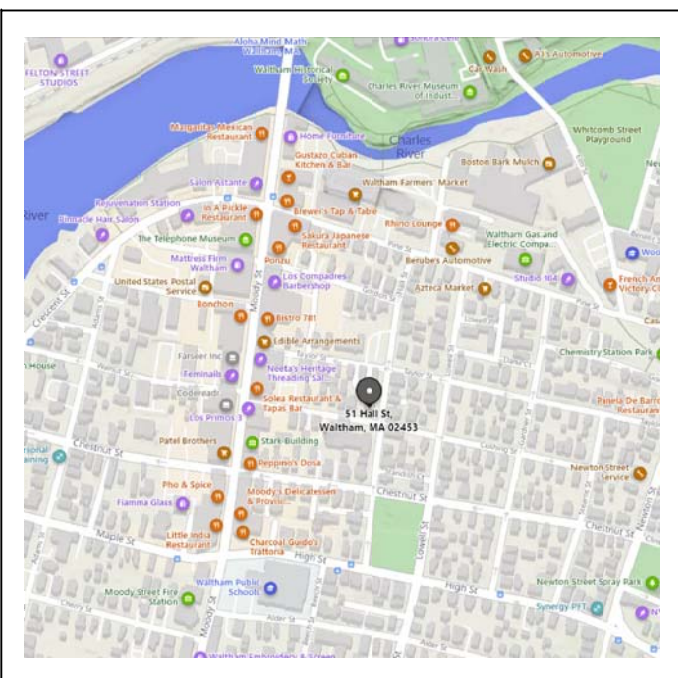


Grading & Utility Plan

61 Hall St.
Waltham, MA



PARCEL ID: R069-018-0004

MATERIALS:
DRAIN LINES SHALL BE SDR35 w/ 12" MIN. COVER
OVER PIPE. 1% SLOPE MIN.
SEWER SERVICES SHALL BE 6" PVC SDR35 PIPE

REFERENCES:
SURVEY: J2M Consulting, LLC, "Existing Conditions
Plan" 5-5-22
ARCHITECT: Vanko Studio Architects, LLC

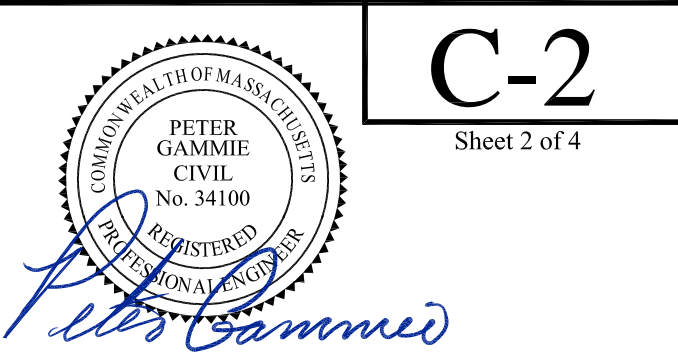
Date	Comment
#1 01-18-23	Engineering Comments
#2 02-10-23	Replace Ex. Hydrant
#3 04-04-23	Engineering Comments
#4 05-17-23	Board of Survey Comments

Columbia Design Group, LLC
Consulting Engineers

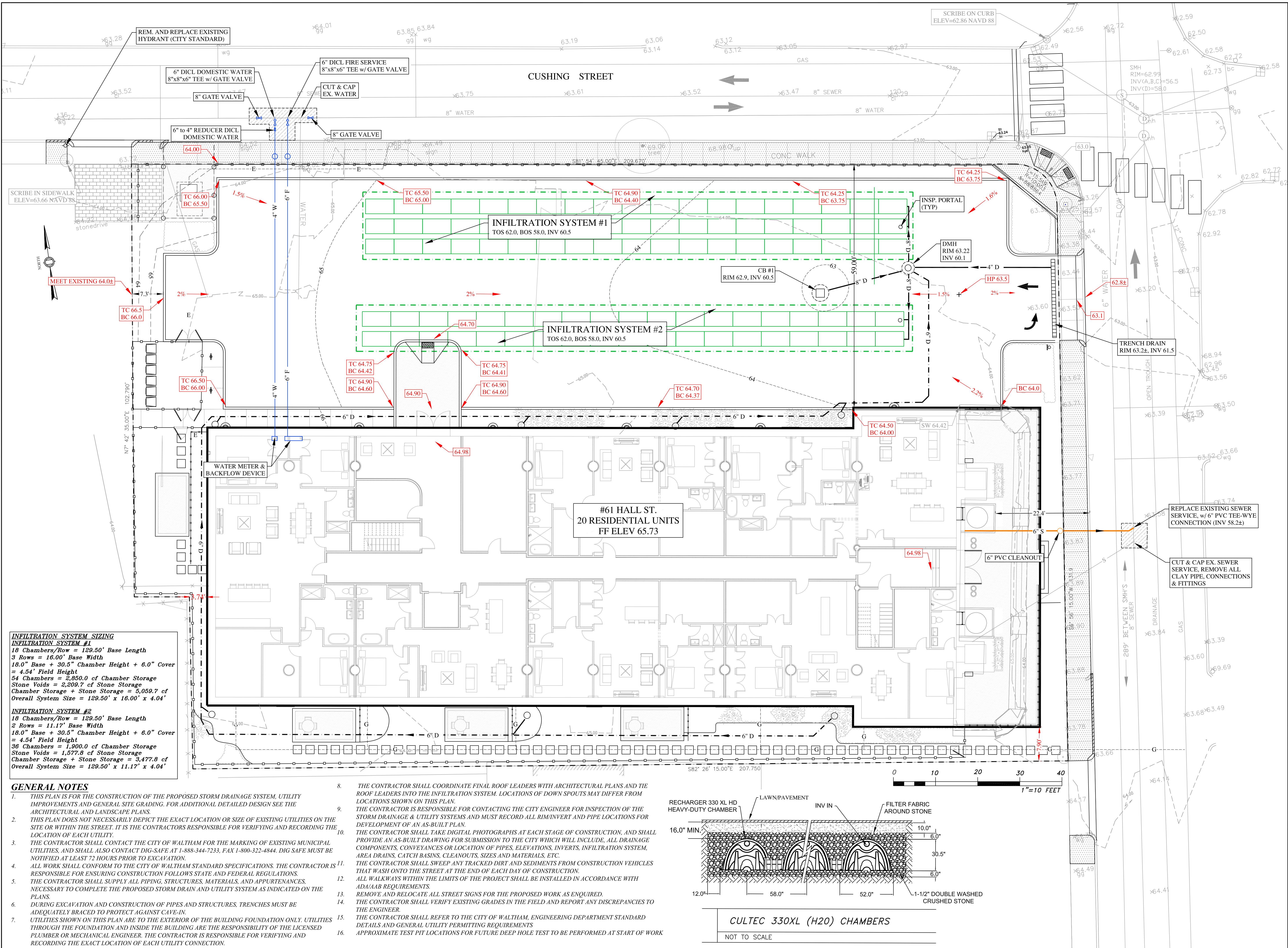
14 Upham Avenue
Boston, MA 02125
(T) 617.506.1474 (F) 617.507.7740

GRADING & UTILITY PLAN

July 8, 2022	Scale: 1" = 10'
Project No.: 2022-133	Drawing by: PG



C-2
Sheet 2 of 4



INFILTRATION SYSTEM SIZING
INFILTRATION SYSTEM #1
18 Chambers/Row = 129.50' Base Length
3 Rows = 16.00' Base Width
18.0" Base + 30.5" Chamber Height + 6.0" Cover = 4.54' Field Height
54 Chambers = 2,850.0 cf Chamber Storage
Stone Voids = 2,209.7 cf Stone Storage
Chamber Storage + Stone Storage = 5,059.7 cf
Overall System Size = 129.50' x 16.00' x 4.04'
INFILTRATION SYSTEM #2
19 Chambers/Row = 129.50' Base Length
2 Rows = 11.17' Base Width
18.0" Base + 30.5" Chamber Height + 6.0" Cover = 4.54' Field Height
38 Chambers = 1,900.0 cf Chamber Storage
Stone Voids = 1,577.8 cf Stone Storage
Chamber Storage + Stone Storage = 3,477.8 cf
Overall System Size = 129.50' x 11.17' x 4.04'

GENERAL NOTES

- THIS PLAN IS FOR THE CONSTRUCTION OF THE PROPOSED STORM DRAINAGE SYSTEM, UTILITY IMPROVEMENTS AND GENERAL SITE GRADING. FOR ADDITIONAL DETAILED DESIGN SEE THE ARCHITECTURAL AND LANDSCAPE PLANS.
- THIS PLAN DOES NOT NECESSARILY DEPICT THE EXACT LOCATION OR SIZE OF EXISTING UTILITIES ON THE SITE OR WITHIN THE STREET. IT IS THE CONTRACTORS RESPONSIBLE FOR VERIFYING AND RECORDING THE LOCATION OF EACH UTILITY.
- THE CONTRACTOR SHALL CONTACT THE CITY OF WALTHAM FOR THE MARKING OF EXISTING MUNICIPAL UTILITIES, AND SHALL ALSO CONTACT DIG-SAFE AT 1-888-344-7233, FAX 1-800-322-4844. DIG-SAFE MUST BE NOTIFIED AT LEAST 72 HOURS PRIOR TO EXCAVATION.
- ALL WORK SHALL CONFORM TO THE CITY OF WALTHAM STANDARD SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING CONSTRUCTION FOLLOWS STATE AND FEDERAL REGULATIONS.
- THE CONTRACTOR SHALL SUPPLY ALL PIPING, STRUCTURES, MATERIALS, AND APPURTENANCES NECESSARY TO COMPLETE THE PROPOSED STORM DRAIN AND UTILITY SYSTEM AS INDICATED ON THE PLANS.
- DURING EXCAVATION AND CONSTRUCTION OF PIPES AND STRUCTURES, TRENCHES MUST BE ADEQUATELY BRACED TO PROTECT AGAINST CAVE-IN.
- UTILITIES SHOWN ON THIS PLAN ARE TO THE EXTERIOR OF THE BUILDING FOUNDATION ONLY. UTILITIES THROUGH THE FOUNDATION AND INSIDE THE BUILDING ARE THE RESPONSIBILITY OF THE LICENSED PLUMBER OR MECHANICAL ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND RECORDING THE EXACT LOCATION OF EACH UTILITY CONNECTION.
- THE CONTRACTOR SHALL COORDINATE FINAL ROOF LEADERS WITH ARCHITECTURAL PLANS AND TIE ROOF LEADERS INTO THE INFILTRATION SYSTEM. LOCATIONS OF DOWN SPOUTS MAY DIFFER FROM LOCATIONS SHOWN ON THIS PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CITY ENGINEER FOR INSPECTION OF THE STORM DRAINAGE & UTILITY SYSTEMS AND MUST RECORD ALL RIM/INVERT AND PIPE LOCATIONS FOR DEVELOPMENT OF AN AS-BUILT PLAN.
- THE CONTRACTOR SHALL TAKE DIGITAL PHOTOGRAPHS AT EACH STAGE OF CONSTRUCTION, AND SHALL PROVIDE AN AS-BUILT DRAWING FOR SUBMISSION TO THE CITY WHICH WILL INCLUDE, ALL DRAINAGE COMPONENTS, CONVEYANCES OR LOCATION OF PIPES, ELEVATIONS, INVERTS, INFILTRATION SYSTEM, AREA DRAINS, CATCH BASINS, CLEANOUTS, SIZES AND MATERIALS, ETC.
- THE CONTRACTOR SHALL SWEEP ANY TRACKED DIRT AND SEDIMENTS FROM CONSTRUCTION VEHICLES THAT WASH ONTO THE STREET AT THE END OF EACH DAY OF CONSTRUCTION.
- ALL WALKWAYS WITHIN THE LIMITS OF THE PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH ADA/AAB REQUIREMENTS.
- REMOVE AND RELOCATE ALL STREET SIGNS FOR THE PROPOSED WORK AS ENQUIRED.
- THE CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- THE CONTRACTOR SHALL REFER TO THE CITY OF WALTHAM, ENGINEERING DEPARTMENT STANDARD DETAILS AND GENERAL UTILITY PERMITTING REQUIREMENTS.
- APPROXIMATE TEST PIT LOCATIONS FOR FUTURE DEEP HOLE TEST TO BE PERFORMED AT START OF WORK