

Bureau of Environmental Health
 7178 Gateway Drive Columbia, MD 21046
 (410) 313-2640 Fax (410) 313-2648
 TDD (410) 313-2323 Toll Free 1-866-313-6300
 website: www.hchealth.org

Maura J. Rossman, M.D., Health Officer

RECEIPT DATE: 12/12/12

ONSITE SEWAGE DISPOSAL SYSTEM

P 544432-B

INSTALLATION APPROVAL DATE: 3/10/14

PERMIT

A _____

SEWER HOUSE CONNECTION

PROPERTY ADDRESS: 14577 Edgewoods Way

SUBDIVISION: Edgewood Farm

LOT: 42

TAX ID: 04-372700

CONTRACTOR: Fogle's Septic Clean Inc.

EMAIL: kurt@foglesinc.com

CONTRACTOR ADDRESS: 580 Obrecht Road, Sykesville, MD 21784

PHONE: 410-795-5670

PROPERTY OWNER: Toll MD V Limited Partnership

EMAIL: _____

OWNER ADDRESS: 14540 Edgewoods Way, Glenelg, MD 21737

PHONE: 410-489-2275

NUMBER OF BEDROOMS: 4 HOUSE SQ. FT. _____ CONNECTED TO PUBLIC WATER: YES NO

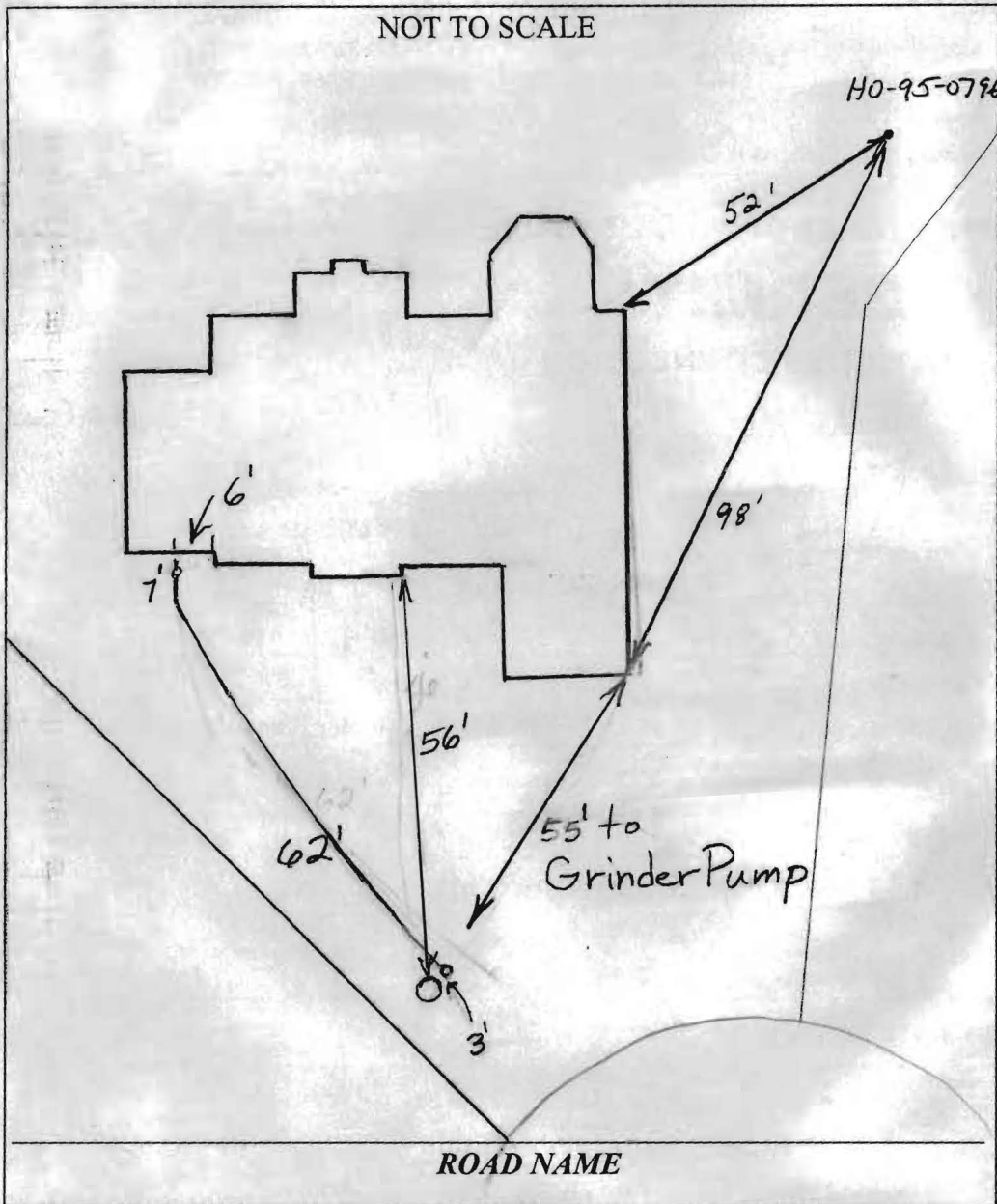
LOCATION:	INSTALL 4" SEWER LINE PER APPROVED SITE PLAN.
NOTES:	

ISSUED BY: Dana Bernard ISSUE DATE: 9/24/13 EXPIRATION DATE: 12/12/13

- NOTE: HOWARD COUNTY BUREAU OF UTILITIES APPROVAL OF GRINDER PUMP INSTALLATION IS REQUIRED PRIOR TO SEPTIC PERMIT APPROVAL
- NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING
- NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM. PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT. CALL 410-313-1771 FOR INSPECTION OF SEPTIC SYSTEM.

NOT TO SCALE



TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
_____	_____	_____
NUMBER OF TRENCHES _____		
TOTAL LENGTH _____		
ABSORPTION AREA _____		
DISTRIBUTION BOX LEVEL _____		
DISTRIBUTION BOX BAFFLE _____		
DISTRIBUTION BOX PORT _____		

SEPTIC TANK DATA

SEPTIC TANK I LEVEL _____

MANUFACTURER _____

CAPACITY _____ GAL

SEAM LOC _____

TANK LID DEPTH _____

BAFFLES _____

BAFFLE FILTER _____

MANHOLE LOC _____

6" PORT LOC _____

WATERTIGHT TEST _____

SLOTTED _____

DATE ON LID _____

PUMP/SEPTIC TANK LEVEL

MANUFACTURER _____

CAPACITY _____ GAL

SEAM LOC _____

TANK LID DEPTH _____

BAFFLES _____

BAFFLE FILTER _____

MANHOLE LOC _____

6" PORT LOC _____

WATERTIGHT TEST _____

SLOTTED _____

DATE ON LID _____

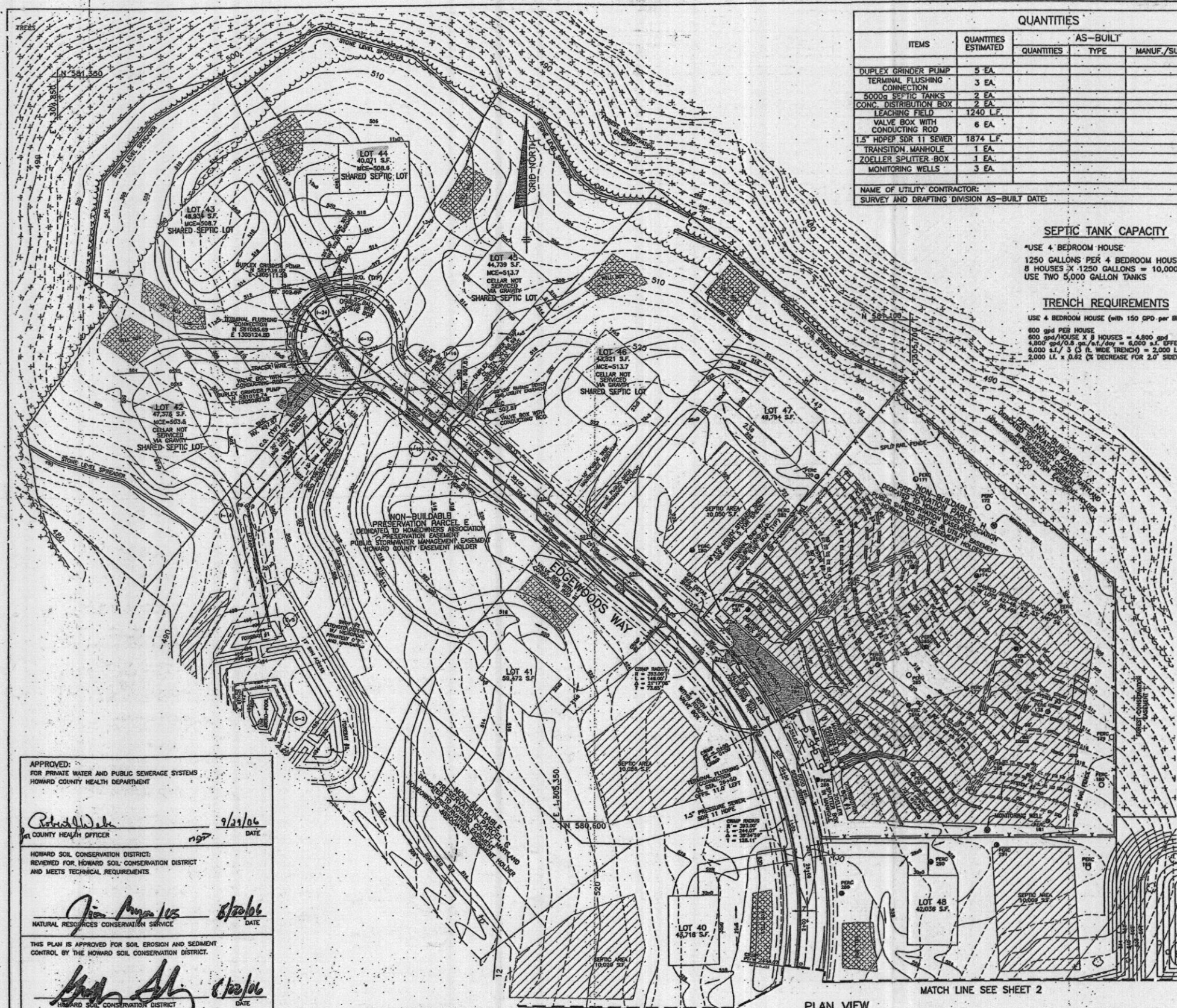
PRE-CONSTRUCTION:

INSTALLATION: ~~12/21/13~~ ^{12/21/13} ~~12/21/14~~ ^{12/21/2014} Made connection from grinder pump to front of house. Need final house connection. Need grinder pump approval from utilities. (BB)

3/10/14 Pump check and alarm test completed. Sewer system has been approved. (AG)

3/10/14 County sent e-mail approval and release of U+O for house. (AG)

FINAL INSPECTOR Andrew Heint DATE OF APPROVAL 3/10/14



ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
DUPLEX GRINDER PUMP	5 EA.			
TERMINAL FLUSHING CONNECTION	3 EA.			
5000G SEPTIC TANKS	2 EA.			
CONC. DISTRIBUTION BOX	2 EA.			
LEACHING FIELD	1240 L.F.			
VALVE BOX WITH CONDUCTING ROD	6 EA.			
1.5" HDPE SDR 11 SEWER	1874 L.F.			
TRANSITION MANHOLE	1 EA.			
ZOELLER SPLITTER BOX	1 EA.			
MONITORING WELLS	3 EA.			

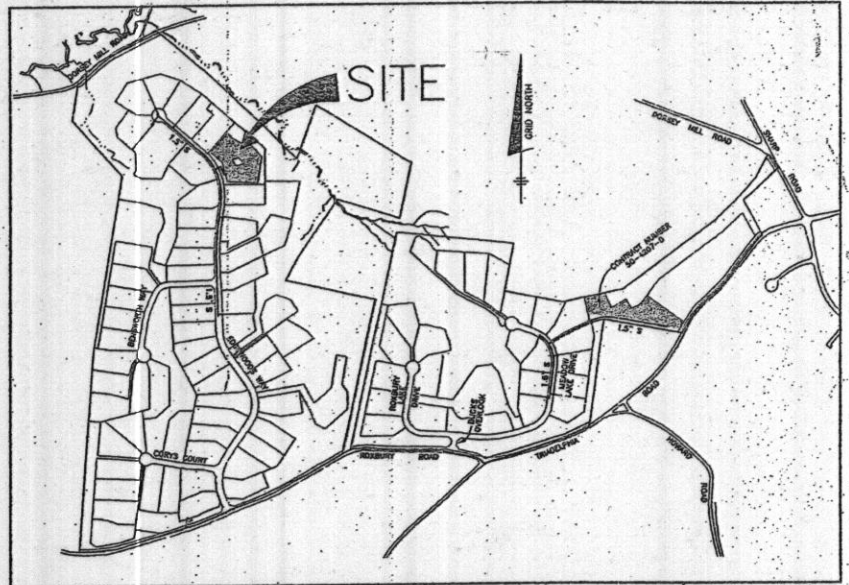
NAME OF UTILITY CONTRACTOR:
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:

SEPTIC TANK CAPACITY

USE 4-BEDROOM HOUSE
1250 GALLONS PER 4 BEDROOM HOUSE
8 HOUSES X 1250 GALLONS = 10,000 GALLONS
USE TWO 5,000 GALLON TANKS

TRENCH REQUIREMENTS

USE 4-BEDROOM HOUSE (with 150 GPD PER BEDROOM)
800 GPD PER HOUSE
800 GPD/HOUSE X 8 HOUSES = 6,400 GPD
4,000 GPD/0.5 GPD/FT./DAY = 8,000 GPD EFFECTIVE AREA
6,000 GPD / 3 (3 FT. WIDE TRENCH) = 2,000 L.F.
2,000 L.F. X 0.62 (2% DECREASE FOR 2.0" SIDEWALL) = 1,240 L.F.



WATER AND SEWER COUNTY CODE		TYPE OF BUILDING - SINGLE FAMILY DETACHED	
WATER CODE:	M/A	NUMBER OF BUILDABLE LOTS:	80
SEWER CODE:	M/A	NUMBER OF SHC'S:	8
TEST GRADIENT:	M/A	NUMBER OF INCHES:	8
		DRAINAGE AREA:	PATENT
		TREATMENT PLANT:	M/A

VICINITY MAP
SCALE: 1" = 600'

SHARED SEPTIC NOTES:

1. WELLS ON THE LOTS SURROUNDING THE COMMON SHARED SEPTIC AREAS SHALL BE TESTED FOR BACKGROUND LEVELS OF CONTAMINANTS TO BE SPECIFIED BY THE DEPARTMENT OF PUBLIC WORKS PRIOR TO PUTTING THE SHARED SEPTIC SYSTEM IN SERVICE.
 2. THE BUILDER SHALL INSTALL BACKFLOW PREVENTER AND RELIEF VALVE ON THE SEWER SERVICE AT THE HOUSE AT THE TIME OF THE HOUSE CONSTRUCTION OR AS REQUIRED BY THE PLUMBING INSPECTOR.
 3. INSTALLATION AND START-UP OF THE PUBLICLY OWNED GRINDER PUMPS AND APPURTENANCES, AND THE 4" PVC SEWER HOUSE CONNECTIONS (SHC) SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.
 4. ALL PRESSURE SEWER SHALL BE HDPE SDR 11 A 6" GAUGE TRACER WIRE SHALL BE WRAPPED AROUND OR ATTACHED TO THE PIPE. TRACER WIRE CONNECTIONS OFF OF THE MAIN MUST BE OVERLAPPING, INSULATED, FIRMLY CONNECTED AND ENCAPSULATED.
 5. SEPTIC TANKS SHALL BE VACUUM OR WATER TESTED ON-SITE BY THE MANUFACTURER. SEPTIC TANK SHOP DRAWINGS FROM THE MANUFACTURER SHOULD BE SUBMITTED TO THE HOWARD COUNTY ENVIRONMENTAL HEALTH DEPARTMENT PRIOR TO ISSUANCE OF SHARED SEPTIC SYSTEM PERMIT.
 6. ALL PRESSURE SEWER IS TO BE PRESSURE TESTED ACCORDING TO THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS STANDARDS AND SPECIFICATIONS.
 7. THE CONTRACTOR SHALL NOTIFY HOWARD CO. HEALTH DEPARTMENT AT (410) 313-1771 AT LEAST FIVE (5) WORKING DAYS BEFORE ANY PRESSURE TEST OF PRESSURE SEWERS, AND ANY SEPTIC TANKS VACUUM OR WATER TESTING IS PERFORMED.
 8. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE REQUIREMENTS AND METHOD OF INSTALLATION OF GRINDER PUMP AND ITS APPURTENANCES.
 9. OBSERVATION WELLS TO BE INSTALLED AFTER TRENCH INSTALLATION IS COMPLETED.
 10. LOTS WITH "CELLAR NOT SERVICED VIA GRAVITY" IS INDICATED, SEWER PUMPS LOCATED INSIDE THE BASEMENT ARE REQUIRED IN ORDER TO SERVICE THE CELLAR.
 11. PRIOR TO INSTALLATION, A PRECONSTRUCTION MEETING MUST BE SCHEDULED TO REVIEW THE INSTALLATION. THE ON-SITE SEWAGE DISPOSAL SYSTEM MUST BE PROFESSIONALLY SEALED FOR THE MEETING. THE MEETING SHALL INCLUDE:
 - a. MICHAEL DAVIS, HOWARD COUNTY DEPARTMENT OF HEALTH 410-313-1771
 - b. BARRY GLOFFELY, MARYLAND DEPARTMENT OF THE ENVIRONMENT 410-237-4159
 - c. REBECCA HUGEL, DEPARTMENT OF PUBLIC WORKS, BUREAU OF UTILITIES 410-313-8774
 12. ON-SITE DISPOSAL SYSTEM INSTALLATION CONTRACTOR.
 13. GENERAL CONTRACTOR FOR THE PROJECT.
 14. ENGINEER.
- A MINIMUM OF FIVE (5) DAYS NOTICE MAY BE REQUIRED TO SCHEDULE THE MEETING.
12. ANY CHANGES TO THE APPROVED PLAN MUST BE PRESENTED TO THE DEPARTMENT OF HEALTH, MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE DEPARTMENT OF PUBLIC WORKS BY THE ENGINEER.
 13. PRIOR TO WASTEWATER DISCHARGE TO THE ON-SITE SEWAGE DISPOSAL SYSTEM, THE ENGINEER MUST CERTIFY THAT THE SYSTEM HAS BEEN INSTALLED AS DESIGNED AND RECEIVE APPROVAL FOR DISCHARGE FROM THE DEPARTMENT OF HEALTH, DEPARTMENT OF PUBLIC WORKS AND MARYLAND DEPARTMENT OF THE ENVIRONMENT.
 14. PRIOR TO INSTALLATION OF ANY COMPONENT OF THE SYSTEM, PROPER PERMITS MUST BE OBTAINED FROM THE DEPARTMENT OF HEALTH, SEPTIC SYSTEM INSTALLATION PERMIT.

GENERAL NOTES

PART 1 - GENERAL

1. APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON APRIL 8, 2004 BY WISD ADRIAN WAPPING CO., INC.
3. HORIZONTAL AND VERTICAL SURVEY CONTROLS:
 - THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 21A AND NO. 27CA.
 - ALL VERTICAL CONTROLS ARE BASED ON NAVD 83. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE:
4. ALL PILE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 18 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONDUCTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRANCHES OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRANCHING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRANCHING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRANCHING OF THE POLES.
6. FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATIONS OF THE TEST PIT OR PITS AS NOTED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

AT&T	1-800-252-1133
BCE (CONSTRUCTION SERVICES)	410-850-4820
BCE (CONSUMER)	410-850-1400
BUREAU OF UTILITIES	410-313-4950
COLUMBIA PIPELINE CO.	410-741-1399
MD&E	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-9533
VERIZON	1-800-743-0033/410-224-8210
9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAJOR TRUNKS. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STOP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL REMOVE TREES, STAMPS AND ROOTS ALONG LINE OF EXISTENCE. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
11. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE (5) WORKING DAYS BEFORE OPEN CUTTING OR BORING/CACING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPM REQUIREMENTS PER SECTION 18.114(c) OF THE HOWARD COUNTY CODE.

PART 3 - SEWER

1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
3. FORCE MAINS SHALL BE D.I.P. ONLY.
4. MANHOLES SHOWN WITH 12" AND 18" WELLS ARE FOR BRICK MANHOLES ONLY.
5. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE UNDERDRAIN FRAMES AND COVERS. STANDARD DESIGN 05.52. WHERE UNDERDRAIN MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-0" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWING.
6. HOUSE(S) WITH THE SYMBOL INDICATES THAT CELLAR CANNOT BE SERVED.

CONTROL PANEL SPECS.

1. CONTROL PANEL SHALL BE SITUATED ON HOUSE SO THAT A CLEAR LINE OF VISION IS MAINTAINED BETWEEN RESEAL AND THE PUMP CHAMBER.
2. RESEAL BOX 6" BELOW CONTROL PANEL ON HOUSE IN LINE WITH CONDUIT. SEAL WITH CHOC UNDERDRAIN SEALANT TO CREATE WATER LOCK.
3. CONTROL PANEL MUST BE DIRECT WIRED FROM HOUSE ELECTRICAL SERVICE BOX.
4. CONTROL PANEL SHOULD HAVE FUNCTIONAL HOLD/PAUSE TO REWIND SWITCH.
5. CONTROLS MUST HAVE OVER CURRENT DEVICE AND DISCONNECT.
6. ALL WIRING SHALL BE RUN THROUGH CONDUIT.

APPROVED: 9/21/06 DATE
COUNTY HEALTH OFFICER

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

9/21/06 DATE
NATURAL RESOURCES CONSERVATION SERVICE

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

9/21/06 DATE
HOWARD SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER ROAD CONSTRUCTION PLANS F-06-108

DEVELOPER:
TOLL BROTHERS, INC.
7164 COLUMBIA GATEWAY DRIVE
SUITE 230
COLUMBIA, MARYLAND 21046

****ALL SEWAGE GRINDER PUMPS ARE TO BE PUBLICLY OWNED AND MAINTAINED**

****MAXIMUM NUMBER OF BEDROOMS FOR EACH HOUSE ON LOTS 42-46, 49 AND 53-54 SHALL BE FOUR (4).**

PLAN VIEW
SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

8-14-06 DATE
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

8/14/06 DATE
CHIEF, DEVELOPMENT/ENGINEERING DIVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.

8400 BALTIMORE NATIONAL PIKE & SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE 410-485-6100 FAX 410-485-8944

DESIGN: DBT
DRAFT: DBT
CHK: DAM
DATE: 6/07/06

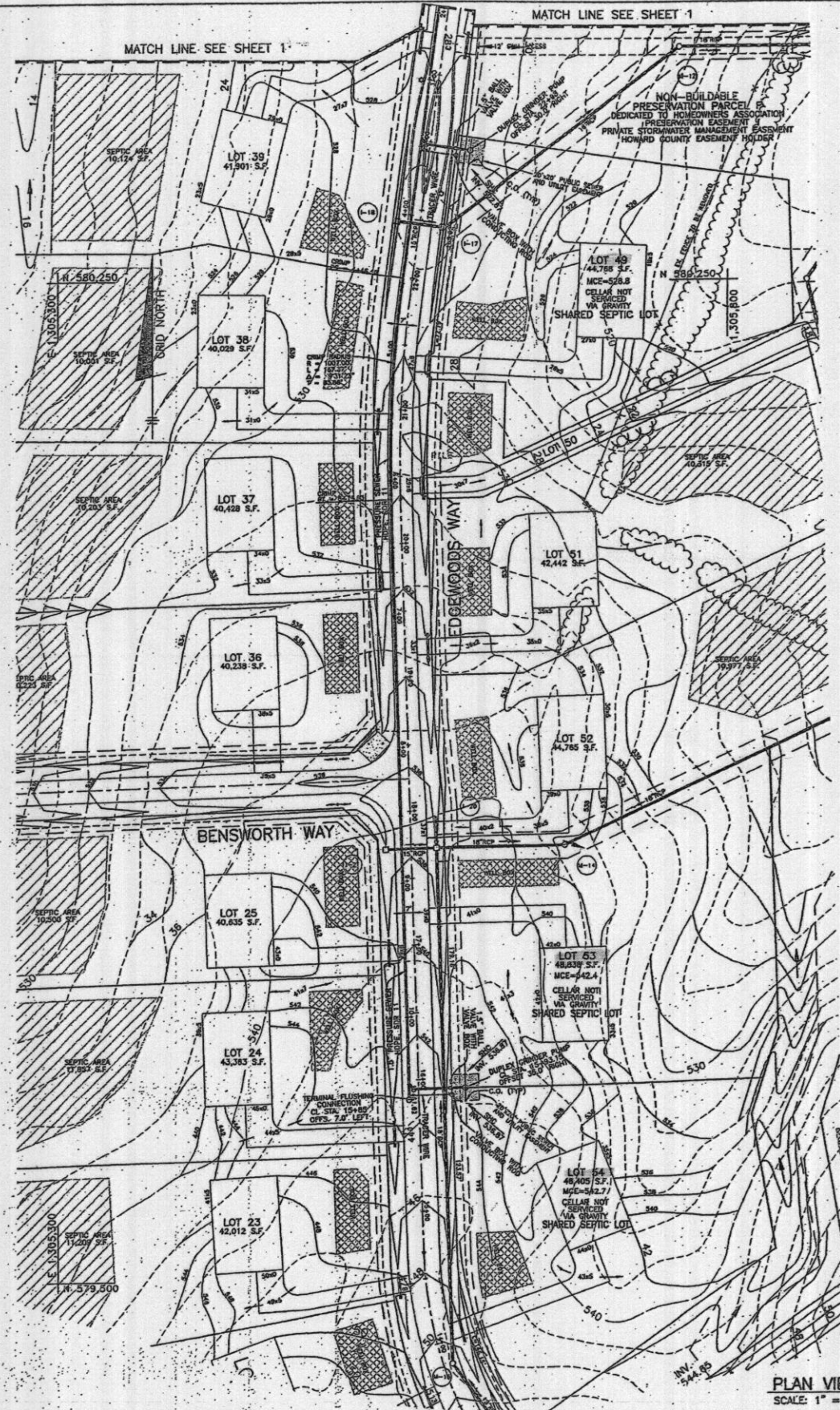
BY NO. REVISIONS DATE

600 SCALE MAP NO. 50
BLOCK 3

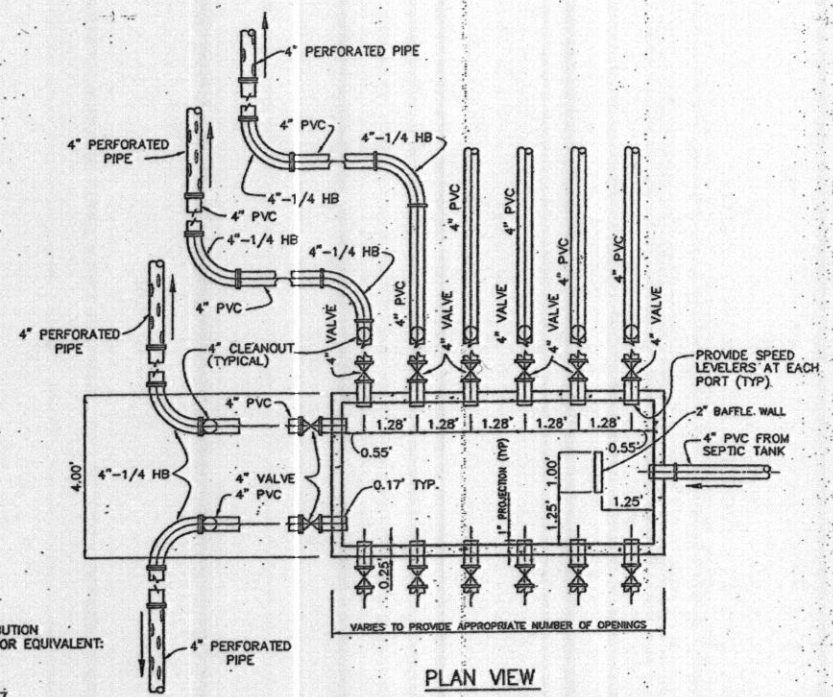
PLAN VIEW OF SHARED SEPTIC SYSTEM

EDGEWOOD FARM
SHARED SEPTIC PLAN FOR LOTS 42-46, 49, 53 AND 54
FOURTH ELECTION DISTRICT
CONTRACT NO. 50-4309-D

SCALE: AS SHOWN
SHEET NO. 1 OF 6



PLAN VIEW
SCALE: 1" = 50'

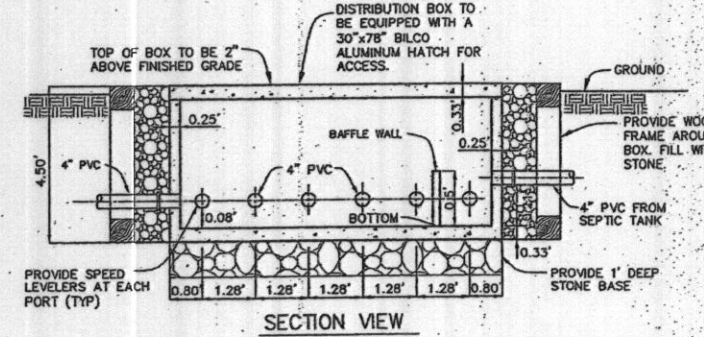


PLAN VIEW

MANUFACTURER OF DISTRIBUTION BOX SHALL BE AS BELOW OR EQUIVALENT:
MAYER BROTHERS, INC.
6284 RACE ROAD
ELKBRIDGE, MARYLAND 21227
410-796-1434

DISTRIBUTION BOX DATA		
BOX NO.	INLET SIDE	TOP ELEV.
BOX #1	N 580655.47 E 1305529.91	528.00
BOX #2	N 580779.16 E 1305574.37	526.30

COORDINATE LOCATION IS AT THE TOP CENTER OF BOX.



SECTION VIEW

TYPICAL CONCRETE DISTRIBUTION BOX DETAIL
NOT TO SCALE

OWNER/DEVELOPER:
TOLL BROTHERS, INC.
7164 COLUMBIA GATEWAY DRIVE
SUITE 230
COLUMBIA, MARYLAND 21046

**MAXIMUM NUMBER OF BEDROOMS FOR EACH HOUSE ON LOTS 39-43, 46 AND 50-51 SHALL BE FOUR (4).
**ALL SEWAGE GRINDER PUMPS ARE TO BE PUBLICLY OWNED AND MAINTAINED

APPROVED:
FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

Robert W. Lee 9/29/06
COUNTY HEALTH OFFICER DATE

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

Jim Meyer 8/22/06
NATURAL RESOURCES CONSERVATION OFFICER DATE

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

John A. ... 8/22/06
HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER ROAD CONSTRUCTION PLANS F-04-118

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Ruth ... 9-21-06
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

...
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
8400 BALTIMORE NATIONAL PIKE & SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE 410-485-9105 FAX 410-485-8644



DESIGN: DBT	
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DATE: 7/07/06	BY: NO.
REVISIONS	DATE

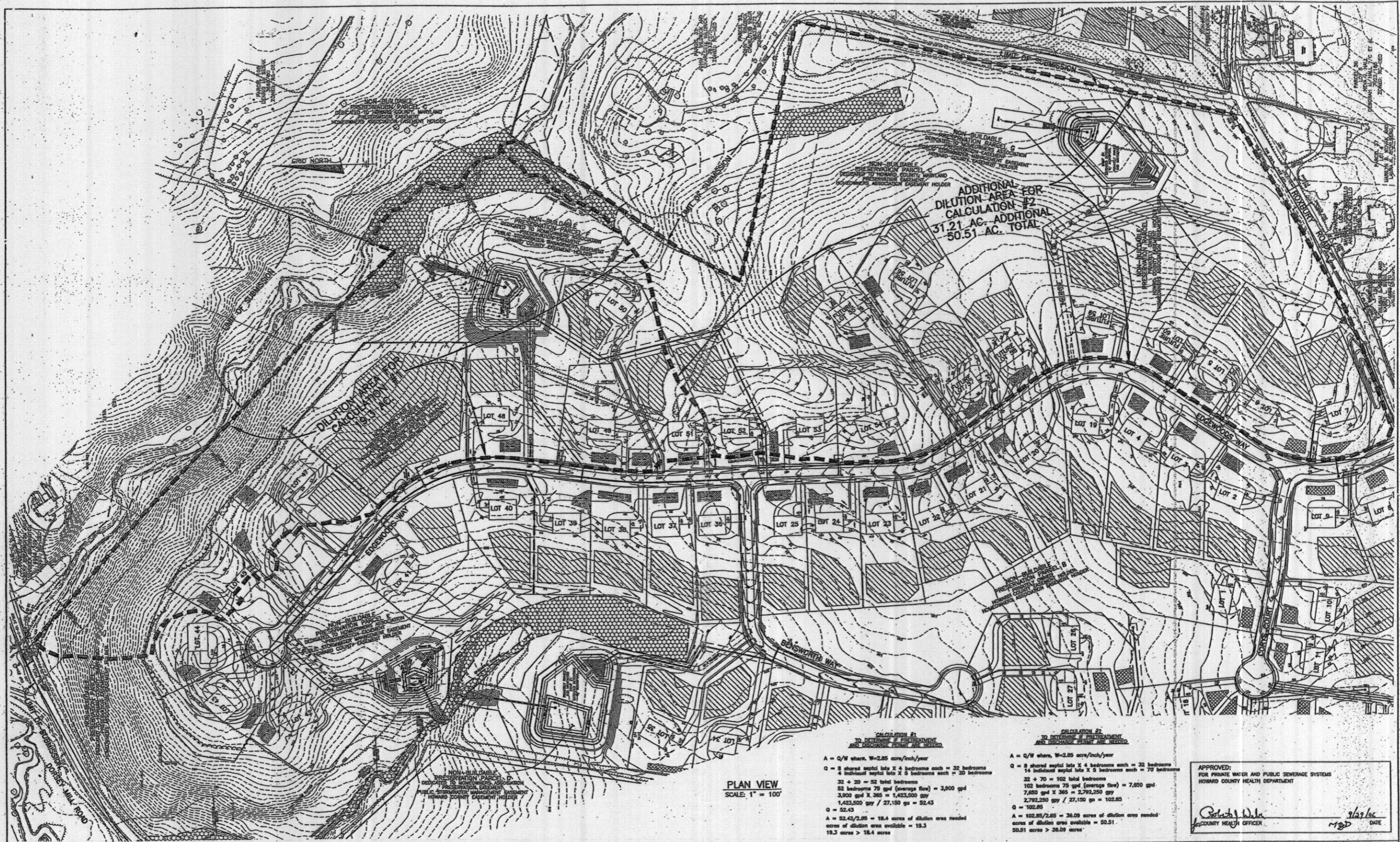
PLAN VIEW OF
SHARED SEPTIC SYSTEM

600 SCALE MAP NO. 50

EDGEWOOD FARM
SHARED SEPTIC PLAN FOR LOTS
LOTS 42-46, 49, 53 AND 54
FOURTH ELECTION DISTRICT
CONTRACT NO. 50-4309-D

SCALE:
AS SHOWN

SHEET NO.
2 OF 6



ADDITIONAL
DILUTION AREA #2
31.21 AC. ADDITIONAL
50.51 AC. TOTAL

PLAN VIEW
SCALE: 1" = 100'

CALCULATION #1
TO DETERMINE IF PRETREATMENT
AND DISCHARGE PERMIT ARE NEEDED.

A = Q/W where, W=2.85 acres/inch/year
 Q = 8 shared septic lots X 4 bedrooms each = 32 bedrooms
 4 individual septic lots X 5 bedrooms each = 20 bedrooms
 32 + 20 = 52 total bedrooms
 52 bedrooms 75 gpd (average flow) = 3,900 gpd
 3,900 gpd X 365 = 1,423,500 gpy
 1,423,500 gpy / 27,150 ga = 52.43
 Q = 52.43
 A = 52.43/2.85 = 18.4 acres of dilution area needed
 acres of dilution area available = 19.3
 19.3 acres > 18.4 acres

CALCULATION #2
TO DETERMINE IF PRETREATMENT
AND DISCHARGE PERMIT ARE NEEDED.

A = Q/W where, W=2.85 acres/inch/year
 Q = 8 shared septic lots X 4 bedrooms each = 32 bedrooms
 14 individual septic lots X 5 bedrooms each = 70 bedrooms
 32 + 70 = 102 total bedrooms
 102 bedrooms 75 gpd (average flow) = 7,650 gpd
 7,650 gpd X 365 = 2,792,250 gpy
 2,792,250 gpy / 27,150 ga = 102.85
 Q = 102.85
 A = 102.85/2.85 = 36.09 acres of dilution area needed
 acres of dilution area available = 50.51
 50.51 acres > 36.09 acres

APPROVED:
FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

Richard W. ... 9/19/06
COUNTY HEALTH OFFICER DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Richard W. ... 8-18-06
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Richard W. ... 8-18-06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
6480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE 410-485-6105 FAX 410-485-8644



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DATE: 7/07/06	BY NO.	REVISIONS	DATE

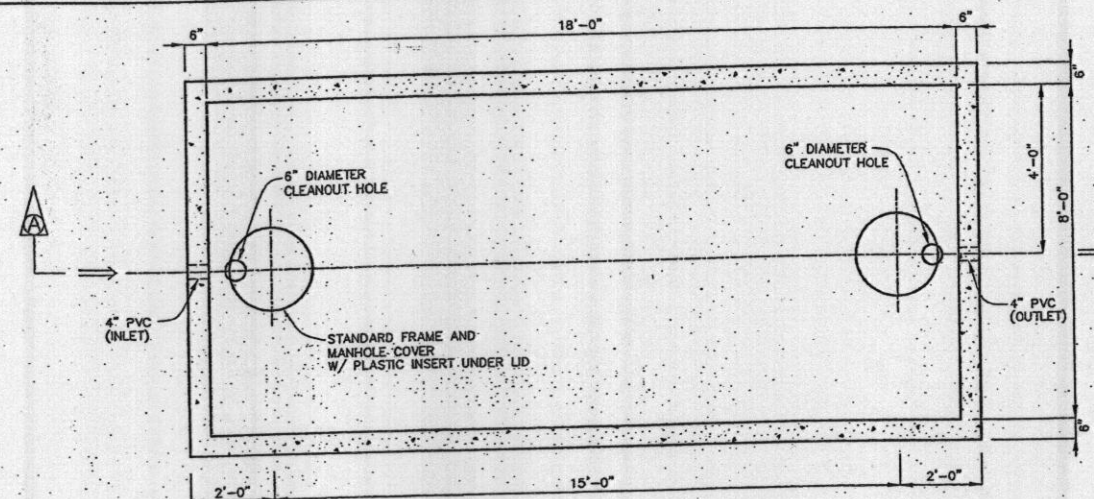
PLAN VIEW OF
DILUTION AREA

600 SCALE MAP NO. 50 BLOCK 3

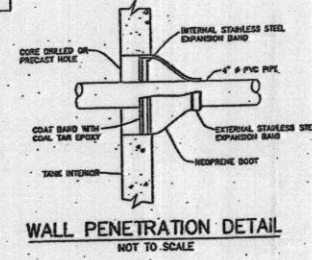
EDGEWOOD FARM
SHARED SEPTIC PLAN FOR LOTS
LOTS 42-46, 49, 53 AND 54
FOURTH ELECTION DISTRICT
CONTRACT NO. 50-4309-D

SCALE:
AS SHOWN

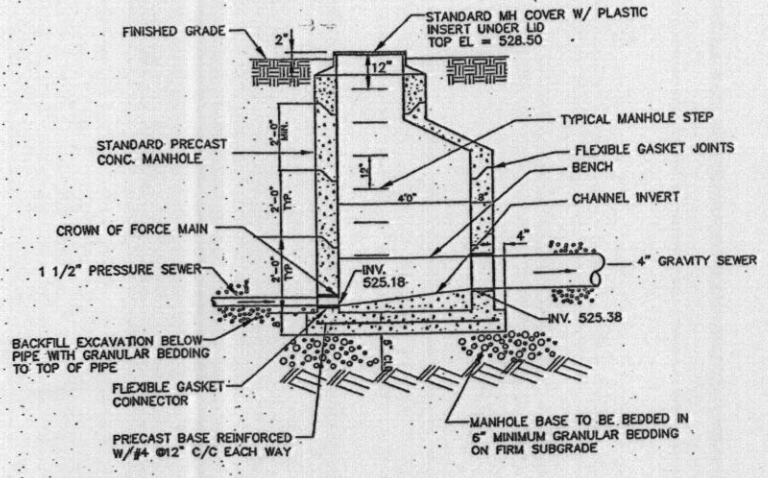
SHEET NO.
6 OF 6



PLAN VIEW

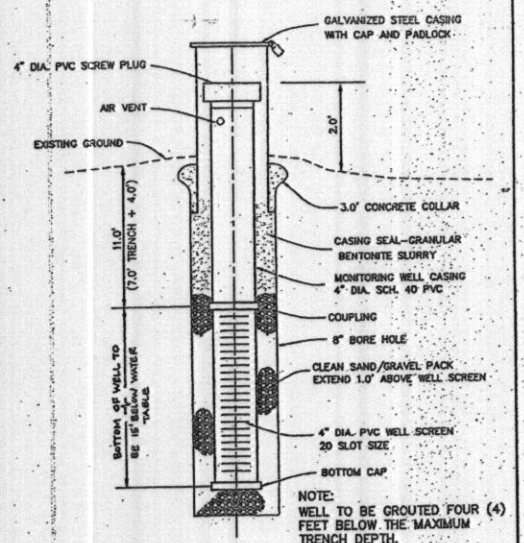


WALL PENETRATION DETAIL
NOT TO SCALE

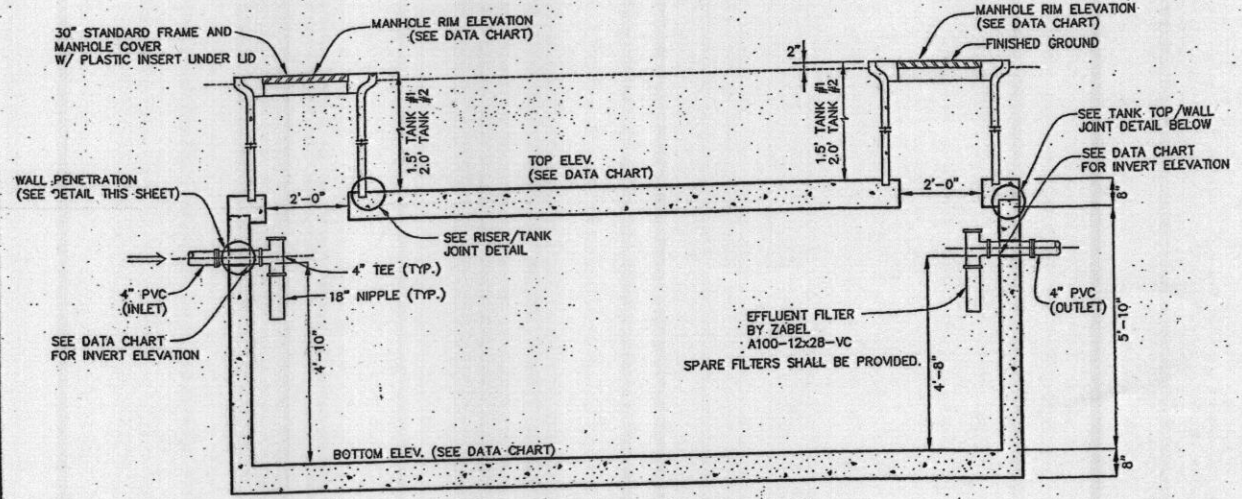


- NOTES:
- ELEVATION OF GRAVITY SEWER INVERT SHALL BE MINIMUM 0.1' ABOVE ELEVATION OF PRESSURE SEWER CROWN.
 - PROVIDE SMOOTH UPWARD SLOPING CHANNEL FROM FORCE MAIN TO GRAVITY SEWER.

TRANSITION MANHOLE:
PRESSURE SEWER TO GRAVITY SEWER
NOT TO SCALE



MONITORING WELL DETAIL
NOT TO SCALE



SECTION VIEW A-A

5,000 GALLON SEPTIC TANK DATA

TANK #	TANK ELEVATION	INVERT ELEVATION	TANK COORDINATES	MANHOLE RIM ELEVATION
SEPTIC TANK #1	TOP = 526.84	525.19 IN	N 580692.11 E 1305593.51	528.34
	BOT = 520.35	525.02 OUT	N 580674.64 E 1305600.96	528.34
SEPTIC TANK #2	TOP = 526.62	524.97 IN	N 580670.04 E 1305602.95	528.62
	BOT = 520.13	524.80 OUT	N 580652.58 E 1305610.42	528.62

REINFORCING:
WALLS - #4 REBAR, 8" C/C E/W
SLAB TOP - #4 REBAR, 8" C/C E/W
BASE - #4 REBAR, 8" C/C E/W
REBAR GRADE 60

JOINTS SEALED WITH BUTYL ROPE
FORM AND MORTAR.

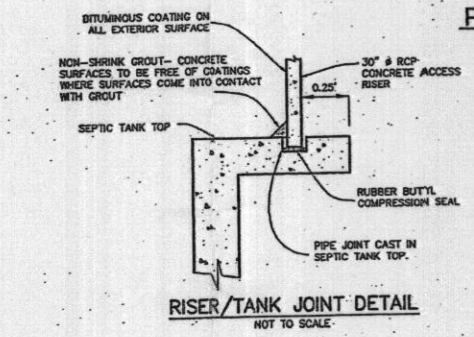
CONCRETE 4,000 PSI IN 28 DAYS

INTERIOR COATED WITH TWO COATS
BERT COATING.

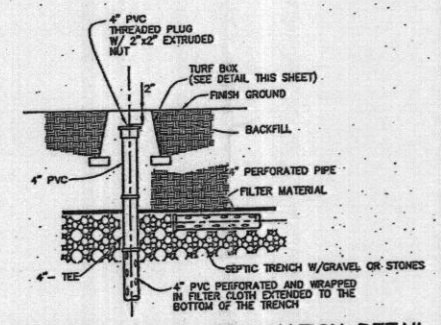
- NOTES:
- MANHOLE RIM ELEVATION SHOWN HEREON IS AT THE CENTER OF THE RIM.
 - TANK COORDINATES ARE AT THE MIDPOINT OF EACH END.

SEPTIC TANK TO BE PRECAST BY J.F. GILLESPIE, INC. OR EQUAL

PRECAST CONCRETE 5,000 GALLON
CAPACITY SINGLE COMPARTMENT SEPTIC TANK
SCALE: 1" = 2'



RISER/TANK JOINT DETAIL
NOT TO SCALE



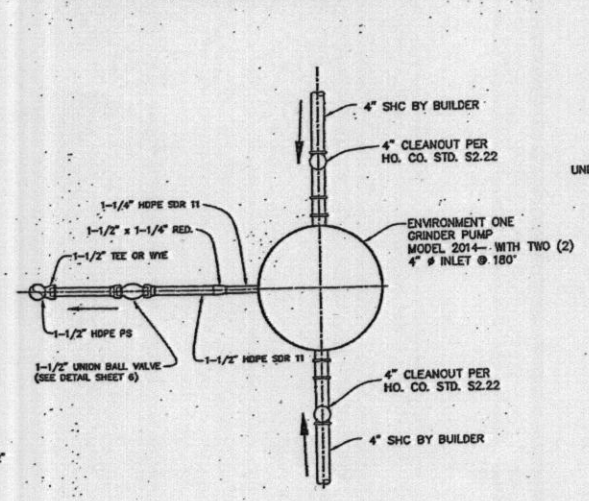
DISTRIBUTION LATERAL TERMINATION DETAIL
NOT TO SCALE

ENVIRONMENT ONE GRINDER PUMP DATA TABLE

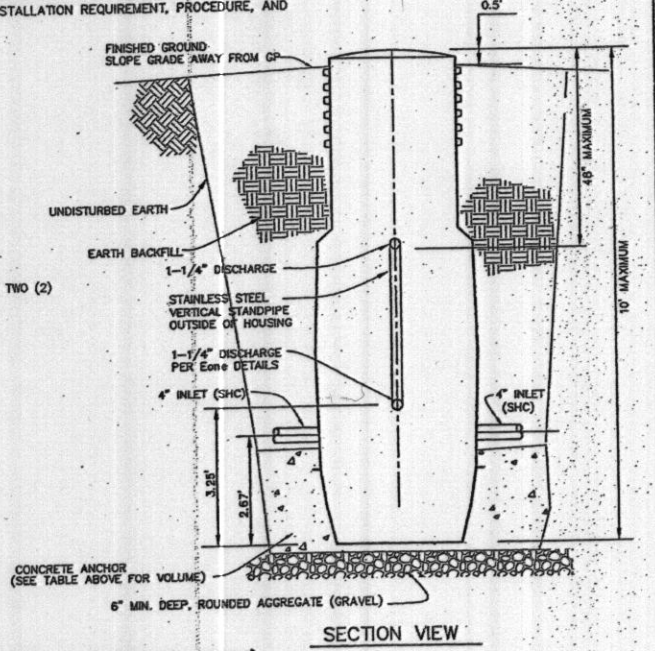
LOTS	TOP ELEV.	BOTTOM ELEV.	DEPTH	INLET ELEV.	DISCHARGE ELEV.	CONC. ANCHOR VOLUME	REMARKS
42	505.0	495.0	10.00' (120")	497.67	498.25	35.7 C.F.	MODEL NO. 2014 (DUPEX)
43 & 44	510.0	500.0	10.00' (120")	502.67	503.25	35.7 C.F.	MODEL NO. 2014 (DUPEX)
45 & 46	515.0	505.0	10.00' (120")	507.67	508.25	35.7 C.F.	MODEL NO. 2014 (DUPEX)
49	530.0	520.0	10.00' (120")	522.67	523.25	35.7 C.F.	MODEL NO. 2014 (DUPEX)
53 & 54	544.0	534.0	10.00' (120")	536.67	537.25	35.7 C.F.	MODEL NO. 2014 (DUPEX)

NOTE: SEE MANUFACTURER'S MANUAL FOR GRINDER PUMP INSTALLATION REQUIREMENT, PROCEDURE, AND ELECTRICAL CONNECTION.

ACCEPTABLE ALTERNATE TO ENVIRONMENT ONE GRINDER PUMP:
VORTEX GRINDER PUMPS
C/O FLUID SOLUTIONS, INC.
TANETOWN, MARYLAND
410-755-9292

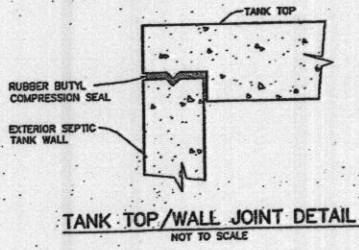


PLAN VIEW

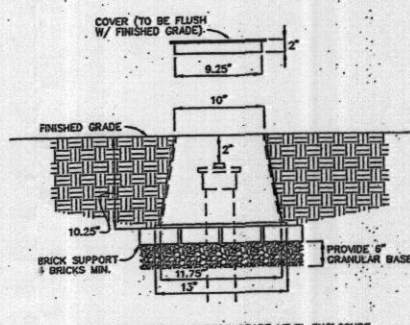


SECTION VIEW

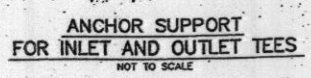
TYPICAL DUPLEX GRINDER PUMP (MODEL #2014)
NOT TO SCALE



TANK TOP/WALL JOINT DETAIL
NOT TO SCALE



TURF BOX DETAIL
NOT TO SCALE



ANCHOR SUPPORT
FOR INLET AND OUTLET TEES
NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Ruth Davis 9-14-06
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
[Signature] 2/2/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8400 BALTIMORE NATIONAL PIKE & SUITE 418
ELICOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-8844



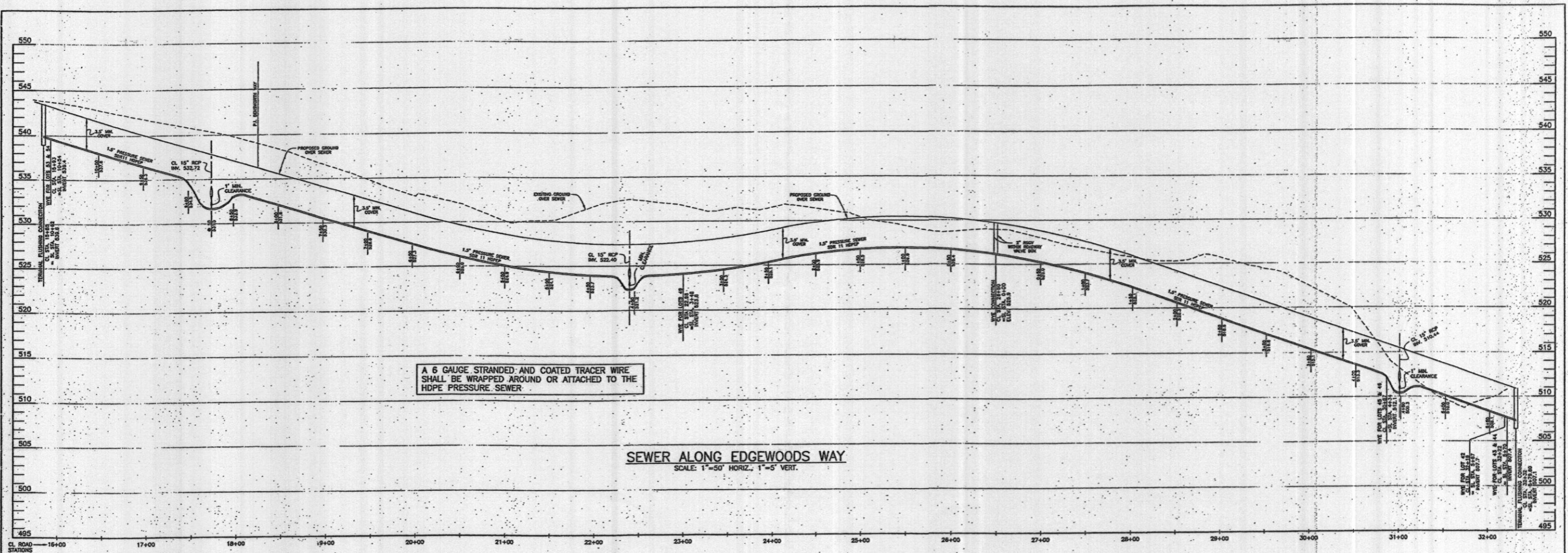
DESIGN: DBT
DRAFT: DBT
CHK: DAM
DATE: 7/07/06
BY NO. REVISIONS DATE 600 SCALE MAP NO. 50 BLOCK 3

DETAILS

EDGEWOOD FARM
SHARED SEPTIC PLAN FOR LOTS
LOTS 42-45, 49, 53 AND 54
FOURTH ELECTION DISTRICT
CONTRACT NO. 50-4309-D

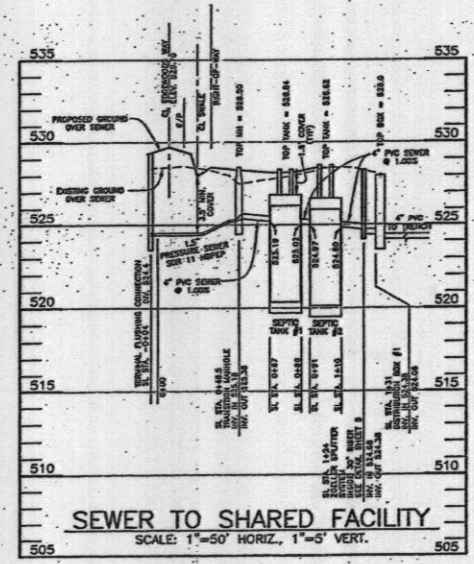
SCALE:
AS SHOWN
SHEET NO.
4 OF 6

APPROVED:
FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
[Signature] 9/29/06
COUNTY HEALTH OFFICER DATE

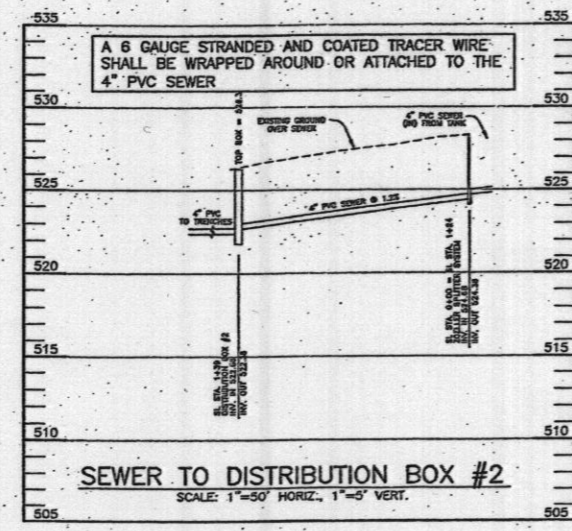


A 6 GAUGE STRANDED AND COATED TRACER WIRE SHALL BE WRAPPED AROUND OR ATTACHED TO THE HDPE PRESSURE SEWER.

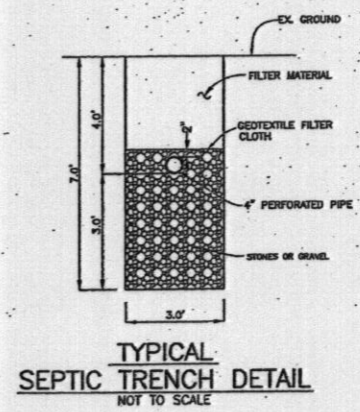
SEWER ALONG EDGEWOODS WAY
SCALE: 1"=50' HORIZ., 1"=5' VERT.



SEWER TO SHARED FACILITY
SCALE: 1"=50' HORIZ., 1"=5' VERT.



SEWER TO DISTRIBUTION BOX #2
SCALE: 1"=50' HORIZ., 1"=5' VERT.

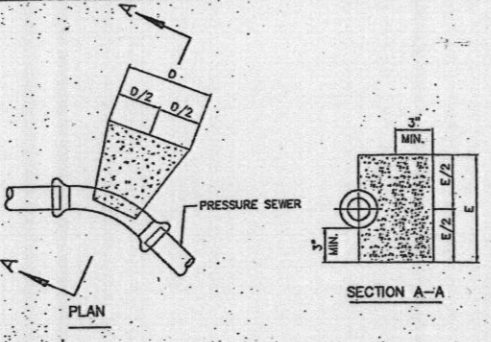
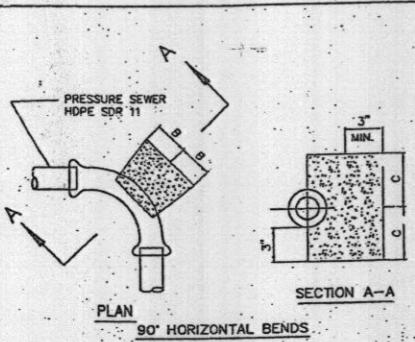


TYPICAL SEPTIC TRENCH DETAIL
NOT TO SCALE

APPROVED:
FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

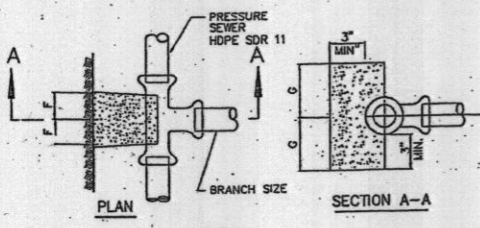
Robert L. W. [Signature] 9/27/06
COUNTY HEALTH OFFICER DATE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>[Signature]</i> 8-14-06 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND <i>[Signature]</i> 2/20/07 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE A SUITE 418 ELICOTT CITY, MARYLAND 21043 PHONE: 410-485-5105 FAX: 410-485-8844		DESIGN: DBT	REVISIONS	DATE	600 SCALE MAP NO. 50	BLOCK 3	EDGEWOOD FARM SHARED SEPTIC PLAN FOR LOTS LOTS 42-46, 49, 53 AND 54 FOURTH ELECTION DISTRICT CONTRACT NO. 50-4309-D	SCALE: AS SHOWN
				DRAFT: DBT						SHEET NO. 3 OF 6
				CHK: DAM						
				DATE: 7/07/06						

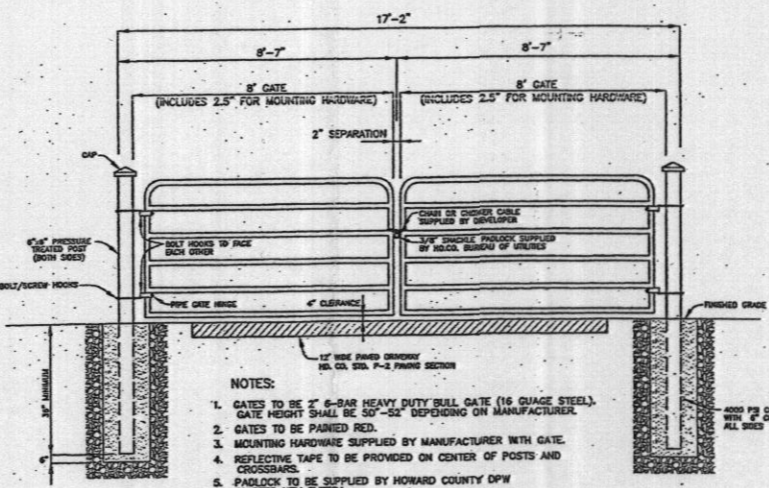
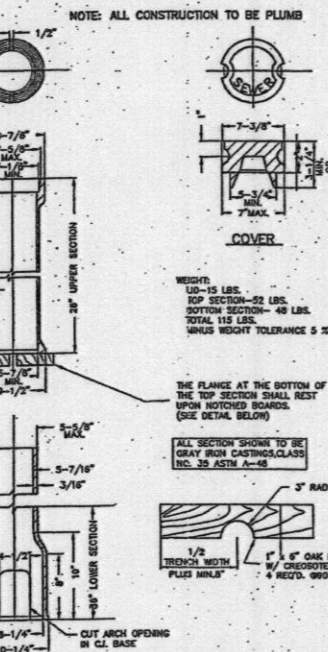
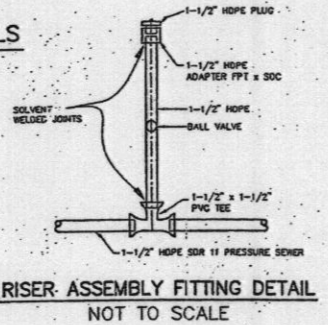
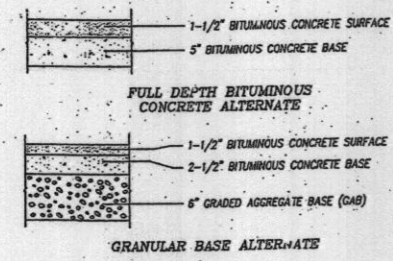


PIPE SIZE	B	C	D	E	F	G
1-1/4" & 1-1/2"	4"	4"	5"	5"	3"	3"
2"	5"	5"	7"	7"	5"	5"

- NOTES:
1. f_c = 3000 psi @ 28 DAYS.
 2. CARRY ALL BEARING SURFACE TO UNDISTURBED GROUND OR FIRM SUBGRADE.
 3. BUTTRESS SIZED FOR 150 psi.
 5. DO NOT ENCASE JOINTS.

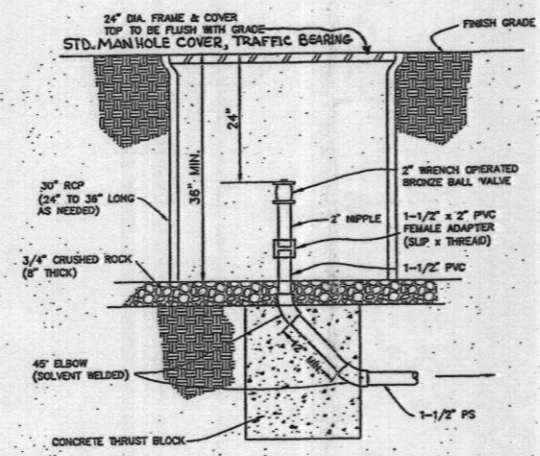


PRESSURE SEWER BLOCKING DETAILS
NOT TO SCALE

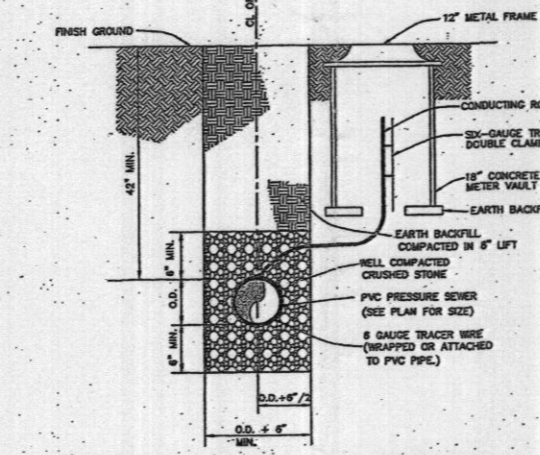


- NOTES:
1. GATES TO BE 6" BAR HEAVY DUTY BALL GATE (16 GAUGE STEEL). GATE HEIGHT SHALL BE 30" ± DEPENDING ON MANUFACTURER.
 2. GATES TO BE PAIRED RED.
 3. MOUNTING HARDWARE SUPPLIED BY MANUFACTURER WITH GATE.
 4. REFLECTIVE TAPE TO BE PROVIDED ON CENTER OF POSTS AND CROSSBARS.
 5. PADLOCK TO BE SUPPLIED BY HOWARD COUNTY DPW MASTER KEY SYSTEM.

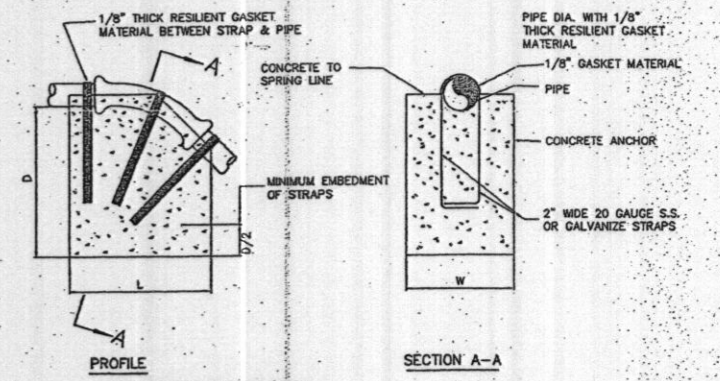
GATE DETAIL
NOT TO SCALE



TERMINAL FLUSHING CONNECTION
NOT TO SCALE



PRESSURE SEWER TRENCH, BEDDING & CONDUCTING ROD CABLE BOX LOCATION DETAIL
NOT TO SCALE



BEND	1-1/4"	1-1/2"
11-1/4"	L	12"
	W	10"
	D	10"
22-1/2"	L	15"
	W	15"
	D	12"
45°	L	20"
	W	20"
	D	12"

- NOTES:
1. PAINT EXPOSED GALVANIZE STRAPS WITH TWO(2) COATS OF BITUMINOUS PAINT.
 2. f_c = 3000 psi AT 28 DAYS.
 3. CARRY ALL BEARING SURFACE TO UNDISTURBED EARTH OR FIRM SUBGRADE.
 4. CONCRETE ANCHORAGE DIMENSIONS ARE BASED ON TOTAL PRESSURE OF 150 psi.

ANCHORING PRESSURE SEWERS (UPPER VERTICAL BENDS)
NOT TO SCALE

SPECIFICATIONS FOR UTILITY STORAGE BUILDING

- BUILDING SHALL BE 8'x12' VINYL SIDED STORAGE BUILDING
- SHALL BE HIGH WALL BARN STYLE WITH 6" SIDE WALLS
- ONE DOUBLE DOOR ON END OF BUILDING
- DOORS AND FRAME TO BE REINFORCED
- DOOR HINGES MUST BE "T" TYPE OR STRAP TYPE; 3 HINGES PER DOOR
- FRAMING HINGES ARE NOT ACCEPTABLE
- NO WINDOWS
- 10' RIDGE VENT
- 4"x4" PRESSURE TREATED SKIDS
- 2"x4" FLOOR JOIST 16" ON CENTER
- 5/8" PLYWOOD FLOOR SHEATHING
- 2"x4" STUDS 16" ON CENTER
- ALL WALLS TO BE PLATED AT BOTTOM AND DOUBLE PLATED AT THE TOP
- 1/2" ROOF SHEATHING
- 240 POUND ASPHALT 20-YEAR SHINGLES
- LOCKS ARE TO BE KEYPAD ALIKE WITH BAUER CH751 IJCK
- ALMOND COLORED VINYL SIDING AND TRIM
- BROWN COLORED ROOF SHINGLES

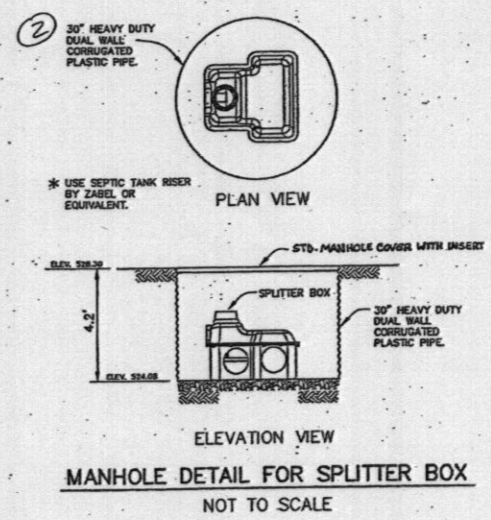
REFERENCE: RIDGE CABINET COMPANY
4536 RIDGE ROAD
MT. AIRY, MARYLAND
410-875-2211

Technical Specifications

SAMPLE ENGINEERING SPECIFICATION:
CONTRACTOR must furnish a Zellerbach Flow® riser system, model 173-0001. A concrete or plastic distribution box requiring riser levelers should not be considered equal. The riser leveler system must be lightweight to ease the burden of installation. Product must be capable of splitting effluent from 1/10th to 30 GPM evenly into 2 to 5 distribution lines. Product must not require external vent for distribution line flow balancing purposes. System must be easily adjustable to the surface. The riser leveler will be built in for easy adjustment and service. A 6" or 8" riser pipe shall be brought to the surface for future access, inspection, and adjustment. Splice housing shall be rigid enough to withstand the anticipated frost and traffic loading. The riser system must be made of all non-corrosive materials. Flowing shall be made of polypropylene to increase the chemical resistance to the effluent and gases present in the waste stream. Divertor shall be made of virgin ABS with Viton® additive to enhance product life. Six 4" SDR 35 pipe ends shall be provided with the unit.

ALL ZELLERBACH PRODUCTS MUST BE INSTALLED IN ACCORDANCE WITH PLUMBING AND HEALTH DEPARTMENT CODES.

Distributed By: **Zellerbach Pump Co.**
1-800-928-PUMP
www.zellerbach.com

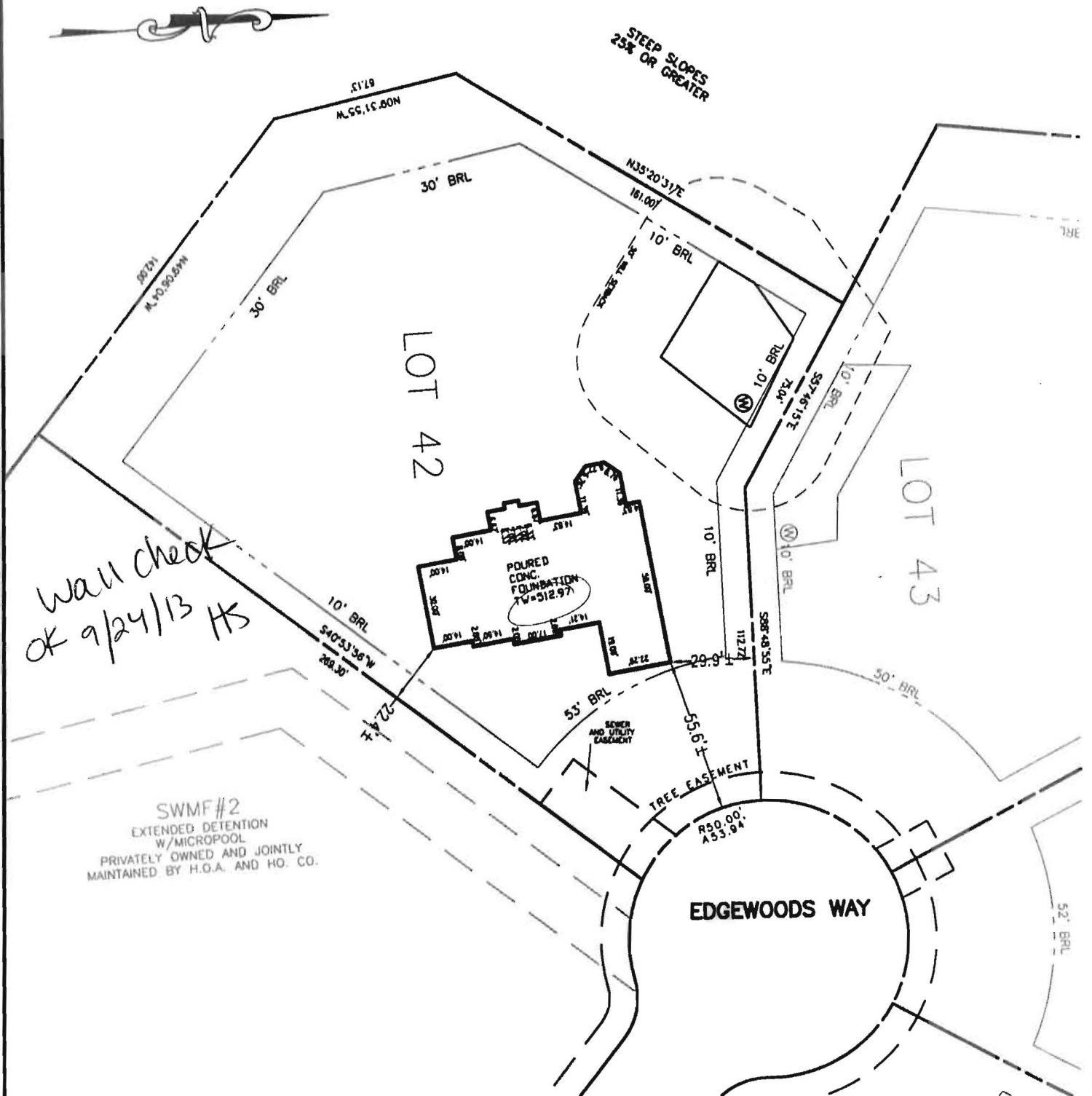


MANHOLE DETAIL FOR SPLITTER BOX
NOT TO SCALE

APPROVED:
FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

Robert J. John 2/2/06
COUNTY HEALTH OFFICER
RJD DATE

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21328, EXPIRATION DATE 1/8/15.



BUILDING SETBACKS (B.R.L.'s) SHOWN HEREON PER SITE DEVELOPMENT PLAN SETBACK DISTANCES SHOWN HEREON AS "±" HAVE AN ACCURACY OF ±0.1' FOOT.

ADDRESS: 14577 EDGEWOODS WAY
GLENELG MD 21837

SURVEYOR'S NOTE

THIS WALLCHECK WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT. THIS PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS, RIGHT-OF-WAYS, COVENANTS, AND RESTRICTIONS, ETC. OF RECORD, SOME OR ALL OF WHICH MAY OR MAY NOT BE SHOWN AND/OR REFERENCED HEREON. BEARINGS AND DISTANCES OF THE PROPERTY BOUNDARY LINES SHOWN HEREON ARE PER AVAILABLE RECORDS AND HAVE NOT BEEN FIELD VERIFIED. THIS IS NOT A "LOCATION DRAWING" AND IS NOT TO BE USED FOR SETTLEMENT PURPOSES.

SIGNATURE: *Michael Joe Boyce* 21328 MD. LIC NO. DATE: 07/01/13

WALL CHECK
LOT #42
EDGEWOOD FARM

LIBER 10677, FOLIO 461
PLAT No. 19268
FOURTH (4TH) ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



ESE Consultants Inc.
7164 Columbia Gateway Dr.
Suite 203
Columbia, MD 21046
TEL: 410-872-9105
FAX: 410-872-4870

DATE: 7/01/13 SCALE: 1"=50' FILE: Lot 42 WALL CHECK
CHK'D: MJB JOB#: 1498 DRAWN: RWA