

LEGEND

- SURVEY SYMBOLS**
- REBAR
 - ∨ ANGLE IRON
 - CB/DH □ CONCRETE BOUND WITH DRILL HOLE
 - SB □ STONE BOUND
 - SB/DH □ STONE BOUND

- UTILITY SYMBOLS**
- ⊠ ELECTRIC HAND HOLE
 - ⊘ GUY POLE
 - GW- GUY WIRE
 - ⊠ HVAC UNIT
 - ⊠ BUILDING LIGHT
 - ⊠ TRANSFORMER
 - ⊠ WATER GATE
 - ⊠ EXHAUST VENT
 - ⊠ AIR VENT
 - ⊠ DRAINAGE SUMP
 - ⊠ EMH ELECTRIC MANHOLE
 - ⊠ SMH SEWER MANHOLE
 - ⊠ DMH DRAIN MANHOLE
 - ⊠ TMH TELEPHONE MANHOLE
 - ⊠ DRAINAGE CATCH BASIN
 - ⊠ DOOR WAY THRESHOLD
 - ⊠ HYDRANT
 - ⊠ POST INDICATOR VALVE
 - ⊠ UTILITY POLE
 - ⊠ YARD LIGHT
 - ⊠ RIP RAP
 - ⊠ BOLLARD
 - ⊠ SIGN
 - ⊠ FA FIRE ALARM

- LINE DESIGNATORS**
- W- WATER MAIN
 - GR- GUARD RAIL
 - CHW- OVERHEAD WIRES
 - G- GAS LINE
 - WS- WATER SERVICE
 - E- UNDERGROUND ELECTRIC
 - D- STORM DRAIN LINE
 - S- SANITARY SEWER LINE
 - X- DRAINAGE SWALE
 - X- CHAIN LINK FENCE

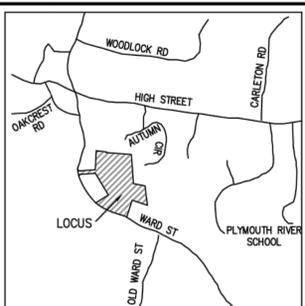
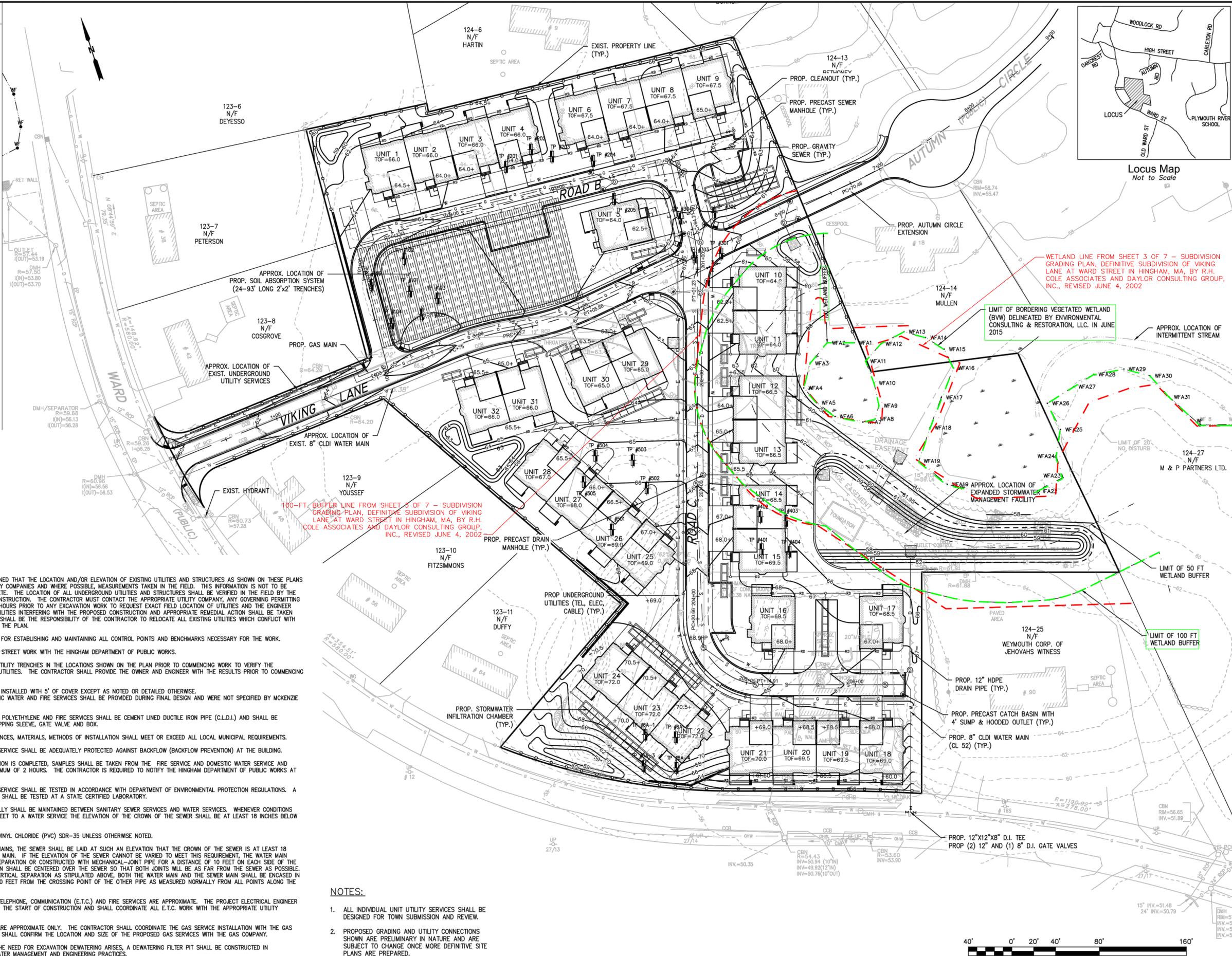
- ABBREVIATIONS**
- FTE FIRST FLOOR ELEVATION
 - BIT CONC. BITUMINOUS CONCRETE PAVEMENT
 - CCB CAPE COD BERM
 - EP EDGE OF PAVEMENT
 - BC BITUMINOUS CONCRETE CURB
 - (AM) AS MEASURED
 - RET WALL RETAINING WALL
 - CONC. CONCRETE
 - RCP REINFORCED CONCRETE PIPE
 - VCC VERTICAL GRANITE CURB
 - ETW EDGE OF TRAVEL WAY
 - MFL METAL BEEL
 - VCC VERTICAL CONCRETE CURB
 - CMP CORRUGATED METAL PIPE

GENERAL UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
3. THE CONTRACTOR SHALL COORDINATE ALL STREET WORK WITH THE HINGHAM DEPARTMENT OF PUBLIC WORKS.
4. THE CONTRACTOR SHALL EXCAVATE THE UTILITY TRENCHES IN THE LOCATIONS SHOWN ON THE PLAN PRIOR TO COMMENCING WORK TO VERIFY THE ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES. THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH THE RESULTS PRIOR TO COMMENCING ANY WORK.
5. ALL WATER AND FIRE SERVICES SHALL BE INSTALLED WITH 5' OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE.
6. THE LOCATION AND SIZES OF THE DOMESTIC WATER AND FIRE SERVICES SHALL BE PROVIDED DURING FINAL DESIGN AND WERE NOT SPECIFIED BY MCKENZIE ENGINEERING GROUP, INC.
7. THE DOMESTIC WATER SERVICES SHALL BE POLYETHYLENE AND FIRE SERVICES SHALL BE CEMENT LINED DUCTILE IRON PIPE (C.L.D.I.) AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED TAPPING SLEEVE, GATE VALVE AND BOX.
8. ALL WATER AND FIRE SERVICE APPURTENANCES, MATERIALS, METHODS OF INSTALLATION SHALL MEET OR EXCEED ALL LOCAL MUNICIPAL REQUIREMENTS.
9. THE FIRE SERVICE AND DOMESTIC WATER SERVICE SHALL BE ADEQUATELY PROTECTED AGAINST BACKFLOW (BACKFLOW PREVENTION) AT THE BUILDING.
10. AFTER PRESSURE TESTING AND CHLORINATION IS COMPLETED, SAMPLES SHALL BE TAKEN FROM THE FIRE SERVICE AND DOMESTIC WATER SERVICE AND SHALL BE TESTED AT 200 PSI FOR A MINIMUM OF 2 HOURS. THE CONTRACTOR IS REQUIRED TO NOTIFY THE HINGHAM DEPARTMENT OF PUBLIC WORKS AT LEAST 24 HOURS PRIOR TO THE TESTING.
11. THE FIRE SERVICE AND DOMESTIC WATER SERVICE SHALL BE TESTED IN ACCORDANCE WITH DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS. A MINIMUM OF 2 SEPARATE WATER SAMPLES SHALL BE TESTED AT A STATE CERTIFIED LABORATORY.
12. A MINIMUM OF 10 FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN SANITARY SEWER SERVICES AND WATER SERVICES. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET TO A WATER SERVICE THE ELEVATION OF THE CROWN OF THE SEWER SHALL BE AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER SERVICE.
13. ALL GRAVITY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) SDR-35 UNLESS OTHERWISE NOTED.
14. WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
15. THE LOCATIONS OF PROPOSED ELECTRIC, TELEPHONE, COMMUNICATION (E.T.C.) AND FIRE SERVICES ARE APPROXIMATE. THE PROJECT ELECTRICAL ENGINEER SHALL VERIFY THESE LOCATIONS PRIOR TO THE START OF CONSTRUCTION AND SHALL COORDINATE ALL E.T.C. WORK WITH THE APPROPRIATE UTILITY COMPANIES.
16. THE PROPOSED GAS SERVICE LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL COORDINATE THE GAS SERVICE INSTALLATION WITH THE GAS COMPANY. THE CLIENT AND CONTRACTOR SHALL CONFIRM THE LOCATION AND SIZE OF THE PROPOSED GAS SERVICES WITH THE GAS COMPANY.
17. IF DURING THE CONSTRUCTION PROCESS THE NEED FOR EXCAVATION DEWATERING ARISES, A DEWATERING FILTER PIT SHALL BE CONSTRUCTED IN ACCORDANCE WITH APPROPRIATE STORMWATER MANAGEMENT AND ENGINEERING PRACTICES.

NOTES:

1. ALL INDIVIDUAL UNIT UTILITY SERVICES SHALL BE DESIGNED FOR TOWN SUBMISSION AND REVIEW.
2. PROPOSED GRADING AND UTILITY CONNECTIONS SHOWN ARE PRELIMINARY IN NATURE AND ARE SUBJECT TO CHANGE ONCE MORE DEFINITIVE SITE PLANS ARE PREPARED.



REV	DATE	DESCRIPTION	BY	APP
1	1/9/18	RECONFIGURATION	SSS	BCM
2	1/19/18	REVIEW COMMENTS	SSS	BCM

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COMPREHENSIVE PERMIT PLAN
 KNOWN AS
RIVER STONE
 (ASSESSORS MAP 124, LOTS 70-75 & LOT 26)
 VIKING LANE & WARD STREET
 HINGHAM, MASSACHUSETTS

PROFESSIONAL ENGINEER:
 RIVER STONE, LLC
 293R WASHINGTON STREET
 NORWELL, MASSACHUSETTS 02061

APPLICANT:	RIVER STONE, LLC
DESIGNED BY:	JLS
CHECKED BY:	
APPROVED BY:	
DATE:	10/7/2015
SCALE:	1"=40'
PROJECT NO.:	27-135
DWG. TITLE:	Grading & Utility Plan
DWG. NO.:	C-2