

CIVIL GENERAL NOTES

1. THERE ARE NUMEROUS EXISTING BURIED UTILITIES IN THIS PROJECT AREA. THE LOCATION OF PIPES, DUCTS CONDUITS, AND OTHER UNDERGROUND STRUCTURES SHOWN HERE ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND STRUCTURES ARE SHOWN. THESE UTILITIES ARE SHOWN BASED ON BEST AVAILABLE FIELD EVIDENCE AND RECORDED DATA PROVIDED BY THE OWNER. ALL UNDERGROUND UTILITIES MUST BE LOCATED AND MARKED, BY THE CONTRACTOR, DURING THE PROJECT.
2. THE CONTRACTOR MUST CONSTRUCT THE WATER MAIN WHILE MAINTAINING WATER SERVICE THROUGH THE EXISTING WATER MAINS. WATER SERVICE SHALL NOT BE INTERRUPTED FOR MORE THAN FOUR (4) HOURS. ALL CUSTOMERS THAT MAY BE TEMPORARILY OUT OF WATER SHALL BE NOTIFIED TWENTY-FOUR (24) HOURS PRIOR TO ACTIVITY BY THE CONTRACTOR.
3. THE CONTRACTOR MUST CONSTRUCT THE SANITARY SEWER MAIN WHILE MAINTAINING SEWER SERVICE THROUGH THE EXISTING COLLECTION SYSTEM OR A BY-PASS PUMPING SYSTEM. SEWER SERVICE SHALL NOT BE INTERRUPTED FOR MORE THAN FOUR (4) HOURS. ALL CUSTOMERS THAT MAY BE TEMPORARILY OUT OF SEWER SERVICE SHALL BE NOTIFIED TWENTY-FOUR (24) HOURS PRIOR TO ACTIVITY BY THE CONTRACTOR.
4. THE CONTRACTOR SHALL PERFORM EXPLORATORY EXCAVATION TO VERIFY LOCATIONS AND SIZES OF EXISTING WATER, SEWER, STORM DRAIN SYSTEMS, AND SERVICES, PRIOR TO INSTALLATION OF ANY SEGMENT OF NEW UTILITIES. CONTRACTOR SHALL USE EXTREME CAUTION TO PREVENT DAMAGE TO EXISTING UTILITIES. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL UTILITIES WHETHER OR NOT THEY ARE SHOWN ON THE PLANS. ALL REPAIRS TO DAMAGED UTILITIES SHALL BE MADE BY THE CONTRACTOR, USING MATERIALS APPROVED BY THE ENGINEER, AT NO ADDITIONAL EXPENSE OF THE OWNER.
5. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS SET FORTH IN THE CONSTRUCTION GENERAL PERMIT(3-9001) AND THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENTATION CONTROL.
6. WHEN REPLACING STRUCTURES AND/OR CONNECTING TO EXISTING PIPING SYSTEMS, CONFIRM EXISTING LOCATIONS, SIZES AND ELEVATIONS OF INVERTS PRIOR TO ORDERING PRE-CAST STRUCTURES.
7. CONTRACTOR TO USE EXTREME CAUTION WHEN EXCAVATING NEAR BUILDINGS AND OTHER STRUCTURES.
8. GENERALLY DARK OR HEAVY LINE WEIGHT REFERS TO PROPOSED IMPROVEMENTS. NORMAL FONT OR LIGHT LINE WORK REFERS TO EXISTING FACILITIES.
9. CONTRACTORS SHALL COORDINATE WITH DIG SAFE A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION.
10. REFER TO WATER DETAILS AND SEWER DETAILS FOR CONSTRUCTION DETAILS.
11. ALL WORK SHALL BE DONE ON LANDS OWNED BY CITY OF BARRE OR IN THE PUBLIC RIGHT-OF-WAY OR EASEMENT AREAS.
12. LISTING OF ADAPTERS, FITTINGS, NIPPLES, ETC. IS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. ADDITIONAL MATERIAL MAY BE REQUIRED. SOLID SLEEVE COUPLINGS WILL BE REQUIRED FOR CONNECTION TO EXISTING MAINS.
13. MINIMUM VERTICAL CLEARANCE BETWEEN NEW WATER MAINS AND ALL EXISTING UTILITIES, EXCEPT SEWERS AND STORM DRAINS TO BE SIX (6) INCHES AT CROSSING LOCATIONS. SEE WATER AND SEWER SEPARATION NOTES ON THIS SHEET FOR MINIMUM CLEARANCE FROM SEWERS AND STORM DRAINS.
14. ANY EXISTING WATER AND SEWER SERVICES WILL BE REPAIRED OR RELOCATED AS NECESSARY IN ORDER TO MAINTAIN SERVICE. THE UTILITY OWNER WILL ASSIST IN THE LOCATION AND MARKING OF THESE SERVICES BUT THE CONTRACTOR MAY BE REQUIRED TO CONDUCT EXPLORATORY EXCAVATION AS REQUIRED.
15. WHERE NEW MECHANICALLY RESTRAINED PIPE IS CONNECTED TO EXISTING PUSH ON JOINT PEIP THE CONTRACTOR MUST ADEQUATELY RESTRAIN EXISTING PUSH ON PIPE AS NECESSARY..
16. ALL WATER MAIN PIPE, VALVES, FITTINGS, AND HYDRANTS ARE TO BE MECHANICALLY RESTRAINED USING MECHANICAL JOINTS WITH WEDGE TYPE RETAINER GLANDS. CONTRACTOR MAY USE THRUST BLOCKS AT HIS DISCRETION.
17. WATER MAINS TO HAVE 6.0 FEET MINIMUM COVER UNLESS OTHERWISE STATED OR SHOWN ON THE PROFILES. WHEN 6.0 FEET OF COVER CANNOT BE MAINTAINED 4" RIGID BOARD INSULATION SHALL BE USED. DEPTH COVER SHALL NOT BE LESS THAN 4 FEET EVEN WITH INSULATION. SEWER MAIN SHALL HAVE A MINIMUM OF 6.0' OF COVER UNLESS OTHERWISE STATED OR SHOWN ON THE PROFILES.
18. ALL WATER MAIN ON THE PROJECT SHALL BE MECHANICAL JOINT AND SHALL INCORPORATE A WEDGE TYPE RETAINER GLAND INSTEAD OF THE COMMON FOLLOWER GLAND.
19. CONTRACTOR IS RESPONSIBLE FOR FLUSHING, PRESSURE TESTING AND DISINFECTING ALL NEW WATER MAIN. CHLORINE INJECTION POINTS SHALL BE INSTALLED WHERE REQUIRED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION AND REMOVED UPON COMPLETION OF TESTING. CONTRACTOR TO DISCUSS PROCEDURES WITH ENGINEER PRIOR TO COMMENCEMENT OF TESTING.
20. CONTRACTOR SHALL VERIFY LOCATION OF ALL OVERHEAD AND UNDERGROUND ELECTRIC, CABLE AND TELEPHONE LINES AND TAKE NECESSARY PRECAUTIONS IN STRICT ACCORDANCE WITH OSHA STANDARDS DURING CONSTRUCTION. CONTRACTOR SHALL CONTACT THE LOCAL POWER UTILITY AND TELEPHONE UTILITY REGARDING ANY NECESSARY SUPPORT OF ANY UTILITY POLES DURING CONSTRUCTION. SEE THE UTILITY SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
21. CONTRACTOR TO PROVIDE CAPS FOR ALL ABANDONED PIPING AS REQUIRED. ALL TYPES OF PIPE CAPPING TO BE PAID FOR UNDER THE PIPE UNIT PRICE. ALL MAIN LINE UTILITIES TO BE ABANDONED SHALL BE FILLED WITH FLOWABLE FILL. ALL SERVICE LINES TO BE REMOVED.
22. CONTRACTOR SHALL MAKE EVERY EFFORT TO ALLOW ACCESS TO AND FROM DRIVEWAYS, RESIDENCES, AND BUSINESSES LOCATED ALONG THE ROUTE OF CONSTRUCTION.
23. TECHNICAL SPECIFICATIONS PROVIDE NECESSARY INFORMATION AND ARE PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.
24. ROOF DRAIN INFORMATION SHOWN HEREON RELY ON INFORMATION PROVIDED BY PLANS PRODUCED BY VANASSE HANGEN BRUSTLIN, INC. CONTRACTOR IS TO VERIFY STORMWATER STRUCTURE INVERT INFORMATION PRIOR TO COMMENCEMENT OF CONSTRUCTION OF EACH ROOF DRAIN.
25. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS TO GAIN ACCESS TO BASEMENTS WHERE NECESSARY.
26. FLOWABLE FILL IS TO BE USED DIRECTLY UNDER EXISTING DUCT BANK WHEN MECHANICAL COMPACTION CANNOT ACHIEVE THE REQUIRED COMPACTION AT ALL UTILITY MAIN AND SERVICE CROSSINGS.
27. ALL WATER MAIN (INCLUDING INTERCONNECTION POINTS, SPRINKLER LINES, AND FUTURE STUBS) MUST BE FLUSHED PRIOR TO DISENFECTION. TEMPORARY FLUSHING CONNECTIONS AE REQUIRED IN MOST CASES. SEE DETAIL ON SHEET 154.

WATER AND SEWER SEPARATION

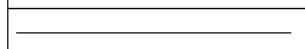
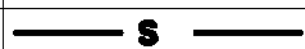
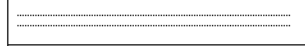
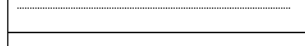
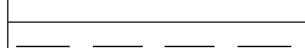
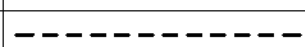
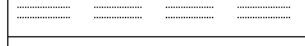
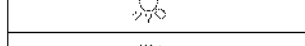
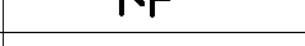
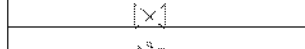
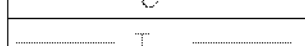
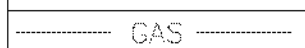
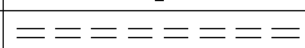
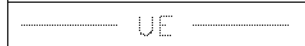
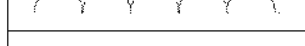
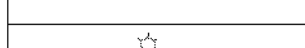
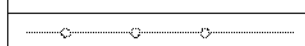
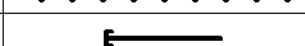
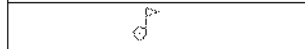
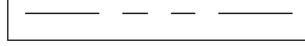
1. PARALLEL INSTALLATION: WATER MAINS AND WATER SERVICES SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY SEWER OR FIVE (5) FEET FROM ANY STORM SEWER. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.
2. CROSSINGS: WATER MAINS OR WATER SERVICES CROSSING SEWER PIPES (SANITARY OR STORM) SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER PIPE. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS ABOVE OR BELOW THE SEWER PIPE. AT CROSSINGS, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. IF THE SEWER MAIN IS OVER THE WATER MAIN, THE FIRST SEWER PIPE JOINTS ON EACH SIDE OF THE WATER MAIN MUST BE CONCRETE ENCASED. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

LOCAL VALVE OPERATION

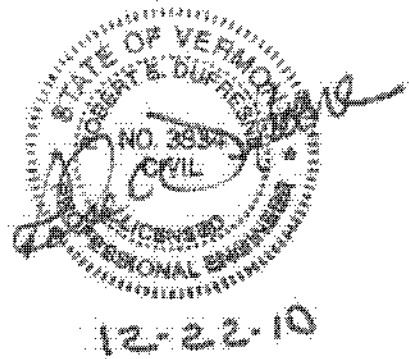
1. EXISTING AND PROPOSED MAIN LINE GATE VALVES SHALL OPEN RIGHT OR CLOCKWISE. OPERATION OF GATE VALVES WILL BE PERFORMED BY THE UTILITY OWNER'S STAFF ONLY.
2. ALL INTERCONNECTIONS TO THE EXISTING SYSTEM CAN ONLY BE MADE WITH THE WRITTEN PERMISSION OF THE ENGINEER.

INDEX OF SHEETS

| NUMBER | TITLE                     |
|--------|---------------------------|
| 133    | GENERAL NOTES AND LEGEND  |
| 134    | WATER AND SEWER SITE PLAN |
| 135    | WATER AND SEWER SITE PLAN |
| 136    | WATER AND SEWER SITE PLAN |
| 137    | WATER AND SEWER SITE PLAN |
| 138    | WATER AND SEWER SITE PLAN |
| 139    | SANITARY SEWER PROFILES   |
| 140    | SANITARY SEWER PROFILES   |
| 141    | SANITARY SEWER PROFILES   |
| 142    | SANITARY SEWER PROFILES   |
| 143    | SANITARY SEWER PROFILES   |
| 144    | SEWER SERVICE PROFILES    |
| 145    | SEWER SERVICE PROFILES    |
| 146    | SEWER SERVICE PROFILES    |
| 147    | SEWER SERVICE PROFILES    |
| 148    | SEWER SERVICE PROFILES    |
| 149    | SEWER SERVICE PROFILES    |
| 150    | SEWER DETAILS             |
| 151    | WATER PROFILES            |
| 152    | WATER PROFILES            |
| 153    | WATER PROFILES            |
| 154    | WATER DETAILS             |
| 155    | ROOF DRAIN PROFILES       |
| 156    | ROOF DRAIN PROFILES       |
| 157    | ROOF DRAIN PROFILES       |
| 158    | BOX CULVERT DETAILS       |

| LEGEND                                                                                |                      |                                                                                       |                                  |
|---------------------------------------------------------------------------------------|----------------------|---------------------------------------------------------------------------------------|----------------------------------|
| EXISTING                                                                              |                      | PROPOSED                                                                              |                                  |
|  | BUILDING             |  | SANITARY SEWER                   |
|  | CURB                 |  | SEWER SERVICE                    |
|  | EDGE OF PAVEMENT     |  | WATER MAIN                       |
|  | EDGE OF SIDEWALK     |  | HIGH PRESSURE WATER MAIN         |
|  | EDGE OF GRAVEL DRIVE |  | WATER SERVICE                    |
|  | WATER MAIN           |  | ROOF DRAIN                       |
|  | SANITARY SEWER       |  | SEWER MANHOLE                    |
|  | STORM DRAIN          |  | GATE VALVE                       |
|  | SEWER MANHOLE        |  | BUTTERFLY VALVE                  |
|  | CATCH BASIN          |  | FIRE HYDRANT                     |
|  | DRAIN MANHOLE        |  | CURB STOP                        |
|  | TELEPHONE MANHOLE    |  | MANUAL AIR RELEASE               |
|  | ELECTRIC MANHOLE     |  | END CAP                          |
|  | FIRE HYDRANT         |  | PIPE FITTINGS                    |
|  | GATE VALVE           |  | SOLID SLEEVE                     |
|  | CURB STOP            |  | CATCH BASIN (BY OTHERS)          |
|  | TELEPHONE            |  | STORM MANHOLE (BY OTHERS)        |
|  | GAS LINE             |  | STORM DRAIN (BY OTHERS)          |
|  | UNDERGROUND ELECTRIC |  | TELEPHONE (BY OTHERS)            |
|  | UTILITY POLE         |  | UNDERGROUND ELECTRIC (BY OTHERS) |
|  | GUY WIRE             |  | LIGHT AND BASE (BY OTHERS)       |
|  | TREELINE             |  | GFI RECEPTICAL (BY OTHERS)       |
|  | SIGN                 |  | TREE (BY OTHERS)                 |
|  | LIGHT                |  | UTILITIES TO BE ABANDONED        |
|  | CHAINLINK FENCE      |  | FUTURE STUB                      |
|  | MAIL BOX             |  | SEWER VAULT                      |
|  | RIGHT OF WAY         |                                                                                       |                                  |

| ABBREVIATIONS |                              |
|---------------|------------------------------|
| CPEP          | CORRUGATED POLYETHYLENE PIPE |
| DI            | DUCTILE IRON                 |
| FF            | FINISHED FLOOR               |
| ID            | INSIDE DIAMETER              |
| MJ            | MECHANICAL JOINT             |
| N/F           | NOW OR FORMALLY              |
| PP            | PRESSURE PIPE                |
| RD            | ROOF DRAIN                   |
| ROW           | RIGHT-OF-WAY                 |
| SMH           | SEWER MANHOLE                |
| SS            | SEWER SERVICE                |
| TYP           | TYPICAL                      |
| WS            | WATER SERVICE                |
| MIN           | MINIMUM                      |
| TBR           | TO BE REMOVED                |
| TBV           | TO BE VERIFIED               |



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|                                      |                           |
|--------------------------------------|---------------------------|
| PROJECT NAME: BARRE CITY             |                           |
| PROJECT NUMBER: FEGC F 026-1(34) C/2 |                           |
| FILE NAME: 717014-SITE PLANS         | PLOT DATE: Mar. 22, 11    |
| PROJECT LEADER: R.E. DUFRESNE        | DRAWN BY: B.L. BAKER      |
| DESIGNED BY: B.L. BAKER              | CHECKED BY:C.L. WHITEHEAD |
| LEGEND AND GENERAL NOTES             | SHEET 133 OF 339          |