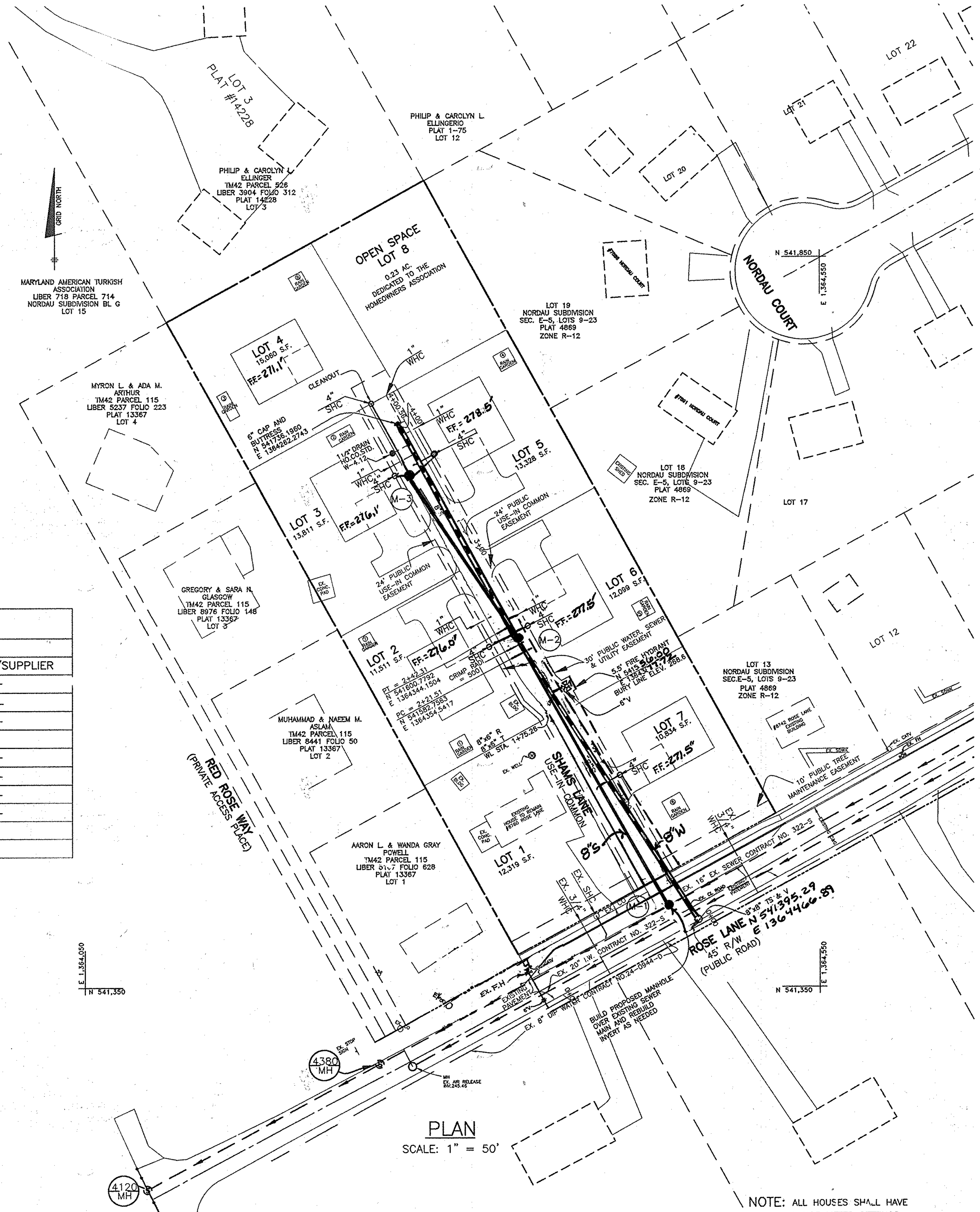


PLAN

SCALE: 1" = 50'

NOTE: ALL HOUSES SHALL HAVE INSIDE METER SETTINGS.

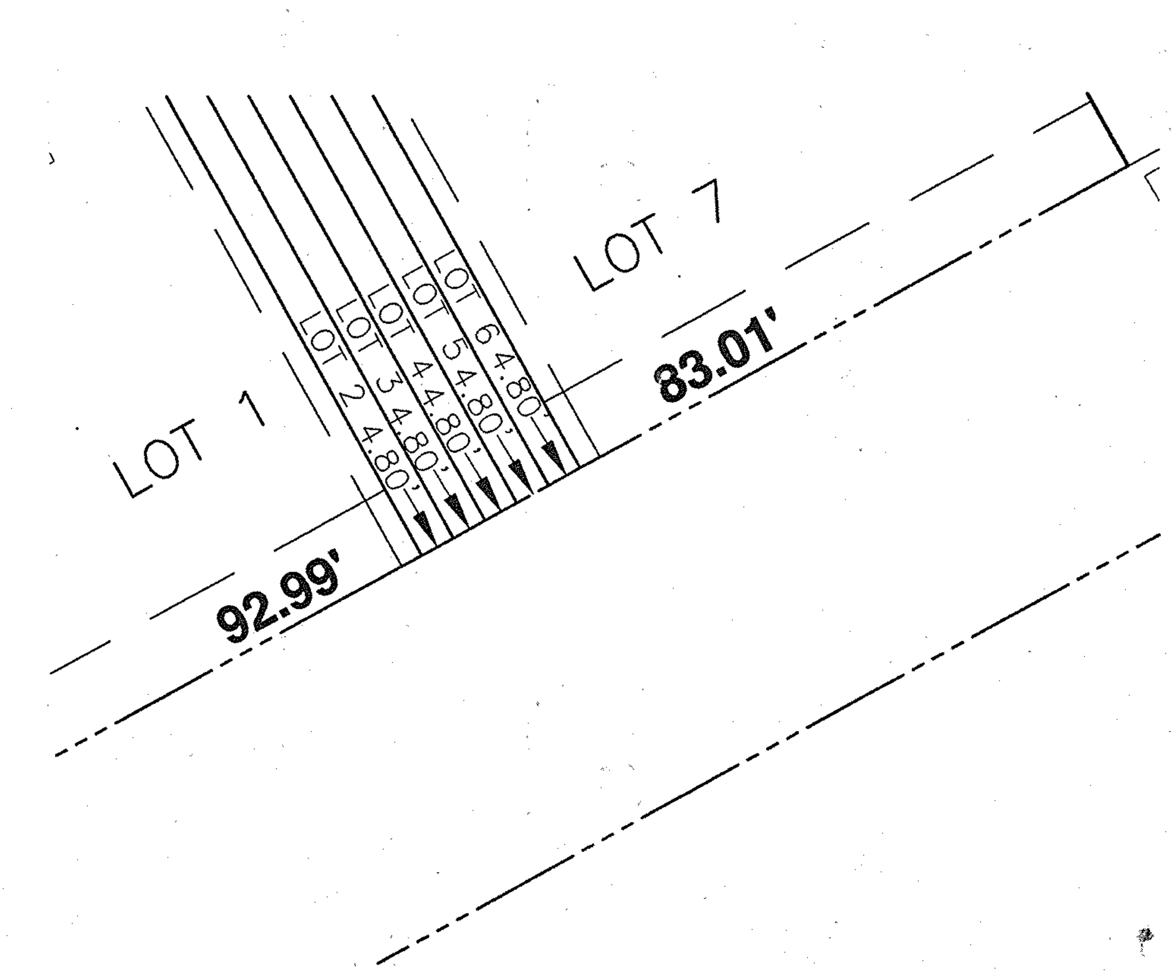
QUANTITIES					
ITEMS	QUANTITIES ESTIMATED	AS-BUILT			
		QUANTITIES	TYPE	MANUF./SUPPLIER	
1" WHC	L.F.	83'	–	–	
6" WATER	L.F.	212'	–	–	
8" WATER	L.F.	188'	–	–	
FIRE HYDRANT	EACH	2			
SEWER MAIN	L.F.	347'	–	–	
SEWER MANHOLES	EACH	3	–	–	
4" SHC	L.F.	130'	–	–	
11/2" DRAIN	EACH	1	–	–	
NAME OF UTILITY CONTRACTOR:					
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:					

SEWER MANHOLE COORDINATE TABLE			
ITEM	EAST	NORTH	RIM ELEVATION
MANHOLE 1	N 541405.04	E 1364447.47	261.04
MANHOLE 2	N 541588.62	E 1364345.71	271.45
MANHOLE 3	N 541701.93	E 1364270.59	273.16

SEWER HOUSE CONNECTION TABLE					
LOT NO.	INVERT AT MAIN/MH	INVERT AT ROW/EASEMENT	MCE	REMARKS	FRIST FLOOR ELEVATION
2	255.0	255.4	258.9	LATERAL AT 2%	276.0'
3	258.0	258.2	261.8	LATERAL AT 2%	276.1'
4	257.8	258.3	261.5	LATERAL AT 1%	271.1'
5	257.8	258.2	261.9	LATERAL AT 2%	278.5'
6	254.7	254.9	258.7	LATERAL AT 2%	277.5'
7	248.3	248.6	252.0	LATERAL AT 2%	271.5'

LEGEND

- EXIST. WATER MAIN
- EXIST. SEWER MAIN
- EXIST. SEWER MANHOLE
- PROP. WATER MAIN
- PROP. SEWER MAIN
- PROP. STORM DRAIN (BY OTHERS)
- PROP. SEWER MANHOLE
- PROP. TERMINAL MANHOLE
- PROP. SEWER HOUSE CONNECTION
- PROP. WATER HOUSE CONNECTION (DOUBLE – 1 1/2")
- PROP. WATER HOUSE CONNECTION (SINGLE – 1")
- PROP. FIRE HYDRANT
- PROP. VALVE



FRONT FOOT SKETCH

SCALE: 1" = 20'

OWNER: SAYED AND SONA HASSAN
9467 VOLLMERHAUSEN DRIVE
COLUMBIA, MARYLAND 21046
301-776-826?

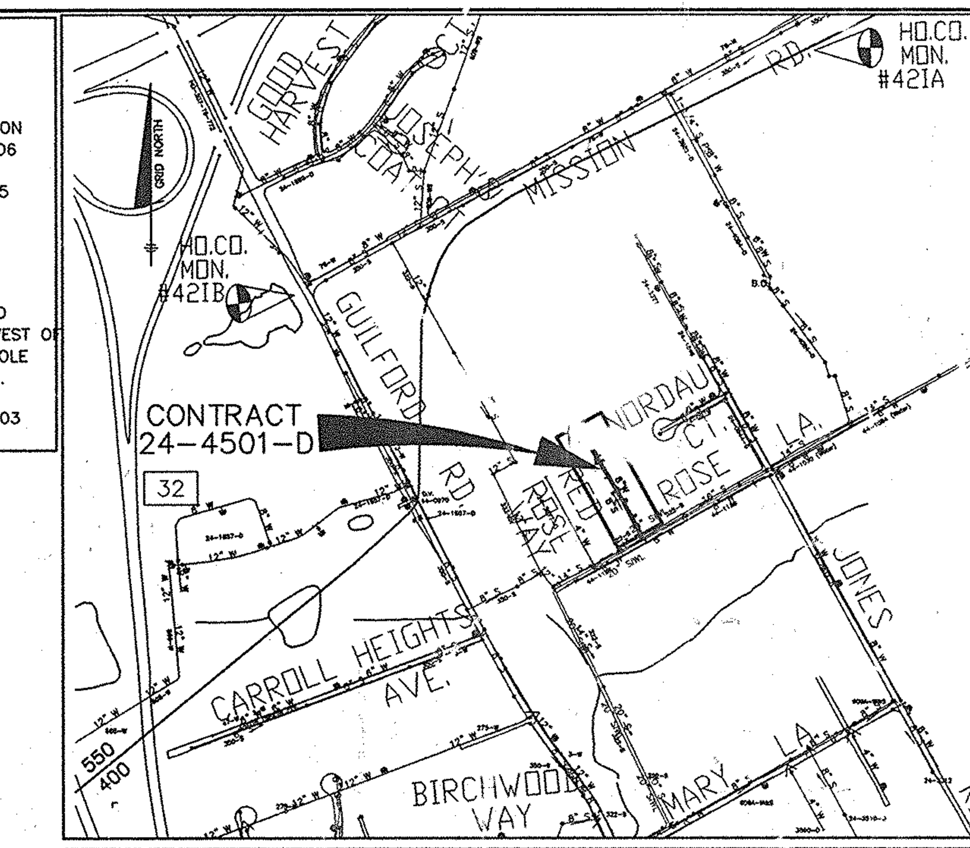
BENCH MARKS

HO. CO. #421A

HOWARD COUNTY CONTROL No. 3241001 CONCRETE MONUMENT WEST SIDE OF MISSION ROAD 74.3' NORTH OF BG&E POLE #297906 AND 39.2' WEST OF G&B #137114
N 543,390.386 E 1,364,912.655
ELEV. 312.67

HO. CO. #421B

HOWARD COUNTY No. 3241002 CONCRETE MONUMENT SOUTH SIDE OF GUILFORD ROAD OPPOSITE OF MISSION ROAD 42.2' SOUTHWEST OF DRAIN INLET 19.4' SOUTHEAST OF BG&E POLE No. 271362 AND 16.3' EAST OF GUY WIRE.
N 542,366.879 E 1,363,076.003
ELEV. 283.12



WATER AND SEWER COUNTY CODE	
WATER CODE:	B03
SEWER CODE:	4400000
TEST GRADIENT:	550

TYPE OF BUILDING: ....RESIDENTIAL
NUMBER OF BUILDABLE LOTS: 7
NUMBER OF SHC'S: 6
NUMBER OF WHC'S: 6
SEWER SHED: ....LITTLE PATUXENT
TREATMENT PLANT: .... LITTLE PATUXENT WATER RECLAMATION PLANT

ADC MAP 20 GRID D-4

VICINITY MAP

SCALE: 1" = 600'

GENERAL NOTES

PART I

1. APPROXIMATE LOCATION 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 NOVEMBER, 2006 BY BENCHMARK ENGINEERING, 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.421A AND No.421B.
   ALL VERTICAL CONTROLS ARE BASED ON NAVD '88.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, 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 PITS. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
8. 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
BGE (CONSTRUCTION SERVICES)	410-850-4620
BGE (EMERGENCY)	410-685-1400
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERIZON	1-800-743-0033/410-224-9210

9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. 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/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.

PART II – WATER

1. ALL WATER MAINS SHALL BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
5. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 100? OF THE STANDARD SPECIFICATIONS.
6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
7. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
8. SPRINKLER SYSTEM FOR ALL TOWN HOMES OR MULTI-FAMILY DWELLING UNITS SHOULD HAVE A MINIMUM OF 1" CONNECTION WITH A 3/4" METER.

PART III – 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 UNLESS OTHERWISE NOTED.
4. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
5. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
6. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

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

[signature] 8/20/08
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 ROAD CONSTRUCTION PLANS F-07-197

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[signature] 8/4/08
CHIEF, BUREAU OF UTILITIES — DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

[signature] 8/26/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
www.bei-civilengineering.com

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 21443, Expiration Date: 12-21-2016

[signature] 12/31/07

DESIGN: DAM
DRAFT: EDD
CHK: DAM
DATE: AUG,2007

BY	NO.	REVISIONS	DATE
EDD	3	REVISE WATER & SEWER	2-22-16
EDD	2	REVISE CURB & GUTTER AND REMOVE PROP. FIRE HYDRANT	6-21-10
EDD	1	REVISE SHC TABLE AND ADD F.F. ELEV. FOR LOTS 2-5	7/23/09

WATER AND SEWER PLAN

600 SCALE MAP NO. 42 — BLOCK 24

PROJECT: **ROSE LANE**
SECTION E-5
LOT 1 THRU LOT 7 AND OPEN SPACE LOT 8, A RESUBDIVISION OF NORDAU SUBDIVISION SECTION E-5, LOTS 3 AND 4 PLAT BOOK 3 FOLIO 51

LOCATION: TAX MAP 42 – GRID 24
PARCEL 160 AND 240
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

CONTRACT NO. 24-4501-D

SCALE: AS SHOWN

SHEET NO. 1 OF 2

F-07-197

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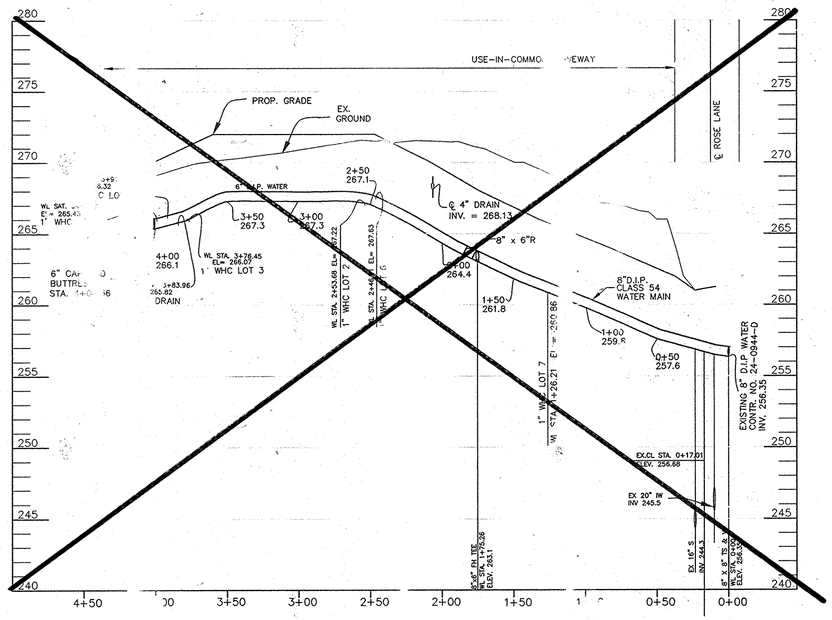
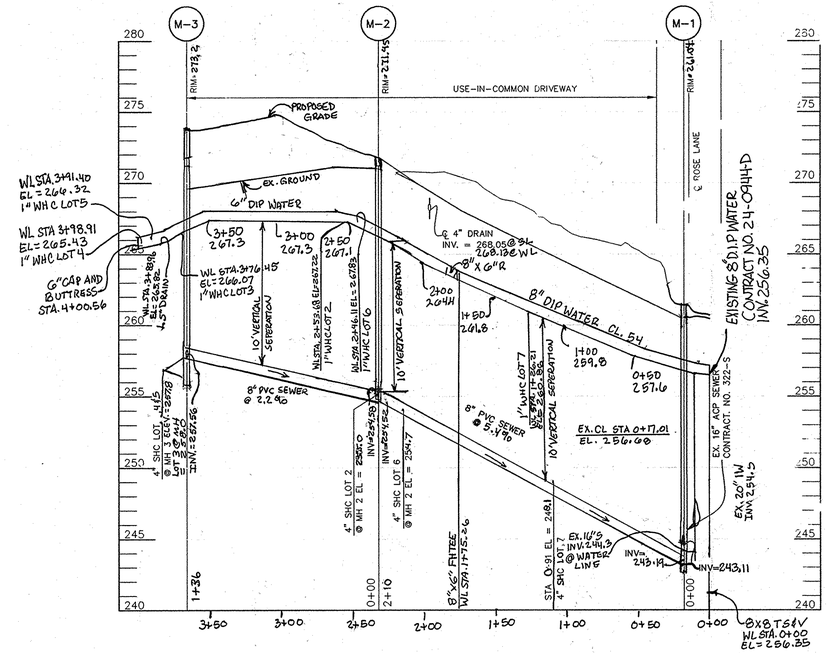


WATER MAIN PROFILE

HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'



SEWER MAIN PROFILE

HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

OWNER: SAYED AND SONA HASSAN
9467 VOLLMERHAUSEN DRIVE
COLUMBIA, MARYLAND 21046
[illegible]1-776-826[illegible]

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND	BENCHMARK ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418 ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644 www.bei-civilengineering.com	Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 21443, Expiration Date: 12/31/2008. 2016 Donald Mason 12/31/07	DESIGN: DAM	
				DRAFT: EDD	
				CHK: DAM	
CHIEF, BUREAU OF UTILITIES 8/4/08 DATE	CHIEF, DEVELOPMENT ENGINEERING DIVISION 8/26/08 DATE			DATE: AUG,2007	

BY	NO.	REVISIONS	DATE
EDD	3	REVISE SEWER PROFILE TO SHOW WATER MAINS PER LOCATIONS	2-22-16
EDD	2	REMOVE PROPOSES FIRE HYDRANT PROFILE	6-21-10
EDD	1	LOWER SEWER BETWEEN M-2 AND M-3, REVISE RIM ELEVS.	7-23-09

WATER AND SEWER PROFILE

600 SCALE MAP NO. 42 BLOCK 24

PROJECT: ROSE LANE
SECTION F-3
LOT 1 THRU LOT 7 AND OPEN SPACE LOT 8, A RESUBDIVISION OF NORDAU SUBDIVISION SECTION E-5, LOTS 3 AND 4 PLAT BOOK 3 FOLIO 51

LOCATION: TAX MAP 42 - GRID 24 PARCEL 160 AND 240 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CONTRACT NO. 24-4501-D

SCALE: AS SHOWN

SHEET NO. 2 OF 2

F-07-197

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