EMERGENCY/TEMP NO. IF ANY

B 1 — SEQUENCE NO. (MDE USE ONLY) — 1 2 3 — 6

STATE OF MARYLAND
APPLICATION FOR PERMIT TO DRILL WELL
please type

5/15/24

STATE PERMIT NUMBER: HO - 20 - 0177 (70 — 79)
fill in this form completely

Date Received (APA): 04/28/22 (8 MM DD YY 13)

OWNER INFORMATION

BGE (15 Last Name — Owner — First Name 34)

Po Box 1475 (36 Street or RFD 55)

Baltimore MD 21203 (57 Town — 70 State — 72 Zip 76)

DRILLER INFORMATION

Michael Barlow MWD355 (Driller's Name 76 License No. 81)

Barlow Well Drilling (Firm Name)

522 Underwood Lane 21014 (Address)

Signature — 4/20/22 (Date)

B 3 LOCATION OF WELL

Howard (8 COUNTY 21)

Chestnut Hill Substation (23 SUBDIVISION 42)

SECTION (44 46) LOT Bore #2 (48 50)

Ellicott City (52 NEAREST TOWN 71)

B 4

SOURCES OF DRILLING WATER
1. Well
2.
3.

Baltimore National Pike (11 STREET ADDRESS 30)

ON WHICH SIDE OF ROAD (CIRCLE APPROPRIATE BOX): NORTH N, W 32 E, WEST, EAST, S, SOUTH

1600 (34 37) DISTANCE FROM ROAD Ft (ENTER FT OR MI 38 39)

TAX MAP: ____ BLK: ____ PARCEL ____

B 2 WELL INFORMATION

APPROX. PUMPING RATE (GAL. PER MIN.) 0 (8 12)

AVERAGE DAILY QUANTITY NEEDED (GAL. PER DAY) 0 (14 20)

USE FOR WATER (CIRCLE APPROPRIATE BOX)

- D DOMESTIC POTABLE SUPPLY & RESIDENTIAL IRRIGATION
- F FARMING (LIVESTOCK WATERING & AGRICULTURAL IRRIGATION)
- 22 (I) INDUSTRIAL, COMMERCIAL, DEWATERING — Electric Ground Well
- P PUBLIC WATER SUPPLY WELL
- T TEST, OBSERVATION, MONITORING
- O OPEN LOOP GEOTHERMAL
- C CLOSED LOOP GEOTHERMAL

NOT TO BE FILLED IN BY DRILLER
HEALTH DEPARTMENT APPROVAL

Howard (13) (COUNTY NAME — COUNTY NO.)

STATE SIGNATURE _____ INSERT S → 41

DATE ISSUED 5/17/22 (43 MM DD YY 48) — CO SIGNATURE — EXP. DATE 5/17/23

APPROXIMATE DEPTH OF WELL 150 (24 28) FEET

APPROXIMATE DIAMETER OF WELL 6 NEAREST INCH

METHOD OF DRILLING (circle one)

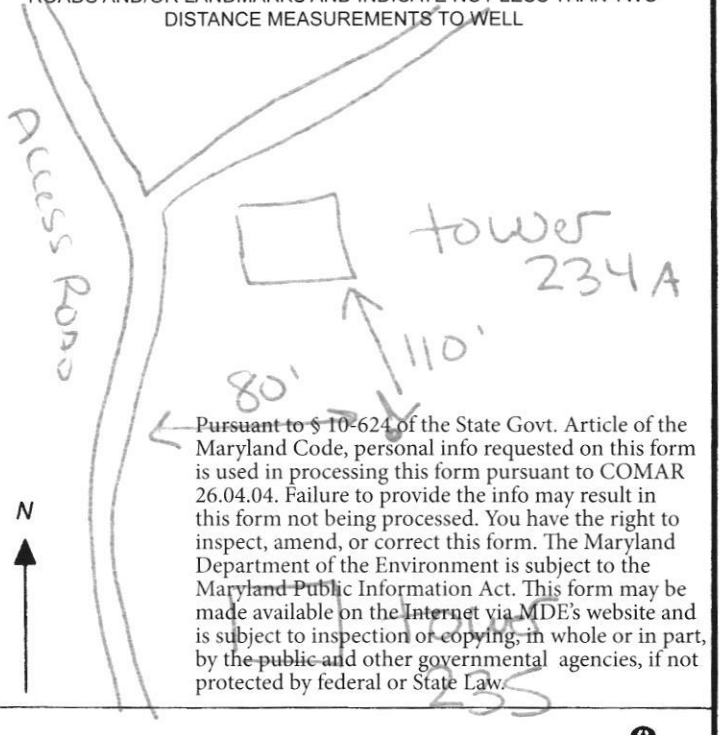
	BORED (or Augered)	JETTED	Jetted & DRIVEN
30	AIR-ROTary	AIR-PERcussion	ROTARY (Hydraulic Rotary)
37	CABLE	REVerse-ROTary	DRive-POINT
	other		

REPLACEMENT OR DEEPENED WELLS
(CIRCLE APPROPRIATE BOX)

- (N) THIS WELL WILL NOT REPLACE AN EXISTING WELL
- Y THIS WELL WILL REPLACE A WELL THAT WILL BE ABANDONED AND SEALED
- 39 S THIS WELL WILL REPLACE A WELL THAT WILL BE USED AS A STANDBY-CONTACT LOCAL APPROVING AUTHORITY FOR POLICY ON STANDBY WELLS
- D THIS WELL WILL DEEPEN AN EXISTING WELL

PERMIT NUMBER OF WELL TO BE REPLACED OR DEEPENED (IF AVAILABLE) 41 ___ ___ - ___ ___ - ___ ___ ___ ___ 52

PROPOSED LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURES SUCH AS BUILDINGS, SEPTIC SYSTEM, ROADS AND/OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCE MEASUREMENTS TO WELL



Pursuant to § 10-624 of the State Govt. Article of the Maryland Code, personal info requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or State Law.

Not to be filled in by driller (MDE OR COUNTY USE ONLY)

APPROP. PERMIT NUMBER _ _ _ _ _ G _ _ _

PERMIT No. HO - 20 - 0177 (70 71 72 73 74 75 76 77 78 79)

SPECIAL CONDITIONS
NOTE APPROVING AUTHORITIES SHOULD USE SEPARATE SHEET IF NEEDED

MDE/WMA/PER.071

② COUNTY

C 1 | 76312 | SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER

ST/CO USE ONLY DATE Received MM DD YY: 8 09 08 12 13

DATE WELL COMPLETED MM DD YY: 15 06 06 2022 20 (Approved 10/27/2022)

Depth of Well: 22 150 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL": 28 29 HO-20-0177 37

OWNER BGE (last name) (first name)

WELL SITE ADDRESS Baltimore National Pike TOWN Ellicott City

SUBDIVISION Chestnut Hill Slostation SECTION LOT Box 2

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Soil	0	5	
Brown Shale	5	52	
Med Gray Rock	52	150	
Hole Filled with Bentonite After Insertion of Ground Rod			

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes Y / no N

CIRCLE APPROPRIATE LETTER
- A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E ELECTRIC LOG OBTAINED
- P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: M D 355

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: WR D 113

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes Y 44 / no N 44

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT C M 45 46 BENTONITE CLAY B C 45 46

NO. OF BAGS 14 NO. OF POUNDS 700

GALLONS OF WATER 350

DEPTH OF GROUT SEAL (to nearest foot)

from 0 48 TOP 52 ft. to 150 54 BOTTOM 58 ft.

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

S T STEEL; C O CONCRETE; P L PLASTIC; O T OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
ST 60 61	6 63 64	55 66 70

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	depth (feet) to

SCREEN RECORD
screen type or open hole — insert appropriate code below

S T STEEL; B R BRASS BRONZE; H O OPEN HOLE; P L PLASTIC; O T OTHER

C 2 1 2 DEPTH (nearest ft.)

EACH SCREEN				
1	8 9	11 15	17 21	
2	23 24	26 30	32 36	
3	38 39	41 45	47 51	

SLOT SIZE 1 ____ 2 ____ 3 ____

DIAMETER OF SCREEN ____ 56 60 (NEAREST INCH)

from to

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 ____ 68

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T (E.R.O.S.) W Q

70 ____ TELESCOPE CASING; 72 ____ LOG INDICATOR; 74 75 76 OTHER DATA

C 3 PUMPING TEST
1 2

HOURS PUMPED (nearest hour) ____ 8 9

PUMPING RATE (gal. per min.) ____ 11 15

METHOD USED TO MEASURE PUMPING RATE ____

WATER LEVEL (distance from land surface)

BEFORE PUMPING ____ 17 20 ft.

WHEN PUMPING ____ 22 25 ft.

TYPE OF PUMP USED (for test)

A air 27; P piston 27; T turbine 27; C centrifugal 27; R rotary 27; O other (describe below) 27; J jet 27; S submersible 27

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES NO

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. ____ 29

CAPACITY: GALLONS PER MINUTE (to nearest gallon) ____ 31 35

PUMP HORSE POWER ____ 37 41

PUMP COLUMN LENGTH (nearest ft.) ____ 43 47

CASING HEIGHT (circle appropriate box and enter casing height)

+ 49 above; – 49 below LAND SURFACE

____ 50 51 (nearest foot)

LATITUDE 39.298932

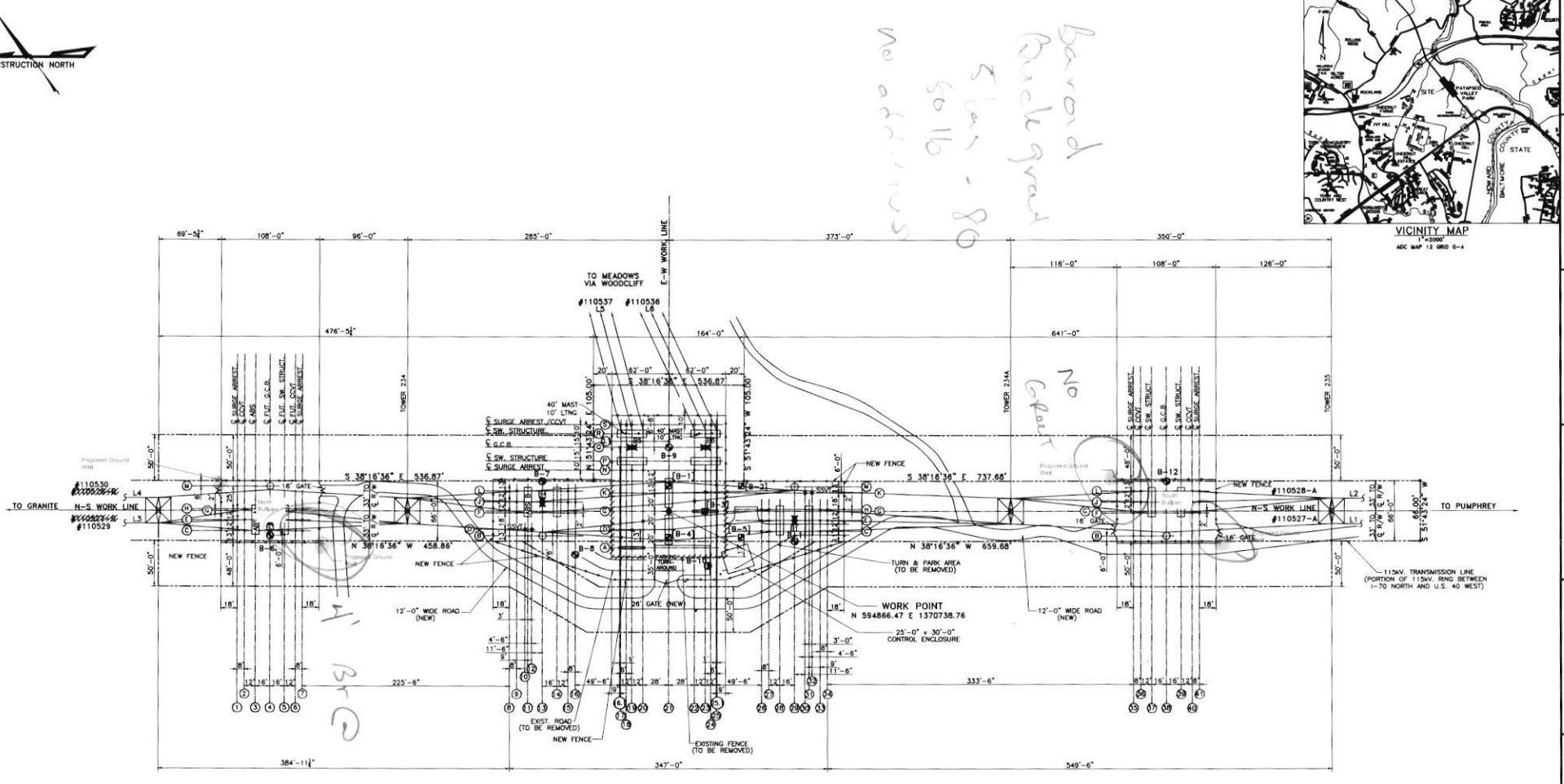
LONGITUDE 76.792477

(DEFAULT COORD. WGS 84)

Pursuant to §10-624 of the State Govt. Article of the Maryand Code personal info. requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info. may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the pulic and other governmental agencies, if not protected by federal or state law.

MDE/WMA/PER.071

COUNTY



NOTES:

1. ALL SOIL BORINGS ARE TO USE HOLLOW STEM, DRIVEN SPLIT SPOON PER ASTM D1586, AND IN ACCORDANCE WITH BGE SOIL BORING CONTRACT.
2. BEGIN BLOW COUNTS AT SURFACE.
3. DESCRIBE SOIL AT SURFACE AND AT EVERY CHANGE OF STRATA, IN ACCORDANCE TO THE UNIFIED CLASSIFICATION SYSTEM, ASTM D2488.
4. ⊕B-6 BORING TO BE TAKEN TO 35 FEET BELOW GRADE.
   ⊕B-10 BORING TO BE TAKEN TO 20 FEET BELOW GRADE.
   ⊠[B-1] BORING DATED 02AUG1968 BY AMERICAN TESTING.
5. IF SOUND ROCK IS ENCOUNTERED, CORE 5' INTO IT. WHERE A BOULDER, OR WEATHERED, FRACTURED ROCK IS ENCOUNTERED, CORE 15' INTO IT, BUT NOT TO A GREATER DEPTH THAN 20' BELOW GRADE.
6. BORING LOG SHOULD INDICATE SURFACE ELEVATION AT EACH BORING.
7. LOCATIONS OF BORINGS MAY BE SHIFTED TO AVOID OVERHEAD & UNDERGROUND OBSTRUCTIONS, OR EXISTING EQUIPMENT. CONTRACTOR TO SUBMIT AS-BUILTS OF RELOCATED BORINGS.
8. PERFORM POCKET PENTROMETER TEST ON COHESIVE SAMPLES AND RECORD THE COMPRESSIVE STRENGTH IN TONS/SQ. FT.
9. INDICATE WATER TABLE ELEVATION AT TIME OF BORING AND 24 HRS LATER.
10. INDICATE CAVE DEPTH OF BORING.
11. IF ANY UNUSUAL OR UNEXPECTED OCCURRENCES SHOULD ARISE, PLEASE NOTIFY THE CIVIL ENGINEER. (410-470-8739)
12. BORING HOLES AND GROUND DISTURBANCES SHALL BE BACKFILLED AND RETURNED TO ORIGINAL CONDITION.
13. SOIL BORING LOGS PROVIDED IN THE GEOTECHNICAL INVESTIGATION REPORT DATED JUNE 7, 2016 BY SCHNABEL ENGINEERING.

SOIL BORING DATA CHART

BORING LOCATION	EQUIPMENT & STRUCTURE DESCRIPTION	TOTAL UNIT WEIGHT	TRADITIONAL FOUNDATION TYPE	BORING DEPTH
B-1	SEE EDMS DESIGN DATA FOLDER / CHESTNUT HILL GEOTECHNICAL REPORT CGR-38-1001	N/A	N/A	20'-0"
B-2	SEE EDMS DESIGN DATA FOLDER / CHESTNUT HILL GEOTECHNICAL REPORT CGR-38-1001	N/A	N/A	21'-6"
B-3	SEE EDMS DESIGN DATA FOLDER / CHESTNUT HILL GEOTECHNICAL REPORT CGR-38-1001	N/A	N/A	21'-6"
B-4	SEE EDMS DESIGN DATA FOLDER / CHESTNUT HILL GEOTECHNICAL REPORT CGR-38-1001	N/A	N/A	21'-6"
B-5	SEE EDMS DESIGN DATA FOLDER / CHESTNUT HILL GEOTECHNICAL REPORT CGR-38-1001	N/A	N/A	21'-6"
B-6	NORTH BULLPEN AREA	N/A	DRILLED PIER	35'-0"
B-7	SUBSTATION YARD	N/A	DRILLED PIER	35'-0"
B-8	SUBSTATION YARD	N/A	DRILLED PIER	35'-0"
B-9	SUBSTATION YARD	N/A	DRILLED PIER	35'-0"
B-10	CONTROL ENCLOSURE	20,000#	SLAB	20'-0"
B-11	SUBSTATION YARD	N/A	DRILLED PIER	35'-0"
B-12	SOUTH BULLPEN AREA	N/A	DRILLED PIER	35'-0"

CAUTION:
UNDERGROUND OBSTRUCTIONS EXIST IN AREA....USE EXTREME CAUTION WHEN EXCAVATING IN GENERAL AREA. SEE REFERENCE DRAWING LIST THIS SHEET FOR ADDITIONAL DATA.

REFERENCE DRAWINGS:
599001E – CONSTRUCTION ONE LINE WIRING DIAGRAM
599002E – LOCATION PLAN AND ARRANGEMENT OF OVERHEAD LINES
599003E – GRADING PLAN, FENCE AND ROADWAY LAYOUT
599004E – GROUND WIRE SYSTEM CABLE PLAN AND LIGHTING
599005E – ARRANGEMENT OF EQUIPMENT PLAN AND SECTIONS
599777E – ARRANGEMENT OF EQUIPMENT PLAN
599778E – ARRANGEMENT OF EQUIPMENT SECTIONS
599779E – MATERIAL LIST
599980E – GROUND WIRE SYSTEM CABLE PLAN AND LIGHTING
599981E – FOUNDATION DETAILS AND DETAILS
601851E – FOUNDATION LOCATION PLAN
601852E – FOUNDATION LOCATION PLAN – NORTH BULLPEN
601853E – FOUNDATION LOCATION PLAN – SOUTH BULLPEN

AS-BUILT

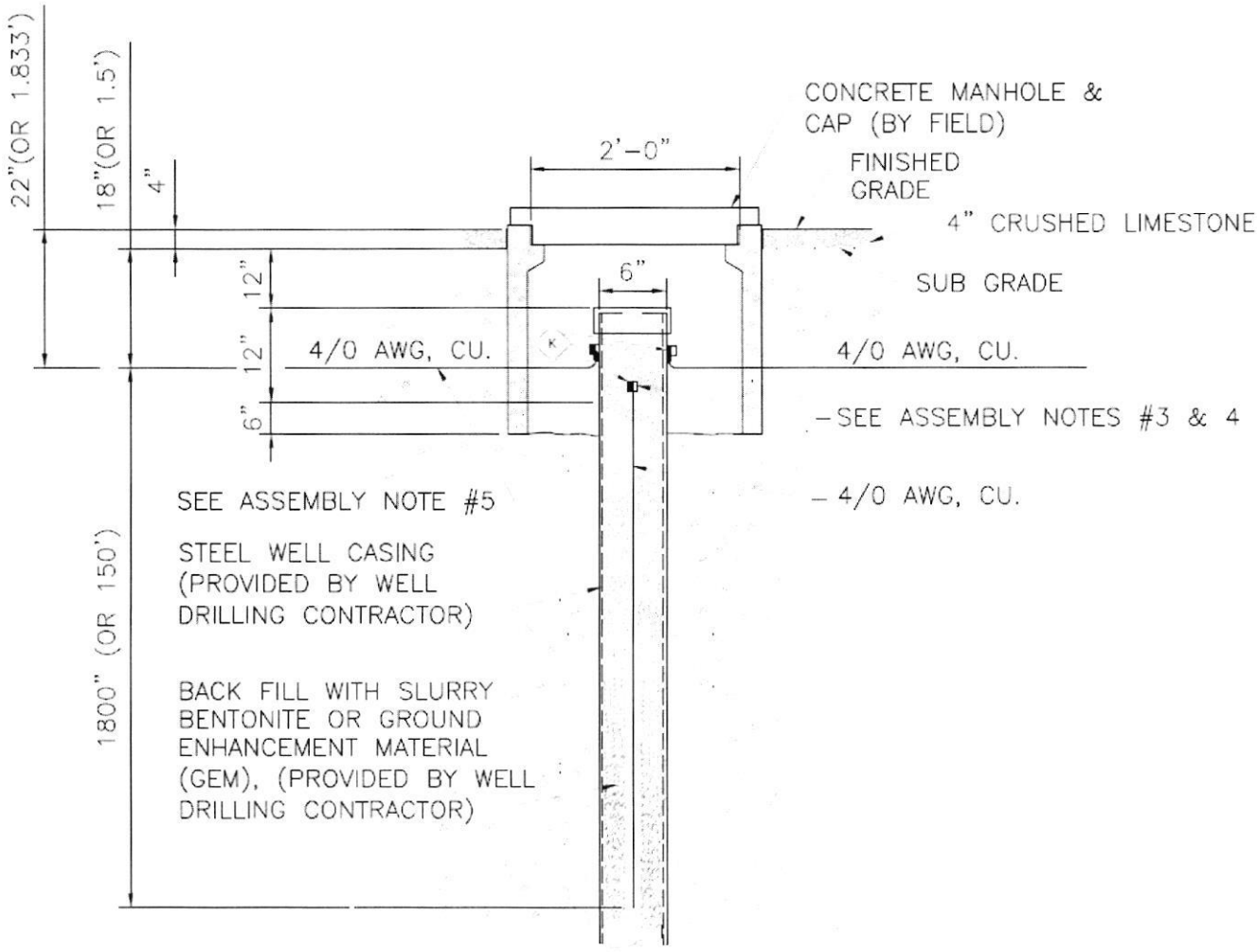
FULL SET OF AS-BUILT DRAWINGS (WITH OR WITHOUT CHANGES) MUST BE RETURNED TO SUBSTATION DESIGN AT THE LORD BALTIMORE BUILDING (LBB), 2nd FLOOR, WITHIN 30 DAYS AS REQUIRED BY CONTRACT & MANAGEMENT MODEL DOCUMENT AM-BE-P3061 FOR COMPLIANCE.

CHANGES REQUIRED: YES ☐ NO ☐
NAME(PRINT):
DATE:(mm/dd/yy)
COMPANY:
SIGNATURE: 40

REV.	DATE	ACCOUNT NO.	DESCRIPTION	APPROVED
A	17FEB2016	BGE01087	REVISION TO NOTES AND DETAILS. DES: CGS ENG: JMS CHK: JMS/DWH	DWH
B	29OCT2021	2598	INSTALL 115kV GCBs B1, B2, B5, B6 AND ASSOCIATED EQUIPMENT	DES: MBR, BV DRN: ZSJ, BV ENG: DWH, BV MNT: BC

AUTOCAD
ENGINEERING
CIVIL
ELEC.
PROJ. ENG.
PROJ. MGR.
PRIN. ENG.
SUPV. ENG.
DESIGN GROUP
DESIGNED
Drawn
CHECKED
APPROVED JSK
DATE 31.08.2020

SOIL BORING LOCATION PLAN
115kV OUTDOOR SWITCHING STATION
CHESTNUT HILL
ELECTRIC SUBSTATION ENGINEERING
BGE SCALE 1"=40' DWG NO. 59906E REV B


22"(OR 1.833')
18"(OR 1.5')
4"
12"
12"
6"
1800" (OR 150')
2'-0"
6"
CONCRETE MANHOLE & CAP (BY FIELD)
FINISHED GRADE
4" CRUSHED LIMESTONE
SUB GRADE
4/0 AWG, CU.
4/0 AWG, CU.
SEE ASSEMBLY NOTES #3 & 4
4/0 AWG, CU.
SEE ASSEMBLY NOTE #5
STEEL WELL CASING (PROVIDED BY WELL DRILLING CONTRACTOR)
BACK FILL WITH SLURRY BENTONITE OR GROUND ENHANCEMENT MATERIAL (GEM), (PROVIDED BY WELL DRILLING CONTRACTOR)