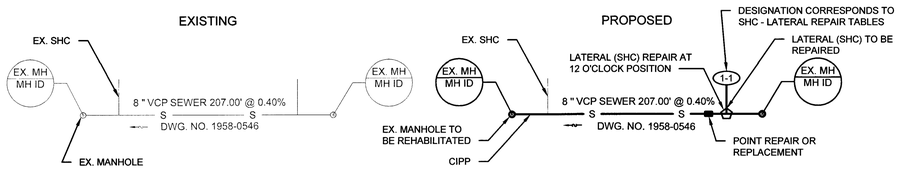
REDHOUSE RUN SEWERSHED
SANITARY SEWER STRUCTURAL REHABILITATION
PHASE I

ABBREVIATIONS

ACP	=	ASBESTOS CEMENT PIPE	EL	=	ELEVATION	REHAB	=	REHABILITATION
APPROX.	=	APPROXIMATE	EX	=	EXISTING	ROW, R/W	=	RIGHT OF WAY
B/W	=	BETWEEN	FM	=	FORCEMAIN	S, SAN	=	SANITARY
BGE	=	BALTIMORE GAS & ELECTRIC	FT	=	FOOT/FEET	STLP	=	STEEL PIPE
CCTV	=	CLOSED CIRCUIT TELEVISION	G	=	GAS	SD	=	STORM DRAIN
CI, CIP	=	CAST IRON PIPE	GIS	=	GEOGRAPHIC INFORMATION SYSTEM	SHA	=	STATE HIGHWAY ADMINSTRATION
CIPP	=	CURED IN PLACE PIPE	HORZ	=	HORIZONTAL	SHC	=	SANITARY HOUSE CONNECTION
CNL	=	COULD NOT LOCATE	INV	=	INVERT	SHCLS	=	SANITARY HOUSE CONNECTION LATERAL SEAL
CO	=	CLEANOUT	LH	=	LAMPHOLE	STA	=	STATION
CONC	=	CONCRETE	LOD	=	LIMITS OF DISTURBANCE	TYP.	=	TYPICAL
CONT	=	CONTINUATION	MH	=	MANHOLE	UNK	=	UNKNOWN
CP	=	CONCRETE PIPE	MTLP	=	METAL PIPE	USMH	=	UPSTREAM MANHOLE
CT	=	CLAY TILE	NO.	=	NUMBER	VCP	=	VITRIFIED CLAY PIPE
D	=	DRAINAGE	PP	=	POWER POLE	VERT	=	VERTICAL
DI, DIP	=	DUCTILE IRON PIPE	PVC	=	POLYVINYL CHLORIDE	W	=	WATER
DSMH	=	DOWNSTREAM MANHOLE	RCP	=	REINFORCED CONCRETE PIPE	WHC	=	WATER HOUSE CONNECTION
DWG. NO.	=	DRAWING NUMBER						

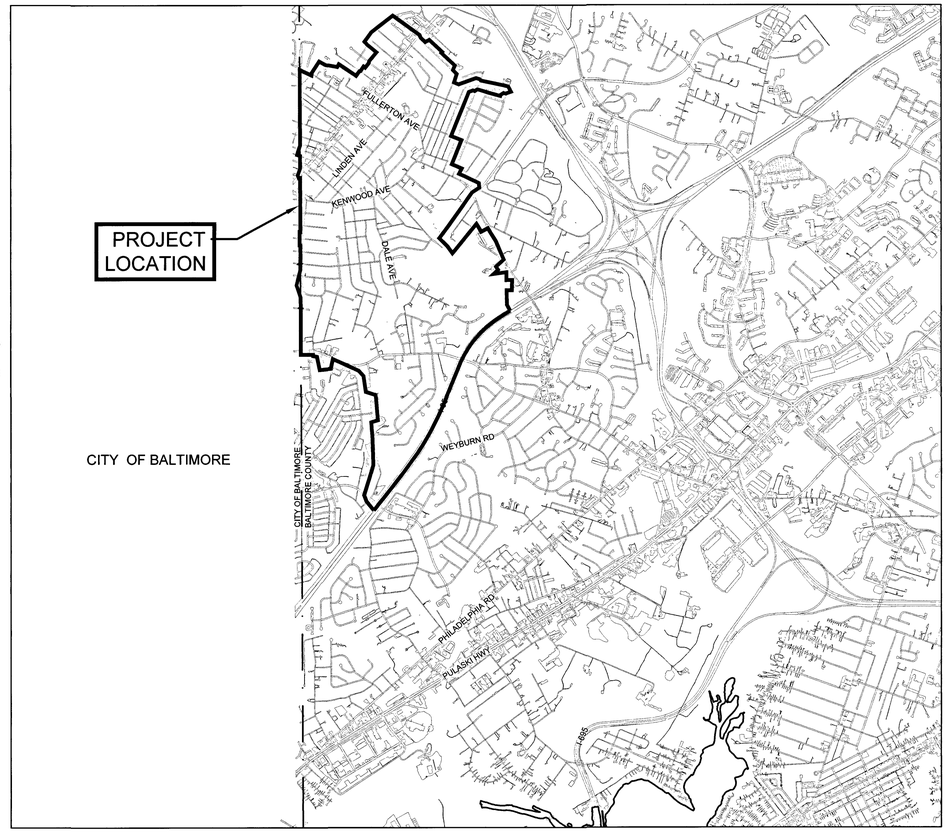
LEGEND



- ELECTRIC BOX/MANHOLE
- FIRE HYDRANT
- LIGHT POLE
- SANITARY SEWER CLEANOUT/LAMPHOLE
- SANITARY SEWER MANHOLE
- STORM DRAIN INLET
- STORM DRAIN MANHOLE
- STREET SIGN
- TRAFFIC SIGNAL POLE
- TREE
- UTILITY POLE
- WATER METER
- WATER REDUCER
- WATER VALVE
- FM — FORCE MAIN
- D — STORM DRAIN
- W — WATER
- G — GAS
- UE — UNDERGROUND ELECTRIC
- OE — OVERHEAD ELECTRIC
- PROPERTY LINE
- WATER FEATURE CENTERLINE/EDGE

S — S ASSETS TO BE REHABILITATED UNDER SEPARATE CONTRACT

JOB ORDER NO. 201-0077-7263
CONTRACT NO. 21002 SX0



VICINITY MAP
SCALE: 1" = 2000'

BALTIMORE COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

THE CONTRACTOR UNDERSTANDS THAT BALTIMORE COUNTY SHALL INCUR SIGNIFICANT AND SUBSTANTIAL STIPULATED PENALTIES PURSUANT TO A CONSENT DECREE ENTERED IN U.S. DISTRICT COURT FOR THE DISTRICT OF MARYLAND BY AND AMONG THE UNITED STATES OF AMERICA, THE STATE OF MARYLAND, AND BALTIMORE COUNTY. IN THE EVENT SEWAGE IS DISCHARGED ONTO THE GROUND OR INTO ANY STREAMS IN CONNECTION WITH THIS CONTRACT. ANY PENALTIES INCURRED BY THE COUNTY, ALONG WITH ANY AND ALL OTHER DAMAGES, COSTS AND EXPENSES OF THE COUNTY, SHALL BE THE LIABILITY AND OBLIGATION OF THE CONTRACTOR UNDER THIS CONTRACT.

NOTES:

1. SEE PLAN SHEET G-3 FOR GENERAL NOTES.
2. DRAWINGS BASED ON BALTIMORE COUNTY GIS DATA (COORDINATE SYSTEM NAD83). SEWER LATERALS AND POINT REPAIR LOCATIONS BASED ON CCTV INSPECTION.
3. THE CONTRACTOR SHALL ASSUME FULL PIPE FLOW CONDITIONS FOR BYPASS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCOMMODATING ALL FLOWS AS REQUIRED TO COMPLETE THEIR WORK.
4. **ALL LINING WORK SHOULD BE COMPLETED DURING DRY WEATHER DUE TO HIGH RATES OF INFLOW/INFILTRATION DURING WET WEATHER. NO LINING SHALL BE PERMITTED DURING RAIN EVENTS.**
5. THE CONTRACTOR SHALL PROVIDE APPROPRIATE TREE PROTECTION WHEN CONSTRUCTION ACTIVITIES ARE IN THE VICINITY OF STAND ALONE TREES OR FORESTED AREAS.

BGE FACILITIES:

THIS DOCUMENT INCLUDES INFORMATION AND DEPICTIONS OF BALTIMORE GAS AND ELECTRIC COMPANY'S ("BGE") ELECTRIC AND/OR GAS UTILITIES LOCATED WITHIN THE PROJECT AREA (THE "BGE UTILITY INFORMATION"). LOCATIONS, DIMENSIONS, DEPTHS, AND OTHER DETAILS OF ANY SUCH UTILITIES MAY NOT BE AS-BUILT, AND THE INFORMATION SHALL NOT BE RELIED UPON WITHOUT FIELD VERIFICATION. EXCAVATORS MUST EMPLOY SAFE DIGGING BEST PRACTICES WHEN APPROACHING BGE ELECTRIC AND GAS UTILITIES AND COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, INCLUDING, BUT NOT LIMITED TO, THE "MISS UTILITY LAW". NO REPRESENTATION, GUARANTEES, OR WARRANTIES, EXPRESS OR IMPLIED, ARE MADE BY BGE AS TO THE QUALITY, COMPLETENESS, OR ACCURACY OF THE BGE UTILITY INFORMATION, AND IN ACCEPTING THIS DOCUMENT THE RECIPIENT EXPRESSLY ACKNOWLEDGES AND AGREES THAT IT IS NOT RELYING ON THE ACCURACY OF THE SAME.

O'BRIEN & GERE ENGINEERS, INC
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

SHEET DESIGNATION	CONTRACT NUMBER
G-1	21002 SX0
	JOB ORDER NUMBER
	201-0077-7263
	SHEET 1 OF 70
	DRAWING NUMBER
	2020-1566
	FILE NO.: 5%

DWG. FILENAME: 65602-1001.dwg

I:\Baltimore-Co.15243\65602.Redhouse-Run-Se\Docs\DWG\Sheets\65602-1001.dwg

Jun 16, 2021 - 2:58pm

SEAL: STATE OF MARYLAND — JOSEPH P. CONTI — 55452 — PROFESSIONAL ENGINEER
DATE : 6-21-21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC. EXECUTIVE PLAZA III, SUITE 803 11350 McCORMICK RD. HUNT VALLEY, MD 21031 Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE
CONTRACT COMPLETION BOX		

P.W.A. NO.
R.O.W NO.

KEY SHEET: JNE NSE MSW

POSITION SHT: 13NE20, 14NE10-18, 15NE19-20, 18NE27-35, 17NE27-35, 18NE27-35, 19NE27-19, 20NE16-35, 21NE26-35, 22NE27-35, 23NE19-35, 24NE27-35, 25NE19-35, 26NE27-35, 26NE19-20, 26NE18-19

DRAWING SCALE: PLAN SCALE: AS SHOWN; PROFILE SCALE: N/A; N/A

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: DIRECTOR
DATE: 7/8/2021

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:					RLE		KR 22
DATE REVIEWED:					6/30/2021		7/1/2021

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: CHIEF
DATE: 7/1/2021

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION
REDHOUSE RUN SEWERSHED
SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I
COVER SHEET

SUBDIVISION: ROSEDALE
ELECTION DIST. NO.:14C6

INDEX OF DRAWINGS

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2	G-2	INDEX OF DRAWINGS
3	G-3	GENERAL NOTES
4	G-4	KEY SHEET
5	G-5	KEY SHEET
6	C-1	PLAN - GLADE AVE, DELIGHT AVE, BELAIR RD
7	C-2	PLAN - CARDWELL AVE, THORNCLIFF RD, BELAIR RD, MARION AVE
8	C-3	PLAN - LINHIGH AVE, LESLIE AVE
9	C-4	PLAN - ELINOR AVE
10	C-5	PLAN - BELHAVEN DR, BELAIR RD
11	C-6	PLAN - HENRY AVE, MARION AVE
12	C-7	PLAN - LESLIE AVE, LINHIGH AVE, HENRY AVE
13	C-8	PLAN - FULLERTON HEIGHTS AVE, VIRGINIA AVE, FULLERTON AVE, TAYLOR AVE
14	C-9	PLAN - FULLERTON AVE, BEECH AVE, CHERRY ST
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17	C-12	PLAN - KENWOOD AVE, TRUMPS MILL RD, LYNDALE AVE, MCCORMICK AVE
18	C-13	PLAN - TAYLOR AVE, FULLER AVE, W ELM AVE, MANOR AVE, HIGHVIEW AVE
19	C-14	PLAN - BELAIR RD, E ELM AVE, W ELM AVE, FULLER AVE, MANOR AVE
20	C-15	PLAN - WALNUT AVE, CHESLEY AVE, BELAIR RD, W OVERLEA AVE
21	C-16	PLAN - E OVERLEA AVE, WILLOW AVE, MADELINE AVE, LINDEN AVE, E ELM AVE
22	C-17	PLAN - BEECH AVE, WILLOWDALE AVE, E ELM AVE
23	C-18	PLAN - KENWOOD AVE, MCCORMICK AVE, GREENWOOD AVE, ELMONT AVE
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29	C-24	PLAN - KOLB AVE, KENWOOD AVE, BELMAR AVE, MANNINGTON AVE
30	C-25	PLAN - GLENMORE AVE, FOREST VIEW AVE, RASPE AVE
31	C-26	PLAN - OLD HOME RD, ELMWOOD RD, MARGLENN AVE, DANVILLE RD, FOREST VIEW AVE, RASPE AVE
32	C-27	PLAN - DALE AVE, BELINDA AVE, FOREST VIEW AVE, WALCOTT RD, RIDGEWAY AVE, ELMWOOD RD
33	C-28	PLAN - ST PATRICK RD, MAWANI RD
34	C-29	PLAN - SPRINGWOOD AVE, MANNINGTON AVE, SPRINGWOOD CT
35	C-30	PLAN - OLD HOME RD, MARGLENN AVE, CHARLES AVE
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41	C-36	PLAN - HAZELWOOD AVE, WESTWOOD AVE, SOUTHWOOD AVE, NORTH HAZELWOOD AVE
42	C-37	PLAN - MCCORMICK AVE, HAZELWOOD AVE
43	C-38	PLAN - HAZELWOOD AVE, DAYBREAK TER, COMSTOCK AVE, CANYON AVE
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70	D-6	TRAFFIC CONTROL PLAN FOR US-1 (BELAIR ROAD) SHEET NO. 6

Sep 14, 2021 - 9:18am

CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

DWG. FILENAME: 65602-1002.dwg

I:\Baltimore-Co.15243\65602 Redhouse-Run-Sel\Docs\DWG\Sheets\65602-1002.dwg

SEAL

STATE OF MARYLAND — JOSEPH T. PONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
			R.O.W NO.		

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE

PLAN SCALE: _____

PROFILE SCALE: _____

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR

DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF

DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

INDEX OF DRAWINGS

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
G-2	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 2 OF 70	
DRAWING NUMBER	
2020-1567	
FILE NO.:	5%

GENERAL NOTES

1. A CONSTRUCTION SCHEDULE SHALL BE SUBMITTED TO THE BUREAU OF ENGINEERING AND CONSTRUCTION, CONSTRUCTION CONTRACTS ADMINISTRATION DIVISION, AT THE TIME OF THE PRE-CONSTRUCTION CONFERENCE.

2. SUBMITTALS ON MATERIALS FOR THIS PROJECT SHALL BE APPROVED BY THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.

3. THE REHABILITATION WORK FOR THIS PROJECT SHALL BE COMPLETED AS IDENTIFIED IN THE CONTRACT DOCUMENTS (PLANS AND TECHNICAL SPECIFICATIONS) FOR THIS PROJECT.

4. CONTRACTOR SHALL HAVE A COMPLETE SET OF CONTRACT DOCUMENTS (PLANS AND SPECIFICATIONS) ON SITE AT ALL TIMES.

5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE BALTIMORE COUNTY STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, BALTIMORE COUNTY STANDARD DETAILS FOR CONSTRUCTION, PROJECT SPECIAL PROVISIONS, AND AMENDMENTS THERETO.

6. BASE MAPPING FOR THIS PROJECT WAS DEVELOPED USING BALTIMORE COUNTY GIS DATA (COORDINATE SYSTEM NAD83).

7. THE LOCATIONS OF THE UTILITIES SHOWN ON THESE DRAWINGS ARE FROM THE COUNTY'S GIS SYSTEM AND/OR THE BEST AVAILABLE INFORMATION OBTAINED AT THE TIME OF DESIGN. THIS INFORMATION IS NOT NECESSARILY COMPLETE, AND LOCATIONS OF THE UTILITIES SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY EXISTING CONDITIONS TO THEIR SATISFACTION PRIOR TO INITIATING ANY WORK ACTIVITIES. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING UTILITIES, STRUCTURES, OR OTHER FEATURES LOCATED NEAR WORK ACTIVITIES. DAMAGE TO EXISTING UTILITIES AS A RESULT OF CONTRACTOR WORK ACTIVITIES SHALL BE IMMEDIATELY REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

8. WHEN EXCAVATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-257-7777) A MINIMUM OF 72-HOURS PRIOR TO START OF EXCAVATION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TEST PITTING DETERMINED NECESSARY TO VERIFY THE SIZE, ELEVATION, LOCATION AND TYPE OF UTILITIES PRIOR TO PERFORMING ANY WORK THAT MAY IMPACT THESE UTILITIES. ANY UTILITY, WHETHER SHOWN OR NOT, THAT IS DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER. THE OWNER IS TO BE ADVISED IMMEDIATELY OF ANY DISCREPANCIES IDENTIFIED BETWEEN THE CONTRACT DOCUMENTS AND FIELD CONDITIONS. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT THE AUTHORIZATION OF THE OWNER, THE CONTRACTOR ASSUMES THE RESPONSIBILITY FOR SAID CORRECTIONS OR ADJUSTMENTS.

9. THE EXISTENCE AND SUBSEQUENT LOCATIONS OF UNDERGROUND UTILITIES (ELECTRIC, WATER, ETC.) ON PRIVATE PROPERTY OR OUTSIDE THE COUNTY'S R.O.W. IS UNKNOWN. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE EXISTING UTILITIES ON PRIVATE PROPERTIES (AS NECESSARY), DEPENDING ON THE LIMITS AND LOCATIONS OF WORK ACTIVITIES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGING THESE UTILITIES AND ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

10. THE CONTRACTOR IS ENCOURAGED TO MAKE AN ON-SITE INSPECTION OF THE AREAS REQUIRING REHABILITATION/REPLACEMENT AND ANY RELATED CONDITIONS THAT MAY IMPACT THEIR WORK, INCLUDING ACCESS REQUIREMENTS, PRIOR TO BIDDING THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS PROJECT MANAGER AT LEAST 24-HOURS PRIOR TO VISITING THE SITE FOR THIS INSPECTION. SUBMISSION OF A BID SHALL SERVE AS ACKNOWLEDGEMENT OF THE CONDITIONS REQUIRED TO COMPLETE THE WORK AND ACCURACY OF THE BID.

11. THE LOCATION OF FEATURES SHOWN ON THESE DRAWINGS ARE PROVIDED ONLY FOR THE CONVENIENCE OF THE CONTRACTOR, AND BALTIMORE COUNTY DOES NOT WARRANT AND/OR GUARANTEE THE ACCURACY OR COMPLETENESS OF THE INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY TO THEIR SATISFACTION THE WORK REQUIREMENTS ASSOCIATED WITH ALL LOCATIONS, INCLUDING DIMENSIONS OF ANY EXISTING UTILITIES, FEATURES AND/OR STRUCTURES RELATED TO PROJECT CONSTRUCTION PRIOR TO ORDERING MATERIALS OR COMMENCING WORK.

12. CONSTRUCTION ACTIVITIES ARE TO BE PERFORMED WITHIN ALL EASEMENTS AND RIGHTS-OF-WAY SHOWN ON THE DRAWINGS UNLESS OTHERWISE NOTED. WORK OUTSIDE OF EASEMENT/RIGHT-OF-WAY AREAS SHALL BE NEGOTIATED BY THE CONTRACTOR WITH THE RESPECTIVE PROPERTY OWNER OF THE RESPECTIVE PARCEL(S). THE CONTRACTOR IS ALSO RESPONSIBLE FOR COORDINATING ALL SITE ACCESS REQUIREMENTS, PERMITS, TEMPORARY SHUT-DOWNS, AND BYPASS ROUTING REQUIREMENTS WITH IMPACTED PROPERTY OWNERS AS NECESSARY TO COMPLETE THE WORK.

13. SEVERAL LOCATIONS ASSOCIATED WITH THE WORK REQUIRED OF THIS PROJECT MAY BE LOCATED ON PRIVATE PROPERTY AND REQUIRE TEMPORARY ACCESS TO COMPLETE THE WORK. THESE AREAS MAY BE PRIVATELY OWNED OR OWNED BY ORGANIZATIONS SUCH AS CSX, SHA, BGE, ETC. IN AREAS WHERE A PERMIT HAS NOT ALREADY BEEN OBTAINED IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE OWNERS AND DETERMINE ANY SPECIFIC ACCESS OR LAND USE REQUIREMENTS AS NEEDED TO COMPLETE THE WORK. ALL COSTS ASSOCIATED WITH LAND USE NOT COVERED BY PERMITS INCLUDED IN THE BID PACKAGE (INCLUDING BUT NOT LIMITED TO TRAINING REQUIREMENTS, PERMITS, INSTALLING ACCESS ROUTES SUITABLE FOR COMPLETION OF THE WORK, WORK SCHEDULES, SITE RESTORATION, ETC.) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTACT WITH PROPERTY OWNERS SHALL BE COMPLETED EARLY IN THE PROJECT SO AS NOT TO IMPACT THE COMPLETION OF THE WORK.

14. SOME OF THE MANHOLES AND SEWER SEGMENTS DO NOT HAVE ESTABLISHED ACCESS EASEMENTS/R.O.W.(S) AND VEHICLE ACCESS MAY NOT BE AVAILABLE. FOR THESE LOCATIONS, WALK-IN ACCESS MAY BE REQUIRED TO COMPLETE THE WORK. ULTIMATELY, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL ACCESS TO THE PROJECT ASSETS DESIGNATED FOR WORK UNDER THIS CONTRACT.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING SILT AND DEBRIS OUT OF THE STORM DRAINAGE SYSTEM, STREAMS, RIVERS, ETC. FOR THE DURATION OF THE PROJECT.

16. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING LANDSCAPING, ROADS, DRIVEWAYS, CULVERTS, DRAINAGE DITCHES, DRAIN FIELDS, UTILITIES, PIPES, STRUCTURES AND EQUIPMENT WHICH OCCURS BECAUSE OF PROJECT CONSTRUCTION. ANY ITEM DAMAGED BY WORK ACTIVITIES SHALL BE REPAIRED TO EITHER PRECONSTRUCTION CONDITION OR REPLACED IN KIND.

17. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS AND ALLEYS OF DUST AND TAKE WHATEVER MEASURES NECESSARY TO ENSURE THAT ALL ROADS ARE MAINTAINED IN A MUD AND DUST FREE CONDITION AT ALL TIMES. CONSTRUCTION ENTRANCES TO EASEMENTS MAY BE INSTALLED IF APPROVED BY THE ENGINEER AND SHALL BE PROVIDED AT NO ADDITIONAL COST. DIRT AND/OR MUD TRACKED ONTO ROADS SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR.

18. EXCAVATION ASSOCIATED WITH THIS SEWER REHABILITATION PROJECT IS INTENDED TO OCCUR ONLY WHERE SHOWN ON THESE PLANS. SHOULD THE CONTRACTOR'S INTENDED SEQUENCE OF CONSTRUCTION RELY ON ADDITIONAL EXCAVATION TO COMPLETE THE WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY ADDITIONAL PERMITS AND APPROVAL FROM THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ANY STIPULATIONS AND REQUIREMENTS IMPOSED FOR THIS CONSTRUCTION BY THE BALTIMORE COUNTY SOIL CONSERVATION DISTRICT (SCD) AND THE BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY (DEPS).

19. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST VERSION OF THE MARYLAND STATE HIGHWAY ADMINISTRATION'S (MSHA) BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES AND MSHA'S MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST EDITION.

20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO ALL MAINTENANCE OF TRAFFIC (MOT) REQUIREMENTS AND FOR OBTAINING ANY REQUIRED PERMITS NECESSARY TO COMPLETE THEIR WORK

21. EXISTING SEWER SERVICE SHALL BE MAINTAINED AT ALL TIMES DURING THE COURSE OF CONSTRUCTION. AT NO TIME WILL IT BE PERMITTED FOR SEWAGE TO BE DISCHARGED ONTO THE GROUND, INTO STREAMS, OR ANY AREAS OTHER THAN A SANITARY SEWER. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING BYPASS PUMPING PLANS FOR APPROVAL FROM THE BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY EQUIPMENT (PLUGGING, PUMPING, CONTAINMENT, ETC.) FOR BYPASSING ACTIVITIES NECESSARY FOR THIS PROJECT.

22. SHOULD ANY LIQUID OR SOLID MATTER FROM THE SEWER COLLECTION SYSTEM BE SPILLED, DISCHARGED, LEAKED OR OTHERWISE DEPOSITED TO THE OPEN ENVIRONMENT AS A RESULT OF THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEANUP AND DISINFECTION OF THE AFFECTED AREA AND ALL ASSOCIATED COSTS, INCLUDING ANY FINES OR PENALTIES RESULTING FROM THE DISCHARGE. THE CONTRACTOR ALSO SHALL BE RESPONSIBLE FOR NOTIFYING THE SEWER SYSTEM OPERATING PERSONNEL AND PERFORMING ALL REQUIRED CLEANUP OPERATIONS AT NO ADDITIONAL COST TO THE COUNTY. ANY SEWER SPILLS SHALL BE REPORTED WITHIN 24 HOURS TO THE BALTIMORE COUNTY BUREAU OF UTILITIES AT 410-887-7415 AND THE COUNTY'S INSPECTOR. THE CONTRACTOR MUST SUBMIT A COPY OF AN INCIDENT REPORT (SEE SPECIFICATIONS) TO THE PROJECT INSPECTOR WITHIN 24 HOURS OF EVENT.

23. CONTRACTOR SHALL NOTIFY BUSINESSES AND HOMEOWNERS 72-HOURS PRIOR TO ANY SERVICE INTERRUPTIONS. SERVICE INTERRUPTIONS SHALL BE KEPT TO A MINIMUM.

24. THE CONTRACTOR SHALL REPORT TO THE BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS PROJECT MANAGER, AND WHEN IN THE STATE HIGHWAY RIGHT OF WAY, THE STATE HIGHWAY PROJECT MANAGER, ALL INCIDENTS/COMPLAINTS FROM RESIDENTS REGARDING PROPERTY DAMAGE RESULTING FROM CONTRACTOR WORK OR ANY BACKUPS OF SEWAGE INTO DWELLING/BUSINESSES. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR MUST COMPLETE BASEMENT BACKUP INCIDENT REPORT (SEE SPECIFICATIONS) AND PROVIDE TO INSPECTOR WITHIN 24 HOURS.

25. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF EXCAVATIONS, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER. EXCAVATIONS WHICH ARE TO BE LEFT OPEN OVERNIGHT, OR WHEN THE CONTRACTOR'S FORCES ARE NOT PRESENT, SHALL BE APPROVED BY BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND SO PROTECTED OR ENCLOSED AND EFFECTIVELY MARKED TO PRESENT NO DANGER TO THE PUBLIC OR OTHER VISITORS TO THE AREA. EXCAVATIONS OCCURRING IN THE ROADWAY SHALL HAVE PLATES PLACED OVER THE EXCAVATED SITE WHEN THE CONTRACTOR IS NOT PRESENT. SILT FENCING SHALL BE PLACED ON THE DOWNHILL SIDE OF ANY AREA TO BE WORKED BY THE CONTRACTOR'S FORCES, AS MAY BE REQUIRED.

26. THE CONTRACTOR SHALL NOT PENETRATE, CONNECT, OR DEMOLISH ANY EXISTING SEWERS OR ASSOCIATED STRUCTURES WITHOUT PRIOR APPROVAL FROM THE BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS, AND THE STATE HIGHWAY ADMINISTRATION WHEN IN THE STATE HIGHWAY RIGHT OF WAY.

27. THE CONTRACTOR SHALL PERFORM ALL REQUIRED SEWER CLEANING AND CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION OF ALL PIPE SEGMENTS TO BE REPAIRED AS PART OF THIS PROJECT IN ADVANCE OF INITIATING CONSTRUCTION ACTIVITIES. SEWER CLEANING AND CCTV INSPECTIONS SHALL BE AS DESCRIBED IN THE CONTRACT SPECIFICATIONS TO DETERMINE/CONFIRM PIPE DIMENSIONS, ALIGNMENT, CONNECTION LOCATIONS, PIPELINE/CONNECTION CONDITIONS, AND ANY OTHER ABNORMALITIES OR CONDITIONS THAT WOULD AFFECT THE PROPOSED REPAIR/REHABILITATION/REPLACEMENT PROCESS. DAMAGE CAUSED BY THE CLEANING EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

28. THE CONTRACTOR SHALL TAKE NOTE OF THE DATE OF THE CCTV INSPECTION VIDEOS THAT WERE PROVIDED BY BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND UTILIZED TO MAKE SEWER REHABILITATION RECOMMENDATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING NEW PRE-CCTV INSPECTIONS AND DETERMINING IF ANY OF THE SEWER CONDITIONS HAVE SIGNIFICANTLY CHANGED SINCE THE CCTV INSPECTIONS WERE ORIGINALLY CONDUCTED THAT WOULD IMPACT THE WORK. ANY DIFFERING CONDITIONS SHOULD BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS ALONG WITH ALTERNATIVE REPAIR RECOMMENDATIONS SUBMITTED FOR CONSIDERATION.

29. IT IS THE INTENT OF THIS CONTRACT TO COMPLETE THE REHABILITATION/REPAIR WORK WITH MINIMAL EXCAVATION WHEREVER IS POSSIBLE. OPEN-CUT EXCAVATION POINT REPAIRS SHOULD ONLY BE MADE WHEN INDICATED ON THE CONTRACT DOCUMENTS OR WHEN APPROVED BY BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS, AND THE STATE HIGHWAY ADMINISTRATION, WHEN IN STATE HIGHWAY RIGHT OF WAY.

30. THE CONTRACTOR SHALL PROVIDE APPROPRIATE TREE PROTECTION WHEN CONSTRUCTION ACTIVITIES ARE IN THE VICINITY OF STAND ALONE TREES OR FORESTED AREAS.

31. THE LOCATION OF HOUSE CONNECTIONS SHOWN ON THE DRAWINGS ARE FOR INFORMATION ONLY. THE EXACT NUMBER AND LOCATION OF THE SANITARY HOUSE CONNECTIONS (SHCS) WILL NEED TO BE DETERMINED AS PART OF THE PRE-CCTV INSPECTIONS.

32. ALL LINING WORK SHOULD BE COMPLETED DURING DRY WEATHER DUE TO HIGH RATES OF INFLOW/INFILTRATION DURING WET WEATHER. NO LINING SHALL BE PERMITTED DURING RAIN EVENTS.

33. BGE FACILITIES: THIS DOCUMENT INCLUDES INFORMATION AND DEPICTIONS OF BALTIMORE GAS AND ELECTRIC COMPANY'S ("BGE") ELECTRIC AND/OR GAS UTILITIES LOCATED WITHIN THE PROJECT AREA (THE "BGE UTILITY INFORMATION"). LOCATIONS, DIMENSIONS, DEPTHS, AND OTHER DETAILS OF ANY SUCH UTILITIES MAY NOT BE AS-BUILT, AND THE INFORMATION SHALL NOT BE RELIED UPON WITHOUT FIELD VERIFICATION. EXCAVATORS MUST EMPLOY SAFE DIGGING BEST PRACTICES WHEN APPROACHING BGE ELECTRIC AND GAS UTILITIES AND COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, INCLUDING, BUT NOT LIMITED TO, THE "MISS UTILITY LAW." NO REPRESENTATION, GUARANTEES, OR WARRANTIES, EXPRESS OR IMPLIED, ARE MADE BY BGE AS TO THE QUALITY, COMPLETENESS, OR ACCURACY OF THE BGE UTILITY INFORMATION, AND IN ACCEPTING THIS DOCUMENT, THE RECIPIENT EXPRESSLY ACKNOWLEDGES AND AGREES THAT IT IS NOT RELYING ON THE ACCURACY OF THE SAME.

34. TEMPORARY ACCESS ROADS MAY INVOLVE TEMPORARY GRADING. ALL GRADING MUST BE RESTORED TO THE ORIGINAL CONDITION AT THE END OF THE PROJECT.

35. ALL EXCAVATED POINT REPAIRS AND SHC REPLACEMENTS SHALL BE COMPLETED PRIOR TO CIPP LINING WORK.

SPECIAL PROVISIONS FOR TRAFFIC CONTROL:

1. A MINIMUM SINGLE-LANE OF TRAFFIC IS REQUIRED TO BE MAINTAINED AT ALL TIMES ON ALL ROADWAYS. SINGLE-LANE OPERATIONS WILL ONLY BE ALLOWED BETWEEN THE HOURS OF 9:00 A.M. UNTIL 3:00 P.M. ON THE FOLLOWING STREETS: KENWOOD AVE., TAYLOR AVE., AND HAZELWOOD AVE.

2. AT THE END OF EACH WORKDAY, THE CONTRACTOR IS REQUIRED TO COMPLETE THE FOLLOWING:
   a. BACKFILL AND/OR PLATE OVER ALL OPEN EXCAVATIONS SO THAT TWO LANES OF TRAFFIC ARE MAINTAINED.
   b. REMOVE ALL EQUIPMENT AND MATERIAL FROM THE TRAVELED PORTION OF THE ROADWAY. ALSO, EQUIPMENT AND MATERIALS SHOULD NOT BE STORED IN SUCH A MANNER AS TO OBSTRUCT SIGHT DISTANCE AT ANY DRIVEWAY OR INTERSECTING ROAD.
   c. COVER OR REMOVE ALL SIGNS REFERRING TO A SINGLE-LANE OPERATION. ALSO, IT MAY BE NECESSARY FOR THE CONTRACTOR TO PROVIDE "STEEL PLATES AHEAD" SIGNS ON EACH APPROACH TO THE CONSTRUCTION AREA, IF APPROPRIATE, OR AS DIRECTED BY THE INSPECTOR FOR THE PROJECT.

3. ALL EXISTING DRIVEWAY ACCESS MUST BE MAINTAINED AT ALL TIMES.

4. THE CONTRACTOR IS TO BE RESPONSIBLE FOR THE FABRICATION, INSTALLATION AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES. SAID DEVICES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. ALSO, THE CONTRACTOR MAY BE REQUIRED TO FURNISH ADDITIONAL SIGNS SHOULD CONDITIONS WARRANT. REGARDING THE CONTROL OF TRAFFIC THROUGH WORK AREAS, PART 6 "TEMPORARY TRAFFIC CONTROL" OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) SHALL BE UTILIZED.

5. ONCE THE CONTRACTOR HAS RECEIVED THEIR NOTICE TO PROCEED, THE DIVISION OF TRAFFIC ENGINEERING WILL INVENTORY THE EXISTING PERMANENT TRAFFIC CONTROL DEVICES THROUGHOUT THE CONSTRUCTION AREA. SHOULD IT BE NECESSARY FOR ANY DEVICES TO BE REMOVED BY THE CONTRACTOR, HIS PERSONNEL, OR THEIR SUB-CONTRACTOR DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE STORAGE OF THESE DEVICES. SHOULD THEY BECOME DAMAGED, DEFACED, LOST, ETC., THE CONTRACTOR WILL BE BILLED FOR REPLACEMENT OF THESE PERMANENT DEVICES. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE RE-INSTALLATION OF ANY PERMANENT DEVICES REMOVED DURING CONSTRUCTION.

CONTRACT COMPLETION BOX

CONTRACTOR: ____________
DATE COMPLETED: ____________
INSPECTOR: ____________
PIPE MATERIAL (Pressure Only) ____________

DWG. FILENAME: 65602-1003.dwg

SEAL: STATE OF MARYLAND — JOSEPH R. CONTI — 55452 — PROFESSIONAL ENGINEER
DATE: 08/02/21

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. 55452, EXPIRATION DATE 12/23/21.

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	
						PLAN SCALE:	
			R.O.W NO.				
CONTRACT COMPLETION BOX						PROFILE SCALE:	
BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER

REVIEWED BY:
DATE REVIEWED:
SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566
BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

GENERAL NOTES

SUBDIVISION: ROSEDALE
ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
G-3	21002 SX0
	JOB ORDER NUMBER
	201-0077-7263
	SHEET 3 OF 70
	DRAWING NUMBER
	2020-1568
	FILE NO.:

BALTIMORE COUNTY MARYLAND

Sep 14, 2021 - 9:18am
I:\Baltimore-Co.15243\65602.Redhouse-Run-Se\Docs\DWG\Sheets\65602-1003.dwg

VICINITY MAP

SCALE: 1" = 500'

NAD 83

1"=500' 500 0 500 1000

Sep 14, 2021 - 9:19am

I:\Baltimore-Co.152436\65602 Redhouse-Run-Sel\Docs\DWG\Sheets\65602-1004.dwg

DWG. FILENAME: 65602-1004.dwg

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

SEAL

STATE OF MARYLAND — JOSEPH N. BONK — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:

O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

CONTRACT COMPLETION BOX

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	JNE NSE MSW	1NNE17-19, 2NNE16-20 2NNE18-20, 2SNE16-20 2SNE18-20, 2ANE17-21 2SNE16-20, 2NNE18-19

DRAWING SCALE

PLAN SCALE:

PROFILE SCALE:

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

KEY SHEET

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
G-4	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 4 OF 70	
DRAWING NUMBER	
2020-1569	
FILE NO.:	

VICINITY MAP

SCALE: 1" = 500'

1"=500' 500 0 500 1000

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1004.dwg

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SEAL

STATE OF MARYLAND JOSEPH R. CONTY 55452 PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:

O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE
			R.O.W NO.	JNE NSE	13NE18, 14NE18-19, 15NE18-20, 16NE17-20, 17NE17-20, 18NE17-20, 19NE17-19, 20NE16-19, 21NE16	PLAN SCALE:
CONTRACT COMPLETION BOX						PROFILE SCALE:

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER

REVIEWED BY:

DATE REVIEWED:

SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR

DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF

DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

KEY SHEET

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

SHEET DESIGNATION	CONTRACT NUMBER
G-5	21002 SX0
	JOB ORDER NUMBER
	201-0077-7263
	SHEET 5 OF 70
	DRAWING NUMBER
	2020-1570
	FILE NO.:

BALTIMORE COUNTY MARYLAND

Sep 14, 2021 - 9:20am

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2352	9.8	MANHOLE COATING - CEMENTITIOUS
2353	15.4	MANHOLE COATING - CEMENTITIOUS
2356	14.8	MANHOLE COATING - CEMENTITIOUS
2357	16.0	MANHOLE COATING - CEMENTITIOUS
2358	8.8	MANHOLE COATING - CEMENTITIOUS
2359	9.5	MANHOLE COATING - CEMENTITIOUS
2360	6.8	MANHOLE COATING - CEMENTITIOUS
2430	8.3	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2353	2352	8	339
2356	2352	8	264
2357	2356	8	408
2358	2353	8	200
2359	2358	8	188
2360	2359	8	277
2430	2357	8	286

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
1-1	2430	0+34	GROUT
1-2	2430	0+48	SHCLS
1-3	2430	2+09	SHCLS
1-4	2430	2+55	SHCLS
1-5	2357	0+34	SHCLS
1-6	2357	1+41	SHCLS
1-7	2357	3+32	SHCLS
1-8	2357	3+67	SHCLS
1-9	2357	3+88	SHCLS
1-10	2356	0+43	GROUT
1-11	2353	2+79	GROUT
1-12	2360	1+94	TRIM
1-13	2359	1+93	TRIM

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

2.) THE SEWER PIPE SIZES SHOWN ON THIS SHEET WERE TAKEN FROM BEST AVAILABLE INFORMATION. THIS INFORMATION MAY NOT BE ACCURATE. THE CONTRACTOR SHALL PHYSICALLY MEASURE ALL PIPE DIAMETERS, INSTALLATION LENGTHS AND VERIFY OTHER REQUIREMENTS THAT MAY IMPACT THEIR WORK PRIOR TO ORDERING MATERIALS, INSTALLING THE LINER OR SCHEDULING THEIR WORK.

3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

5.) ALL SHCS SHALL BE REINSTATED TO THE SEWER FOLLOWING THE CIPP LINING OPERATION EXCEPT SHCS CONFIRMED TO BE ABANDONED/CAPPED, OR UNLESS OTHERWISE DIRECTED BY THE COUNTY.

6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

Sep 14, 2021 - 9:21am

I:\Baltimore-Co.152436\5602.Redhouse-Run-Set\Docs\DWG\Sheets\65602-1101.dwg

CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

DWG. FILENAME: 65602-1101.dwg

SEAL

STATE OF MARYLAND — JOSEPH R. BRUNO — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:

O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				NSE	25NE18
			R.O.W NO.		25NE19
					26NE18
					26NE19
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – GLADE AVE, DELIGHT AVE, BELAIR RD

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-1	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 6 OF 70	
DRAWING NUMBER	
2020-1571	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2331	8.7	MANHOLE COATING - CEMENTITIOUS
2332	18.1	MANHOLE COATING - CEMENTITIOUS
2333	7.3	MANHOLE COATING - CEMENTITIOUS
2334	9.8	MANHOLE COATING - CEMENTITIOUS
2335	8.6	MANHOLE COATING - CEMENTITIOUS
2351	9.3	MANHOLE COATING - CEMENTITIOUS
6383	7.5	MANHOLE COATING - CEMENTITIOUS
6384	8.3	MANHOLE COATING - CEMENTITIOUS
6385	16.0	MANHOLE COATING - CEMENTITIOUS
6386	9.1	MANHOLE COATING - CEMENTITIOUS
22888	12.7	MANHOLE COATING - CEMENTITIOUS
22889	12.4	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2332	2331	18	355
2333	2332	18	381
2334	2333	18	290
2335	2334	18	255
2351	2335	8	327
2352	2351	8	253
6383	6384	8	345
6384	6385	8	323
6385	6386	8	297
22889	22888	8	67

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
2-1	2334	1+58	GROUT
2-2	2334	1+61	GROUT
2-3	2333	2+57	GROUT
2-4	6383	0+06	GROUT
2-5	6383	0+14	GROUT
2-6	6383	0+61	GROUT
2-7	6383	1+02	GROUT
2-8	6383	1+10	GROUT
2-9	6383	1+62	GROUT
2-10	6384	0+63	GROUT
2-11	6384	1+60	GROUT
2-12	6385	0+24	SHCLS
2-13	2352	0+31	TRIM
SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL			

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

2.) THE SEWER PIPE SIZES SHOWN ON THIS SHEET WERE TAKEN FROM BEST AVAILABLE INFORMATION. THIS INFORMATION MAY NOT BE ACCURATE. THE CONTRACTOR SHALL PHYSICALLY MEASURE ALL PIPE DIAMETERS, INSTALLATION LENGTHS AND VERIFY OTHER REQUIREMENTS THAT MAY IMPACT THEIR WORK PRIOR TO ORDERING MATERIALS, INSTALLING THE LINER OR SCHEDULING THEIR WORK.

3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

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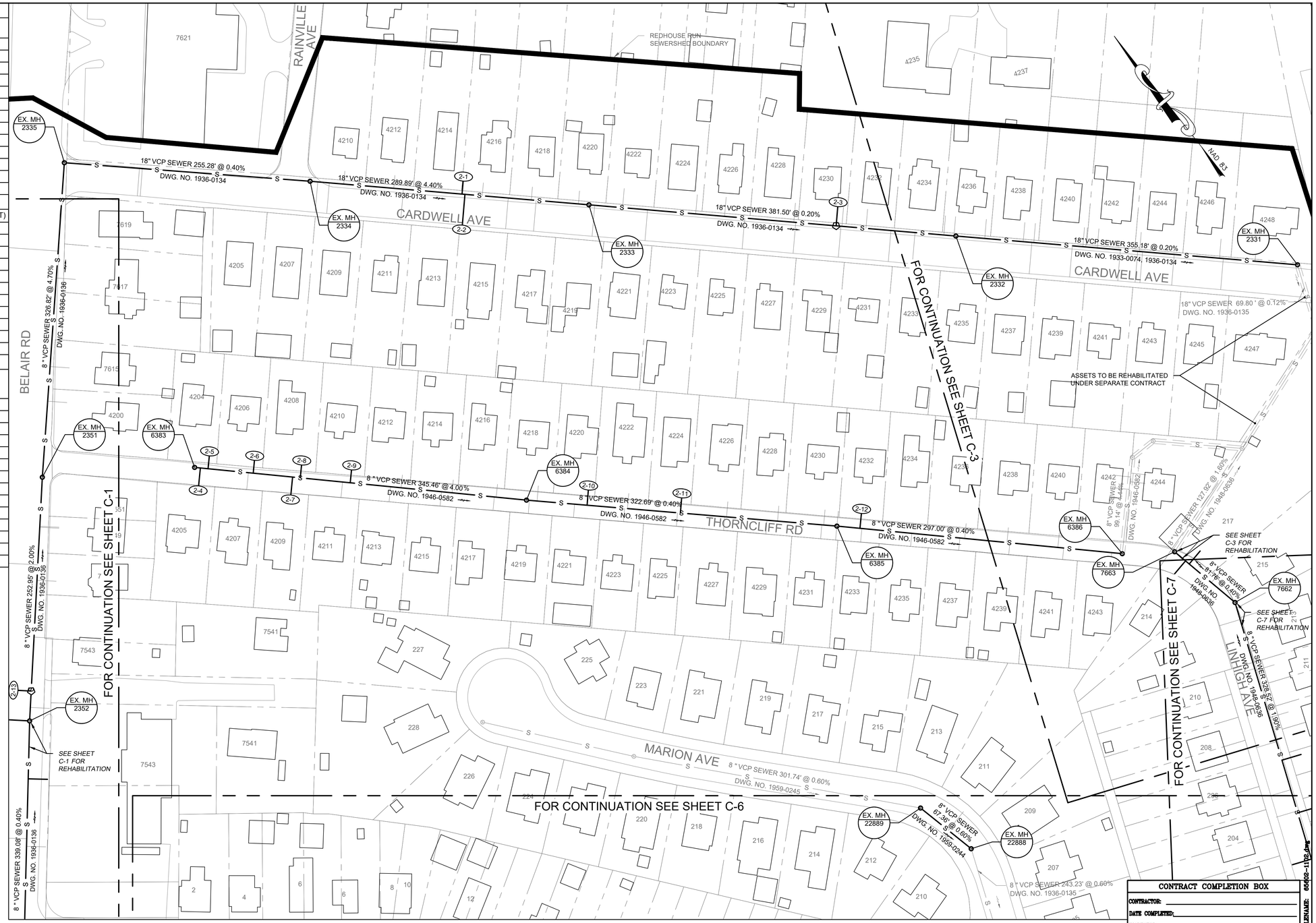

Sep 14, 2021 - 9:23am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1102.dwg

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1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — JOSEPH T. PIERCE — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	NSE	24NE19 24NE20 25NE19 25NE20 26NE19

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS	
APPROVED BY:	SEE SHEET 2020-1566 — DIRECTOR
DATE:	SEE SHEET 2020-1566
BUR. OF ENGINEERING & CONSTRUCTION	
APPROVED BY:	SEE SHEET 2020-1566 — CHIEF
DATE:	SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – CARDWELL AVE, THORNCLIFF RD, BELAIR RD, MARION AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-2	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 7 OF 70	
DRAWING NUMBER	
2020-1572	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2328	16.0	MANHOLE COATING - CEMENTITIOUS
2329	11.0	MANHOLE COATING - CEMENTITIOUS
7663	9.2	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2329	2328	18	233
7662	7663	8	82

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
3-1	7662	0+62	GROUT
3-2	7662	0+67	GROUT
SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL			

NOTES:

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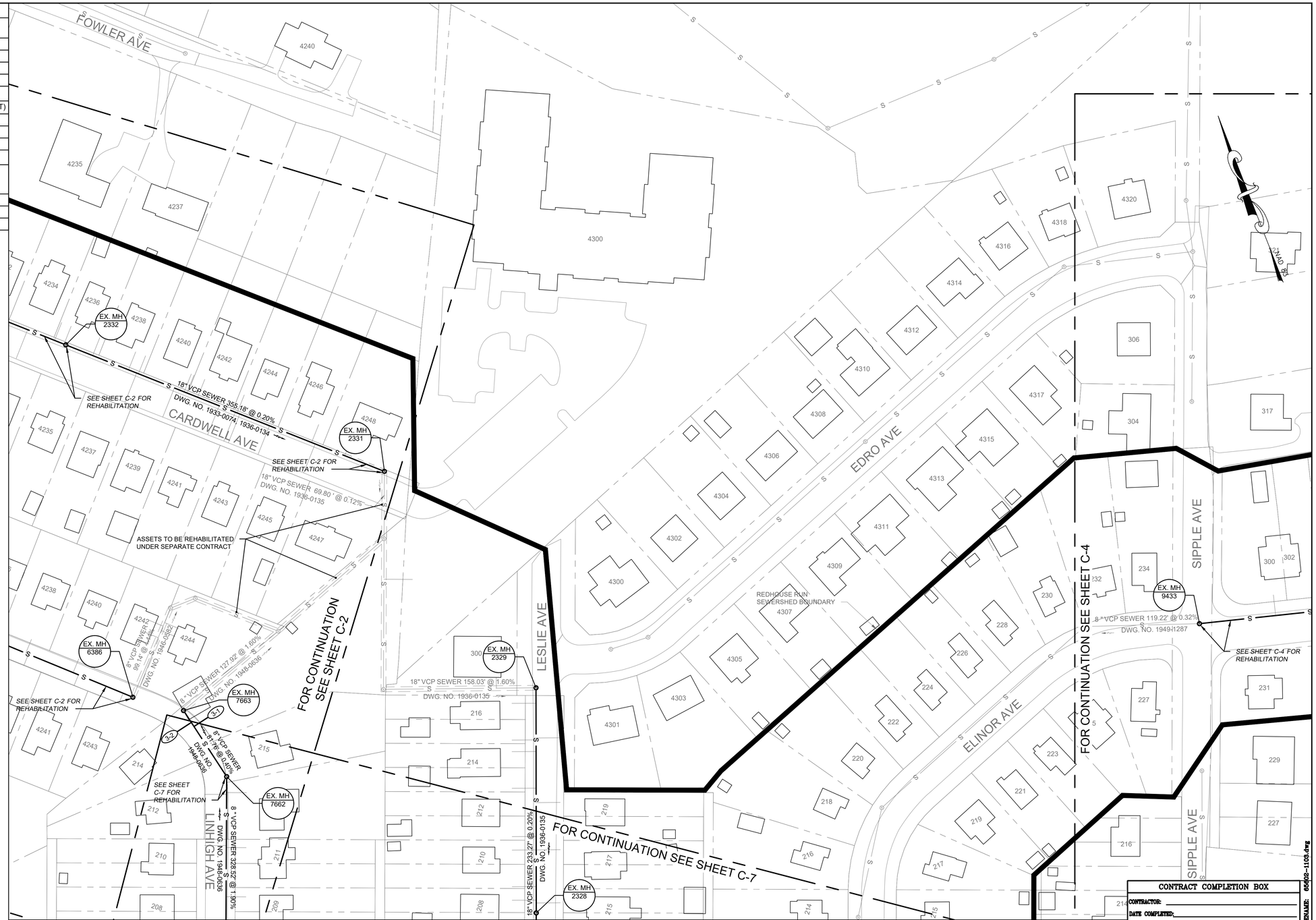

Sep 14, 2021 - 9:24am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1103.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — JOSEPH R. BIDEN III — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

R.O.W NO.

CONTRACT COMPLETION BOX

KEY SHEET	POSITION SHT
NSE	24NE19
	24NE20
	25NE19
	25NE20

DRAWING SCALE: PLAN SCALE: 1"=50' PROFILE SCALE:

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566
BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – LINHIGH AVE, LESLIE AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-3	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 8 OF 70	
DRAWING NUMBER	
2020-1573	
FILE NO.:	

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MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
9433	13.1	MANHOLE COATING - CEMENTITIOUS
16789	10.9	MANHOLE COATING - CEMENTITIOUS
16790	11.0	MANHOLE COATING - CEMENTITIOUS
16791	11.4	MANHOLE COATING - CEMENTITIOUS
16792	9.7	MANHOLE COATING - CEMENTITIOUS
16793	9.7	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
16789	9433	8	292
16790	16789	8	97
16791	16790	8	107
16792	16791	8	241
16793	16792	8	81

NOTES:

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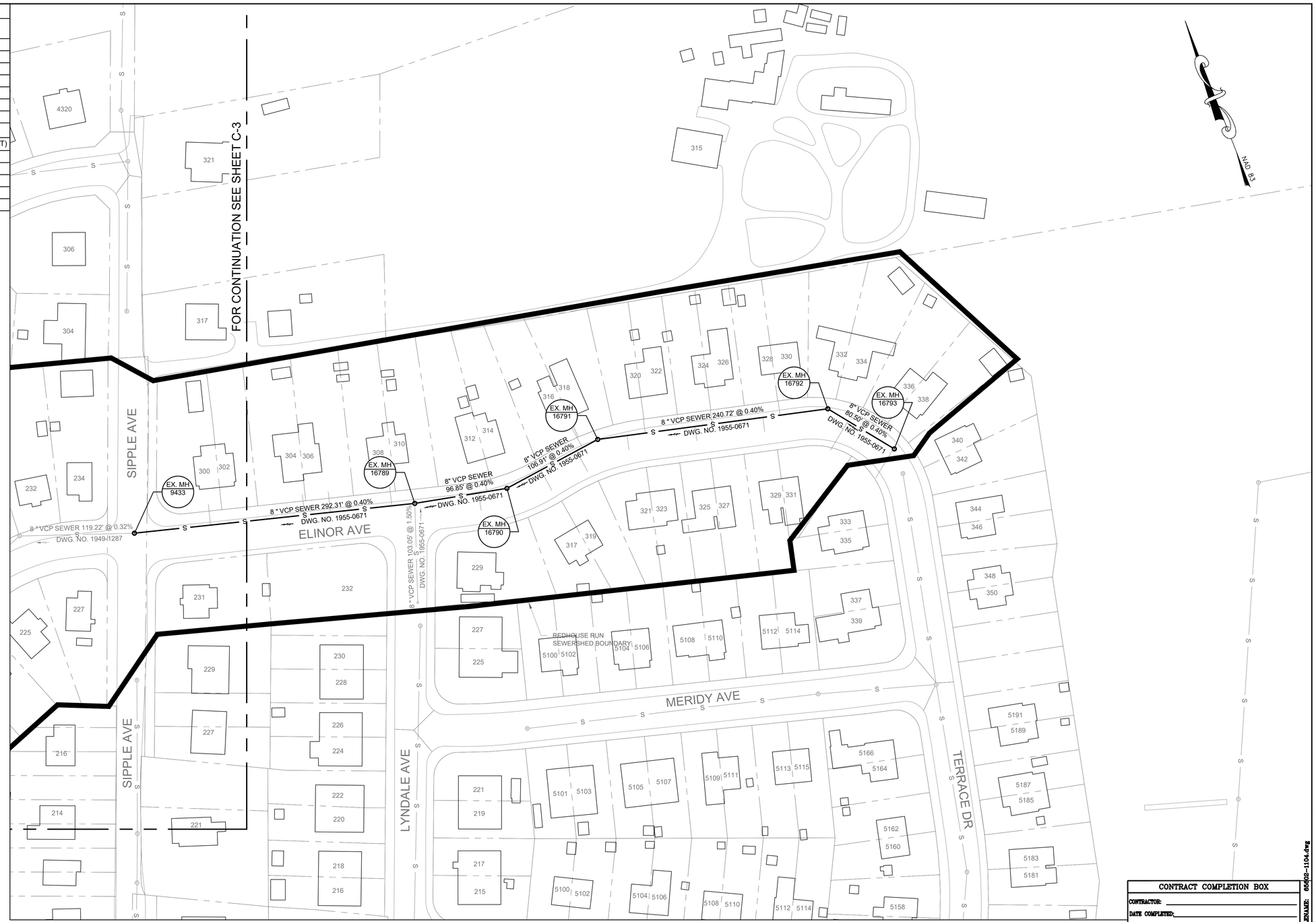

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1104.dwg

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Sep 14, 2021 - 9:25am

SEAL: STATE OF MARYLAND — JOSEPH C. TOMKO — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

CONTRACT COMPLETION BOX

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	MSW	23NE20 23NE21 24NE20 24NE21 25NE20

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE
PLAN SCALE: 1"=50'
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – ELINOR AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-4	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 9 OF 70	
DRAWING NUMBER	
2020-1574	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2354	13.3	MANHOLE COATING - CEMENTITIOUS
2355	11.4	MANHOLE COATING - CEMENTITIOUS
12083	8.4	MANHOLE COATING - CEMENTITIOUS
12084	7.8	MANHOLE COATING - CEMENTITIOUS
12194	11.3	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
^12083	12194	212	232	8	20

^ INDICATES CONTINGENT POINT REPAIR - CONTRACTOR TO CONFIRM WITH PRE-REHABILITATION CCTV PRIOR TO INITIATING REPAIR ACTIVITIES

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2354	2353	8	469
2355	12194	8	283
12083	12194	8	291
12084	12083	8	295
12194	2354	8	13

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
5-1	2354	3+71	GROUT
5-2	2354	1+81	TRIM
5-3	2354	1+20	GROUT
5-4	2354	0+36	GROUT
5-5	12084	2+51	GROUT
5-6	12083	1+89	TRIM

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

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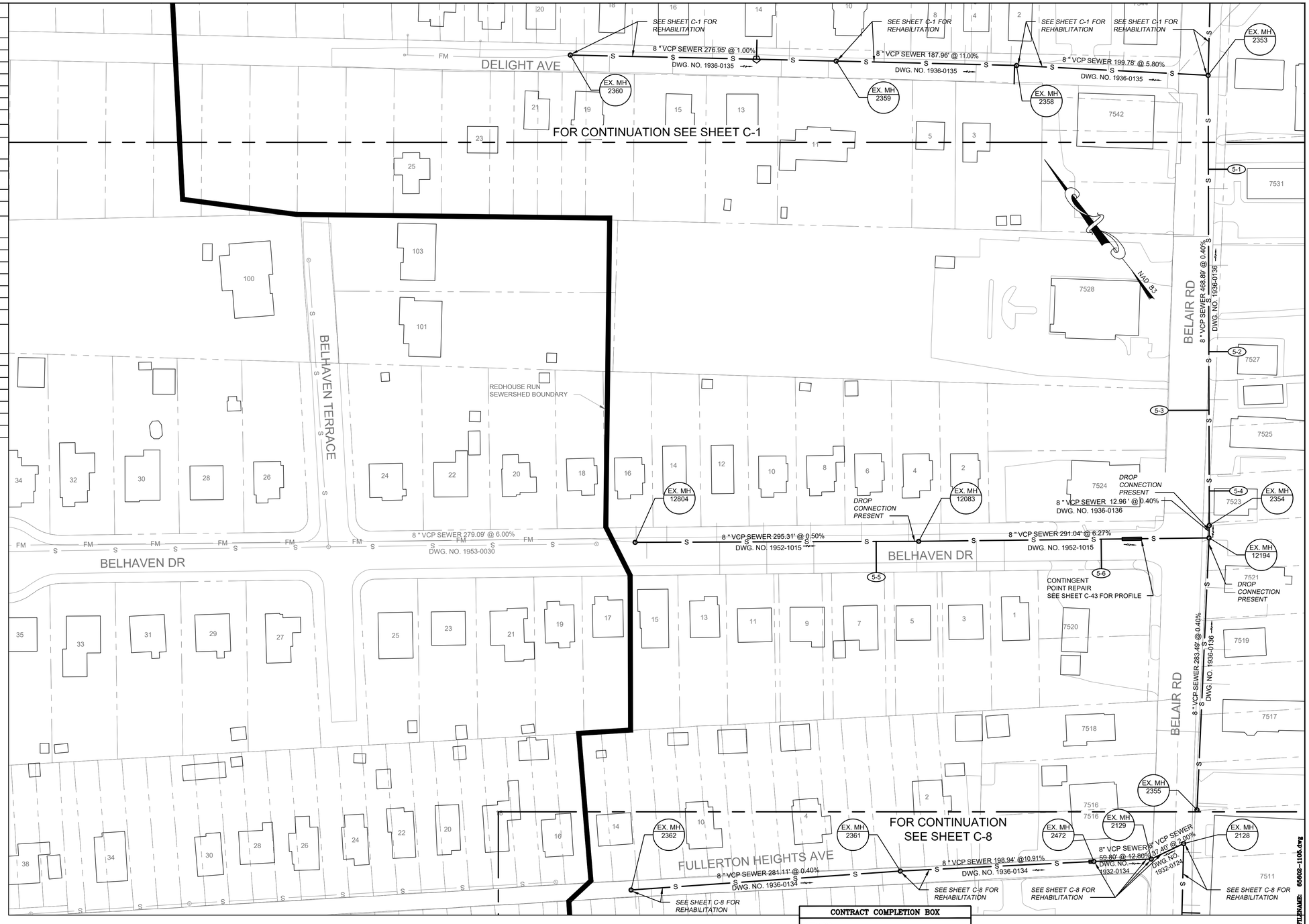

Sep 14, 2021 - 9:28am

DWG. FILENAME: 65602-1105.dwg

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CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — JOSEPH R. BONO — LICENSED PROFESSIONAL ENGINEER — 55452

DATE : 08/02/21

PROFESSIONAL CERTIFICATION

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LICENSE NO. 55452 EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				NSE	24NE18
			R.O.W NO.		25NE18
					25NE19
					26NE18
CONTRACT COMPLETION BOX					

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – BELHAVEN DR, BELAIR RD

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-5	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 10 OF 70	
DRAWING NUMBER	
2020-1575	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2346	12.8	MANHOLE COATING - CEMENTITIOUS
2347	11.0	MANHOLE COATING - CEMENTITIOUS
2348	7.4	MANHOLE COATING - CEMENTITIOUS
2349	10.0	MANHOLE COATING - CEMENTITIOUS
2350	8.5	MANHOLE COATING - CEMENTITIOUS
32785	9.0	MANHOLE COATING - CEMENTITIOUS
32786	8.0	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2347	2346	8	377
2348	2347	8	377
2349	32785	8	47
2350	2349	8	250
32785	2348	8	304
32786	32785	8	44

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
6-1	32785	0+48	TRIM
6-2	32785	0+82	TRIM
6-3	32785	1+06	TRIM
6-4	32785	1+72	TRIM
6-5	32785	2+06	TRIM
6-6	32785	2+81	SHCLS
6-7	2348	1+76	GROUT
6-8	2347	0+83	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

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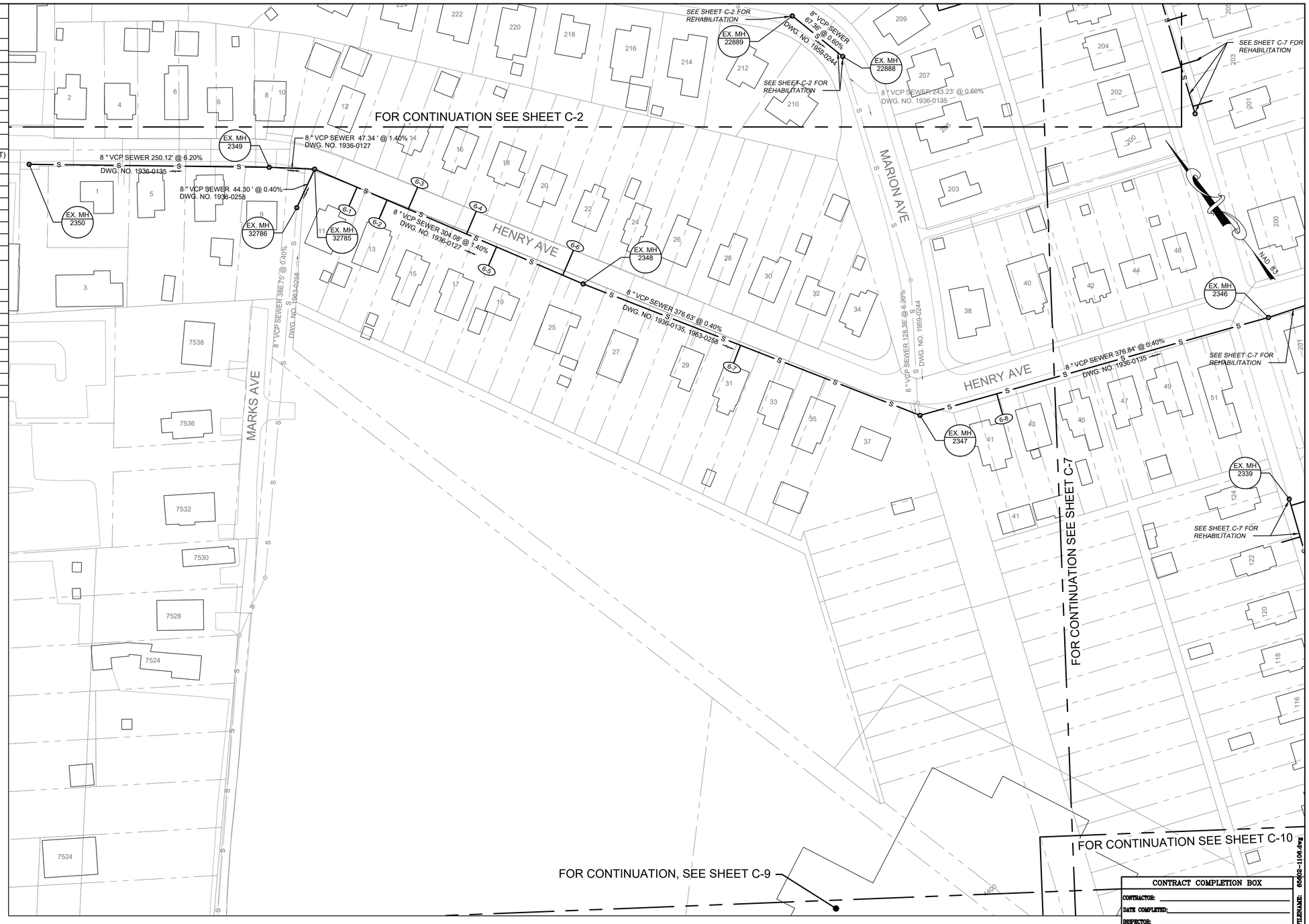

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1106.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — JOSEPH R. MONTY — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	NSE	23NE19 24NE18 24NE19 25NE18 25NE19

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE
PLAN SCALE: 1"=50'
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – HENRY AVE, MARION AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-6	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 11 OF 70	
DRAWING NUMBER	
2020-1576	
FILE NO.:	

BALTIMORE COUNTY MARYLAND

I:\Baltimore-Co.15243\65602.Redhouse-Run-Set\Docs\DWG\Sheets\65602-1106.dwg

Sep 14, 2021 - 9:23am

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2325	10.0	MANHOLE COATING - CEMENTITIOUS
2326	12.8	MANHOLE COATING - CEMENTITIOUS
2327	11.8	MANHOLE COATING - CEMENTITIOUS
2338	7.4	MANHOLE COATING - CEMENTITIOUS
2339	9.9	MANHOLE COATING - CEMENTITIOUS
7661	8.0	MANHOLE COATING - CEMENTITIOUS
7662	11.9	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2326	2325	18	444
2327	2326	18	425
2328	2327	18	406
2339	2338	8	426
2346	2327	8	308
7661	7662	8	329

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
7-1	2339	3+47	TRIM, GROUT
7-2	2339	2+70	GROUT
7-3	2339	0+97	TRIM, SHCLS
7-4	2339	0+41	TRIM, GROUT
7-5	2339	0+07	TRIM, SHCLS
7-6	7661	0+08	GROUT
7-7	7661	0+51	GROUT
7-8	7661	0+53	SHCLS
7-9	7661	1+01	GROUT
7-10	7661	1+58	GROUT
7-11	2326	4+10	TRIM, GROUT
7-12	2326	3+82	GROUT
7-13	2326	3+73	GROUT
7-14	2326	3+04	GROUT
7-15	2326	2+49	GROUT
7-16	2326	1+97	GROUT
7-17	2326	1+50	GROUT
7-18	2326	0+72	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

2.) THE SEWER PIPE SIZES SHOWN ON THIS SHEET WERE TAKEN FROM BEST AVAILABLE INFORMATION. THIS INFORMATION MAY NOT BE ACCURATE. THE CONTRACTOR SHALL PHYSICALLY MEASURE ALL PIPE DIAMETERS, INSTALLATION LENGTHS AND VERIFY OTHER REQUIREMENTS THAT MAY IMPACT THEIR WORK PRIOR TO ORDERING MATERIALS, INSTALLING THE LINER OR SCHEDULING THEIR WORK.

3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

5.) ALL SHCS SHALL BE REINSTATED TO THE SEWER FOLLOWING THE CIPP LINING OPERATION EXCEPT SHCS CONFIRMED TO BE ABANDONED/CAPPED, OR UNLESS OTHERWISE DIRECTED BY THE COUNTY.

6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

Sep 14, 2021 - 9:30am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1107.dwg

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1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND JOSEPH R. BONK 55452 PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 , EXPIRATION DATE 12/23/21

ENGINEER:

O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	NSE	23NE19 23NE20 24NE19 24NE20

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – LESLIE AVE, LINHIGH AVE, HENRY AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-7	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 12 OF 70	
DRAWING NUMBER	
2020-1577	
FILE NO.:	4%

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2124	9.8	MANHOLE COATING - CEMENTITIOUS
2125	8.3	MANHOLE COATING - CEMENTITIOUS
2126	8.3	MANHOLE COATING - CEMENTITIOUS
2127	14.8	MANHOLE COATING - CEMENTITIOUS
2128	7.8	MANHOLE COATING - CEMENTITIOUS
2129	6.7	MANHOLE COATING - CEMENTITIOUS
2130	7.0	MANHOLE COATING - CEMENTITIOUS
2131	7.6	MANHOLE COATING - CEMENTITIOUS
2132	7.6	MANHOLE COATING - CEMENTITIOUS
2133	6.6	MANHOLE COATING - CEMENTITIOUS
2134	12.6	MANHOLE COATING - CEMENTITIOUS
2343	8.7	MANHOLE COATING - CEMENTITIOUS
2344	9.5	MANHOLE COATING - CEMENTITIOUS
2345	8.5	MANHOLE COATING - CEMENTITIOUS
2361	6.7	MANHOLE COATING - CEMENTITIOUS
2362	6.0	MANHOLE COATING - CEMENTITIOUS
2472	9.0	MANHOLE COATING - CEMENTITIOUS
7607	9.4	MANHOLE COATING - CEMENTITIOUS
32789	7.0	MANHOLE COATING - CEMENTITIOUS
32790	8.3	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
2127	2126	59	71	8	12
2361	2472	196	199	8	3*

* POINT REPAIR INCLUDES DROP CONNECTION

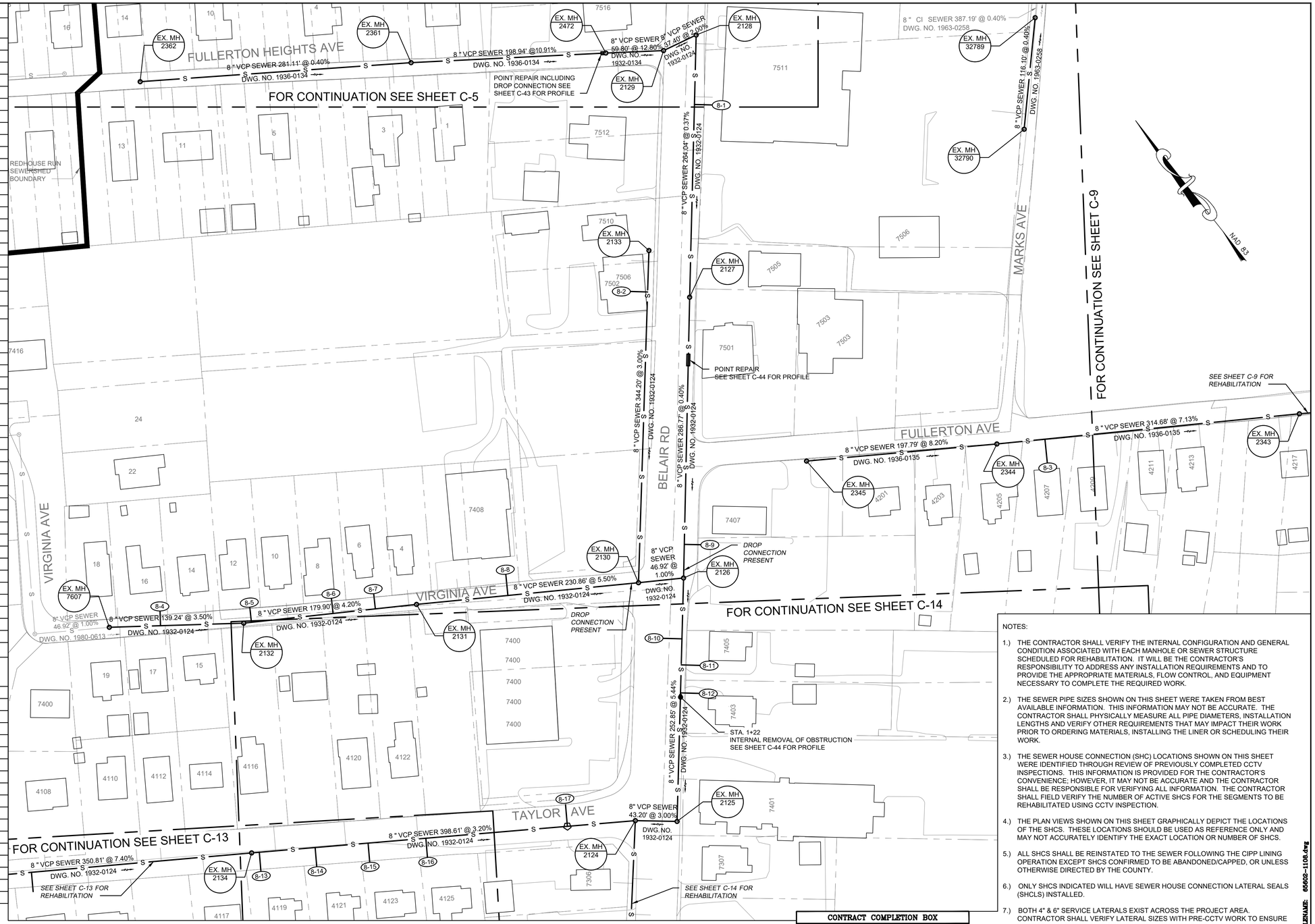
SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2125	2124	8	43
2126	2125	8	253
2127	2126	8	289
2128	2127	8	264
2129	2128	8	37
2130	2126	8	47
2131	2130	8	231
2132	2131	8	180
2133	2130	8	344
2134	2124	8	399
2344	2343	8	315
2345	2344	8	198
2361	2472	8	199
2362	2361	8	281
2472	2129	8	60
7607	2132	8	139
32790	32789	8	116

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
8-1	2128	0+72	SHCLS
8-2	2133	0+43	SHCLS
8-3	2344	0+50	GROUT
8-4	7607	0+53	SHCLS
8-5	2132	0+08	SHCLS
8-6	2132	0+93	GROUT
8-7	2132	1+37	SHCLS
8-8	2131	0+95	SHCLS
8-9	2127	2+56	SHCLS
8-10	2126	0+63	GROUT
8-11	2126	0+90	GROUT
8-12	2126	1+19	SHCLS
8-13	2134	0+08	TRIM, SHCLS
8-14	2134	0+66	TRIM, SHCLS
8-15	2134	1+21	TRIM, SHCLS
8-16	2134	1+81	TRIM, SHCLS
8-17	2134	3+28	TRIM

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL



NOTES:

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6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

1"=50' 50 0 50 100

CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

SEAL: STATE OF MARYLAND — JOSEPH P. KONTY — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER:

O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

CONTRACT COMPLETION BOX

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	NSE	23NE18 24NE17 24NE18 24NE19 25NE18

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR

DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF

DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – FULLERTON HEIGHTS AVE, VIRGINIA AVE, FULLERTON AVE, TAYLOR AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-8	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 13 OF 70	
DRAWING NUMBER	
2020-1578	
FILE NO.:	4%

DWG. FILENAME: 65602-1108.dwg

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Sep 14, 2021 - 9:31am

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2341	9.4	MANHOLE COATING - CEMENTITIOUS
2341M	8.7	MANHOLE COATING - CEMENTITIOUS
2342	6.7	MANHOLE COATING - CEMENTITIOUS
8383	10.0	MANHOLE COATING - CEMENTITIOUS
8756	8.5	MANHOLE COATING - CEMENTITIOUS
68653	7.3	MANHOLE COATING - CEMENTITIOUS
C162/XXXX	5.0	REPLACE EX. CLEANOUT WITH MANHOLE

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
^8383	68653	114	120	8	6

^ INDICATES CONTINGENT POINT REPAIR - CONTRACTOR TO CONFIRM WITH PRE-REHABILITATION CCTV PRIOR TO INITIATING REPAIR ACTIVITIES

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2341	2341M	8	276
2341M	2340	8	109
2342	2341	8	35
2343	2342	8	299
8383	68653	8	120
C162	8756	8	179

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
9-1	2341	0+03	GROUT
9-2	8383	0+80	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

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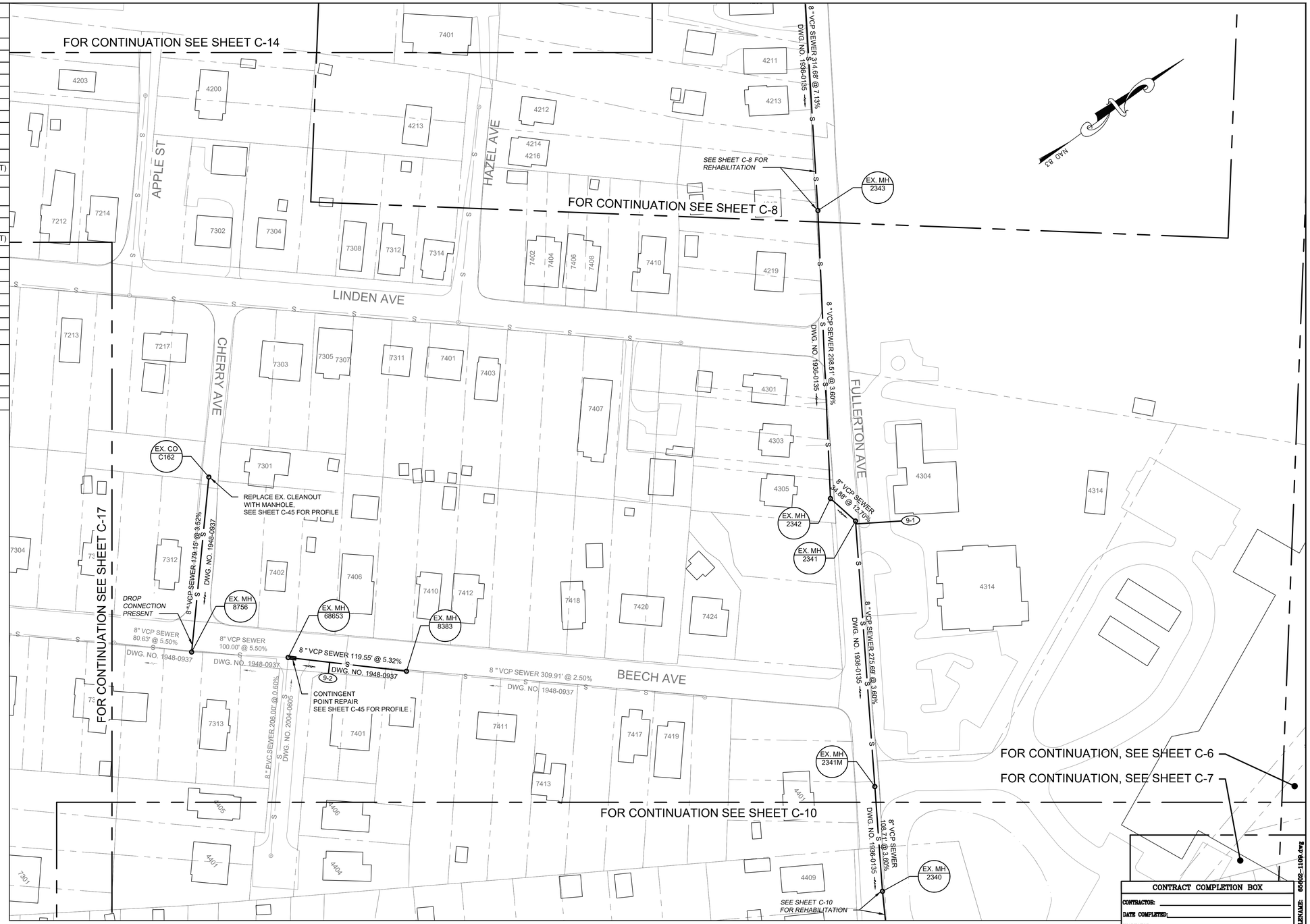

Sep 14, 2021 - 9:33am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-2-6019.dwg

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1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND JOSEPH R. BRIEN JR. 55452 PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				NSE	22NE18 23NE18 23NE19 24NE18 24NE19
			R.O.W NO.		
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – FULLERTON AVE, BEECH AVE, CHERRY ST

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C–9	21002 SX0
JOB ORDER NUMBER	
201–0077–7263	
SHEET 14 OF 70	
DRAWING NUMBER	
2020–1579	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2336	9.3	MANHOLE COATING - CEMENTITIOUS
2337	14.2	MANHOLE COATING - CEMENTITIOUS
2338M	10.7	MANHOLE COATING - CEMENTITIOUS
2340	8.6	MANHOLE COATING - CEMENTITIOUS
10192	8.2	MANHOLE COATING - CEMENTITIOUS
10193	8.6	MANHOLE COATING - CEMENTITIOUS
10196	8.9	MANHOLE COATING - CEMENTITIOUS
10197	8.3	MANHOLE COATING - CEMENTITIOUS
10198	6.5	MANHOLE COATING - CEMENTITIOUS
10877	7.4	MANHOLE COATING - CEMENTITIOUS
10878	5.8	MANHOLE COATING - CEMENTITIOUS
10879	9.7	MANHOLE COATING - CEMENTITIOUS
10880	9.1	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
10878	10877	45	54	8	9

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2325	2324	18	427
2336	2323	8	310
2338	2338M	8	263
2338M	2337	8	152
2340	10877	8	111
10193	10192	8	247
10197	10196	8	91
10198	10197	8	162
10877	2337	8	283
10878	10877	8	53
10879	10878	8	256
10880	10879	8	234

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
10-1	2340	0+32	TRIM, GROUT
10-2	2340	0+74	GROUT
10-3	10877	0+31	TRIM, SHCLS
10-4	10877	0+78	TRIM, SHCLS
10-5	10877	0+79	GROUT
10-6	10877	1+39	TRIM, SHCLS
10-7	10877	1+57	TRIM, SHCLS
10-8	10877	2+51	TRIM, SHCLS
10-9	2336	1+13	GROUT
10-10	2336	1+40	SHCLS

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

2.) THE SEWER PIPE SIZES SHOWN ON THIS SHEET WERE TAKEN FROM BEST AVAILABLE INFORMATION. THIS INFORMATION MAY NOT BE ACCURATE. THE CONTRACTOR SHALL PHYSICALLY MEASURE ALL PIPE DIAMETERS, INSTALLATION LENGTHS AND VERIFY OTHER REQUIREMENTS THAT MAY IMPACT THEIR WORK PRIOR TO ORDERING MATERIALS, INSTALLING THE LINER OR SCHEDULING THEIR WORK.

3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

5.) ALL SHCS SHALL BE REINSTATED TO THE SEWER FOLLOWING THE CIPP LINING OPERATION EXCEPT SHCS CONFIRMED TO BE ABANDONED/CAPPED, OR UNLESS OTHERWISE DIRECTED BY THE COUNTY.

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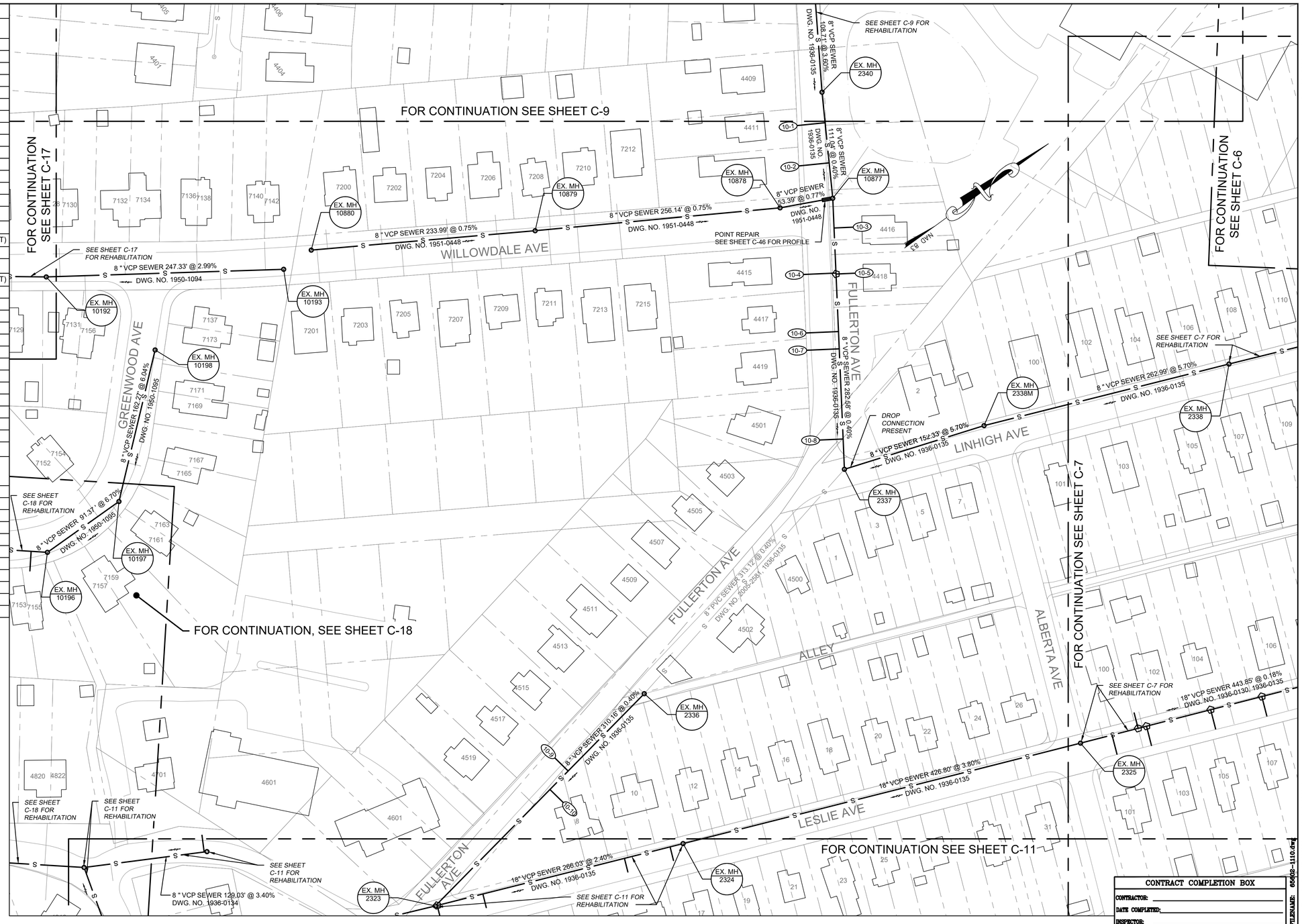
7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.



Sep 14, 2021 - 9:34am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1110.dwg

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SEAL

STATE OF MARYLAND — JOSEPH R. BOVY — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 , EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
			R.O.W NO.	NSE	22NE18 22NE19 23NE18 23NE19 24NE19
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS	
APPROVED BY:	SEE SHEET 2020-1566 DIRECTOR
DATE:	SEE SHEET 2020-1566
BUR. OF ENGINEERING & CONSTRUCTION	
APPROVED BY:	SEE SHEET 2020-1566 CHIEF
DATE:	SEE SHEET 2020-1566

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – WILLOWDALE AVE, FULLERTON AVE, GREENWOOD AVE, LINHIGH AVE, LESLIE AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-10	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 15 OF 70	
DRAWING NUMBER	
2020-1580	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2311	9.0	MANHOLE COATING - CEMENTITIOUS
2312	9.6	MANHOLE COATING - CEMENTITIOUS
2315	12.3	MANHOLE COATING - CEMENTITIOUS
2321	10.7	MANHOLE COATING - CEMENTITIOUS
2323	13.2	MANHOLE COATING - CEMENTITIOUS
2324	10.4	MANHOLE COATING - CEMENTITIOUS
3868	12.7	MANHOLE COATING - CEMENTITIOUS
3869	23.0	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2311	2310	8	129
2312	2310	18	125
2321	2315	8	380
2323	2312	18	332
2324	2323	18	266
3869	3868	8	381

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
11-1	2311	0+03	GROUT
11-2	2324	2+64	GROUT
11-3	2324	2+15	SHCLS
11-4	2324	0+63	GROUT
11-5	2324	0+14	SHCLS

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

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Sep 14, 2021 - 9:35am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1111.dwg

I:\Baltimore-Co.1524\365602.Redhouse-Run-Se\Docs\DWG\Sheets\65602-1111.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND JOSEPH R. BIANCHI 55452 PROFESSIONAL ENGINEER	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. 55452, EXPIRATION DATE 12/23/21				R.O.W NO.	NSE	21NE19 22NE19 22NE20 23NE19 23NE20	PLAN SCALE: 1"=50' PROFILE SCALE:	APPROVED BY: SEE SHEET 2020-1566 DIRECTOR DATE: SEE SHEET 2020-1566
DATE : 08/02/21	ENGINEER: O'BRIEN & GERE ENGINEERS, INC. EXECUTIVE PLAZA III, SUITE 803 11350 McCORMICK RD HUNT VALLEY, MD 21031 Phone: (443) 541-1300	CONTRACT COMPLETION BOX							
	DGN BY: CTP DWN BY: BNL CHKD BY: REB	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
		REVIEWED BY: DATE REVIEWED:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						BUR. OF ENGINEERING & CONSTRUCTION APPROVED BY: SEE SHEET 2020-1566 CHIEF DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – ELINOR AVE, SIPPLE AVE, LESLIE AVE, KENWOOD AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-11	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 16 OF 70	
DRAWING NUMBER	
2020-1581	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
XXXX	7.0	MANHOLE COATING - CEMENTITIOUS
2317	12.5	MANHOLE COATING - CEMENTITIOUS
2318	7.8	MANHOLE COATING - CEMENTITIOUS
2319	6.2	MANHOLE COATING - CEMENTITIOUS
2320	5.5	MANHOLE COATING - CEMENTITIOUS
36729	13.8	MANHOLE COATING - CEMENTITIOUS
39920	13.3	MANHOLE COATING - CEMENTITIOUS
39921	12.7	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
39921	39920	69	72	8	3

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2318	XXXX	12	50
XXXX	2317	12	262
2319	2318	12	254
2320	2317	8	288
39921	39920	8	159

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
12-1	2319	2+39	SHCLS
12-2	39921	0+56	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

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Sep 14, 2021 - 9:36am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1112.dwg

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SEAL

STATE OF MARYLAND — JOSEPH A. MONTY — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

CONTRACT COMPLETION BOX

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	NSE	21NE19
		21NE20
		22NE19
		22NE20

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – KENWOOD AVE, TRUMPS MILL RD, LYNDALE AVE, MCCORMICK AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-12	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 17 OF 70	
DRAWING NUMBER	
2020-1582	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1573	6.4	MANHOLE COATING - CEMENTITIOUS
1574	8.2	MANHOLE COATING - CEMENTITIOUS
1575	4.6	MANHOLE COATING - CEMENTITIOUS
1576	5.7	MANHOLE COATING - CEMENTITIOUS
1577	5.4	MANHOLE COATING - CEMENTITIOUS
1640	12.8	MANHOLE COATING - CEMENTITIOUS
2135	12.3	MANHOLE COATING - CEMENTITIOUS
2136	11.8	MANHOLE COATING - CEMENTITIOUS
2283	8.6	MANHOLE COATING - CEMENTITIOUS
3413	9.5	MANHOLE COATING - CEMENTITIOUS
3769	17.2	MANHOLE COATING - CEMENTITIOUS
3770	11.3	MANHOLE COATING - CEMENTITIOUS
7624	7.6	MANHOLE COATING - CEMENTITIOUS
14168	9.2	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1573	1572	8	379
1574	1573	8	376
1575	1574	8	257
1576	1575	8	155
1577	1575	8	372
1640	1574	8	463
2135	2134	8	351
2136	2135	8	283
2283	2136	8	228
3413	3412	8	404
3769	3413	8	280
3770	3769	8	335
7624	7623	8	358
14168	7624	8	276

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
13-1	2135	1+22	SHCLS
13-2	1577	0+02	SHCLS
13-3	1577	0+42	SHCLS
13-4	1575	1+44	SHCLS
13-5	1640	4+52	GROUT
13-6	1574	3+38	GROUT
13-7	1573	2+57	SHCLS
13-8	3770	1+19	SHCLS
13-9	3769	0+22	GROUT
13-10	3769	0+98	GROUT
13-11	3413	2+58	GROUT
13-12	3413	3+91	SHCLS

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

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CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND JOSEPH R. BONO No. 55452 PROFESSIONAL ENGINEER	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. 55452, EXPIRATION DATE 12/23/21				R.O.W NO.	NSE	23NE17 23NE18 24NE17 24NE18	PLAN SCALE: 1"=50' PROFILE SCALE:	APPROVED BY: SEE SHEET 2020-1566 DIRECTOR DATE: SEE SHEET 2020-1566
DATE: 08/02/21	ENGINEER: O'BRIEN & GERE ENGINEERS, INC. EXECUTIVE PLAZA III, SUITE 803 11350 McCORMICK RD HUNT VALLEY, MD 21031 Phone: (443) 541-1300	CONTRACT COMPLETION BOX				STORM DRAINS	SEWER	WATER	FIELD ENGINEER / BUR. OF ENGINEERING & CONSTRUCTION
	DGN BY: CTP DWN BY: BNL CHKD BY: REB	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES				APPROVED BY: SEE SHEET 2020-1566 CHIEF DATE: SEE SHEET 2020-1566
		REVIEWED BY: DATE REVIEWED:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – TAYLOR AVE, FULLER AVE, W ELM AVE, MANOR AVE, HIGHVIEW AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-13	21002 SX0
JOB ORDER NUMBER	201-0077-7263
SHEET 18 OF 70	
DRAWING NUMBER	2020-1583
FILE NO.:	5/6

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1571	12.2	MANHOLE COATING - CEMENTITIOUS
1572	8.7	MANHOLE COATING - CEMENTITIOUS
1644	13.7	MANHOLE COATING - CEMENTITIOUS
1645	17.6	MANHOLE COATING - CEMENTITIOUS
1707	17.0	MANHOLE COATING - CEMENTITIOUS
1708	9.7	MANHOLE COATING - CEMENTITIOUS
3412	11.6	MANHOLE COATING - CEMENTITIOUS
7623	7.1	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
^2124	1708	150	156	8	6
3412	1707	191	200	8	9*

* POINT REPAIR INCLUDES DROP CONNECTION
^INDICATES CONTINGENT POINT REPAIR - CONTRACTOR TO CONFIRM WITH PRE-REHABILITATION CCTV PRIOR TO INITIATING REPAIR ACTIVITIES

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1571	1645	8	104
1572	1571	8	122
1645	1644	12	341
1703	1707	10	164
1707	1645	12	174
1708	1571	8	301
2124	1708	8	311
3412	1707	8	200
7623	1708	8	209

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
14-1	1703	0+80	GROUT
14-2	1703	1+28	GROUT
14-3	1703	1+31	GROUT
14-4	1571	0+30	SHCLS
14-5	1708	2+61	TRIM, GROUT
14-6	1708	2+06	GROUT
14-7	1708	1+31	GROUT
14-8	1708	1+08	SHCLS
14-9	1708	0+11	SHCLS

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

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4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

5.) ALL SHCS SHALL BE REINSTATED TO THE SEWER FOLLOWING THE CIPP LINING OPERATION EXCEPT SHCS CONFIRMED TO BE ABANDONED/CAPPED, OR UNLESS OTHERWISE DIRECTED BY THE COUNTY.

6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1114.dwg

I:\Baltimore-Co.15243\65602.Redhouse-Run-Set\Docs\DWG\Sheets\65602-1114.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SHEET DESIGNATION	CONTRACT NUMBER
C-14	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 19 OF 70	
DRAWING NUMBER	
2020-1584	
FILE NO.:	

SEAL: STATE OF MARYLAND, JOSEPH A. MONTY, 35452, PROFESSIONAL ENGINEER
DATE : 08/02/21

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. 55452 , EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				NSE	22NE16
			R.O.W NO.		23NE17
					23NE18
					24NE17
					24NE18

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – BELAIR RD, E ELM AVE, W ELM AVE, FULLER AVE, MANOR AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1148	9.0	FRAME SEAL, MANHOLE COATING - CEMENTITIOUS
1149	7.0	MANHOLE COATING - CEMENTITIOUS
1495	8.5	MANHOLE COATING - CEMENTITIOUS
1496	9.3	MANHOLE COATING - CEMENTITIOUS
1698	5.0	MANHOLE COATING - CEMENTITIOUS
1699	5.4	MANHOLE COATING - CEMENTITIOUS
1700	12.3	MANHOLE COATING - CEMENTITIOUS
1701	10.6	MANHOLE COATING - CEMENTITIOUS
1702	11.8	MANHOLE COATING - CEMENTITIOUS
1703	14.3	MANHOLE COATING - CEMENTITIOUS
1704	13.0	MANHOLE COATING - CEMENTITIOUS
1705	8.6	MANHOLE COATING - CEMENTITIOUS
1706	6.3	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1149	1148	8	72
1495	1149	8	204
1496	1495	8	293
1698	1699	8	281
1699	1703	8	389
1700	1699	8	163
1701	1700	8	189
1702	1701	8	374
1704	1703	8	440
1705	1704	8	260
1706	1705	8	296

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
15-1	1705	1+73	TRIM, GROUT
15-2	1704	0+08	TRIM, GROUT
15-3	1704	0+39	TRIM, GROUT
15-4	1702	0+15	GROUT
15-5	1702	0+90	GROUT
15-6	1702	3+44	GROUT
15-7	1702	3+46	GROUT
15-8	1702	3+54	GROUT
15-9	1701	0+36	GROUT
15-10	1701	0+65	GROUT
15-11	1698	1+98	SHCLS
15-12	1496	0+33	GROUT
15-13	1496	2+30	GROUT
15-14	1495	0+39	GROUT
15-15	1495	0+49	GROUT
15-16	1495	0+91	GROUT
15-17	1495	1+29	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

2.) THE SEWER PIPE SIZES SHOWN ON THIS SHEET WERE TAKEN FROM BEST AVAILABLE INFORMATION. THIS INFORMATION MAY NOT BE ACCURATE. THE CONTRACTOR SHALL PHYSICALLY MEASURE ALL PIPE DIAMETERS, INSTALLATION LENGTHS AND VERIFY OTHER REQUIREMENTS THAT MAY IMPACT THEIR WORK PRIOR TO ORDERING MATERIALS, INSTALLING THE LINER OR SCHEDULING THEIR WORK.

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CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1115.dwg

I:\Baltimore-Co.15243\65602.Redhouse-Run-Set\Docs\DWG\Sheets\65602-1115.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — JOSEPH T. PONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

P.W.A. NO.	KEY SHEET	POSITION SHT
	NSE	22NE17
R.O.W NO.		23NE16
		23NE17

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE
PLAN SCALE: 1"=50'
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – WALNUT AVE, CHESLEY AVE, BELAIR RD, W OVERLEA AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-15	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 20 OF 70	
DRAWING NUMBER	
2020-1585	
FILE NO.:	

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
16-1	1493	0+06	GROUT
16-2	1494	1+31	GROUT
16-3	1494	1+02	GROUT
16-4	1494	0+67	GROUT
16-5	1494	0+50	GROUT
16-6	1697	0+48	GROUT
16-7	1697	2+71	GROUT
16-8	1697	3+53	GROUT
16-9	1695	0+07	GROUT
16-10	1695	0+36	SHCLS
16-11	1695	0+42	GROUT
16-12	1695	1+28	GROUT
16-13	1695	1+33	GROUT
16-14	1695	1+53	GROUT
16-15	1695	1+89	GROUT
16-16	1695	2+00	GROUT
16-17	1694	0+31	GROUT
16-18	1694	1+31	SHCLS
16-19	1694	1+84	GROUT
16-20	1694	2+10	GROUT
16-21	1644	1+49	GROUT
16-22	1644	1+65	GROUT
16-23	1644	1+98	SHCLS
16-24	1644	2+87	GROUT
16-25	1644	3+08	GROUT
16-26	1693	0+64	GROUT
16-27	1692	0+16	GROUT
16-28	1692	0+93	GROUT
16-29	1692	2+31	SHCLS
16-30	1692	2+74	SHCLS
16-31	1692	2+97	REPLACE
16-32	1692	3+30	GROUT
16-33	1691	0+41	GROUT
16-34	1691	1+00	GROUT
16-35	1690	1+32	SHCLS

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1493	7.7	MANHOLE COATING - CEMENTITIOUS
1494	9.6	MANHOLE COATING - CEMENTITIOUS
1642	14.8	MANHOLE COATING - CEMENTITIOUS
1690	8.1	MANHOLE COATING - CEMENTITIOUS
1691	10.8	MANHOLE COATING - CEMENTITIOUS
1692	10.5	MANHOLE COATING - CEMENTITIOUS
1693	10.2	MANHOLE COATING - CEMENTITIOUS
1694	10.3	MANHOLE COATING - CEMENTITIOUS
1695	8.4	MANHOLE COATING - CEMENTITIOUS
1696	12.2	MANHOLE COATING - CEMENTITIOUS
1697	11.0	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
1692	1691	293	299	8	6

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1493	1148	8	183
1494	1493	8	175
1644	1642	12	472
1690	1642	8	178
1691	1690	8	229
1692	1691	8	351
1693	1692	8	117
1694	1691	8	411
1695	1694	8	216
1696	1692	8	190
1697	1696	8	387

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

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CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

DWG. FILENAME: 65602-1116.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — JOSEPH R. NOLAN — 55452 — PROFESSIONAL ENGINEER

DATE: 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				NSE	21NE17
			R.O.W NO.		22NE17
					22NE18
					23NE17
					23NE18

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE: PLAN SCALE: 1"=50'; PROFILE SCALE: ____

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – E OVERLEA AVE, WILLOW AVE, MADELINE AVE, LINDEN AVE, E ELM AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-16	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 21 OF 70	
DRAWING NUMBER	
2020-1586	
FILE NO.:	

BALTIMORE COUNTY MARYLAND

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Sep 14, 2021 - 9:41am

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1636	8.9	MANHOLE COATING - CEMENTITIOUS
1641	7.3	MANHOLE COATING - CEMENTITIOUS
1687	10.4	MANHOLE COATING - CEMENTITIOUS
1688	8.4	MANHOLE COATING - CEMENTITIOUS
1689	8.6	MANHOLE COATING - CEMENTITIOUS
2989	10.0	MANHOLE COATING - CEMENTITIOUS
10189	7.0	MANHOLE COATING - CEMENTITIOUS
10190	8.6	MANHOLE COATING - CEMENTITIOUS
10191	8.1	MANHOLE COATING - CEMENTITIOUS
54212	8.4	MANHOLE COATING - CEMENTITIOUS
54214	8.2	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1642	1641	12	293
1688	1687	8	315
1689	1688	8	349
2989	54214	8	248
10189	1636	8	64
10190	10189	8	288
10191	10190	8	201
10192	10191	8	201
54212	1636	12	7

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
17-1	1642	0+63	GROUT
17-2	1642	0+92	GROUT
17-3	1642	1+01	GROUT
17-4	1642	1+21	GROUT
17-5	1642	1+46	GROUT
17-6	1642	1+53	GROUT
17-7	1642	2+34	GROUT
17-8	1689	0+56	GROUT
17-9	1689	0+59	SHCLS
17-10	1689	0+68	GROUT
17-11	1689	1+10	GROUT
17-12	1689	1+18	GROUT
17-13	1689	1+47	GROUT
17-14	1689	2+95	GROUT
17-15	1688	0+61	GROUT
17-16	1688	1+41	SHCLS
17-17	1688	2+74	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

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6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

Sep 14, 2021 - 9:42am

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DWG. FILENAME: 65602-1117.dwg

CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — JOSEPH M. CUNNY — No. 55452 — PROFESSIONAL ENGINEER

DATE: 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
			R.O.W NO.	NSE	21NE18 22NE18 22NE19 23NE18

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR

DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF

DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – BEECH AVE, WILLOWDALE AVE, E ELM AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-17	21002 SX0
JOB ORDER NUMBER	201-0077-7263
SHEET 22 OF 70	
DRAWING NUMBER	2020-1587
FILE NO.:	47

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2300	11.0	MANHOLE COATING - CEMENTITIOUS
2301	7.2	MANHOLE COATING - CEMENTITIOUS
2304	12.9	MANHOLE COATING - CEMENTITIOUS
2305	11.8	MANHOLE COATING - CEMENTITIOUS
2306	9.8	MANHOLE COATING - CEMENTITIOUS
2309	9.4	MANHOLE COATING - CEMENTITIOUS
2310	8.6	MANHOLE COATING - CEMENTITIOUS
10194	7.8	MANHOLE COATING - CEMENTITIOUS
10195	10.3	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2301	2300	8	360
2302	2301	8	334
2304	2300	18	142
2305	2304	18	225
2306	2305	8	392
2307	2306	8	396
2309	2305	18	288
2310	2309	18	166
10195	10194	8	405
10196	10195	8	326

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
18-1	10196	0+17	SHCLS
18-2	10195	1+41	GROUT
18-3	10195	2+53	GROUT
18-4	10195	2+82	GROUT
18-5	2310	0+95	GROUT
18-6	2309	0+13	GROUT
18-7	2309	0+43	GROUT
18-8	2309	1+59	GROUT
18-9	2306	2+65	GROUT
18-10	2306	1+82	GROUT
18-11	2306	0+97	SHCLS
18-12	2307	1+46	GROUT
18-13	2307	1+14	GROUT
18-14	2307	0+87	GROUT
18-15	2307	0+16	GROUT
18-16	2301	2+58	SHCLS
18-17	2301	2+42	SHCLS
18-18	2301	1+09	GROUT
18-19	2302	3+32	SHCLS
18-20	2302	3+10	SHCLS
18-21	2302	2+95	SHCLS

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

2.) THE SEWER PIPE SIZES SHOWN ON THIS SHEET WERE TAKEN FROM BEST AVAILABLE INFORMATION. THIS INFORMATION MAY NOT BE ACCURATE. THE CONTRACTOR SHALL PHYSICALLY MEASURE ALL PIPE DIAMETERS, INSTALLATION LENGTHS AND VERIFY OTHER REQUIREMENTS THAT MAY IMPACT THEIR WORK PRIOR TO ORDERING MATERIALS, INSTALLING THE LINER OR SCHEDULING THEIR WORK.

3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

5.) ALL SHCS SHALL BE REINSTATED TO THE SEWER FOLLOWING THE CIPP LINING OPERATION EXCEPT SHCS CONFIRMED TO BE ABANDONED/CAPPED, OR UNLESS OTHERWISE DIRECTED BY THE COUNTY.

6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1118.dwg

Sep 14, 2021 - 9:44am

I:\Baltimore-Co.15243\65602.Redhouse-Run-Sel\Docs\DWG\Sheets\65602-1118.dwg

SEAL

STATE OF MARYLAND — JOSEPH T. PIONTKOWSKI — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE
CONTRACT COMPLETION BOX		

P.W.A. NO.	KEY SHEET	POSITION SHT
	NSE	21NE18
R.O.W NO.		21NE19
		22NE18
		22NE19

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE
PLAN SCALE: 1"=50'
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – KENWOOD AVE, MCCORMICK AVE, GREENWOOD AVE, ELMONT AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-18	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 23 OF 70	
DRAWING NUMBER	
2020-1588	
FILE NO.:	4%

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
2302	8.0	MANHOLE COATING - CEMENTITIOUS
2303	7.9	MANHOLE COATING - CEMENTITIOUS
2307	7.9	MANHOLE COATING - CEMENTITIOUS
2308	7.2	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
2303	2302	8	331
2308	2307	8	295

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
19-1	2308	2+65	SHCLS
19-2	2308	2+45	SHCLS
19-3	2308	2+23	SHCLS
19-4	2308	1+79	SHCLS
19-5	2308	1+38	SHCLS
19-6	2308	0+60	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

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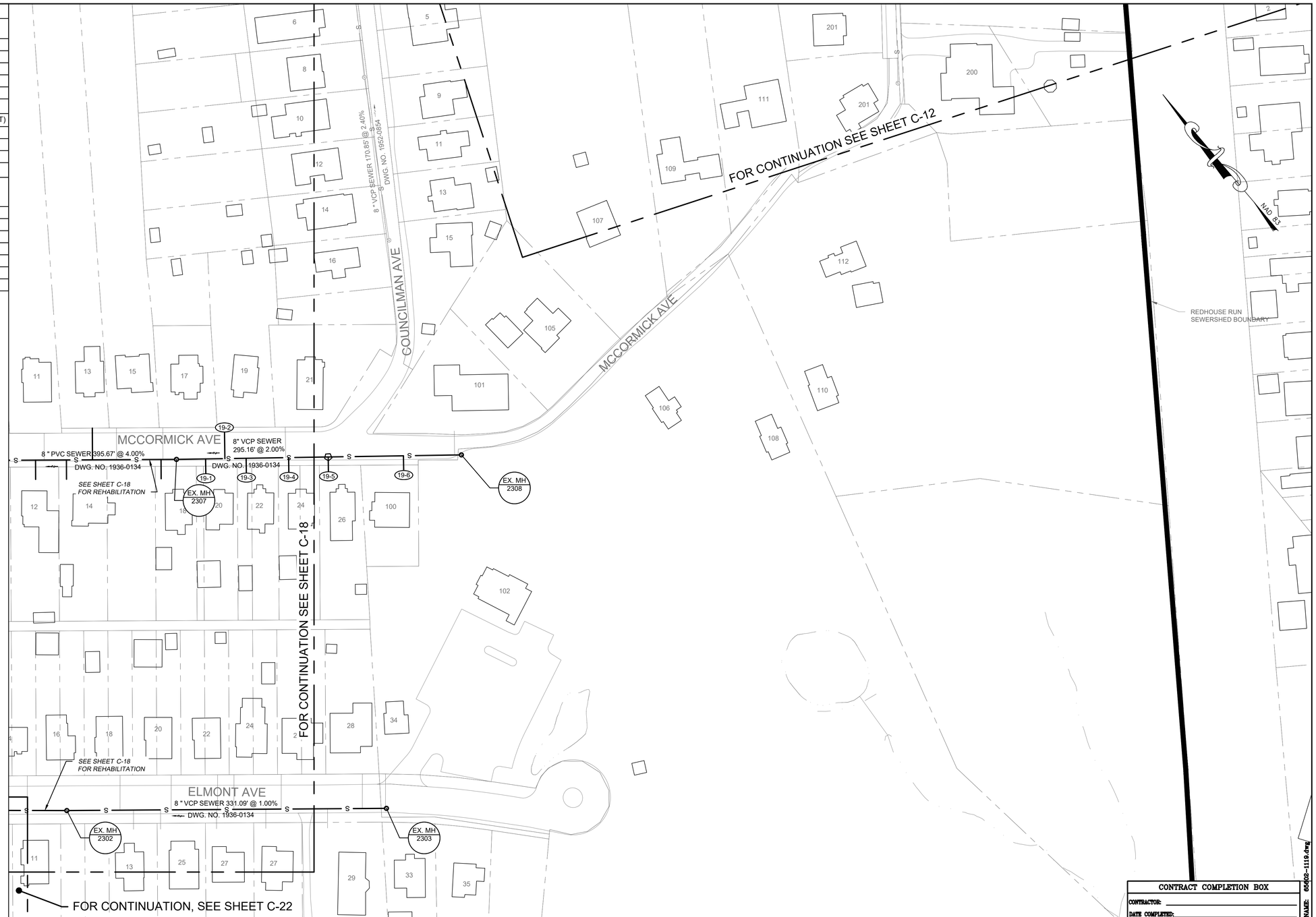

Sep 14, 2021 - 9:45am

DWG. FILENAME: 65602-1119.dwg
I:\Baltimore-Co.15243\65602.Redhouse-Run-Sel\Docs\DWG\Sheets\65602-1119.dwg

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

SEAL: STATE OF MARYLAND — JOSEPH A. BRUNO — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
			R.O.W NO.	JNE NSE	20NE19 20NE20 21NE19 21NE20 22NE19
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE: PLAN SCALE: 1"=50'; PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – MCCORMICK AVE, ELMONT AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-19	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 24 OF 70	
DRAWING NUMBER	
2020-1589	
FILE NO.: 4%	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1145	15.3	F/C RESET, MANHOLE COATING - CEMENTITIOUS
1146	9.0	MANHOLE COATING - CEMENTITIOUS
1147	11.0	MANHOLE COATING - CEMENTITIOUS
1444	15.7	MANHOLE COATING - CEMENTITIOUS
1485	9.8	MANHOLE COATING - CEMENTITIOUS
1486	14.0	MANHOLE COATING - CEMENTITIOUS
1487	10.0	F/C RESET, MANHOLE COATING - CEMENTITIOUS
1488	9.4	MANHOLE COATING - CEMENTITIOUS
1489	10.0	MANHOLE COATING - CEMENTITIOUS
1491	13.0	FRAME SEAL
1548	8.3	MANHOLE COATING - CEMENTITIOUS
TCM162	11.8	F/C RESET
TCM163	15.2	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1146	1145	8	207
1147	1146	8	226
1148	1147	8	321
1485	1548	8	227
1486	1485	8	253
1487	1444	8	410
1488	1487	8	364
1489	1488	8	253

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
20-1	1486	0+31	GROUT
20-2	1148	0+46	GROUT
20-3	1148	0+73	GROUT
20-4	1148	2+29	GROUT
20-5	1147	1+17	SHCLS
20-6	1147	1+47	GROUT
20-7	1147	1+67	GROUT
20-8	1147	2+00	TRIM, SHCLS
20-9	1146	0+82	GROUT
20-10	1146	1+46	GROUT
20-11	1488	0+83	GROUT
20-12	1487	0+16	GROUT
20-13	1487	0+52	GROUT
20-14	1487	2+45	GROUT
20-15	1487	2+53	GROUT
20-16	1487	2+60	GROUT
20-17	1487	3+13	GROUT
SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL			

NOTES:

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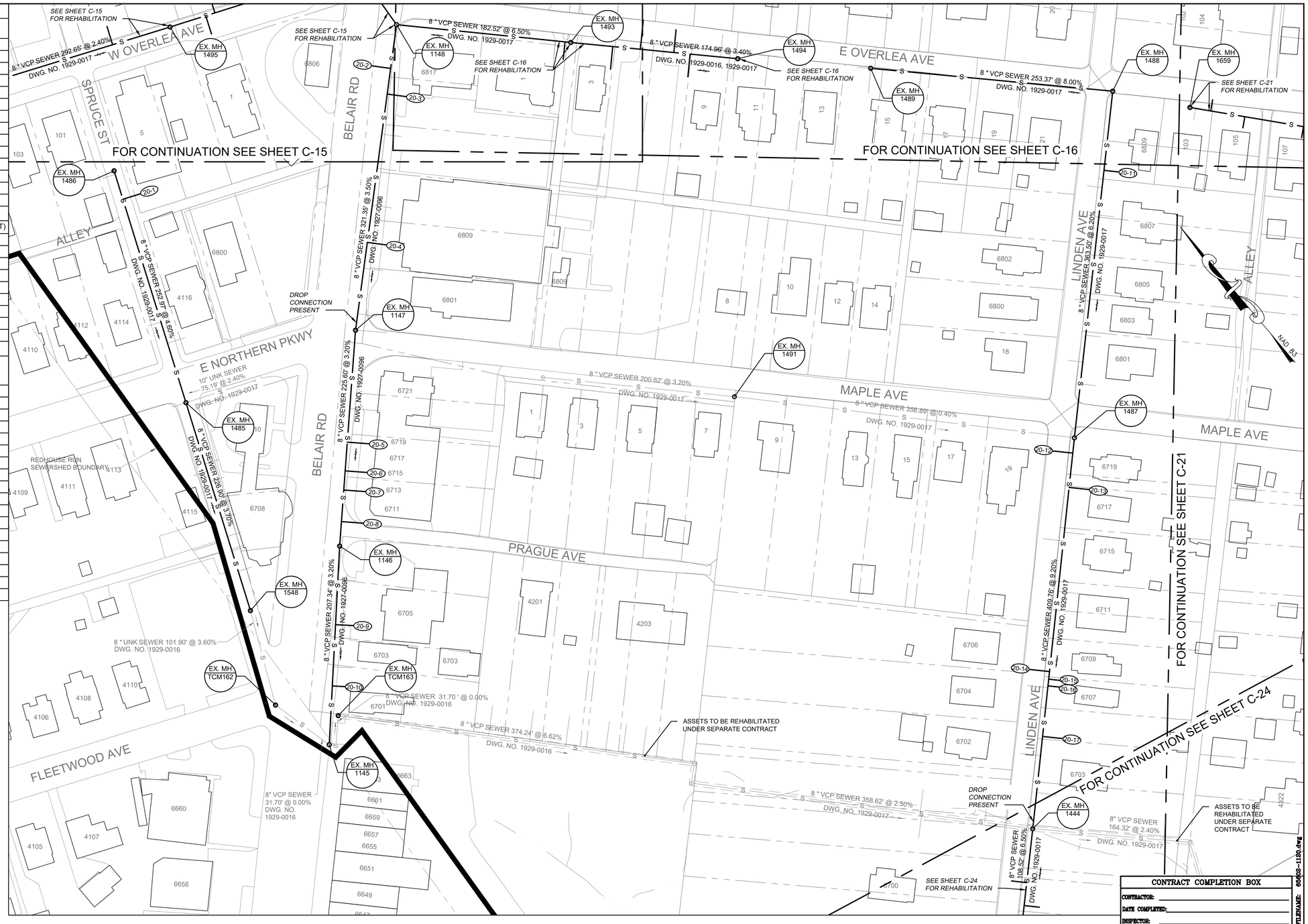

Sep 14, 2021 - 9:47am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1120.dwg

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1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SHEET DESIGNATION	CONTRACT NUMBER
C-20	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 25 OF 70	
DRAWING NUMBER	
2020-1590	
FILE NO.:	

SEAL: STATE OF MARYLAND — JOSEPH R. CONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC. EXECUTIVE PLAZA III, SUITE 803, 11350 McCORMICK RD, HUNT VALLEY, MD 21031, Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				NSE	21NE17
			R.O.W NO.		22NE16
					22NE17
					22NE18

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – E OVERLEA AVE, MAPLE AVE, SPRUCE ST, BELAIR RD, LINDEN AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
834	8.0	MANHOLE COATING - CEMENTITIOUS
845	5.7	MANHOLE COATING - CEMENTITIOUS
1649	11.7	MANHOLE COATING - CEMENTITIOUS
1650	6.3	MANHOLE COATING - CEMENTITIOUS
1651	10.4	MANHOLE COATING - CEMENTITIOUS
1652	9.0	MANHOLE COATING - CEMENTITIOUS
1653	8.7	MANHOLE COATING - CEMENTITIOUS
1654	8.4	MANHOLE COATING - CEMENTITIOUS
1655	10.8	MANHOLE COATING - CEMENTITIOUS
1656	14.7	MANHOLE COATING - CEMENTITIOUS
1657	8.9	MANHOLE COATING - CEMENTITIOUS
1658	8.3	MANHOLE COATING - CEMENTITIOUS
1659	9.6	MANHOLE COATING - CEMENTITIOUS
1660	11.4	MANHOLE COATING - CEMENTITIOUS
1663	10.0	MANHOLE COATING - CEMENTITIOUS
1664	7.5	MANHOLE COATING - CEMENTITIOUS
1667	6.4	MANHOLE COATING - CEMENTITIOUS
1668	10.0	MANHOLE COATING - CEMENTITIOUS
1669	5.0	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
845	1650	8	122
1650	1649	8	279
1651	845	8	160
1652	1651	8	121
1653	1652	8	115
1654	1653	8	156
1655	1654	8	200
1656	1655	8	306
1657	1656	8	203
1658	1657	8	257
1659	1657	8	277
1660	1651	8	114
1663	834	8	69
1664	1663	8	97
1668	1667	8	246
1669	1668	8	211

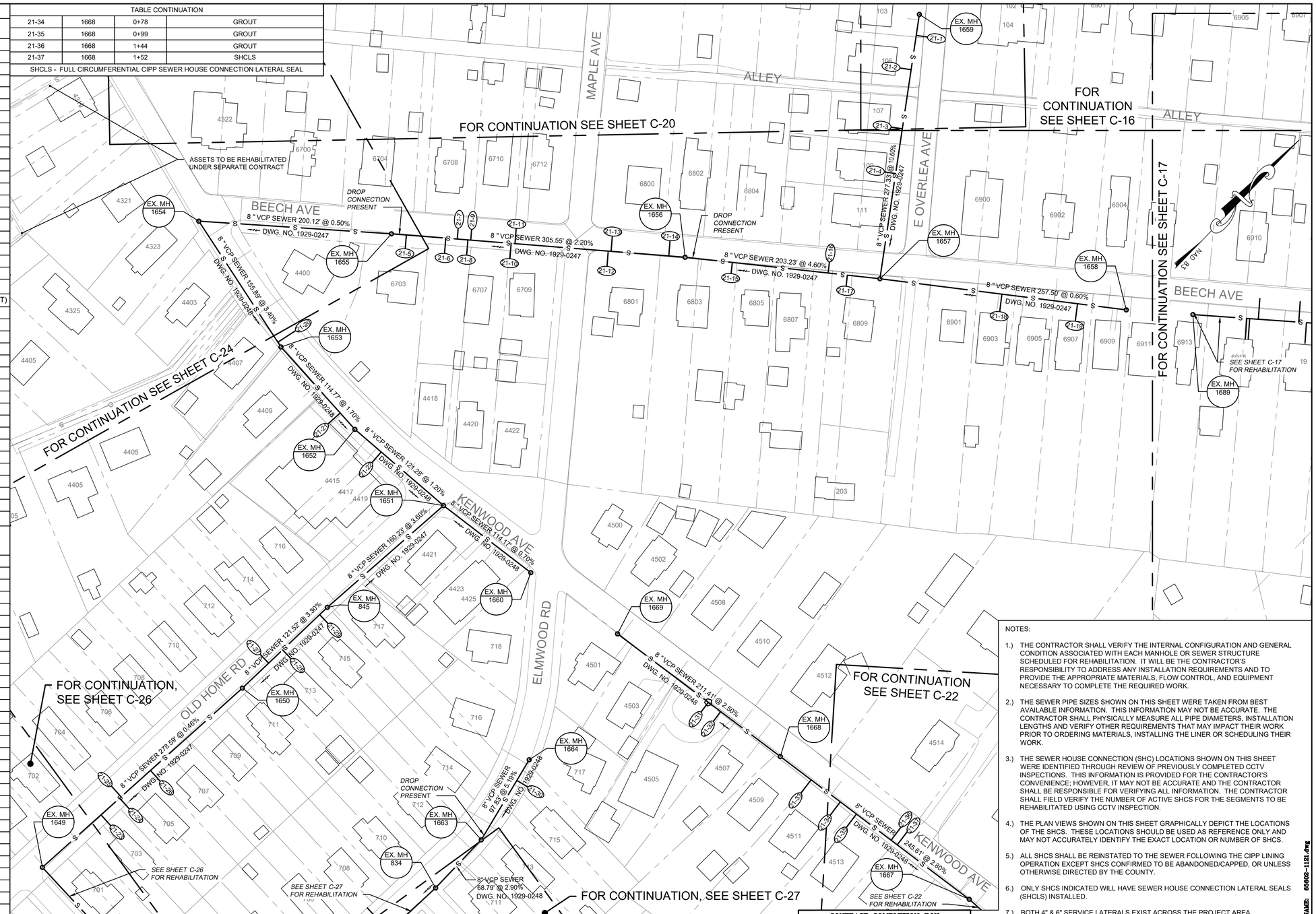
SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
21-1	1659	0+22	GROUT
21-2	1659	0+58	GROUT
21-3	1659	1+20	GROUT
21-4	1659	1+67	GROUT
21-5	1656	2+90	GROUT
21-6	1656	2+49	GROUT
21-7	1656	2+37	GROUT
21-8	1656	2+26	GROUT
21-9	1656	2+23	GROUT
21-10	1656	1+81	GROUT
21-11	1656	1+77	SHCLS
21-12	1656	0+80	SHCLS
21-13	1656	0+77	SHCLS
21-14	1656	0+17	SHCLS
21-15	1657	1+54	GROUT
21-16	1657	0+54	GROUT
21-17	1657	0+34	GROUT
21-18	1658	1+30	GROUT
21-19	1658	0+51	GROUT
21-20	1654	1+50	GROUT
21-21	1653	0+92	SHCLS
21-22	1652	0+36	TRIM
21-23	1650	1+97	GROUT
21-24	1650	1+71	GROUT
21-25	1650	1+69	GROUT
21-26	1650	1+28	GROUT
21-27	845	0+84	GROUT
21-28	845	0+64	GROUT
21-29	845	0+11	GROUT
21-30	1664	0+25	TRIM
21-31	1669	1+18	TRIM, SHCLS
21-32	1669	1+34	GROUT
21-33	1668	0+40	GROUT
21-34 TO 21-37	SEE TABLE CONTINUATION		

TABLE CONTINUATION

21-34	1668	0+78	GROUT
21-35	1668	0+99	GROUT
21-36	1668	1+44	GROUT
21-37	1668	1+52	SHCLS

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL



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1"=50' 50 0 50 100

CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

SEAL: STATE OF MARYLAND — JOSEPH N. MUNTY — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 , EXPIRATION DATE 12/23/21

ENGINEER:

O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.
			R.O.W NO.
CONTRACT COMPLETION BOX			

KEY SHEET	POSITION SHT
JNE	20NE17
NSE	20NE18
	21NE17
	21NE18
	22NE17
	22NE18

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:							
DATE REVIEWED:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR

DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF

DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – MAPLE AVE, E OVERLEA AVE, KENWOOD AVE, BEECH AVE, OLD HOME RD, ELMWOOD RD

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-21	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 26 OF 70	
DRAWING NUMBER	
2020-1591	
FILE NO.:	

DWG. FILENAME: 65602-1121.dwg

I:\Baltimore-Co.1524365602.Redhouse-Run-Se\Docs\DWG\Sheets\65602-1121.dwg

Sep 14, 2021 - 9:48am

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1628	8.4	MANHOLE COATING - CEMENTITIOUS
1629	15.7	MANHOLE COATING - CEMENTITIOUS
1631	9.3	MANHOLE COATING - CEMENTITIOUS
1632	14.0	MANHOLE COATING - CEMENTITIOUS
1633	10.4	MANHOLE COATING - CEMENTITIOUS
1634	9.7	MANHOLE COATING - CEMENTITIOUS
1666	7.7	MANHOLE COATING - CEMENTITIOUS
1679	8.7	MANHOLE COATING - CEMENTITIOUS
1680	10.1	MANHOLE COATING - CEMENTITIOUS
1681	7.1	MANHOLE COATING - CEMENTITIOUS
1683	8.7	MANHOLE COATING - CEMENTITIOUS
1684	8.1	MANHOLE COATING - CEMENTITIOUS
1685	8.2	MANHOLE COATING - CEMENTITIOUS
2299	8.4	MANHOLE COATING - CEMENTITIOUS
2890	10.5	MANHOLE COATING - CEMENTITIOUS
2891	8.7	MANHOLE COATING - CEMENTITIOUS
2990	10.0	MANHOLE COATING - CEMENTITIOUS
2991	13.6	MANHOLE COATING - CEMENTITIOUS
4496	11.0	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
1681	1680	278	281	8	3

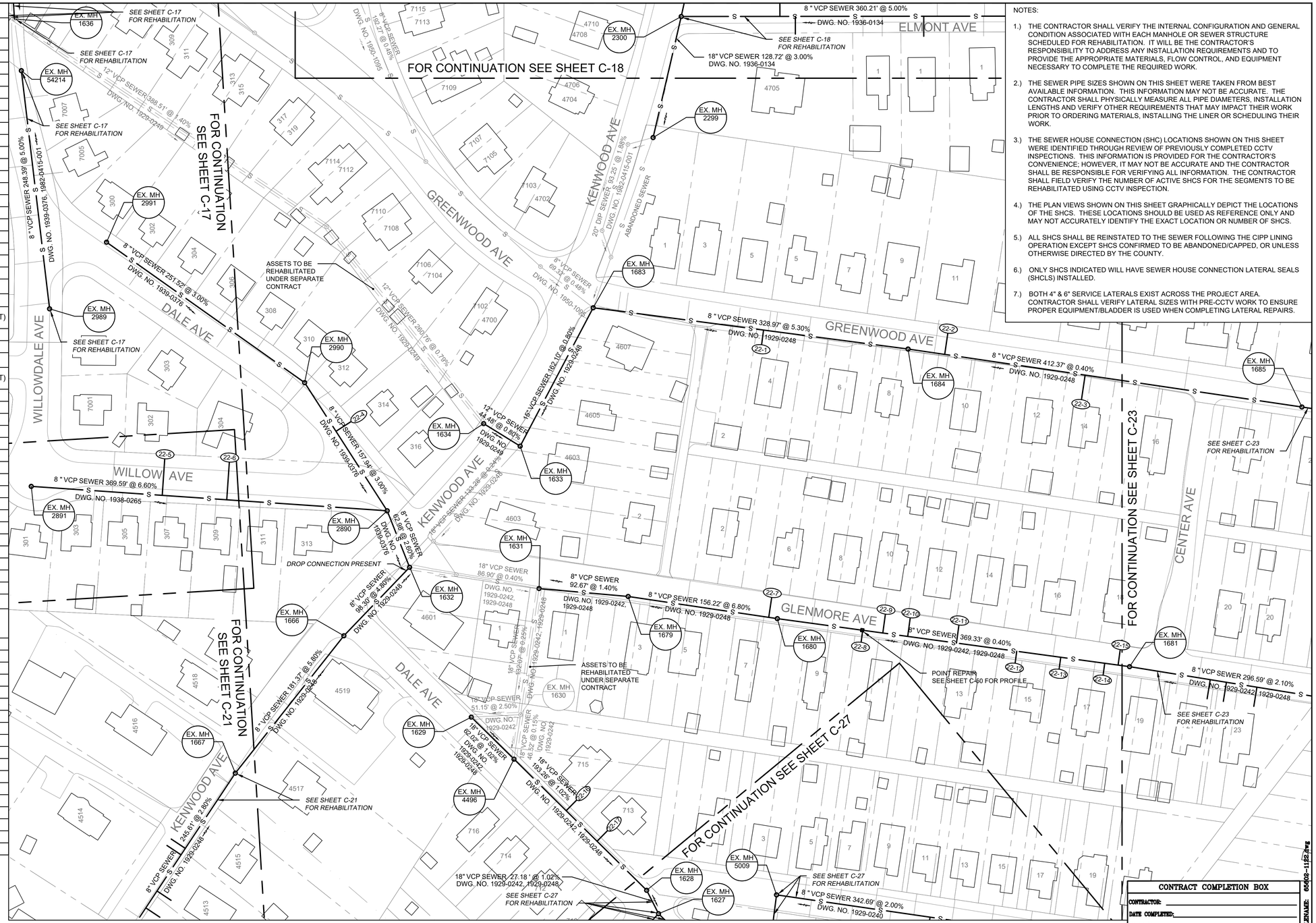
SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1629	4496	18	62
1634	1633	12	44
1666	1632	8	98
1667	1666	8	181
1679	1631	8	93
1680	1679	8	156
1681	1680	8	369
1683	1633	15	162
1684	1683	8	329
1685	1684	8	412
2300	2299	18	129
2890	1632	8	63
2891	2890	8	370
2990	2890	8	158
2991	2990	8	252
4496	1628	18	193

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
22-1	1684	1+51	SHCLS
22-2	1685	3+74	SHCLS
22-3	1685	2+27	SHCLS
22-4	2990	0+60	GROUT
22-5	2891	1+36	GROUT
22-6	2891	2+03	GROUT
22-7	1680	0+09	GROUT
22-8	1681	2+79	REPLACE
22-9	1681	2+58	GROUT
22-10	1681	2+32	GROUT
22-11	1681	1+81	GROUT
22-12	1681	1+18	GROUT
22-13	1681	0+72	GROUT
22-14	1681	0+26	GROUT
22-15	1681	0+12	GROUT
22-16	4496	0+76	GROUT
22-17	4496	1+21	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL



NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

2.) THE SEWER PIPE SIZES SHOWN ON THIS SHEET WERE TAKEN FROM BEST AVAILABLE INFORMATION. THIS INFORMATION MAY NOT BE ACCURATE. THE CONTRACTOR SHALL PHYSICALLY MEASURE ALL PIPE DIAMETERS, INSTALLATION LENGTHS AND VERIFY OTHER REQUIREMENTS THAT MAY IMPACT THEIR WORK PRIOR TO ORDERING MATERIALS, INSTALLING THE LINER OR SCHEDULING THEIR WORK.

3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

5.) ALL SHCS SHALL BE REINSTATED TO THE SEWER FOLLOWING THE CIPP LINING OPERATION EXCEPT SHCS CONFIRMED TO BE ABANDONED/CAPPED, OR UNLESS OTHERWISE DIRECTED BY THE COUNTY.

6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

Sep 14, 2021 - 9:49am

CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

DWG. FILENAME: 65602-1122.dwg

I:\Baltimore-Co.15243\65602.Redhouse-Run-Sel\Docs\DWG\Sheets\65602-1122.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SHEET DESIGNATION	CONTRACT NUMBER
C-22	21002 SX0
	JOB ORDER NUMBER
	201-0077-7263
	SHEET 27 OF 70
	DRAWING NUMBER
	2020-1592
	FILE NO.: 5%

BALTIMORE COUNTY MARYLAND

SEAL

STATE OF MARYLAND — JOSEPH R. BIONDO — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER:

O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION

BY	DATE	P.W.A. NO.
		R.O.W NO.

CONTRACT COMPLETION BOX

KEY SHEET	POSITION SHT
JNE	20NE18
NSE	20NE19
	21NE18
	21NE19
	22NE18

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – GREENWOOD AVE, KENWOOD AVE, GLENMORE AVE, DALE AVE, WILLOW AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1671	7.8	MANHOLE COATING - CEMENTITIOUS
1672	10.6	MANHOLE COATING - CEMENTITIOUS
1673	12.3	MANHOLE COATING - CEMENTITIOUS
1674	9.6	MANHOLE COATING - CEMENTITIOUS
1675	10.3	MANHOLE COATING - CEMENTITIOUS
1682	8.0	MANHOLE COATING - CEMENTITIOUS
1686	6.4	MANHOLE COATING - CEMENTITIOUS
15764	11.2	MANHOLE COATING - CEMENTITIOUS
15765	9.1	MANHOLE COATING - CEMENTITIOUS
16086	10.6	MANHOLE COATING - CEMENTITIOUS
16087	9.8	MANHOLE COATING - CEMENTITIOUS
16088	9.8	MANHOLE COATING - CEMENTITIOUS
16089	9.0	MANHOLE COATING - CEMENTITIOUS
16090	8.6	MANHOLE COATING - CEMENTITIOUS
C1731/XXXX	5.4	REPLACE EX. LAMPHOLE WITH MANHOLE

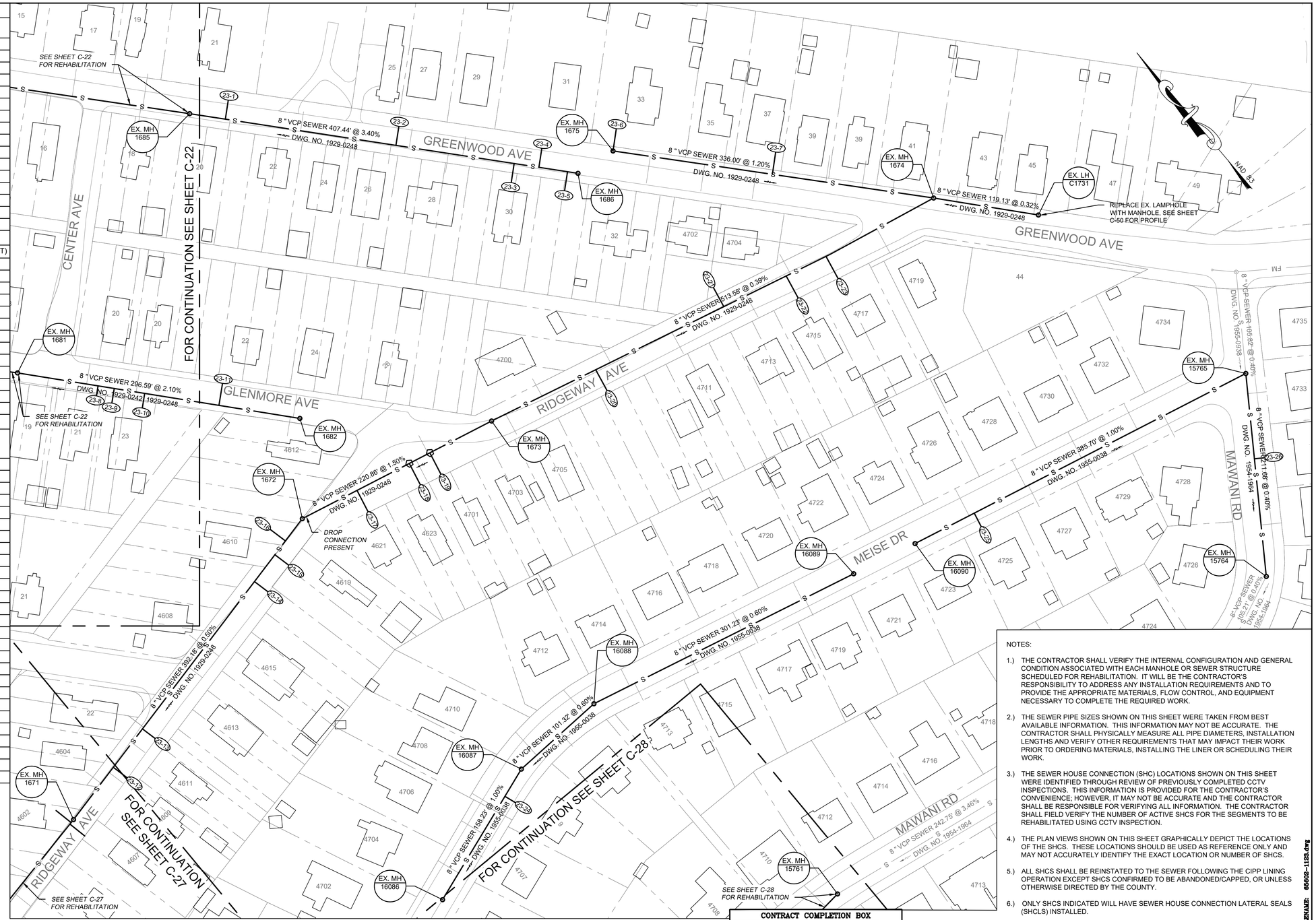
SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1672	1671	8	392
1673	1672	8	221
1674	1673	8	514
1675	1674	8	336
1682	1681	8	297
1686	1685	8	407
15765	15764	8	212
16087	16086	8	158
16088	16087	8	101
16089	16088	8	301
16090	15765	8	386
C1731	1674	8	119

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
23-1	1686	3+70	GROUT
23-2	1686	1+91	GROUT
23-3	1686	0+67	SHCLS
23-4	1686	0+41	GROUT
23-5	1686	0+11	GROUT
23-6	1675	0+01	GROUT
23-7	1675	1+67	GROUT
23-8	1682	2+12	SHCLS
23-9	1682	1+95	GROUT
23-10	1682	1+63	SHCLS
23-11	1682	0+85	GROUT
23-12	1672	3+24	GROUT
23-13	1672	2+74	GROUT
23-14	1672	0+82	GROUT
23-15	1672	0+47	GROUT
23-16	1672	0+29	GROUT
23-17	1673	1+57	SHCLS
23-18	1673	0+96	TRIM, SHCLS
23-19	1673	0+72	SHCLS
23-20	1674	3+93	GROUT
23-21	1674	2+45	GROUT
23-22	1674	1+73	TRIM, SHCLS
23-23	1674	1+27	GROUT
23-24	16087	0+33	GROUT
23-25	16090	0+69	GROUT
23-26	15765	0+89	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL



NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

2.) THE SEWER PIPE SIZES SHOWN ON THIS SHEET WERE TAKEN FROM BEST AVAILABLE INFORMATION. THIS INFORMATION MAY NOT BE ACCURATE. THE CONTRACTOR SHALL PHYSICALLY MEASURE ALL PIPE DIAMETERS, INSTALLATION LENGTHS AND VERIFY OTHER REQUIREMENTS THAT MAY IMPACT THEIR WORK PRIOR TO ORDERING MATERIALS, INSTALLING THE LINER OR SCHEDULING THEIR WORK.

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6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

DWG. FILENAME: 65602-1123.dwg

1"=50' 50 0 50 100

CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

O'BRIEN & GERE ENGINEERS, INC

SHEET DESIGNATION	CONTRACT NUMBER
C-23	21002 SX0

JOB ORDER NUMBER 201-0077-7263

SHEET 28 OF 70

DRAWING NUMBER 2020-1593

FILE NO.: 4%

STATE OF MARYLAND — JOSEPH R. BIANCO — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE
CONTRACT COMPLETION BOX		

P.W.A. NO. R.O.W NO.

KEY SHEET	POSITION SHT
JNE	19NE19
NSE	20NE18
	20NE19
	21NE18
	21NE19

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE
PLAN SCALE: 1"=50'
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – RIDGEWAY AVE, GREENWOOD AVE, MEISE DR, MAWANI RD, GLENMORE AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

Sep 14, 2021 - 9:50am

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MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1445	8.7	MANHOLE COATING - CEMENTITIOUS
1477	11.3	MANHOLE COATING - CEMENTITIOUS
1497	7.2	MANHOLE COATING - CEMENTITIOUS
1498	8.7	MANHOLE COATING - CEMENTITIOUS
1534	7.8	MANHOLE COATING - CEMENTITIOUS
1535	7.7	MANHOLE COATING - CEMENTITIOUS
1621	10.3	MANHOLE COATING - CEMENTITIOUS
TCM100	10.6	MANHOLE COATING - CEMENTITIOUS
TCM103	9.3	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1445	1444	8	109
1497	1621	8	183
1498	1497	8	185
1535	1477	8	342
TCM100	1535	8	379
TCM103	1534	8	315

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
24-1	1445	0+04	GROUT
24-2	1445	0+28	GROUT
24-3	1445	0+52	GROUT
24-4	1498	0+82	GROUT
24-5	1497	0+95	GROUT
24-6	1535	2+12	GROUT
SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL			

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

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4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

5.) ALL SHCS SHALL BE REINSTATED TO THE SEWER FOLLOWING THE CIPP LINING OPERATION EXCEPT SHCS CONFIRMED TO BE ABANDONED/CAPPED, OR UNLESS OTHERWISE DIRECTED BY THE COUNTY.

6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

Sep 14, 2021 - 9:51am

CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

DWG. FILENAME: 65602-1124.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND JOSEPH R. BRIEN No. 55452 PROFESSIONAL ENGINEER	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. 55452, EXPIRATION DATE 12/23/21				R.O.W NO.	JNE NSE	20NE16 20NE17 21NE16 21NE17	PLAN SCALE: 1"=50' PROFILE SCALE:	APPROVED BY: SEE SHEET 2020-1566 DIRECTOR DATE: SEE SHEET 2020-1566
DATE : 08/02/21	ENGINEER: O'BRIEN & GERE ENGINEERS, INC. EXECUTIVE PLAZA III, SUITE 803 11350 McCORMICK RD HUNT VALLEY, MD 21031 Phone: (443) 541-1300	CONTRACT COMPLETION BOX							
	DGN BY: CTP DWN BY: BNL CHKD BY: REB	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
		REVIEWED BY: DATE REVIEWED:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						BUR. OF ENGINEERING & CONSTRUCTION APPROVED BY: SEE SHEET 2020-1566 CHIEF DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – KOLB AVE, KENWOOD AVE, BELMAR AVE, MANNINGTON AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-24	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 29 OF 70	
DRAWING NUMBER	
2020-1594	
FILE NO.:	

I:\Baltimore-Co.1524365602.Redhouse-Run-Se\Docs\DWG\Sheets\65602-1124.dwg

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1475	8.0	MANHOLE COATING - CEMENTITIOUS
1476	17.3	REPLACE MANHOLE
1537	7.6	REPLACE MANHOLE
901595	4.7	MANHOLE COATING - CEMENTITIOUS
901614	6.0	MANHOLE COATING - CEMENTITIOUS
901629	3.6	MANHOLE COATING - CEMENTITIOUS
901725	6.1	F/C RESET, MANHOLE COATING - CEMENTITIOUS
901726	5.3	MANHOLE COATING - CEMENTITIOUS
901730	8.1	MANHOLE COATING - CEMENTITIOUS
901731	6.5	MANHOLE COATING - CEMENTITIOUS
901732	9.8	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
^1476	1475	354	360	8	6

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1476	1475	12	371
1477	1476	12	372
901725	1537	8	375
901726	901725	8	379
901730	1475	8	187
901731	901730	8	307

^ INDICATES CONTINGENT POINT REPAIR - CONTRACTOR TO CONFIRM WITH PRE-REHABILITATION CCTV PRIOR TO INITIATING REPAIR ACTIVITIES

SEWER PIPES TO BE REPLACED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1537	1476	8	11
901595	901614	8	330
901614	901629	8	384

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
25-1	1477	2+54	GROUT
25-2	1476	3+27	TRIM, SHCLS
25-3	901725	2+74	SHCLS
25-4	901725	1+51	GROUT
25-5	901725	1+21	GROUT
25-6	901726	3+12	GROUT
25-7	901726	1+99	GROUT
25-8	901726	0+69	GROUT
25-9	901731	2+82	GROUT
25-10	901731	2+59	GROUT
25-11	901731	1+83	GROUT
25-12	901731	1+60	GROUT
25-13	901731	1+30	GROUT
25-14	901731	1+08	GROUT
25-15	901731	0+82	GROUT
25-16	901731	0+60	GROUT
25-17	901731	0+34	GROUT
25-18	901731	0+11	GROUT
25-19	901732	2+14	GROUT
25-20	901732	1+33	GROUT
25-21	901732	0+59	GROUT
25-22	901732	0+54	GROUT
25-23	901614	3+40	REPLACE
25-24	901614	3+29	REPLACE
25-25	901614	2+89	REPLACE
25-26	901614	2+63	REPLACE
25-27	901614	2+40	REPLACE
25-28	901614	2+14	REPLACE
25-29	901614	1+88	REPLACE
25-30	901614	1+65	REPLACE
25-31	901614	1+42	REPLACE
25-32	901614	1+16	REPLACE
25-33	901614	0+90	REPLACE
25-34	901614	0+64	REPLACE
25-35	901614	0+41	REPLACE
25-36	901595	3+28	REPLACE
25-37	901595	3+01	REPLACE
25-38	901595	2+77	REPLACE
25-39 TO 25-48	SEE TABLE CONTINUATION		

TABLE CONTINUATION

25-39	901595	2+51	REPLACE
25-40	901595	2+25	REPLACE
25-41	901595	1+99	REPLACE
25-42	901595	1+76	REPLACE
25-43	901595	1+49	REPLACE
25-44	901595	1+26	REPLACE
25-45	901595	0+99	REPLACE
25-46	901595	0+75	REPLACE
25-47	901595	0+48	REPLACE
25-48	901595	0+25	REPLACE
SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL			

NOTES:

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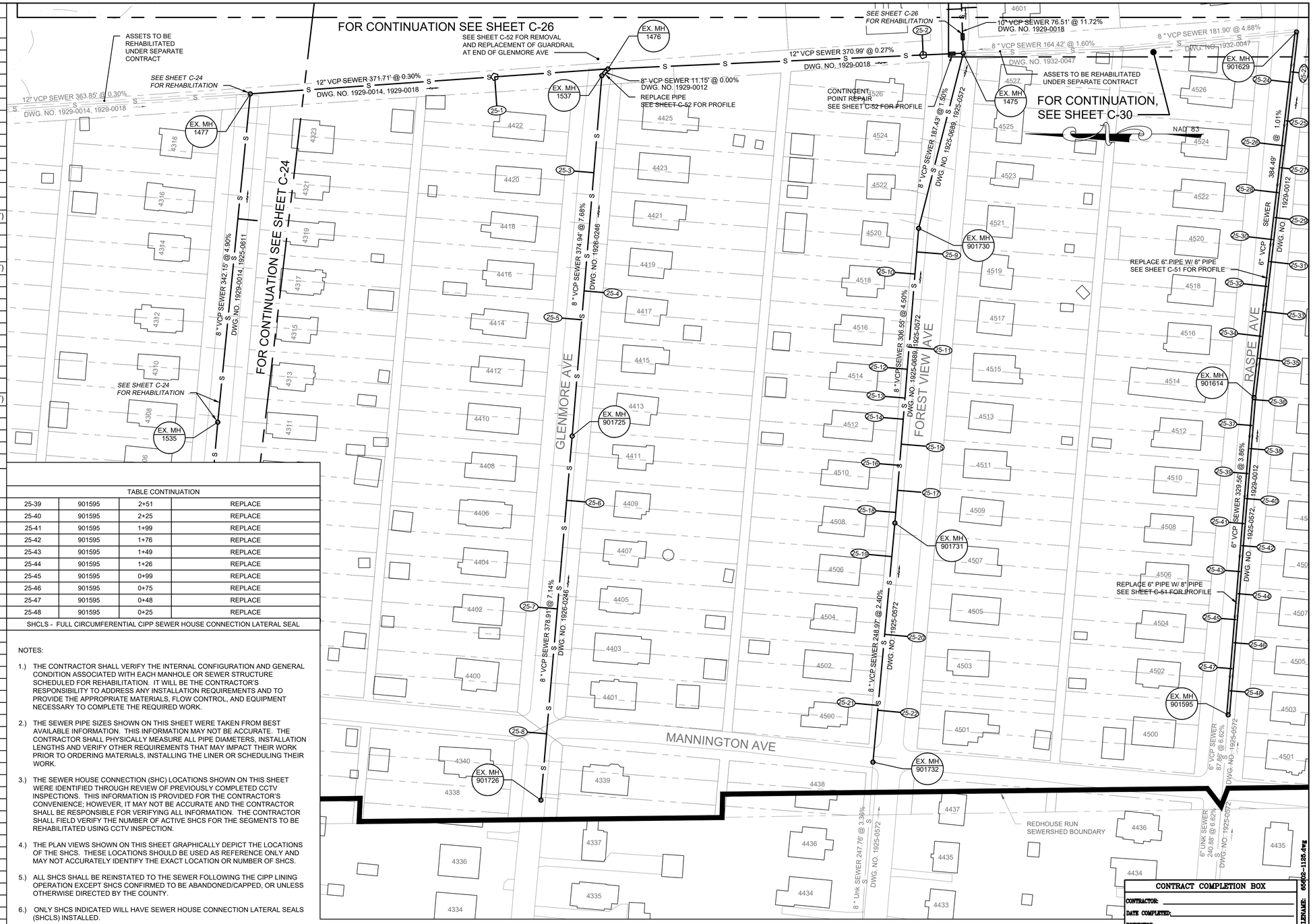


CONTRACT COMPLETION BOX	
CONTRACTOR:	
DATE COMPLETED:	
INSPECTOR:	
PIPE MATERIAL (Pressure Only)	

DWG. FILENAME: 65602-1125.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SHEET DESIGNATION	CONTRACT NUMBER
C-25	21002 SX0
JOB ORDER NUMBER	201-0077-7263
SHEET 30 OF 70	
DRAWING NUMBER	2020-1595
FILE NO.:	5%

SEAL: STATE OF MARYLAND JOSEPH C. KUNKEL 55452 PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	19NE17 20NE17
			R.O.W NO.		
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:							
DATE REVIEWED:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						

DRAWING SCALE
PLAN SCALE: 1"=50'
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – GLENMORE AVE, FOREST VIEW AVE, RASPE AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

I:\Baltimore-Co.1524365602.Redhouse-Run-Se\Docs\DWG\Sheets\65602-1125.dwg

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1423	6.5	MANHOLE COATING - CEMENTITIOUS
1471	10.6	MANHOLE COATING - CEMENTITIOUS
1472	10.3	FRAME SEAL, MANHOLE COATING - CEMENTITIOUS
1474	11.9	MANHOLE COATING - CEMENTITIOUS
1646	11.2	MANHOLE COATING - CEMENTITIOUS
1647	7.0	MANHOLE COATING - CEMENTITIOUS
1648	6.9	MANHOLE COATING - CEMENTITIOUS
1661	7.9	MANHOLE COATING - CEMENTITIOUS
6644	10.1	MANHOLE COATING - CEMENTITIOUS
7484	12.3	MANHOLE COATING - CEMENTITIOUS
7485	9.0	MANHOLE COATING - CEMENTITIOUS
7486	9.0	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

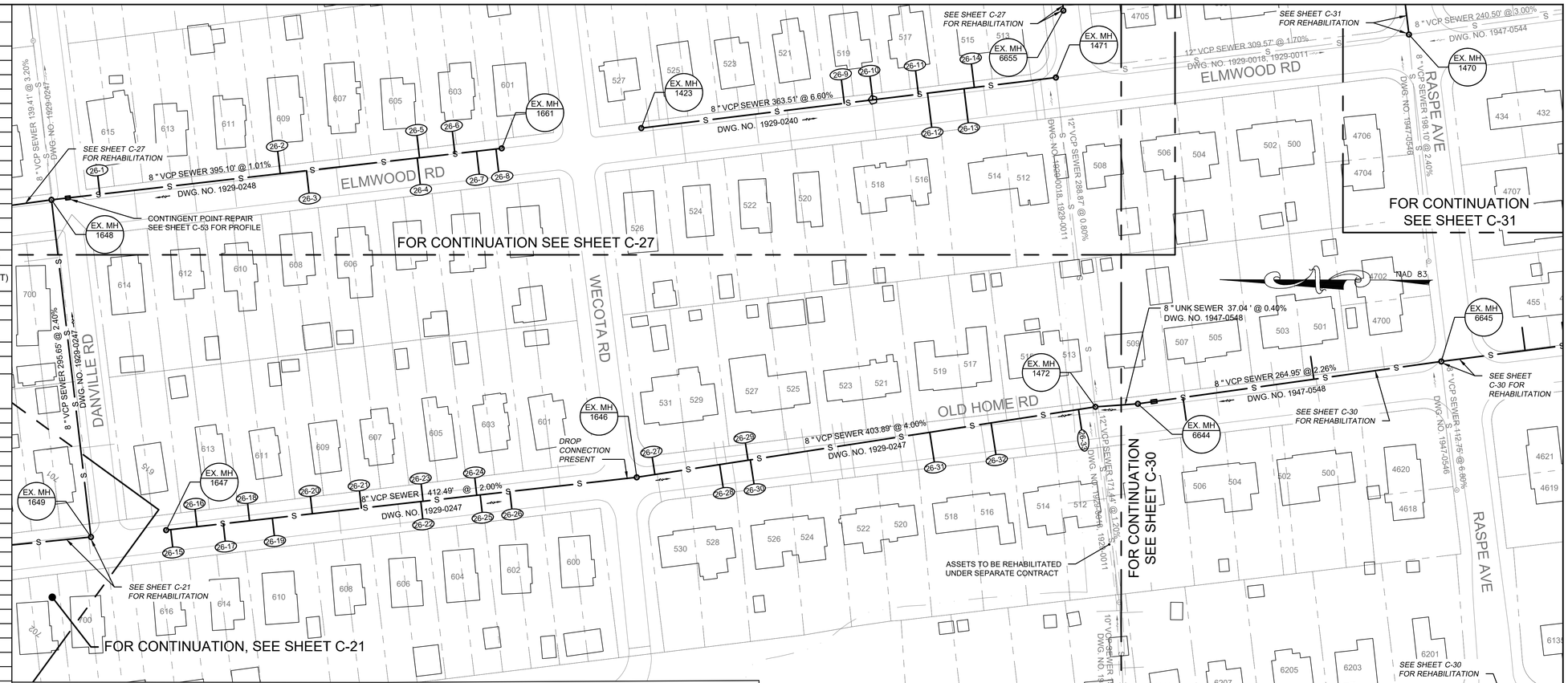
UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
1475	1474	14	20	10	6
^ 1661	1648	378	382	8	4

^ INDICATES CONTINGENT POINT REPAIR - CONTRACTOR TO CONFIRM WITH PRE-REHABILITATION CCTV PRIOR TO INITIATING REPAIR ACTIVITIES

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
26-1	1661	3+52	GROUT
26-2	1661	1+94	GROUT
26-3	1661	1+71	GROUT
26-4	1661	0+73	GROUT
26-5	1661	0+71	GROUT
26-6	1661	0+38	GROUT
26-7	1661	0+21	GROUT
26-8	1661	0+05	GROUT
26-9	1423	1+77	GROUT
26-10	1423	2+03	GROUT
26-11	1423	2+42	GROUT
26-12	1423	2+50	GROUT
26-13	1423	2+83	SHCLS
26-14	1423	2+92	GROUT
26-15	1647	0+02	GROUT
26-16	1647	0+27	GROUT
26-17	1647	0+50	GROUT
26-18	1647	0+73	GROUT
26-19	1647	0+93	GROUT
26-20	1647	1+28	GROUT
26-21	1647	1+71	GROUT
26-22	1647	2+23	GROUT
26-23	1647	2+25	GROUT
26-24	1647	2+72	GROUT
26-25	1647	2+75	SHCLS
26-26	1647	3+01	GROUT
26-27	1646	0+16	TRIM
26-28	1646	0+73	TRIM
26-29	1646	0+98	SHCLS
26-30	1646	1+00	TRIM
26-31	1646	2+58	SHCLS
26-32	1646	3+12	TRIM
26-33	1646	3+89	TRIM
26-34	902197	0+01	GROUT
26-35	902197	0+07	GROUT
26-36	902197	0+26	GROUT
26-37	902197	1+27	GROUT
26-38	7485	0+92	GROUT
26-39	1474	1+15	TRIM, SHCLS
26-40	1474	0+72	TRIM, SHCLS
26-41	1474	0+23	TRIM, SHCLS
26-42	1474	0+22	TRIM, SHCLS
26-43	1474	0+14	SHCLS
26-44	1475	0+47	TRIM, SHCLS
26-45	1475	0+46	TRIM, SHCLS
26-46	7486	1+61	GROUT
26-47	7486	1+52	GROUT
26-48	7486	0+08	GROUT
26-49	7486	0+05	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL



SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1423	1471	8	364
1474	7484	10	184
1475	1474	10	76
1646	1472	8	404
1647	1646	8	412
1649	1648	8	296
1661	1648	8	395
6644	1472	8	37
7485	7484	8	314
7486	7485	8	226
902197	7484	8	164

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CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

DWG. FILENAME: 65602-1126.dwg

SEAL

STATE OF MARYLAND — JOSEPH T. CONTI — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 , EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	19NE17
			R.O.W NO.		19NE18
					20NE17
CONTRACT COMPLETION BOX					20NE18

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE

PLAN SCALE: 1"=50'

PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR

DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF

DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – OLD HOME RD, ELMWOOD RD, MARGLENN AVE, DANVILLE RD, FOREST VIEW AVE, RASPE AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-26	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 31 OF 70	
DRAWING NUMBER	
2020-1596	
FILE NO.:	

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Sep 14, 2021 - 9:54am

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1626	9.8	MANHOLE COATING - CEMENTITIOUS
1627	9.7	MANHOLE COATING - CEMENTITIOUS
1662	6.0	MANHOLE COATING - CEMENTITIOUS
1665	7.0	MANHOLE COATING - CEMENTITIOUS
1670	7.8	MANHOLE COATING - CEMENTITIOUS
5008	9.3	MANHOLE COATING - CEMENTITIOUS
5009	8.4	MANHOLE COATING - CEMENTITIOUS
5010	11.4	MANHOLE COATING - CEMENTITIOUS
6654	9.8	MANHOLE COATING - CEMENTITIOUS
6655	7.5	MANHOLE COATING - CEMENTITIOUS
7023	10.7	MANHOLE COATING - CEMENTITIOUS

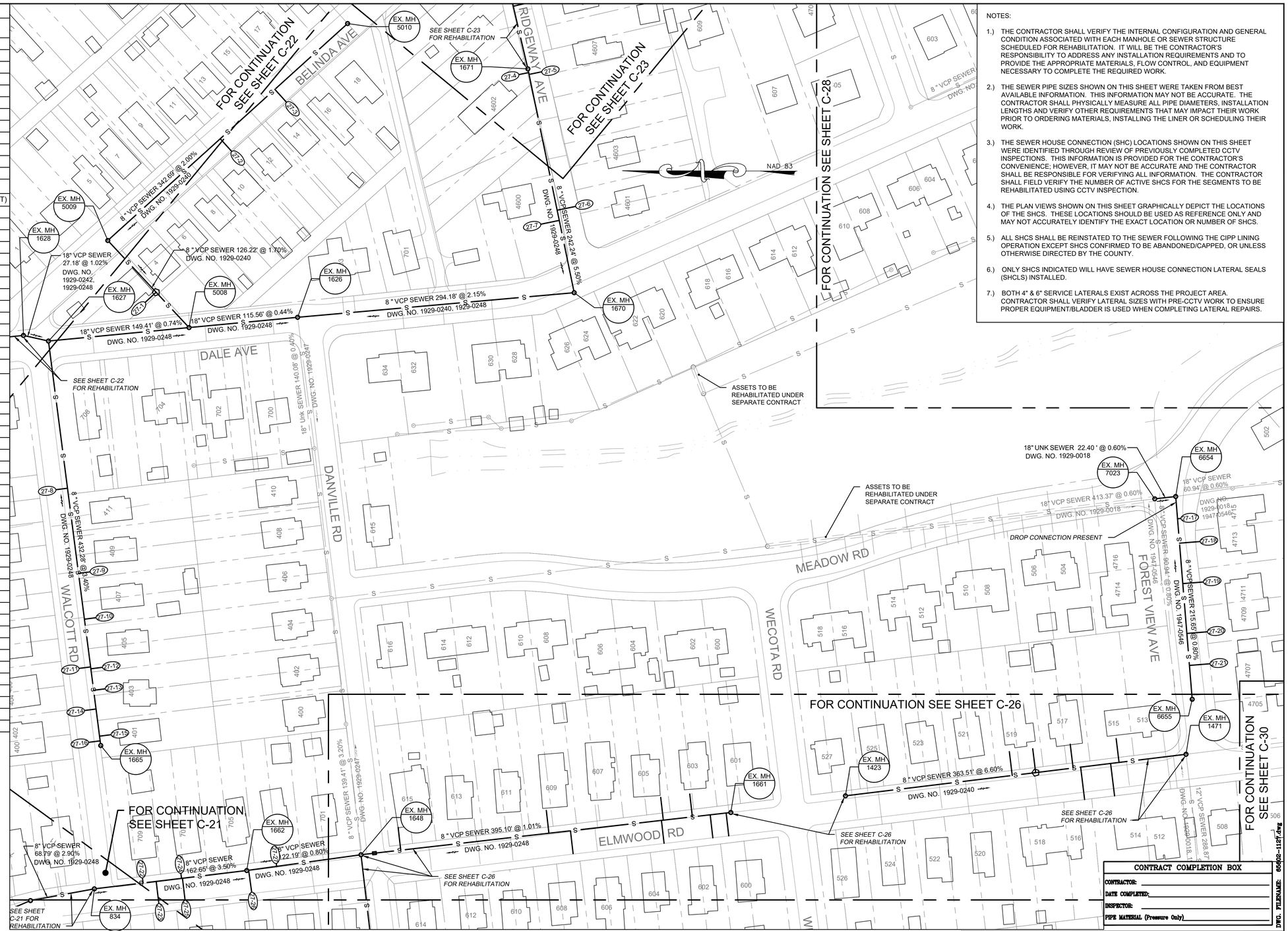
SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
834	1662	8	163
1627	5008	18	149
1628	1627	18	27
1662	1648	8	122
1665	1627	8	432
1670	1626	8	294
1671	1670	8	242
5008	1626	18	116
5009	5008	8	126
5010	5009	8	343
6655	6654	8	216
7023	6654	18	22

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
27-1	5009	0+75	SHCLS
27-2	5010	1+82	GROUT
27-3	5010	1+04	GROUT
27-4	1671	0+04	GROUT
27-5	1671	0+06	GROUT
27-6	1671	1+53	GROUT
27-7	1671	1+64	GROUT
27-8	1665	2+75	GROUT
27-9	1665	1+84	GROUT
27-10	1665	1+35	GROUT
27-11	1665	0+84	GROUT
27-12	1665	0+82	GROUT
27-13	1665	0+59	GROUT
27-14	1665	0+39	GROUT
27-15	1665	0+10	GROUT
27-16	1665	0+05	GROUT
27-17	6655	1+92	GROUT
27-18	6655	1+66	GROUT
27-19	6655	1+23	GROUT
27-20	6655	0+70	GROUT
27-21	6655	0+36	GROUT
27-22	834	0+52	GROUT
27-23	834	0+66	GROUT
27-24	834	0+93	GROUT
27-25	834	0+94	GROUT
27-26	1662	0+01	GROUT
27-27	1662	0+32	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL



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Sep 14, 2021 - 9:55am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1127F.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — JOSEPH N. CONTI — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	19NE18
			R.O.W NO.	NSE	20NE18
					21NE18
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE
PLAN SCALE: 1"=50'
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566
BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – DALE AVE, BELINDA AVE, FOREST VIEW AVE, WALCOTT RD, RIDGEWAY AVE, ELMWOOD RD

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-27	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 32 OF 70	
DRAWING NUMBER	
2020-1597	
FILE NO.:	

I:\Baltimore-Co.15243\65602.Redhouse-Run-Sel.Docs\DWG\Sheets\65602-1127.dwg

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1468	11.8	MANHOLE COATING - CEMENTITIOUS
6656	10.1	MANHOLE COATING - CEMENTITIOUS
6657	9.5	MANHOLE COATING - CEMENTITIOUS
6674	9.0	MANHOLE COATING - CEMENTITIOUS
12173	10.5	MANHOLE COATING - CEMENTITIOUS
15760	8.1	MANHOLE COATING - CEMENTITIOUS
15761	8.3	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
6656	1468	8	215
6657	6674	8	56
6674	6656	8	115
12173	6657	8	68
15761	15760	8	232

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
28-1	6657	0+36	GROUT
28-2	6674	0+18	GROUT
28-3	6656	1+53	GROUT
SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL			

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

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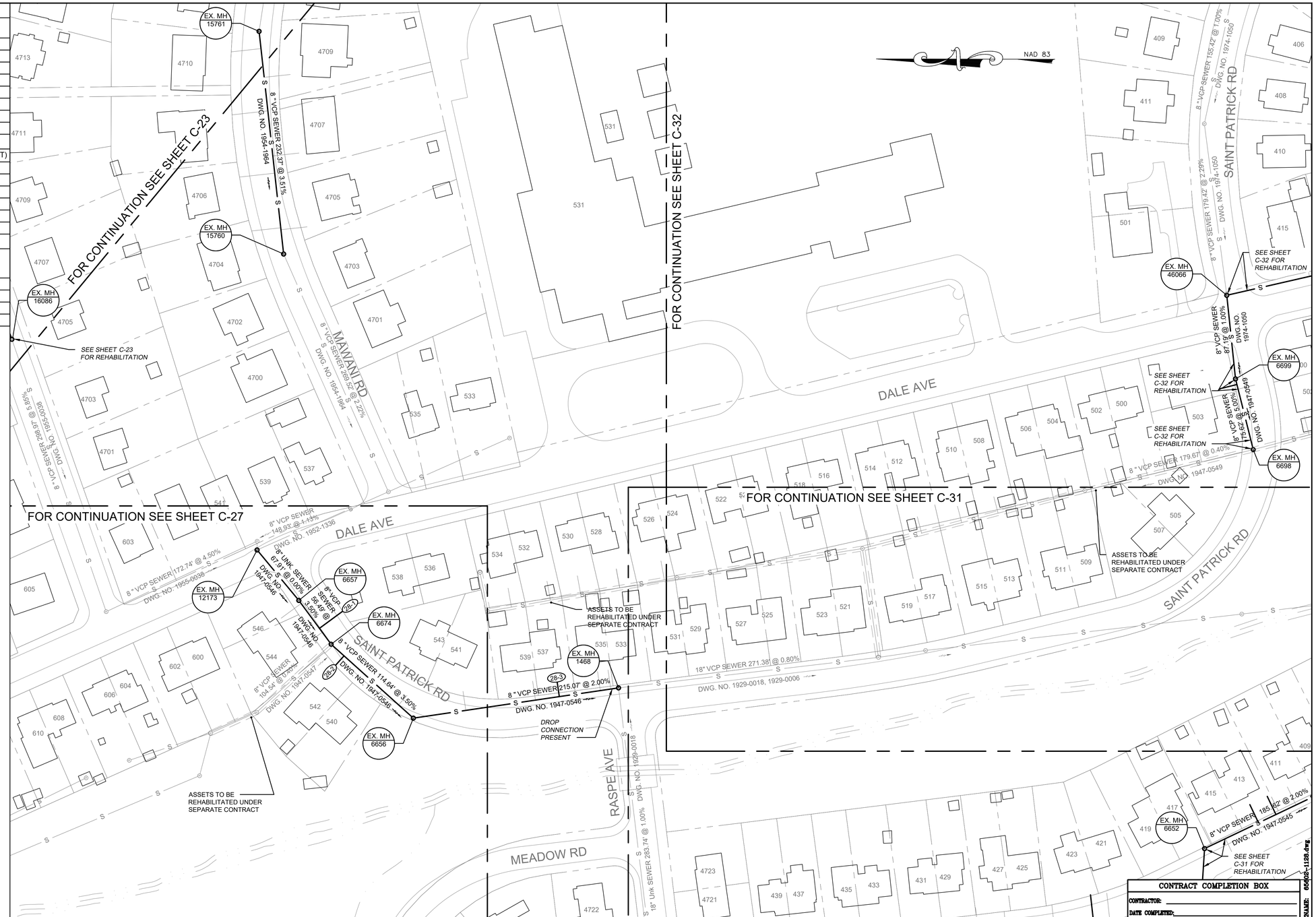
3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

5.) ALL SHCS SHALL BE REINSTATED TO THE SEWER FOLLOWING THE CIPP LINING OPERATION EXCEPT SHCS CONFIRMED TO BE ABANDONED/CAPPED, OR UNLESS OTHERWISE DIRECTED BY THE COUNTY.

6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.



Sep 14, 2021 - 9:56am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1128.dwg

I:\Baltimore-Co.1524\65602 Redhouse-Run-Se\Docs\DWG\Sheets\65602-1128.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SHEET DESIGNATION	CONTRACT NUMBER
C-28	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 33 OF 70	
DRAWING NUMBER	
2020-1598	
FILE NO.:	

SEAL: STATE OF MARYLAND — JOSEPH R. KNOTT — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC. EXECUTIVE PLAZA III, SUITE 803, 11350 McCORMICK RD, HUNT VALLEY, MD 21031, Phone: (443) 541-1300

DGN BY: CTP
DWN BY: IH
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	19NE18
			R.O.W NO.		19NE19
					20NE18
					20NE19

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – SAINT PATRICK RD, MAWANI RD

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
11830	10.8	REBUILD BENCH & CHANNEL, MANHOLE COATING - CEMENTITIOUS
13173	11.3	MANHOLE COATING - CEMENTITIOUS
13174	10.5	MANHOLE COATING - CEMENTITIOUS
13175	10.4	MANHOLE COATING - CEMENTITIOUS
13176	7.8	MANHOLE COATING - CEMENTITIOUS
15303	9.8	MANHOLE COATING - CEMENTITIOUS
15304	10.1	MANHOLE COATING - CEMENTITIOUS
15305	8.8	MANHOLE COATING - CEMENTITIOUS
15306	9.2	MANHOLE COATING - CEMENTITIOUS
15307	9.6	MANHOLE COATING - CEMENTITIOUS
15308	9.7	MANHOLE COATING - CEMENTITIOUS
15309	9.0	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
11830	11828	8	427
13173	11830	8	276
13174	13173	8	209
13176	13173	8	244
15307	15306	8	116
15308	15307	8	85
15309	15308	8	225

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
29-1	13174	0+09	GROUT
29-2	13174	0+60	GROUT
29-3	13174	0+74	GROUT
29-4	13173	0+13	GROUT
29-5	13173	0+62	GROUT
29-6	13173	0+64	GROUT
29-7	13173	1+63	GROUT
29-8	13176	0+27	GROUT
29-9	15309	0+07	GROUT
29-10	15309	0+09	GROUT
29-11	15309	1+09	TRIM
29-12	15309	1+48	GROUT
29-13	15307	1+03	GROUT
SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL			

NOTES:

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Sep 14, 2021 - 9:58am

I:\Baltimore-Co.152435\65602\Redhouse-Run-Set\Docs\DWG\Sheets\65602-1129.dwg

CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

DWG. FILENAME: 65602-1129.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

STATE OF MARYLAND — JOSEPH N. MCCORMICK — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:

O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
			R.O.W NO.	JNE	18NE17 19NE17
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – SPRINGWOOD AVE, MANNINGTON AVE, SPRINGWOOD CT

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-29	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 34 OF 70	
DRAWING NUMBER	
2020-1599	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
6645	8.4	MANHOLE COATING - CEMENTITIOUS
6646	8.9	F/C RESET, MANHOLE COATING - CEMENTITIOUS
6647	8.3	MANHOLE COATING - CEMENTITIOUS
6665	8.4	MANHOLE COATING - CEMENTITIOUS
11828	9.1	MANHOLE COATING - CEMENTITIOUS
11829	12.7	MANHOLE COATING - CEMENTITIOUS
19120	11.4	MANHOLE COATING - CEMENTITIOUS
19121	10.1	MANHOLE COATING - CEMENTITIOUS
20902	8.7	MANHOLE COATING - CEMENTITIOUS
20903	10.2	MANHOLE COATING - CEMENTITIOUS
20904	9.3	MANHOLE COATING - CEMENTITIOUS
C1701/XXXX	7.5	REPLACE EX. LAMPHOLE WITH MANHOLE

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
6645	6644	250	255	8	5

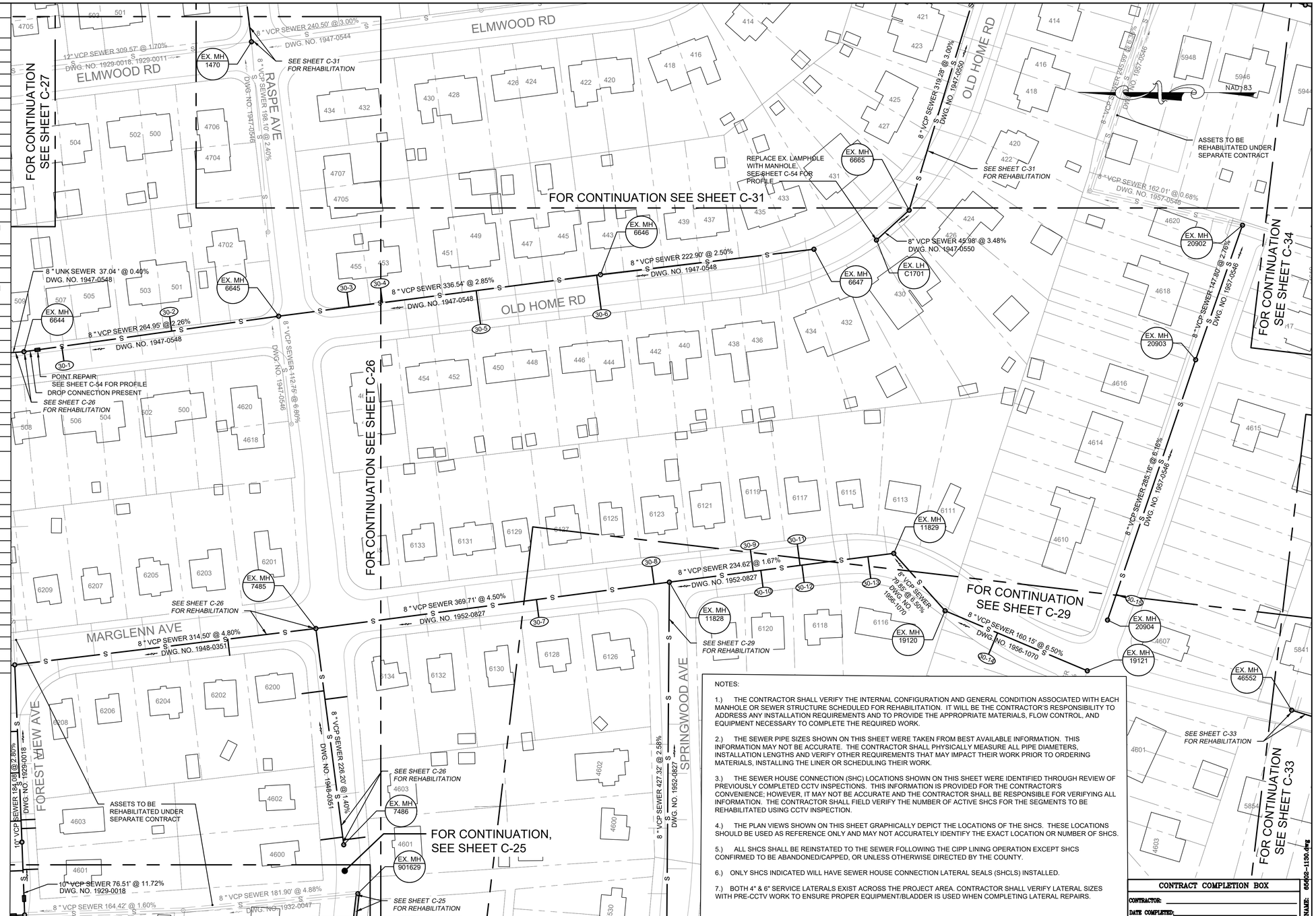
SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
6645	6644	8	265
6646	6645	8	337
6647	6646	8	223
11828	7485	8	370
11829	11828	8	235
19120	11829	8	80
19121	19120	8	160
20903	20902	8	148
20904	20903	8	285
C1701	6665	8	46

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
30-1	6645	2+27	GROUT
30-2	6645	1+12	GROUT
30-3	6646	2+63	GROUT
30-4	6646	2+28	GROUT
30-5	6646	1+30	GROUT
30-6	6646	0+04	GROUT
30-7	11828	1+39	SHCLS
30-8	11828	0+16	GROUT
30-9	11829	1+47	GROUT
30-10	11829	1+39	GROUT
30-11	11829	0+98	GROUT
30-12	11829	0+96	GROUT
30-13	11829	0+27	GROUT
30-14	19121	1+01	GROUT
30-15	20904	0+28	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL



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CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

DWG. FILENAME: 65602-1130.dwg

SEAL: STATE OF MARYLAND — JOSEPH R. BIONDI — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION

BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
			JNE	18NE17
		R.O.W NO.		18NE18
				19NE17
				19NE18

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE

PLAN SCALE: 1"=50'

PROFILE SCALE: _____

1"=50' 50 0 50 100

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – OLD HOME RD, MARGLENN AVE, CHARLES AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-30	21002 SX0
JOB ORDER NUMBER	201-0077-7263
SHEET 35 OF 70	
DRAWING NUMBER	2020-1600
FILE NO.:	4%

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MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
1469	9.3	MANHOLE COATING - CEMENTITIOUS
1470	11.4	MANHOLE COATING - CEMENTITIOUS
6652	9.0	MANHOLE COATING - CEMENTITIOUS
6653	7.5	MANHOLE COATING - CEMENTITIOUS
6658	9.8	MANHOLE COATING - CEMENTITIOUS
6659	9.6	MANHOLE COATING - CEMENTITIOUS
6660	10.8	MANHOLE COATING - CEMENTITIOUS
6661	8.7	MANHOLE COATING - CEMENTITIOUS
6662	8.4	MANHOLE COATING - CEMENTITIOUS
6664	9.0	MANHOLE COATING - CEMENTITIOUS
8499	7.7	MANHOLE COATING - CEMENTITIOUS
8504	8.1	MANHOLE COATING - CEMENTITIOUS
20900	8.0	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
1470	1469	15	273
6652	6661	8	186
6653	6652	8	282
6659	6658	8	315
6661	6660	8	180
6662	6660	8	87
6664	6660	8	360
6665	6664	8	319
8499	6662	8	293
20900	8504	8	153

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
31-1	1470	2+56	TRIM
31-2	1470	1+83	TRIM
31-3	1470	1+55	TRIM
31-4	1470	1+10	TRIM
31-5	6659	3+02	GROUT
31-6	6659	0+26	GROUT
31-7	6653	0+29	SHCLS
31-8	6653	0+37	GROUT
31-9	6653	0+63	GROUT
31-10	6652	0+62	GROUT
31-11	6652	0+82	GROUT
31-12	6661	0+08	GROUT
31-13	6661	0+32	GROUT
31-14	6664	2+57	GROUT
31-15	6664	1+54	GROUT
31-16	6664	1+31	GROUT
31-17	6664	0+66	GROUT
31-18	6664	0+55	GROUT
31-19	6664	0+33	GROUT
31-20	6664	0+05	GROUT
31-21	20900	1+11	SHCLS

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

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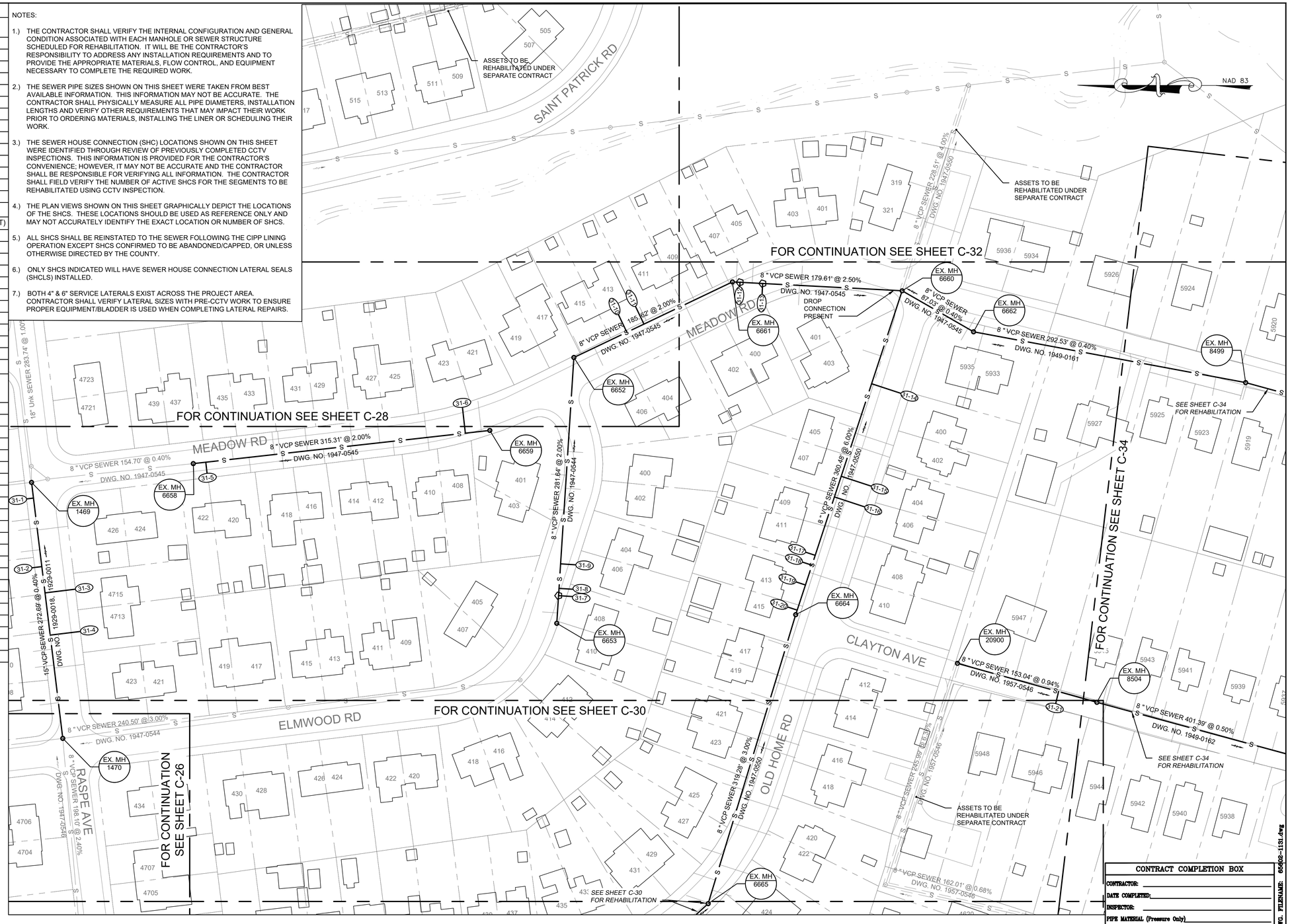

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1131.dwg

Sep 14, 2021 - 10:00am

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1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SHEET DESIGNATION	CONTRACT NUMBER
C-31	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 36 OF 70	
DRAWING NUMBER	
2020-1601	
FILE NO.:	

SEAL

STATE OF MARYLAND — JOSEPH R. MONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
			R.O.W NO.	JNE	18NE18 19NE18
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – MEADOW RD, ELMWOOD RD, OLD HOME RD, RASPE AVE, CLAYTON AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
6698	8.2	MANHOLE COATING - CEMENTITIOUS
6699	8.5	MANHOLE COATING - CEMENTITIOUS
46066	10.5	MANHOLE COATING - CEMENTITIOUS
46069	5.6	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
6699	6698	8	76
46066	6699	8	87
46069	46066	8	259

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
32-1	6699	0+06	GROUT
32-2	46069	0+17	GROUT
SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL			

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

2.) THE SEWER PIPE SIZES SHOWN ON THIS SHEET WERE TAKEN FROM BEST AVAILABLE INFORMATION. THIS INFORMATION MAY NOT BE ACCURATE. THE CONTRACTOR SHALL PHYSICALLY MEASURE ALL PIPE DIAMETERS, INSTALLATION LENGTHS AND VERIFY OTHER REQUIREMENTS THAT MAY IMPACT THEIR WORK PRIOR TO ORDERING MATERIALS, INSTALLING THE LINER OR SCHEDULING THEIR WORK.

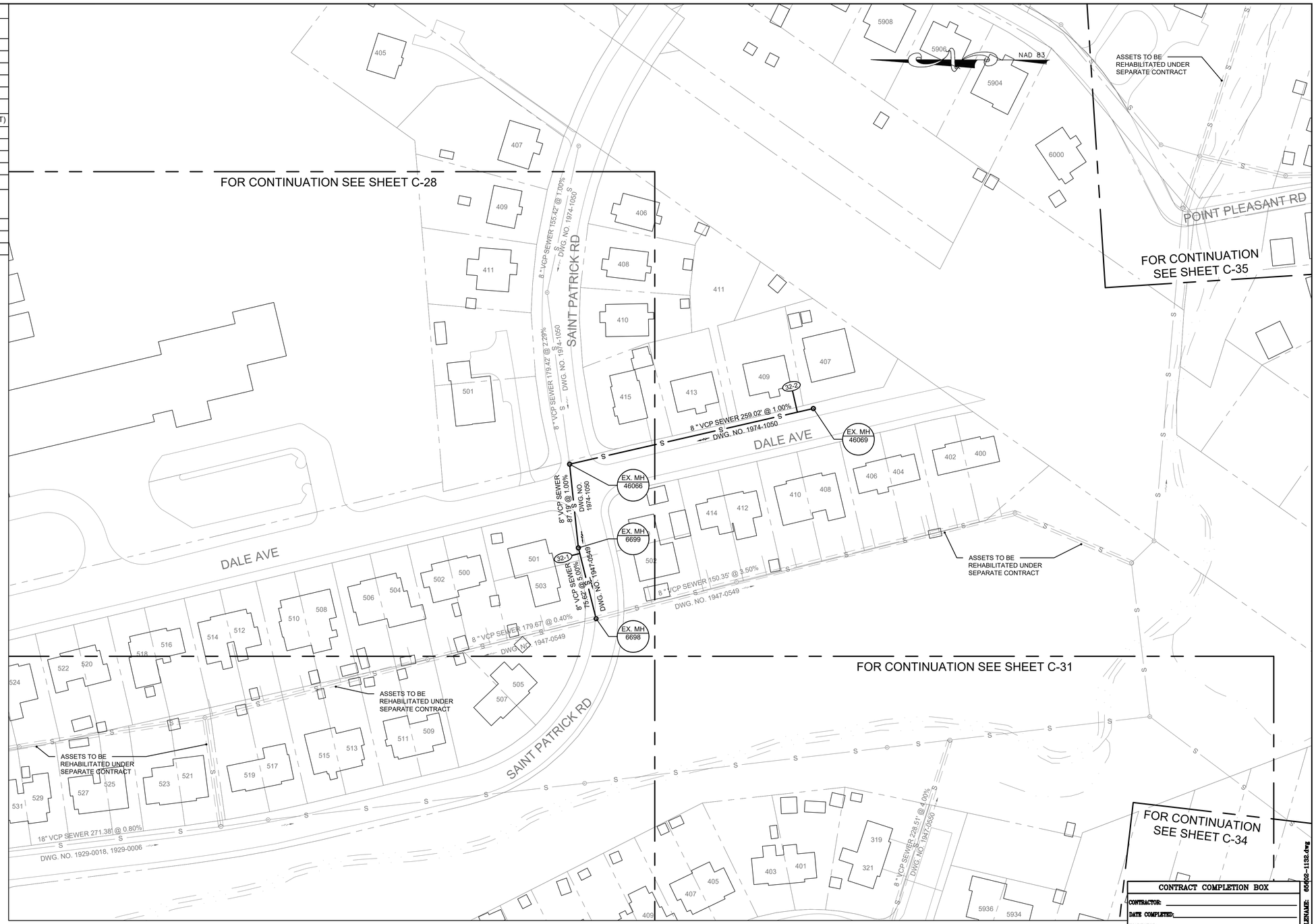
3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

5.) ALL SHCS SHALL BE REINSTATED TO THE SEWER FOLLOWING THE CIPP LINING OPERATION EXCEPT SHCS CONFIRMED TO BE ABANDONED/CAPPED, OR UNLESS OTHERWISE DIRECTED BY THE COUNTY.

6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.



CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1132.dwg

SEAL

STATE OF MARYLAND — JOSEPH R. TOMO — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	18NE18
			R.O.W NO.		18NE19
					19NE18
CONTRACT COMPLETION BOX					19NE19

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – DALE AVE, SAINT PATRICK RD

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-32	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 37 OF 70	
DRAWING NUMBER	
2020-1602	
FILE NO.:	

BALTIMORE COUNTY MARYLAND

I:\Baltimore-Co.152435\65602.Redhouse-Run-Set\Docs\DWG\Sheets\65602-1132.dwg

Sep 14, 2021 - 10:02am

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
31350	10.3	MANHOLE COATING - CEMENTITIOUS
31351	10.2	MANHOLE COATING - CEMENTITIOUS
31352	13.2	MANHOLE COATING - CEMENTITIOUS
31353	14.8	MANHOLE COATING - CEMENTITIOUS
31353A	11.1	MANHOLE COATING - CEMENTITIOUS
32322	12.9	MANHOLE COATING - CEMENTITIOUS
32323	10.7	MANHOLE COATING - CEMENTITIOUS
39041	9.5	MANHOLE COATING - CEMENTITIOUS
39042	7.2	MANHOLE COATING - CEMENTITIOUS
39043	6.8	MANHOLE COATING - CEMENTITIOUS
46552	7.2	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
31351	31350	8	190
31352	31351	8	241
31353	32322	8	264
31353A	31353	8	261
32322	31352	8	18
32323	32322	8	240
39042	39041	8	222
39043	39042	8	287
46552	39043	8	61

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
33-1	32323	0+05	GROUT
33-2	32323	0+67	GROUT
33-3	32323	1+35	GROUT
33-4	32323	1+64	GROUT
33-5	31353A	0+38	GROUT
33-6	31353A	1+86	SHCLS
33-7	31352	1+81	SHCLS
33-8	31352	2+27	SHCLS
33-9	31351	0+93	GROUT
33-10	31351	1+15	GROUT
33-11	31351	1+22	GROUT
33-12	39043	2+36	GROUT
33-13	39043	2+41	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

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3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

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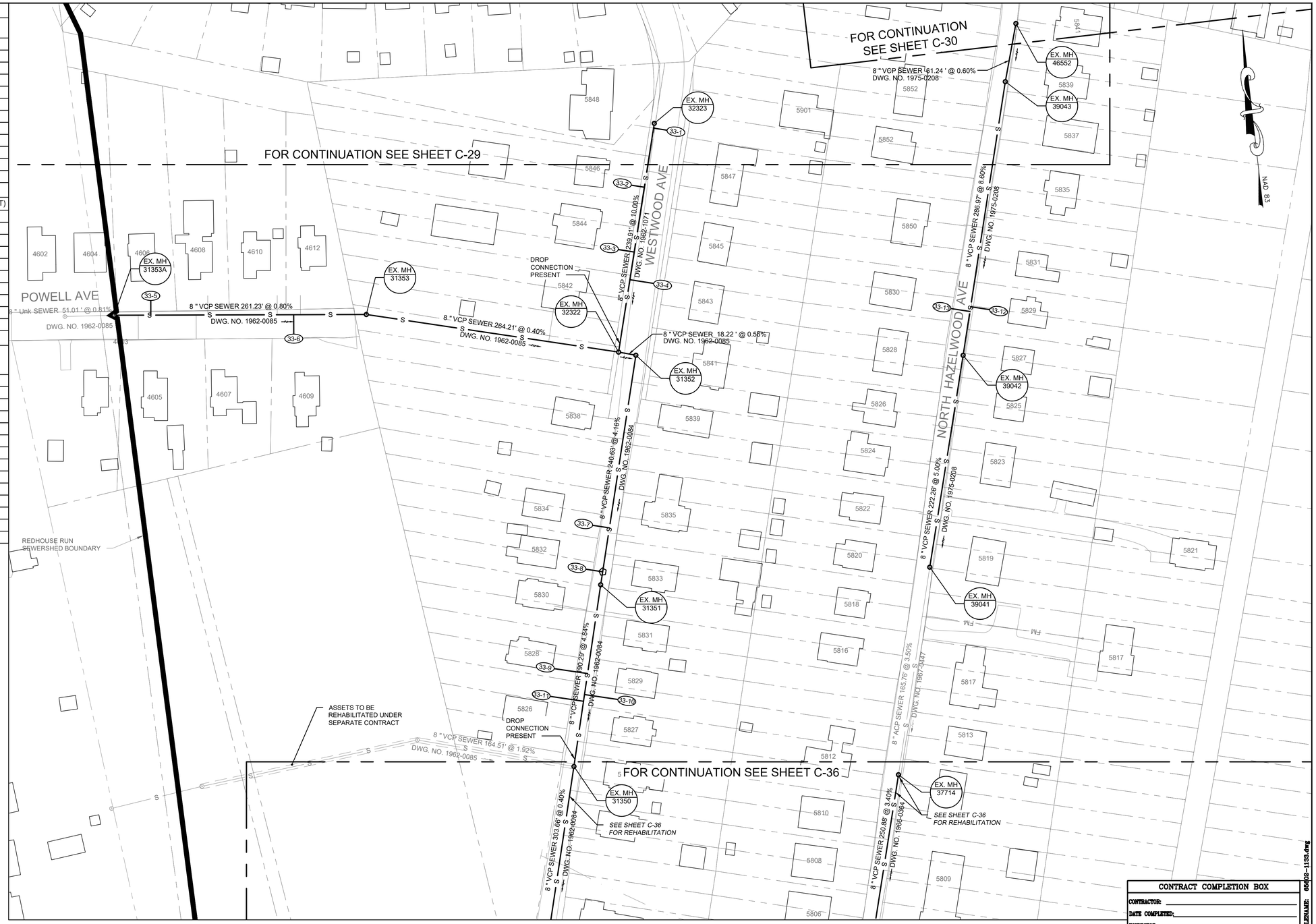

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1133.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — JOSEPH R. BNL — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	17NE17
			R.O.W NO.		17NE18
					18NE17
CONTRACT COMPLETION BOX					18NE18

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE
PLAN SCALE: 1"=50'
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – WESTWOOD AVE, NORTH HAZELWOOD AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-33	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 38 OF 70	
DRAWING NUMBER	
2020-1603	
FILE NO.:	

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MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
8498	8.7	MANHOLE COATING - CEMENTITIOUS
8501	9.9	MANHOLE COATING - CEMENTITIOUS
8502	10.7	MANHOLE COATING - CEMENTITIOUS
8503	9.1	MANHOLE COATING - CEMENTITIOUS
15935	9.1	MANHOLE COATING - CEMENTITIOUS
32059	7.9	MANHOLE COATING - CEMENTITIOUS
43607	9.7	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
32059	8501	18	26	8	8

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
8498	8499	8	266
8502	8501	8	259
8503	8502	8	230
8504	8503	8	401
15935	32059	8	150
32059	8501	8	36
43607	15935	8	104

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
34-1	8503	0+99	GROUT
34-2	8504	3+86	GROUT
34-3	8504	3+66	GROUT
34-4	8502	1+55	GROUT
34-5	8502	1+97	SHCLS
34-6	8502	2+28	GROUT
34-7	8502	2+42	GROUT
34-8	15935	1+29	SHCLS
34-9	15935	0+45	SHCLS
34-10	43607	0+99	GROUT
34-11	43607	0+35	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

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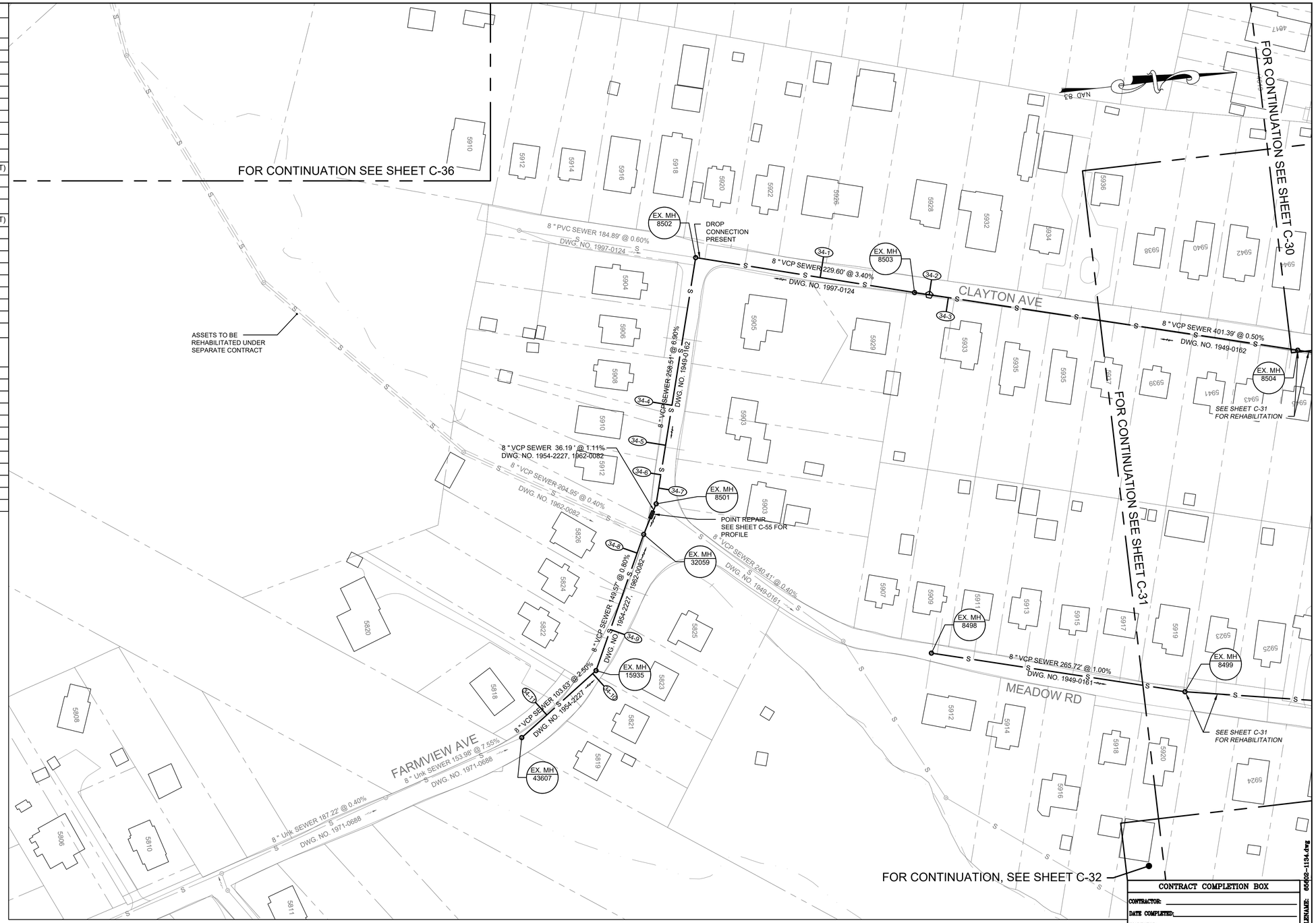

Sep 14, 2021 - 10:04am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1134.dwg

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SEAL: STATE OF MARYLAND — JOSEPH W. CUNNINGHAM — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	17NE17
			R.O.W NO.		17NE18
					18NE18

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE: PLAN SCALE: 1"=50' ; PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566
BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – FARMVIEW AVE, CLAYTON AVE, MEADOW RD

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-34	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 39 OF 70	
DRAWING NUMBER	
2020-1604	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
28859	10.1	MANHOLE COATING - CEMENTITIOUS
28860	7.8	MANHOLE COATING - CEMENTITIOUS
28861	7.4	MANHOLE COATING - CEMENTITIOUS
28862	11.1	MANHOLE COATING - CEMENTITIOUS
30236	7.8	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
53996	53995	111	114	8	3

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
28860	28859	8	192
28861	28860	8	116
28862	28860	8	94
28863	28862	8	443
30236	28859	8	84

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
35-1	28860	1+85	SHCLS
35-2	53996	1+12	REPLACE

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

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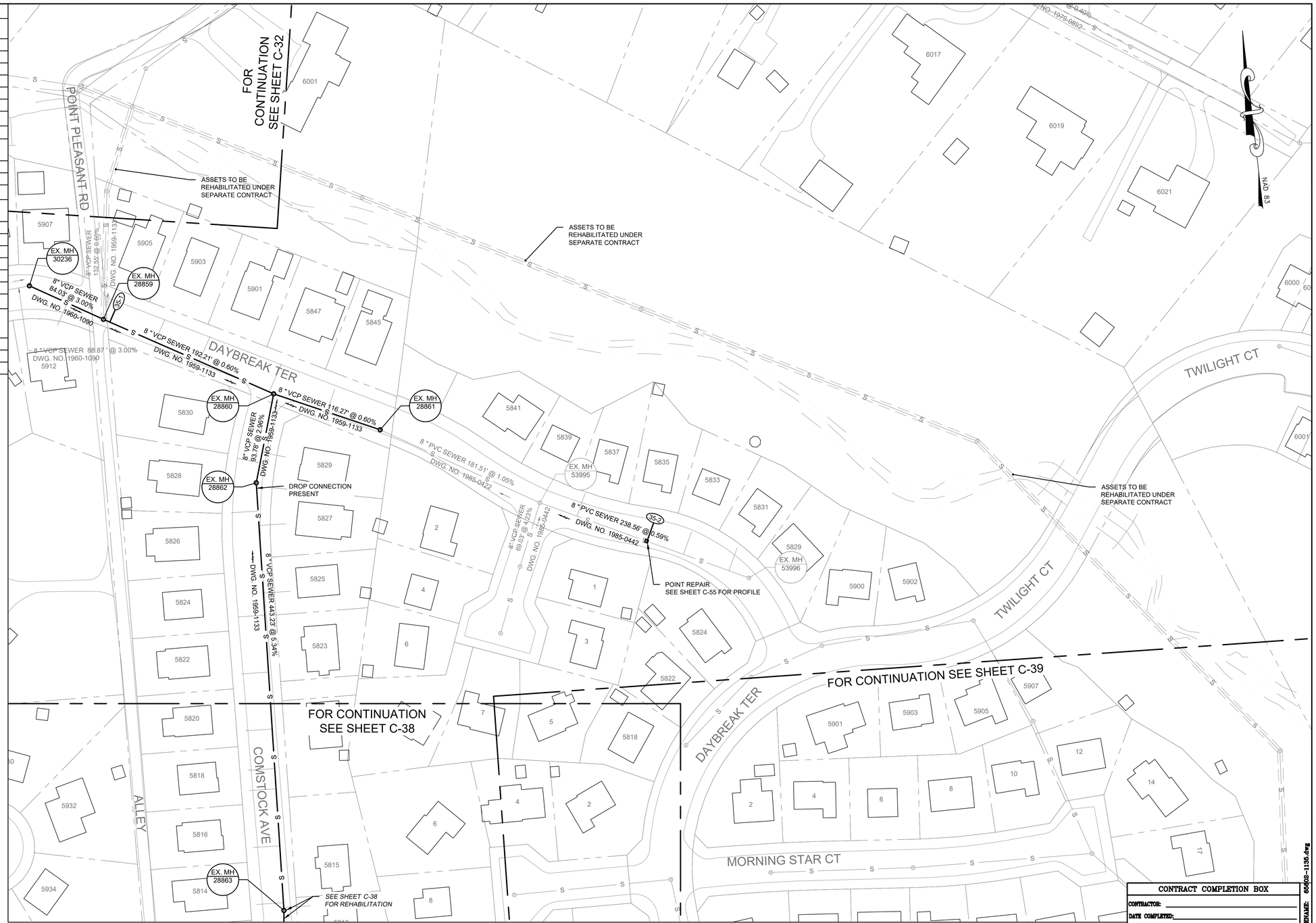

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1135.dwg

I:\Baltimore-Co.15243\65602.Redhouse-Run-Sel\Docs\DWG\Sheets\65602-1135.dwg

SEAL: STATE OF MARYLAND — JOSEPH R. BONY — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

CONTRACT COMPLETION BOX

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	JNE	17NE19
		17NE20
		18NE19
		18NE20

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – DAYBREAK TER, COMSTOCK AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-35	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 40 OF 70	
DRAWING NUMBER	
2020-1605	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
31345	10.3	MANHOLE COATING - CEMENTITIOUS
31346	10.7	MANHOLE COATING - CEMENTITIOUS
31347	9.0	MANHOLE COATING - CEMENTITIOUS
31348	12.8	MANHOLE COATING - CEMENTITIOUS
31349	12.2	MANHOLE COATING - CEMENTITIOUS
32060	11.8	MANHOLE COATING - CEMENTITIOUS
32061	15.7	MANHOLE COATING - CEMENTITIOUS
32147	9.8	MANHOLE COATING - CEMENTITIOUS
36728	9.8	MANHOLE COATING - CEMENTITIOUS
37712	8.5	MANHOLE COATING - CEMENTITIOUS
37713	11.7	MANHOLE COATING - CEMENTITIOUS
37714	8.7	MANHOLE COATING - CEMENTITIOUS
50801	7.1	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
^37713	37712	20	32	8	12

^ INDICATES CONTINGENT POINT REPAIR - CONTRACTOR TO CONFIRM WITH PRE-REHABILITATION CCTV PRIOR TO INITIATING REPAIR ACTIVITIES

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
31346	50801	8	241
31348	31347	8	317
31349	31348	8	165
31350	31349	8	304
32060	31346	8	89
32061	32060	8	246
32147	31348	8	96
36728	31345	8	249
37712	31347	8	24
37713	37712	8	99
37714	37713	8	251
50801	31345	8	69

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
36-1	31349	1+45	GROUT
36-2	31348	0+98	GROUT
36-3	32147	0+07	SHCLS
36-4	32061	0+48	GROUT
36-5	32060	0+50	SHCLS

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

2.) THE SEWER PIPE SIZES SHOWN ON THIS SHEET WERE TAKEN FROM BEST AVAILABLE INFORMATION. THIS INFORMATION MAY NOT BE ACCURATE. THE CONTRACTOR SHALL PHYSICALLY MEASURE ALL PIPE DIAMETERS, INSTALLATION LENGTHS AND VERIFY OTHER REQUIREMENTS THAT MAY IMPACT THEIR WORK PRIOR TO ORDERING MATERIALS, INSTALLING THE LINER OR SCHEDULING THEIR WORK.

3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

5.) ALL SHCS SHALL BE REINSTATED TO THE SEWER FOLLOWING THE CIPP LINING OPERATION EXCEPT SHCS CONFIRMED TO BE ABANDONED/CAPPED, OR UNLESS OTHERWISE DIRECTED BY THE COUNTY.

6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1136.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — JOSEPH R. CONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

CONTRACT COMPLETION BOX

P.W.A. NO.	KEY SHEET	POSITION SHT
	JNE	16NE17
R.O.W NO.		16NE18
		17NE17
		17NE18

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE
PLAN SCALE: 1"=50'
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – HAZELWOOD AVE, WESTWOOD AVE, SOUTHWOOD AVE, NORTH HAZELWOOD AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-36	21002 SX0
JOB ORDER NUMBER	201-0077-7263
SHEET 41 OF 70	
DRAWING NUMBER	2020-1606
FILE NO.:	4%

I:\Baltimore-Co.1524\65602 Redhouse-Run-Sel\Docs\DWG\Sheets\65602-1136.dwg

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
43613	6.3	MANHOLE COATING - CEMENTITIOUS
43614	6.8	MANHOLE COATING - CEMENTITIOUS
43615	8.2	MANHOLE COATING - CEMENTITIOUS
43616	10.6	MANHOLE COATING - CEMENTITIOUS
43617	11.2	MANHOLE COATING - CEMENTITIOUS
67782	9.2	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
43614	43613	8	99
43615	43614	8	47
43616	67782	8	259
43617	43616	8	364
67782	43615	8	93

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
37-1	43614	0+05	GROUT
37-2	43614	0+48	GROUT
37-3	43617	0+44	GROUT
SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL			

NOTES:

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3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

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7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

Sep 14, 2021 - 10:08am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1137.dwg

I:\Baltimore-Co.15243\65602.Redhouse-Run-Sel\Docs\DWG\Sheets\65602-1137.dwg

SEAL: STATE OF MARYLAND — JOSEPH N. TOMY — 55452 — PROFESSIONAL ENGINEER

DATE: 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	15NE18
			R.O.W NO.		16NE18
					16NE19
CONTRACT COMPLETION BOX					17NE18

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – MCCORMICK AVE, HAZELWOOD AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-37	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 42 OF 70	
DRAWING NUMBER	
2020-1607	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
18347	8.2	MANHOLE COATING - CEMENTITIOUS
22957	8.1	MANHOLE COATING - CEMENTITIOUS
22958	9.0	MANHOLE COATING - CEMENTITIOUS
28863	7.1	MANHOLE COATING - CEMENTITIOUS
28864	7.4	MANHOLE COATING - CEMENTITIOUS
29999	8.1	MANHOLE COATING - CEMENTITIOUS
30000	10.4	MANHOLE COATING - CEMENTITIOUS
30230	7.5	MANHOLE COATING - CEMENTITIOUS
30231	8.0	MANHOLE COATING - CEMENTITIOUS
30232	8.4	MANHOLE COATING - CEMENTITIOUS
30237	8.1	MANHOLE COATING - CEMENTITIOUS
30238	7.7	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
22957	18347	83	88	8	5

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
22957	18347	8	90
22958	22957	8	376
28864	28863	8	324
29999	22958	8	399
30000	29999	8	300
30230	30231	8	128
30231	30232	8	242
30237	30231	8	148
30238	30232	8	130

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
38-1	28864	2+86	SHCLS
38-2	30000	0+28	GROUT
38-3	29999	0+71	SHCLS
38-4	29999	1+42	SHCLS
38-5	29999	1+46	SHCLS
38-6	29999	1+83	GROUT
38-7	22958	0+54	GROUT
38-8	22958	1+08	GROUT
38-9	22957	0+43	SHCLS
38-10	22957	0+86	REPLACE

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

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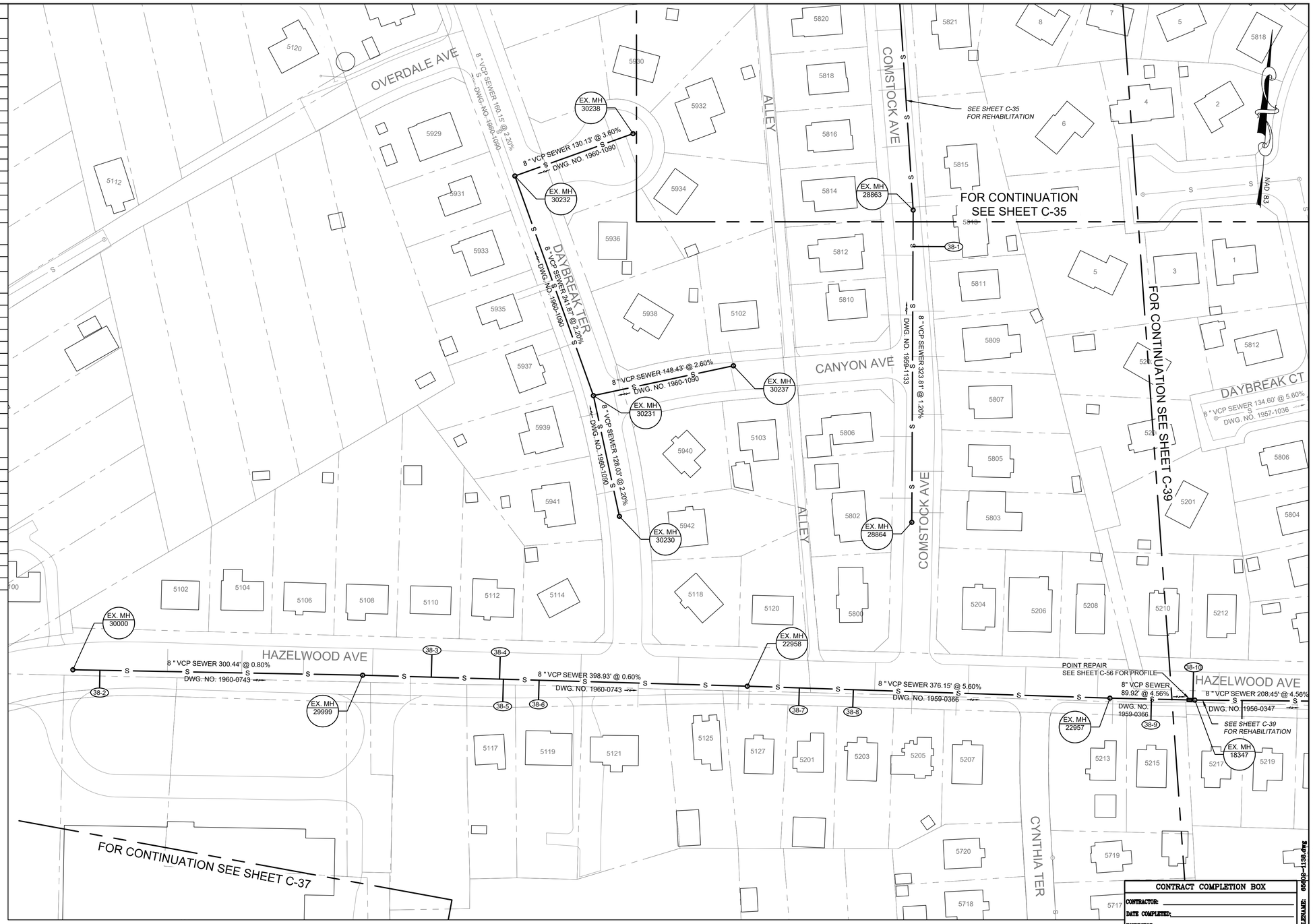

Sep 14, 2021 - 10:09am

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CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1138.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SHEET DESIGNATION	CONTRACT NUMBER
C-38	21002 SX0
	JOB ORDER NUMBER
	201-0077-7263
	SHEET 43 OF 70
	DRAWING NUMBER
	2020-1608
	FILE NO.:

SEAL: STATE OF MARYLAND — JOSEPH C. PONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	16NE18
			R.O.W NO.		16NE19
					17NE18
CONTRACT COMPLETION BOX					17NE19

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – HAZELWOOD AVE, DAYBREAK TER, COMSTOCK AVE, CANYON AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
18345	8.2	MANHOLE COATING - CEMENTITIOUS
18346	13.2	MANHOLE COATING - CEMENTITIOUS
18348	14.1	MANHOLE COATING - CEMENTITIOUS
18349	5.9	MANHOLE COATING - CEMENTITIOUS
21200	9.4	MANHOLE COATING - CEMENTITIOUS
21201	9.4	MANHOLE COATING - CEMENTITIOUS

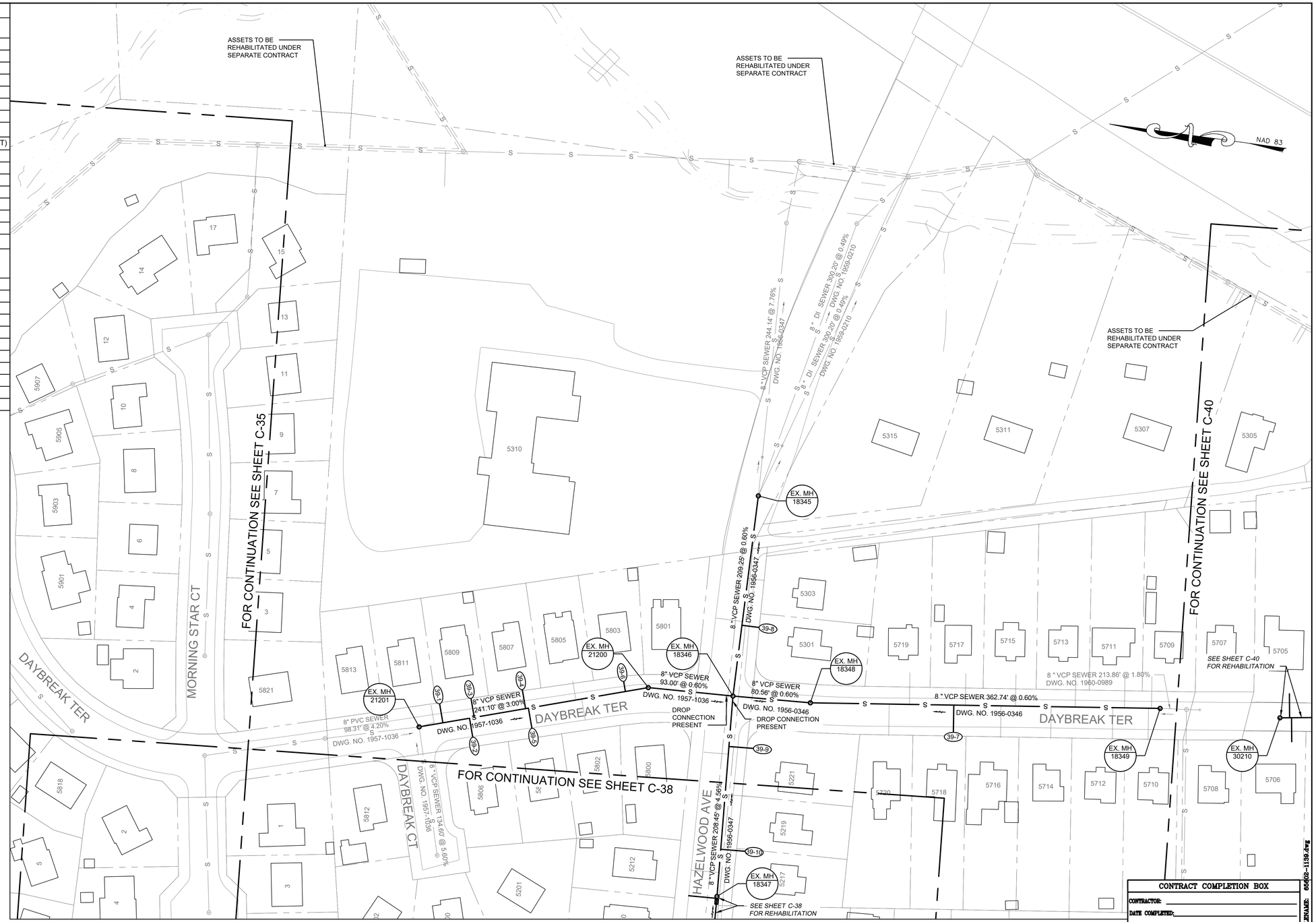
SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
18346	18345	8	209
18347	18346	8	208
18348	18346	8	81
18349	18348	8	363
21200	18346	8	93
21201	21200	8	241

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
39-1	21201	0+25	TRIM, SHCLS
39-2	21201	0+53	SHCLS
39-3	21201	0+58	TRIM, SHCLS
39-4	21201	1+12	SHCLS
39-5	21201	1+15	SHCLS
39-6	21201	2+17	SHCLS
39-7	18349	2+14	GROUT
39-8	18346	0+74	GROUT
39-9	18347	1+56	GROUT
39-10	18347	0+49	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL



Sep 14, 2021 - 10:10am

NOTES:

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1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

DWG. FILENAME: 65602-1139.dwg

I:\Baltimore-Co.15243\65602.Redhouse-Run-Sel\Docs\DWG\Sheets\65602-1139.dwg

SEAL

STATE OF MARYLAND — JOSEPH A. MONTY — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 , EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE
CONTRACT COMPLETION BOX		

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	JNE	16NE19
	NSE	16NE20
		17NE19
		17NE20

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – DAYBREAK TER, HAZELWOOD AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-39	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 44 OF 70	
DRAWING NUMBER	
2020-1609	
FILE NO.:	

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
30210	8.7	MANHOLE COATING - CEMENTITIOUS
30211	12.1	MANHOLE COATING - CEMENTITIOUS
30212	12.2	MANHOLE COATING - CEMENTITIOUS
30213	9.8	MANHOLE COATING - CEMENTITIOUS
30214	8.9	MANHOLE COATING - CEMENTITIOUS
30215	8.5	MANHOLE COATING - CEMENTITIOUS
30216	8.5	MANHOLE COATING - CEMENTITIOUS
30217	8.4	MANHOLE COATING - CEMENTITIOUS
31174	10.1	MANHOLE COATING - CEMENTITIOUS
31175	9.6	MANHOLE COATING - CEMENTITIOUS
31176	8.4	MANHOLE COATING - CEMENTITIOUS
31177	8.3	MANHOLE COATING - CEMENTITIOUS
31178	12.7	MANHOLE COATING - CEMENTITIOUS
31179	6.6	MANHOLE COATING - CEMENTITIOUS
31180	12.1	MANHOLE COATING - CEMENTITIOUS
31181	7.1	MANHOLE COATING - CEMENTITIOUS
31182	8.1	MANHOLE COATING - CEMENTITIOUS

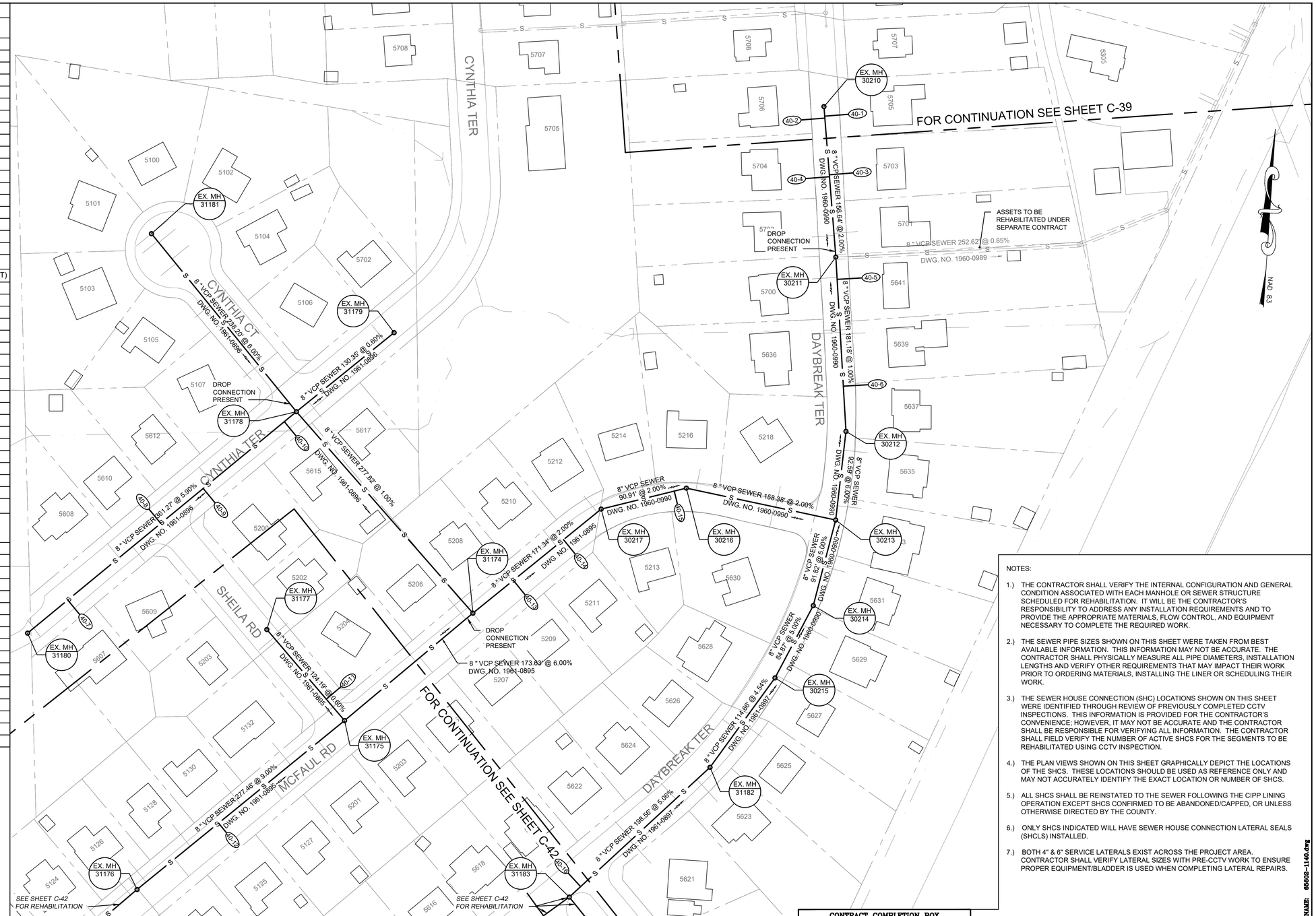
SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
30210	30211	8	157
30212	30211	8	181
30213	30212	8	93
30214	30213	8	92
30215	30214	8	85
30216	30213	8	158
30217	30216	8	91
31174	30217	8	171
31175	31174	8	174
31176	31175	8	277
31177	31175	8	124
31178	31174	8	278
31179	31178	8	130
31180	31178	8	361
31181	31178	8	238
31182	30215	8	115
31183	31182	8	199

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
40-1	30210	0+10	GROUT
40-2	30210	0+12	GROUT
40-3	30210	0+71	SHCLS
40-4	30210	0+73	GROUT
40-5	30212	1+58	GROUT
40-6	30212	0+47	GROUT
40-7	31180	0+54	GROUT
40-8	31180	1+79	GROUT
40-9	31180	2+36	GROUT
40-10	31180	3+45	GROUT
40-11	31177	0+95	TRIM
40-12	31176	1+09	GROUT
40-13	31174	0+54	GROUT
40-14	31174	1+21	GROUT
40-15	30217	0+78	GROUT
40-16	31183	0+16	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL



NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

2.) THE SEWER PIPE SIZES SHOWN ON THIS SHEET WERE TAKEN FROM BEST AVAILABLE INFORMATION. THIS INFORMATION MAY NOT BE ACCURATE. THE CONTRACTOR SHALL PHYSICALLY MEASURE ALL PIPE DIAMETERS, INSTALLATION LENGTHS AND VERIFY OTHER REQUIREMENTS THAT MAY IMPACT THEIR WORK PRIOR TO ORDERING MATERIALS, INSTALLING THE LINER OR SCHEDULING THEIR WORK.

3.) THE SEWER HOUSE CONNECTION (SHC) LOCATIONS SHOWN ON THIS SHEET WERE IDENTIFIED THROUGH REVIEW OF PREVIOUSLY COMPLETED CCTV INSPECTIONS. THIS INFORMATION IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE; HOWEVER, IT MAY NOT BE ACCURATE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF ACTIVE SHCS FOR THE SEGMENTS TO BE REHABILITATED USING CCTV INSPECTION.

4.) THE PLAN VIEWS SHOWN ON THIS SHEET GRAPHICALLY DEPICT THE LOCATIONS OF THE SHCS. THESE LOCATIONS SHOULD BE USED AS REFERENCE ONLY AND MAY NOT ACCURATELY IDENTIFY THE EXACT LOCATION OR NUMBER OF SHCS.

5.) ALL SHCS SHALL BE REINSTATED TO THE SEWER FOLLOWING THE CIPP LINING OPERATION EXCEPT SHCS CONFIRMED TO BE ABANDONED/CAPPED, OR UNLESS OTHERWISE DIRECTED BY THE COUNTY.

6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.

1"=50' 50 0 50 100

CONTRACT COMPLETION BOX

CONTRACTOR: _____

DATE COMPLETED: _____

INSPECTOR: _____

PIPE MATERIAL (Pressure Only) _____

SEAL: STATE OF MARYLAND — JOSEPH R. CONTY — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

CONTRACT COMPLETION BOX

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	JNE	15NE19
		15NE20
		16NE19
		16NE20

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE

PLAN SCALE: 1"=50'
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – DAYBREAK TER, MCFAUL RD, CYNTHIA TER, CYNTHIA CT, SHEILA RD

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-40	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 45 OF 70	
DRAWING NUMBER	
2020-1610	
FILE NO.:	

DWG. FILENAME: 65602-1140.dwg

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Sep 14, 2021 - 10:11am

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
32144	9.0	MANHOLE COATING - CEMENTITIOUS
32145	7.4	MANHOLE COATING - CEMENTITIOUS
32146	9.4	MANHOLE COATING - CEMENTITIOUS

POINT REPAIRS

UPSTREAM MH	DOWNSTREAM MH	POINT REPAIR LOCATION (FROM UPSTREAM MH)			
		BEGIN	END	DIAMETER	LENGTH (FT)
52962	52961	242	245	8	3

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
32145	32144	8	115
32146	32145	8	343

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
41-1	32146	2+88	SHCLS
41-2	52962	2+43	REPLACE

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

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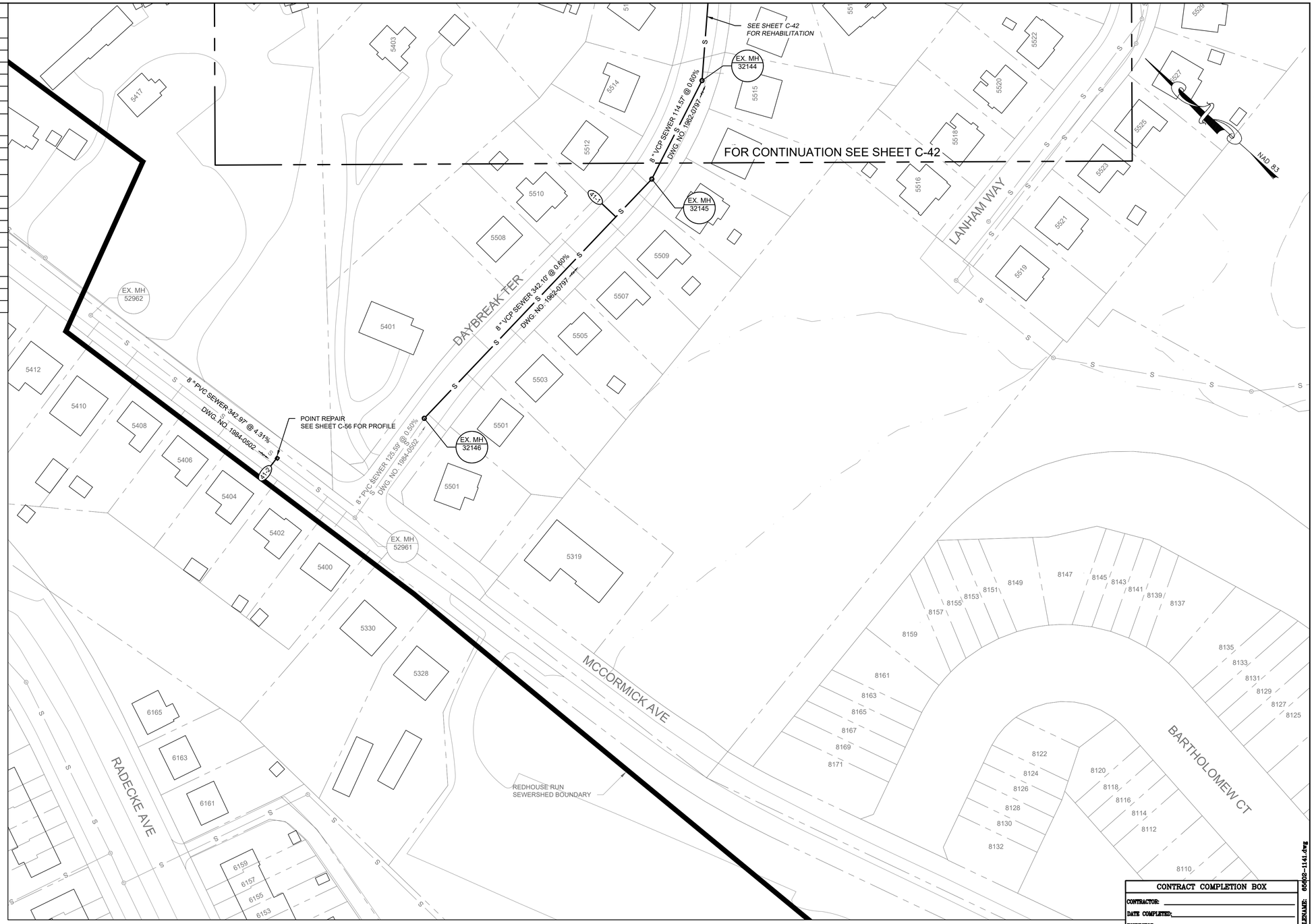
6.) ONLY SHCS INDICATED WILL HAVE SEWER HOUSE CONNECTION LATERAL SEALS (SHCLS) INSTALLED.

7.) BOTH 4" & 6" SERVICE LATERALS EXIST ACROSS THE PROJECT AREA. CONTRACTOR SHALL VERIFY LATERAL SIZES WITH PRE-CCTV WORK TO ENSURE PROPER EQUIPMENT/BLADDER IS USED WHEN COMPLETING LATERAL REPAIRS.



Sep 14, 2021 - 10:13am

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DWG. FILENAME: 65602-1141.dwg

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SHEET DESIGNATION	CONTRACT NUMBER
C-41	21002 SX0
JOB ORDER NUMBER	201-0077-7263
SHEET 46 OF 70	
DRAWING NUMBER	2020-1611
FILE NO.:	4%

SEAL: STATE OF MARYLAND — JOSEPH A. CONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	13NE18
			R.O.W NO.		14NE18
					14NE19
CONTRACT COMPLETION BOX					15NE18

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	

DEPARTMENT OF PUBLIC WORKS	
APPROVED BY:	SEE SHEET 2020-1566 DIRECTOR
DATE:	SEE SHEET 2020-1566
BUR. OF ENGINEERING & CONSTRUCTION	
APPROVED BY:	SEE SHEET 2020-1566 CHIEF
DATE:	SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – DAYBREAK TER, MCCORMICK AVE

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

MANHOLE REHABILITATION

MANHOLE #	MANHOLE DEPTH	TYPE
31183	7.8	MANHOLE COATING - CEMENTITIOUS
31185	6.2	MANHOLE COATING - CEMENTITIOUS
31945	8.5	MANHOLE COATING - CEMENTITIOUS
31946	14.1	MANHOLE COATING - CEMENTITIOUS
31947	9.5	MANHOLE COATING - CEMENTITIOUS
31948	7.8	MANHOLE COATING - CEMENTITIOUS
31949	10.8	MANHOLE COATING - CEMENTITIOUS
31950	7.6	MANHOLE COATING - CEMENTITIOUS
31951	8.6	MANHOLE COATING - CEMENTITIOUS
31952	6.8	MANHOLE COATING - CEMENTITIOUS
31953	8.3	MANHOLE COATING - CEMENTITIOUS
31954	8.1	MANHOLE COATING - CEMENTITIOUS
31955	8.0	MANHOLE COATING - CEMENTITIOUS
32009	12.0	MANHOLE COATING - CEMENTITIOUS
32141	9.4	MANHOLE COATING - CEMENTITIOUS

SEWER PIPES TO BE LINED

UPSTREAM MH	DOWNSTREAM MH	DIAMETER	LENGTH (FT)
31185	31183	8	102
31945	31183	8	150
31946	31945	8	116
31947	31946	8	301
31948	31947	8	208
31949	31948	8	321
31950	31176	8	266
31951	31950	8	291
31952	31951	8	135
31953	31949	8	90
31954	31953	8	94
31955	31949	8	117
32009	31946	8	113
32141	31947	8	119
32144	31949	8	143

SEWER HOUSE CONNECTION - LATERAL REPAIRS

REPAIR NO.	UPSTREAM MH	STATION FROM US MH	TYPE OF REPAIR
42-1	31950	1+17	GROUT
42-2	31950	1+55	GROUT
42-3	31946	0+45	SHCLS
42-4	31945	0+53	GROUT
42-5	31945	0+83	GROUT
42-6	31945	1+17	GROUT
42-7	31185	0+21	GROUT
42-8	31185	0+15	GROUT

SHCLS - FULL CIRCUMFERENTIAL CIPP SEWER HOUSE CONNECTION LATERAL SEAL

NOTES:

1.) THE CONTRACTOR SHALL VERIFY THE INTERNAL CONFIGURATION AND GENERAL CONDITION ASSOCIATED WITH EACH MANHOLE OR SEWER STRUCTURE SCHEDULED FOR REHABILITATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS ANY INSTALLATION REQUIREMENTS AND TO PROVIDE THE APPROPRIATE MATERIALS, FLOW CONTROL, AND EQUIPMENT NECESSARY TO COMPLETE THE REQUIRED WORK.

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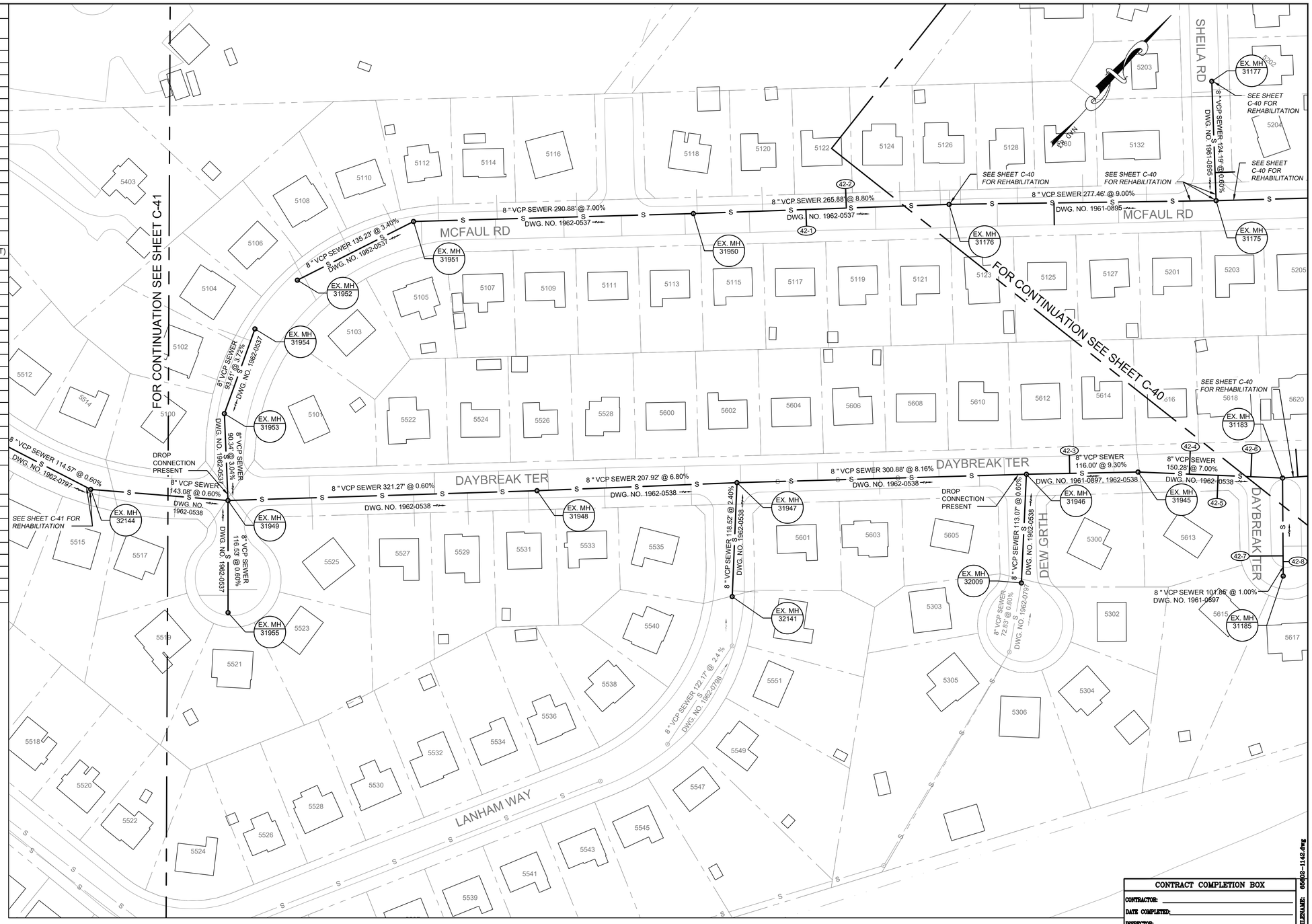

Sep 14, 2021 - 10:14am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1142.dwg

1"=50' 50 0 50 100

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — JOSEPH E. BONN — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	14NE18 14NE19 15NE18 15NE19 16NE19
			R.O.W NO.		
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE
PLAN SCALE: 1"=50'
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN – DAYBREAK TER, MCFAUL RD, DEW GRTH, LANHAM WAY

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:1406

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-42	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 47 OF 70	
DRAWING NUMBER	
2020-1612	
FILE NO.:	

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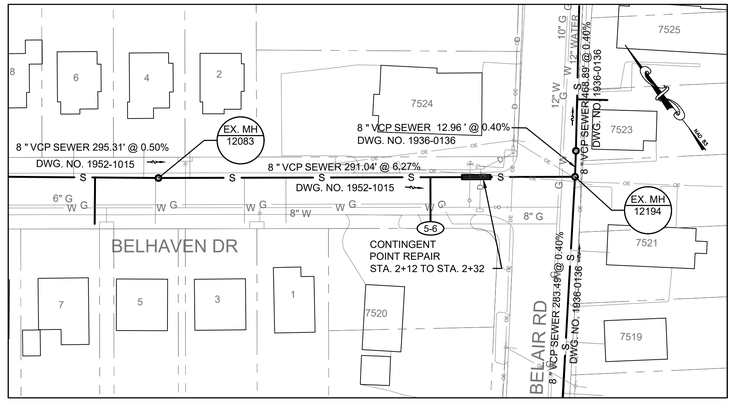
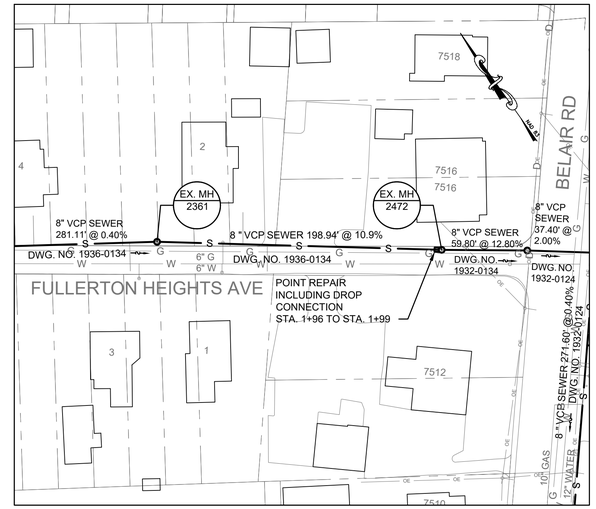


PLAN: MH 12083 - MH 12194

HORZ: 1" = 50'

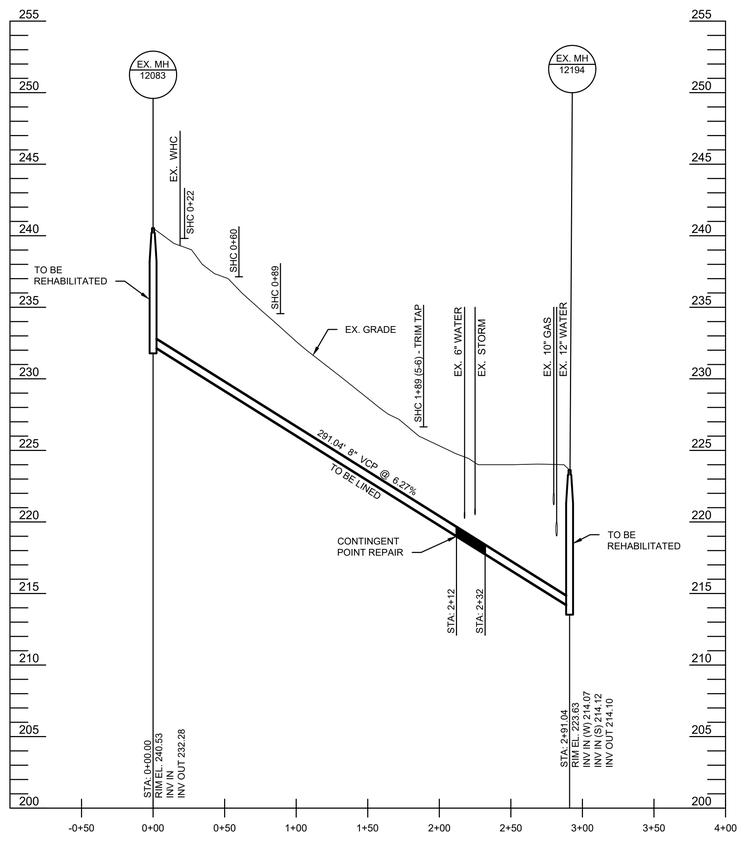
SEE SHEET C-5



PLAN: MH 2361 - MH 2472

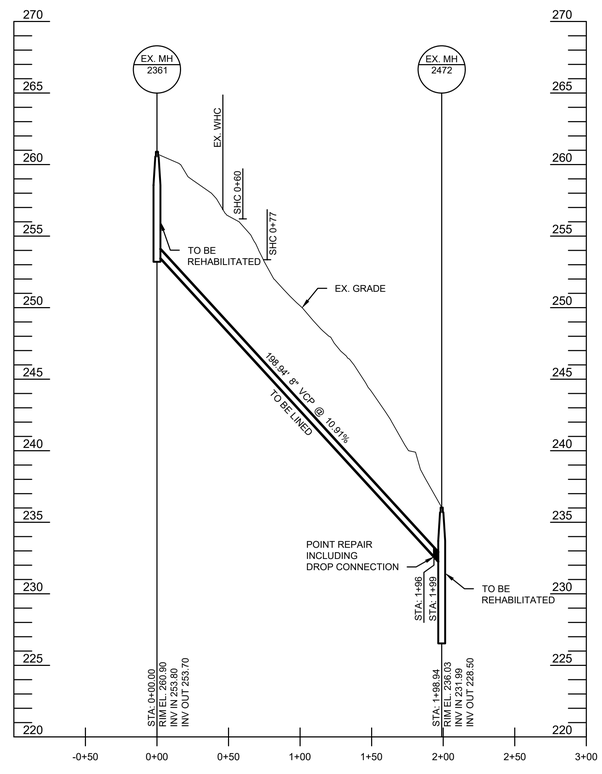
HORZ: 1" = 50'

SEE SHEET C-8



PROFILE: MH 12083 - MH 12194

HORZ: 1" = 50'
VERT: 1" = 5'



PROFILE: MH 2361 - MH 2472

HORZ: 1" = 50'
VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
2. REGARDING BGE FACILITIES SHOWN HEREIN (GAS AND ELECTRIC), SEE NOTE 33 ON SHEET G-3.
3. THE CONTRACTOR SHALL CCTV ALL PIPE SEGMENTS DESIGNATED WITH POINT REPAIRS TO CONFIRM THE LIMITS OF EACH POINT REPAIR PRIOR TO CONSTRUCTION.
4. REPAIR ACTIVITIES REQUIRING EXCAVATION (I.E. POINT REPAIRS, MANHOLE REPLACEMENT, & PIPE REPLACEMENT) SHALL BE PERFORMED PRIOR TO LINING WORK.
5. SEE SHEET C-59 FOR THE REQUIRED EXTENTS OF PAVEMENT RESTORATION ASSOCIATED WITH TRENCHING IN PAVED STREETS.

1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1201.dwg

SEAL

STATE OF MARYLAND — JOSEPH A. CONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				NSE	24NE18 25NE18
			R.O.W NO.		
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' 1"=5'

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLANS & PROFILES C-5 & C-8

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-43	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 48 OF 70	
DRAWING NUMBER	
2020-1613	
FILE NO.:	

BALTIMORE COUNTY MARYLAND

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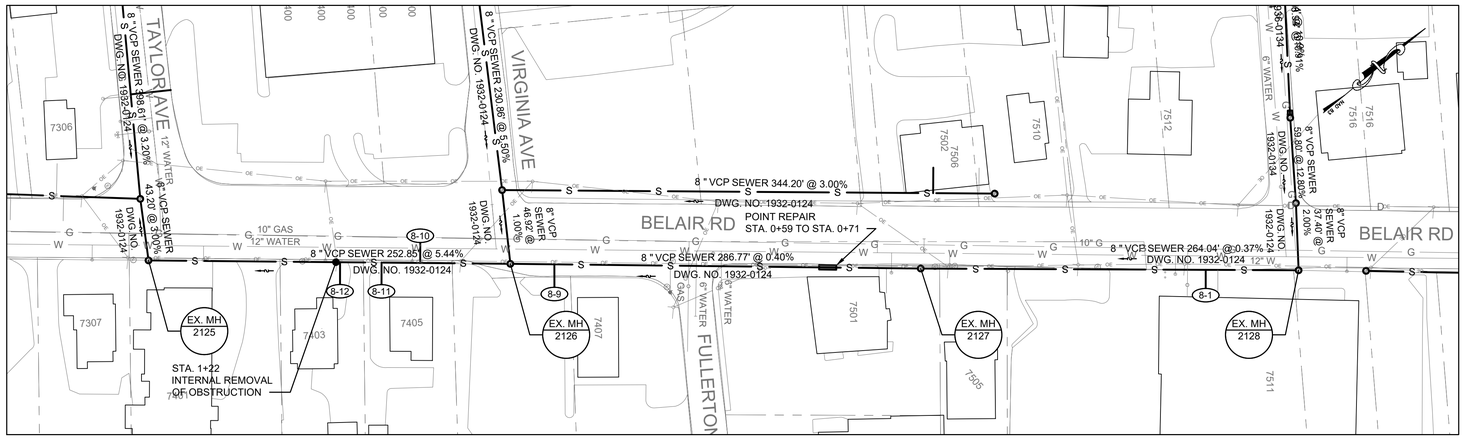
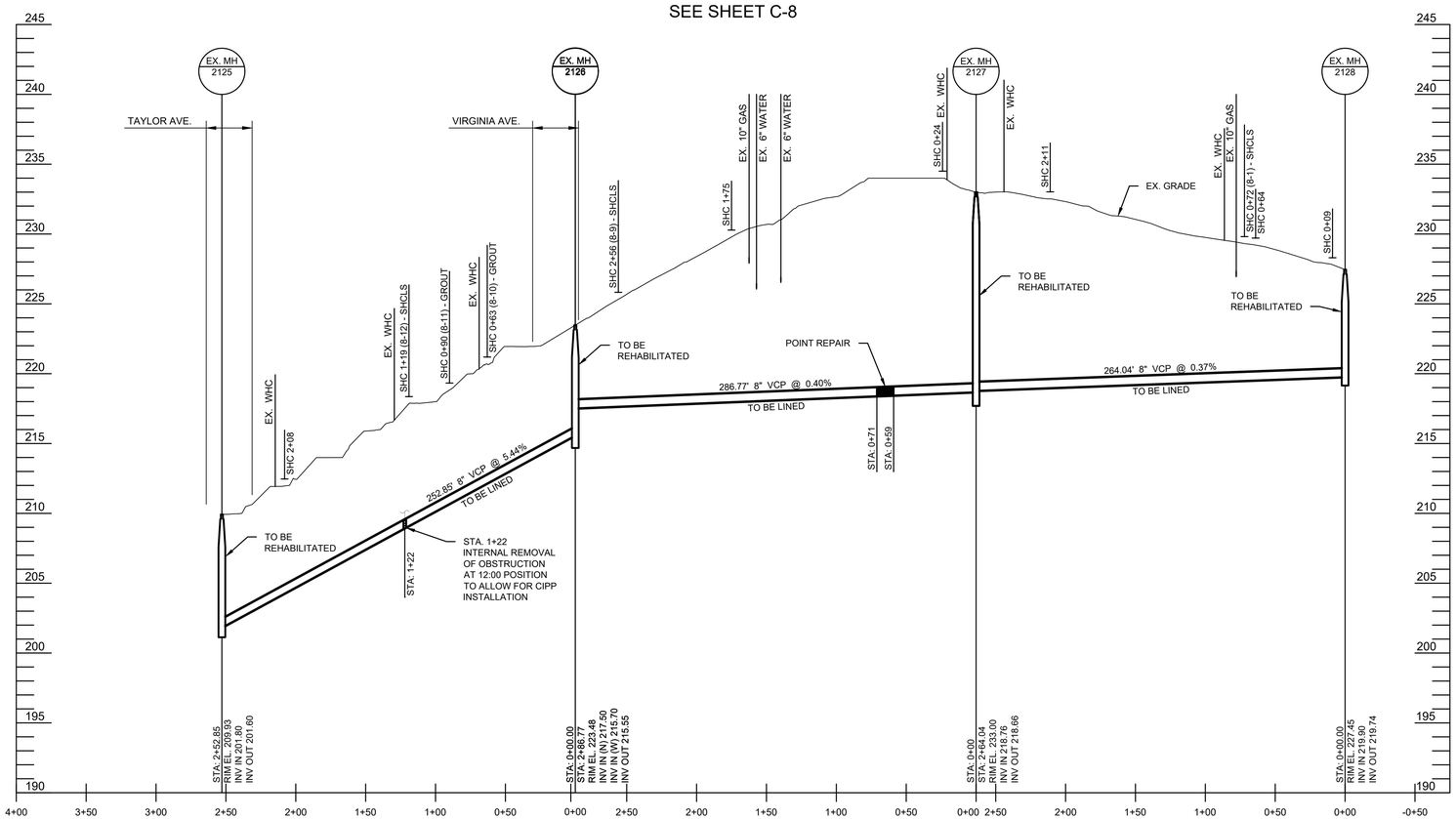
Sep 14, 2021 - 10:14am



PLAN: MH 2128 - MH 2127 & MH 2127 - MH 2126

HORZ: 1" = 50'

SEE SHEET C-8



PROFILE: MH 2128 - MH 2127 & MH 2127 - MH 2126 & MH 2126 - MH 2125

HORZ: 1" = 50'
VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
2. REGARDING BGE FACILITIES SHOWN HEREIN (GAS AND ELECTRIC), SEE NOTE 33 ON SHEET G-3.
3. THE CONTRACTOR SHALL CCTV ALL PIPE SEGMENTS DESIGNATED WITH POINT REPAIRS TO CONFIRM THE LIMITS OF EACH POINT REPAIR PRIOR TO CONSTRUCTION.
4. REPAIR ACTIVITIES REQUIRING EXCAVATION (I.E. POINT REPAIRS, MANHOLE REPLACEMENT, & PIPE REPLACEMENT) SHALL BE PERFORMED PRIOR TO LINING WORK.
5. SEE SHEET C-59 FOR THE REQUIRED EXTENTS OF PAVEMENT RESTORATION ASSOCIATED WITH TRENCHING IN PAVED STREETS.

1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1202.dwg

SEAL: STATE OF MARYLAND — JOSEPH T. MONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD.
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	NSE	24NE18

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' 1"=5'

CONTRACT COMPLETION BOX						
BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES					
DATE REVIEWED:						

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN & PROFILE C-8

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-44	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 49 OF 70	
DRAWING NUMBER	
2020-1614	
FILE NO.:	

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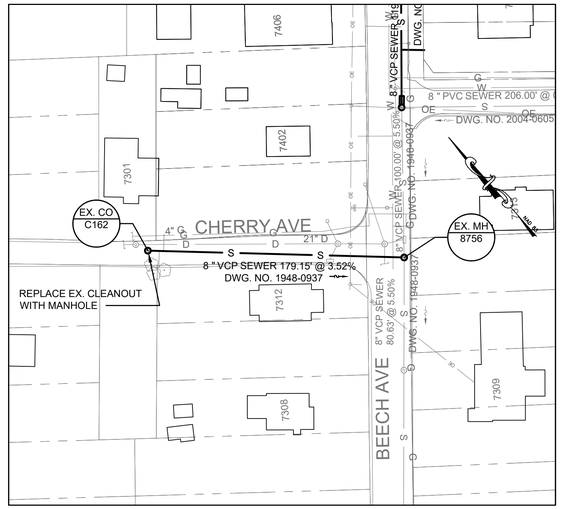
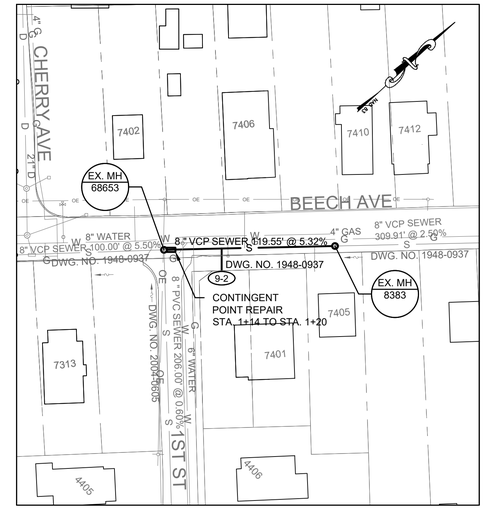
Sep 14, 2021 - 10:14am



PLAN: CO C162 - MH 8756

HORZ: 1" = 50'

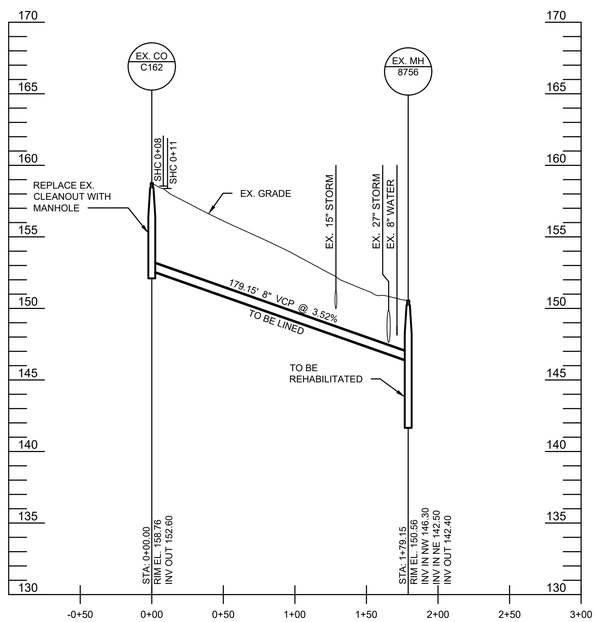
SEE SHEET C-9



PLAN: MH 8383 - MH 68653

HORZ: 1" = 50'

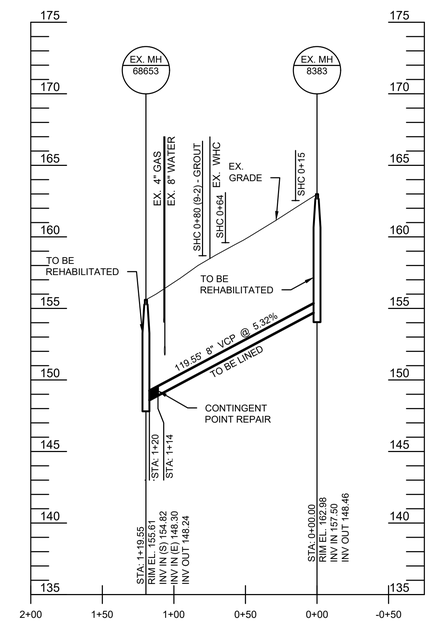
SEE SHEET C-9



PROFILE: CO C162 - MH 8756

HORZ: 1" = 50'

VERT: 1" = 5'



PROFILE: MH 8383 - MH 68653

HORZ: 1" = 50'

VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
2. REGARDING BGE FACILITIES SHOWN HEREIN (GAS AND ELECTRIC), SEE NOTE 33 ON SHEET G-3.
3. THE CONTRACTOR SHALL CCTV ALL PIPE SEGMENTS DESIGNATED WITH POINT REPAIRS TO CONFIRM THE LIMITS OF EACH POINT REPAIR PRIOR TO CONSTRUCTION.
4. REPAIR ACTIVITIES REQUIRING EXCAVATION (I.E. POINT REPAIRS, MANHOLE REPLACEMENT, & PIPE REPLACEMENT) SHALL BE PERFORMED PRIOR TO LINING WORK.
5. SEE SHEET C-59 FOR THE REQUIRED EXTENTS OF PAVEMENT RESTORATION ASSOCIATED WITH TRENCHING IN PAVED STREETS.

1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1203.dwg

I:\Baltimore-Co.15243\65602.Redhouse-Run-Sel.Docs\DWG\Sheets\65602-1203.dwg

Sep 14, 2021 - 10:15am

SEAL: STATE OF MARYLAND — JOSEPH A. CONTI — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				NSE	23NE18
			R.O.W NO.		
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' / 1"=5'

DEPARTMENT OF PUBLIC WORKS	
APPROVED BY: SEE SHEET 2020-1566	DIRECTOR
DATE: SEE SHEET 2020-1566	
BUR. OF ENGINEERING & CONSTRUCTION	
APPROVED BY: SEE SHEET 2020-1566	CHIEF
DATE: SEE SHEET 2020-1566	

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

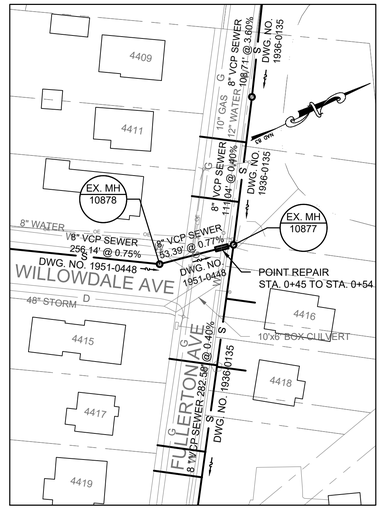
PLAN & PROFILE C-9

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

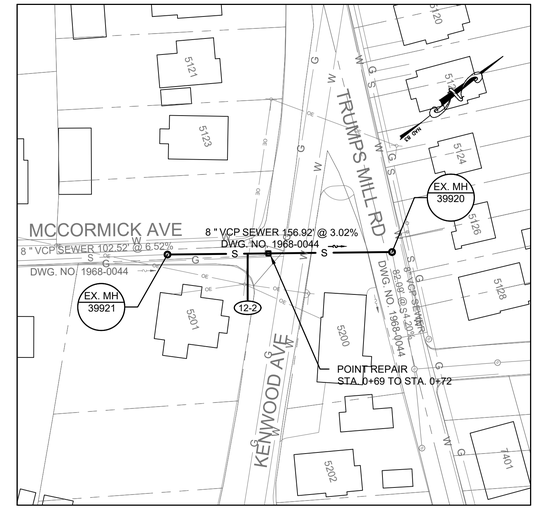
SHEET DESIGNATION	CONTRACT NUMBER
C-45	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 50 OF 70	
DRAWING NUMBER	
2020-1615	
FILE NO.:	



PLAN: MH 10878 - MH 10877

HORZ: 1" = 50'

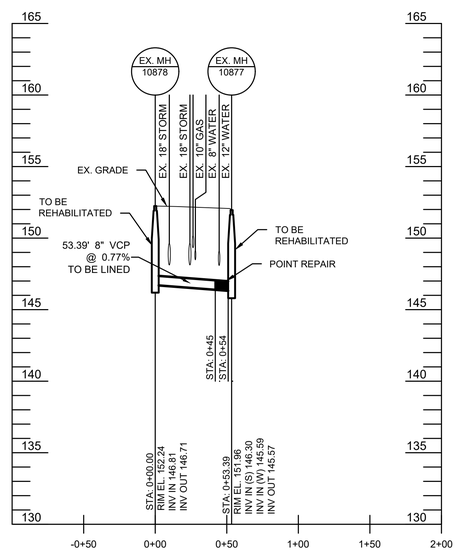
SEE SHEET C-10



PLAN: MH 39921 - MH 39920

HORZ: 1" = 50'

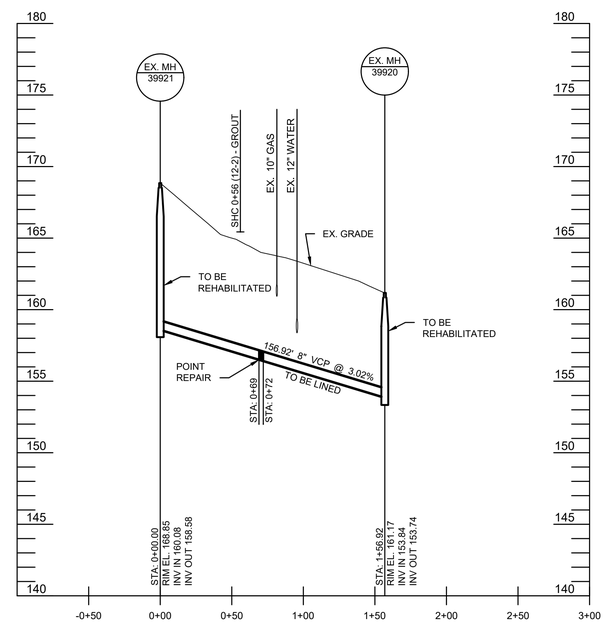
SEE SHEET C-12



PROFILE: MH 10878 - MH 10877

HORZ: 1" = 50'

VERT: 1" = 5'



PROFILE: MH 39921 - MH 39920

HORZ: 1" = 50'

VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
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5. SEE SHEET C-59 FOR THE REQUIRED EXTENTS OF PAVEMENT RESTORATION ASSOCIATED WITH TRENCHING IN PAVED STREETS.

1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1204.dwg

I:\Baltimore-Co.1524\65602-Redhouse-Run-Se\Docs\DWG\Sheets\65602-1204.dwg

SEAL

STATE OF MARYLAND — JOSEPH A. CUNNINGHAM — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 , EXPIRATION DATE 12/23/21

ENGINEER:

O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION

BY	DATE	P.W.A. NO.
		R.O.W NO.

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION | TRAFFIC | HIGHWAYS | STRUCTURES | STORM DRAINS | SEWER | WATER | FIELD ENGINEER

REVIEWED BY:

DATE REVIEWED:

SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES

KEY SHEET	POSITION SHT
NSE	21NE20
	23NE19

DRAWING SCALE

PLAN SCALE: 1"=50'

PROFILE SCALE: 1"=50' / 1"=5'

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR

DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF

DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLANS & PROFILES C-10 & C-12

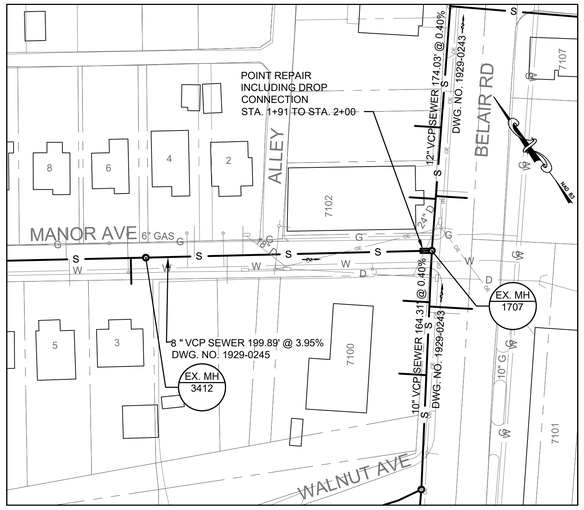
SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-46	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 51 OF 70	
DRAWING NUMBER	
2020-1616	
FILE NO.:	

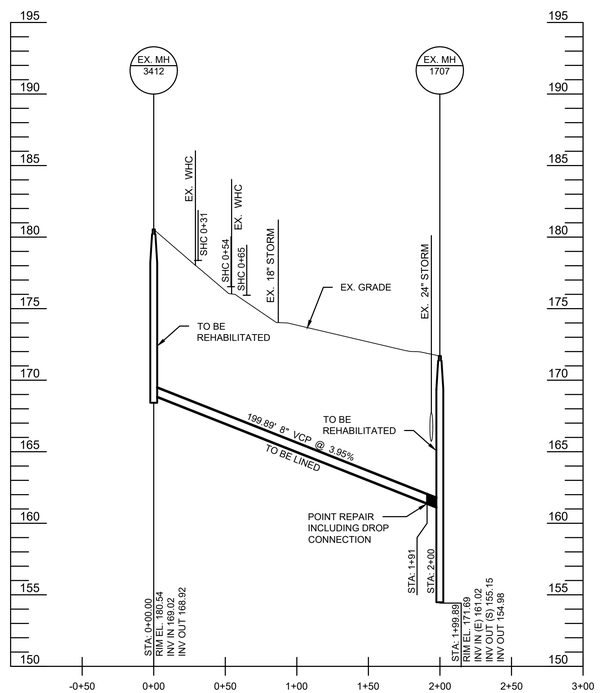
Sep 14, 2021 - 10:15am



PLAN: MH 3412 - MH 1707

HORZ: 1" = 50'

SEE SHEET C-14



PROFILE: MH 3412 - MH 1707

HORZ: 1" = 50'

VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
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4. REPAIR ACTIVITIES REQUIRING EXCAVATION (I.E. POINT REPAIRS, MANHOLE REPLACEMENT, & PIPE REPLACEMENT) SHALL BE PERFORMED PRIOR TO LINING WORK.
5. SEE SHEET C-59 FOR THE REQUIRED EXTENTS OF PAVEMENT RESTORATION ASSOCIATED WITH TRENCHING IN PAVED STREETS.

1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1205.dwg

I:\Baltimore-Co.15243\65602\Redhouse-Run-Sel\Docs\DWG\Sheets\65602-1205.dwg

SEAL: STATE OF MARYLAND — JOSEPH R. BOVA — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	
			R.O.W NO.	NSE	23NE17	PLAN SCALE:	1"=50'
						PROFILE SCALE:	1"=50' / 1"=5'
CONTRACT COMPLETION BOX							

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN & PROFILE C-14 – MANOR AVENUE

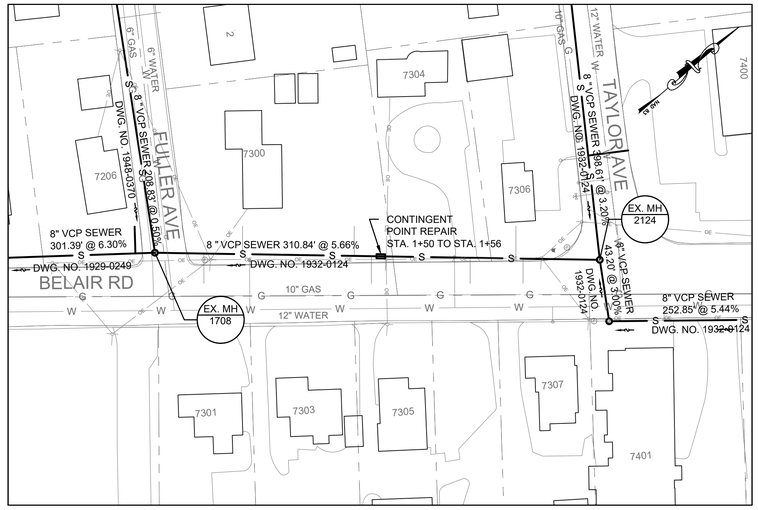
SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-47	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 52 OF 70	
DRAWING NUMBER	
2020-1617	
FILE NO.:	47

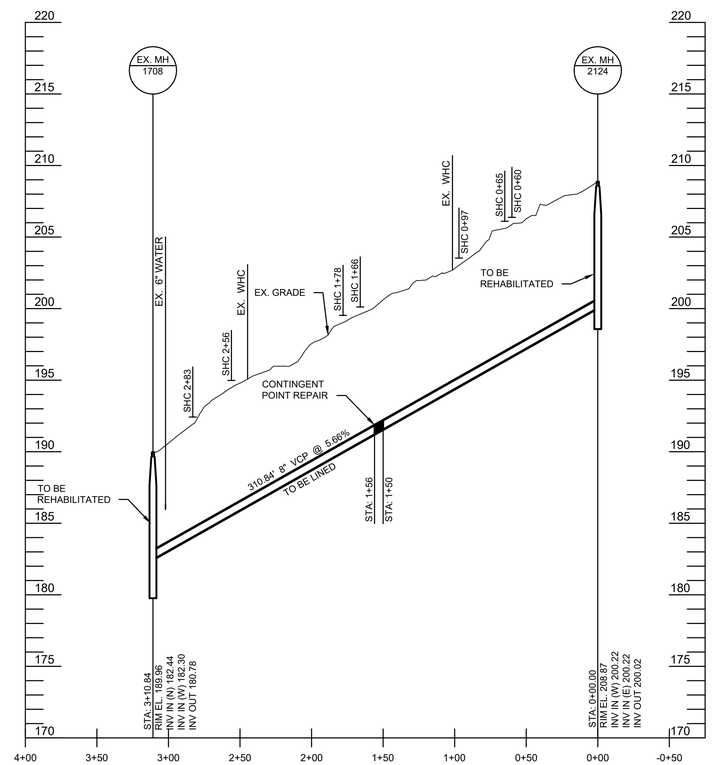
Sep 14, 2021 - 10:15am



PLAN: MH 2124 - MH 1708

HORZ: 1" = 50'

SEE SHEET C-14



PROFILE: MH 2124 - MH 1708

HORZ: 1" = 50'
VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
2. REGARDING BGE FACILITIES SHOWN HEREIN (GAS AND ELECTRIC), SEE NOTE 33 ON SHEET G-3.
3. THE CONTRACTOR SHALL CCTV ALL PIPE SEGMENTS DESIGNATED WITH POINT REPAIRS TO CONFIRM THE LIMITS OF EACH POINT REPAIR PRIOR TO CONSTRUCTION.
4. REPAIR ACTIVITIES REQUIRING EXCAVATION (I.E. POINT REPAIRS, MANHOLE REPLACEMENT, & PIPE REPLACEMENT) SHALL BE PERFORMED PRIOR TO LINING WORK.
5. SEE SHEET C-59 FOR THE REQUIRED EXTENTS OF PAVEMENT RESTORATION ASSOCIATED WITH TRENCHING IN PAVED STREETS.

1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1206.dwg

I:\Baltimore-Co.1524\65602\Redhouse-Run-Se\Docs\DWG\Sheets\65602-1206.dwg

Sep 14, 2021 - 10:15am

SEAL: STATE OF MARYLAND, JOSEPH A. NOVI, No. 55452, PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

CONTRACT COMPLETION BOX

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	NSE	23NE18 24NE18

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' 1"=5'

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

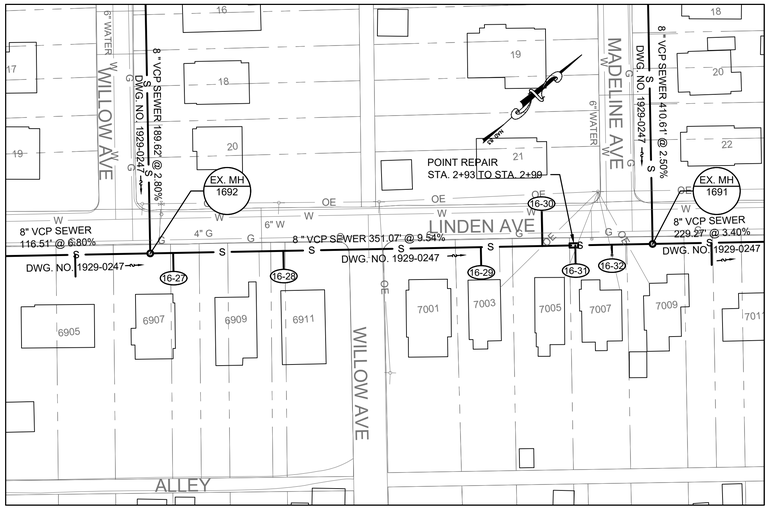
PLAN & PROFILE C-14 – BELAIR ROAD

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

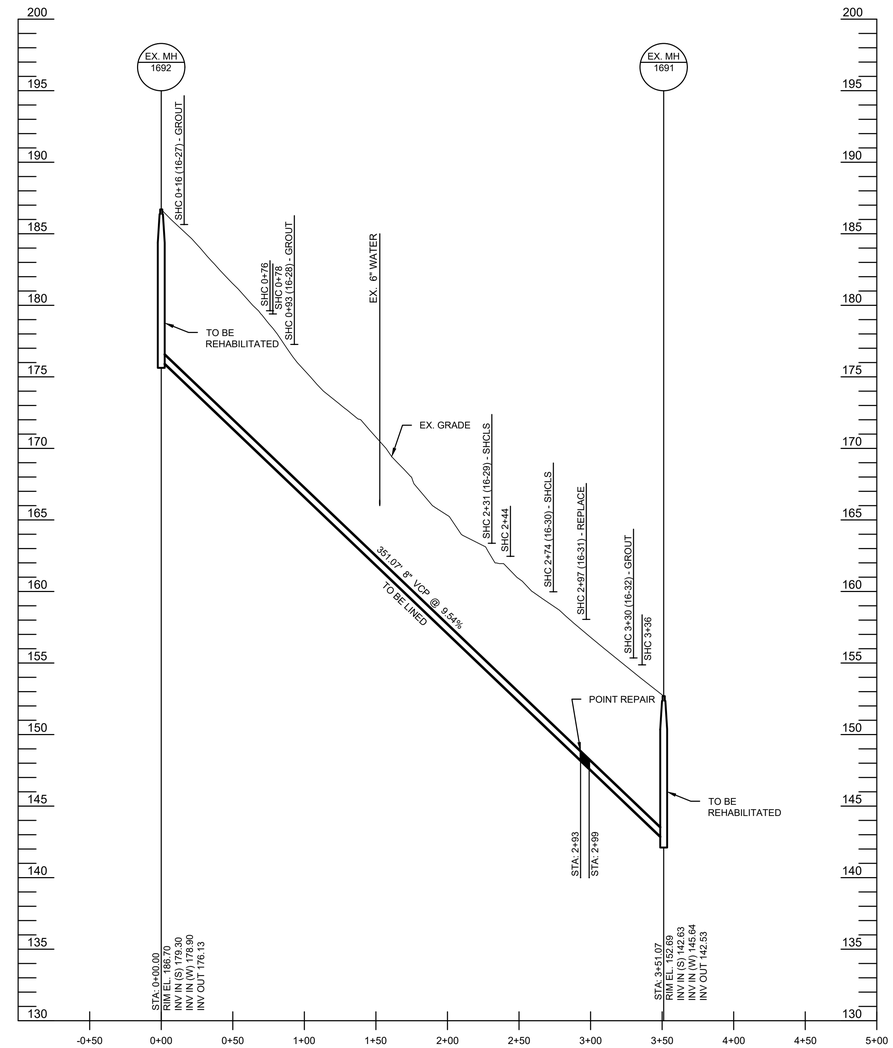
SHEET DESIGNATION	CONTRACT NUMBER
C-48	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 53 OF 70	
DRAWING NUMBER	
2020-1618	
FILE NO.:	5%



PLAN: MH 1692 - MH 1691

HORZ: 1" = 50'

SEE SHEET C-16



PROFILE: MH 1692 - MH 1691

HORZ: 1" = 50'

VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
2. REGARDING BGE FACILITIES SHOWN HEREIN (GAS AND ELECTRIC), SEE NOTE 33 ON SHEET G-3.
3. THE CONTRACTOR SHALL CCTV ALL PIPE SEGMENTS DESIGNATED WITH POINT REPAIRS TO CONFIRM THE LIMITS OF EACH POINT REPAIR PRIOR TO CONSTRUCTION.
4. REPAIR ACTIVITIES REQUIRING EXCAVATION (I.E. POINT REPAIRS, MANHOLE REPLACEMENT, & PIPE REPLACEMENT) SHALL BE PERFORMED PRIOR TO LINING WORK.
5. SEE SHEET C-59 FOR THE REQUIRED EXTENTS OF PAVEMENT RESTORATION ASSOCIATED WITH TRENCHING IN PAVED STREETS.

1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1207.dwg

SEAL: STATE OF MARYLAND — JOSEPH P. CONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
			R.O.W NO.	NSE	22NE18
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' 1"=5'

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN & PROFILE C-16

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-49	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 54 OF 70	
DRAWING NUMBER	
2020-1619	
FILE NO.:	

BALTIMORE COUNTY MARYLAND

Sep 14, 2021 - 10:16am

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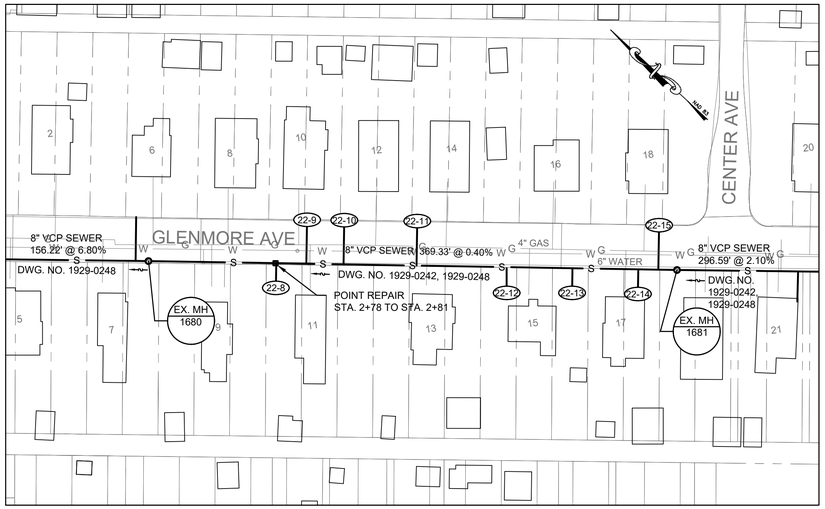
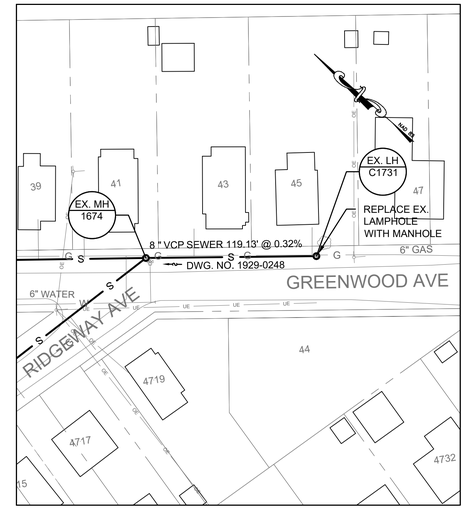


PLAN: MH 1681 - MH 1680

HORZ: 1" = 50'

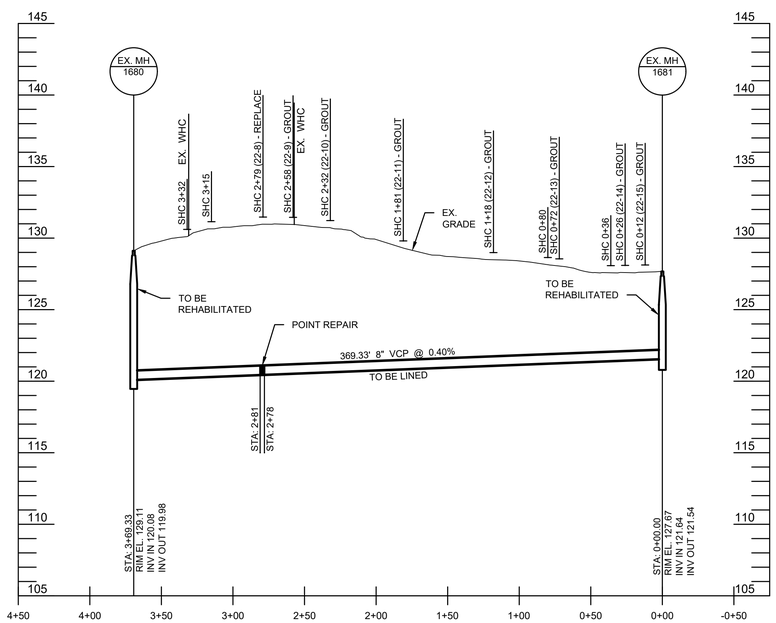
SEE SHEET C-22



PLAN: LH C1731 - MH 1674

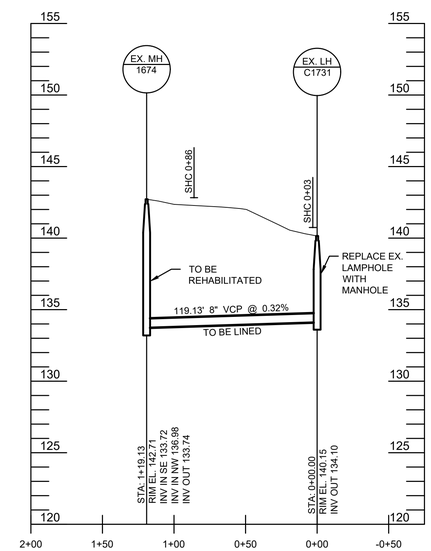
HORZ: 1" = 50'

SEE SHEET C-23



PROFILE: MH 1681 - MH 1680

HORZ: 1" = 50'
VERT: 1" = 5'



PROFILE: LH C1731 - MH 1674

HORZ: 1" = 50'
VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
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5. SEE SHEET C-59 FOR THE REQUIRED EXTENTS OF PAVEMENT RESTORATION ASSOCIATED WITH TRENCHING IN PAVED STREETS.

1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

O'BRIEN & GERE ENGINEERS, INC

SHEET DESIGNATION	CONTRACT NUMBER
C-50	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 55 OF 70	
DRAWING NUMBER	
2020-1620	
FILE NO.:	

SEAL: STATE OF MARYLAND — JOSEPH P. CONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

CONTRACT COMPLETION BOX

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	JNE NSE	20NE19 21NE18

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' 1"=5'

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLANS & PROFILES C-22 & C-23

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

DWG. FILENAME: 65602-1208.dwg

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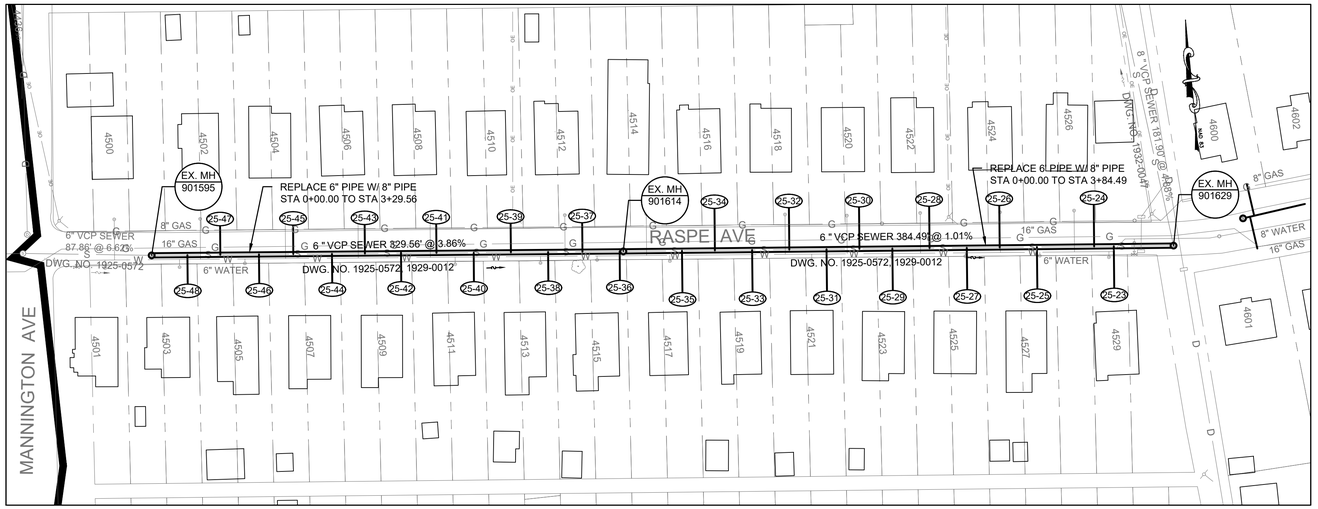
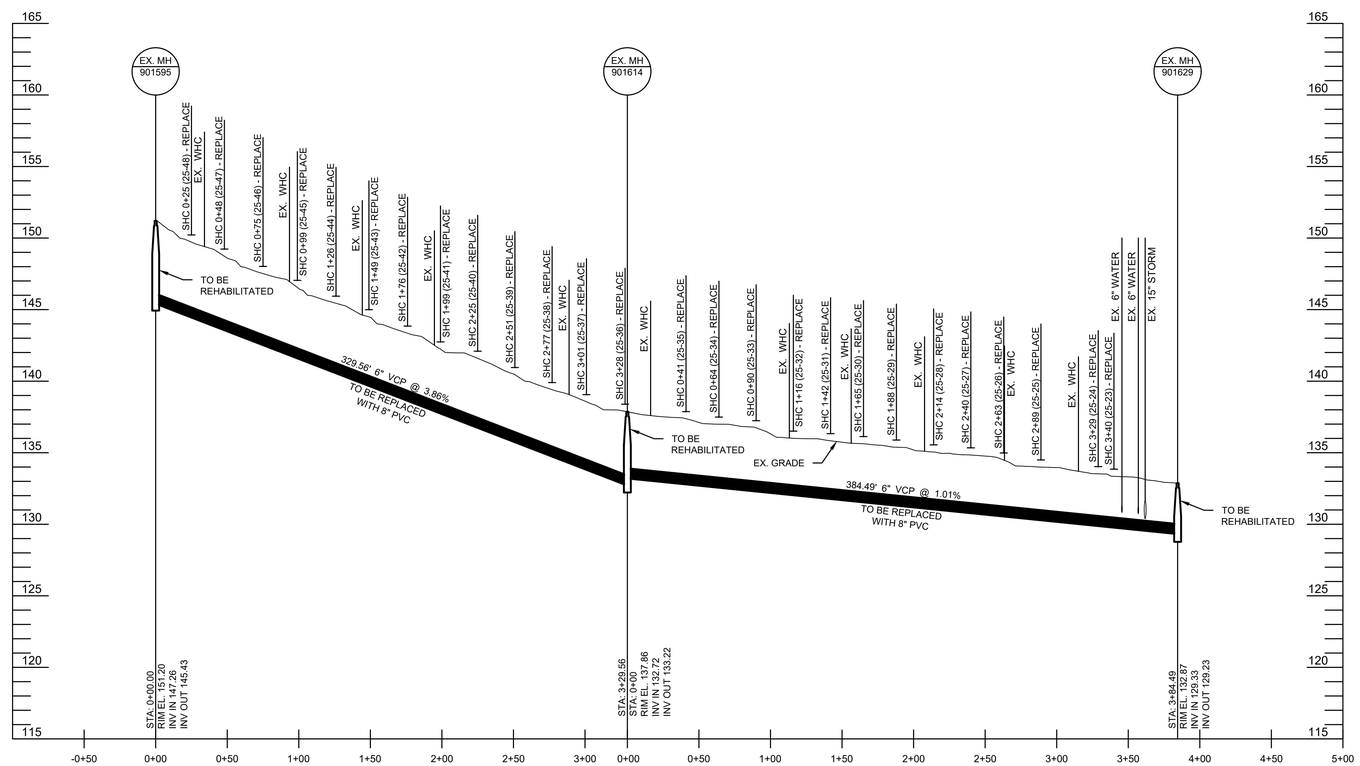
Sep 14, 2021 - 10:16am



PLAN: MH 901595 - MH 901614 & MH 901614 - MH 901629

HORZ: 1" = 50'

SEE SHEET C-25



PROFILE: MH 901595 - MH 901614 & MH 901614 - MH 901629

HORZ: 1" = 50'
VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
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5. SEE SHEET C-59 FOR THE REQUIRED EXTENTS OF PAVEMENT RESTORATION ASSOCIATED WITH TRENCHING IN PAVED STREETS.

1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1209.dwg

SEAL: STATE OF MARYLAND — JOSEPH N. MURPHY — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 , EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
				JNE	18NE17
			R.O.W NO.		
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' 1"=5'

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLAN & PROFILE C-25

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-51	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 56 OF 70	
DRAWING NUMBER	
2020-1621	
FILE NO.:	

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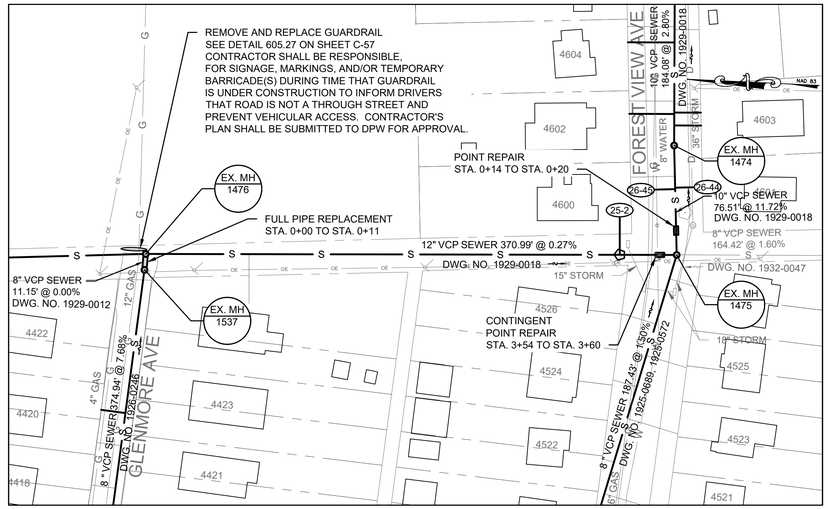
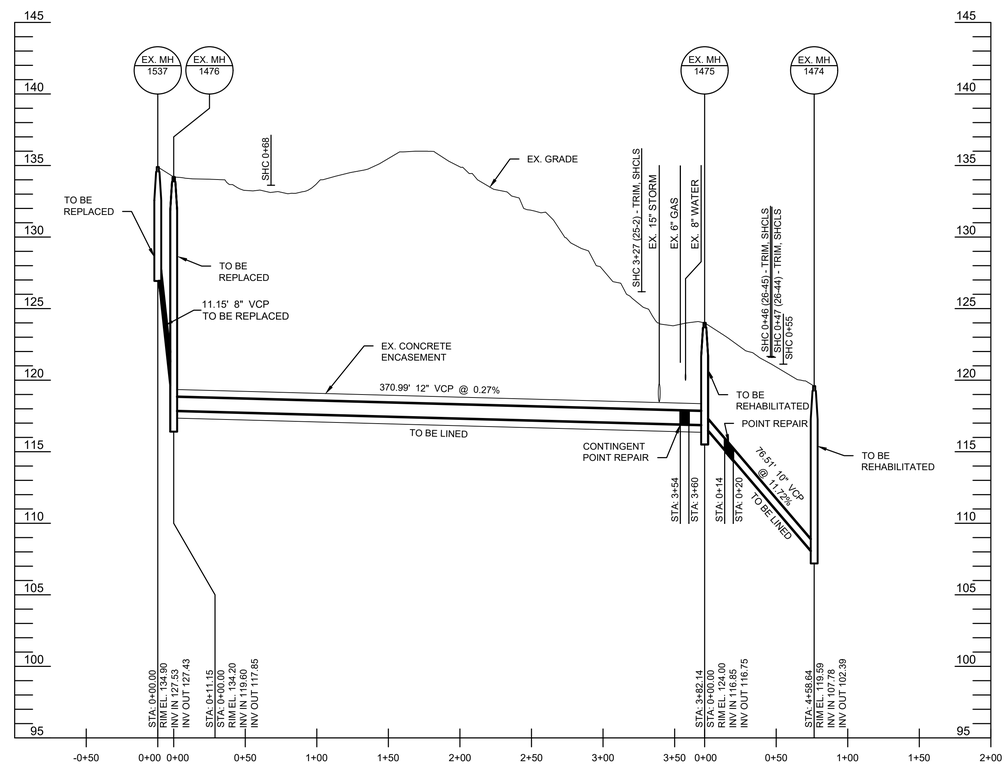
Sep 14, 2021 - 10:16am



PLAN: MH 1537 - MH 1476 & MH 1476 - MH 1475 & MH 1475 - MH 1474

HORZ: 1" = 50'

SEE SHEETS C-25 & C-26



PROFILE: MH 1537 - MH 1476 & MH 1476 - MH 1475 & MH 1475 - MH 1474

HORZ: 1" = 50'
VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
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5. SEE SHEET C-59 FOR THE REQUIRED EXTENTS OF PAVEMENT RESTORATION ASSOCIATED WITH TRENCHING IN PAVED STREETS.

1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1214.dwg

Sep 14, 2021 - 10:16am

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SEAL: STATE OF MARYLAND — JOSEPH A. CONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

P.W.A. NO.: R.O.W NO.

CONTRACT COMPLETION BOX

KEY SHEET	POSITION SHT
JNE	19NE17 20NE17

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' 1"=5'

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

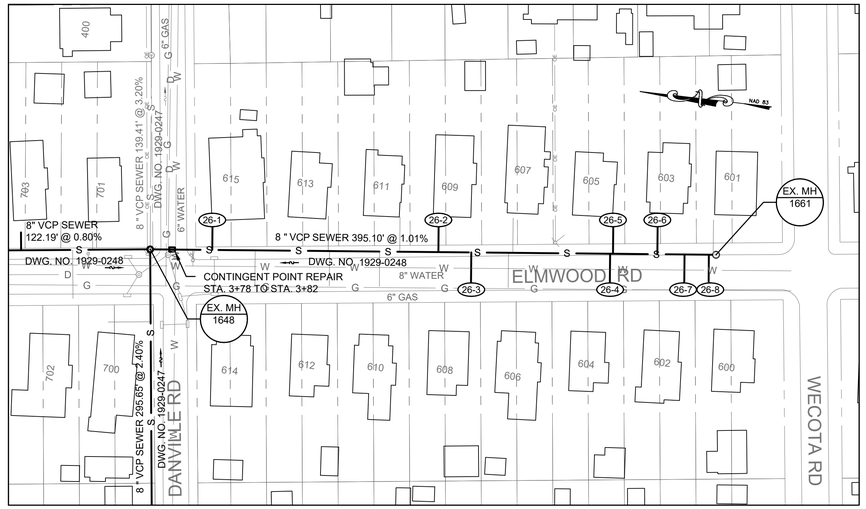
PLANS & PROFILES C-25 & C-26

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

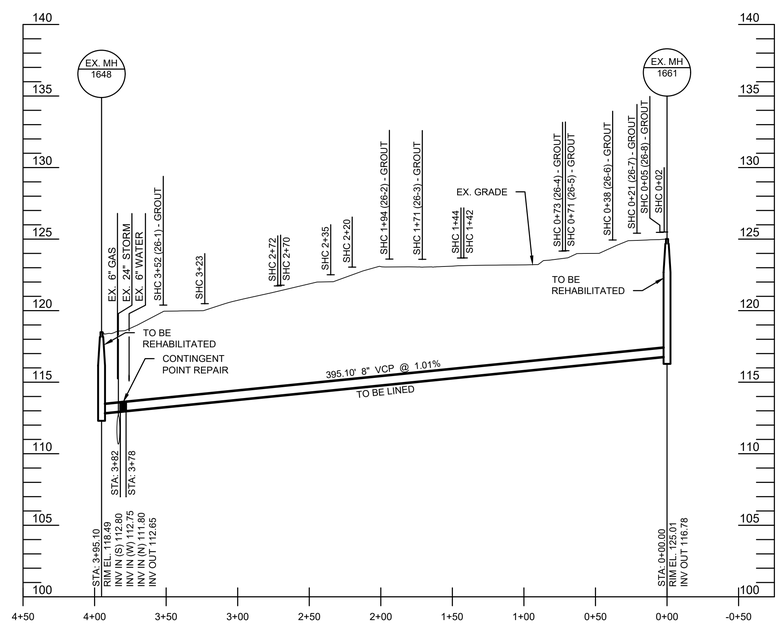
SHEET DESIGNATION	CONTRACT NUMBER
C-52	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 57 OF 70	
DRAWING NUMBER	
2020-1622	
FILE NO.:	



PLAN: MH 1661 - MH 1648

HORZ: 1" = 50'

SEE SHEET C-26



PROFILE: MH 1661 - MH 1648

HORZ: 1" = 50'

VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
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1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1210.dwg

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Sep 14, 2021 - 10:16am

SEAL

STATE OF MARYLAND — JOSEPH A. CONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:

O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

P.W.A. NO.
R.O.W NO.

CONTRACT COMPLETION BOX

KEY SHEET	POSITION SHT
JNE	20NE18

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' 1"=5'

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

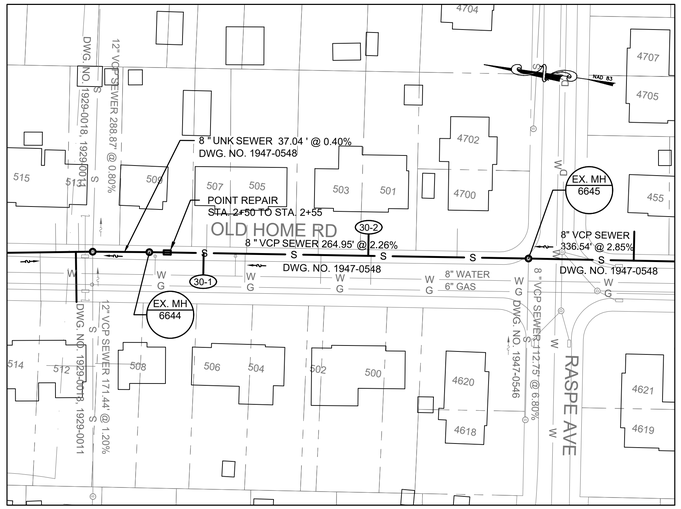
PLAN & PROFILE C-26

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

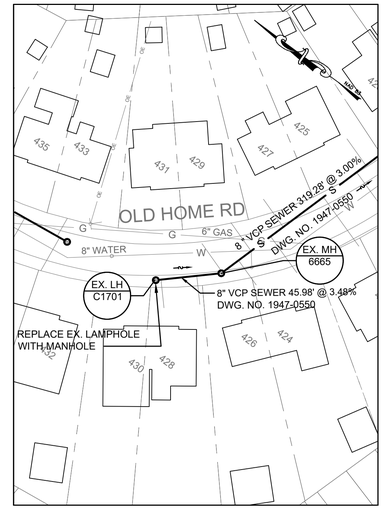
SHEET DESIGNATION	CONTRACT NUMBER
C-53	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 58 OF 70	
DRAWING NUMBER	
2020-1623	
FILE NO.:	



PLAN: MH 6645 - MH 6644

HORZ: 1" = 50'

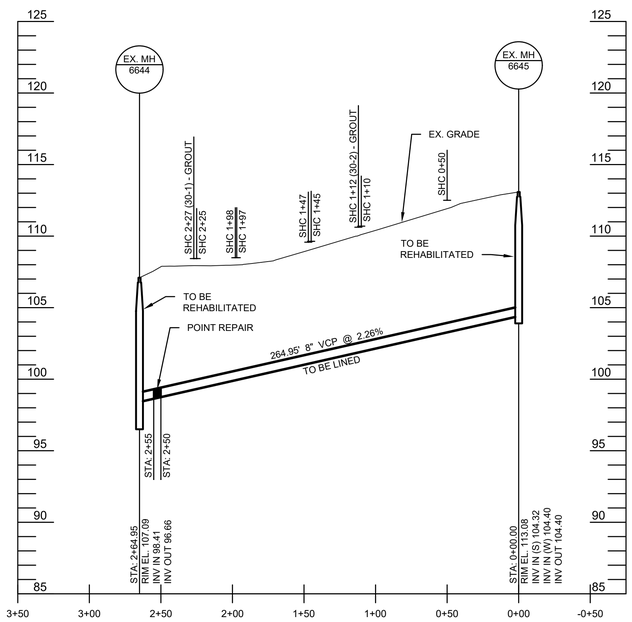
SEE SHEET C-30



PLAN: LH C1701 - MH 6665

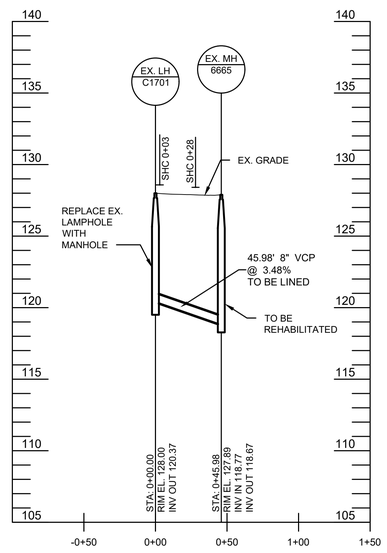
HORZ: 1" = 50'

SEE SHEET C-30



PROFILE: MH 6645 - MH 6644

HORZ: 1" = 50'
VERT: 1" = 5'



PROFILE: LH C1701 - MH 6665

HORZ: 1" = 50'
VERT: 1" = 5'

GENERAL NOTES:

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2. REGARDING BGE FACILITIES SHOWN HEREIN (GAS AND ELECTRIC), SEE NOTE 33 ON SHEET G-3.
3. THE CONTRACTOR SHALL CCTV ALL PIPE SEGMENTS DESIGNATED WITH POINT REPAIRS TO CONFIRM THE LIMITS OF EACH POINT REPAIR PRIOR TO CONSTRUCTION.
4. REPAIR ACTIVITIES REQUIRING EXCAVATION (I.E. POINT REPAIRS, MANHOLE REPLACEMENT, & PIPE REPLACEMENT) SHALL BE PERFORMED PRIOR TO LINING WORK.
5. SEE SHEET C-59 FOR THE REQUIRED EXTENTS OF PAVEMENT RESTORATION ASSOCIATED WITH TRENCHING IN PAVED STREETS.

1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1211.dwg

I:\Baltimore-Co.1524\65602-Redhouse-Run-Sel\Docs\DWG\Sheets\65602-1211.dwg

Sep 14, 2021 - 10:17am

SEAL

STATE OF MARYLAND — JOSEPH T. PONTI — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION | TRAFFIC | HIGHWAYS | STRUCTURES | STORM DRAINS | SEWER | WATER | FIELD ENGINEER

REVIEWED BY:

DATE REVIEWED:

SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	JNE	19NE18

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' / 1"=5'

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLANS & PROFILES C-30

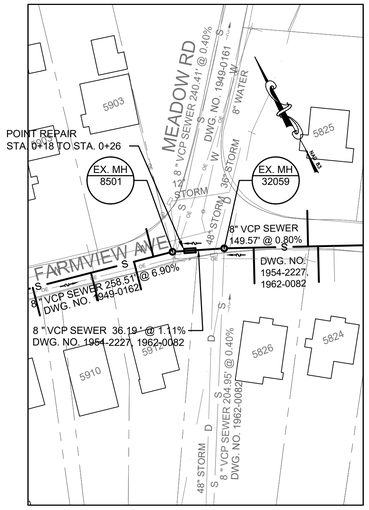
SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY MARYLAND

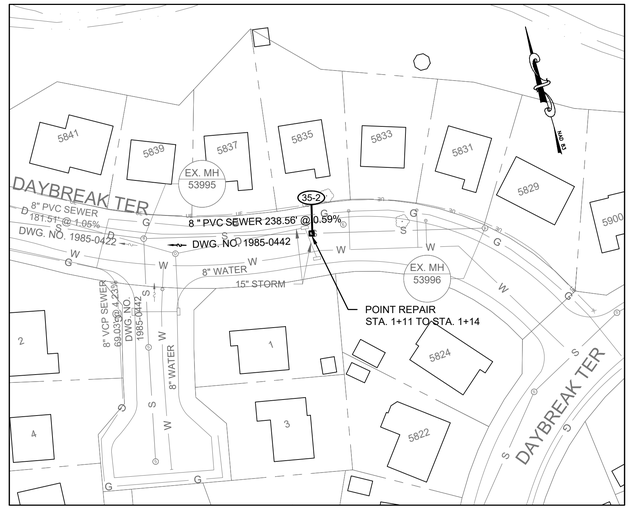
SHEET DESIGNATION	CONTRACT NUMBER
C-54	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 59 OF 70	
DRAWING NUMBER	
2020-1624	
FILE NO.:	%



PLAN: MH 32059 - MH 8501

HORZ: 1" = 50'

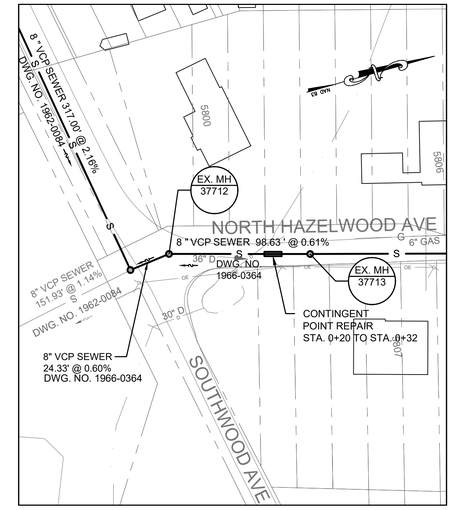
SEE SHEET C-34



PLAN: MH 53996 - MH 53995

HORZ: 1" = 50'

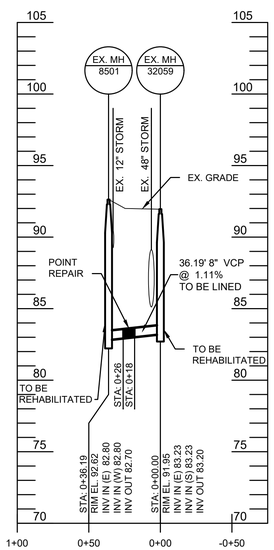
SEE SHEET C-35



PLAN: MH 37713 - MH 37712

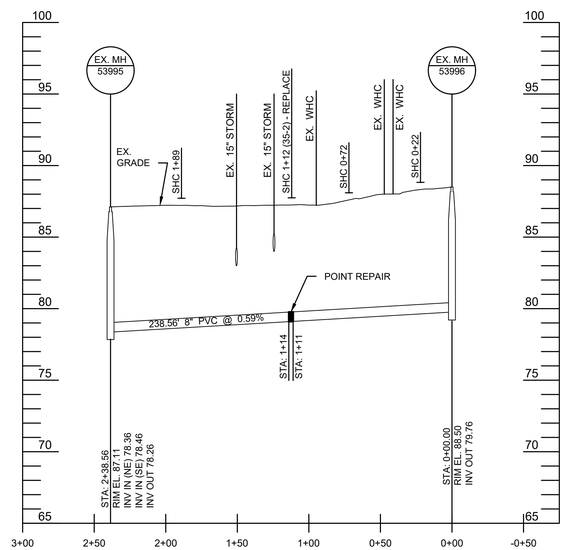
HORZ: 1" = 50'

SEE SHEET C-36



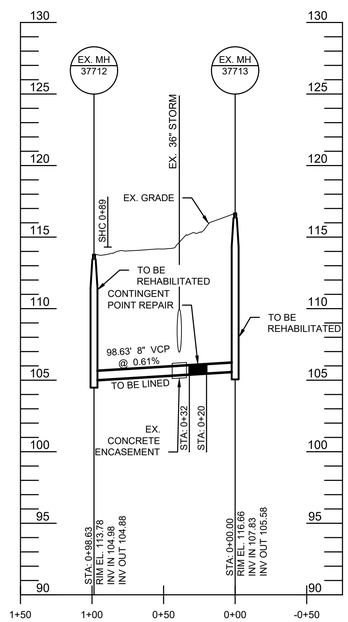
PROFILE: MH 32059 - MH 8501

HORZ: 1" = 50'
VERT: 1" = 5'



PROFILE: MH 53996 - MH 53995

HORZ: 1" = 50'
VERT: 1" = 5'



PROFILE: MH 37713 - MH 37712

HORZ: 1" = 50'
VERT: 1" = 5'

GENERAL NOTES:

1. EXISTING UTILITIES SHOWN HEREIN (LOCATIONS, TYPES, DEPTHS) HAVE BEEN LOCATED BASED UPON BEST AVAILABLE INFORMATION, ARE APPROXIMATE, AND ARE FOR INFORMATION PURPOSES ONLY. IN ADDITION, THERE IS THE POSSIBILITY THAT ADDITIONAL UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE IDENTIFIED PROJECT AREAS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, SIZE, DEPTH, AND TYPE OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.
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1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1212.dwg

Sep 14, 2021 - 10:17am

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SEAL: STATE OF MARYLAND — JOSEPH A. CONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
			R.O.W NO.	JNE	17NE17
					17NE18
					17NE19
CONTRACT COMPLETION BOX					18NE19

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' 1"=5'

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

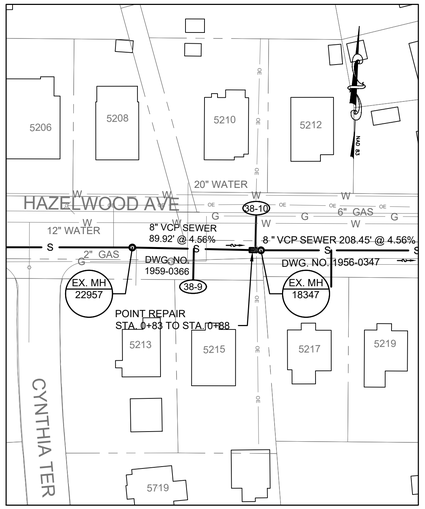
PLANS & PROFILES C-34 & C-35 & C-36

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 1406

O'BRIEN & GERE ENGINEERS, INC

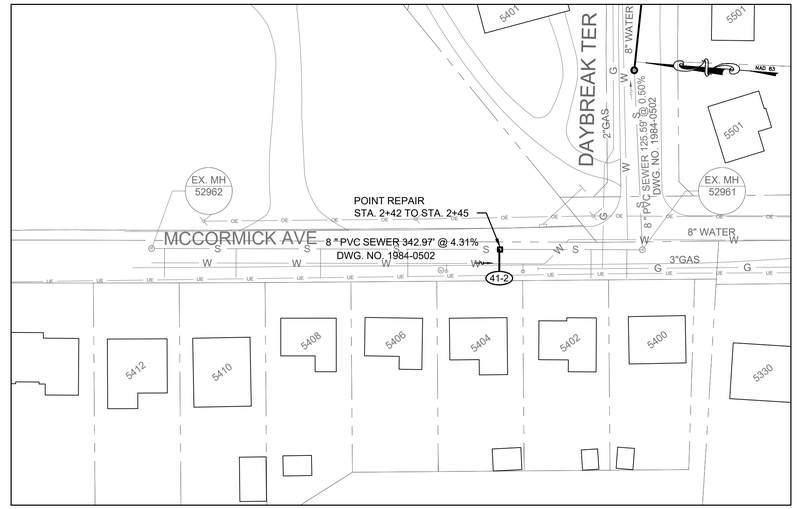
SHEET DESIGNATION	CONTRACT NUMBER
C-55	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 60 OF 70	
DRAWING NUMBER	
2020-1625	
FILE NO.:	



PLAN: MH 22957 - MH 18347

HORZ: 1" = 50'

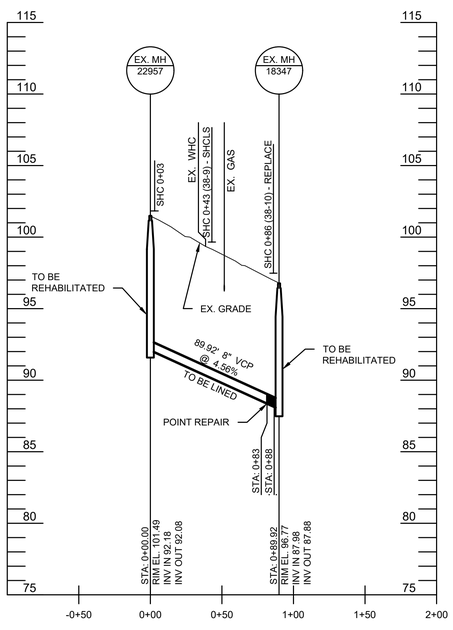
SEE SHEET C-38



PLAN: MH 52962 - MH 52961

HORZ: 1" = 50'

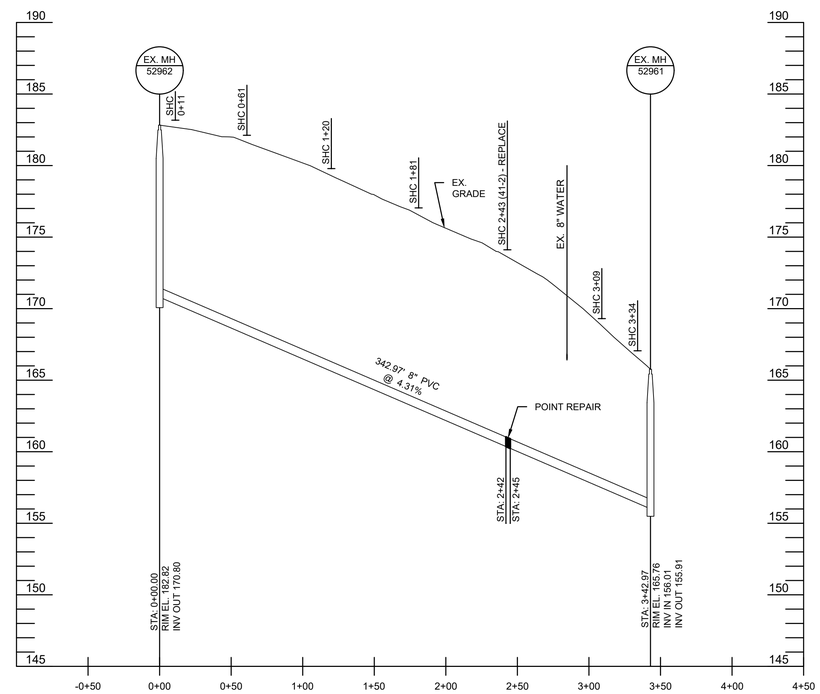
SEE SHEET C-41



PROFILE: MH 22957 - MH 18347

HORZ: 1" = 50'

VERT: 1" = 5'



PROFILE: MH 52962 - MH 52961

HORZ: 1" = 50'

VERT: 1" = 5'

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1"=50' 50 0 50 100

1"=5' 5 0 5 10

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1213.dwg

I:\Baltimore-Co.1524\65602 Redhouse-Run-Se\Docs\DWG\Sheets\65602-1213.dwg

Sep 14, 2021 - 10:17am

SEAL: STATE OF MARYLAND — JOSEPH A. POLIZ — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

PROFESSIONAL CERTIFICATION

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LICENSE NO. 55452 EXPIRATION DATE 12/23/21

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Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE
CONTRACT COMPLETION BOX		

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.	JNE	14NE18 15NE18 17NE19

DRAWING SCALE	
PLAN SCALE:	1"=50'
PROFILE SCALE:	1"=50' 1"=5'

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION

APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

PLANS & PROFILES C-38 & C-41

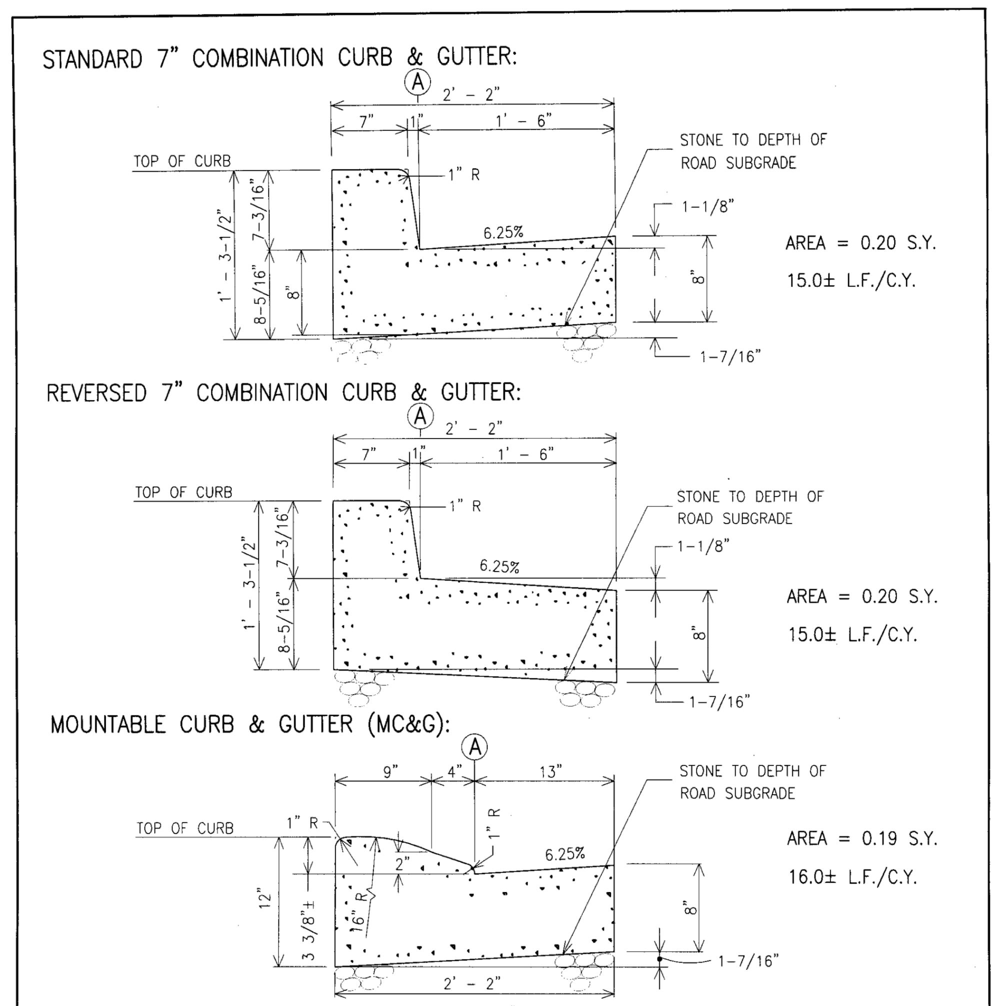
SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-56	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 61 OF 70	
DRAWING NUMBER	
2020-1626	
FILE NO.:	4%

STANDARD 7" COMBINATION CURB & GUTTER:



NOTES:

1. TRANSITION MC&G TO STANDARD 7" COMBINATION CURB & GUTTER OR TO STANDARD COMBINATION INLET CURB PIECE THROUGH 4 LINEAR FEET VARY INLET HEADPIECE TOP ELEVATION AS REQUIRED TO MAINTAIN FLOW LINE.
2. MIX #2 CONCRETE WITH 25% OR LESS GROUND IRON BLAST FURNACE SLAG UNLESS OTHERWISE SPECIFIED ON PLANS.
3. THIS DETAIL INCORPORATES FORMER DETAILS R-21 AND R-21A.
4. MC&G SHALL NOT BE USED WHERE SIDEWALK IS TO BE PLACED ADJACENT TO THE CURB.

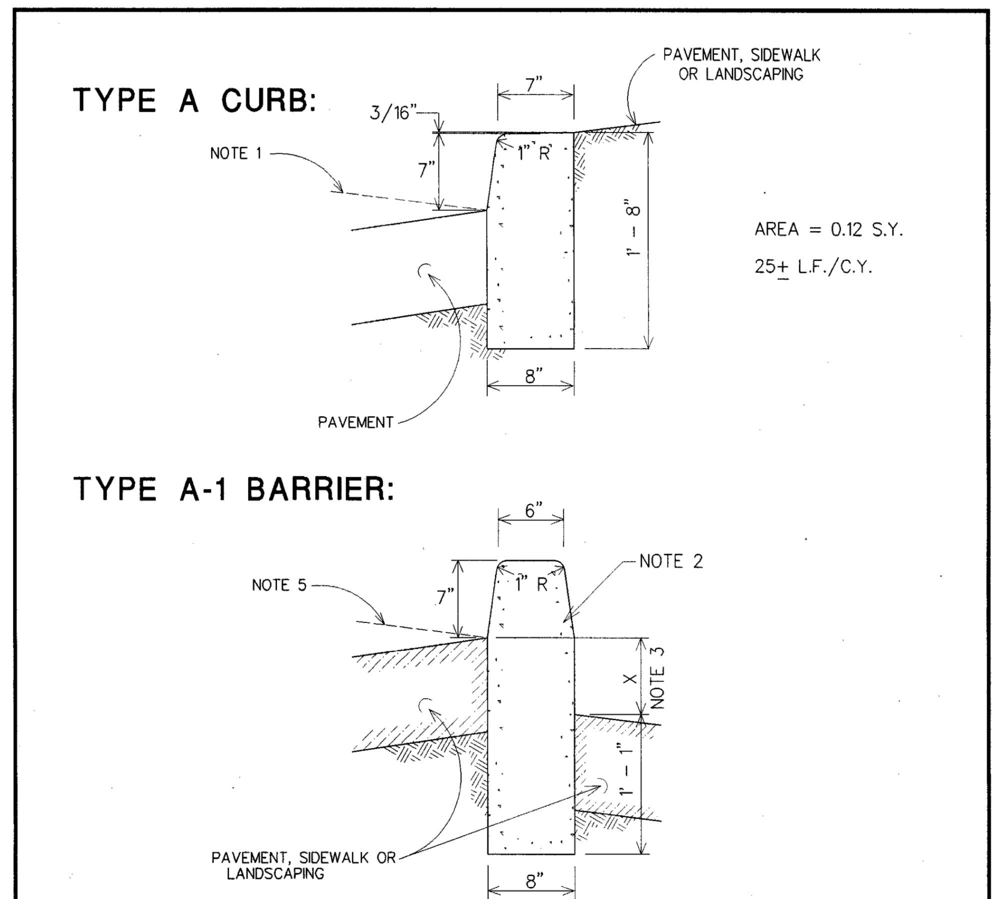
(A) FACE OF CURB & FACE OF INLET CURB PIECE

DEPARTMENT OF PUBLIC WORKS
ROAD & STREET DETAILS
CONCRETE COMBINATION CURB AND GUTTER

ISSUED OCTOBER 1977 | REVISED MAY 1985 | REVISED JUNE 2005

PLATE R-21

TYPE A CURB:



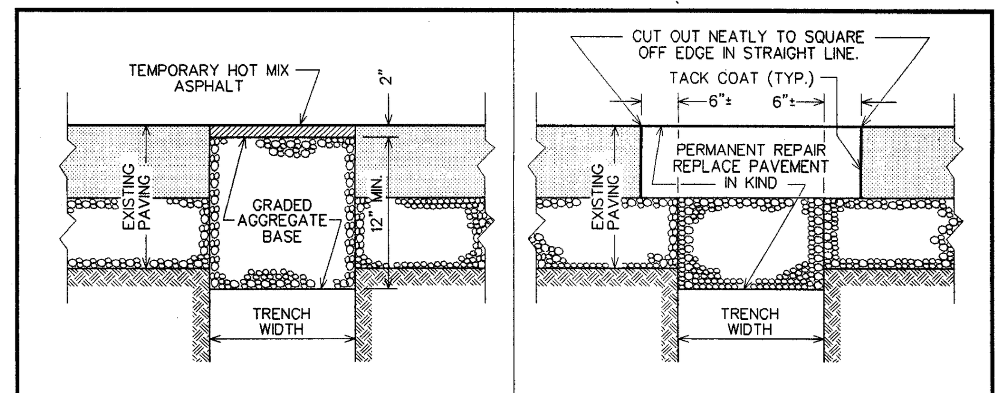
NOTES:

1. CURB & GUTTER TO BE USED WHERE STORM WATER WILL COLLECT AT FACE OF CURB EXCEPT AS DIRECTED BY THE ENGINEER.
2. MIX #2 OR MIX #6 CONCRETE AS DIRECTED ON PLANS.
3. SPECIAL DESIGN AS RETAINING WALL WHERE THIS DIMENSION EXCEEDS 18 INCHES. THIS BARRIER IS FOR USE ONLY IN OFF-STREET AREAS WHERE VEHICLE SPEEDS ARE MINIMAL.
4. MdSHA TYPE A CURB (MD620.02) TO BE USED WITHIN MdSHA RIGHT OF WAY.
5. WHERE GRADING IS TOWARD WALL, PROVIDE UNDERDRAINAGE & STONE BACKFILL ALONG WALL PER DETAIL D-100 WITH SUITABLE OUTFALL. TENAX TENDRAIN® OR EQUIVALENT MAY BE USED IN THIS APPLICATION.

DEPARTMENT OF PUBLIC WORKS
ROAD & STREET DETAILS
CONCRETE CURB

ISSUED JANUARY 1999

PLATE R-24



1. CLEAN THOROUGHLY BEFORE PAVING.
2. DEPTH OF PERMANENT REPAIR TO MATCH DEPTH OF EXISTING PAVING. HOT MIX ASPHALT BASE TO BE PLACED IN COURSES NOT TO EXCEED 4". SURFACE COURSE SHALL BE 1-1/2".

STAGE I - TEMPORARY

STAGE II - PERMANENT

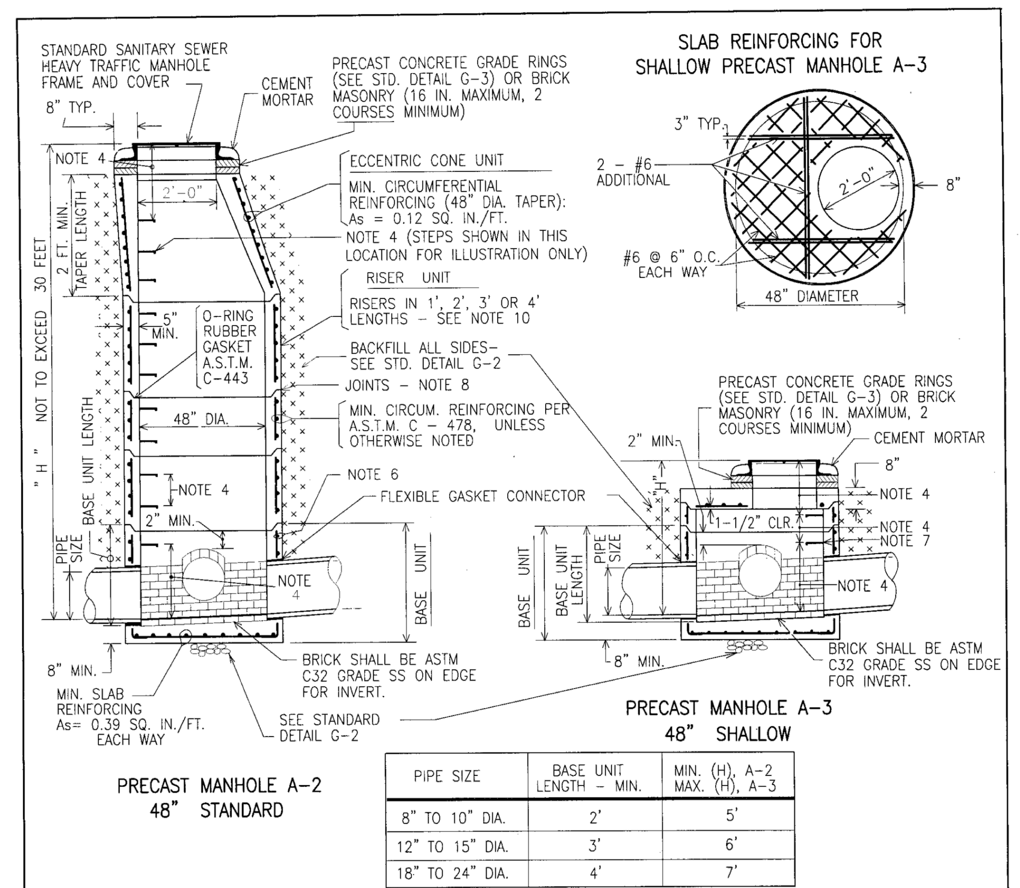
NOTES :

1. REPLACE PAVING MATERIALS IN KIND AT SAME RELATIVE ELEVATION (PERMANENT).
2. MINIMUM ALLOWABLE SECTION = 3" HOT MIX ASPHALT / 11" GRADED AGGREGATE BASE.
3. PORTLAND CEMENT CONCRETE BASE AND SOIL CEMENT BASE MAY BE REPLACED WITH HOT MIX ASPHALT OF THE SAME DEPTH.
4. HOT MIX ASPHALT MAY BE USED IN PLACE OF PENETRATION MACADAM.
5. GRADED AGGREGATE BASE MAY BE USED IN PLACE OF WATER BOUND MACADAM.
6. GRADED AGGREGATE BASE NOT REQUIRED IF FLOWABLE FILL USED FOR BACKFILL.
7. STAGE II SHALL START 90 DAYS AFTER COMPLETION OF STAGE I.
8. TIME CHARGES IF IN SUSPENSION WILL RESUME 90 DAYS AFTER COMPLETION OF STAGE I.
9. TRENCH WIDTHS AND PAVEMENTS TO BE PER PLATES G-6 AND G-7.
10. FOR S.H.A. ROADS, TRENCH REPAIRS ARE TO CONFORM TO S.H.A. PERMIT REQUIREMENTS.
11. TACK COAT EDGES BETWEEN EXISTING BOUND PAVING AND HOT MIX ASPHALT PERMANENT REPAIR.
12. TEMPORARY HOT MIX ASPHALT SHALL BE 9.5mm (LEVEL 1) (PG 64-22).
13. PERMANENT HOT MIX ASPHALT SHALL BE 9.5mm (LEVEL 1) (PG 64-22). ON HIGHER CAPACITY NON-RESIDENTIAL ROADS, HMA LEVEL SHALL BE DETERMINED DURING DESIGN.

DEPARTMENT OF PUBLIC WORKS
ROAD & STREET DETAILS
REPAVING TRENCH OPENINGS FLEXIBLE PAVING

ISSUED MAY 1981 | REVISED FEBRUARY 1987 | REVISED MARCH 2002

PLATE R-38



PIPE SIZE	BASE UNIT LENGTH - MIN.	MIN. (H), A-2 MAX. (H), A-3
8" TO 10" DIA.	2'	5'
12" TO 15" DIA.	3'	6'
18" TO 24" DIA.	4'	7'

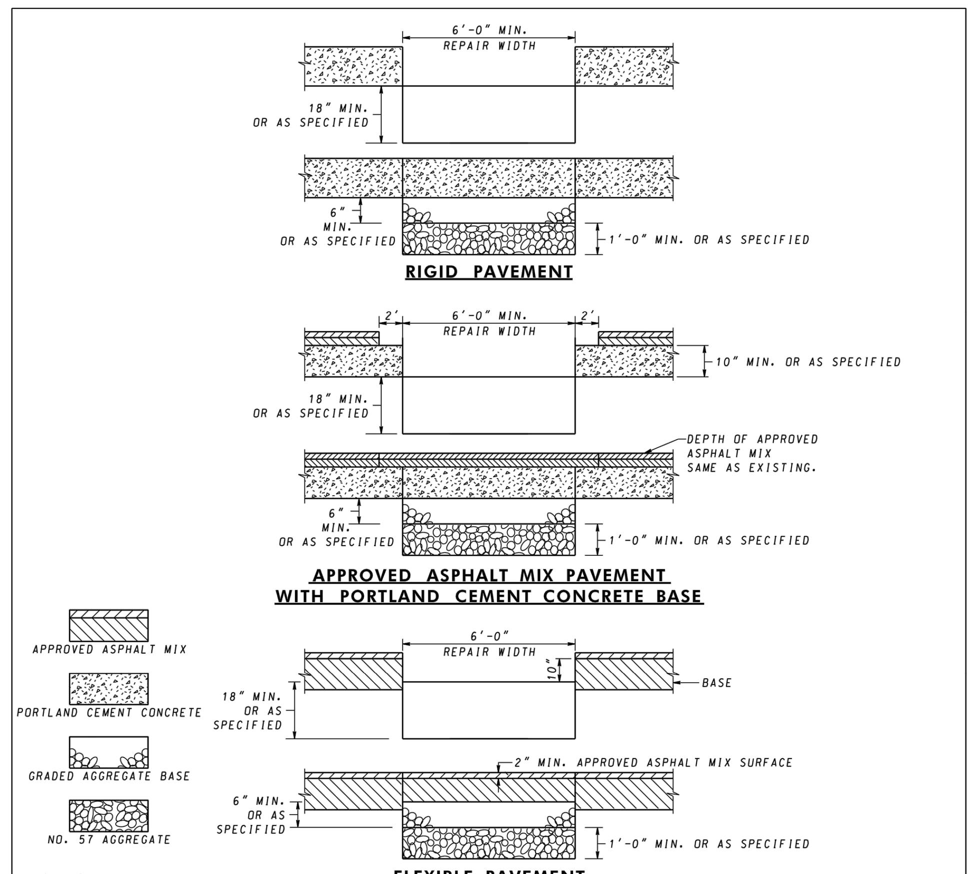
NOTES :

1. UNLESS OTHERWISE NOTED, MANHOLE TAPERS, RISERS AND BASES SHALL BE FURNISHED IN STRICT ACCORDANCE WITH A.S.T.M. DESIGNATION C-478 (LATEST) FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".
2. ALL CONCRETE SHALL BE 4,500 PSI COMPRESSIVE STRENGTH.
3. REINFORCING FOR TYPE A-3 THE SAME AS FOR TYPE A-2.
4. SEE STANDARD DETAIL PLATE G-4 FOR MANHOLE STEP SPECIFICATIONS, SPACING AND PLACEMENT. STEP LOCATION SHOWN IS FOR ILLUSTRATION ONLY. LOCATE STEPS 90° FROM MAIN FLOW CHANNEL WITHIN MANHOLE.
5. A PRECAST MANHOLE SECTION MAY BE PLACED OVER EXISTING PIPE. SEE DETAIL FOR PRECAST MANHOLE "DOGHOUSE" RISER, STANDARD DETAIL PLATE S-15.
6. MINIMUM CIRCUMFERENTIAL REINFORCEMENT PER A.S.T.M. C76 TABLE III WALL B FOR PIPE DIAMETERS GREATER THAN 18".
7. USE A MINIMUM OF 1 MANHOLE STEP IN BASE UNIT.
8. PRECAST MANHOLE RISER JOINTS: THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR & MADE WATER-TIGHT USING THE MANUFACTURER'S RECOMMENDED ASTM OR AASHTO-APPROVED SEALANT.
9. SEE STANDARD DETAIL PLATE G-3 FOR SPECIFICATIONS AND PLACEMENT OF PRECAST CONCRETE GRADE RINGS.
10. USE LARGEST APPLICABLE RISER UNIT LENGTHS. USE A MAXIMUM OF ONE- 1' LENGTH RISER UNIT PER STRUCTURE, TO BE PLACED IMMEDIATELY BELOW ECCENTRIC CONE SECTION.

DEPARTMENT OF PUBLIC WORKS
SANITARY SEWER DETAILS
48" PRECAST SANITARY MANHOLE (FOR PIPE 8" THRU 24" HORIZ. DIA.)

ISSUED OCTOBER 1977 | REVISED SEPTEMBER 1993 | REVISED OCTOBER 2006

PLATE S-4



NOTES

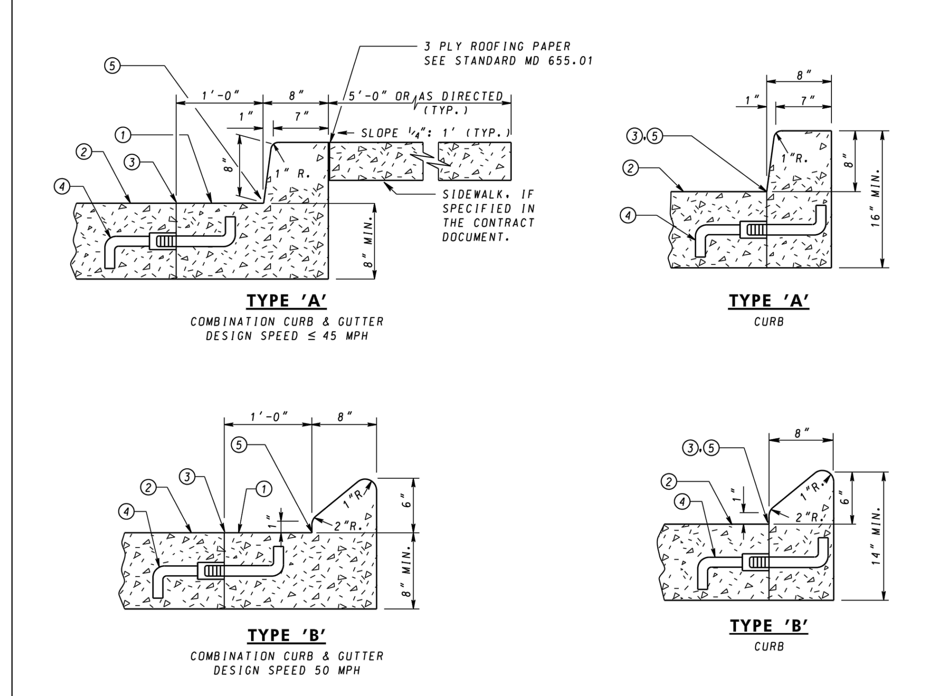
1. THIS STANDARD IS TO BE USED IN ACCORDANCE WITH SECTIONS 505 AND 522. THE ROADWAY SHALL BE PATCHED WITH THE SAME TYPE MATERIAL REMOVED UNLESS NOTED IN THE SPECIFICATIONS. PORTLAND CEMENT CONCRETE PAVEMENT REPAIR SHALL BE IN ACCORDANCE WITH STANDARDS 577.02, 577.03, 577.04, 577.05, 577.06, OR 577.10.
2. THE TOP 1 FT. OF THE TRENCH SHALL BE FILLED WITH NO. 57 AGGREGATE. TRENCH TO BE EXTENDED TO DITCH LINE.
3. WHEREVER A TRENCH CROSSES A CONCRETE ROADWAY THAT HAS JOINT INSTALLATIONS THE ENTIRE SLAB BETWEEN THE EDGE OF THE TRENCH AND NEAREST JOINT SHALL BE REMOVED IF THE DISTANCE IS LESS THAN 6 FT.
4. CLEAN AND WET EDGES OF CUT AND SUBBASE BEFORE PLACING CONCRETE. MATERIAL CONFORMING TO SECTION 303, CR-6, NO. 57 AGGREGATE WRAPPED IN SE GEOTEXTILE, CLSM OR GAB.
5. ALL WORK SUCH AS TRENCH BACKFILL, CURING OF CONCRETE, MATERIALS USED, ETC. SHALL BE IN ACCORDANCE WITH SECTIONS 201, 505 AND 522 OF THE SPECIFICATIONS OR AS SPECIFIED IN THE PERMIT.
6. ALL COSTS FOR SAWCUTS, TRENCH EXCAVATION, BACKFILL, APPROVED ASPHALT MIX, CONCRETE, MATERIAL CONFORMING TO SECTION 303, CR-6, NO. 57 AGGREGATE WRAPPED IN SE GEOTEXTILE, CLSM OR GAB, MATERIALS, TOOLS, LABOR AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE OF THE UTILITY ITEMS.
7. CLSM - CONTROLLED LOW STRENGTH MATERIAL.
8. NO. 57 AGGREGATE SHALL BE COMPLETELY WRAPPED IN SE GEOTEXTILE AS DIRECTED BY THE ENGINEER.

SPECIFICATION 505 | CATEGORY CODE ITEMS | APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS: APPROVAL 3-6-86, REVISED 2-25-16 | APPROVAL • FEDERAL HIGHWAY ADMINISTRATION: APPROVAL 3-18-86, REVISED 2-23-16

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
REPAIRING PAVEMENT OPENINGS FOR UTILITY TRENCHES

STANDARD NO. MD 578.01



(1) SLOPE GUTTER PAN 1/2" PER FOOT TOWARD FLOW LINE ON ALL ROADWAYS INCLUDING SUPERELEVATED SECTIONS, EXCEPT INTERCHANGE RAMPS.
(2) ROADWAY PAVEMENT SLOPE.
(3) ROADWAY PAVEMENT CONSTRUCTION JOINT.
(4) PROVIDE LONGITUDINAL TIE DEVICE "J" BAR MODIFIED. REFER TO STANDARD NO MD 572.61.
(5) FLOW LINE.

NOTES

A. RIGID PAVEMENT ROADWAY ADJACENT TO COMBINATION CURB AND GUTTER AND CLOSED SECTION ROADWAY USING RIGID PAVEMENT WITH COMBINATION CURB AND GUTTER SHALL BE TIED AT THE ROADWAY PAVEMENT CONSTRUCTION JOINT. REFER TO STANDARD MD 572.61 FOR METHOD OF LONGITUDINAL TIE DEVICES. SPACING OF THE TIE BARS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. RIGID PAVEMENT AND CURB SHALL BE CONSTRUCTED AS INDICATED. TIE DEVICES ARE NOT REQUIRED WHEN USING FLEXIBLE PAVEMENT FOR ROADWAY.
B. MAXIMUM JOINT SPACING FOR CONCRETE CURB AND COMBINATION CURB & GUTTER IS 10'. SEE SPECIFICATION FOR LOCATIONS AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.
C. TYPE A OR B COMBINATION CURB AND GUTTER SHALL BE USED FOR ALL APPLICABLE NEW CONSTRUCTION AND IN THOSE AREAS WHERE THE COMBINATION CURB AND GUTTER IS TO BE REPLACED IN KIND.
D. TYPE A OR B CURB SHALL BE USED FOR THE REPLACEMENT OF LIKE KIND OF CURB ONLY. NOT TO BE USED FOR NEW CONSTRUCTION EXCEPT WHERE INDICATED ON APPROPRIATE INLET STANDARDS.

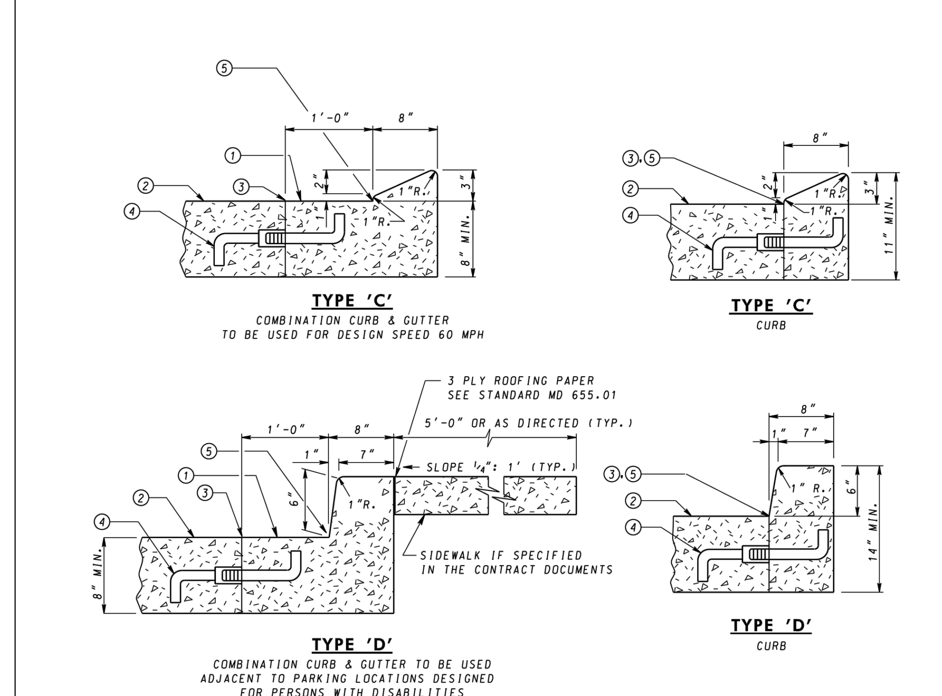
SPECIFICATION 602 | CATEGORY CODE ITEMS | APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS: APPROVAL 2-10-04, REVISED 2-25-16 | APPROVAL • FEDERAL HIGHWAY ADMINISTRATION: APPROVAL 3-31-04, REVISED 2-23-16

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD TYPES A & B CONCRETE CURB AND COMBINATION CONCRETE CURB & GUTTER

STANDARD NO. MD 620.02

1 OF 2



(1) SLOPE GUTTER PAN 1/2" PER FOOT TOWARD FLOW LINE ON ALL ROADWAYS INCLUDING SUPERELEVATED SECTIONS, EXCEPT INTERCHANGE RAMPS.
(2) ROADWAY PAVEMENT SLOPE.
(3) ROADWAY PAVEMENT CONSTRUCTION JOINT.
(4) PROVIDE LONGITUDINAL TIE DEVICE "J" BAR MODIFIED. REFER TO STANDARD NO MD 572.61.
(5) FLOW LINE.

NOTES

A. RIGID PAVEMENT ROADWAY ADJACENT TO COMBINATION CURB AND GUTTER AND CLOSED SECTION ROADWAY USING RIGID PAVEMENT WITH COMBINATION CURB AND GUTTER SHALL BE TIED AT THE ROADWAY PAVEMENT CONSTRUCTION JOINT. REFER TO STANDARD MD 572.61 FOR METHOD OF LONGITUDINAL TIE DEVICES. SPACING OF THE TIE BARS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. RIGID PAVEMENT AND CURB SHALL BE CONSTRUCTED AS INDICATED. TIE DEVICES ARE NOT REQUIRED WHEN USING FLEXIBLE PAVEMENT FOR ROADWAY.
B. MAXIMUM JOINT SPACING FOR CONCRETE CURB AND COMBINATION CURB & GUTTER IS 10'. SEE SPECIFICATION FOR LOCATIONS AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.
C. TYPE C OR D COMBINATION CURB AND GUTTER SHALL BE USED FOR ALL APPLICABLE NEW CONSTRUCTION AND IN THOSE AREAS WHERE THE COMBINATION CURB AND GUTTER IS TO BE REPLACED IN KIND.
D. TYPE C OR D CURB SHALL BE USED FOR THE REPLACEMENT OF LIKE KIND OF CURB ONLY. NOT TO BE USED FOR NEW CONSTRUCTION EXCEPT WHERE INDICATED ON APPROPRIATE INLET STANDARDS.

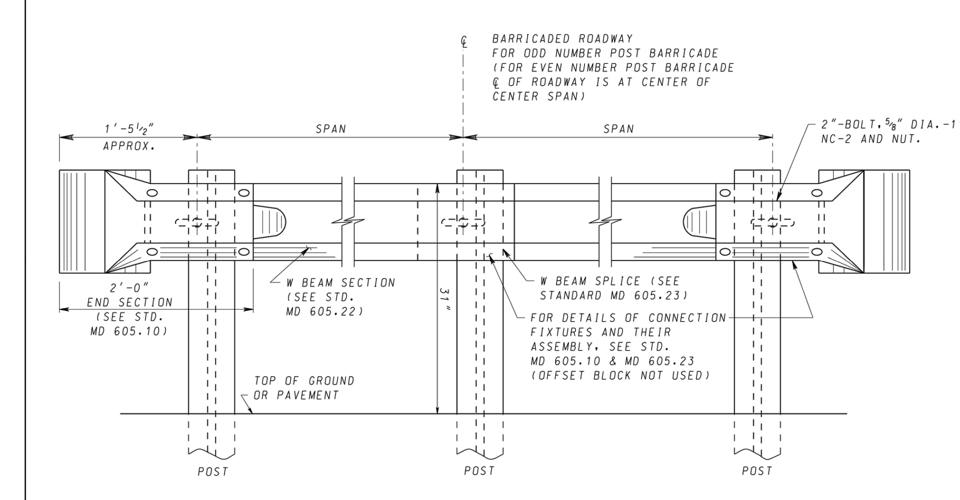
SPECIFICATION 602 | CATEGORY CODE ITEMS | APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS: APPROVAL 2-10-04, REVISED 2-25-16 | APPROVAL • FEDERAL HIGHWAY ADMINISTRATION: APPROVAL 3-31-04, REVISED 2-23-16

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD TYPES C AND D CONCRETE CURB AND COMBINATION CONCRETE CURB & GUTTER

STANDARD NO. MD 620.02-01

2 OF 2



MINIMUM NUMBER OF SPANS = 2
MINIMUM NUMBER OF POSTS = 3
MAXIMUM SPAN: 12'-6"
LENGTH OF BARRICADE NOTED ON PLANS: CENTER TO CENTER OF END POSTS
ALL SPANS TO BE EQUAL LENGTH.
NO. OF POSTS TO BE NOTED ON PLANS.
ALL POSTS W6x8.5 (OR W6x9), 6'-0" LONG
(SEE STD. MD 605.10)

NOTES

1. TRAFFIC BARRIER W BEAM BARRICADE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT. THE CONTRACT PRICE BID SHALL INCLUDE THE FURNISHING AND INSTALLATION OF ALL POSTS, W BEAM, POST AND SPLICE BOLTS WITH NUTS, END SECTIONS, GALVANIZING, THE COST OF ALL EXCAVATION, BACKFILLING AND TAMPING INCIDENTAL TO SETTING THE POSTS, OR THE COST OF DRIVING THE POSTS, THE COST OF THE REMOVAL OF EXISTING PAVEMENT WHERE NECESSARY, AS WELL AS THE COST OF ALL LABOR, APPROVED TOOLS AND EQUIPMENT INCIDENTAL TO FURNISHING AND INSTALLING THE BARRICADE AT LOCATIONS NOTED ON THE PLANS OR WHERE DIRECTED BY THE ENGINEER. FOR MATERIAL, SEE LATEST MDOT SHA SPECIFICATIONS FOR TRAFFIC BARRIER W BEAM.

SPECIFICATION 605 | CATEGORY CODE ITEMS | APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
TRAFFIC BARRIER W BEAM BARRICADE

STANDARD NO. MD 605.27

CONTRACT COMPLETION BOX

CONTRACTOR: ______
DATE COMPLETED: ______
INSPECTOR: ______
PIPE MATERIAL (Pressure Only) ______

DWG. FILENAME: 65602-1501.dwg

Sep 14, 2021 - 10:17am

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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. 55452, EXPIRATION DATE 12/23/21.

ENGINEER: O'BRIEN & GERE ENGINEERS, INC. EXECUTIVE PLAZA III, SUITE 803, 11350 McCORMICK RD, HUNT VALLEY, MD 21031, Phone: (443) 541-1300

DATE: 08/02/21

DGN BY: CTP | DWN BY: BNL | CHKD BY: REB

AS-BUILT / REVISION | BY | DATE | P.W.A. NO. | KEY SHEET | POSITION SHT

R.O.W NO.

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION | TRAFFIC | HIGHWAYS | STRUCTURES | STORM DRAINS | SEWER | WATER | FIELD ENGINEER

REVIEWED BY: | DATE REVIEWED:

SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES

DRAWING SCALE — PLAN SCALE: | PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 — DIRECTOR
DATE: SEE SHEET 2020-1566
BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 — CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

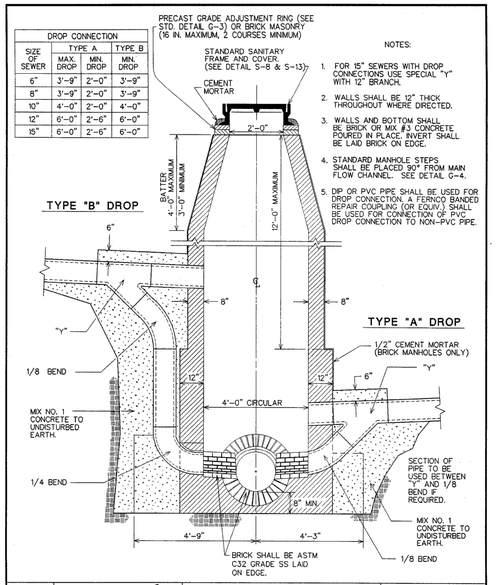
DETAILS

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-57	21002 SX0
	JOB ORDER NUMBER
	201-0077-7263
	SHEET 62 OF 70
	DRAWING NUMBER
	2020-1627
	FILE NO.:

DROP CONNECTION			
SIZE OF SEWER	TYPE A MAX. DROP	TYPE A MIN. DROP	TYPE B MIN. DROP
6"	3'-9"	2'-0"	3'-9"
8"	3'-9"	2'-0"	3'-9"
10"	4'-0"	2'-0"	4'-0"
12"	6'-0"	2'-6"	6'-0"
15"	6'-0"	2'-6"	6'-0"



NOTES:

1. FOR 15" SEWERS WITH DROP CONNECTIONS USE SPECIAL "Y" WITH 12" BRANCH.
2. WALLS SHALL BE 12" THICK THROUGHOUT WHERE DIRECTED.
3. WALLS AND BOTTOM SHALL BE BRICK OR MIX #3 CONCRETE POURED IN PLACE. INVERT SHALL BE LAID BRICK ON EDGE.
4. STANDARD MANHOLE STEPS SHALL BE PLACED 90° FROM MAIN FLOW CHANNEL. SEE DETAIL G-4.
5. DIP OR PVC PIPE SHALL BE USED FOR DROP CONNECTION. A FERNCO BANDED REPAIR COUPLING (OR EQUIV.) SHALL BE USED FOR CONNECTION OF PVC DROP CONNECTION TO NON-PVC PIPE.

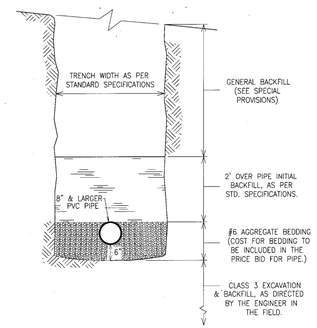
APPROVED: 3/8/02 — CHIEF, BUR. OF ENGINEERING/CONSTRUCTION — DATE

DEPARTMENT OF PUBLIC WORKS
SANITARY SEWER DETAILS

DROP CONNECTIONS AT MANHOLE, TYPE A AND B

ISSUED: OCTOBER, 1977
REVISED: AUGUST, 1997
REVISED: FEBRUARY, 2002

PLATE **S-6**



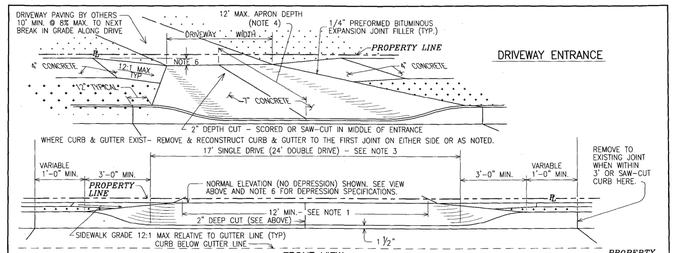
APPROVED: 01-31-07 — CHIEF, BUR. OF ENGINEERING/CONSTRUCTION — DATE

DEPARTMENT OF PUBLIC WORKS
SANITARY SEWER DETAILS

BEDDING DETAIL
FOR GRAVITY PVC PIPE 8" & LARGER

ISSUED: AUGUST, 1997
REVISED: JANUARY, 2007
REVISED:

PLATE **S-7**

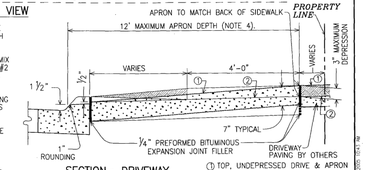


DRIVEWAY ENTRANCE

FRONT VIEW

NOTES

1. DOUBLE WIDTH OF DRIVEWAY PERMITTED AT REAR EDGE OF SIDEWALK WHERE SIDE BY SIDE PARKING SPACES ARE REQUIRED BY ZONING REGULATIONS. DOUBLE WIDTH OF DRIVEWAY, 20' MIN., 24' MAX. AT PROPERTY LINE.
2. WHERE SIDEWALKS ARE NOT REQUIRED THE DRIVEWAY APRONS CAN BE 11" HOT MIX ASPHALT PAVING SECTION IN ACCORDANCE WITH PLATE R-1. USE CONCRETE MIX #2 OR #6 AS SHOWN ON PLANS. LIMIT GROUND IRON BLAST FURNACE SLAG TO 25% MAXIMUM FOR MIX #2 CONCRETE.
3. DEPRESSED CURB WIDTH FOR SINGLE DRIVE WIDTH MAY BE REDUCED TO 14' ALONG LOCAL RESIDENTIAL STREETS WHERE CURB LANE ISN'T USED (OR TO BE USED) AS A TRAFFIC LANE.
4. WHERE BACK-OF-SIDEWALK TO FACE OF CURB IS MORE THAN 12', THE CONCRETE APRON SHALL MEET DRIVEWAY WIDTH AT FRONT EDGE OF SIDEWALK.
5. APRON SLOPE MAY BE REDUCED TO 4% OR INCREASED TO 8% BASED ON GRADE BEYOND PROPERTY LINE WITH APPROVAL OF ENGINEER.
6. 3" MAXIMUM DEPRESSION TO BE USED WHEN GROUND SLOPES AWAY FROM ℄ OR WHEN BACK OF SIDEWALK IS LESS THAN 8' FROM FACE OF CURB.



SECTION- DRIVEWAY

① TOP, UNDEPRESSED DRIVE & APRON
② TOP, DEPRESSED DRIVE & APRON

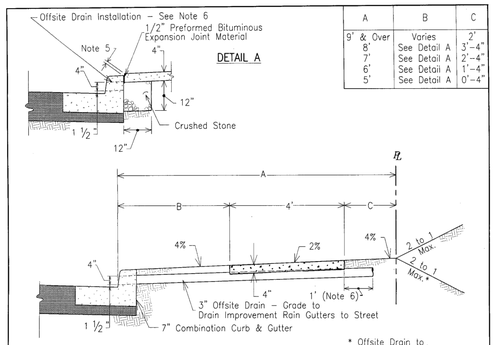
APPROVED: 01-31-07 — CHIEF, BUR. OF ENGINEERING/CONSTRUCTION — DATE

DEPARTMENT OF PUBLIC WORKS
ROAD & STREET DETAILS

TYPICAL DRIVEWAY ENTRANCE APRON
SIDEWALK TO CURB DISTANCE VARIES

ISSUED: JANUARY 3, 1989
REVISED: JUNE 25, 1990
REVISED: NOVEMBER 2005

PLATE **R-15A**



DETAIL A

A	B	C
9' & Over	Varies	2'
8'	See Detail A	3'-4"
7'	See Detail A	2'-4"
6'	See Detail A	1'-4"
5'	See Detail A	0'-4"

* Offsite Drain to Street not Used. (Improvements Drained Elsewhere)

NOTES

1. Sidewalk to be scribed in 4 foot squares.
2. Expansion joints across sidewalk shall be not more than 16 feet apart.
3. Top of 1/2" Preformed bituminous expansion joint material to be 1/4" below sidewalk surface.
4. Mix #2 Concrete with 25% or less Ground Iron Blast Furnace Slag to be used for sidewalks, unless otherwise specified on plans.
5. When sidewalk abuts curb, sidewalk shall be 1/4" above curb with 1/2" prefabricated bituminous expansion joint or 1/4" felt between curb & sidewalk & resting on a compacted crushed stone base. See Detail A this sheet.
6. Offsite drain to be 3" diameter plastic pipe to 1 foot behind sidewalk.
7. Obstructions in sidewalk area such as meter frames, utility poles, hydrants, etc. shall be isolated with a 1/2" thick bituminous isolation joint about their periphery or as shown on Detail R-17. Isolation joint shall extend through 4" sidewalk.

APPROVED: 01-31-07 — CHIEF, BUR. OF ENGINEERING/CONSTRUCTION — DATE

DEPARTMENT OF PUBLIC WORKS
ROAD & STREET DETAILS

STANDARD 4 FOOT SIDEWALK

ISSUED: OCTOBER, 1977
REVISED: AUGUST, 1997
REVISED: JUNE, 2005

PLATE **R-19**

Sep 14, 2021 - 10:18am

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1502.dwg

SEAL: STATE OF MARYLAND — JOSEPH R. BOVINO — No. 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452, EXPIRATION DATE 12/23/21

ENGINEER:
O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE
			R.O.W NO.			PLAN SCALE:
						PROFILE SCALE:
CONTRACT COMPLETION BOX						

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 — DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 — CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION - PHASE I

DETAILS

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

SHEET DESIGNATION	CONTRACT NUMBER
C-58	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 63 OF 70	
DRAWING NUMBER	
2020-1628	
FILE NO.:	

BALTIMORE COUNTY MARYLAND

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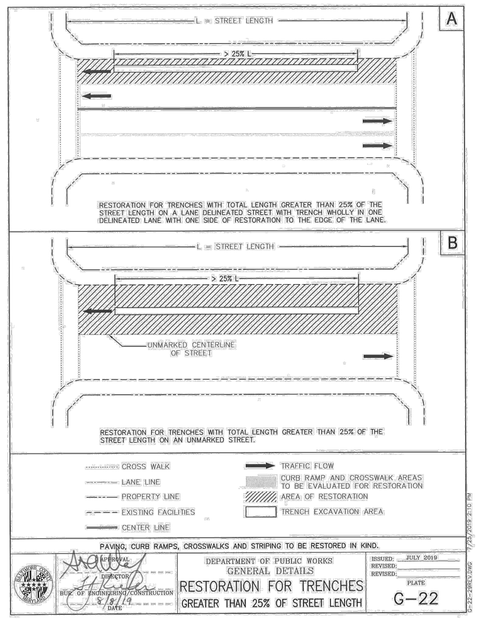

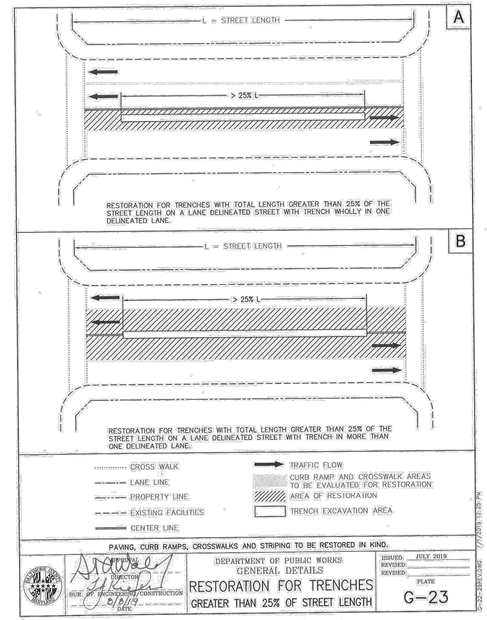

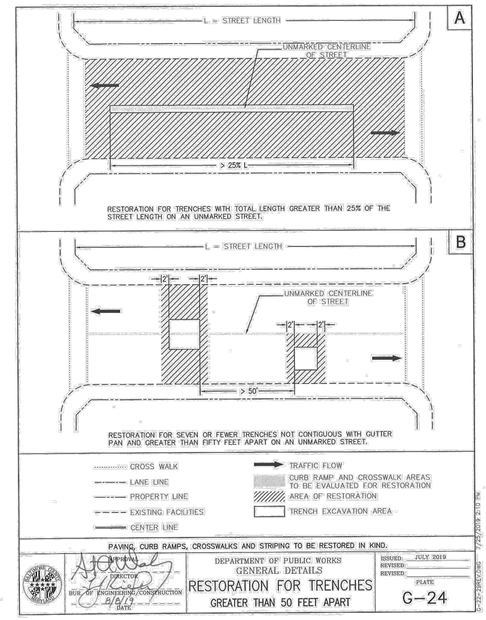

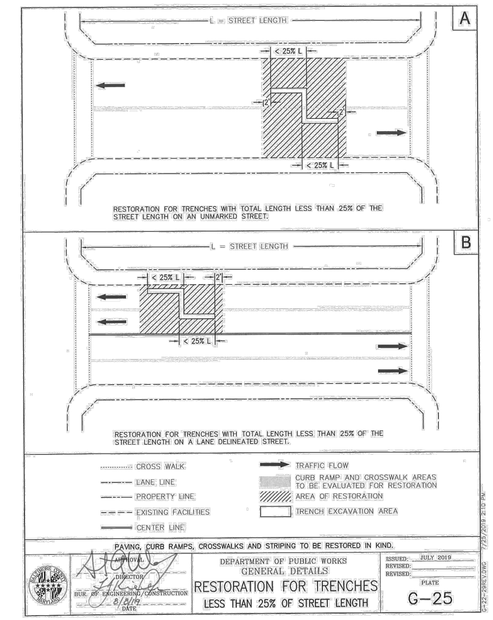

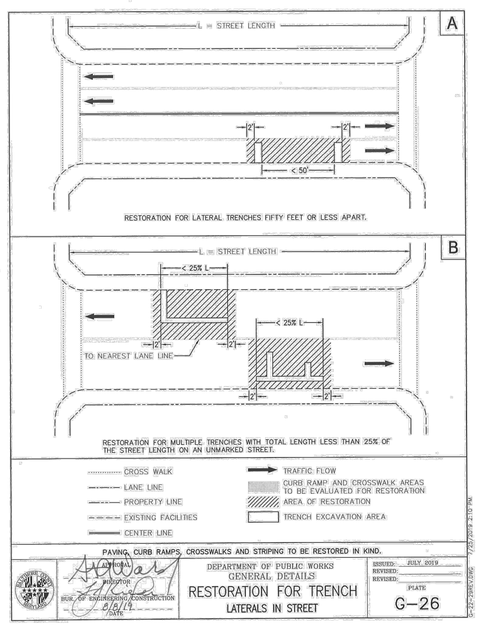

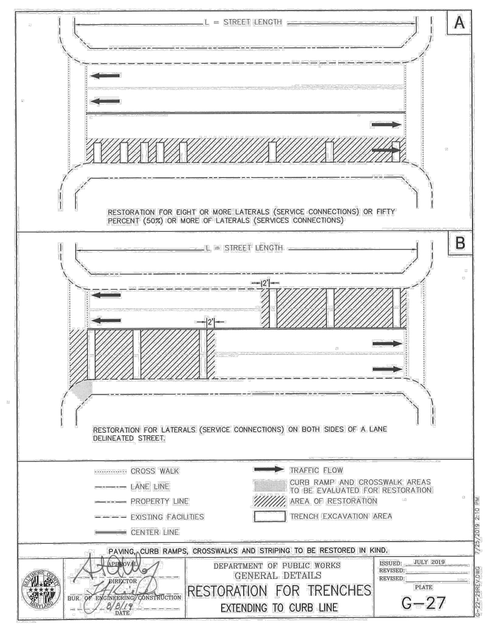

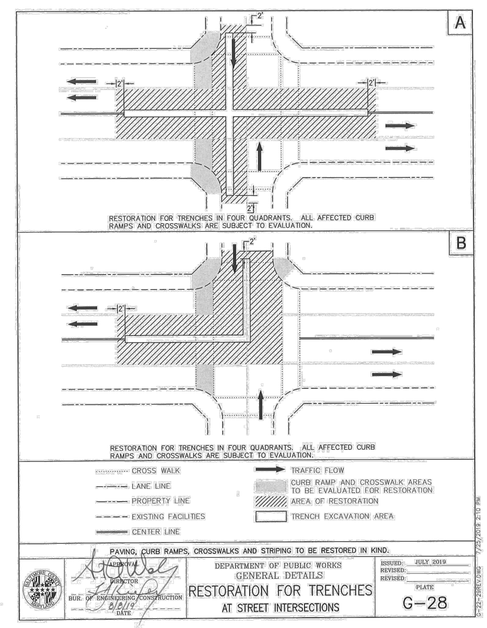

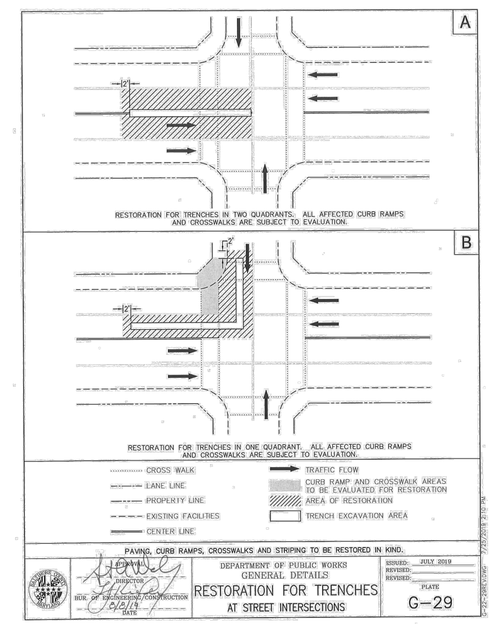

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only)

DWG. FILENAME: 65602-1503.dwg

SEAL

STATE OF MARYLAND — JOSEPH N. CONTI — 55452 — PROFESSIONAL ENGINEER

DATE : 08/02/21

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. 55452 EXPIRATION DATE 12/23/21

ENGINEER: O'BRIEN & GERE ENGINEERS, INC.
EXECUTIVE PLAZA III, SUITE 803
11350 McCORMICK RD
HUNT VALLEY, MD 21031
Phone: (443) 541-1300

DGN BY: CTP
DWN BY: BNL
CHKD BY: REB

AS-BUILT / REVISION	BY	DATE
CONTRACT COMPLETION BOX		

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.		

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE
PLAN SCALE:
PROFILE SCALE:

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

TRENCH RESTORATION DETAILS FOR STREETS

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.: 14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
C-59	21002 SX0
JOB ORDER NUMBER	
201-0077-7263	
SHEET 64 OF 70	
DRAWING NUMBER	
2020-1629	
FILE NO.:	

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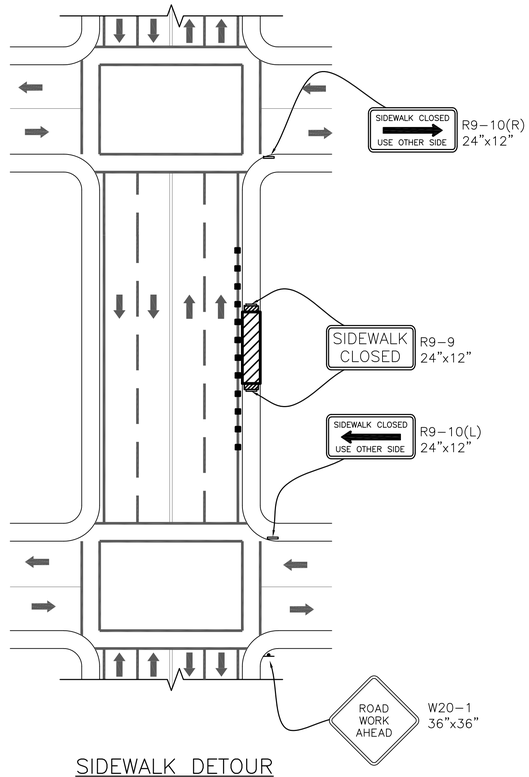
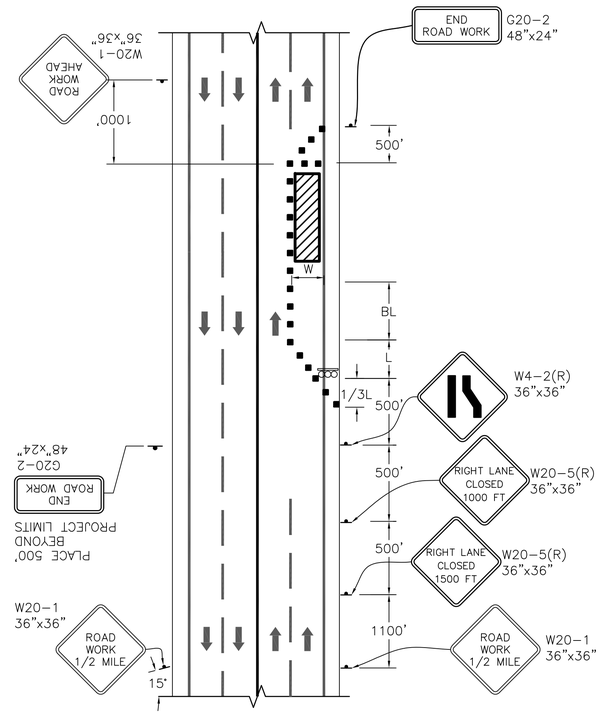
Sep 14, 2021 - 10:18am



SIDEWALK DETOUR
(NOT TO SCALE)



RIGHT LANE CLOSURE MULTI-LANE UNDIV. ROADWAY
EQL/LESS THAN 40 MPH (NIGHT TIME)
(NOT TO SCALE)

NOTES:

1. THESE WORK AREA DETAILS SHALL BE USED AS TYPICAL EXAMPLES FOR THE WORK ZONE PROTECTION AREA. THESE DETAILS ARE TAKEN FROM THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD) AND THE MARYLAND STATE HIGHWAY ADMINISTRATION (MDSHA) BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.
2. ALL SIGNS, FLAGGERS, AND WORK ZONE PROTECTION DEVICES SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE MD MUTCD, WITH ALL REVISIONS.
3. THE CONTRACTOR IS REQUIRED TO MAINTAIN AT LEAST A 11' TRAVEL LANE(S) AT ALL TIMES UNLESS OTHERWISE NOTED.
4. FLAGGERS SHALL NOT BE USED AT TRAFFIC SIGNALS UNLESS THE SIGNAL IS OPERATING UNDER FLASH CONDITIONS.
5. STREET PARKING SHALL NOT BE PERMITTED WITHIN THE VICINITY OF THE TEMPORARY TRAFFIC CONTROL SET UP.

LEGEND

- CHANNELIZING DEVICE
- DIRECTION OF TRAFFIC
- ARROW PANEL
- SIGN
- WORK ZONE
- TYPE III BARRICADE
- TEMPORARY BARRIER
- OPTIONAL PROTECTION VEHICLE WITH TRUCK OR TRAILER-TRUCK ROUNDED ATTENUATOR.
- FLAGGER

TAPER LENGTH TABLE (L)

FOR SPEED LIMITS OF 40 MPH OR LESS:
$L = \frac{WS^2}{60}$

FOR SPEED LIMITS OF 45 MPH OR GREATER:
L = WS

WHERE:
L = TAPER LENGTH (FEET)
W = WIDTH OF OFFSET (FEET)
S = POSTED SPEED LIMIT

S (MPH)	W (FEET)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	L (FEET)														
40	27	53	80	107	133	160	187	213	240	267	293	320	347	373	400

TYPICAL BUFFER LENGTH (BL)

SPEED (MPH)	LENGTH (FEET)
20	115'
25	155'
30	200'
35	250'
40	305'

BRYANT ASSOCIATES
Engineers Surveyors Construction Managers
400 East Pratt Street, 8th Floor
Baltimore, MD 21202

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — MARK A. MOORE — No. 22403 — PROFESSIONAL ENGINEER
DATE: 07/06/2021

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. 22403, EXPIRATION DATE 07/14/2023

ENGINEER:
BRYANT ASSOCIATES, INC.
400 EAST PRATT STREET, 8TH FLOOR
BALTIMORE, MD 21202
PHONE: 443-380-3140

DGN BY: LGA
DWN BY: LGA
CHKD BY: TEB

AS-BUILT / REVISION	BY	DATE

P.W.A. NO.
R.O.W NO.
CONTRACT COMPLETION BOX

KEY SHEET	POSITION SHT

DRAWING SCALE
PLAN SCALE: NTS
PROFILE SCALE: NTS / NTS

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

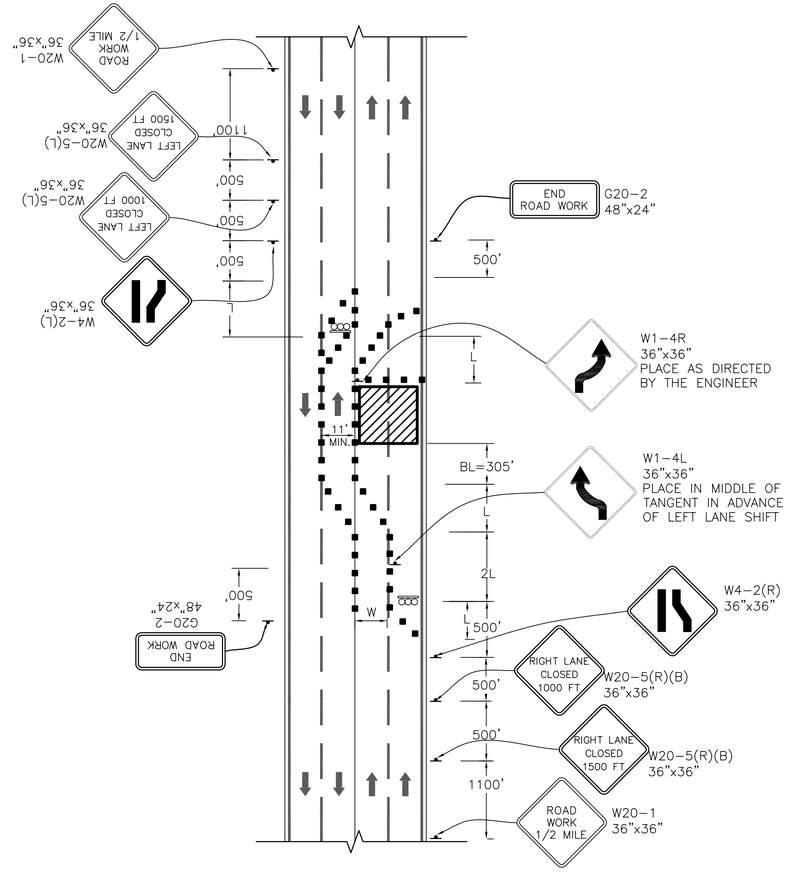
REDHOUSE RUN SEWERSHED
SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I
TRAFFIC CONTROL PLAN FOR US-1 (BELAIR ROAD) – SHEET NO. 1

SUBDIVISION: ROSEDALE
ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

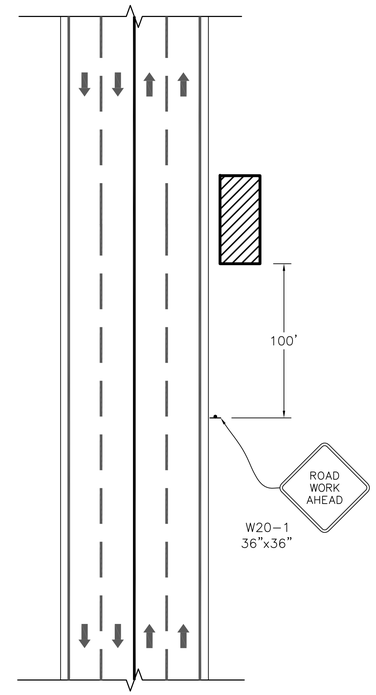
SHEET DESIGNATION	CONTRACT NUMBER
D-1	21002 SX0
JOB ORDER NUMBER	201-0077-7263
SHEET 65 OF 70	
DRAWING NUMBER	2020-1630
FILE NO.:	

DWG. FILENAME: TMP_ SHA PHASE 1-REDHOUSE RUN-BELAIR ROAD.dwg
H:\213507\DWG\TMP_ SHA PHASE 1-REDHOUSE RUN-BELAIR ROAD.dwg
Jul 06, 2021 – 4:26pm



PARTIAL ROAD CLOSURE ON MULTI-LANE UNDIV. ROADWAY EQL/LESS THAN 40 MPH (NIGHT TIME)

(NOT TO SCALE)



WORK BEYOND THE SHOULDER (TA-1)

(NOT TO SCALE)

NOTES:

1. THESE WORK AREA DETAILS SHALL BE USED AS TYPICAL EXAMPLES FOR THE WORK ZONE PROTECTION AREA. THESE DETAILS ARE TAKEN FROM THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD) AND THE MARYLAND STATE HIGHWAY ADMINISTRATION (MDSHA) BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.
2. ALL SIGNS, FLAGGERS, AND WORK ZONE PROTECTION DEVICES SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE MD MUTCD, WITH ALL REVISIONS.
3. THE CONTRACTOR IS REQUIRED TO MAINTAIN AT LEAST A 11' TRAVEL LANE(S) AT ALL TIMES UNLESS OTHERWISE NOTED.
4. FLAGGERS SHALL NOT BE USED AT TRAFFIC SIGNALS UNLESS THE SIGNAL IS OPERATING UNDER FLASH CONDITIONS.
5. STREET PARKING SHALL NOT BE PERMITTED WITHIN THE VICINITY OF THE TEMPORARY TRAFFIC CONTROL SET UP.

LEGEND

- CHANNELIZING DEVICE
- DIRECTION OF TRAFFIC
- ARROW PANEL
- SIGN
- WORK ZONE
- TYPE III BARRICADE
- TEMPORARY BARRIER
- OPTIONAL PROTECTION VEHICLE WITH TRUCK OR TRAILER-TRUCK ROUNDED ATTENUATOR.
- FLAGGER

TAPER LENGTH TABLE (L)

FOR SPEED LIMITS OF 40 MPH OR LESS:

$L = \frac{WS^2}{60}$

FOR SPEED LIMITS OF 45 MPH OR GREATER:

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WHERE:
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TYPICAL BUFFER LENGTH (BL)

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35	250'
40	305'

BRYANT ASSOCIATES
Engineers Surveyors Construction Managers
400 East Pratt Street, 8th Floor
Baltimore, MD 21202

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — MARK A. MOORE — No. 22403 — PROFESSIONAL ENGINEER

DATE: 07/06/2021

PROFESSIONAL CERTIFICATION

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LICENSE NO. 22403, EXPIRATION DATE 07/14/2023.

ENGINEER:
BRYANT ASSOCIATES, INC.
400 EAST PRATT STREET, 8TH FLOOR
BALTIMORE, MD 21202
PHONE: 443-380-3140

DGN BY: LGA
DWN BY: LGA
CHKD BY: TEB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
			R.O.W NO.		
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	NTS
PROFILE SCALE:	NTS / NTS

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

TRAFFIC CONTROL PLAN FOR US-1 (BELAIR ROAD) – SHEET NO. 2

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
D-2	21002 SX0
JOB ORDER NUMBER	201-0077-7263
SHEET 66 OF 70	
DRAWING NUMBER	2020-1631
FILE NO.:	

DWG. FILENAME: TMP_ SHA PHASE 1-REDHOUSE RUN-BELAIR ROAD.dwg

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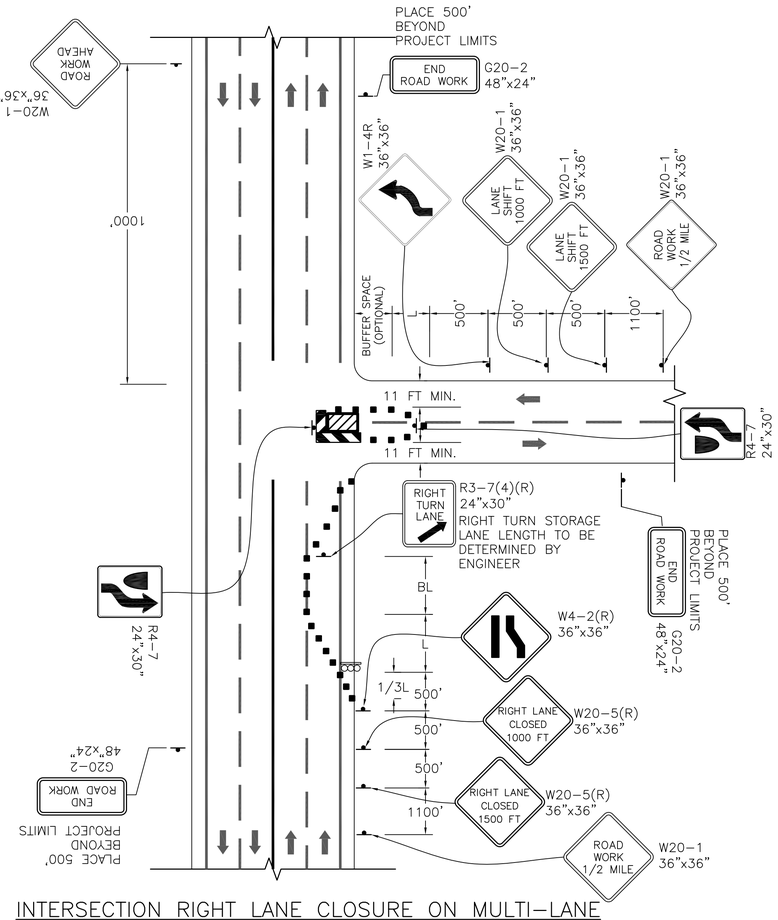
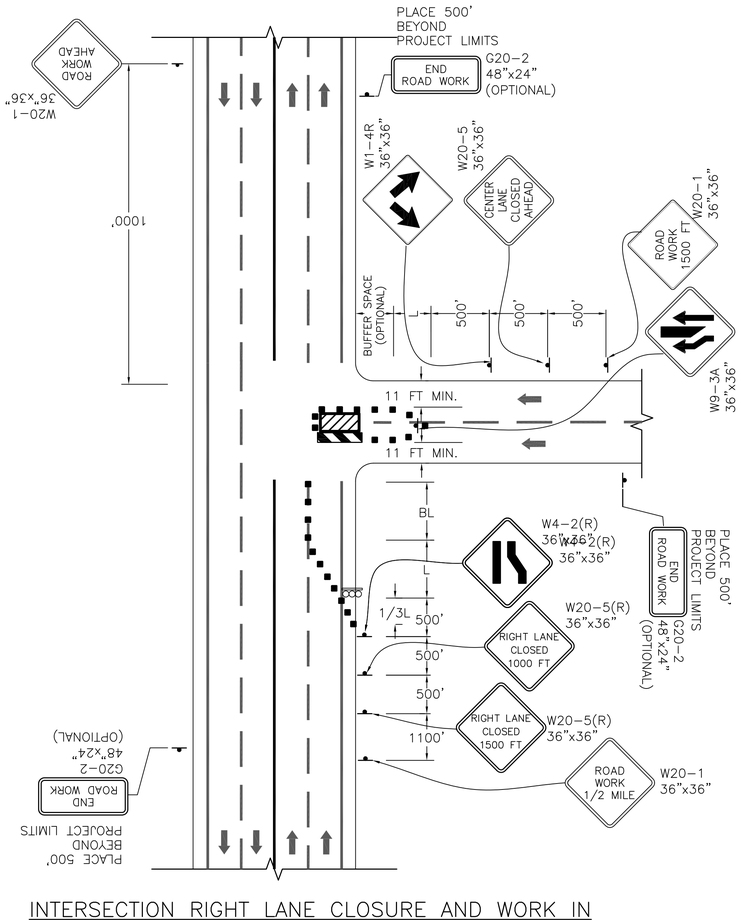
Jul 06, 2021 – 4:26pm



INTERSECTION RIGHT LANE CLOSURE ON MULTI-LANE ROADWAY EQL/LESS THAN 40 MPH (NIGHT TIME)

(NOT TO SCALE)



INTERSECTION RIGHT LANE CLOSURE AND WORK IN CENTER OF LOW-VOLUME ONE-WAY ROAD

(NOT TO SCALE)

NOTES:

1. THESE WORK AREA DETAILS SHALL BE USED AS TYPICAL EXAMPLES FOR THE WORK ZONE PROTECTION AREA. THESE DETAILS ARE TAKEN FROM THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD) AND THE MARYLAND STATE HIGHWAY ADMINISTRATION (MDSHA) BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.
2. ALL SIGNS, FLAGGERS, AND WORK ZONE PROTECTION DEVICES SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE MD MUTCD, WITH ALL REVISIONS.
3. THE CONTRACTOR IS REQUIRED TO MAINTAIN AT LEAST A 11' TRAVEL LANE(S) AT ALL TIMES UNLESS OTHERWISE NOTED.
4. FLAGGERS SHALL NOT BE USED AT TRAFFIC SIGNALS UNLESS THE SIGNAL IS OPERATING UNDER FLASH CONDITIONS.
5. STREET PARKING SHALL NOT BE PERMITTED WITHIN THE VICINITY OF THE TEMPORARY TRAFFIC CONTROL SET UP.

LEGEND

- CHANNELIZING DEVICE
- DIRECTION OF TRAFFIC
- ARROW PANEL
- SIGN
- WORK ZONE
- TYPE III BARRICADE
- TEMPORARY BARRIER
- OPTIONAL PROTECTION VEHICLE WITH TRUCK OR TRAILER-TRUCK ROUNDED ATTENUATOR.
- FLAGGER

TAPER LENGTH TABLE (L)

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$L = \frac{WS^2}{60}$

FOR SPEED LIMITS OF 45 MPH OR GREATER:
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WHERE:
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	L (FEET)														
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TYPICAL BUFFER LENGTH (BL)

SPEED (MPH)	LENGTH (FEET)
20	115'
25	155'
30	200'
35	250'
40	305'

BRYANT ASSOCIATES
Engineers Surveyors Construction Managers
400 East Pratt Street, 8th Floor
Baltimore, MD 21202

O'BRIEN & GERE ENGINEERS, INC

SEAL: STATE OF MARYLAND — GARY A. MOOSER — No. 22403 — PROFESSIONAL ENGINEER

DATE: 07/06/2021

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. 22403, EXPIRATION DATE 07/14/2023

ENGINEER:
BRYANT ASSOCIATES, INC.
400 EAST PRATT STREET, 8TH FLOOR
BALTIMORE, MD 21202
PHONE: 443-380-3140

DGN BY: LGA
DWN BY: LGA
CHKD BY: TEB

AS-BUILT / REVISION | BY | DATE

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION | TRAFFIC | HIGHWAYS | STRUCTURES | STORM DRAINS | SEWER | WATER | FIELD ENGINEER

REVIEWED BY:
DATE REVIEWED:

SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES

P.W.A. NO.
R.O.W NO.

DRAWING SCALE
PLAN SCALE: NTS
PROFILE SCALE: NTS / NTS

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566
BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

TRAFFIC CONTROL PLAN FOR US-1 (BELAIR ROAD) – SHEET NO. 3

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
D-3	21002 SX0

JOB ORDER NUMBER 201-0077-7263
SHEET 67 OF 70
DRAWING NUMBER 2020-1632
FILE NO.: 47%

DWG. FILENAME: TMP_ SHA PHASE 1-REDHOUSE RUN-BELAIR ROAD.dwg

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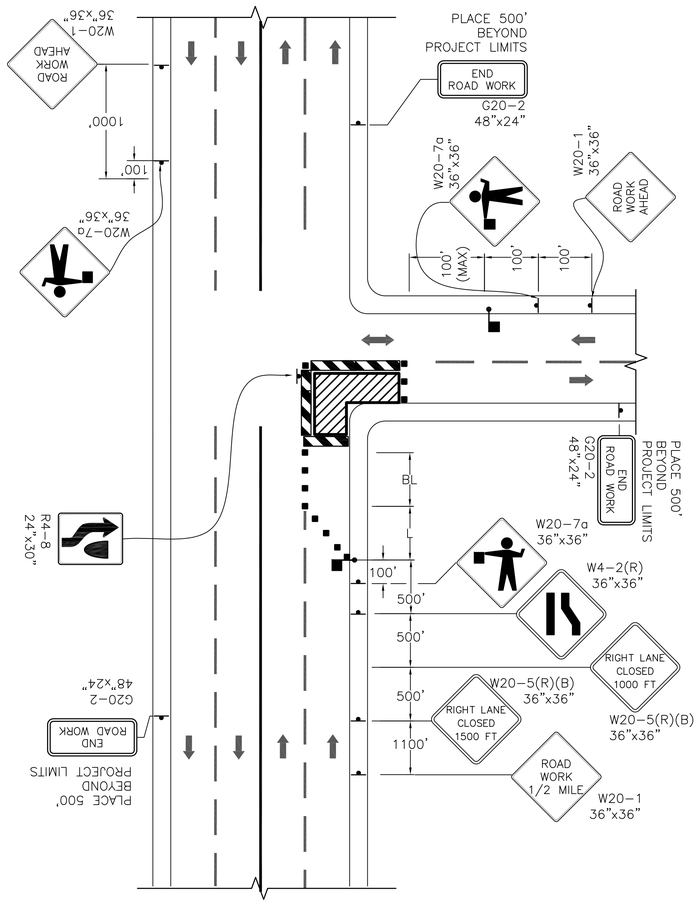
Jul 06, 2021 – 4:26pm



INTERSECTION NEAR-RIGHT LANE CLOSURE MULTILANE UNDIV.
EQL/LESS THAN 40 MPH (NIGHT TIME)
(NOT TO SCALE)

NOTES:

1. THESE WORK AREA DETAILS SHALL BE USED AS TYPICAL EXAMPLES FOR THE WORK ZONE PROTECTION AREA. THESE DETAILS ARE TAKEN FROM THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD) AND THE MARYLAND STATE HIGHWAY ADMINISTRATION (MDSHA) BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.
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3. THE CONTRACTOR IS REQUIRED TO MAINTAIN AT LEAST A 11' TRAVEL LANE(S) AT ALL TIMES UNLESS OTHERWISE NOTED.
4. FLAGGERS SHALL NOT BE USED AT TRAFFIC SIGNALS UNLESS THE SIGNAL IS OPERATING UNDER FLASH CONDITIONS.
5. STREET PARKING SHALL NOT BE PERMITTED WITHIN THE VICINITY OF THE TEMPORARY TRAFFIC CONTROL SET UP.

LEGEND

- CHANNELIZING DEVICE
- DIRECTION OF TRAFFIC
- ARROW PANEL
- SIGN
- WORK ZONE
- TYPE III BARRICADE
- TEMPORARY BARRIER
- OPTIONAL PROTECTION VEHICLE WITH TRUCK OR TRAILER-TRUCK ROUNDED ATTENUATOR.
- FLAGGER

TAPER LENGTH TABLE (L)

FOR SPEED LIMITS OF 40 MPH OR LESS:
$L = \frac{WS^2}{60}$

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WHERE:
L = TAPER LENGTH (FEET)
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S = POSTED SPEED LIMIT

S (MPH)	W (FEET)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	L (FEET)														
40	27	53	80	107	133	160	187	213	240	267	293	320	347	373	400

TYPICAL BUFFER LENGTH (BL)

SPEED (MPH)	LENGTH (FEET)
20	115'
25	155'
30	200'
35	250'
40	305'

SEAL: STATE OF MARYLAND — GARY A. MOORE — No. 22403 — PROFESSIONAL ENGINEER
DATE: 07/06/2021

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. 22403, EXPIRATION DATE 07/14/2023

ENGINEER: BRYANT ASSOCIATES, INC.
400 EAST PRATT STREET, 8TH FLOOR
BALTIMORE, MD 21202
PHONE: 443-380-3140

DGN BY: LGA
DWN BY: LGA
CHKD BY: TEB

AS-BUILT / REVISION	BY	DATE

P.W.A. NO.	KEY SHEET	POSITION SHT
R.O.W NO.		

CONTRACT COMPLETION BOX

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	NTS
PROFILE SCALE:	NTS
	NTS

DEPARTMENT OF PUBLIC WORKS
APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566
BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BRYANT ASSOCIATES
Engineers Surveyors Construction Managers
400 East Pratt Street, 8th Floor
Baltimore, MD 21202

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

TRAFFIC CONTROL PLAN FOR US-1 (BELAIR ROAD) – SHEET NO. 4

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

SHEET DESIGNATION	CONTRACT NUMBER
D-4	21002 SX0
JOB ORDER NUMBER	201-0077-7263
SHEET 68 OF 70	
DRAWING NUMBER	2020-1633
FILE NO.:	

BALTIMORE COUNTY MARYLAND

DWG. FILENAME: TMP_ SHA PHASE 1-REDHOUSE RUN-BELAIR ROAD.dwg

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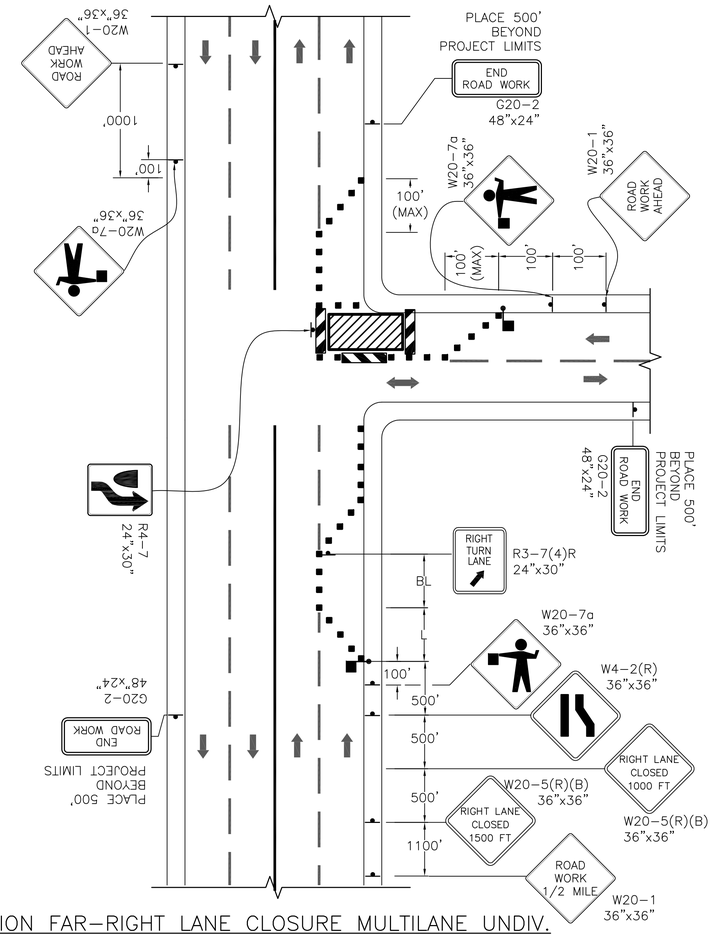
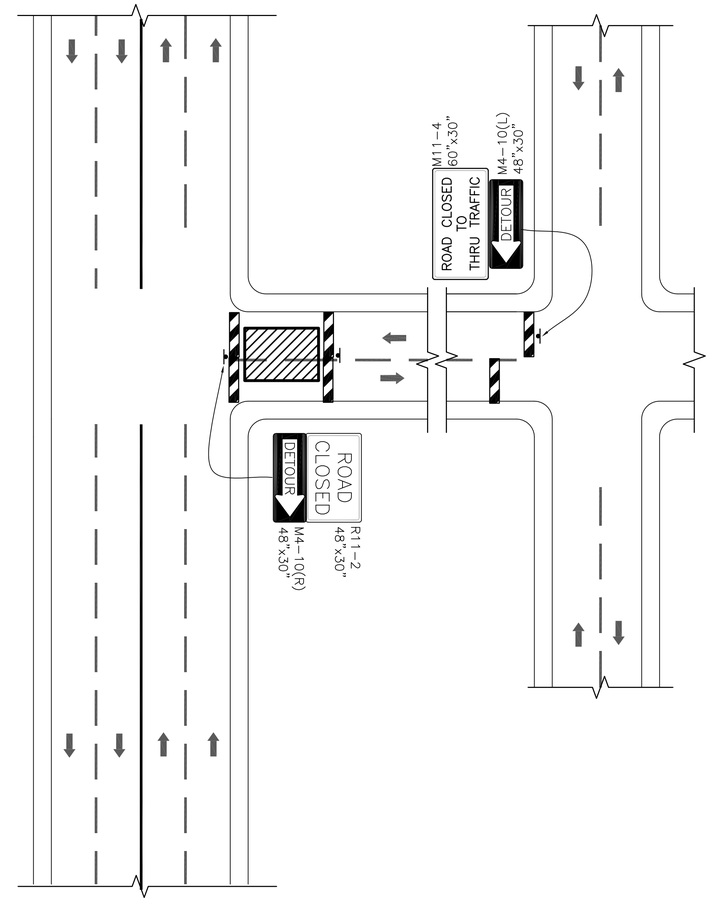
Jul 06, 2021 – 4:27pm



INTERSECTION FAR-RIGHT LANE CLOSURE MULTILANE UNDIV.
EQL/LESS THAN 40 MPH (NIGHT TIME)
(NOT TO SCALE)



ROAD CLOSURE ON LOW-VOLUME TWO-WAY ROAD
(WEST ELM AVENUE AND MANOR AVENUE) EQL/LESS THAN 40 MPH
(NOT TO SCALE)

NOTES:

1. THESE WORK AREA DETAILS SHALL BE USED AS TYPICAL EXAMPLES FOR THE WORK ZONE PROTECTION AREA. THESE DETAILS ARE TAKEN FROM THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD) AND THE MARYLAND STATE HIGHWAY ADMINISTRATION (MDSHA) BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.
2. ALL SIGNS, FLAGGERS, AND WORK ZONE PROTECTION DEVICES SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE MD MUTCD, WITH ALL REVISIONS.
3. THE CONTRACTOR IS REQUIRED TO MAINTAIN AT LEAST A 11' TRAVEL LANE(S) AT ALL TIMES WITH EXCEPTION OF ROAD CLOSURE ON WEST ELM AVENUE AND MANOR AVENUE.
4. FLAGGERS SHALL NOT BE USED AT TRAFFIC SIGNALS UNLESS THE SIGNAL IS OPERATING UNDER FLASH CONDITIONS.
5. STREET PARKING SHALL NOT BE PERMITTED WITHIN THE VICINITY OF THE TEMPORARY TRAFFIC CONTROL SET UP.
6. FOR THE ROAD CLOSURE ON THE LOW VOLUME ROADS, ADDITINAL DETOUR SIGNS SHALL BE PROVIDED TO THE NEXT ADJACENT SIDE STREET.

LEGEND

- CHANNELIZING DEVICE
- DIRECTION OF TRAFFIC
- ARROW PANEL
- SIGN
- WORK ZONE
- TYPE III BARRICADE
- TEMPORARY BARRIER
- OPTIONAL PROTECTION VEHICLE WITH TRUCK OR TRAILER-TRUCK ROUNDED ATTENUATOR.
- FLAGGER

TAPER LENGTH TABLE (L)

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TYPICAL BUFFER LENGTH (BL)

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35	250'
40	305'

BRYANT ASSOCIATES
Engineers Surveyors Construction Managers
400 East Pratt Street, 8th Floor
Baltimore, MD 21202

O'BRIEN & GERE ENGINEERS, INC

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE		DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND GARY A. MOORE JR. No. 22403 PROFESSIONAL ENGINEER	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. 22403, EXPIRATION DATE 07/14/2023.				R.O.W NO.			PLAN SCALE: NTS		APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
		CONTRACT COMPLETION BOX						PROFILE SCALE: NTS / NTS		DATE: SEE SHEET 2020-1566
	ENGINEER: BRYANT ASSOCIATES, INC. 400 EAST PRATT STREET, 8TH FLOOR BALTIMORE, MD 21202 PHONE: 443-380-3140	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	BUR. OF ENGINEERING & CONSTRUCTION
	DGN BY: LGA	REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES							APPROVED BY: SEE SHEET 2020-1566 CHIEF
	DWN BY: LGA	DATE REVIEWED:								DATE: SEE SHEET 2020-1566
DATE: 07/06/2021	CHKD BY: TEB									

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

TRAFFIC CONTROL PLAN FOR US-1 (BELAIR ROAD) – SHEET NO. 5

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

BALTIMORE COUNTY MARYLAND

SHEET DESIGNATION	CONTRACT NUMBER
D-5	21002 SX0
JOB ORDER NUMBER	201-0077-7263
SHEET 69 OF 70	
DRAWING NUMBER	2020-1634
FILE NO.:	

DWG. FILENAME: TMP_ SHA PHASE 1-REDHOUSE RUN-BELAIR ROAD.dwg

H:\21307\DWG\TMP_ SHA PHASE 1-REDHOUSE RUN-BELAIR ROAD.dwg

Jul 06, 2021 – 4:27pm

GENERAL NOTES

1. THE CONTRACTOR SHALL CONTACT THE BUREAU OF TRAFFIC ENGINEERING AND TRANSPORTATION PLANNING AT (410)887-3554 TWO (2) WEEKS BEFORE CONSTRUCTION AND ONE (1) WEEK PRIOR TO ANY CHANGE TO THE MAINTENANCE OF TRAFFIC PLANS. ONCE THE CONTRACTOR RECEIVES NOTICE TO PROCEED, THE DIVISION OF TRAFFIC ENGINEERING WILL INVENTORY THE EXISTING PERMANENT TRAFFIC CONTROL DEVICES WITHIN THE PROJECT LIMITS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE AND REINSTALL ANY DEVICES DAMAGED DURING CONSTRUCTION AT HIS OWN EXPENSE. SHOULD IT BE NECESSARY FOR ANY DEVICES TO BE REMOVED BY THE CONTRACTOR DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE STORAGE OF THESE DEVICES. SHOULD THE DEVICES BECOME DAMAGED, DEFACED, LOST, ETC., THE CONTRACTOR WILL BE BILLED FOR THE REPLACEMENT OF THESE PERMANENT DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RE-INSTALLATION OF ANY PERMANENT DEVICES REMOVED DURING CONSTRUCTION.

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY, INSTALL, AND MAINTAIN ALL TEMPORARY TRAFFIC CONTROL EQUIPMENT FOR THE DURATION OF THE CONTRACT, INCLUDING ADDITIONAL SIGNS THAT ARE DEEMED NECESSARY. ALL MAINTENANCE OF TRAFFIC DEVICES AND INSTALLATION OF THE DEVICES WILL BE INSPECTED ON A ROUTINE BASIS BY THE ENGINEER. ANY DEFICIENCIES SHALL BE CORRECTED PROMPTLY BY THE CONTRACTOR AND REMOVED OR COVERED WITH AN OPAQUE MATERIAL.

3. ALL TRAFFIC CONTROL DEVICES (INCLUDING THEIR INSTALLATION), LANE SHIFTS, AND LANE CLOSURES MUST ADHERE TO THE CURRENT EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD M.U.T.C.D.), MARYLAND STATE HIGHWAY ADMINISTRATION (MDSHA) BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES, AND THE MDSHA STANDARD SPECIFICATIONS FOR CONSTRUCTION MATERIALS.

4. THE CONTRACTOR MUST OBTAIN A LANE CLOSURE PERMIT FROM MDSHA DISTRICT 4 TRAFFIC FOR WORK WITHIN THE BELAIR ROAD (US 1) RIGHT-OF-WAY A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO ANY ROAD WORK.

5. THE CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS, THE BUREAU OF TRAFFIC ENGINEERING AND TRANSPORTATION PLANNING, AND MDSHA DISTRICT 4 TRAFFIC (AS REQUIRED) IN MAINTAINING VEHICULAR, BICYCLE, AND PEDESTRIAN ACCESS FOR COMMERCIAL AND PRIVATE PROPERTIES DURING CONSTRUCTION. PEDESTRIAN DETOURS DUE TO SIDEWALK AND ADA RAMP CONSTRUCTION SHALL BE PROVIDED AND ADHERE TO MDSHA STD. MD 104.06-09A THROUGH MD 104.06-090.

6. ANY TEMPORARY SIGNING AND MARKINGS THAT MAY CONFLICT WITH NORMAL TRAFFIC FLOW SHALL BE REMOVED OR COVERED AT THE END OF EACH DAY. ALL EXISTING DISTURBED PAVEMENT MARKINGS SHALL BE REPLACED IN KIND WITH TEMPORARY PAVEMENT MARKINGS EACH DAY BEFORE THE AFFECTED LANE MAY BE OPENED TO TRAFFIC.

7. ALL EXCAVATION SHALL BE BACKFILLED AND/OR PLATED IN ACCORDANCE WITH MDSHA STANDARDS AT THE END OF EACH WORKING DAY AND 'STEEL PLATES AHEAD' WARNING SIGNS DISPLAYED IN ADVANCE, IF APPLICABLE. A MINIMUM OF ONE LANE OF TRAFFIC IS REQUIRED TO BE MAINTAINED AT ALL TIMES ON ALL COUNTY ROADWAYS.

8. THE CONTRACTOR SHALL MAINTAIN ONE (1) ELEVEN (11) FOOT LANE OF TRAFFIC ON ONE WAY STREETS AND ONE (1) ELEVEN (11) FOOT LANE OF TRAFFIC IN EACH DIRECTION ON TWO WAY STREETS AT ALL TIMES OR PROVIDE A TWO PERSON FLAGGING OPERATION EQUIPPED WITH "SLOW AND STOP" PADDLES (REFER TO MDSHA STANDARD MD 104.02-10). THE BUREAU OF TRAFFIC ENGINEERING AND TRANSPORTATION PLANNING RESERVES THE RIGHT TO LIMIT THE NUMBER AND DURATION OF LANE CLOSURES. WITHIN MDSHA ROW, THE CONTRACTOR SHALL MAINTAIN AT A MINIMUM ONE (1) ELEVEN (11) FOOT LANE OF TRAVEL FOR EACH DIRECTION OF TRAVEL.

9. ACCESS/EGRESS TO ALL INTERSECTING ROADWAYS AND DRIVEWAYS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, UNLESS PERMISSION FOR THE CLOSURE IS GRANTED BY THE PROPERTY OWNER. ACCESSIBILITY FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

10. CLOSURE OF ROADWAYS UNDER SHA JURISDICTION SHALL BE ALLOWED BETWEEN THE HOURS OF 9:00PM AND 5:00AM, MONDAY THROUGH FRIDAY. REFER TO THE CONTRACT SPECIAL PROVISIONS FOR ADDITIONAL CONSTRUCTION AND LANE CLOSURE RESTRICTIONS.

11. AT THE COMPLETION OF THE WORK DAY, THE CONTRACTOR SHALL RESTORE THE ROADWAY TO ITS FULL WIDTH. REFER TO MDSHA STANDARD NO. MD 104.01-28 FOR TEMPORARY AGGREGATE RAMP DETAIL FOR AREAS WHERE THE PAVEMENT DROP OFF IS GREATER THAN 2.5 INCHES AS NEEDED.

12. AS REQUIRED, PORTABLE VARIABLE MESSAGE SIGNS (PVMS) SHALL BE PLACED A MINIMUM OF 1 WEEK PRIOR TO WORK STARTING TO NOTIFY THE PUBLIC OF TRAFFIC CHANGES. MESSAGE AND LOCATION SHALL BE DETERMINED BY THE DISTRICT 4 TRAFFIC ENGINEER. PVMS SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT. RELOCATION MAY BE NECESSARY AS CONSTRUCTION PROGRESSES AND AS DIRECTED BY THE DISTRICT 4 TRAFFIC ENGINEER.

13. THE CONTRACTOR SHALL USE STAGED CONSTRUCTION TO COMPLETE THIS WORK. DURING A STAGE, THE CONTRACTOR SHALL SET UP ONE WORK ZONE AT A TIME LIMITED TO 500 FT OR ONE CITY BLOCK. TO EXCEED THIS LIMIT THE CONTRACTOR MUST OBTAIN APPROVAL FROM THE ENGINEER. AT THE COMPLETION OF ONE WORK ZONE, THE CONTRACTOR SHALL BEGIN THE STAGING OF THE NEXT WORK ZONE.

14. AT THE END OF EACH WORK DAY ALL EQUIPMENT AND MATERIALS SHALL BE REMOVED FROM THE TRAVEL PORTION OF THE ROADWAY AND SHOULD NOT BE STORED IN SUCH A MANNER AS TO OBSTRUCT SIGHT DISTANCE AT ANY DRIVEWAY OR INTERSECTING ROAD.

STREET LIGHTING NOTES

1. THE CONTRACTOR IS REQUIRED TO PROTECT AND MAINTAIN EXISTING CONDUITS/CABLE SYSTEMS. ANY DAMAGE, REPLACEMENT, OR ADJUSTMENTS REQUIRED WILL BE COMPLETED AT THE CONTRACTOR'S EXPENSE. NOTIFY BALTIMORE GAS & ELECTRIC COMPANY (BGE) AT LEAST 30 DAYS PRIOR TO STARTING WORK.

2. THE CONTRACTOR IS REQUIRED TO PROTECT AND MAINTAIN EXISTING STREET LIGHTING, STREET LIGHTING POLES, TRAFFIC SIGNAL FACILITIES, AND HAND BOXES. ANY DAMAGE, REPLACEMENT, OR ADJUSTMENTS REQUIRED WILL BE COMPLETED AT THE CONTRACTOR'S EXPENSE.

3. LIGHTING CONDUIT SIZES CROSSING ALL PAVED STREETS AND ROADS ARE 3-INCH MINIMUM. ALL OTHER LIGHTING CABLING SHOWN SHALL BE ASSUMED TO BE DIRECT BURIED CABLE (DBC) AS INDICATED.

4. IF STREET LIGHTS MUST BE REMOVED FOR CONSTRUCTION, A TEMPORARY LIGHTING SYSTEM SHALL BE INSTALLED PRIOR TO REMOVAL OF THE PERMANENT LIGHTS. THE CONTRACTOR SHALL SUBMIT A TEMPORARY LIGHTING PLAN TO THE DEPARTMENT OF TRANSPORTATION STREET LIGHT SECTION FOR APPROVAL PRIOR TO INSTALLATION. THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH BGE FOR A LIGHTING FEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL, MAINTAIN AND REMOVE THE TEMPORARY LIGHTING SYSTEM.

5. AT NO TIME ARE THE STREETS TO BE WITHOUT PROPER STREET LIGHTING.

6. INSTALLATION OF TEMPORARY AND PERMANENT LIGHTING SYSTEMS SHALL BE IN ACCORDANCE WITH BGE AND COUNTY STANDARDS.

7. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR OR OVER/UNDER ELECTRIC STREET LIGHTING CABLING.

SEAL: STATE OF MARYLAND — GARY A. MOORE — No. 22403 — PROFESSIONAL ENGINEER

DATE: 07/06/2021

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. 22403, EXPIRATION DATE 07/14/2023

ENGINEER:

BRYANT ASSOCIATES, INC.
400 EAST PRATT STREET, 8TH FLOOR
BALTIMORE, MD 21202
PHONE: 443-380-3140

DGN BY: LGA
DWN BY: LGA
CHKD BY: TEB

AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT
			R.O.W NO.		
CONTRACT COMPLETION BOX					

BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
REVIEWED BY:	SEE DRAWING 2020-1566 FOR ORIGINAL SIGNATURES						
DATE REVIEWED:							

DRAWING SCALE	
PLAN SCALE:	NTS
PROFILE SCALE:	NTS
	NTS

DEPARTMENT OF PUBLIC WORKS

APPROVED BY: SEE SHEET 2020-1566 DIRECTOR
DATE: SEE SHEET 2020-1566

BUR. OF ENGINEERING & CONSTRUCTION
APPROVED BY: SEE SHEET 2020-1566 CHIEF
DATE: SEE SHEET 2020-1566

BRYANT ASSOCIATES
Engineers Surveyors Construction Managers
400 East Pratt Street, 8th Floor
Baltimore, MD 21202

O'BRIEN & GERE ENGINEERS, INC

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING & CONSTRUCTION

REDHOUSE RUN SEWERSHED

SANITARY SEWER STRUCTURAL REHABILITATION – PHASE I

TRAFFIC CONTROL PLAN FOR US-1 (BELAIR ROAD) – SHEET NO. 6

SUBDIVISION: ROSEDALE

ELECTION DIST. NO.:14C6

SHEET DESIGNATION	CONTRACT NUMBER
D-6	21002 SX0
JOB ORDER NUMBER	201-0077-7263
SHEET 70 OF 70	
DRAWING NUMBER	2020-1635
FILE NO.:	

DWG. FILENAME: TMP_ SHA PHASE 1-REDHOUSE RUN-BELAIR ROAD.dwg

Jul 06, 2021 – 4:27pm

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