	DOUBLE TYPE S COMBO.	361.66 ±361.5	---	357.21 355.2	HO. CO. STD. SD-4.32 4.23 N 580569.26 E 1366771.78
MH-1	N 580,551.06 E 1,366,764.88	STD PRECAST	361.53 ±361.7	358.33 355.21	355.03 354.2	HO. CO. STD. G-5.11 N 580551.59 E 1366764.76
I-3	N 580,366.56 E 1,366,993.95	S COMBO.	351.16 ±351.0	---	346.49 345.4	HO. CO. STD. SD-4.32 N 580366.19 E 1366893.88
I-4	N 580,336.85 E 1,366,883.84	S COMBO.	349.85 ±349.0	---	344.00 344.55	HO. CO. STD. SD-4.32 N 580338.85 E 1366884.92
MH-2	N 580,344.68 E 1,366,891.26	STD PRECAST	350.01 ±350.0	344.45 344.16 345.00	341.00 341.7	HO. CO. STD. G-5.11 N 580341.02 E 1366889.24
MH-3	N 580,197.47 E 1,366,974.34	STD PRECAST	307.55 ±307.5	300.58 300.6	300.55 300.5	HO. CO. STD. G-5.11 N 580197.89 E 1366973.88
HW-1	N 580,175.48 E 1,366,986.25	TYPE "C" ENDWALL	---	300.49 300.4	300.49 300.4	HO. CO. STD. SD-5.21 N 580176.03 E 1366986.28

STORM DRAIN FLOW TABULATION														
LOCATION		ACRES		C x A			TIME	I	Q = CIA	PIPE n = 0.013			TIME	
FROM	TO	SUB.	TOTAL	C	C x A	SUM	(MIN.)	(IN./HR.)	10 YR. C.F.S.	SIZE	SLOPE %	VEL. (FPS)	LGTH. (FT.)	(MIN.)
I-1	MH-1	0.63	0.63	0.34	0.214	0.214	14.4	5.54	1.19	18"	5.0	1.0	10	0.2
I-2	MH-1	0.25	0.25	0.34	0.085	0.085	18.0	5.00	0.43	15"	5.0	0.4	14	0.6
MH-1	MH-2	---	0.88	---	---	0.299	18.6	4.91	1.47	18"	4.2	0.8	242	5.0
I-3	MH-2	0.52	0.52	0.34	0.177	0.177	14.4	5.54	0.98	15"	5.0	0.8	22	0.4
I-4	MH-2	0.22	0.22	0.34	0.075	0.075	14.4	5.54	0.42	15"	5.0	0.3	5	0.5
MH-2	MH-3	---	1.62	---	---	0.551	23.6	4.29	2.36	18"	24.3	1.3	169	1.9
MH-3	HW-1	---	1.62	---	---	0.551	---	---	2.36	18"	0.5	1.3	25	0.3

RESTORATION SCHEDULE			
STATION	TO STATION	LENGTH	MATERIAL
I-1	MH-1	10 FEET	BITUMINOUS PAVING
I-2	MH-1	14 FEET	BITUMINOUS PAVING
MH-1	MH-2	242 FEET	BITUMINOUS PAVING
I-3	MH-2	22 FEET	BITUMINOUS PAVING
I-4	MH-2	5 FEET	BITUMINOUS PAVING
MH-2	STA. 0+06	6 FEET	BITUMINOUS PAVING
STA. 0+06	MH-3	163 FEET	SEEDING
MH-3	HW-1	25 FEET	SEEDING

QUANTITIES			
ITEM	QUANTITIES ESTIMATED	AS-BUILT	TYPE MATERIAL
15" PIPE	51 LF	46 LF	HDPE
18" PIPE	436 LF	446 LF	HDPE
MANHOLES	3 EA.	3 EA.	4' PRECAST
INLETS	4 EA.	3 EA.	S. COMBO
END WALL	1 EA.	1 EA.	TYPE C
INLET	1 EA.	1 EA.	DOUBLE TYPE S



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DEVELOPER: *Frank Donaldson* 8/29/00 DATE

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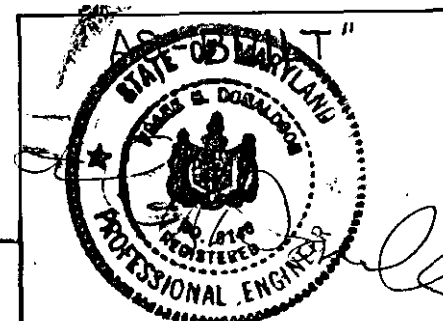
ENGINEER: *Frank Donaldson* 5/1/2000 DATE

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NATURAL RESOURCES CONSERVATION: *n/a* DATE

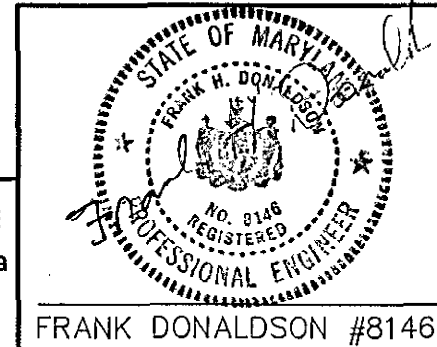
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HOWARD SOIL CONSERVATION DISTRICT: *n/a* DATE



FRANK DONALDSON
P.E. 8146
5/14/02

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STORM DRAIN PROFILE

600' SCALE MAP NO. 25 BLOCK NO. 13

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STORM DRAIN IMPROVEMENT
2ND ELECTION DISTRICT
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CONTRACT NO. D-1118-FFF

SCALE AS SHOWN
SHEET 2 OF 2

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