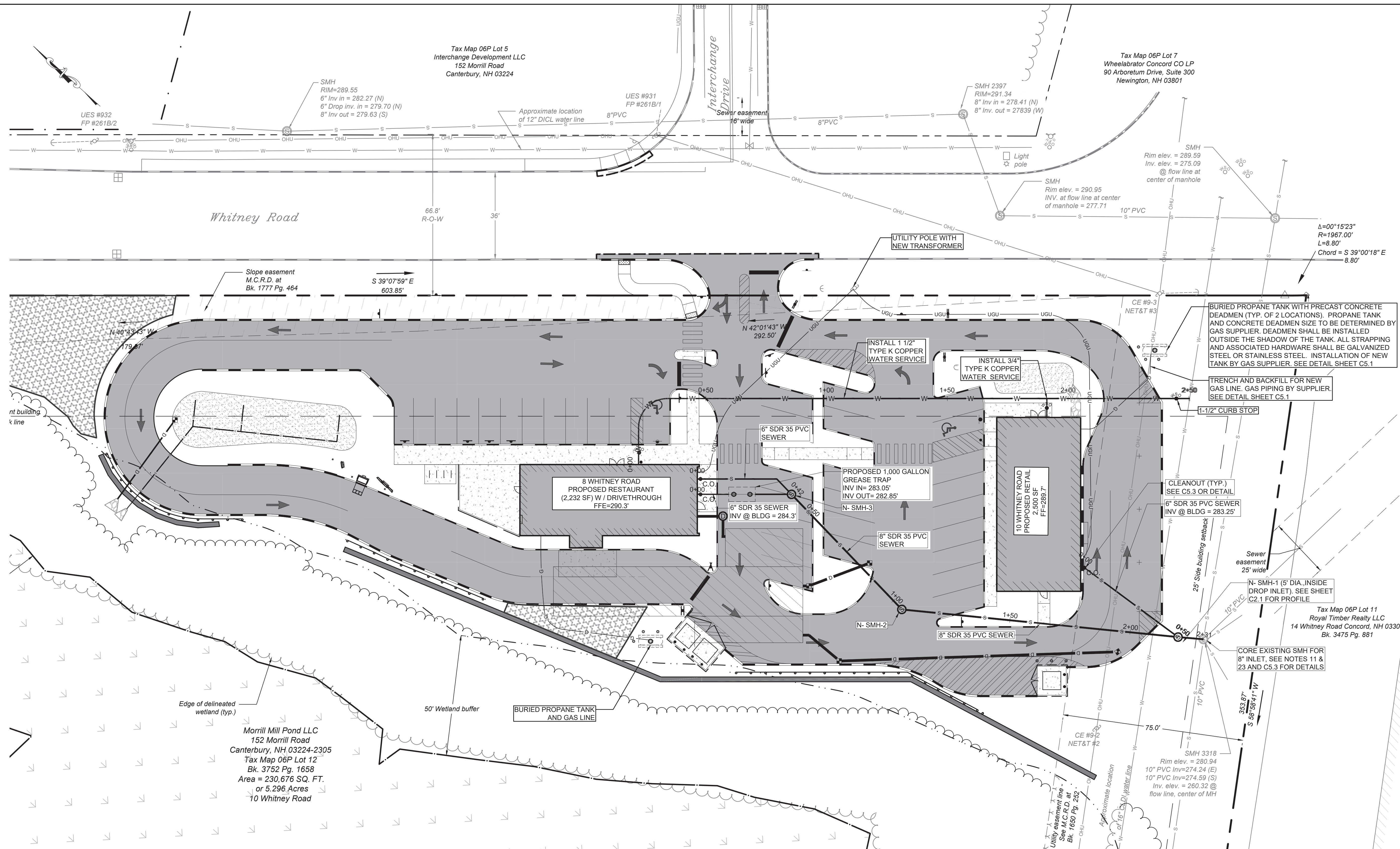


REVISION HISTORY

1. REVISED PER DRAINAGE UPDATES (JMM, 08/23/2022)
2. REVISED PER RESTAURANT DRIVE THROUGH QUEUE (CAT, 08/30/2022)
3. REVISED PER CITY COMMENTS (CDM, 09/16/2022)
4. REVISED PER CITY COMMENTS (CDM, 10/27/2022)
5. REVISED PER CITY COMMENTS (CDM, 12/01/2022)
6. REVISED EXISTING CONDITIONS PLAN (CDM, 12/14/2022)
7. REVISED PER CITY COMMENTS (CDM, 01/05/2023)
8. REVISED PER CITY COMMENTS (CDM, 02/27/2023)



ISSUED FOR

PERMITTING

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OWNER

MORRILL MILL POND LLC

**152 MORRILL ROAD
CANTERBURY, NH 03224**

SITE

**RESTAURANT / RETAIL
DEVELOPMENT**

**8 & 10 WHITNEY ROAD
CONCORD, NH 03301**

MAP 06P / LOT 12

DRAWING TITLE

UTILITY PLAN

| | | | |
|------------|------------|-------------|-------------|
| SCALE | DATE | | |
| 1" = 20' | 08/17/2022 | | |
| DRAFTED BY | CHECKED BY | PROJECT MGR | PROJECT NO. |
| CDM | CAT | CAT | MORL0001 |

STATE OF NEW HAMPSHIRE

CYNTHIA A. THERIAULT
No. 14619
Professional Engineer

C1.3

06 OF 20

PLAN NOTES:

1. REFER TO SURVEYOR'S PLAN, FOR BASE PLAN REFERENCES AND ADDITIONAL NOTES.
2. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE SURVEY PLAN AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
3. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION.
4. LOCATIONS AND ELEVATIONS OF UTILITIES ARE APPROXIMATE ONLY AND ARE BASED ON RECORDS FROM THE UTILITY COMPANIES AND FIELD MEASUREMENTS OF VISIBLE STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION AND WILL NOTIFY ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS.
5. THERE WILL BE NO PHYSICAL CONNECTION BETWEEN A PUBLIC OR PRIVATE POTABLE WATER SUPPLY SYSTEM AND A SEWER OR SEWER APPURTENANCE WHICH WOULD PERMIT THE PASSAGE OF SEWAGE OR POLLUTED WATER INTO THE POTABLE SUPPLY. NO WATER PIPE WILL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SEWER OR SEWER MANHOLE. NO SEWER WILL BE LOCATED WITHIN THE WELL PROTECTIVE

RADII ESTABLISHED IN ENV-WS 300 FOR ANY PUBLIC WATER SUPPLY WELLS OR WITHIN 100 FEET OF ANY PRIVATE WATER SUPPLY WELL. SEWERS WILL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. A DEVIATION FROM THE SEPARATION REQUIREMENTS WILL BE ALLOWED WHERE NECESSARY TO AVOID CONFLICT WITH SUBSURFACE STRUCTURES, UTILITY CHAMBERS, AND BUILDING FOUNDATIONS, PROVIDED THAT THE SEWER IS CONSTRUCTED IN ACCORDANCE WITH THE FORCE MAIN CONSTRUCTION REQUIREMENTS SPECIFIED IN ENV-WQ 704.07. WHENEVER SEWERS MUST CROSS WATER MAINS, THE SEWER WILL BE CONSTRUCTED AS FOLLOWS:

- 5.1. VERTICAL SEPARATION OF THE SEWER AND WATER MAIN WILL BE NOT LESS THAN 18 INCHES, WITH WATER ABOVE SEWER, AND
- 5.2. SEWER PIPE JOINTS WILL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATER MAIN.

6. THE CONTRACTOR WILL PROVIDE A MINIMUM NOTICE OF FOURTEEN (14) DAYS TO ALL CORPORATIONS, COMPANIES AND/OR LOCAL AUTHORITIES OWNING OR HAVING A JURISDICTION OVER UTILITIES RUNNING TO, THROUGH OR ACROSS PROJECT AREAS PRIOR TO DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
7. THE LOCATION, SIZE, DEPTH AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES WILL BE TO THE STANDARDS AND REQUIREMENTS OF THE RESPECTIVE UTILITY COMPANY (ELECTRIC, TELEPHONE, CABLE TELEVISION, FIRE ALARM, GAS, WATER, AND SEWER).
8. ALL CONSTRUCTION WILL CONFORM TO THE CITY STANDARDS AND REGULATIONS, UNLESS OTHERWISE SPECIFIED. ALL CONSTRUCTION ACTIVITIES WILL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.

9. THE CONTRACTOR IS TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITY STUBS PRIOR TO CONSTRUCTION AND DISCONNECT ALL EXISTING SERVICE CONNECTIONS AT THEIR RESPECTIVE MAINS IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS. ENGINEER TO BE NOTIFIED.
10. AS-BUILT PLANS WILL BE SUBMITTED TO ENGINEERING SERVICES DIVISION.
11. INVERTS AND SHELVES: MANHOLES WILL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW AT CHANGES IN DIRECTION. THE INVERTS WILL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES WILL BE CONSTRUCTED TO THE ELEVATION OF THE THROUGH CHANNEL. UNDERLAYMENT OF INVERT, AND SHELF WILL CONSIST OF GRADE SS HARD BRICK MASONRY.
12. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS WILL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30 INCH DIA. CLEAR OPENING. THE WORD "SEWER" OR "DRAIN", AS APPROPRIATE, WILL BE CAST INTO THE CENTER OF THE UPPER FACE OF EACH COVER WITH RAISED, 3" LETTERS.
13. WILLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H20 LOADS.
14. CONTRACTOR WILL PLACE 2" WIDE METAL WIRE IMPREGNATED GREEN PLASTIC WARNING TAPE OVER ENTIRE LENGTH OF ALL GRAVITY SEWERS, SERVICES, AND FORCE MAINS.
15. ALL SANITARY STRUCTURE INTERIOR DIAMETERS (4" MIN) WILL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS.

16. PROPOSED RIM ELEVATIONS OF SANITARY AND DRAIN MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, GAS GATES AND OTHER UTILITIES TO FINISH GRADE.
17. DIMENSIONS ARE SHOWN TO CENTERLINE OF PIPE OR FITTING.
18. ALL GRAVITY SEWER PIPE, MANHOLES, AND FORCE MAINS WILL BE TESTED ACCORDING TO NHDES STANDARDS OF DESIGN AND CONSTRUCTION FOR SEWAGE AND WASTEWATER TREATMENT FACILITIES, CHAPTER ENV-WQ 700, CONFORMING TO THE FOLLOWING MIN. CRITERIA. ENV-WQ 704.06 GRAVITY SEWER PIPE TESTING: GRAVITY SEWERS WILL BE TESTED FOR WATER TIGHTNESS BY USE OF LOW-PRESSURE AIR TESTS CONFORMING WITH ASTM F1417-92(2005) OR UNI-BELL PVC PIPE ASSOCIATION UNI-B-6. LINES WILL BE CLEANED AND VISUALLY INSPECTED AND TRUE TO LINE AND GRADE. DEFLECTION TESTS WILL TAKE PLACE AFTER 30 DAYS FOLLOWING INSTALLATION. ENV-WQ 704.09 FORCE MAIN AND LOW PRESSURE SEWER TESTING: WILL BE TESTED IN ACCORDANCE WITH SECTION 4 OF AWWA C600-05, AND AT A PRESSURE EQUAL TO THE GREATER OF 150 PERCENT OF THE DESIGN OPERATING TOTAL DYNAMIC HEAD OR AT LEAST 100 PSI. ENV-WQ 704.17 (a) SEWER MANHOLES: WILL BE TESTED FOR LEAKAGE USING A VACUUM TEST. TESTING WILL BE CONDUCTED PRIOR TO PLACEMENT OF SHELVES AND INVERTS.
19. SEWERS WILL BE BURIED TO A MINIMUM DEPTH OF 6 FEET BELOW GRADE IN ALL ROADWAY LOCATIONS, AND TO A MINIMUM DEPTH OF 4 FEET BELOW GRADE IN ALL CROSS-COUNTRY LOCATIONS. PROVIDE TWO-INCHES OF R-10 FOAM BOARD INSULATION 2-FOOT WIDE TO BE INSTALLED 6-INCHES OVER SEWER PIPE IN AREAS WHERE DEPTH IS NOT

20. SEWER AND WATER INFRASTRUCTURE ON PRIVATE PROPERTY IS TO REMAIN PRIVATE, HOWEVER, THE CITY RESERVES THE RIGHT TO ENTER THE PROPERTY IN ORDER TO INSPECT, REPAIR AND/OR TERMINATE INDIVIDUAL SEWER OR WATER SERVICES (AT OWNER'S EXPENSE).
21. CONTRACTOR WILL SET RIMS OF NEW SANITARY SEWER MANHOLES TO EXISTING FINISHED GRADE FOR THE WINTER SEASON. RIMS WILL BE RAISED IN THE SPRING PRIOR TO PLACEMENT OF 1" BITUMINOUS OVERLAY.
22. SERVICE LATERAL LOCATIONS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD BASED ON INPUT FROM CITY INSPECTOR AND/OR PROJECT CLERK OF THE WORKS.
23. EXISTING SMH BRICK INVERT TO BE RECONSTRUCTED TO ACCEPT THE NEW SEWER FROM N-SMH-1 AND PROVIDE A SWEEPING INVERT INTO THE EXISTING FLOW PATH.
24. REFER TO SHEET C0.2 FOR GENERAL NOTES AND LEGEND.

ACHIEVED. A NHDES WAIVER IS NEEDED IF THE MINIMUM REQUIRED DEPTH CANNOT BE MET.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.