# SITE PLAN FOR PROPOSED MULTIFAMILY DEVELOPMENT 51-53-55 SUMMER STREET

WALPOLE, MA.

### SHEET INDEX

COVER SHEET SITE PLAN NOTES SHEET C.2 SHEET C.3 SHEET C.4-8 EXISTING CONDITIONS 1-5 EROSION CONTROL AND DEMOLITION SHEET SHEET C.10 PROPOSED SUBDIVISION / OVERALL PLAI SHEET C.11 OPEN SPACE AND RECREATION PLAN SHEET C.12-16 LAYOUT AND MATERIALS PLAN 1-5 SHEET C.17-21 Grading and Drainage Sheet 1—5 SHEET C.22-26 UTILITY SHEET 1-5 SHEET C.27-31 SHEET C.32-36 LIGHTING PLAN 1-5 SHEET C.37 FIRE TRUCK TURN PLAN SHEET C.38-43 DETAIL SHEET 1-6

### REQUESTED SPECIAL PERMITS AND VARIANCES - LOT 1

- WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS 1.4.1: NO ALTERATION ZONE: THE COMMISSION SHALL REQUIRE THE APPLICANT TO MAINTAIN A 25 FOOT WIDE CONTIGUOUS, UNDISTURBED, VEGETATIVE BUFFER MEASURED FROM, AND PARALLEL TO, THE WETLAND RESOURCE BOUNDARY, AS A
- WALPOLE ZONING BYLAWS TABLE 5-B.1.3.D; USE PROHIBITED IN LIMITED MANUFACTURING ZONE;
- WALPOLE ZONING BYLAWS TABLE 5-B.1.3.D.iii: A FIFTY-FOOT BUFFER SHALL BE REQUIRED WHERE THE ADJACENT LOT(S) HAS A SINGLE-FAMILY DWFILING OR IS A VACANT LOT
- WALPOLE ZONING BYLAWS TABLE 5-B.1.3.D.iii; IF THERE IS TO BE MORE THAN ONE PRINCIPLE BUILDING ON A LOT, THERE SHALL BE A MINIMUM OF 10,000 S.F. OF LATE AREA PER DWELLING UNIT;
- WALPOLE ZONING BYLAWS SECTION 6-B-1: IN ALL DISTRICTS NO BUILDING SHALL BE CONSTRUCTED ON ANY PART OF A LOT WHICH DOES NOT HAVE AN AREA IN WHICH A CIRCLE, THE DIAMETER OF WHICH IS NOT LESS THAN 80% OF THE MINIMUM REQUIRED LOT FRONTAGE, TANGENT TO THE EXTREIOR STREET LINE FROM WHICH THE REQUIRED FRONTAGE AND MINIMUM SETBACK ARE DERIVED AND WITHIN ALL OTHER LOT LINES, MAY BE LOCATED;
- WALPOLE ZONING BYLAWS SECTION 6-B-1.A: IN ALL DISTRICTS NO BUILDING SHALL BE CONSTRUCTED ON A LOT HAVING LESS THAN THE
- WALPOLE ZONING BYLAWS TABLE 6-B.1 AND 6-C.3.A: REQUIRED LOT FRONTAGE FOR A LOT IN THE LIMITED MANUFACTURING ZONE:
- WALPOLE ZONING BYLAWS TABLE 6-B.1: REQUIRED MINIMUM SIDE YARD SETBACK FOR A LOT IN THE LIMITED MANUFACTURING ZONE;
- WALPOLE ZONING BYLAWS TABLE 6-B.1: REQUIRED MAXIMUM BUILDING HEIGHT FOR A LOT IN THE LIMITED MANUFACTURING ZONE;
- WALPOLE ZONING BYLAWS SECTION 6-C-11: PROJECTIONS;
- WALPOLE ZONING BYLAWS SECTION 8.3.1: TOWNHOUSES & APARTMENTS ARE CLASSIFIED AS PARKING CODE 1 PER TABLE 6-B.1:
- WALPOLE ZONING BYLAWS SECTION 8.8.B-3 PARKING AISLES: THE ENDS OF PARKING AISLES THAT ARE MORE THAN 15 SPACES IN LENGTH SHALL INCORPORATE LANDSCAPE ISLANDS AT EITHER END OF THE ROW. WHERE THE LENGTH OF A PARKING AISLE EXCEEDS 25 SPACES, ADDITIONAL LANDSCAPED ISLANDS SHALL BE INSTALLED AT REGULAR INTERVALS. THIS INTERVAL SHALL NOT BE MORE THAN EVERY 13 SPACES. THE WIDTH OF LANDSCAPED ISLANDS PERPENDICULAR TO ADJACENT SPACES SHALL BE NO LESS THAN 8 FEET AT THEIR WIDEST POINT;
- 13. WALPOLE ZONING BYLAWS SECTION 12.3.A.2.D: RESIDENTIAL DEVELOPMENT OF SINGLE FAMILY DWELLINGS ARE PERMITTED BY RIGHT IF NO MORE THAN 15% OR 2,500 S.F., WHICHEVER IS GREATER, OF THE BUILDING LOT IS RENDERED IMPERVIOUS;
- 14. WALPOLE ZONING BYLAW SECTIONS 12.3.B.1.F, 12.3.C.6 AND 12.4.D.5: STORAGE, USE, AND REPORTING OF HAZARDOUS MATERIAL;
- 15. WALPOLE ZONING BYLAWS SECTION 12.3.B.1.J: REMOVAL OF SOIL, LOAM, SAND, GRAVEL OR ANY OTHER MINERAL SUBSTANCES WITHIN FOUR FEET OF THE HISTORICAL HIGH GROUNDWATER TABLE ELEVATION IS PROHIBITED;
- 16. WALPOLE ZONING BYLAWS SECTION 12.3.C.3: IN AREAS 3 & 4, ANY USES IN WRPOD OTHER THAN A SINGLE-FAMILY DWELLING WITH A SEWAGE FLOW EXCEEDING 110 GPD PER 10,000 S.F. OF LOT AREA OR EXCEEDING 15,000 GPD TOTAL REQUIRES A SPECIAL PERMIT;
- 17. WALPOLE ZONING BYLAWS SECTION 12.3.C.5: ANY RESIDENTIAL USE IN WRPOD THAT WILL RENDER IMPERVIOUS MORE THAN 15% OR 2,500 S.F. OF ANY LOT REQUIRES A SPECIAL PERMIT;
- 18. WALPOLE ZONING BYLAWS SECTION 13: SITE PLAN REVIEW;
- 19. SIGNS SECTION 7.5.C.5: ONE(1) DOUBLE FACED FREE STANDING SIGN;
- 20. WATER AND SEWER DEPARTMENT INFLOW AND INFILTRATION FEES: INFLOW AND INFILTRATION FEE 2.3:1 RATIO \$13.60;
- WATER AND SEWER DEPARTMENT WATER ENTRANCE FEE: SYSTEM DEVELOPMENT CHARGE OF \$2,440 PER RESIDENTIAL HOUSING UNIT;
- 22. WATER AND SEWER DEPARTMENT NON-ASSESSED SEWER ENTRANCE FEE-RESIDENTIAL: SYSTEM DEVELOPMENT CHARGE OF \$1,670 PER RESIDENTIAL
- 23. ZBA SECTION 3.2.15 STATEMENT OF IMPACT ON MUNICIPAL FACILITIES AND SERVICES;
- 24. ZBA SECTION 3.2.16: COMPLIANCE WITH MASTER AND OPEN SPACE PLANS;
- 25. ZBA SECTION 3.2.17: ROSTER OF DEVELOPMENT TEAM AND LIST OF PRIOR DEVELOPMENTS FOR PAST 10 YEARS;
- 26. ZBA SECTION 3.2.18: TWENTY (20) PAPER COPIES OF SAID APPLICATION WITH ATTACHMENTS AND EXHIBITS;
- 27. ZBA SECTION 3.2.19: PAYMENT OF FILING FEE. 1. FOR LIMITED DIVIDEND ORGANIZATIONS: \$5,000 BASE FEE PLUS, IF THE TOTAL PROJECT CONTAINS MORE THAN 6 MARKET RATE UNITS, \$200.00 PER MARKET RATE IS PROPOSED;
- 28. ZBA SECTION 3.2.5.4: SAID PLAN SHALL INCLUDE THE FOLLOWING INFORMATION: EXISTING SIGNIFICANT ENVIRONMENTAL FEATURES SUCH AS LEDGE OUTCROPS, SCENIC VIEWS AND LARGE TREES (I.E. GREATER THAN 24" DBH);
- 29. ZBA SECTION 5.5: ANY PROFESSIONAL EXPERT OR OTHER WITNESS THAT PARTICIPATED IN THE DRAFTING OF THE PROPOSED PROJECT PLANS OR OTHER ELEMENTS SHALL BE PRESENT AT EACH PUBLIC HEARING:
- 30. ZBA SECTION 5.6: BOARD MAY IN ITS DISCRETION COLLECT APPROPRIATE FEES FOR NOTARY PUBLIC OR STENOGRAPHER.



LOCUS MAP

### REQUESTED SPECIAL PERMITS AND VARIANCES - LOT 2

- 1. WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS 1.4.1: NO ALTERATION ZONE: THE COMMISSION SHALL REQUIRE THE APPLICANT TO MAINTAIN A 25 FOOT WIDE CONTIGUOUS, UNDISTURBED, VEGETATIVE BUFFER MEASURED FROM, AND PARALLEL TO, THE WETLAND RESOURCE BOUNDARY, AS A
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- WALPOLE ZONING BYLAWS SECTION 6-C-11: PROJECTIONS;
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- 12. WALPOLE ZONING BYLAWS SECTION 13: SITE PLAN REVIEW;
- SIGNS SECTION 7.5.C.4; SIGNS SHALL BE A MINIMUM OF 8 FEET FROM THE GROUND;
- 14. WATER AND SEWER DEPARTMENT INFLOW AND INFILTRATION FEES: INFLOW AND INFILTRATION FEE 2.3:1 RATIO \$13.60;
- 15. WATER AND SEWER DEPARTMENT WATER ENTRANCE FEE: SYSTEM DEVELOPMENT CHARGE OF \$2,440 PER RESIDENTIAL HOUSING UNIT; 16. WATER AND SEWER DEPARTMENT NON-ASSESSED SEWER ENTRANCE FEE-RESIDENTIAL: SYSTEM DEVELOPMENT CHARGE OF \$1,670 PER RESIDENTIAL
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55 SS LLC

### ASSESSORS INFORMATION

PROPERTY 307-52-59 PROPERTY 307-52-60 PORTION OF PROPERTY 307-52-78

### REFERENCES

- 2. TOWN OF WALPOLE GEOGRAPHIC INFORMATION SYSTEM
- 3. A.N.R.A.D. PLAN BY LEGACY ENGINEERING DATED 12-10-2019 AND APPROVED BY THE WALPOLE CONSERVATION COMMISSION
- 4. A.N.R.A.D. PLAN BY LEGACY ENGINEERING DATED 8-14-2019 AND APPROVED BY THE WALPOLE CONSERVATION COMMISSION.

### ZONING REQUIREMENTS

LM - LIMITED MANUFACTURING DIMENSIONAL REQUIREMENTS

LOT 1 LOT 2 REQUIREMENT 1,213,210 SF (27.85 AC) MINIMUM LOT AREA MAXIMUM BUILDING COVERAGE 17%± MAX. BLDG & IMP. COVERAGE 83%± MINIMUM OPEN SPACE 61 FT± MINIMUM FRONT YARD

11 FT±\*

207 FT±

30 FT±

\* SEE REQUESTED SPECIAL PERMIT AND VARIANCES LISTS FOR LOT 1 AND LOT 2

### DEVELOPMENT SUMMARY

TOWNHOUSES: 48

MINIMUM REAR YARD

MAXIMUM BUILDING HEIGHT

REQUIRED: 2 PARKING SPACES/UNIT X 48 UNITS = 96 SPACES

PROPOSED: 48 GARAGE SPACES + 32 DRIVEWAY SPACES + 16 SURFACE SPACES = 96 SPACES

APARTMENTS: 192

REQUIRED: 2 PARKING SPACES/UNIT X 192 UNITS = 384 SPACES

PROPOSED: 16 CLUBHOUSE SPACES + 72 GARAGE UNDER SPACES + 12 SURFACE GARAGE SPACES + 229 SURFACE SPACES

LANDBANKED SPACES FOR FUTURE DEVELOPMENT IF NEEDED = 10 SPACES.

SINGLE FAMILY HOUSES: 60

REQUIRED: 2 PARKING SPACES/UNIT X 60 UNITS = 120 SPACES

PROPOSED: 120 GARAGE SPACES + 120 DRIVEWAY SPACES + 12 SURFACE SPACES = 252 SPACES TOTAL

### **OVERALL PARKING SUMMARY:**

LOT 1 TOTAL: 425 SPACES

LOT 2 TOTAL: 252 SPACES

SITE TOTAL: 677 SPACES

\*\* SEE WAIVER 9 UNDER REQUESTED SPECIAL PERMITS AND VARIANCES - LOT 1

- 1. EXISTING PROPERTY LINE AND UTILITY INFORMATION SHOWN IS BASED ON AN EXISTING SURVEY CONDUCTED BY LEGACY ENGINEERING REVISED THROUGH 12-05-19.
- 2. THE ACCURACY AND COMPLETENESS OF THE UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE, TYPE, ETC. OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY BY THE WORK. AT LEAST 72 HOURS BEFORE EXCAVATION, THE CONTRACTOR SHALL BE REQUIRED TO CONTACT DIGSAFE AT 1-888-344-7233.
- 3. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION AND REPORT ANY
- 4. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE APPROPRIATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION.
- 5. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN, PRIOR TO EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION OR REPAVING.
- 6. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES EXCEPT THOSE NOTED TO BE ABANDONED, REMOVED AND DISPOSED.
- 7. THE CONTRACTOR SHALL DISPOSE OF ALL WASTE MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS AT HIS/HER OWN EXPENSE, OUTSIDE OF THE PROJECT LIMITS.



**HOWARD STEIN HUDSON** 

114 Turnpike Road, Suite 2C Chelmsford, MA 01824 www.hshassoc.com

PREPARED FOR:

**6 LYBERTY WAY, SUITE 203** WESTFORD, MA 01886

> AMIL PMEN TREET

REVISIONS: NO BY DATE DESCRIPTION



SITE PLAN

COVER SHEET

**JANUARY 10, 2020** PROJECT NUMBER: PB/KE/KF DESIGNED BY: CHECKED BY: C 1 SHEET 1 OF 43

### **EROSION CONTROL PLAN NOTES:**

- 1. REMOVAL OF EXISTING STRUCTURES SHALL INCLUDE ALL EXISTING PAVEMENT, FOOTINGS, AND UTILITY CONNECTIONS.
- 2. IT IS THE RESPONSIBILITY OF THE CHOSEN CONTRACTOR TO ENSURE ALL STORMWATER INLETS DOWNSTREAM OF CONSTRUCTION ARE FITTED WITH TEMPORARY INLET PROTECTION.
- ALL PROPOSED CATCH BASINS AND MANHOLES SHALL BE FITTED WITH INLET PROTECTIONS DURING
   2. CONSTRUCTION AS TO MINIMIZE EROSION AND SEDIMENTATION WITHIN THE PROPOSED STORMWATER MANAGEMENT SYSTEM.
- 4. ALL EXISTING SITE FEATURES NOT PROPOSED TO BE REMOVED SHALL BE PROTECTED DURING CONSTRUCTION TO THE MAXIMUM EXTENT FEASIBLE. ANY DAMAGE SHALL BE REPAIRED TO THE
- 5. EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND MAINTAINED AND UPGRADED AS NECESSARY DURING CONSTRUCTION BY THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND INSTALL ADDITIONAL CONTROL MEASURES AS NEEDED DURING CONSTRUCTION
- 6. STABILIZATION OF ALL RE-GRADED AND SOIL STOCKPILE AREAS MUST BE MAINTAINED DURING ALL 6. PHASES OF CONSTRUCTION.
- SEDIMENT REMOVED FROM EROSION AND SEDIMENT CONTROL DEVICES MUST BE PROPERLY REMOVED AND DISPOSED. ALL DAMAGED CONTROLS MUST BE REMOVED AND REPLACED.
- 8. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL PLAN. THIS INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE PROPER TOWN AGENCY OF ANY TRANSFER OF THIS
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING WIND EROSION AND DUST THROUGHOUT THE LIFE OF HIS CONTRACT. DUST CONTROL MAY INCLUDE, BUT IS NOT LIMITED TO, 10. SPRINKLING OF WATER ON EXPOSED SOILS AND STREET SWEEPING WITHIN ADJACENT ROADWAYS.
- 10. IF FINAL GRADING IS TO BE DELAYED FOR MORE THAN 21 DAYS AFTER LAND DISTURBANCE ACTIVITIES CEASE, TEMPORARY VEGETATION OR MULCH SHALL BE USED TO STABILIZE SOILS WITHIN
- 11. IF A DISTURBED AREA WILL BE EXPOSED FOR GREATER THAN ONE YEAR, PERMANENT GRASSES OR OTHER APPROVED COVER MUST BE INSTALLED.
- 12. THE CONTRACTOR MUST KEEP ON-SITE AT ALL TIMES ADDITIONAL STRAW WATTLES FOR THE INSTALLATION AT THE DIRECTION OF THE ENGINEER, OR THE TOWN, TO MITIGATE ANY EMERGENCY
- 13. THE CONSTRUCTION FENCING AND EROSION AND SEDIMENT CONTROLS AS SHOWN MAY NOT BE PRACTICAL DURING ALL STAGES OF CONSTRUCTION. EARTHWORK ACTIVITY ON-SITE MUST BE DONE IN A MANNER SUCH THAT RUNOFF IS DIRECTED TO A SEDIMENT CONTROL DEVICE OR INFILTRATED TO THE GROUND.
- DEMOLITION AND CONSTRUCTION DEBRIS MUST BE PROPERLY CONTAINED AND DISPOSED OF.
- 15. DISPOSAL OF ALL DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE HAULED OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.

### **SITE NOTES:**

- THE INTENT OF THIS PLAN IS TO CONSTRUCT A MULTIFAMILY HOUSING DEVELOPMENT CONSISTING OF APARTMENT BUILDINGS AND TOWNHOUSES FOR RENT AND SINGLE FAMILY HOMES WHICH WILL BE INDIVIDUALLY OWNED. THIS PROJECT IS TO BE SERVICED BY MUNICIPAL UTILITIES.
- ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE TOWN AND STATE STANDARDS
- 3. THIS PROPERTY IS PARTIALLY IS WITHIN FLOOD ZONE A. REFER TO COMMUNITY PANEL NUMBER 25021C0332E, DATED JULY 17, 2012.
- ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (S.W.P.P.P.). THIS DOCUMENT IS TO BE KEPT ONSITE AT ALL TIMES AND UPDATED AS REQUIRED.
- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT, AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, FEES, AND BONDS.
- ALL PROPOSED SIGNAGE SHALL CONFORM WITH THE TOWN ZONING REGULATIONS, UNLESS APPROVED AS PART OF THIS APPLICATION.
- ALL SIGNAGE AND PAVEMARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND MASSDOT STANDARDS AND SPECIFICATIONS, UNLESS OTHERWISE NOTED.
- ALL PARKING STALLS SHALL BE SEPARATED USING 4" WIDE SOLID STRIPES. STRIPING SHALL HAVE TWO COATS OF PAINT, ALKYD BASED SYNTHETIC RESIN, FEDERAL SPECIFICATION TTP-115 TYPE 1 IN A COLOR OF WHITE (OR APPROVED EQUAL).
- ALL NEW CURBING TO BE INSTALLED BY RADIUS AND MATERIALS AS NOTED ON THE LAYOUT AND MATERIALS SHEETS 1 - 5 ON THE SITE PLAN.
- ALL BUILDING DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL AND STRUCTURAL PLANS PROVIDED BY THE OWNER. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND OWNER PRIOR TO THE START OF CONSTRUCTION. BUILDING DIMENSIONS AND AREAS ARE MEASURED TO THE OUTSIDE OF FOUNDATION UNLESS OTHERWISE NOTED.
- SNOW TO BE STORED AT EDGE OF PAVEMENT, UNLESS OTHERWISE DESIGNATED. ALL SNOW IN EXCESS OF THESE DESIGNATIONS SHALL BE TRUCKED OFF SITE TO AN APPROVED SNOW DUMPING LOCATION.
- 12. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
- 13. ALL ACCESSIBLE RAMPS SHALL HAVE A SLOPE OF 1:12 OR LESS, BE FITTED WITH A DETECTABLE WARNING PANEL, AND HAVE VERTICAL TO FLUSH TRANSITION CURB ON BOTH SIDES OF THE LEVEL LANDING EXITING THE SIDEWALK.
- PROPOSED RETAINING WALLS TO BE DESIGNED BY OTHERS.
- 15. SNOW STORAGE IS NOT LIMITED TO THE AREAS DENOTED IN THE LAYOUT AND MATERIALS PLANS. ALL SNOW STORAGE SHALL BE A MINIMUM OF 50' FROM ANY

### **GRADING AND DRAINAGE NOTES:**

- UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER HOWARD STEIN HUDSON, NOR ANY OTHER EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES AND/OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 888-DIG-SAFE
- ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
- 3. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. REFER TO THE CONSTRUCTION SEQUENCE.
- 4. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO HAVE THE PROJECTS LAND SURVEYOR STAKE OR FLAG CLEARING LIMITS.
- ALL SWALES AND INFILTRATION PONDS ARE TO BE STABILIZED PRIOR TO ACCEPTING RUNOFF.
- 6. PROPOSED RIM ELEVATIONS OF DRAINAGE STRUCTURES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES.
- 7. ALL SWALES AND ANY SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH NORTH AMERICAN GREEN EROSION CONTROL S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER), UNLESS OTHER SPECIFIED.
- 8. ALL DRAINAGE AND SANITARY STRUCTURES INTERIOR DIAMETERS (4' MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS. CATCH BASINS SHALL HAVE 4' DEEP SUMPS WITH GREASE HOODS, UNLESS
- ALL DRAINAGE STRUCTURES SHALL BE PRECAST, UNLESS OTHERWISE SPECIFIED. SEE DETAIL
- 10. IN AREAS WHERE CONSTRUCTION IS PROPOSED ADJACENT TO ABUTTING PROPERTIES, THE CONTRACTOR SHALL INSTALL ORANGE CONSTRUCTION FENCING ALONG PROPERTY LINES IN ALL AREAS WHERE STRAW WATTLE IS NOT REQUIRED.
- 11. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY ALL GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE EPA SWPPP DURING CONSTRUCTION OPERATIONS.
- ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 3 DAYS OF FINAL GRADING. 13. SHOULD CONSTRUCTION STOP FOR LONGER THAN 14 DAYS, THE SITE SHALL BE SEEDED AS
- 14. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE, AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
- 15. CONSTRUCTION VEHICLES SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCE TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION. IF THE INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE
- SEDIMENT SHALL BE REMOVED FROM ALL SEDIMENT BASINS BEFORE THEY ARE 25% FULL.
- 17. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED, IF DEEDED
- 18. ALL EXISTING CATCH BASINS ON SITE SHALL BE FITTED WITH HOODS, IF NOT ALREADY PRESENT, WHERE POSSIBLE.

COVERED WITH FILTER FABRIC.

### **UTILITY NOTES:**

- 1. THE CONTRACTOR SHALL 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.
- 2. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED UTILITY SERVICES SHALL BE TO THE STANDARDS AND REQUIREMENTS OF THE RESPECTIVE UTILITY COMPANY (ELECTRIC, TELEPHONE, CABLE TELEVISION, WATER, AND SEWER).
- A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE OWNER, ENGINEER, ARCHITECT, CONTRACTOR, LOCAL OFFICIALS, AND ALL PROJECT-RELATED UTILITY COMPANIES (PUBLIC AND PRIVATE) PRIOR TO START OF CONSTRUCTION.
- BUILDING TO BE SERVICED BY UNDERGROUND UTILITIES UNLESS OTHERWISE NOTED.
- THE CONTRACTOR IS TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES 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.
- 6. AS-BUILT PLANS SHALL BE SUBMITTED TO THE ALL MUNICIPAL DEPARTMENTS SPECIFIED BY
- CONTRACTOR SHALL PLACE 2" WIDE METAL WIRE IMPREGNATED RED PLASTIC WARNING TAPE OVER ENTIRE LENGTH OF ALL GRAVITY SEWERS, SERVICES, AND FORCE MAINS.
- 8. ALL SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS.
- 9. PROPOSED RIM ELEVATIONS OF DRAINAGE AND SANITARY MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, AND OTHER UTILITIES TO FINISH GRADE AS SHOWN ON THE GRADING
- 10. WATER MAINS SHALL BE HYDROSTATICALLY PRESSURE TESTED FOR LEAKAGE PRIOR TO
- THRUST BLOCKS SHALL BE INSTALLED AT ALL BENDS, TEES, MECHANICAL JOINTS, AND FIRE
- 12. DIMENSIONS ARE SHOWN TO CENTERLINE OF PIPE OR FITTING.
- 13. CONTRACTOR TO FURNISH SHOP DRAWINGS FOR UTILITY RELATED ITEMS TO ENSURE CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. SHOP DRAWINGS SHOULD BE SENT IN TRIPLICATE TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- 14. EXISTING UTILITIES SHALL BE DIGSAFED AND PRIVATE UTILITY LOCATOR SERVICES SHOULD BE UTILIZED PRIOR TO CONSTRUCTION.
- 15. ALL FIRE SUPPRESSION WATER LINES SHALL HAVE TESTABLE BACKFLOW PREVENTERS AT THE ENTRANCE TO EACH BUILDING.
- 16. THE CONTRACTOR SHALL MINIMIZE THE DISRUPTIONS TO THE EXISTING SEWER FLOWS AND THOSE INTERRUPTIONS SHALL BE LIMITED TO LOCAL SEWER DEPARTMENT REGULATIONS.
- 17. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA
- 18. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE.
- THE CONTRACTOR SHALL MAINTAIN WATER SERVICE TO USERS AT ALL TIMES. REQUIREMENTS B' THE TOWN WATER DEPARTMENT REGARDING NOTIFICATION FOR INTERRUPTION OF SERVICE SHOULD BE INCLUDED (TYPICALLY 24 HOURS) AND ALLOWABLE INTERRUPTION DURATION. WATER TESTING AND DISINFECTION REQUIREMENTS SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

# HOWARD STEIN HUDSON

114 Turnpike Road, Suite 2C Chelmsford, MA 01824 www.hshassoc.com

PREPARED FOR:

**6 LYBERTY WAY, SUITE 203** WESTFORD, MA 01886

**REVISIONS:** DESCRIPTION NO BY DATE



SITE PLAN

SITE PLAN NOTES

JANUARY 10, 2020 PROJECT NUMBER: **DESIGNED BY:** PB/KE/KF PB/KF DRAWN BY: CHECKED BY: C 2

SHEET 2 OF 43

(R) RECORD INFORMATION UTO UNABLE TO OBSERVE CCB CAPE COD BERM M EXISTNG WATER VALVE EXISTNG HYDRANT -- EXISTING UTILITY POLE POST DECIDUOUS TREE CONIFEROUS TREE CONTROL POINT STONE BOUND WITH DRILLHOLE FOUND CONCRETE BOUND WITH DRILLHOLE FOUND PROPOSED TREELINE IRON ROD TO BE SET IN 2012 \_\_\_ SIGN (SINGLE POSTED) TEST PIT E CATCH BASIN

**LEGEND** 

INV. INVERT

EOP EDGE OF PAVEMENT CCB CAPE COD BERM LSA LANDSCAPED AREA

BOH BUILDING OVERHANG SRW STONE RETAINING WALL

PVC POLYVINYL CHLORIDE

FFE FINISHED FLOOR ELEVATION

CRW CONCRETE RETAINING WALL

S EXISTING SEWER MANHOLE

WETLAND RESOURCE AREA

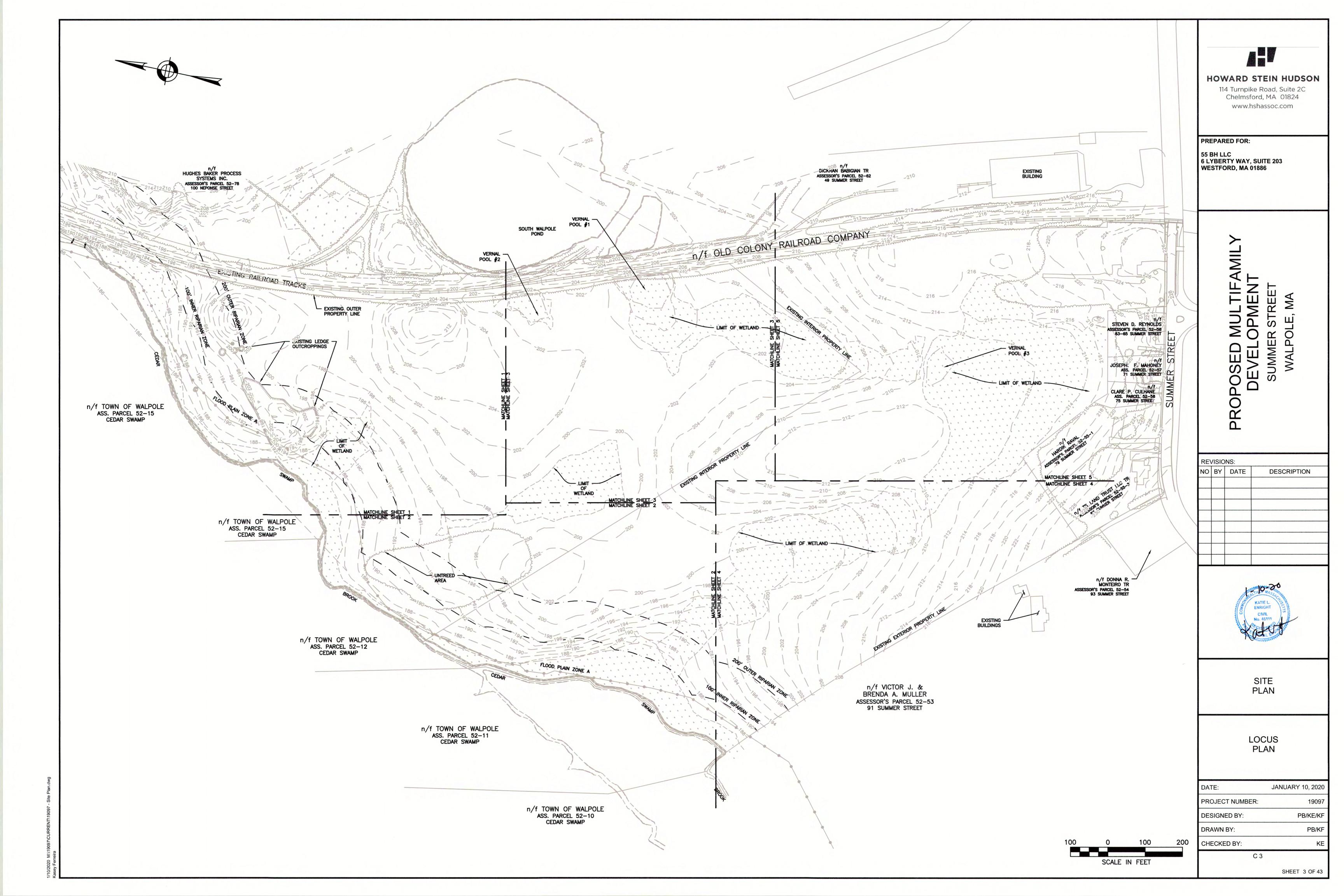
RCP REINFORCED CONCRETE PIPE

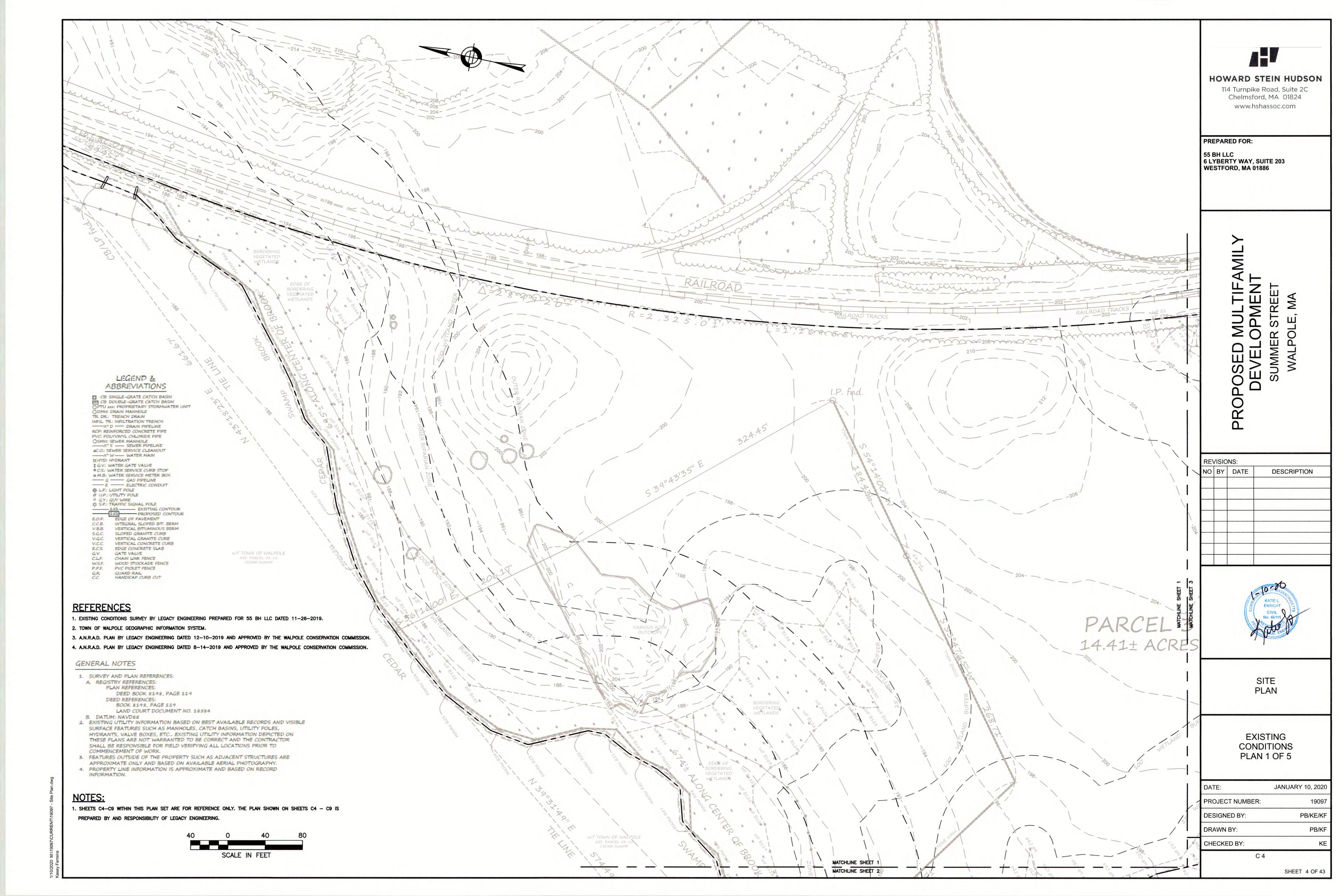
RIPARIAN SETBACK LINE --- D ---- PROPOSED DRAIN LINE EXISTING OVERHEAD WIRES EXISTING SANITARY LINE EXISTING GAS LINE EXISTING WATER LINE — 270— EXISTING INDEX CONTOURS — — — 268— — EXISTING INTERMEDIATE CONTOURS EXISTING TREELINE FEMA FLOOD PLAIN DELINEATION MEAN ANNUAL HIGH WATER LINE PROPOSED FENCE PROPOSED HANDICAP PARKING PROPOSED PAVEMENT STRIPING PROPOSED CONCRETE SURFACE

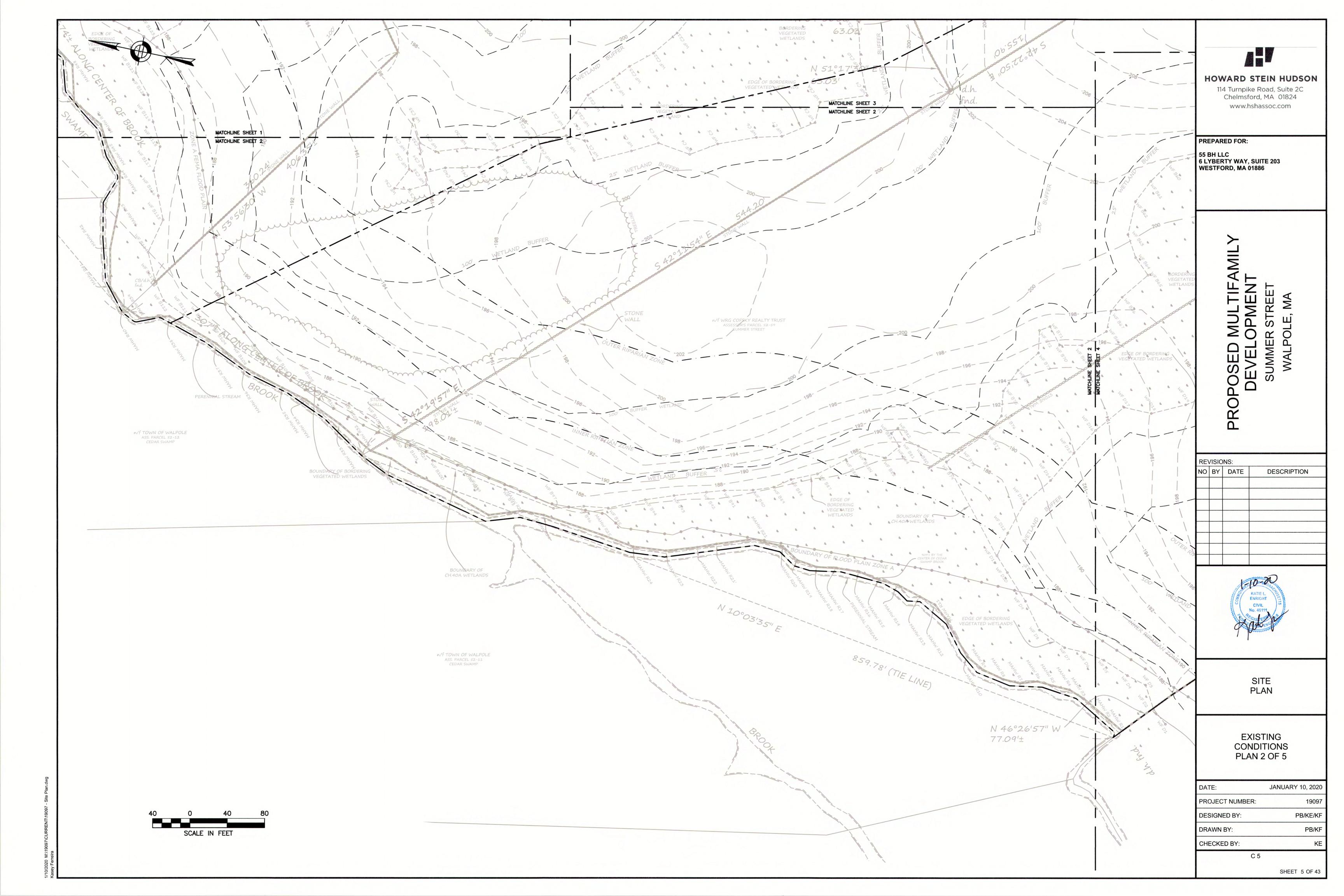
PROPERTY LINE

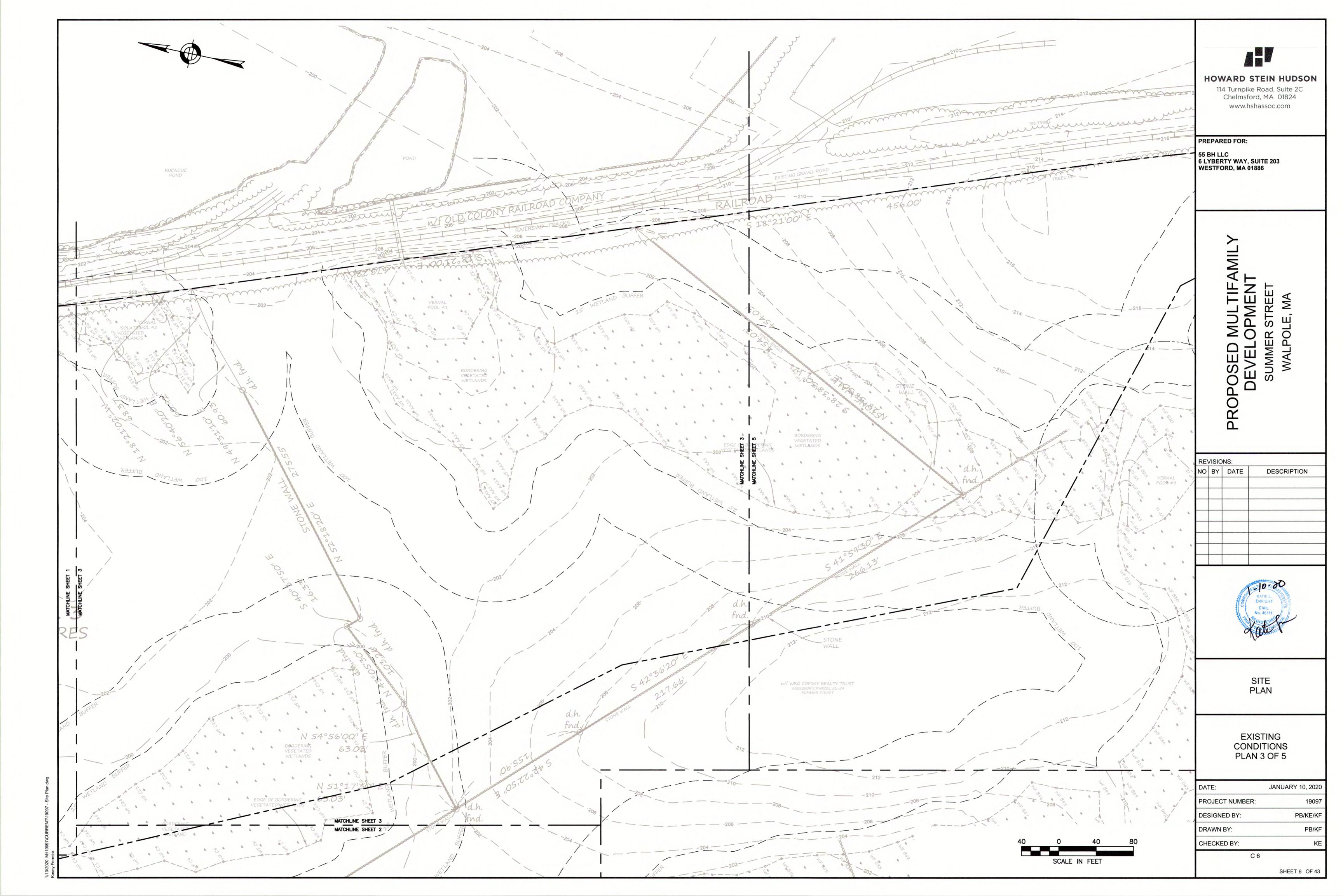
SETBACK LINE

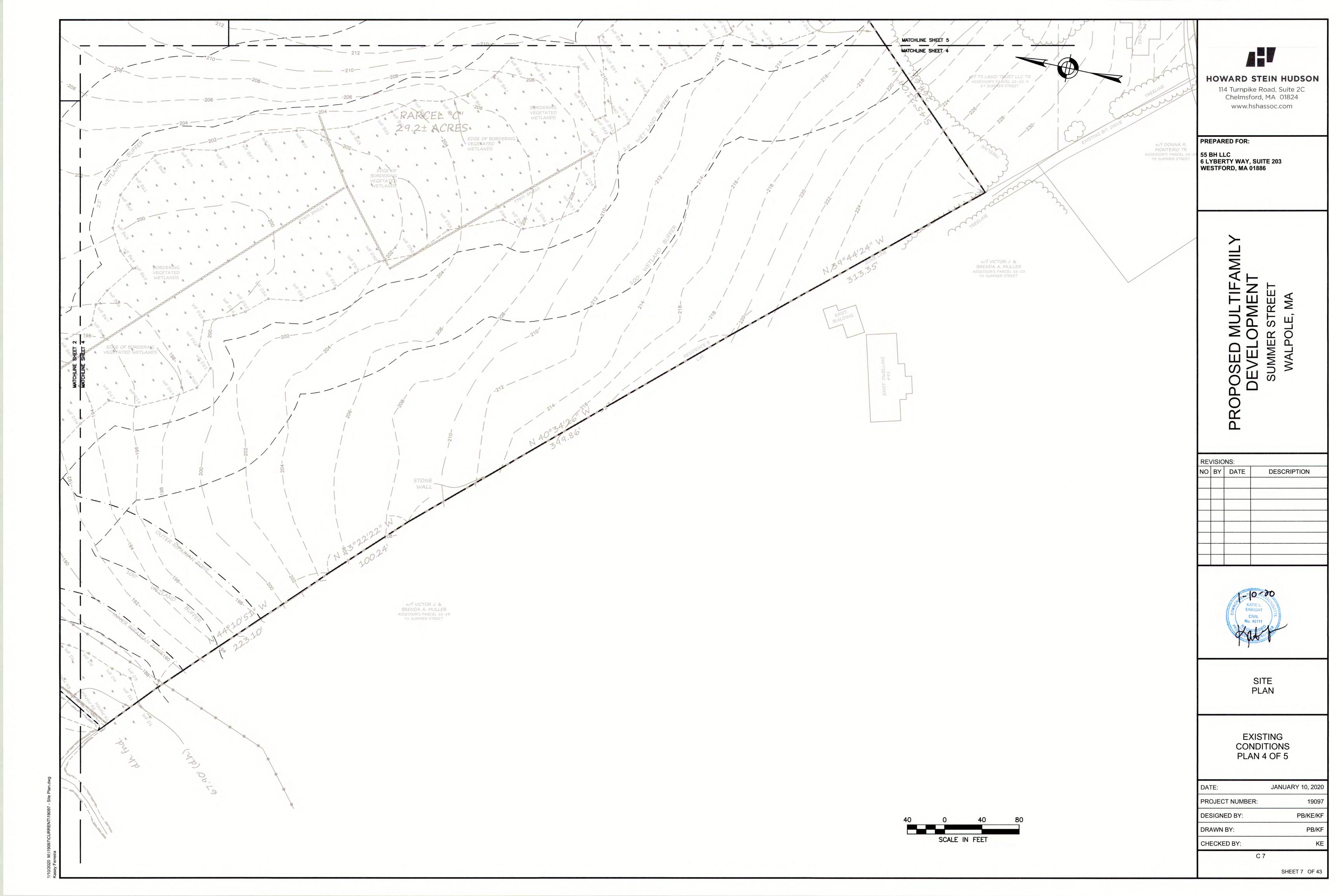
PROPOSED DRAINAGE MANHOLE PROPOSED CATCH BASIN

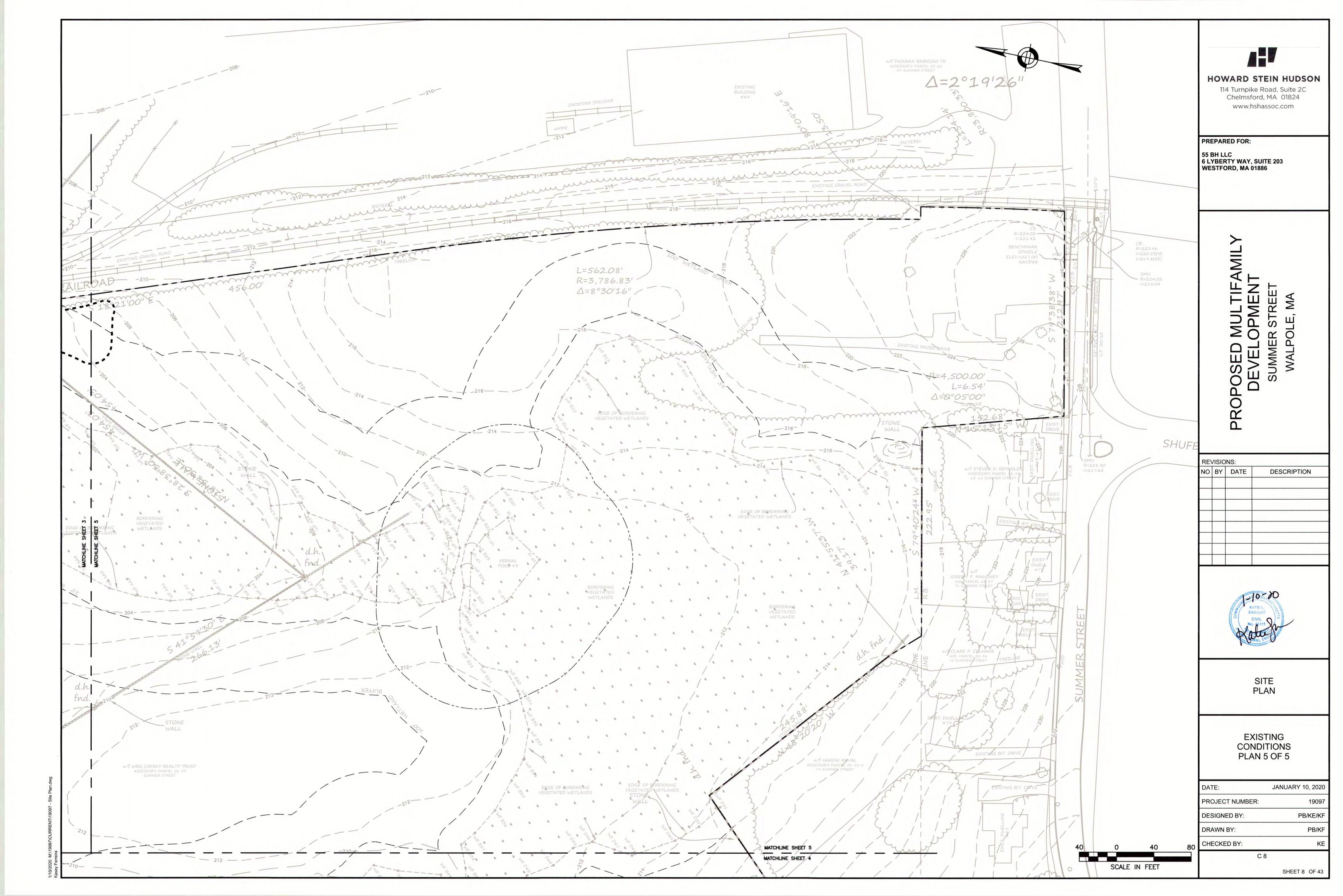


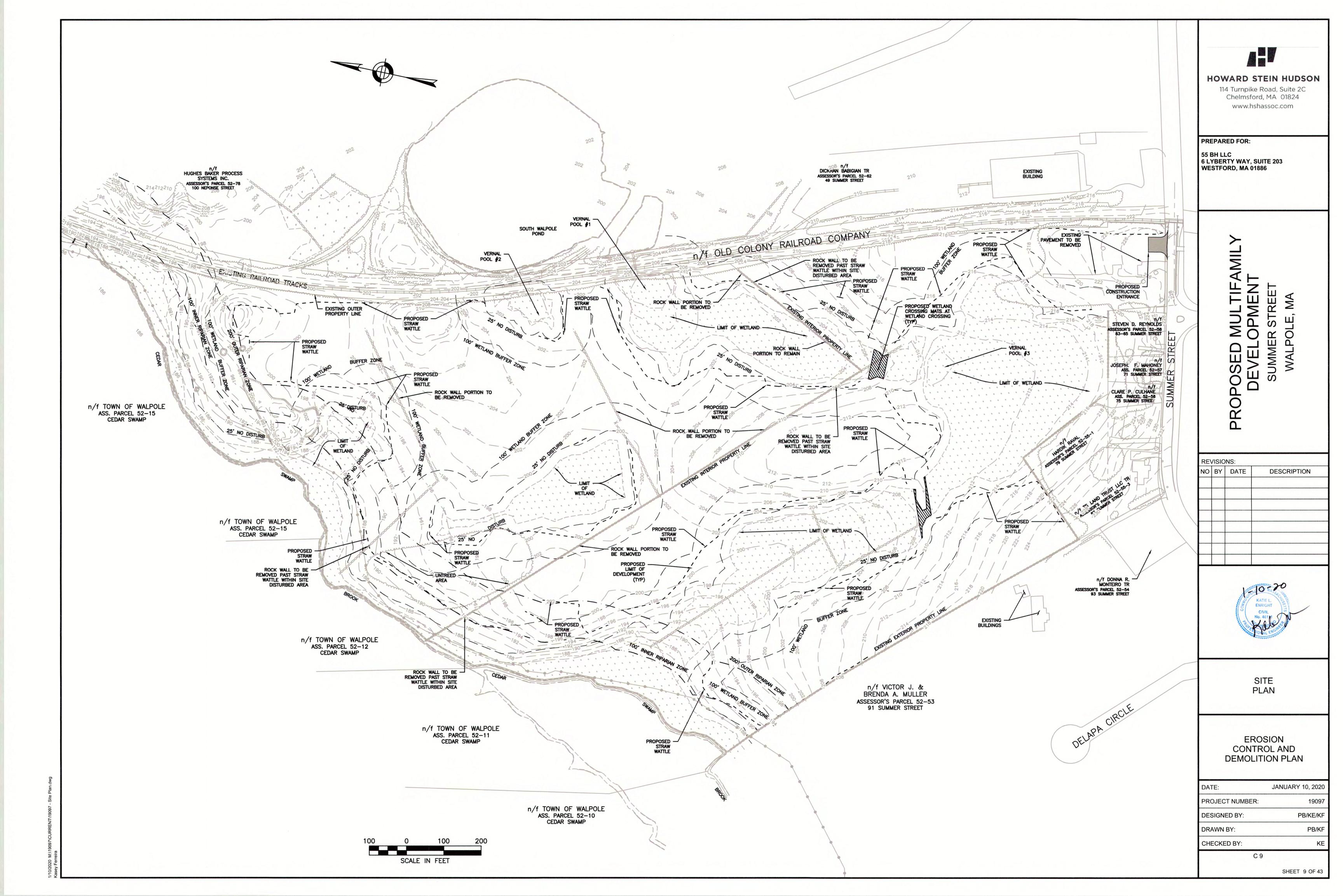


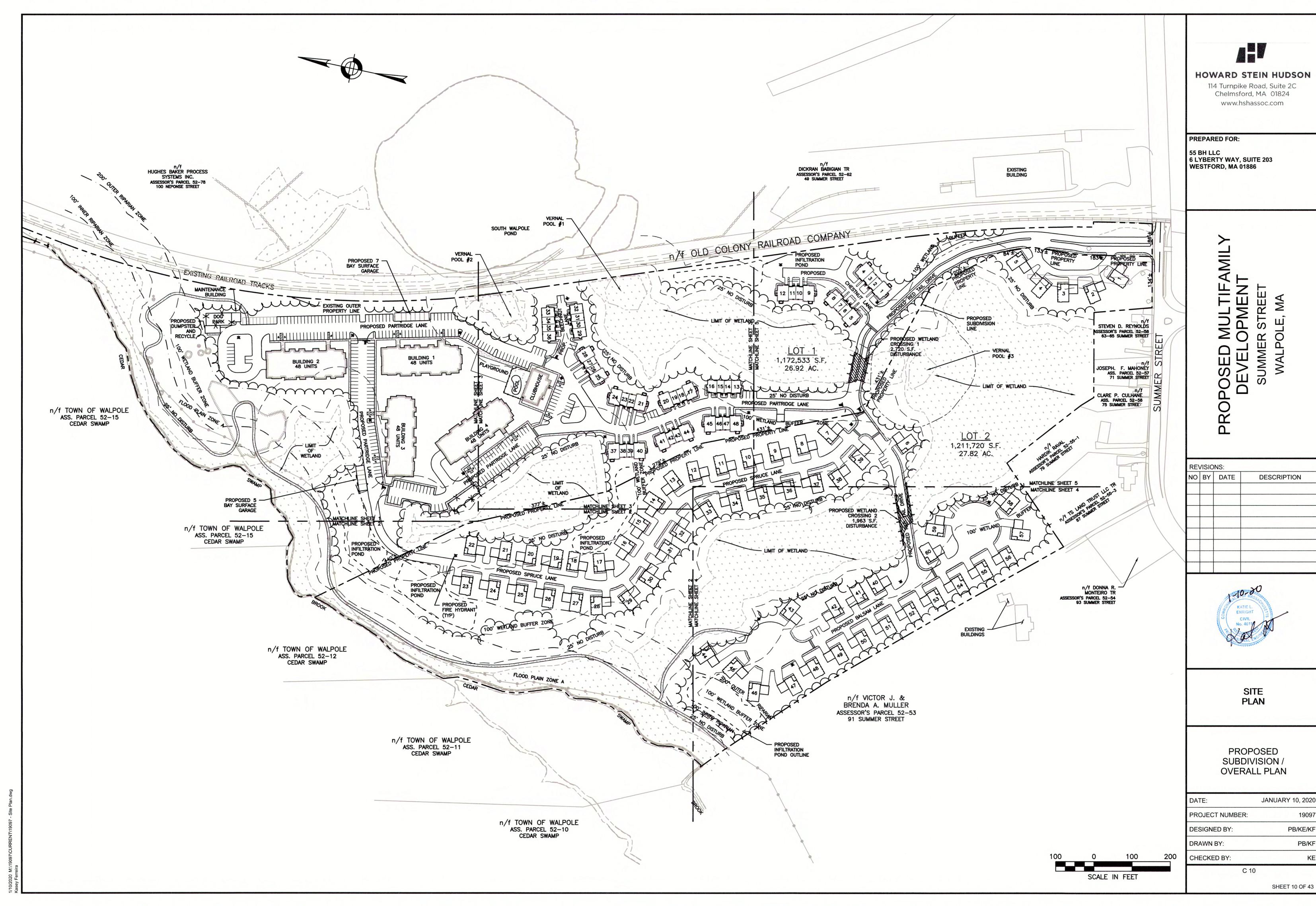




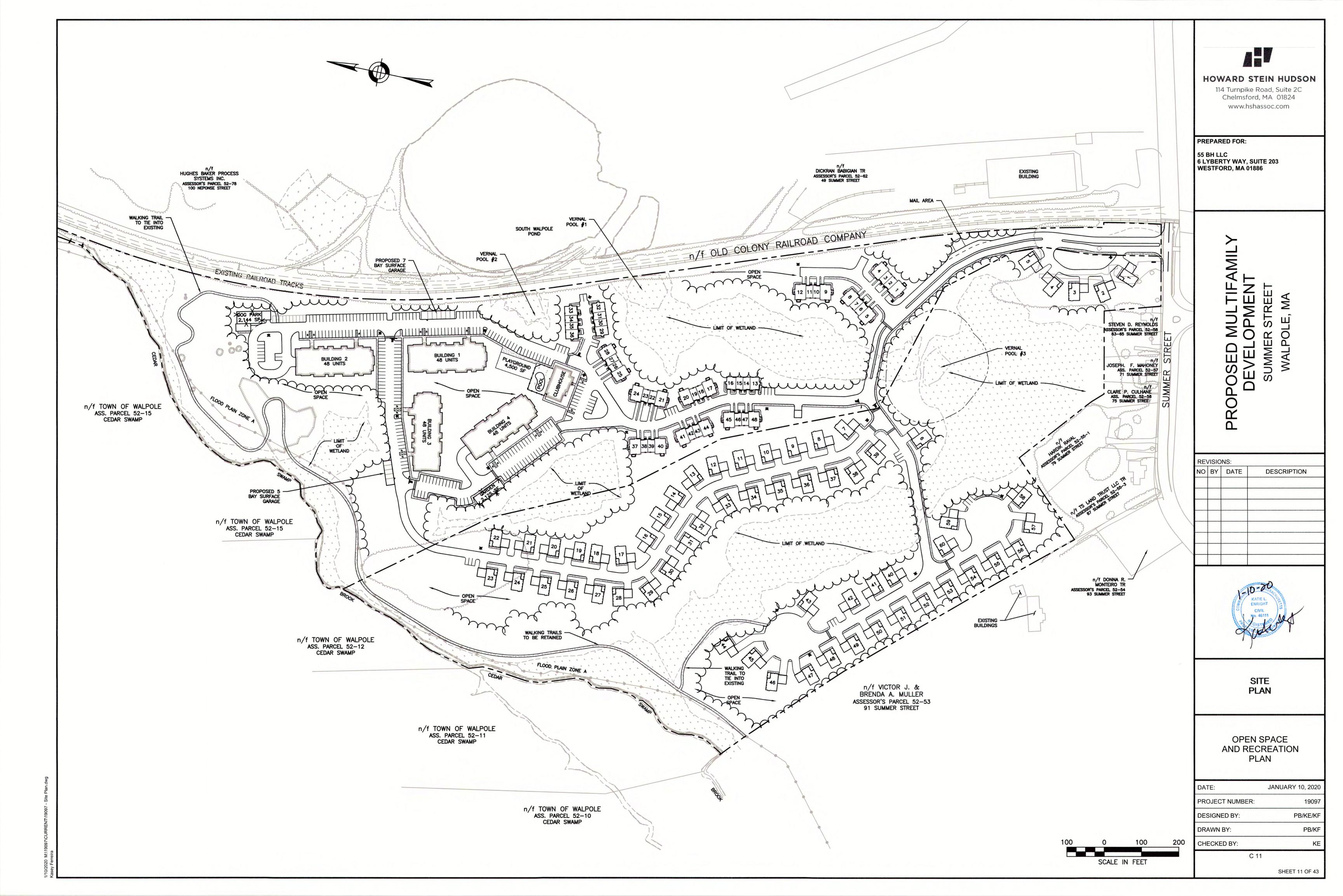


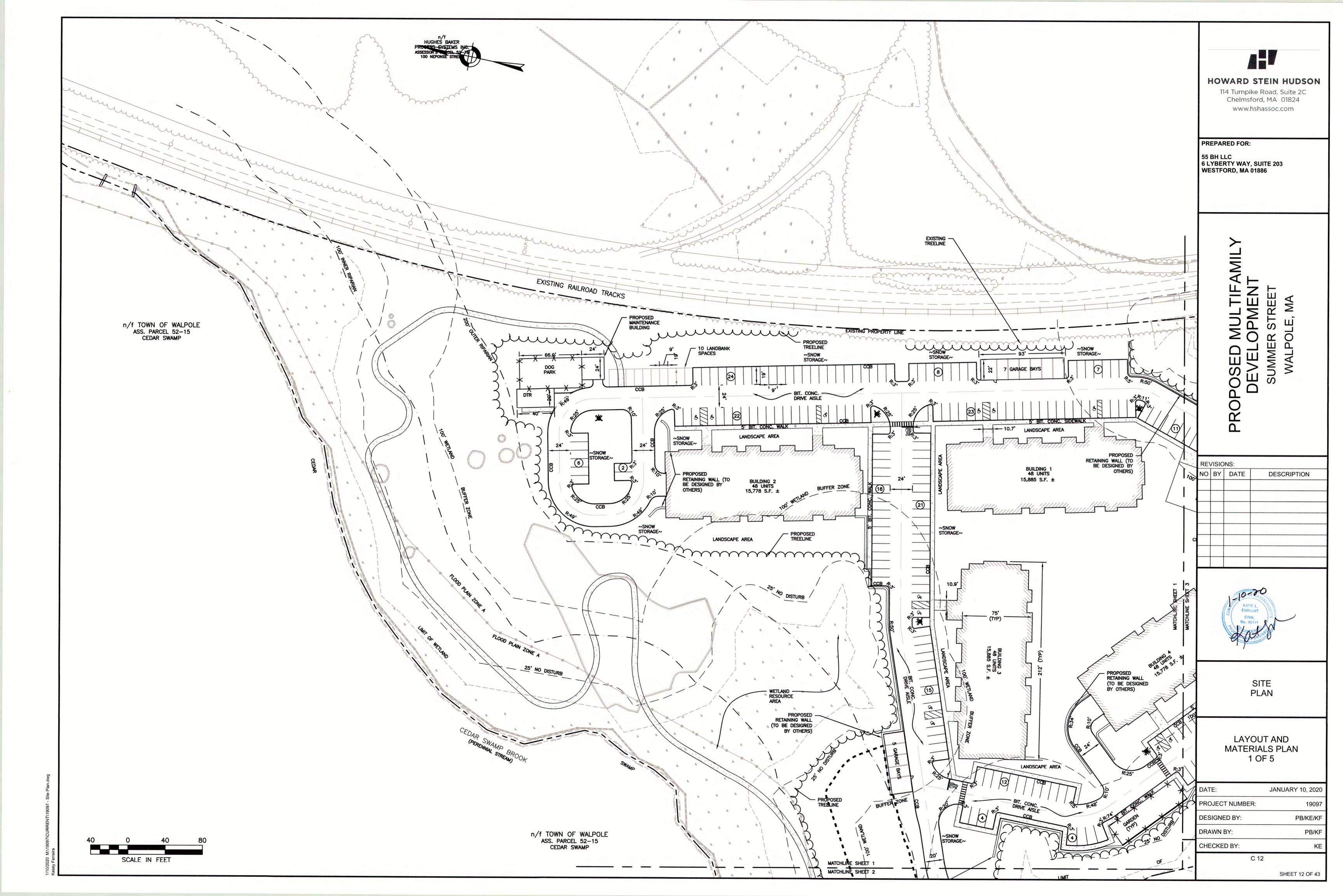


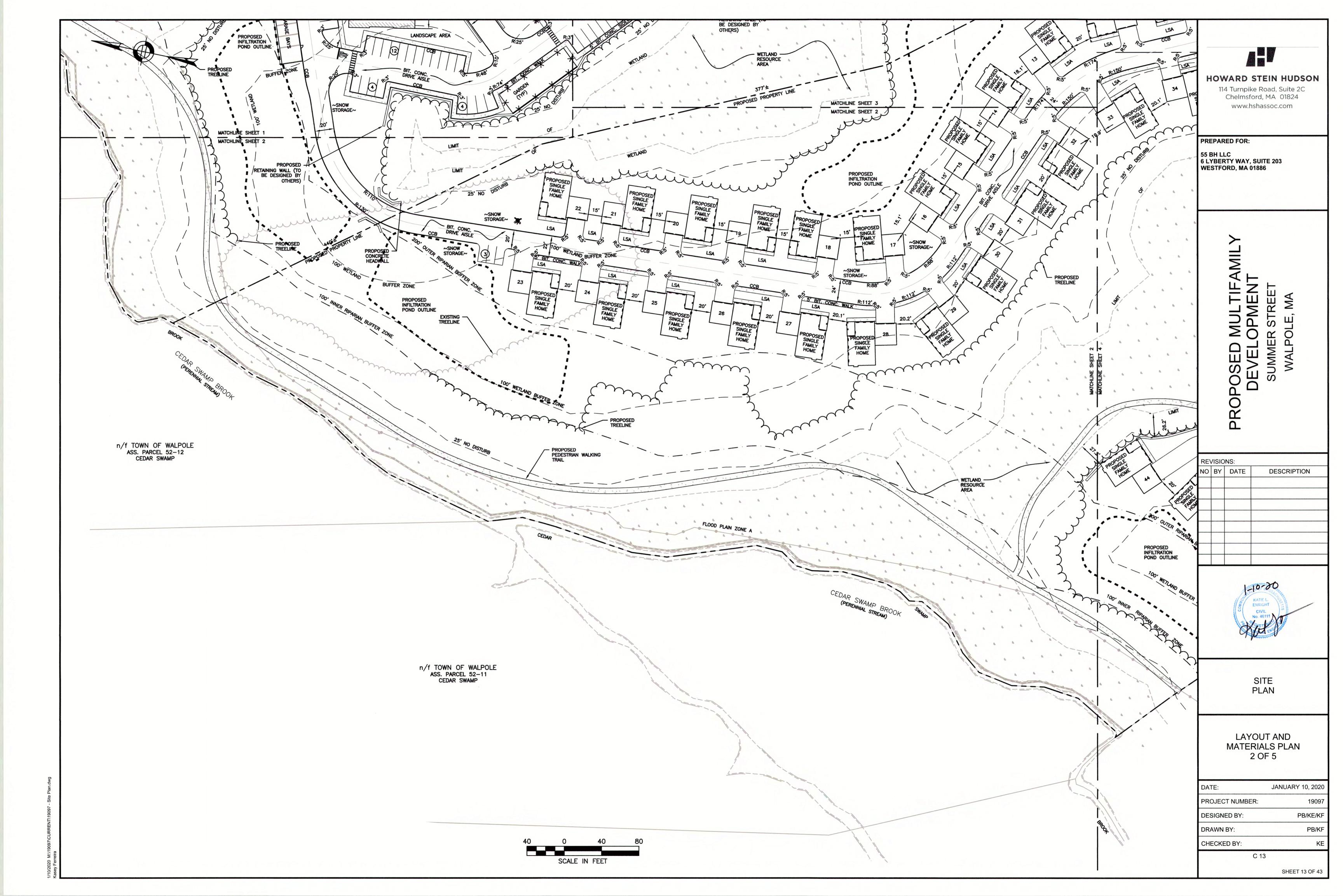


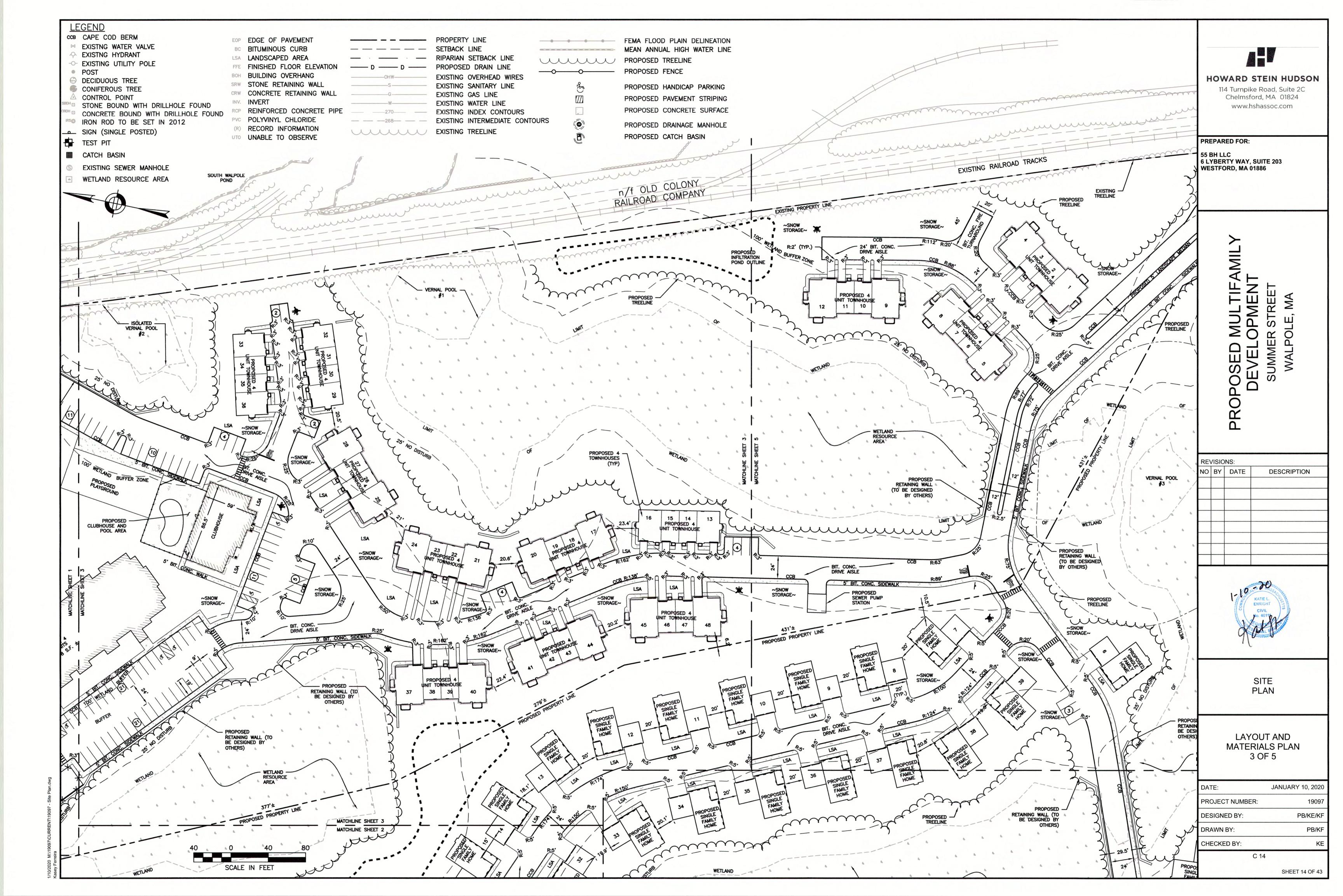


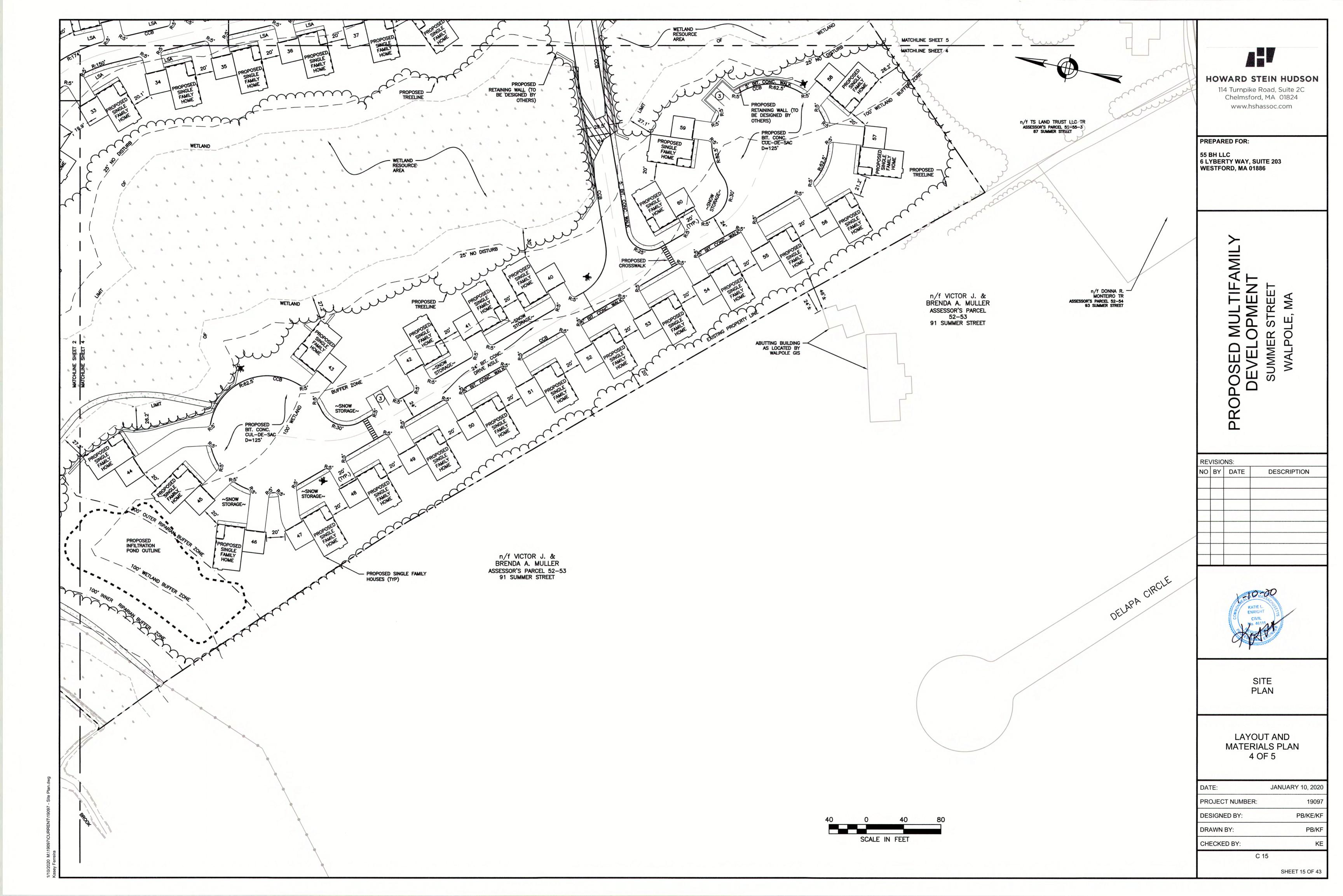
JANUARY 10, 2020 19097 PB/KF SHEET 10 OF 43

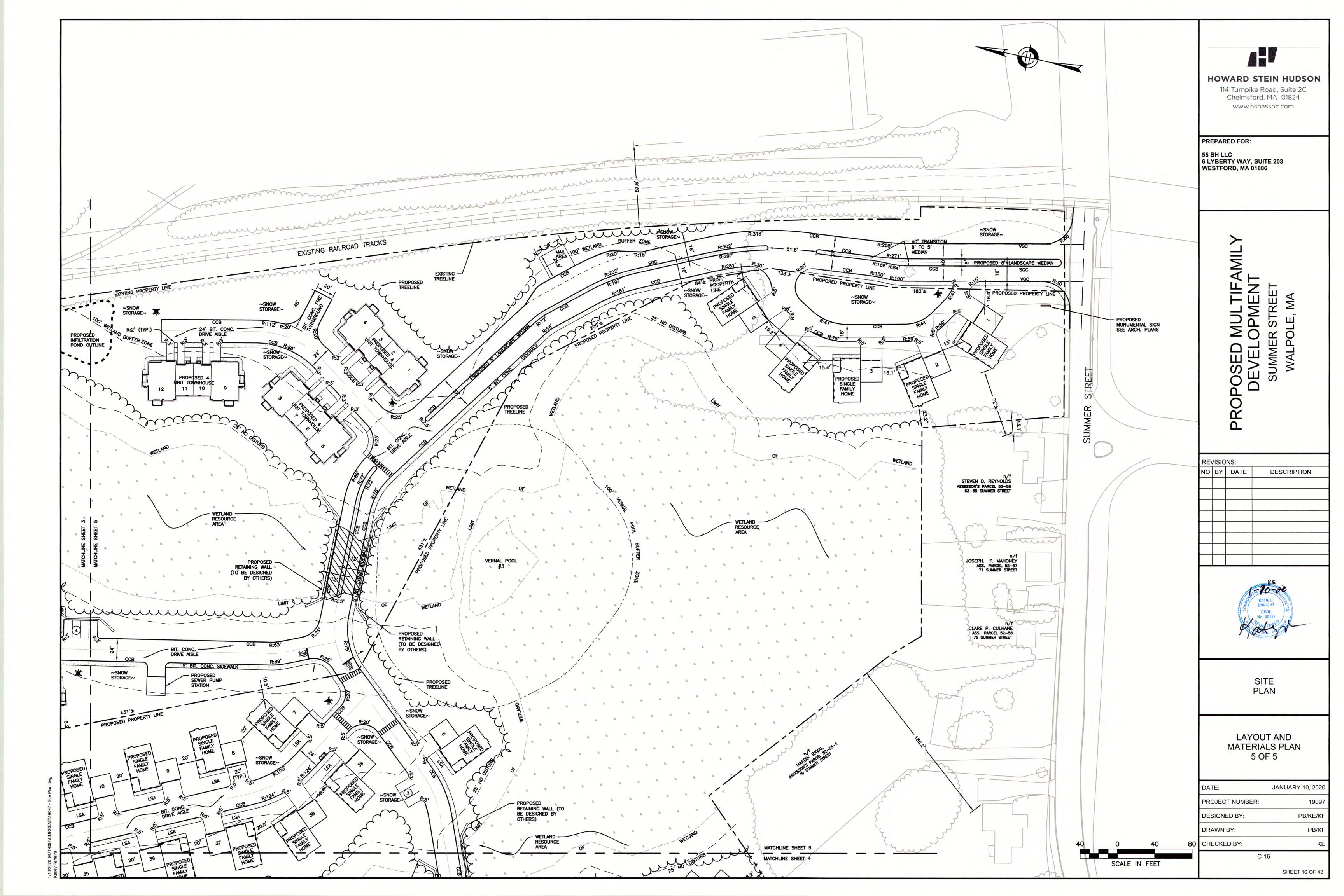


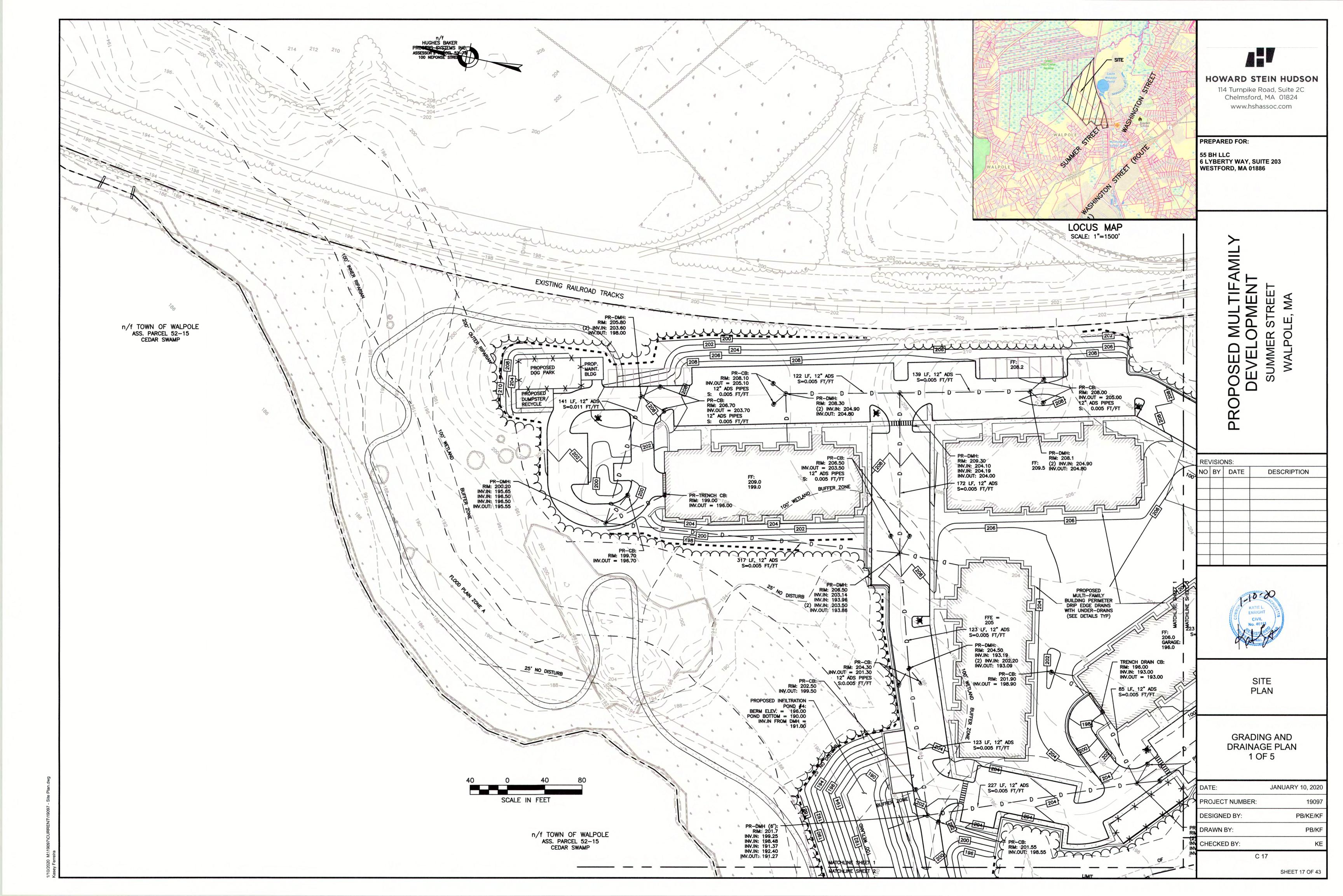


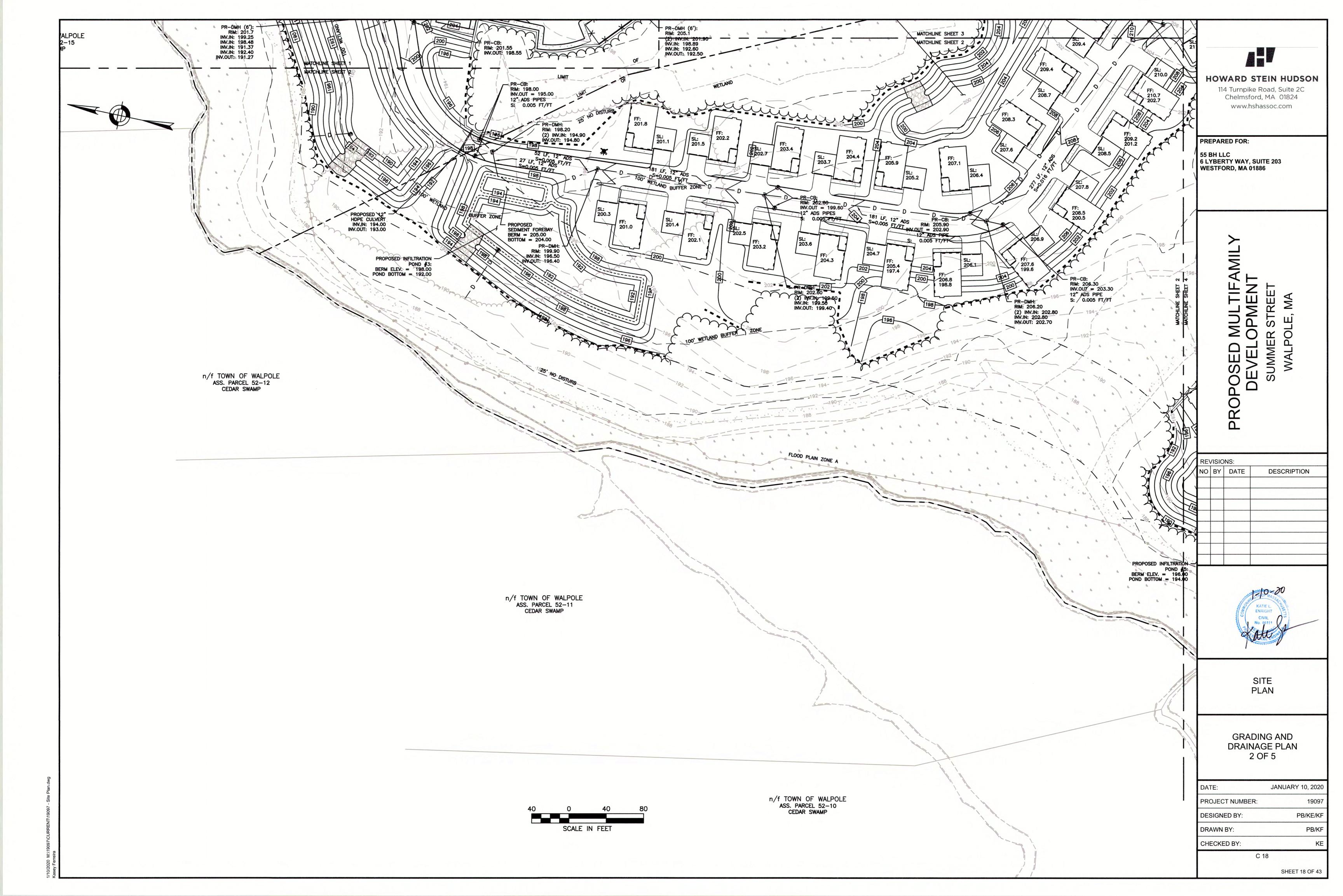


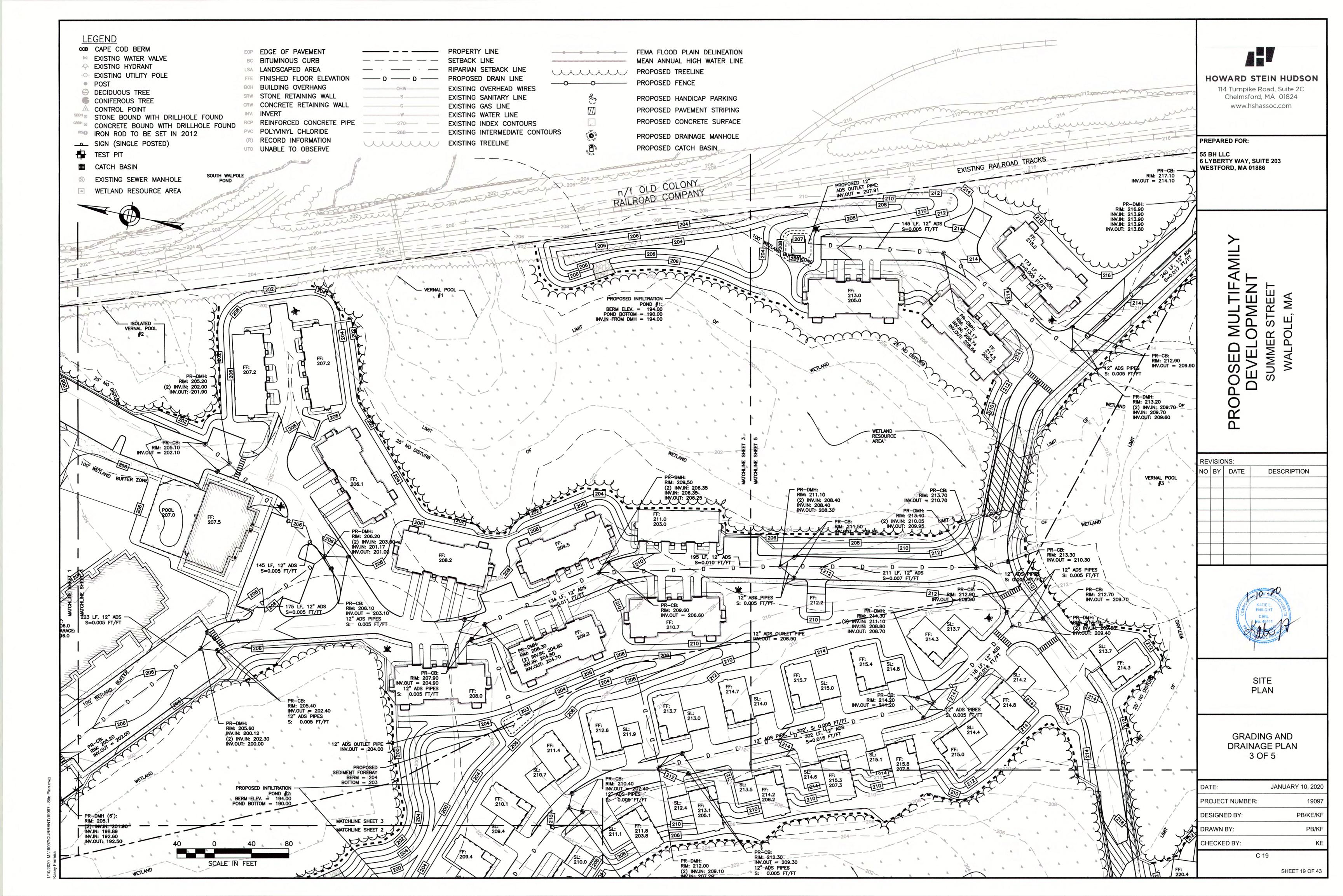


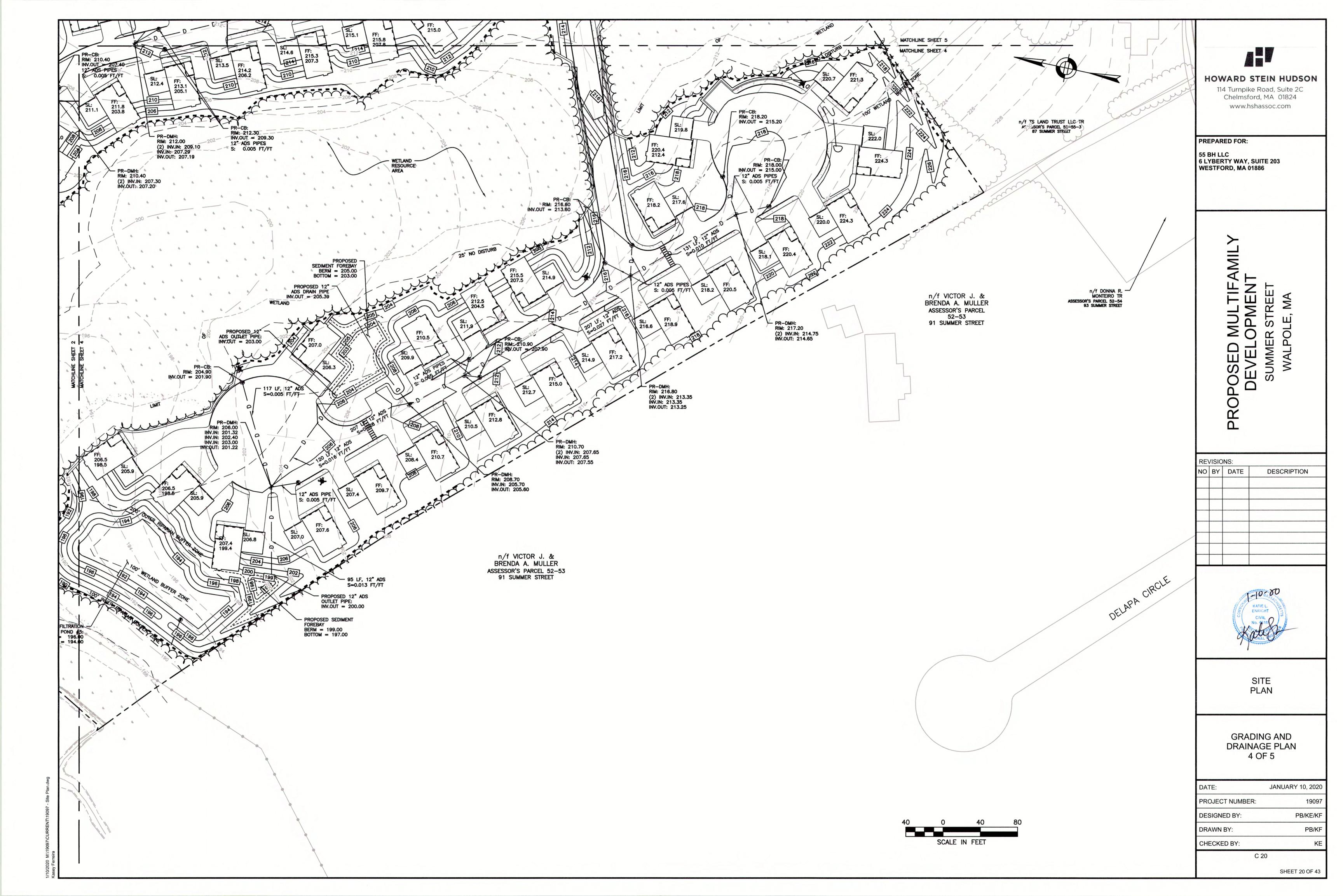


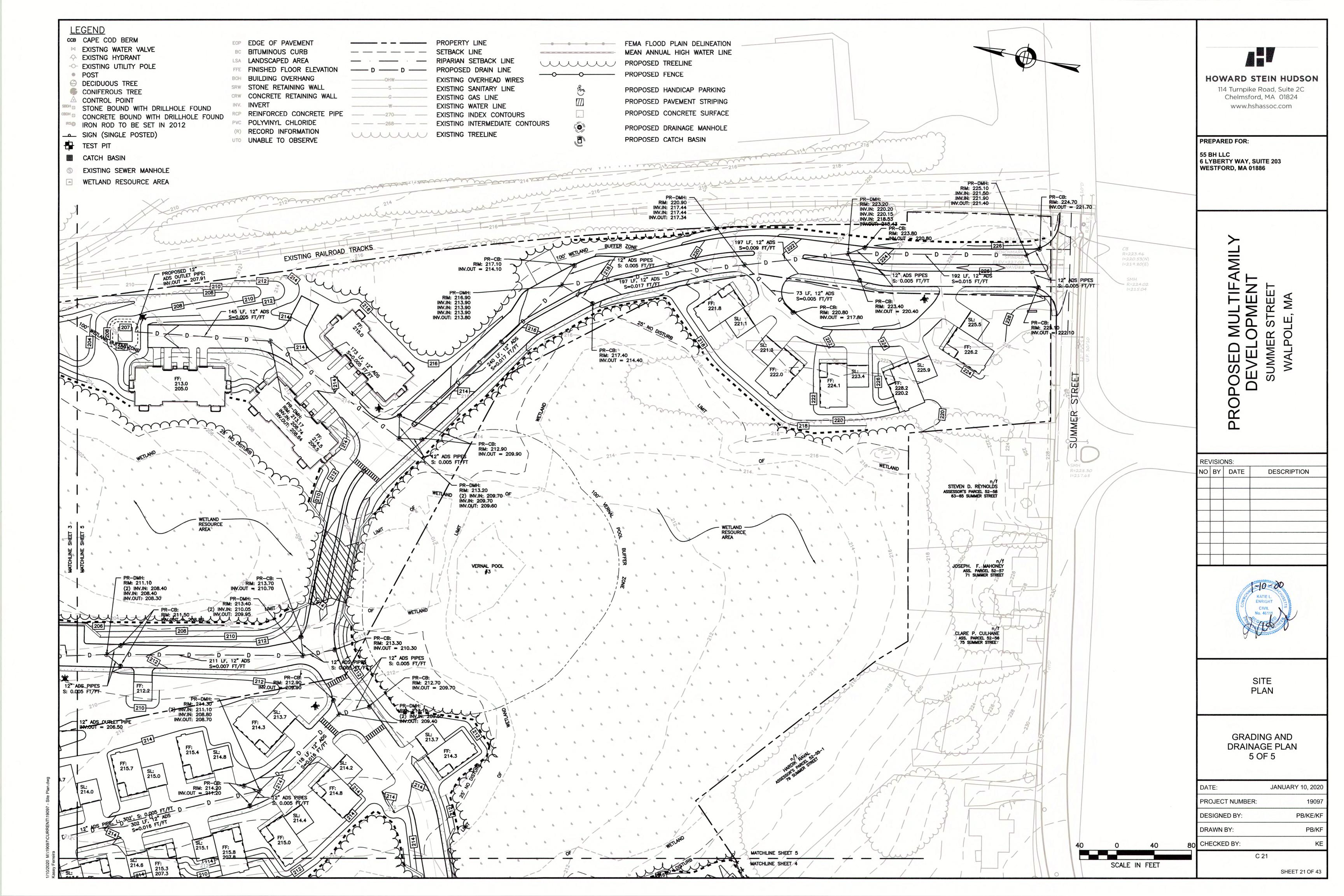


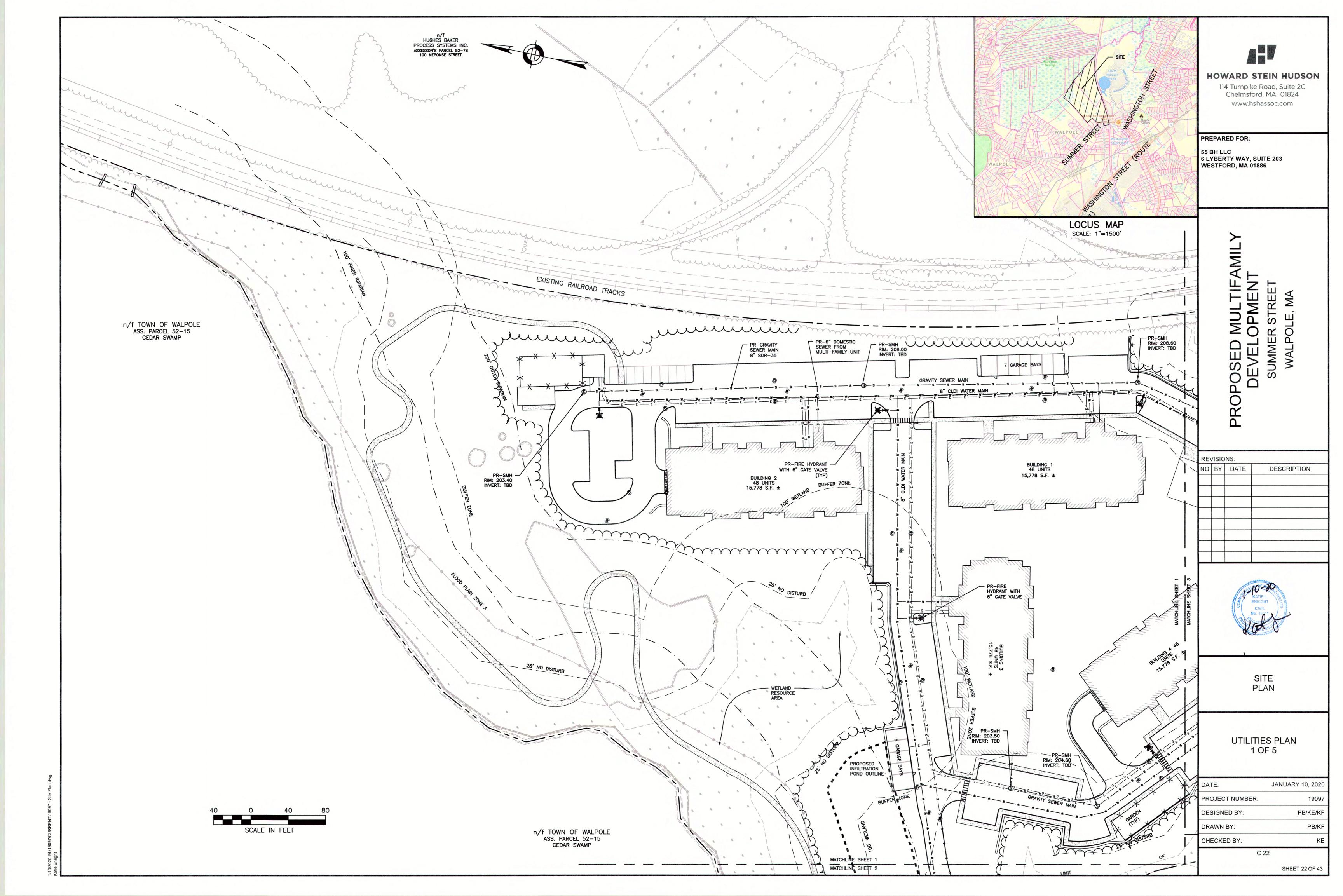


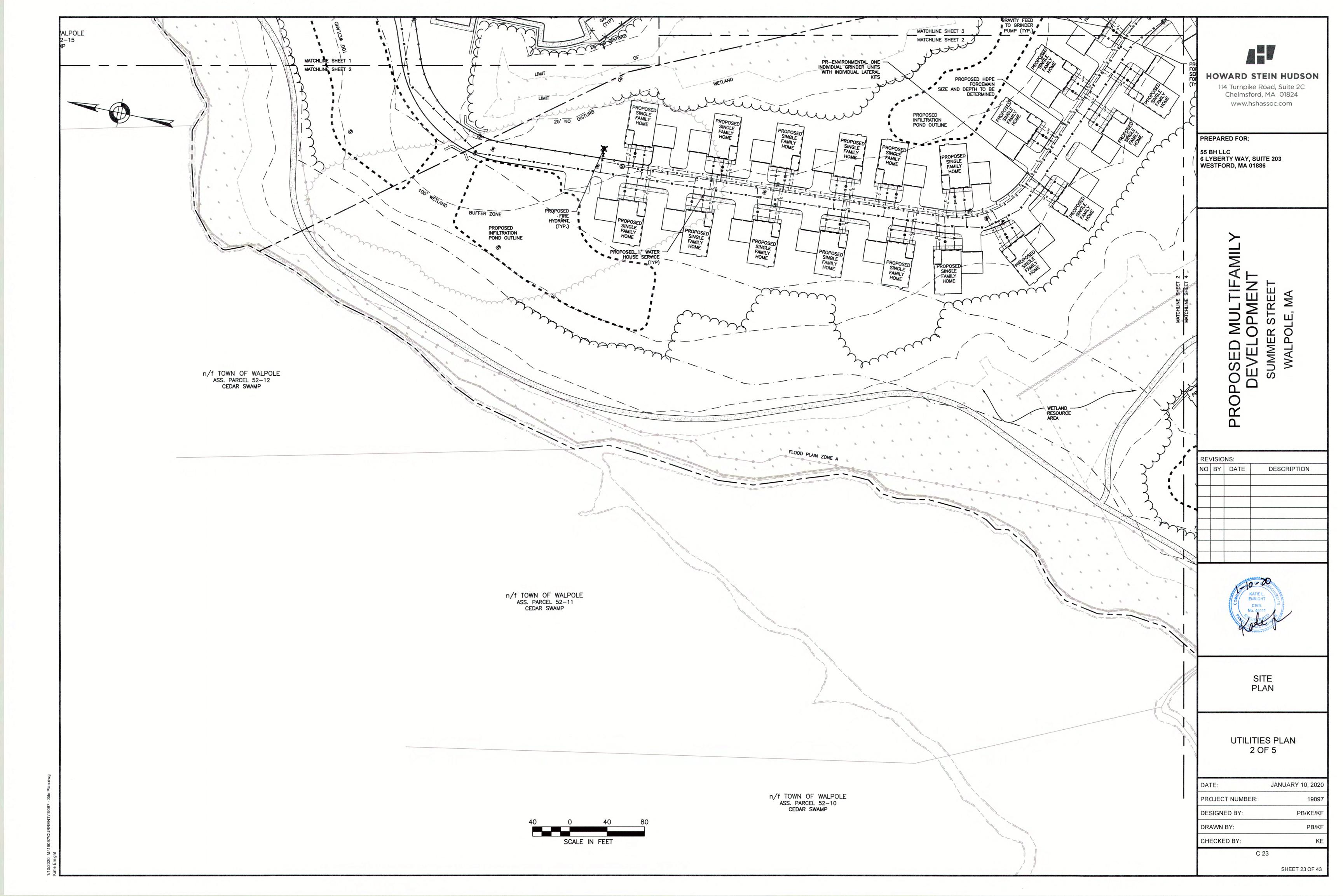


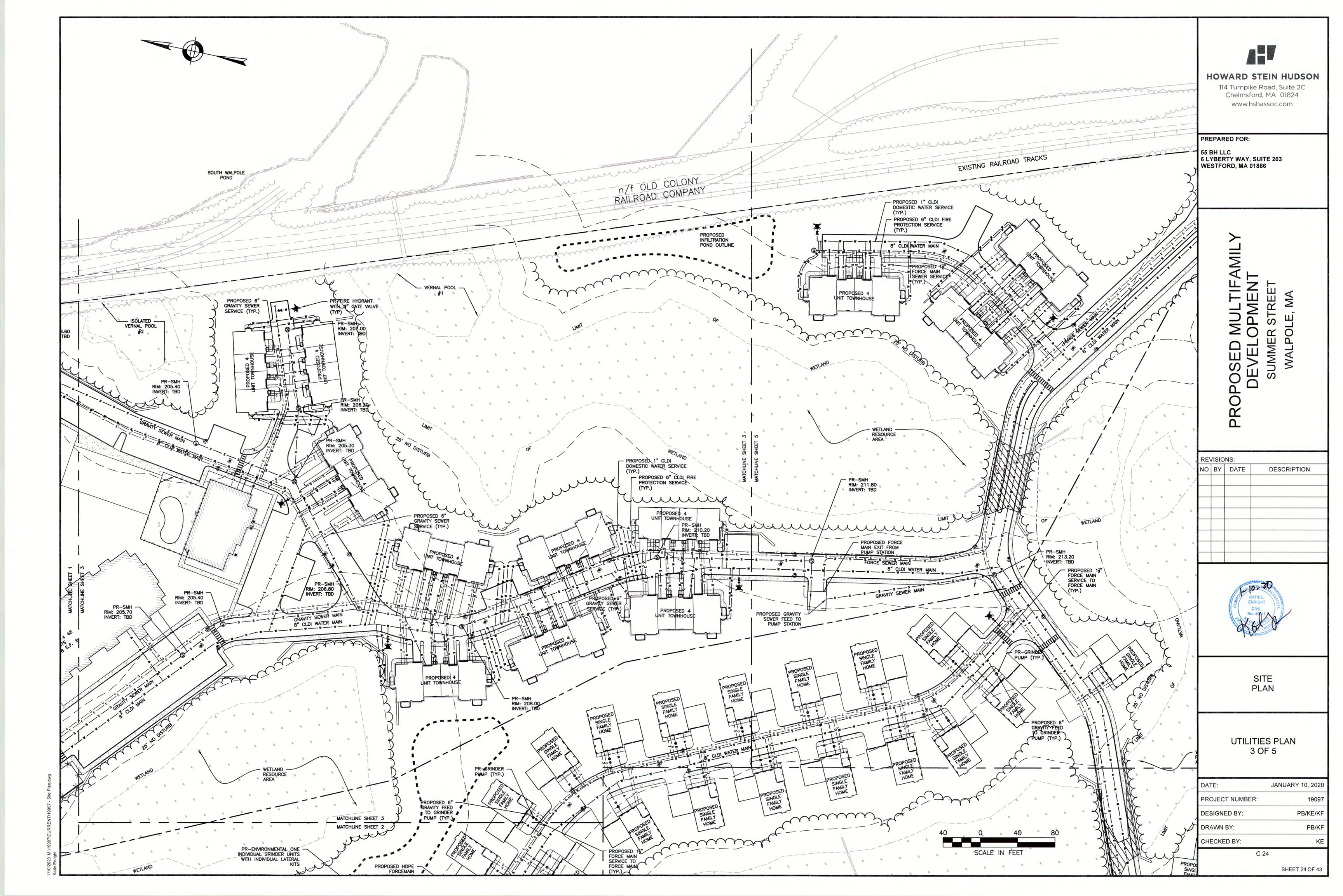


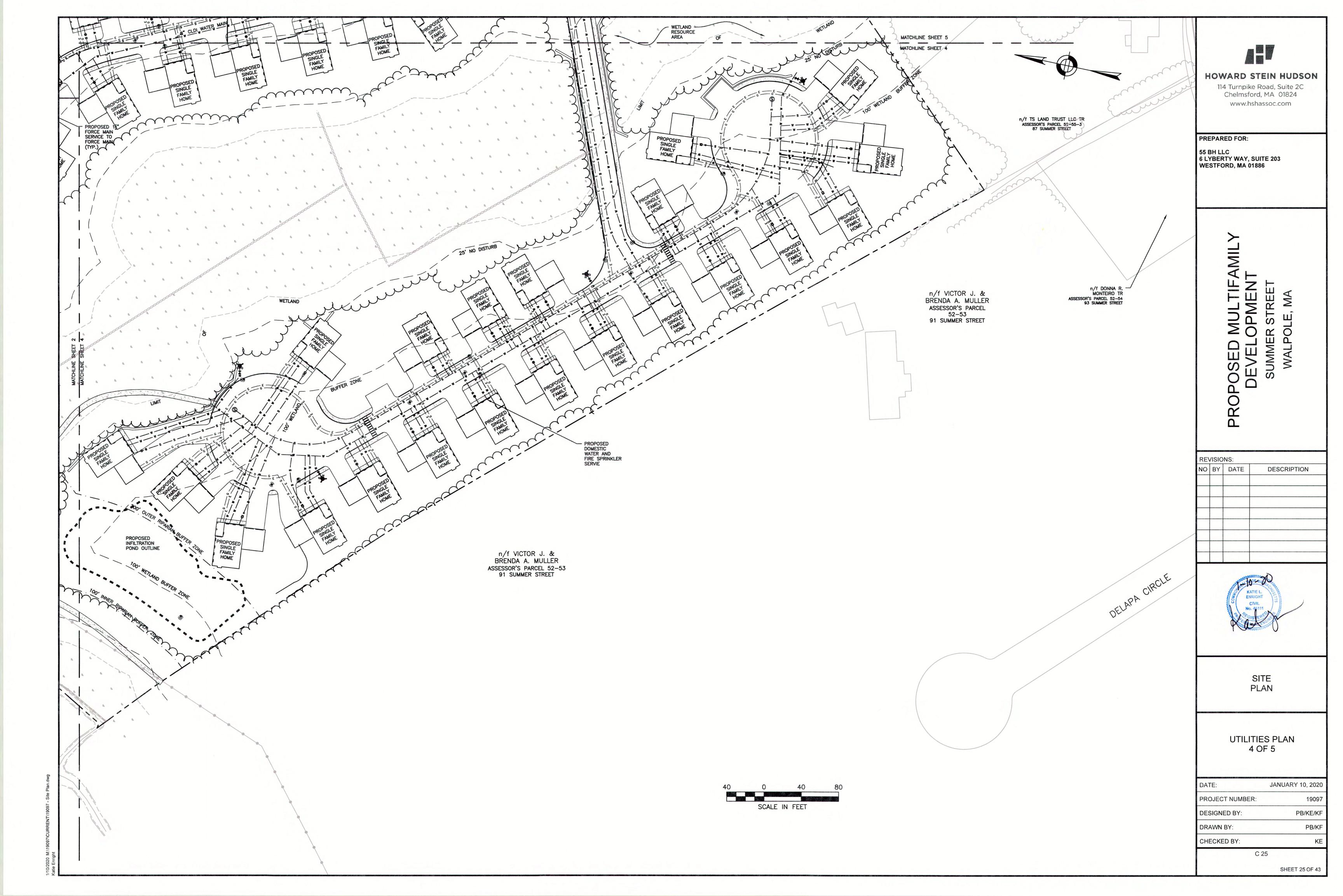


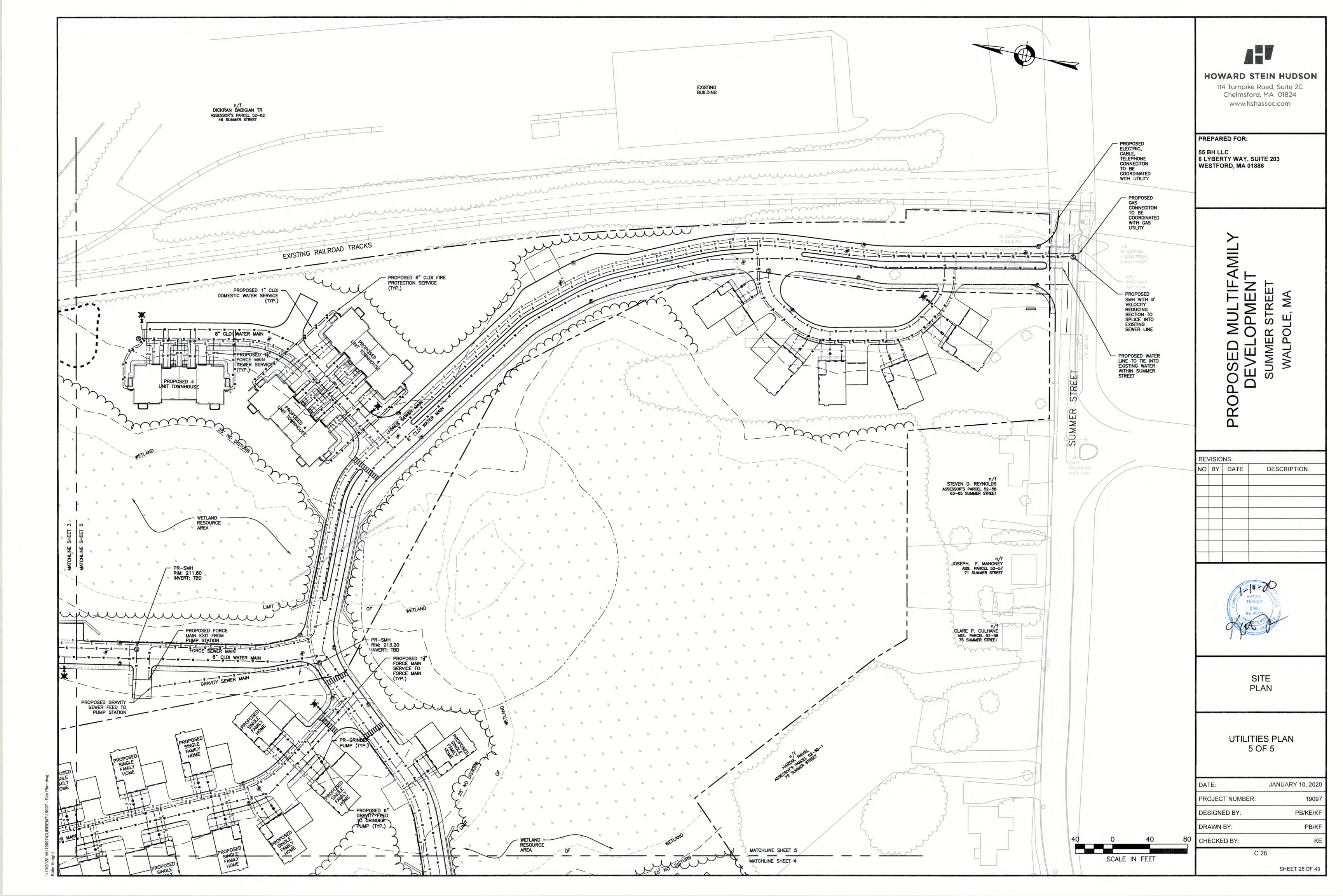


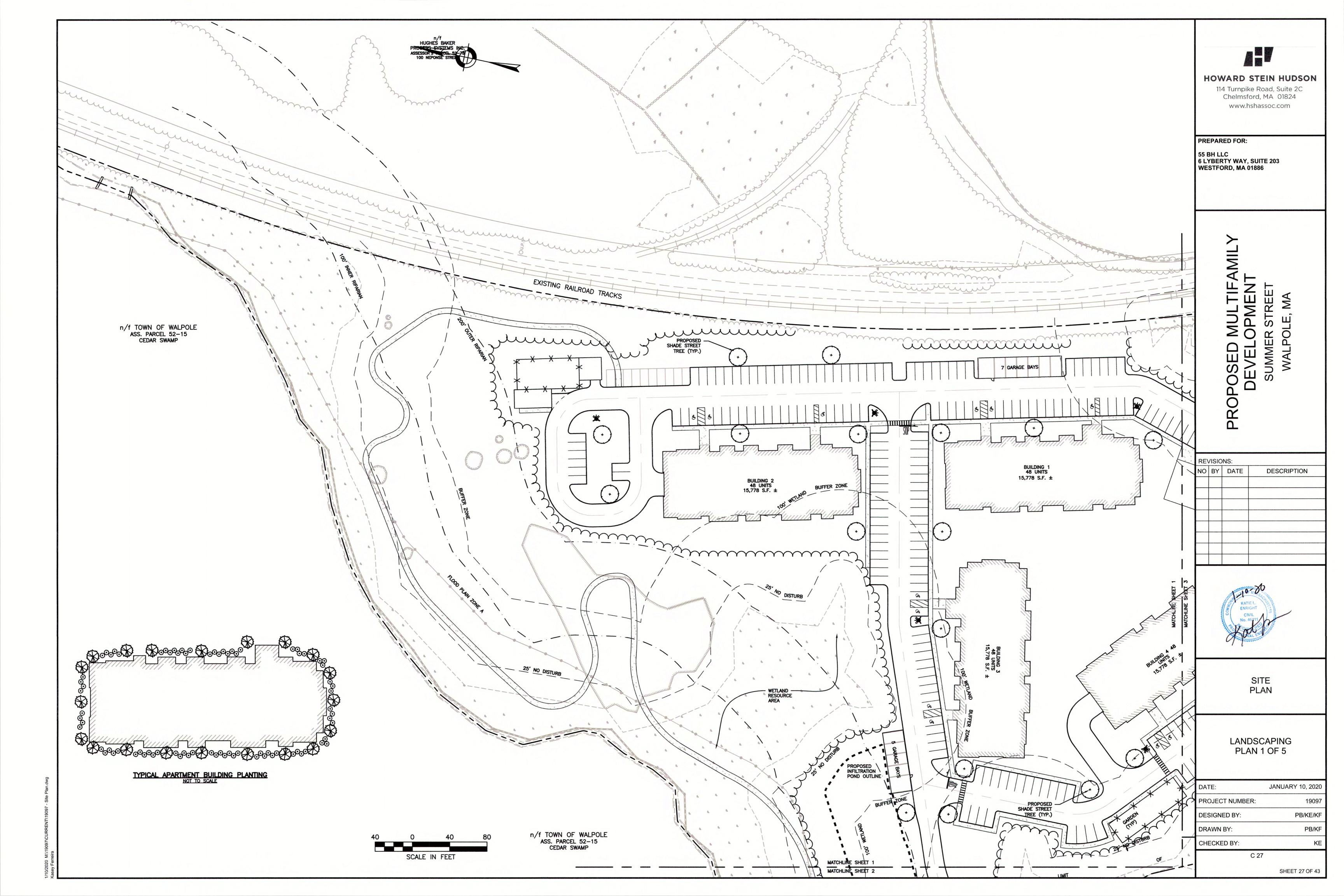


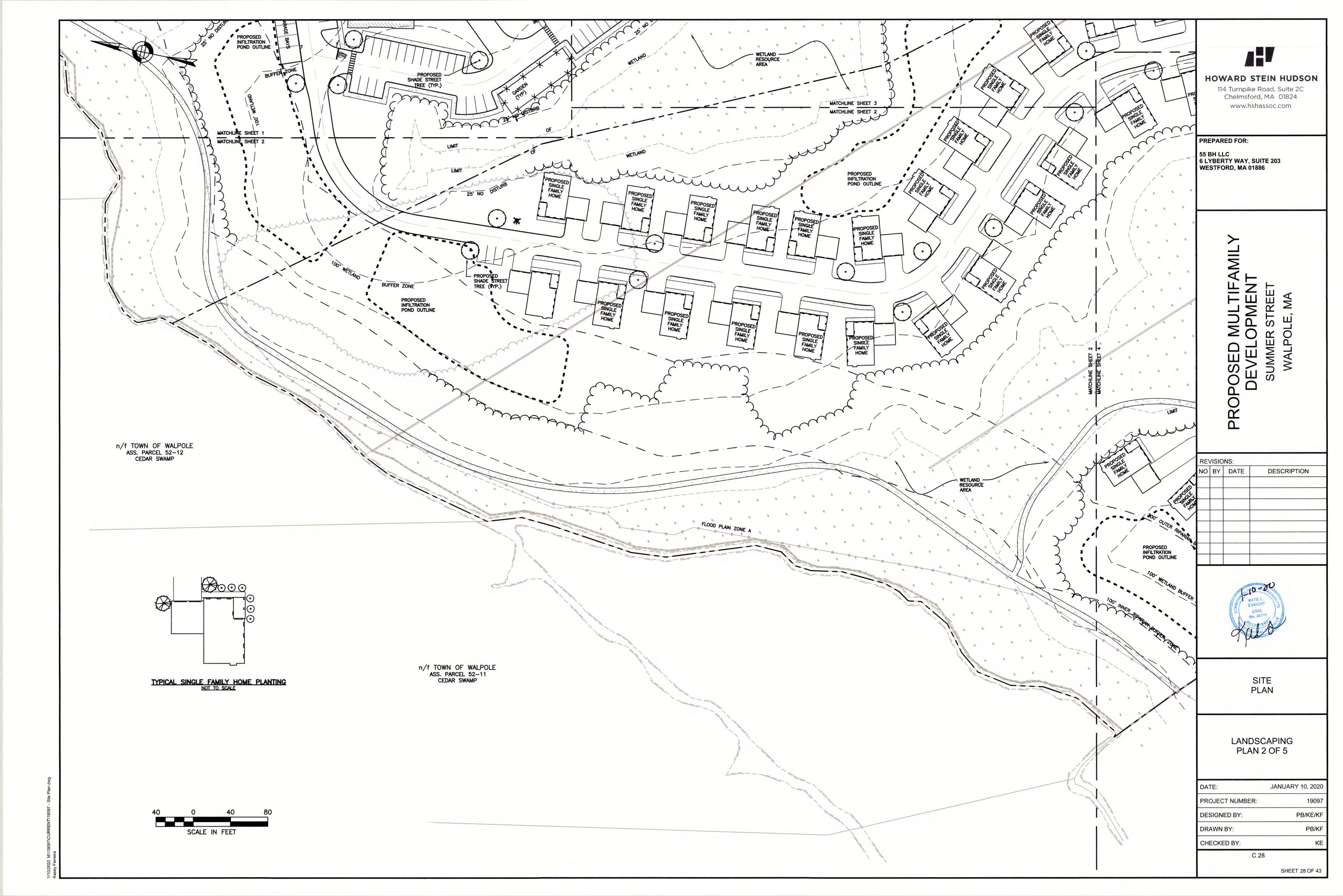


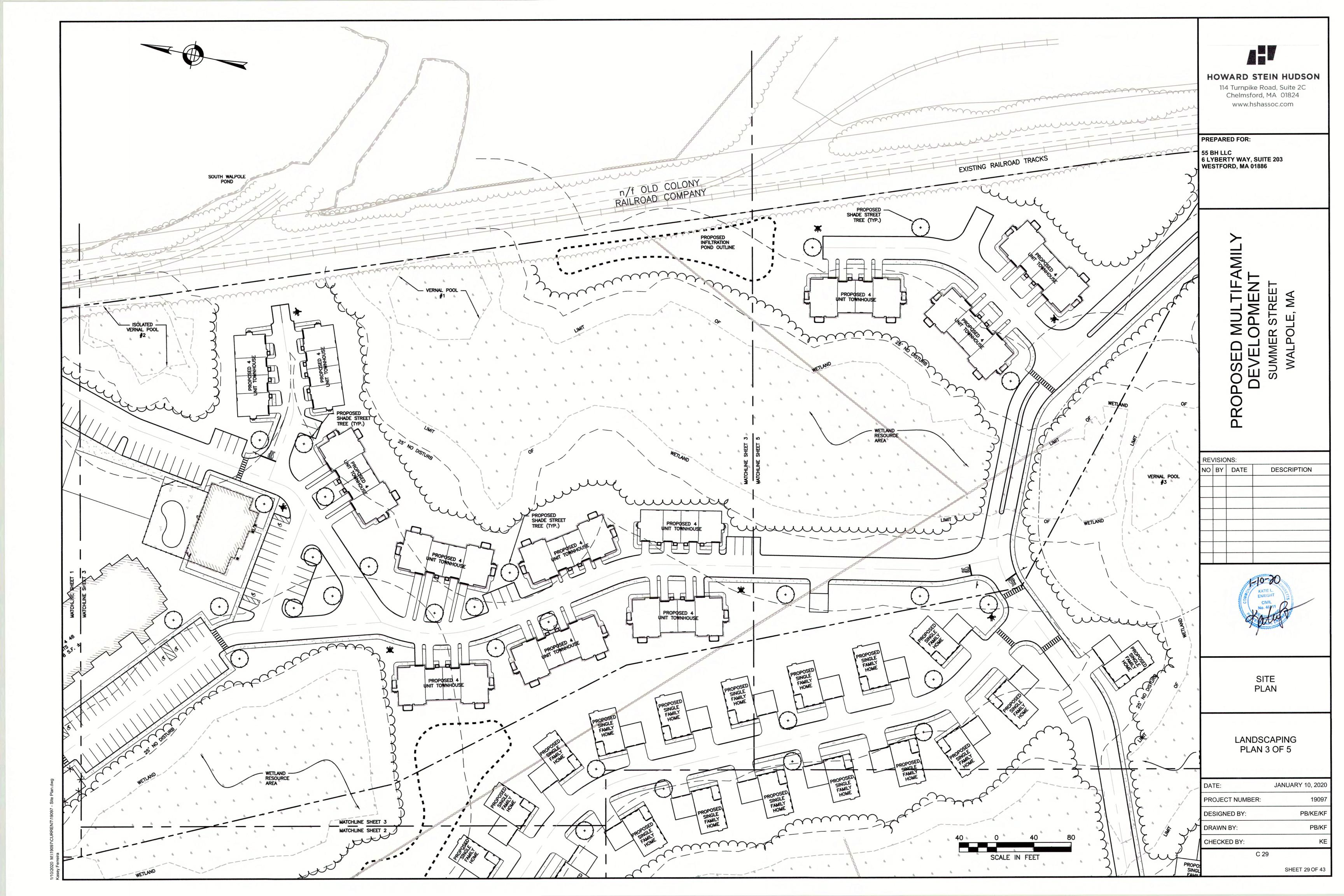


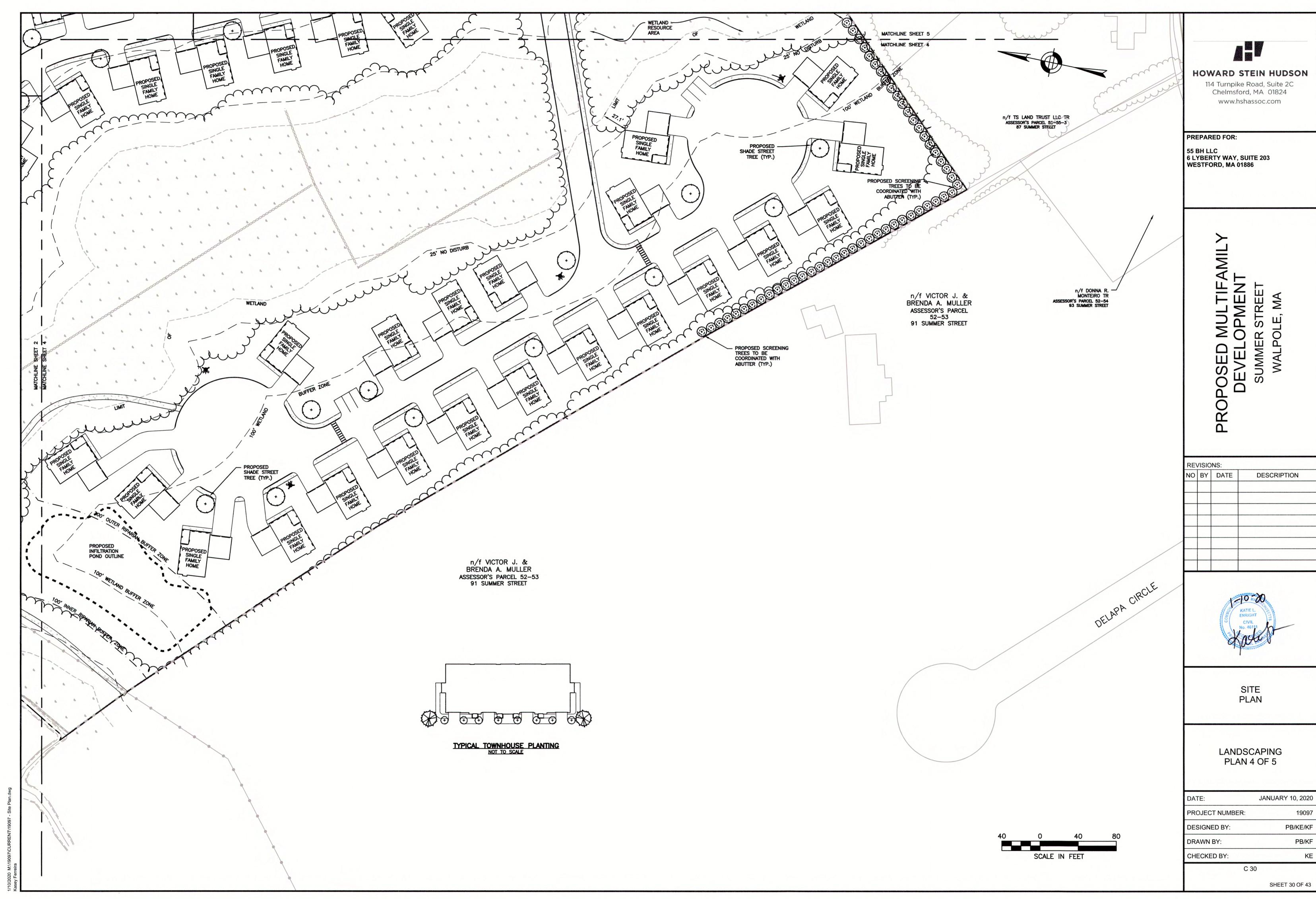




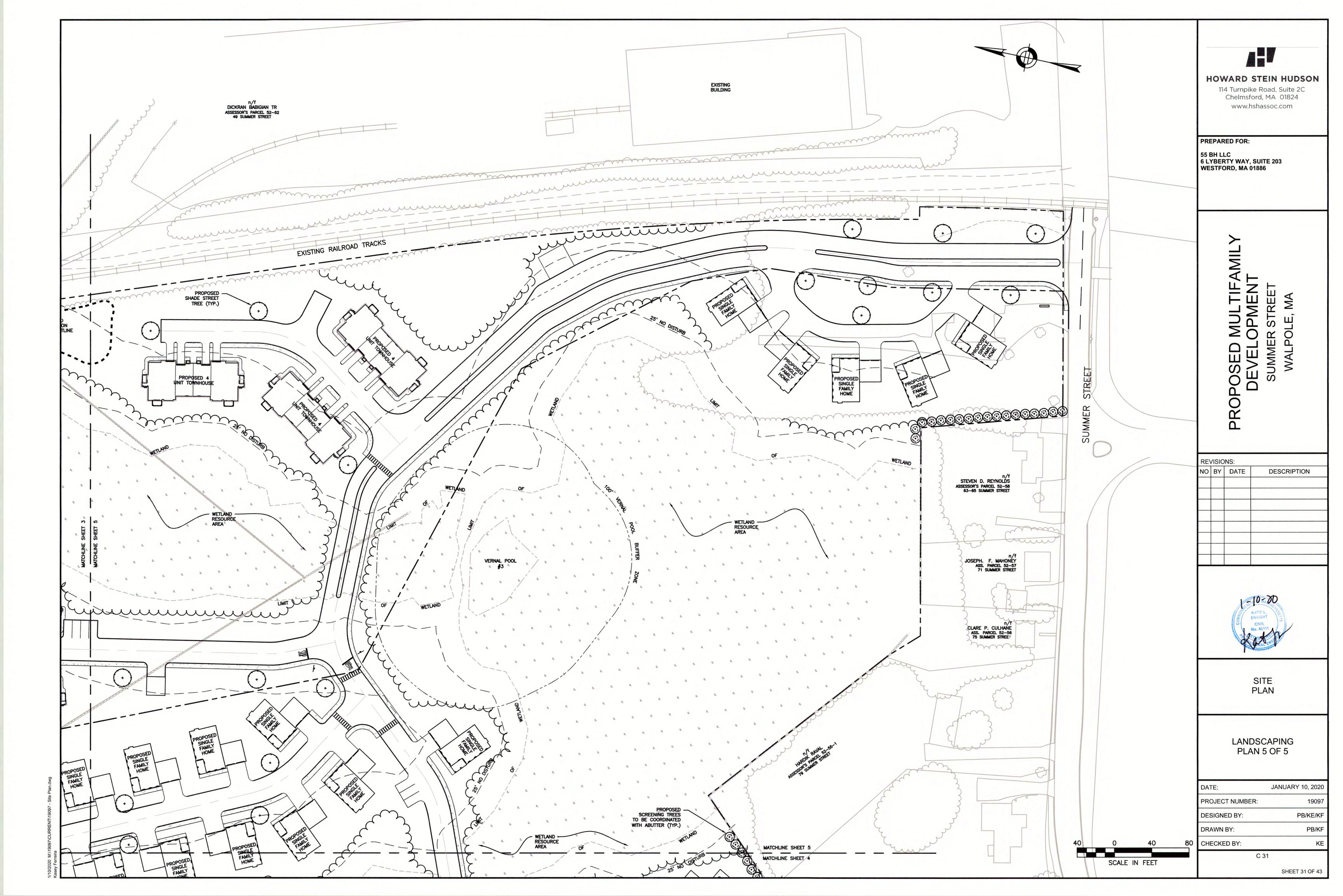


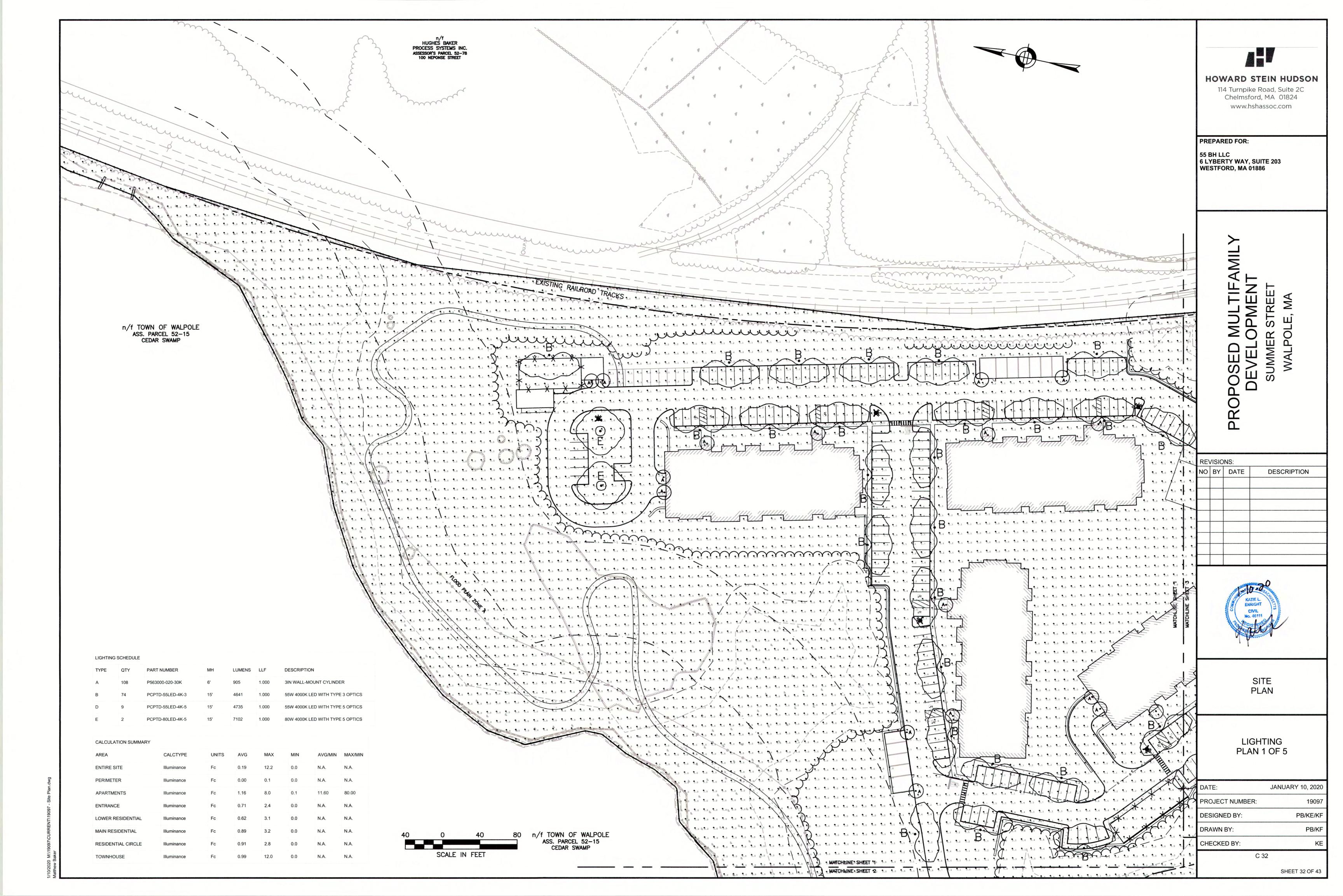


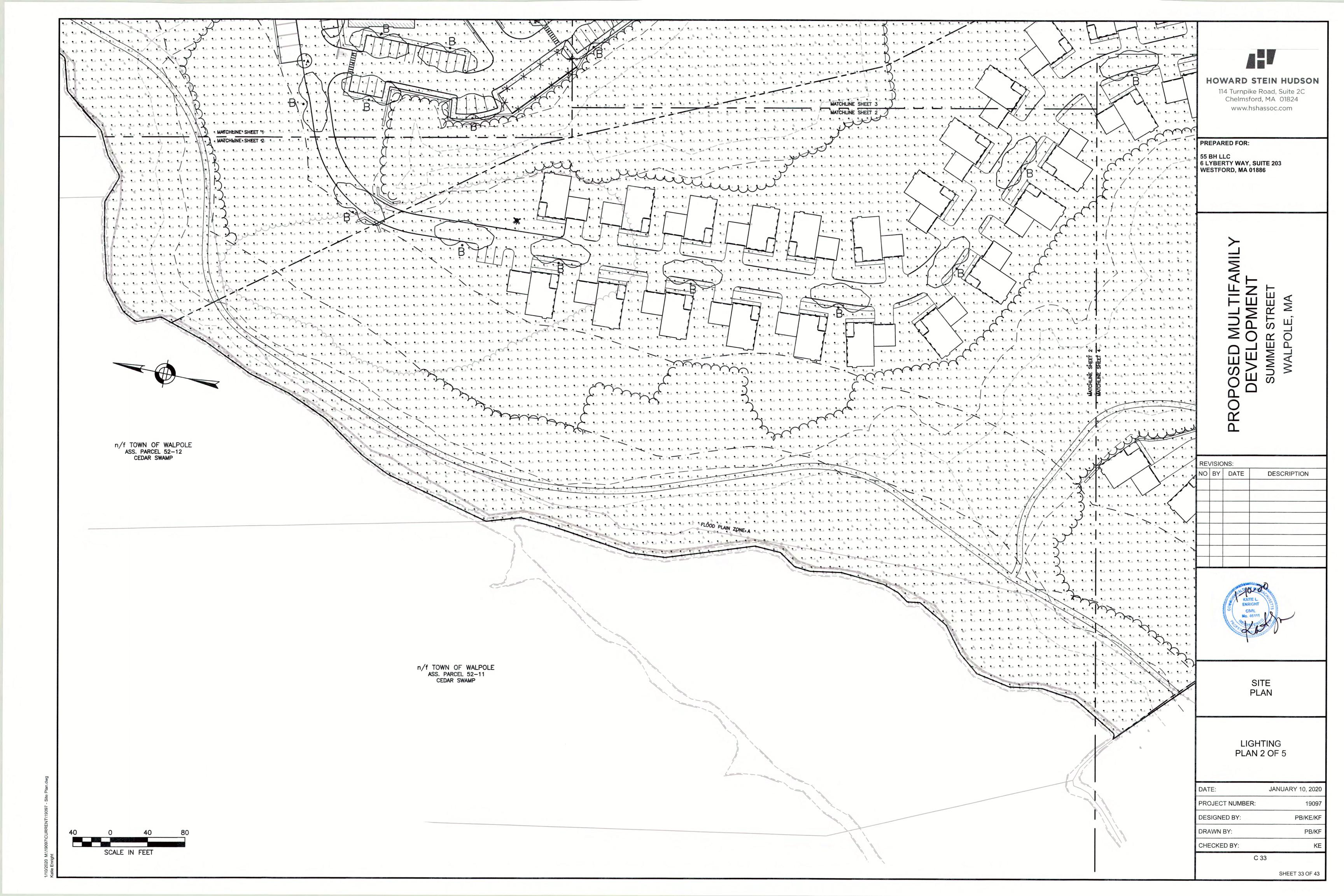


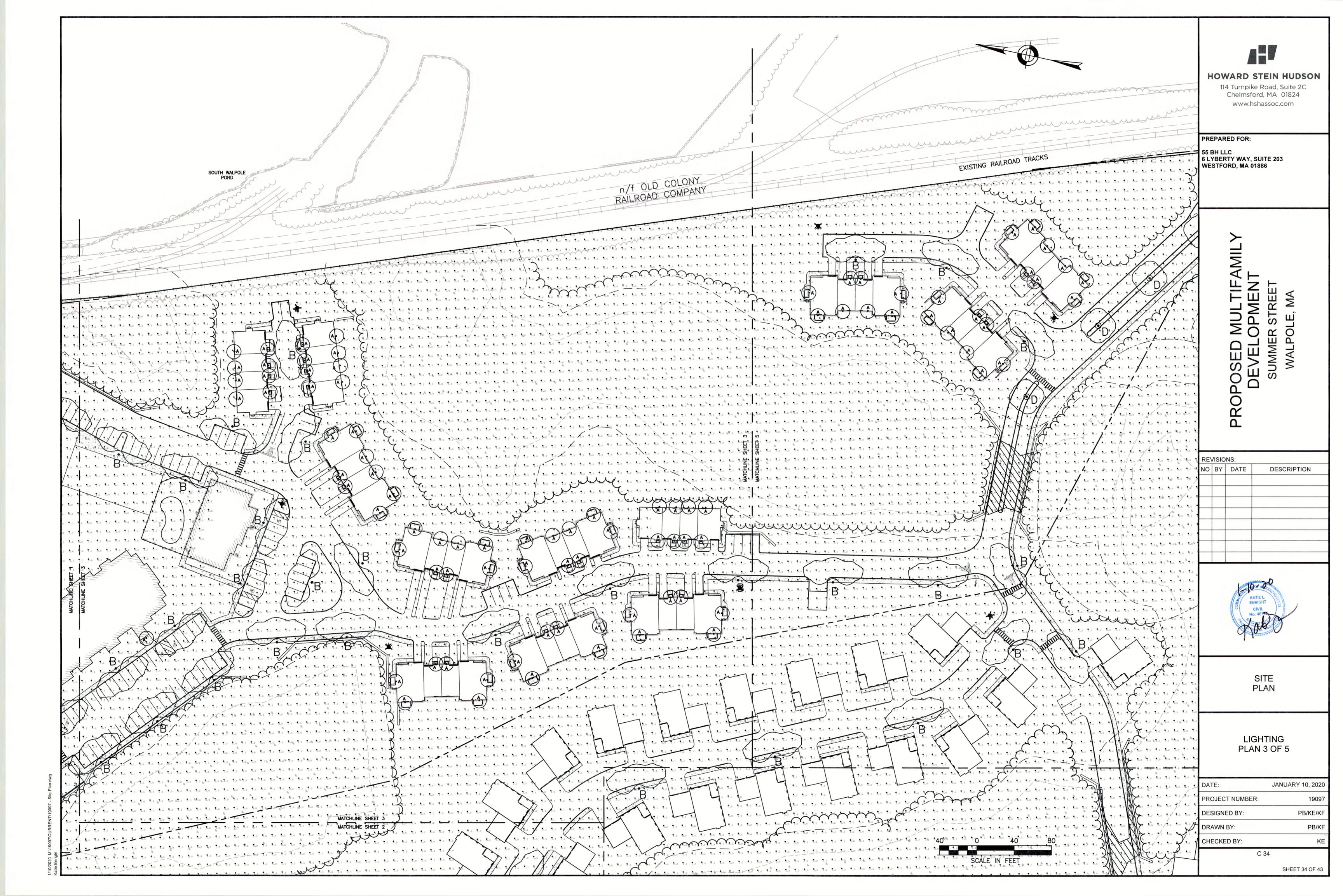


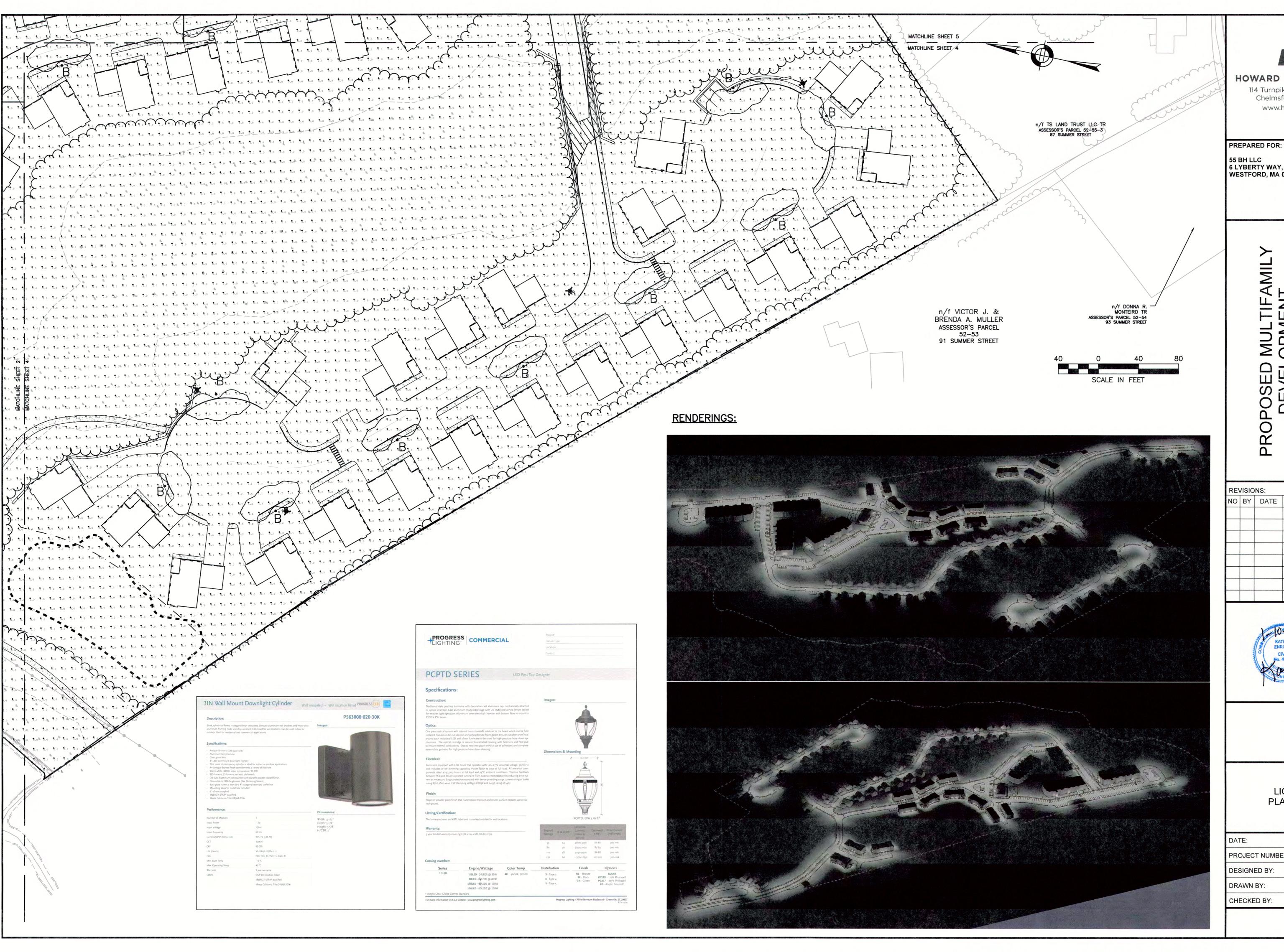
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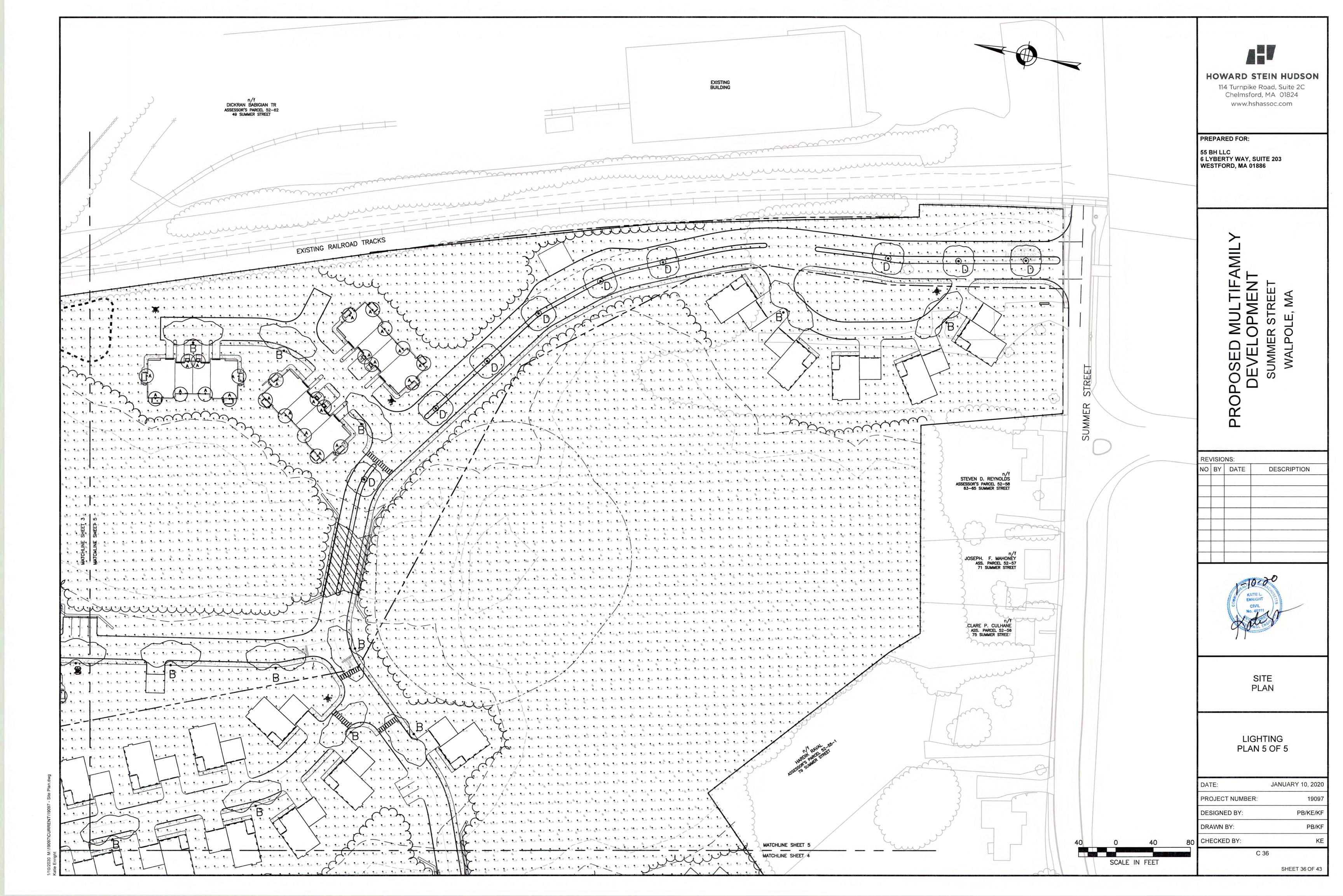
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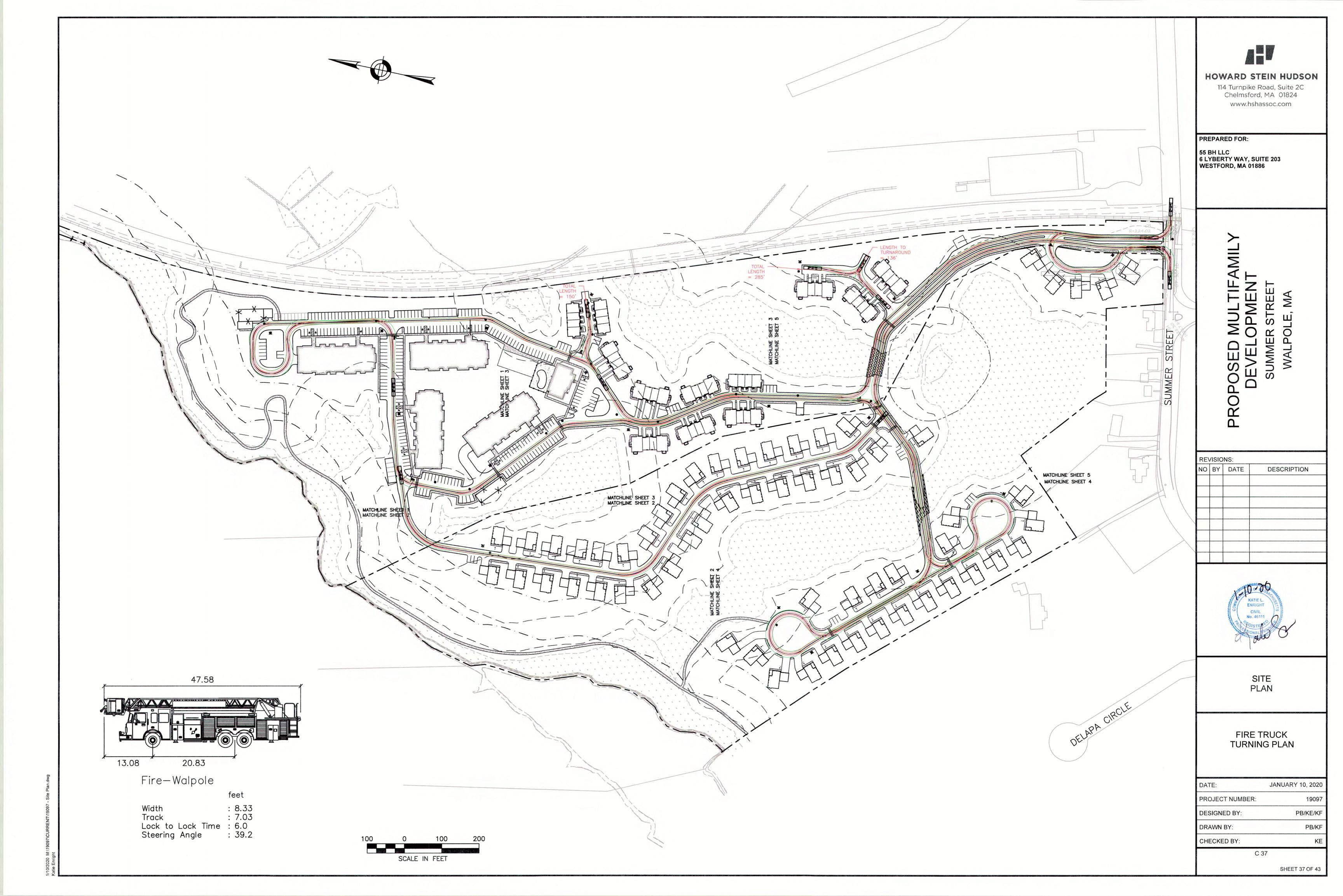


SITE PLAN

LIGHTING PLAN 4 OF 5

DATE:	JANUARY 10, 2020
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/KF
CHECKED BY:	KE
C 38	5
	SHEET 35 OF 43





#### EROSION AND SEDIMENT CONTROL NOTES

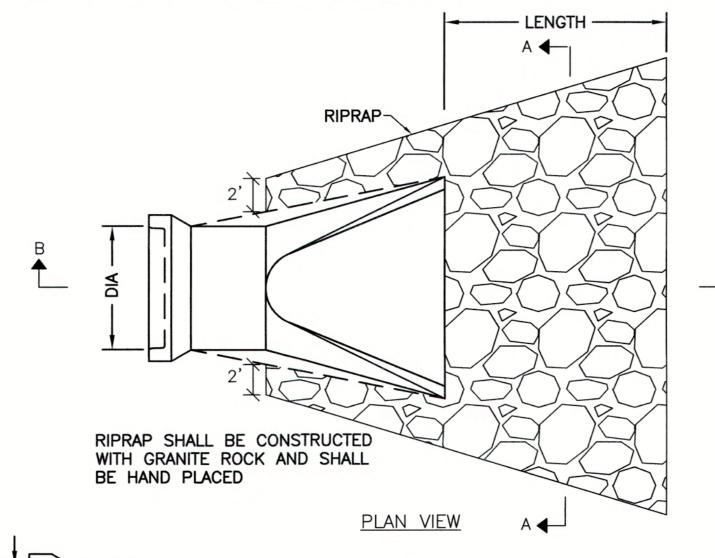
- EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND MAINTAINED AND UPGRADED AS NECESSARY DURING CONSTRUCTION BY THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND INSTALL ADDITIONAL CONTROL MEASURES AS NEEDED DURING CONSTRUCTION.
- ALL CATCH BASINS RECEIVING DRAINAGE FROM THE PROJECT SITE MUST BE PROVIDED WITH A CATCH BASIN FILTER.
- STABILIZATION OF ALL RE-GRADED AND SOIL STOCKPILE AREAS MUST BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
- 4. SEDIMENT REMOVED FROM EROSION AND SEDIMENT CONTROL DEVICES MUST BE PROPERLY REMOVED AND DISPOSED. ALL DAMAGED CONTROLS MUST BE REMOVED AND REPLACED.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL PLAN. THIS INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE PROPER TOWN AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING WIND EROSION AND DUST THROUGHOUT THE LIFE OF HIS CONTRACT. DUST CONTROL MAY INCLUDE, BUT IS NOT LIMITED TO, SPRINKLING OF WATER ON EXPOSED SOILS AND STREET SWEEPING ADJACENT ROADWAYS.
- 7. IF FINAL GRADING IS TO BE DELAYED FOR MORE THAN 21 DAYS AFTER LAND DISTURBANCE ACTIVITIES CEASE, TEMPORARY VEGETATION OR MULCH SHALL BE USED TO STABILIZED SOILS WITHIN 14 DAYS OF THE LAST DISTURBANCE.
- 8. IF A DISTURBED AREA WILL BE EXPOSED FOR GREATER THAN ONE YEAR, PERMANENT GRASSES OR OTHER APPROVED COVER MUST BE INSTALLED.
- 9. THE CONTRACTOR MUST KEEP ON—SITE AT ALL TIMES ADDITIONAL SILT FENCE, STRAW WATTLE, AND HAY BALES FOR THE INSTALLATION AT THE DIRECTION OF THE ENGINEER OR THE TOWN TO MITIGATE ANY EMERGENCY CONDITION.
- 10. THE CONSTRUCTION FENCING AND EROSION AND SEDIMENT CONTROLS AS SHOWN MAY NOT BE PRACTICAL DURING ALL STAGES OF CONSTRUCTION. EARTHWORK ACTIVITY ON—SITE MUST BE DONE IN A MANNER SUCH THAT RUNOFF IS DIRECTED TO A SEDIMENT CONTROL DEVICE OR INFILTRATED TO THE GROUND.
- DEMOLITION AND CONSTRUCTION DEBRIS MUST BE PROPERLY CONTAINED AND DISPOSED OF.
- 12. DISPOSAL OF ALL DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE HAULED OFF—SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.

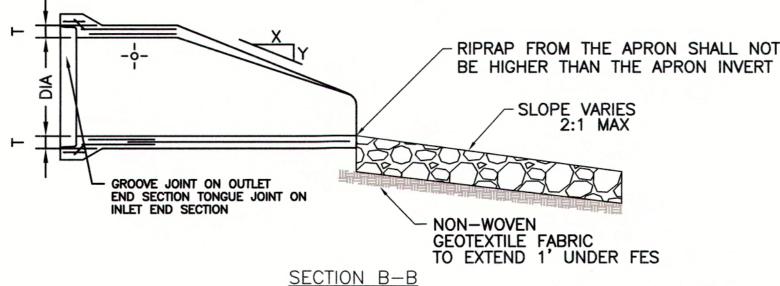
#### GENERAL CONSTRUCTION SEQUENCE

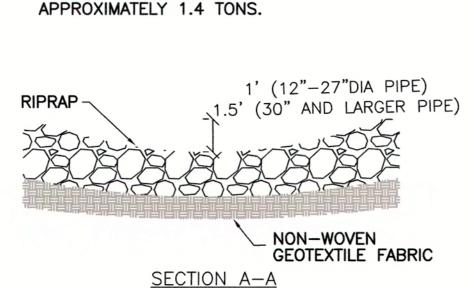
- 1. INSTALL EROSION AND SEDIMENT CONTROLS PRIOR TO STARTING ANY EARTHWORKS ACTIVITY.
- 2. INSTALL CONSTRUCTION ENTRANCE.
- 3. BEGIN CLEARING AND GRUBBING.
- 4. CONSTRUCT STORMWATER MANAGEMENT SYSTEM.
- 5. INSTALL SITE FURNISHINGS.
- 6. INSTALL PAVEMENT AND CURBS.
- 7. INSTALL LANDSCAPING.

NOTES:

8. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED UNTIL PERMANENT COVER IS ESTABLISHED.





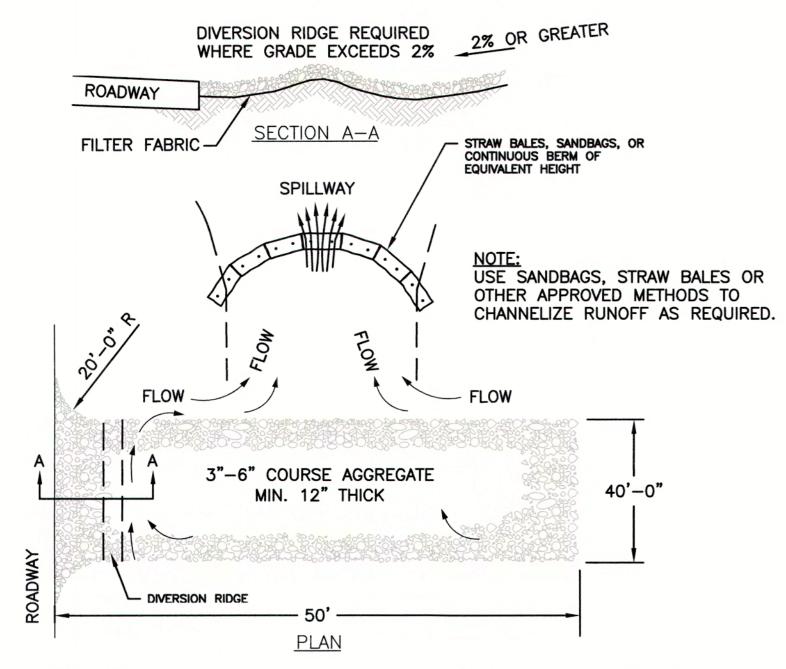


NOTE: ONE CUBIC YARD IS

MINIMUM RIPRAP REQUIRED			
PIPE DIA (IN.)	LENGTH (FT.)	QUANTITY (C.Y.)	CLASS
12"	8'	5	III
15"	8'	5	111
18"	10'	6	III
24"	12'	8	III
30"	14'	12	III
36"	16'	14	Ш
42"	18'	22	IV
48"	20'	26	IV
>48"	22'-28'	30-40	IV

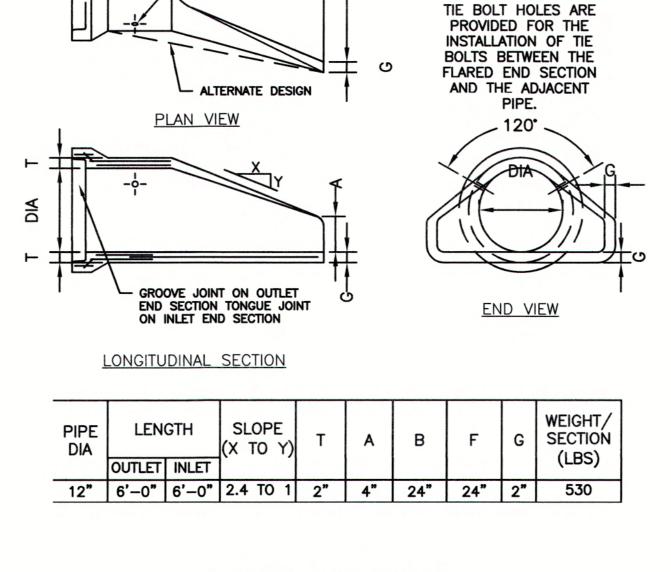
### RIPRAP FOR FLARED END SECTION NOT TO SCALE

LENGTH -

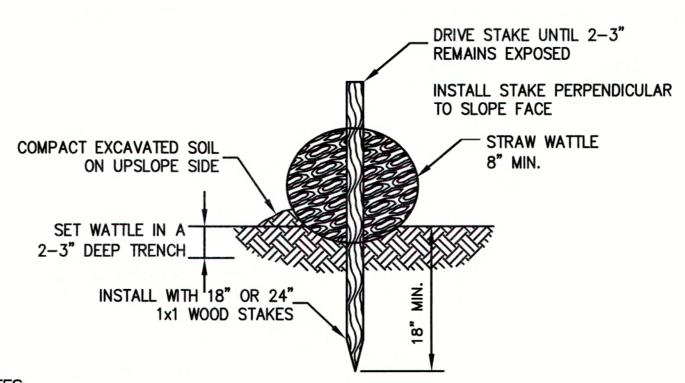


- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING
  OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR
  CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
   WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- TEMPORARY CONSTRUCTION ENTRANCE SHALL BE APPLIED WHERE NECESSARY TO KEEP PUBLIC WAYS FREE OF SEDIMENT INCLUDING STAGING AREAS

### STABILIZED CONSTRUCTION ENTRANCE NOT TO SCALE

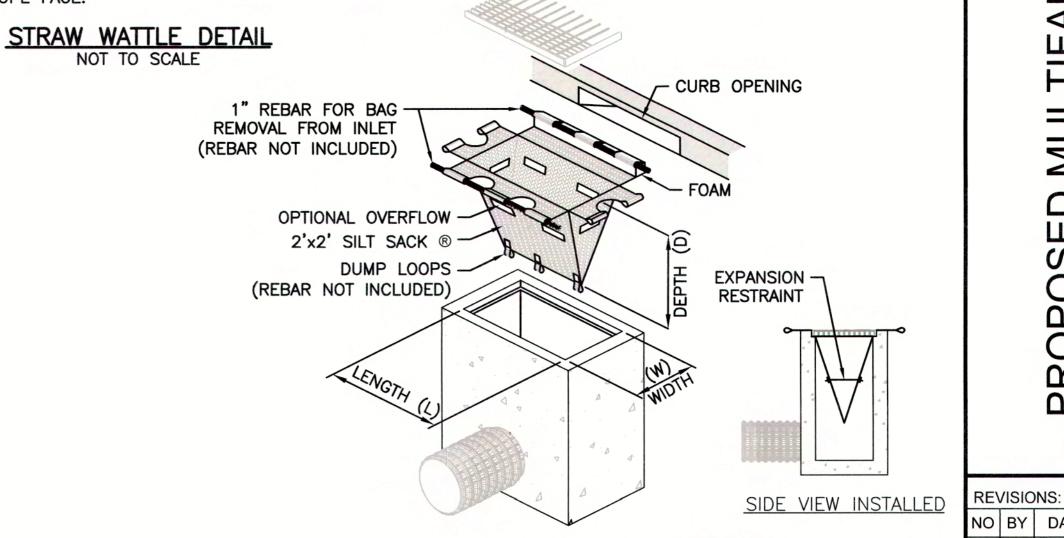


### FLARED END OUTLET NOT TO SCALE

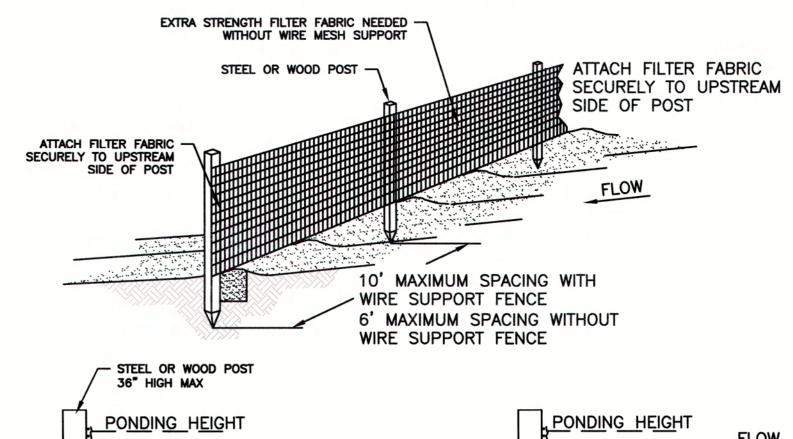


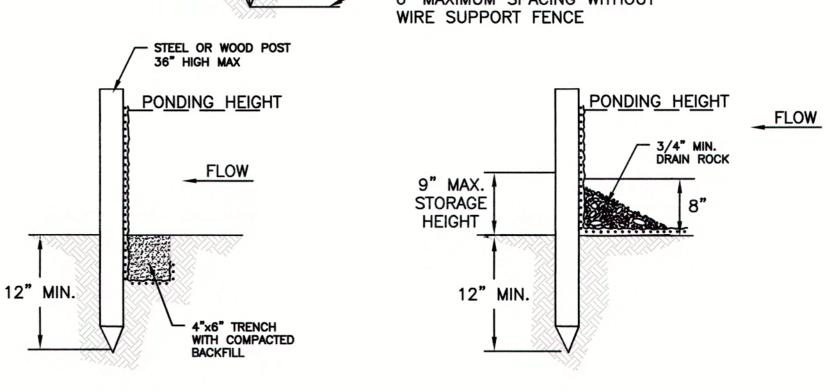
#### NOTES:

- 1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3"(5-7.5 CM) DEEP X 9"(22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE FROM THE ANCHOR TRENCH.
- 2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
- 3. SECURE THE WATTLE WITH 18-24" (45.7-61 CM) STAKES EVERY 3-4' (0.9 1.2 M) AND WITH A STAKE ON EACH END. (STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" (5-7.5 CM) OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO SLOPE FACE.



## TEMPORARY INLET PROTECTION NOT TO SCALE





TRENCH DETAIL

**NOTES:** 

EROSION CONTROL BARRIER (HAY BALES, SILT FENCE OR EROSION STOCK)
 SHALL BE PLACED AROUND ALL MATERIAL STOCKPILE AREAS AND MAINTAINED
 AT STAGING AREAS TO ASSURE NO SILTATION ONTO PUBLIC OR PRIVATE WAYS
 OR PROPERTY.

INSTALLATION WITHOUT TRENCHING

EROSION CONTROL BARRIER

NOT TO SCALE



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PROPOSED MULTIFAMIL
DEVELOPMENT
SUMMER STREET

REVISIONS:

NO BY DATE DESCRIPTION



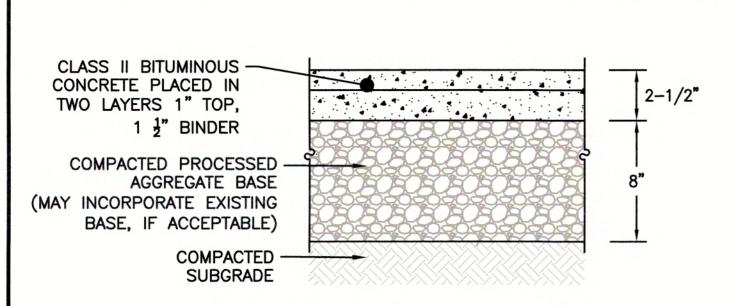
SITE PLAN

DETAIL SHEET 1 OF 6

DATE: JANUARY 10, 2020
PROJECT NUMBER: 19097
DESIGNED BY: PB/KE/KF
DRAWN BY: PB/KF
CHECKED BY: KE

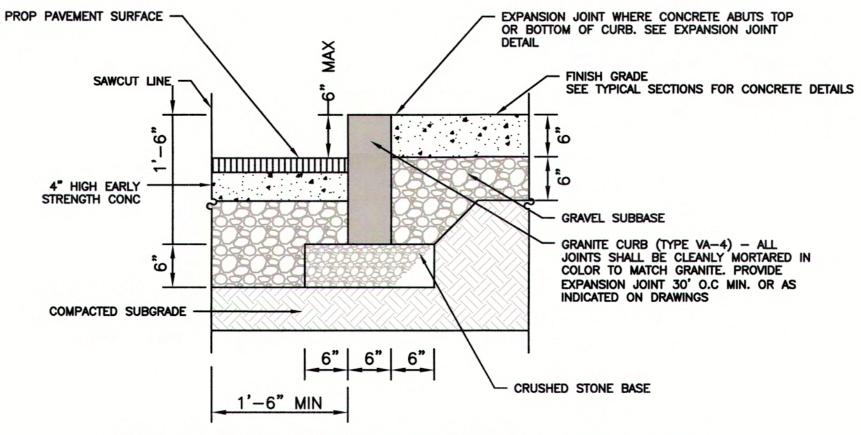
C 38

SHEET 38 OF 43



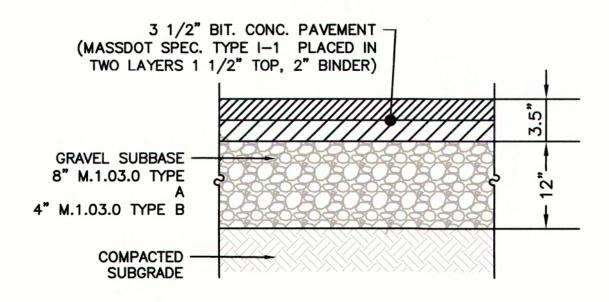
BIT CONC SIDEWALK SECTION DETAIL

NOT TO SCALE



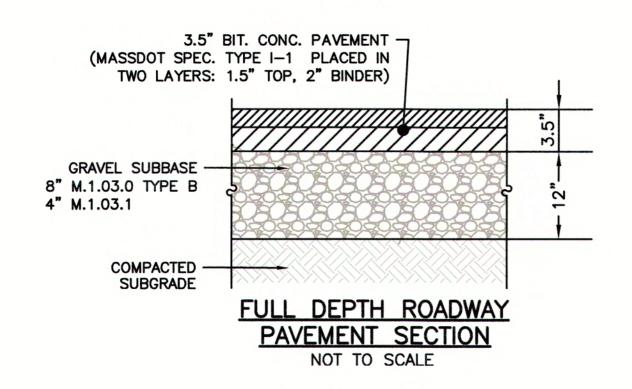
NOTE: USE 2" BIT. CONC. TOP COURSE ABOVE HIGH EARLY STRENGTH CONCRETE FOR RESETTING CURBS

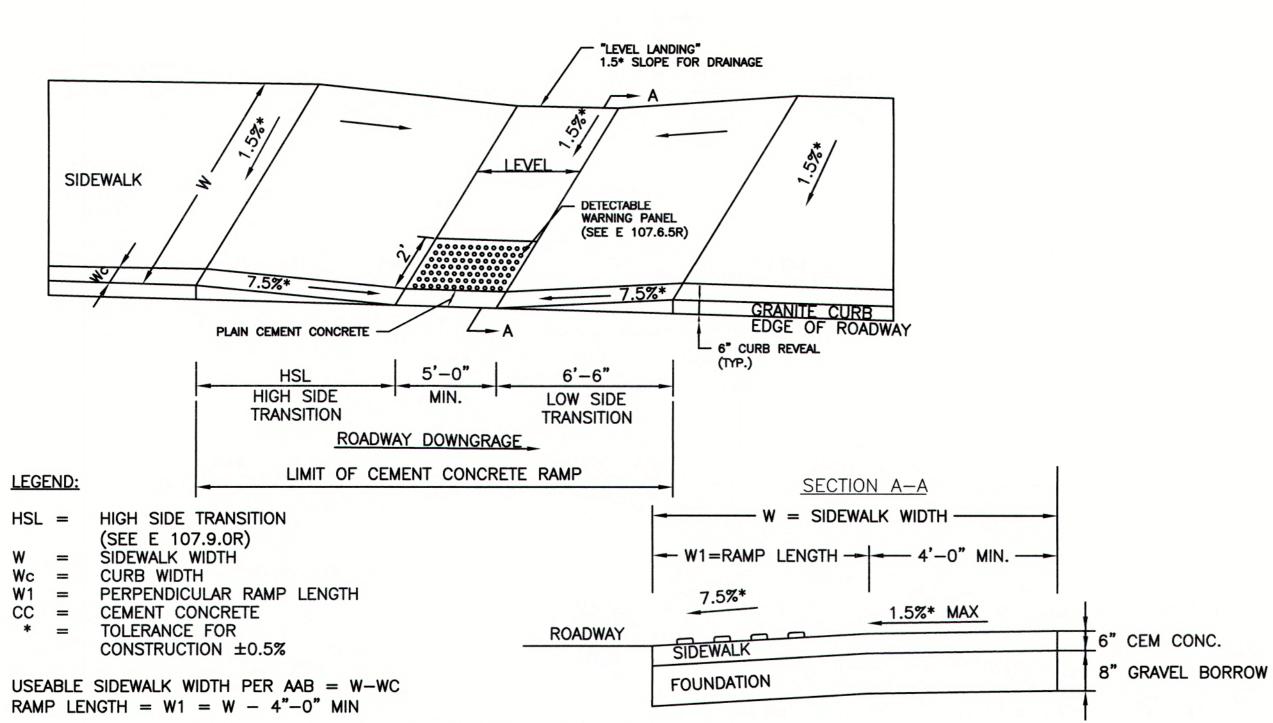
### VERTICAL GRANITE CURB NOT TO SCALE



FULL DEPTH PARKING LOT SECTION DETAIL

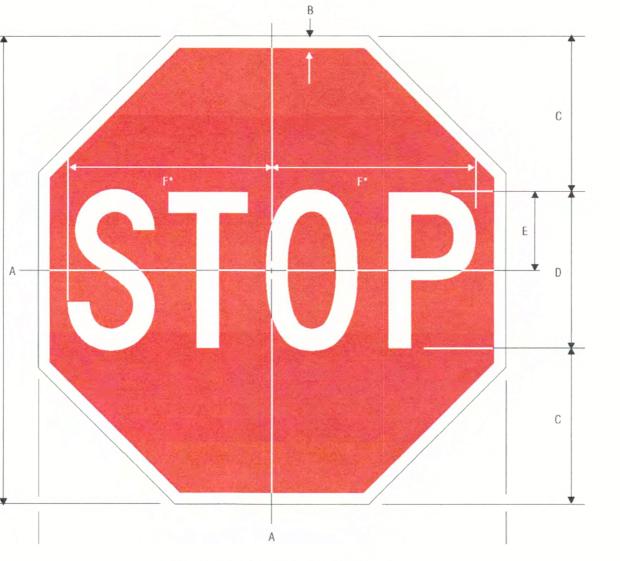
NOT TO SCALE





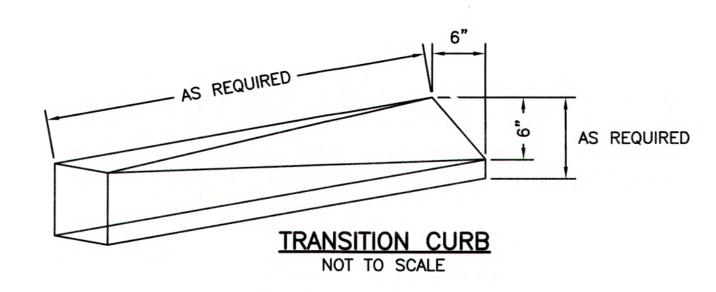
WHEELCHAIR RAMPS ON NARROW SIDEWALK WITH DETECTABLE WARNING PANEL (E107.2.1R)

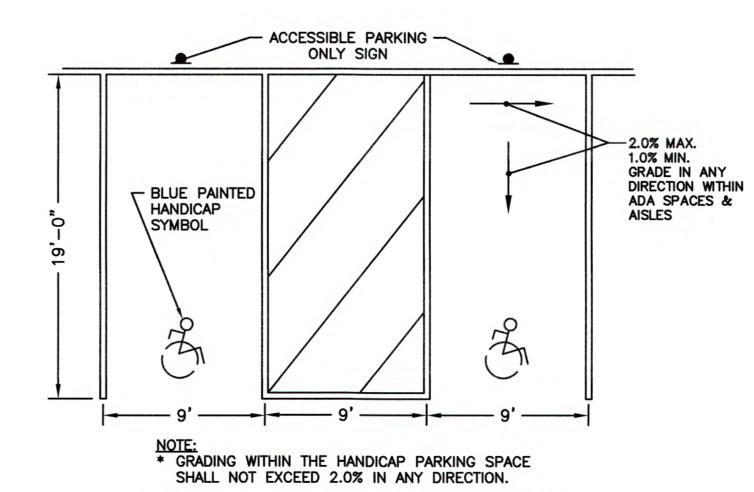
NOT TO SCALE



STOP SIGN DETAIL

NOT TO SCALE



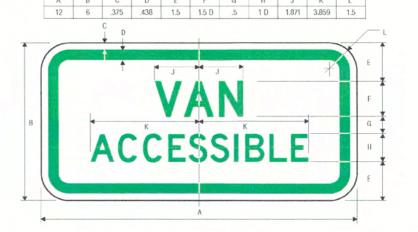


TYPICAL HANDICAP PARKING SPACE

NOT TO SCALE

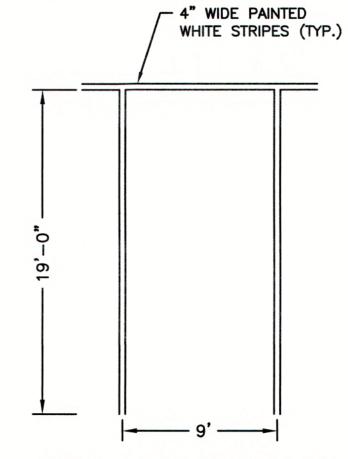


 ${\tt LEGEND-GREEN\,(RETROREFL)},\ \ {\tt WHITE\,SYMBOL\,ON\,BLUE\,(RETROREFL)}\\ {\tt BACKGROUND-WHITE\,(RETROREFL)}$ 



HANDICAP & VAN ACCESSIBLE SIGNS DETAIL

NOT TO SCALE



TYPICAL PARKING SPACE
NOT TO SCALE



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ROPOSED MULTIFAMIL'DEVELOPMENT
SUMMER STREET

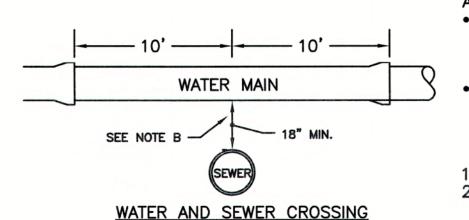
RE\	REVISIONS:			
NO	BY	DATE	DESCRIPTION	



SITE PLAN

DETAIL SHEET 2 OF 6

DATE:	JANUARY 10, 2020
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/KF
CHECKED BY:	KE
C 39	9
	SHEET 39 OF 43



→ 36" MIN. → 18" MIN.

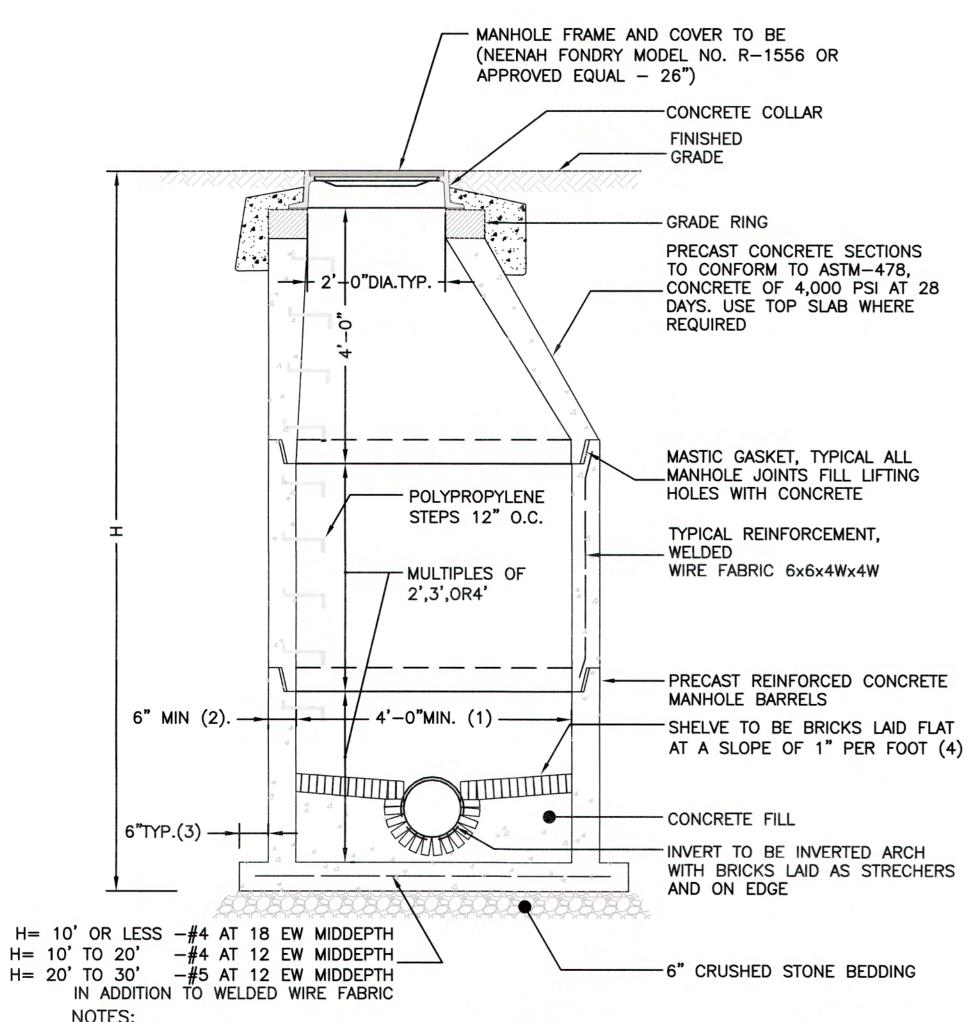
WATER AND SEWER LAID PARALLEL

NOTES: THE SEPARATION OF WATER MAINS AND SEWERS SHALL COMPLY WITH THE FOLLOWING GENERAL REQUIREMENTS. A. PARALLEL INSTALLATION:

- NORMAL CONDITIONS: THE INSIDE EDGE OF A WATER MAIN SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM THE INSIDE EDGE OF ANY SANITARY SEWER. STORM SEWER OR SEWER MANHOLE.
- WHEN LOCAL CONDITIONS PREVENT A HORIZONTAL SEPARATION OF 10 FEET, ONE OF TWO METHODS MAY BE EMPLOYED. IN BOTH CASES THE INVERT OF THE WATER LINE MUST BE AT LEAST 18" ABOVE THE CROWN OF THE SEWER LINE.
- 1. LAY WATER AND SEWER IN SEPARATE TRENCHES 2. LAY THE WATER AND SEWER IN THE SAME TRENCH WITH THE WATER MAIN AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH WITH A MINIMUM HORIZONTAL SEPARATION FROM INSIDE PIPE TO INSIDE PIPE OF 36" B. CROSSINGS:
- . WHEN SEWERS MUST CROSS UNDER WATER MAINS, THE SEWER LAID SUCH THAT THE INVERT OF THE WATER LINE IS AT LEAST 18 INCHES ABOVE THE CROWN OF THE SEWER LINE.
- WHEN THE SEWER ELEVATION CANNOT BE VARIED TO MEET THE REQUIREMENT, THE WATER LINE MUST BE RELOCATED OR RECONSTRUCTED WITH MECHANICAL JOINT CEMENT LINED DUCTILE IRON PIPE FOR A DISTANCE OF 10 ft ON EACH SIDE OF THE SEWER.
- WHEN IT IS IMPOSSIBLE TO OBTAIN EITHER OR BOTH OF THE ABOVE REQUIREMENTS, BOTH THE WATER AND SEWER LINES SHALL BE CONSTRUCTED OF MECHANICAL JOINT CEMENT LINED DUCTILE IRON PIPE OR OTHER EQUIVALENT MATERIAL. BOTH PIPES SHALL BE PRESSURE TESTED BY AN APPROVED METHOD TO ASSURE WATER TIGHTNESS OR BOTH PIPES SHALL BE ENCASED IN CONCRETE.

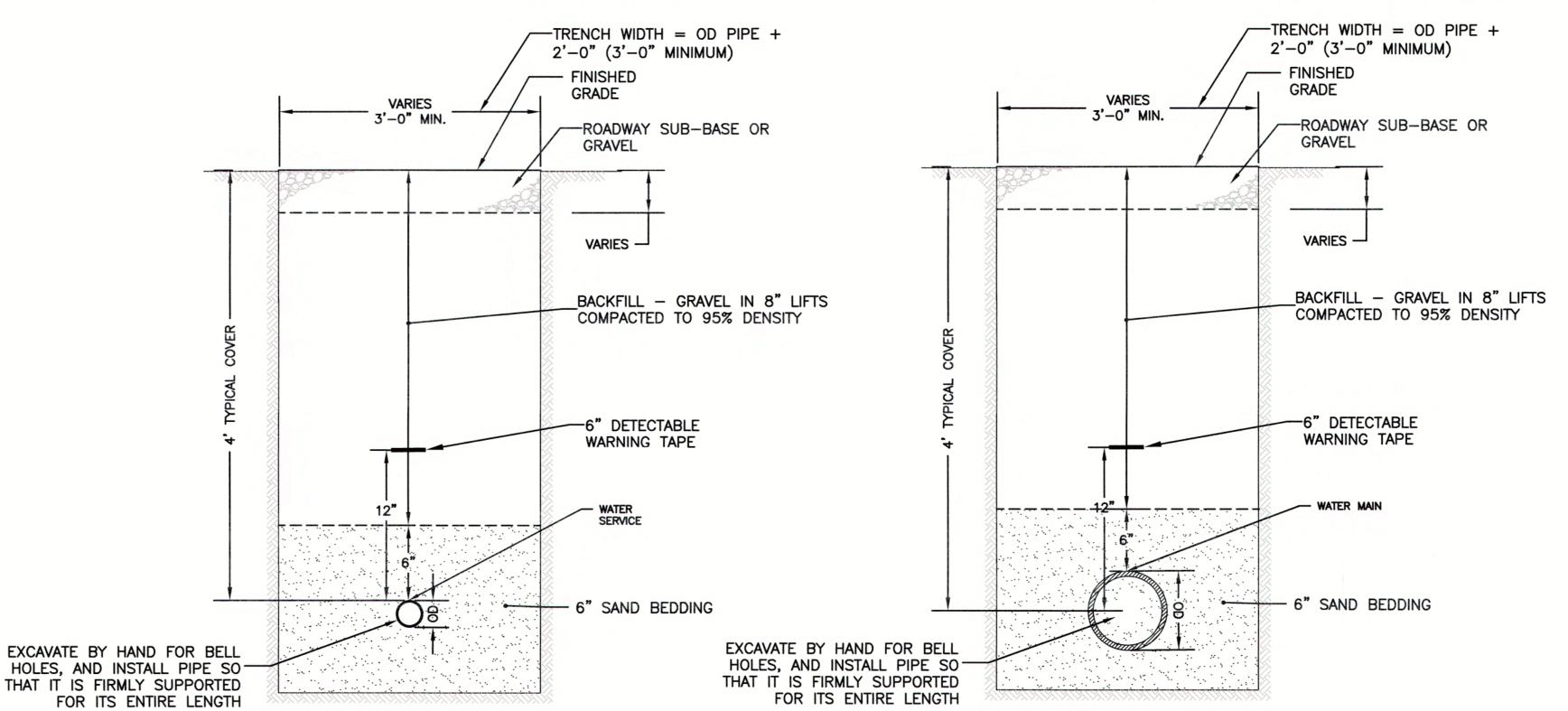
### SEWER/WATER SEPARATION & CROSSING DETAIL

NOT TO SCALE



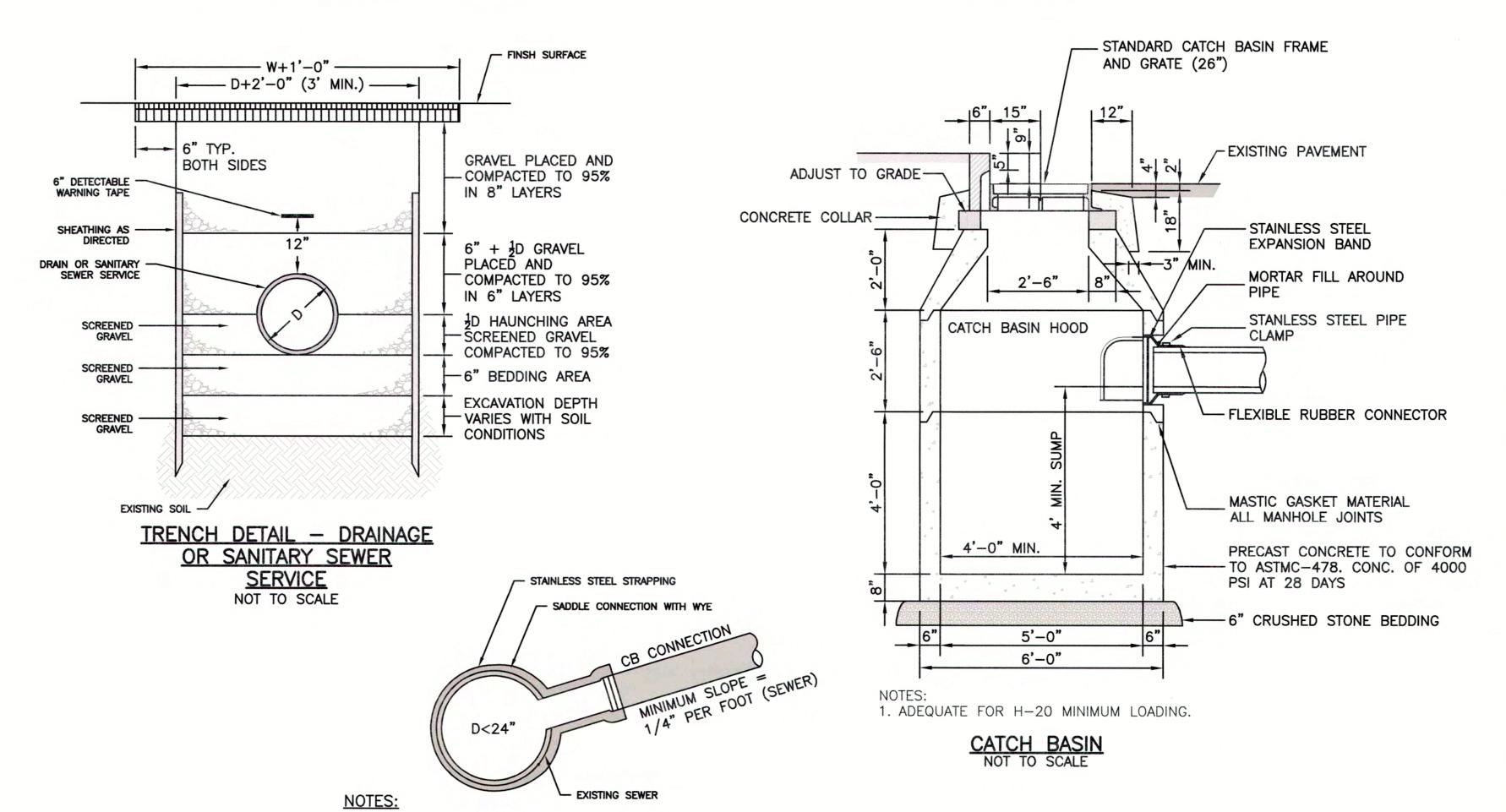
- 1. 5'-0" DIAMETER FOR ALL MANHOLE DEPTHS GREATER THAN 20 FEET OR WHEN ORDERED BY THE
- 2. 6 INCH MIN. WALL THICKNESS AND 7 INCH MIN. BASE THICKNESS WITH 5'-0" DIAMETER MANHOLES.
- 3. 6 INCH LIP OPTIONAL UNLESS OTHERWISE NOTED. CONCRETE INVERT AND SHELF MAY BE SUBSTITUTED IN STORM DRAIN MANHOLES AS DIRECTED BY THE ENGINEER.

PRECAST CONCRETE MANHOLE NOT TO SCALE



TRENCH DETAIL - WATER SERVICE NOT TO SCALE

TRENCH DETAIL - WATER MAIN NOT TO SCALE



- 1. FULL PVC OR IRON SADDLE MAY BE USED TO CONNECT TO EXISTING PVC, CLAY, CONCRETE, OR IRON PIPE.
- 2. SADDLES MUST HAVE RUBBER GASKETS AND SHALL BE TIGHTENED WITH STRAPS. SADDLES WILL NOT BE CEMENTED ONTO THE PIPE.
- FULL WYE CONNECTION FITTINGS MAY BE USED.
- 4. PIPE SHALL BE CUT TO CONFORM TO THE OPENING IN THE SADDLE.
- 5. CONNECTIONS DIRECTLY INTO THE EXISTING PIPE WITHOUT A SADDLE OR A FULL WYE FITTING ARE NOT ALLOWED.

TYPICAL SADDLE CONNECTION TO **SEWER** NOT TO SCALE



HOWARD STEIN HUDSON

114 Turnpike Road, Suite 2C Chelmsford, MA 01824 www.hshassoc.com

PREPARED FOR:

55 BH LLC **6 LYBERTY WAY, SUITE 203** WESTFORD, MA 01886

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**PROPO** 

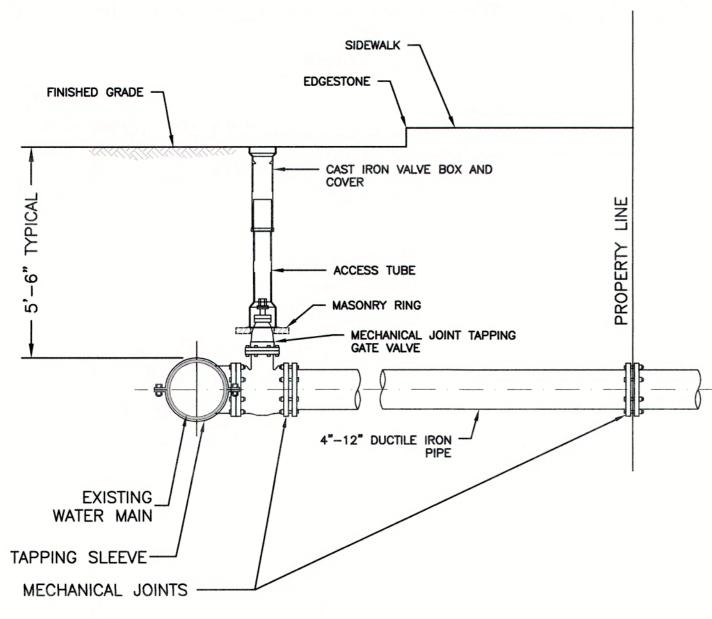
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SITE **PLAN** 

**DETAIL SHEET** 3 OF 6

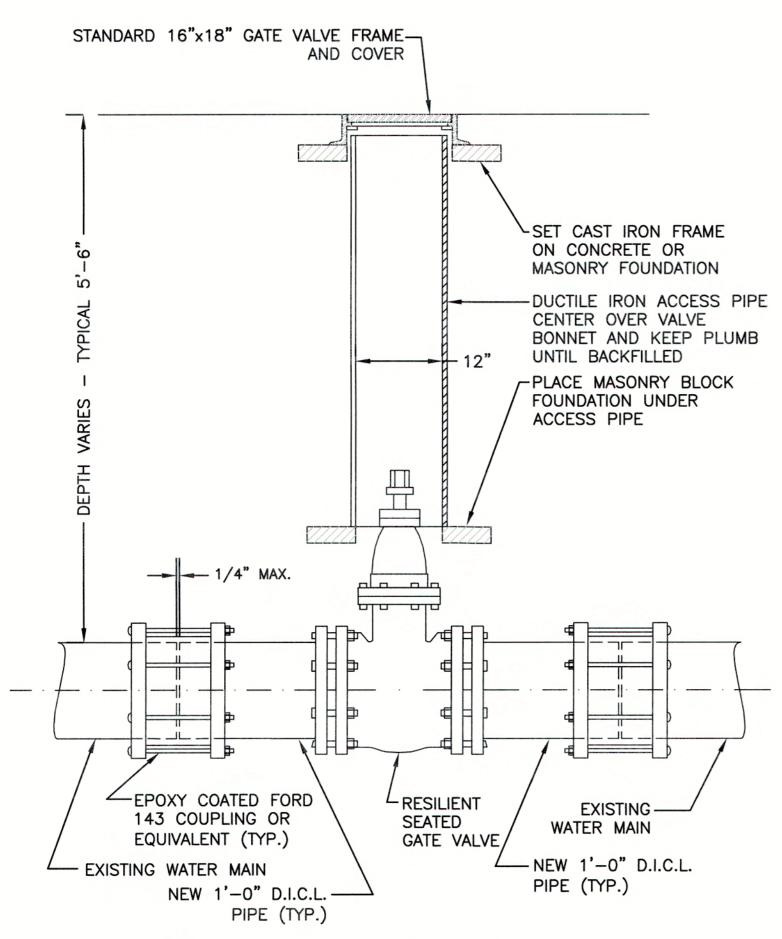
JANUARY 10, 2020 PROJECT NUMBER: 19097 DESIGNED BY PB/KE/KF DRAWN BY: CHECKED BY: C 40 SHEET 40 OF 43



#### NOTES:

- 1. CONCRETE THRUST BLOCK TO BE USED ONLY WHERE IT WILL BEAR ON UNDISTURBED EARTH.
- USE RESTRAINED JOINT FITTINGS OR TIE RODS WHERE CONCRETE THRUST BLOCK IS UNACCEPTABLE.
- SIZE OF BLOCK OR MEGALUG TO BE DESIGNED FOR SPECIFIC CONDITIONS.

### TAPPING SLEEVE & VALVE NOT TO SCALE

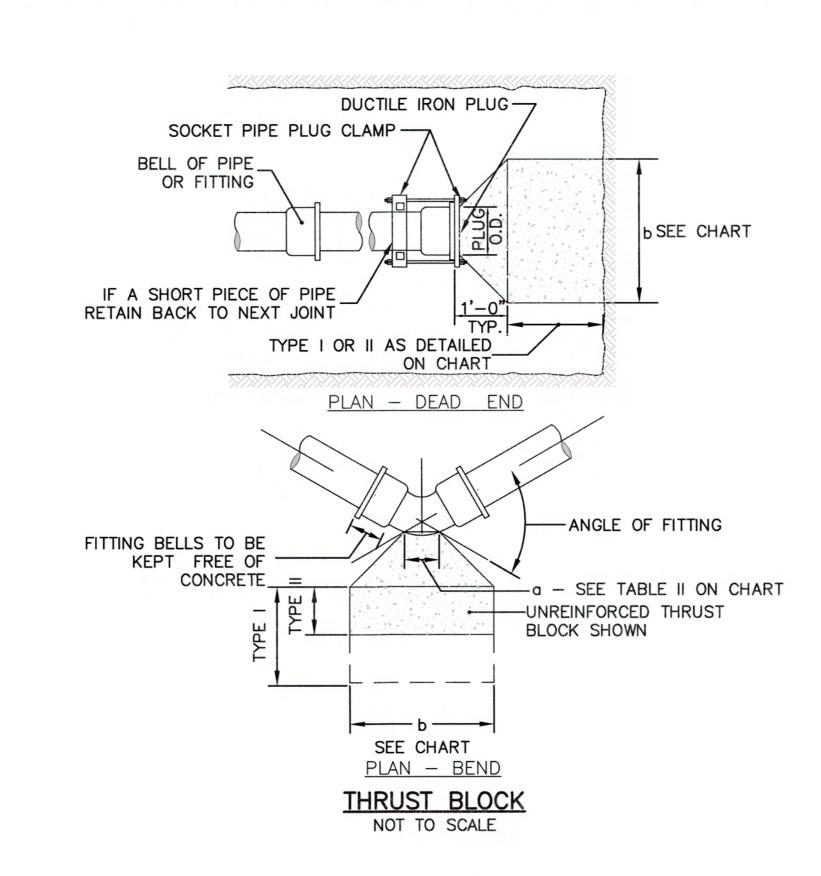


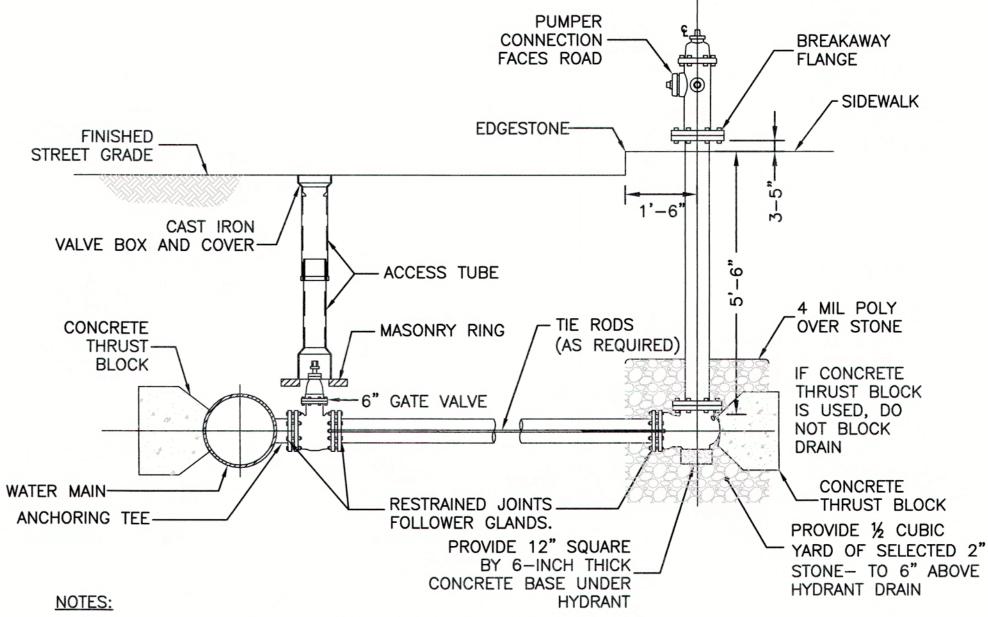
NOTE:

1. ALL EXCAVATION AND BACKFILLING AND PAVING SHALL BE IN ACCORDANCE WITH THE CITY OF BOSTON REQUIREMENTS.

TYPICAL GATE VALVE INSTALLATION

NOT TO SCALE



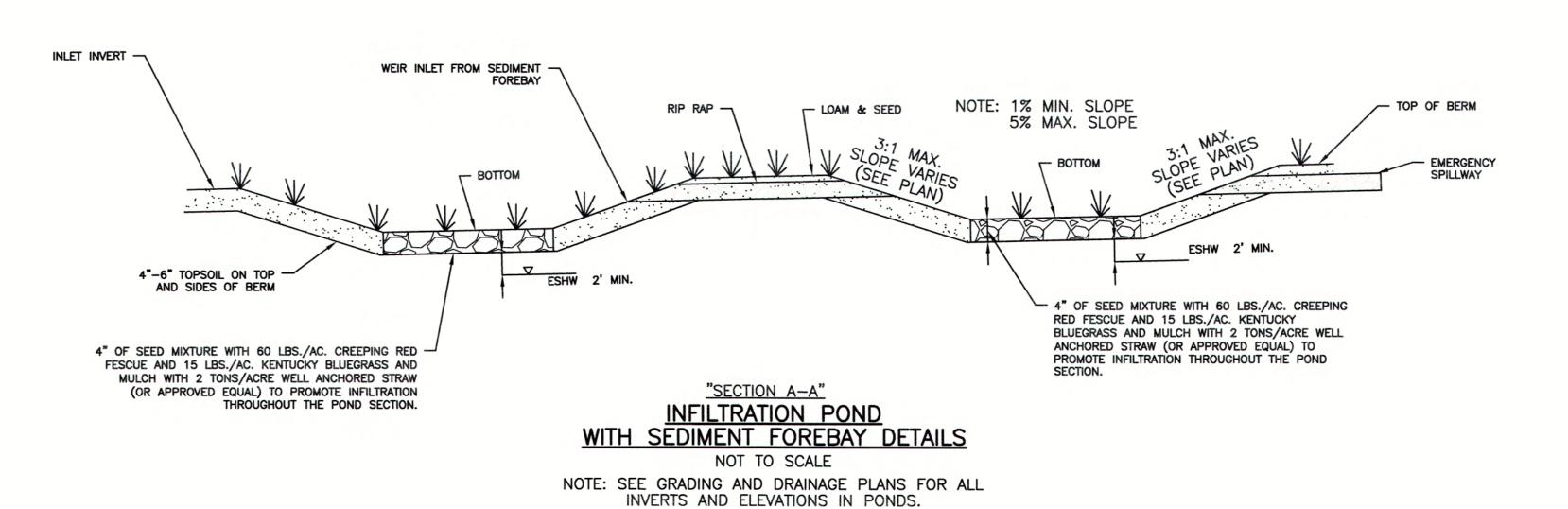


- CONCRETE THRUST BLOCK TO BE USED ONLY WHERE
- IT WILL BEAR ON UNDISTURBED EARTH.

   USE RESTRAINED JOINT FOLLOWER GLANDS, OR TIE RODS.
- WHERE CONCRETE THRUST BLOCK IS UNACCEPTABLE.
- SIZE OF BLOCK OR FITTING TO BE DESIGNED FOR SPECIFIC CONDITIONS, OR ANY NECESSARY BENDS.

TYPICAL FIRE HYDRANT CONNECTION FOR HIGH OR LOW SERVICE LINE

NOT TO SCALE



### DESIGN CONSIDERATIONS:

- 1. DO NOT PLACE BIORETENTION SYSTEMS INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY
- 2. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUN-OFF, WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
- 3. DO NOT TRAFFIC EXPOSE SOIL SURFACE WITH CONSTRUCTION EQUIPMENT, IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

### MAINTENANCE REQUIREMENTS:

- 1. SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENT EXCEEDING 2.5 INCHES IN A 24 HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
- 2. PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
- 3. TRASH SHOULD BE REMOVED AT EACH INSPECTION.
- 4. AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAW—DOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72 HOURS FOLLOWING A RAINFALL EVEN, THEN A QUALIFIED PROFESSIONAL SHOULD ASSES THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENT OR RECONSTRUCTION OF THE FILTER MEDIA.
- 5. VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, REMOVAL AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.
- 6. COMPACTION AND MATERIAL TESTING SERVICES SHALL BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL ENGINEER RETAINED BY THE OWNER.



### HOWARD STEIN HUDSON

114 Turnpike Road, Suite 2C Chelmsford, MA 01824 www.hshassoc.com

PREPARED FOR:

55 BH LLC 6 LYBERTY WAY, SUITE 203 WESTFORD, MA 01886

PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET

REVISIONS:

NO BY DATE DESCRIPTION

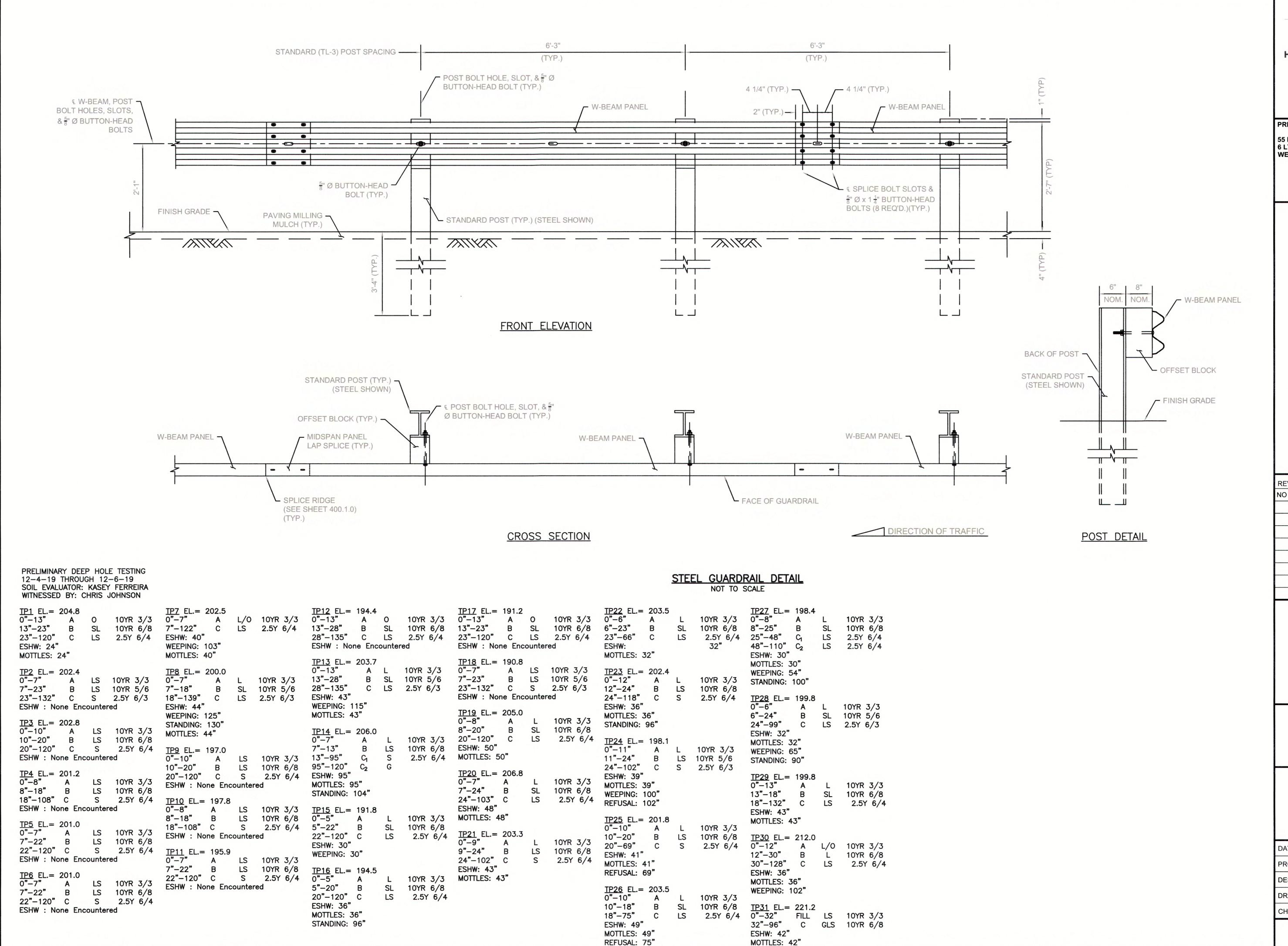


SITE PLAN

DETAIL SHEET 4 OF 6

DATE: JANUARY 10, 2020
PROJECT NUMBER: 19097
DESIGNED BY: PB/KE/KF
DRAWN BY: PB/KF
CHECKED BY: KE

C 41
SHEET 41 OF 43





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PROPOSED MULTIFAMIL'
DEVELOPMENT
SUMMER STREET

REVISIONS:

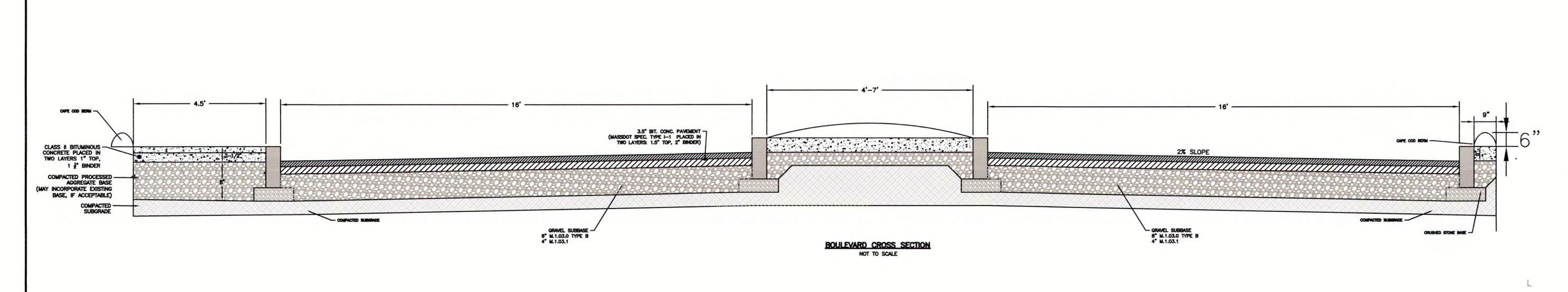
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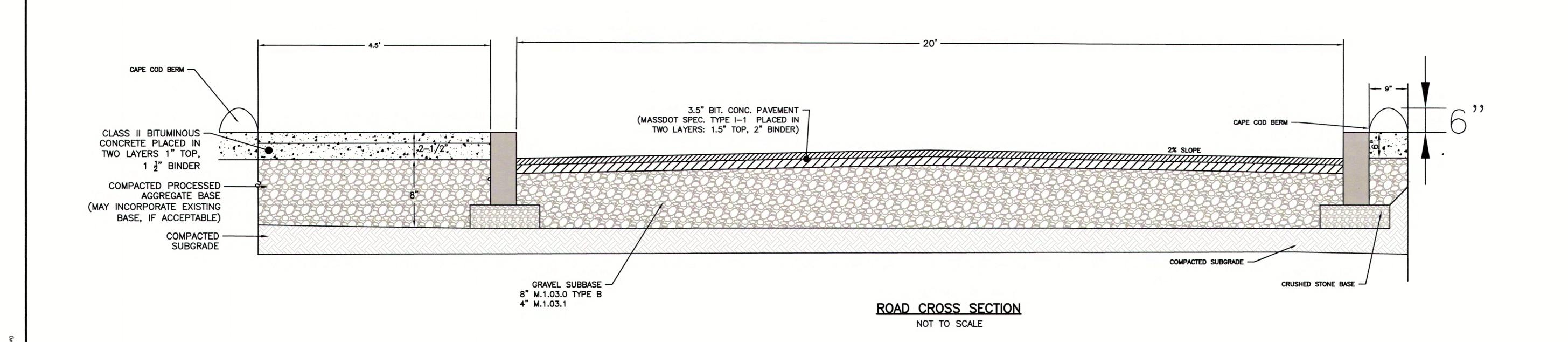


SITE PLAN

DETAIL SHEET 5 OF 6

ATE:	JANUARY 10, 2020
ROJECT NUMBER:	19097
ESIGNED BY:	PB/KE/KF
RAWN BY:	PB/KF
HECKED BY:	KE
C 42	
	SHEET 42 OF 43







PREPARED FOR:

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PROPOSED MULTIFAMIL
DEVELOPMENT
SUMMER STREET

REVISIONS:

NO BY DATE DESCRIPTION



SITE PLAN

DETAIL SHEET 6 OF 6

DATE:	JANUARY 10, 2020
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/KF
CHECKED BY:	KE
C 43	
	SHEET 43 OF 43

#### 1/10/2020 55 SS LLC Cedar Crossing and Cedar Edge Civil Plan List

Number	Description	Date
C.1	Cover Sheet	1/10/2020
C.2	Site Plan Notes	1/10/2020
C.3	Locus	1/10/2020
C.4-8	Existing Conditions	1/10/2020
C.9	<b>Erosion Control and Demolition Sheet</b>	1/10/2020
C.10	Proposed Subdivision / Overall Plan	1/10/2020
C.11	Open Space and Recreation Plan	1/10/2020
C.12-16	Layout and Materials 1-5	1/10/2020
C.17-21	Grading and Drainage 1-5	1/10/2020
C.22-26	Utility 1-5	1/10/2020
C.27-31	Landscape 1-5	1/10/2020
C.32-36	Lighting Plan 1-5	1/10/2020
C.37	Fire Truck Turn Plan	1/10/2020
C.38-43	Detail Sheet 1-6	1/10/2020