CONSTRUCTION DOCUMENT PLANS

FOR

IMPROVEMENTS TO MILLBURY DOWNTOWN PHASE 2

ELM STREET
FROM RIVER STREET TO
MUNICIPAL LOT

Project No. 2022-02



PREPARED FOR:

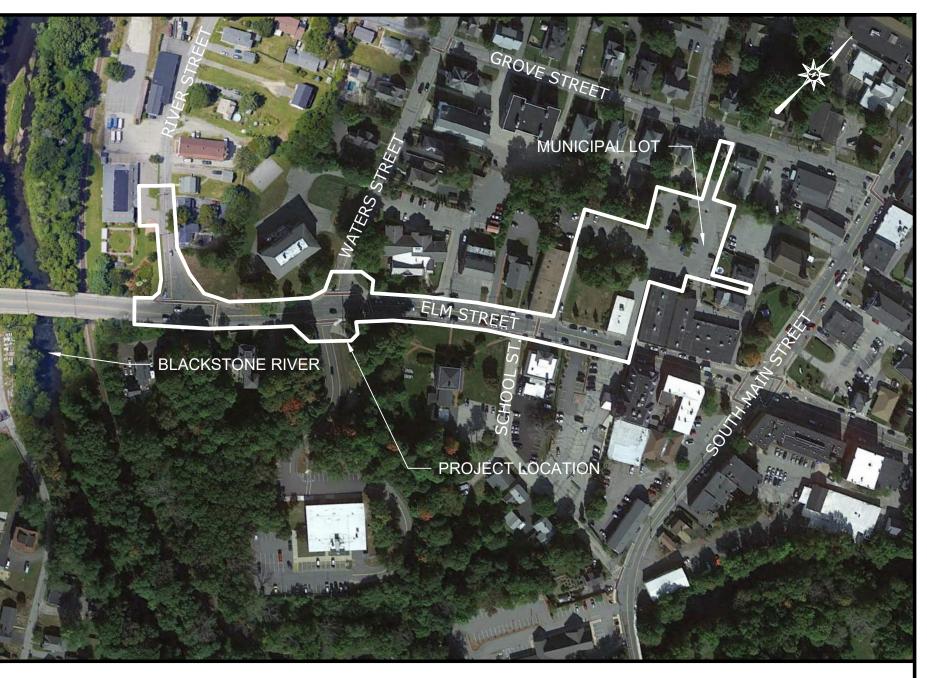
TOWN OF MILLBURY MASSACHUSETTS
Elm Street
Millbury, Massachusetts 01572

PREPARED BY:



ARCHITECTURE ENGINEERING ENVIRONMENTAL LAND SURVEYNG

220 Norwood Park South NORWOOD, MASSACHUSETTS, 02062 (781) 619-9500



VICINITY MAP

SCALE: 1"=200"

ENGINEER	
PER	
DATE	
TOWN MANAGER	
PER	
DATE	
DATES	

February xx, 2022

REVISION:

TS-01

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF BL COMPANIES

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SITE WORK GENERAL NOTES

- 1. THESE PLANS ARE FOR CONSTRUCTION
- 2. ALL CONSTRUCTION SHALL COMPLY WITH THE PROJECT SPECIFICATION MANUAL; MUNICIPAL STANDARDS AND SPECIFICATIONS, COUNTY STANDARDS AND SPECIFICATIONS, MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, 2010 ADA STANDARDS, AND STATE BUILDING CODE IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT. THE MORE STRINGENT SPECIFICATION SHALL APPLY. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
- REFER TO OTHER PLANS BY OTHER DISCIPLINES, DETAILS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE AND BUILDING CONDITIONS IN THE FIELD AND CONTACT THE CIVIL ENGINEER OR ARCHITECT IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS, SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE OWNER'S CONSTRUCTION MANAGER PRIOR TO BIDDING.
- 4. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
- 5. THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
- 6. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORD DRAWINGS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES AND STORMWATER SYSTEM) TO THE OWNER AT THE END OF CONSTRUCTION.
- 7. THE ARCHITECT OR ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ARCHITECT AND ENGINEER HAVE NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY
- 8. THE CONTRACTOR SHALL COMPLY WITH CFR 29 PART 1926 FOR EXCAVATION, TRENCHING, AND TRENCH PROTECTION REQUIREMENTS.
- 9. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL OR COUNTY OR STATE RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND AND OVERHEAD UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT DIGSAFE 72 HOURS BEFORE COMMENCEMENT OF WORK AT (888) 344-7233 OR AT 811 AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS. THE CONTRACTOR SHALL EMPLOY THE USE OF A LITHITY LOCATING COMPANY TO PROVIDE SUBSURFACE UTILITY ENGINEERING CONSISTING OF DESIGNATING UTILITIES AND STORM PIPING ON PRIVATE PROPERTY WITHIN THE CONTRACT LIMIT AND CONSISTING OF DESIGNATING AND LOCATING WHERE PROPOSED UTILITIES AND STORM PIPING CROSS EXISTING UTILITIES AND STORM PIPING WITHIN THE CONTRACT LIMITS.
- 10. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN OVER SCALED DIMENSIONS.
- 11. SHOULD CONFLICTING INFORMATION BE FOUND WITHIN THE CONTRACT DOCUMENTS, IT IS INCUMBENT UPON THE CONTRACTOR TO REQUEST CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK. FOR BUDGETING PURPOSES, THE CONTRACTOR SHALL CARRY THE COST OF THE HIGHER QUALITY/QUANTITY OF WORK UNTIL SUCH TIME THAT A CLARIFICATION IS RENDERED
- 12. ALL CONTRACTORS AND SUBCONTRACTORS SHALL OBTAIN COMPLETE DRAWING PLAN SETS FOR BIDDING AND CONSTRUCTION. PLAN SETS OR PLAN SET ELECTRONIC POSTINGS SHALL NOT BE DISASSEMBLED INTO PARTIAL PLAN SETS FOR USE BY CONTRACTORS AND SUBCONTRACTORS OF INDIVIDUAL TRADES. IT SHALL BE THE CONTRACTOR'S AND SUBCONTRACTOR'S RESPONSIBILITY TO OBTAIN COMPLETE PLAN SETS OR COMPLETE PLAN SET ELECTRONIC POSTINGS FOR USE IN BIDDING AND CONSTRUCTION.
- 13. ALL NOTES AND DIMENSION DESIGNATED AS "TYPICAL" OR "TYP" APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PROJECT.
- 14. CONTRACTOR(S) TO TAKE AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE WORK AND BE RESPONSIBLE FOR COORDINATION OF SAME. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK.
- 15. BL COMPANIES WILL PREPARE FINAL CONSTRUCTION DOCUMENTS SUITABLE FOR BIDDING AND CONSTRUCTION. PROGRESS SETS OF THESE DOCUMENTS ARE NOT SUITABLE FOR THOSE PURPOSES. IF CLIENT ELECTS TO SOLICIT BIDS OR ENTER INTO CONSTRUCTION CONTRACTS UTILIZING CONSTRUCTION DOCUMENTS THAT ARE NOT YET FINAL, CONSULTANT SHALL NOT BE RESPONSIBLE FOR ANY COSTS OR DELAY ARISING AS A RESULT.
- 16. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.
- 17. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT AND OBTAIN FROM MUNICIPAL AND/OR COUNTY SOURCES ALL CONSTRUCTION PERMITS, INCLUDING ANY STATE DOT PERMITS, SEWER AND WATER CONNECTION PERMITS, AND ROADWAY CONSTRUCTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
- 18. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS AND MATERIALS PER PLANS AND SPECIFICATIONS TO THE OWNER AND CIVIL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
- 19. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE SEDIMENT AND EROSION CONTROL PLAN.
- 20. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE CIVIL ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
- 21. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING AS APPLICABLE UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.
- 22. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES, TEMPORARY WALKWAYS, TRAFFIC CONTROLLERS AND UNIFORMED TRAFFIC OFFICERS AS REQUIRED OR AS ORDERED BY THE ENGINEER OR AS REQUIRED BY THE LOCAL GOVERNING AUTHORITIES OR AS REQUIRED BY PERMIT STIPULATIONS OR AS REQUIRED BY THE OWNER. CONTRACTOR SHALL MAINTAIN ALL TRAFFIC LANES AND PEDESTRIAN WALKWAYS FOR USE AT ALL TIMES UNLESS WRITTEN APPROVAL FROM
- 23. TRAFFIC CONTROL SIGNAGE SHALL CONFORM TO THE STATE DOT STANDARD DETAIL SHEETS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. SIGNS SHALL BE INSTALLED PLUMB WITH THE EDGE OF THE SIGN 2' OFF THE FACE OF THE CURB, AND WITH 7' VERTICAL CLEARANCE UNLESS OTHERWISE DETAILED OR NOTED.
- 24. REFER TO DETAIL SHEETS FOR PAVEMENT, CURBING, AND SIDEWALK INFORMATION.
- 25. THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.
- 26. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PAVEMENT MARKING PAINT MIXTURE PRIOR TO STRIPING.
- 27. PAVEMENT MARKING KEY:
- 4" SYDL 4" SOLID YELLOW DOUBLE LINE
- 4" SYL 4" SOLID YELLOW LINE 4" SWL 4" SOLID WHITE LINE
- 12" SWSB 12" SOLID WHITE STOP BAR 4" BWL 4" BROKEN WHITE LINE 10' STRIPE 30' SPACE

THE APPROPRIATE GOVERNING AGENCY IS GRANTED.

- 28. PARKING SPACES SHALL BE STRIPED WITH 4" SWL: HATCHED AREA SHALL BE STRIPED WITH 4" SWL AT A 45° ANGLE. 2' ON CENTER. HATCHING. SYMBOLS, AND STRIPING FOR HANDICAPPED SPACES SHALL BE PAINTED white, and/or blue. OTHER MARKINGS SHALL BE PAINTED WHITE OR AS
- 29. ALL PARKING SPACES AND HATCHED AREAS SHALL HAVE TWO COATS OF PAVEMENT MARKINGS APPLIED TO STRIPING.
- 30. PAVEMENT MARKINGS SHALL BE HOT APPLIED TYPE IN ACCORDANCE WITH STATE DOT SPECIFICATIONS, UNLESS WHERE EPOXY RESIN PAVEMENT
- 31. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, DRAINAGE STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS, SWALE, PAVEMENT MARKINGS, OR SIGNAGE DISTURBED DURING DEMOLITION AND/OR CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE CIVIL ENGINEER, AND TO THE SATISFACTION OF THE OWNER AND THE TOWN.
- 32. EXISTING BOUNDARY AND TOPOGRAPHY IS BASED ON DRAWING TITLED "EXISTING CONDITIONS MAP", SCALE 1"=20', DATED 01/08/2021, BY BL COMPANIES INC.
- 33. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, CIVIL ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING PROCESS.
- 34. AN EROSION CONTROL BOND IS REQUIRED TO BE POSTED BY THE CONTRACTOR BEFORE THE START OF ANY ACTIVITY ON OR OFF SITE. THE AMOUNT OF THE EROSION CONTROL BOND WILL BE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.
- 35. THE SITE IS LOCATED WITHIN ANY FEMA DESIGNATED FLOOD HAZARD AREAS.
- 36. THERE ARE NO WETLANDS LOCATED ON THE SITE AS INDICATED BY MASSGIS OLIVER MAPPING.
- 37. FIRE LANES SHALL BE ESTABLISHED AND PROPERLY DESIGNATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE DISTRICT FIRE MARSHAL.
- 38. THE CONTRACTOR SHALL REMOVE CONFLICTING PAVEMENT MARKINGS IN THE ROADWAY BY METHOD APPROVED BY THE AUTHORITY HAVING JURISDICTION OR DOT AS APPLICABLE FOR THE LOCATION OF THE WORK.
- 39. ALL ADA DESIGNATED PARKING STALLS, ACCESS AISLES AND PEDESTRIAN WALKWAYS SHALL CONFORM TO THE CURRENT VERSION OF THE AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN AND ANSI STANDARDS AND AS MAY BE SUPERCEDED BY THE STATE BUILDING CODE.
- 40. CONSTRUCTION OCCURRING ON THIS SITE SHALL COMPLY WITH NFPA 241 STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION
- OPERATIONS, AND CHAPTER 16 OF NFPA 1 UNIFORM FIRE CODE.
- 41. ALL BUILDINGS, INCLUDING FOUNDATION WALLS AND FOOTINGS AND BASEMENT SLABS INDICATED ON THE DEMOLITION PLAN ARE TO BE REMOVED FROM THE SITE. CONTRACTOR SHALL SECURE ANY PERMITS, PAY ALL FEES AND PERFORM CLEARING AND GRUBBING AND DEBRIS REMOVAL PRIOR TO COMMENCEMENT OF GRADING OPERATIONS
- 42. SEDIMENT AND EROSION CONTROLS AS SHOWN ON THE SEDIMENT AND EROSION CONTROL PLAN AND/OR DEMOLITION PLAN SHALL BE INSTALLED BY THE DEMOLITION CONTRACTOR PRIOR TO START OF DEMOLITION AND CLEARING AND GRUBBING OPERATIONS.
- 43. REMOVE AND DISPOSE OF ANY SIDEWALKS, FENCES, STAIRS, WALLS, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN
- 44. THE CONTRACTOR SHALL SECURE ALL PERMITS FOR HIS DEMOLITION AND DISPOSAL OF HIS DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED. BUILDING DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS AND DISPOSAL OF ALL BUILDING DEMOLITION DEBRIS IN AN APPROVED OFF-SITE LANDFILL
- 45. ASBESTOS OR HAZARDOUS MATERIAL, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL ABATEMENT CONTRACTOR.
- 46. THE CONTRACTOR SHALL PREPARE ALL MANIFEST DOCUMENTS AS REQUIRED PRIOR TO COMMENCEMENT OF DEMOLITION.

APPROVED OFF SITE LANDFILL. BY AN APPROVED HAULER, HAULER SHALL COMPLY WITH ALL REGULATORY REQUIREMENTS.

- 47. THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY PROVIDER TO CUT AND PLUG ALL SERVICE PIPING AT THE STREET LINE OR AT THE MAIN, AS REQUIRED BY THE UTILITY PROVIDER, OR AS OTHERWISE NOTED OR SHOWN ON THE CONTRACT DRAWINGS. ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN. THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF SERVICE PIPING TO BE REMOVED, CUT OR PLUGGED. THE CONTRACTOR SHALL PAY ALL UTILITY PROVIDER FEES FOR ABANDONMENTS AND REMOVALS.
- 48. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING DEMOLITION AND CONSTRUCTION ACTIVITIES. ANY

- CONTRACTOR DISTURBED PINS, MONUMENTS, AND OR PROPERTY CORNERS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE
- 49. THE DEMOLITION CONTRACTOR SHALL STABILIZE THE SITE AND KEEP EROSION CONTROL MEASURES IN PLACE UNTIL THE COMPLETION OF HIS WORK OR UNTIL THE COMMENCEMENT OF WORK BY THE SITE CONTRACTOR, WHICHEVER OCCURS FIRST, AS REQUIRED OR DEEMED NECESSARY BY THE ENGINEER OR OWNER'S REPRESENTATIVE. THE SITE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE MAINTENANCE OF EXISTING EROSION AND SEDIMENTATION CONTROLS AND FOR INSTALLATION OF ANY NEW SEDIMENT AND EROSION CONTROLS AS PER THE SEDIMENT AND EROSION CONTROL
- 50. THE CONTRACTOR SHALL PUMP OUT BUILDING FUEL AND WASTE OIL TANKS (IF ANY ARE ENCOUNTERED) AND REMOVE FUEL TO AN APPROVED DISPOSAL AREA BY A LICENSED WASTE OIL HANDLING CONTRACTOR IN STRICT ACCORDANCE WITH STATE REQUIREMENTS.
- 51. IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT.
- 52. THE CONTRACTOR SHALL PROVIDE DISCONNECT NOTIFICATION TO THE MUNICIPALITY ENGINEERING DEPARTMENT, TELECOMMUNICATIONS UTILITY PROVIDER, GAS UTILITY PROVIDER, ELECTRIC UTILITY PROVIDER, SANITARY UTILITY PROVIDER, AND WATER UTILITY PROVIDER AT LEAST THREE WEEKS
- 53. BACK FILL DEPRESSIONS, FOUNDATION HOLES AND REMOVED DRIVEWAY AREAS IN LOCATIONS NOT SUBJECT TO FURTHER EXCAVATION WITH SOIL MATERIAL APPROVED BY THE OWNER'S GEOTECHNICAL ENGINEER AND COMPACT, FERTILIZE, SEED AND MULCH DISTURBED AREAS NOT SUBJECT TO FURTHER SITE CONSTRUCTION, DEMOLISHED BUILDING FOUNDATION AREA AND BASEMENT IF PRESENT TO BE BACKFILLED WITH GRAVEL FILL OR MATERIAL SPECIFIED IN THE PROJECT GEOTECHNICAL REPORT IN LIFT THICKNESS SPECIFIED IN THE GEOTECHNICAL REPORT. COMPACT TO 95% MAX. DRY DENSITY PER ASTM D1557 AT MOISTURE CONTENT SPECIFIED IN GEOTECHNICAL REPORT AND EARTHWORK SPECIFICATION. EMPLOY WATERING
- 54. THE CONTRACTOR SHALL REPAIR PAVEMENTS BY INSTALLING TEMPORARY AND PERMANENT PAVEMENTS IN PUBLIC RIGHTS OF WAYS AS REQUIRED BY LOCAL GOVERNING AUTHORITIES AND THE MUNICIPALITY AND PER PERMIT REQUIREMENTS DUE TO DEMOLITION AND PIPE REMOVAL ACTIVITIES.
- 55. THE CONTRACTOR SHALL CUT AND REMOVE AT LUMINARE AND SIGN LOCATIONS ANY PROTRUDING CONDUITS TO 24" BELOW GRADE. THE CONTRACTOR SHALL REMOVE ALL CABLE AND CONDUCTORS FROM REMAINING LIGHTING AND SIGNING CONDUITS TO BE ABANDONED. ANY REMAINING LIGHTING TO REMAIN IN PLACE SHALL BE RECIRCUITED OR REWIRED AS NECESSARY TO REMAIN IN OPERATION.
- 56. NO WORK ON THIS SITE SHALL BE INITIATED BY THE CONTRACTOR UNTIL A PRE-CONSTRUCTION MEETING WITH OWNER AND THE CIVIL ENGINEER IS PERFORMED. THE CONTRACTOR SHOULD BE AWARE OF ANY SITE INFORMATION AVAILABLE SUCH AS GEOTECHNICAL AND ENVIRONMENTAL REPORTS. THE CONTRACTOR SHALL HAVE MARK OUTS OF EXISTING UTILITIES COMPLETED PRIOR TO MEETING.
- 57. THE CONTRACTOR SHALL ARRANGE FOR AND INSTALL TEMPORARY OR PERMANENT UTILITY CONNECTIONS WHERE INDICATED ON PLAN OR AS REQUIRED. MAINTAIN UTILITY SERVICES TO BUILDINGS OR TO SERVICES TO REMAIN. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDERS FOR INSTALLATION AND PAY UTILITY PROVIDER FEES.
- 58. THE CONTRACTOR SHALL NOT COMMENCE DEMOLITION OR UTILITY DISCONNECTIONS UNTIL AUTHORIZED TO DO SO BY THE OWNER.
- 59. THE CONTRACTOR OR DEMOLITION CONTRACTOR SHALL INSTALL TEMPORARY SHEETING OR SHORING AS NECESSARY TO PROTECT EXISTING AND NEW BUILDINGS. STRUCTURES AND UTILITIES DURING CONSTRUCTION AND DEMOLITION. SHEETING OR SHORING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER, LICENSED IN THIS STATE AND EVIDENCE OF SUCH SUBMITTED TO THE OWNER PRIOR TO INSTALLATION.
- 60. NO SALVAGE SHALL BE PERMITTED UNLESS PAID TO THE OWNER AS A CREDIT.
- 61. ANY EXISTING POTABLE WELL AND ANY EXISTING SEPTIC TANKS/ABSORPTION AREAS SHALL BE ABANDONED AND REMOVED PER THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, MUNICIPALITY, AND PUBLIC HEALTH CODE REQUIREMENTS.
- 62. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS, REFER TO SEDIMENT AND EROSION CONTROL PLAN FOR LIMIT OF DISTURBANCE AND EROSION CONTROL NOTES.
- 63. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR USE IN FINAL LANDSCAPING.
- 64. SUBGRADE SHALL BE FORMED WITH REMOVAL AND REPLACEMENT OF FILL AND REMOVAL AND REPLACEMENT OF UNSUITABLE AND SOFT SUBGRADE
- MATERIAL AS REQUIRED BY THE GEOTECHNICAL ENGINEER. SEE GEOTECHNICAL REPORT AND EARTHWORK SPECIFICATIONS FOR FURTHER DESCRIPTION. 65. THE CONTRACTOR SHALL COMPACT FILL IN LIFT THICKNESS PER THE GEOTECHNICAL REPORT UNDER ALL PARKING, BUILDING, DRIVE, AND STRUCTURE
- AREAS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR TEST), OR AS REQUIRED BY THE GEOTECHNICAL
- 66. UNDERDRAINS SHALL BE ADDED, IF DETERMINED NECESSARY IN THE FIELD BY THE OWNER/GEOTECHNICAL ENGINEER, AFTER SUBGRADE IS ROUGH GRADED.
- 67. VERTICAL DATUM IS NAVD88.

OF THE CONTRACTOR.

- 68. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE TOWN AGENT PRIOR TO THE START OF WORK ON THE SITE.
- 69. PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR WETLANDS IN ACCORDANCE WITH THE REGULATIONS OF THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, LATEST EDITION, IN ADDITION, THE CONTRACTOR SHALL STRICTLY ADHERE TO THE SEDIMENT AND EROSION CONTROL PLAN CONTAINED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO POST ALL BONDS AS REQUIRED BY THE LOCAL MUNICIPALITIES, OR SOIL CONSERVATION DISTRICT WHICH WOULD GUARANTEE THE PROPER IMPLEMENTATION OF THE PLAN.
- 70. ALL SITE WORK, MATERIALS OF CONSTRUCTION, AND CONSTRUCTION METHODS FOR EARTHWORK AND STORM DRAINAGE WORK SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS MANUAL. OTHERWISE THIS WORK SHALL CONFORM TO THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND PROJECT GEOTECHNICAL REPORT IF THERE IS NO PROJECT SPECIFICATIONS MANUAL. ALL FILL MATERIAL UNDER STRUCTURES AND PAVED AREAS SHALL BE PER THE ABOVE STATED APPLICABLE SPECIFICATIONS, AND/OR PROJECT GEOTECHNICAL REPORT, AND SHALL BE PLACED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER, MATERIAL SHALL BE COMPACTED IN LIFT THICKNESSES PER THE PROJECT GEOTECHNICAL REPORT TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 AT MOISTURE CONTENT INDICATED IN PROJECT GEOTECHNICAL
- 71. ALL DISTURBANCE INCURRED TO MUNICIPAL, COUNTY, AND COMMONWEALTH PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE MUNICIPALITY, COUNTY AND COMMONWEALTH AS APPLICABLE FOR THE LOCATION OF THE
- 72. ALL CONSTRUCTION WITHIN A DOT RIGHT OF WAY SHALL COMPLY WITH ALL DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
- 73. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE PROPOSED SANITARY SEWERS AND WHERE PROPOSED STORM PIPING WILL CROSS EXISTING UTILITIES. AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE CIVIL ENGINEER IN THE EVENT OF ANY DISCOVERED OR UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED SANITARY SEWERS, STORM PIPING AND UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
- 74. UTILITY CONNECTION DESIGN AS REFLECTED ON THE PLAN MAY CHANGE SUBJECT TO UTILITY PROVIDER AND GOVERNING AUTHORITY STAFF REVIEW.
- 75. THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY PROVIDERS AND GOVERNING AUTHORITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY PROVIDER.
- 76. THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY PROVIDERS FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY PROVIDERS AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTIONS, RELOCATIONS, INSPECTIONS, AND DEMOLITION UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATIONS MANUAL AND/OR
- 77. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT. AFTER UTILITY INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL INSTALL TEMPORARY AND/OR PERMANENT PAVEMENT REPAIR AS DETAILED ON THE DRAWINGS OR AS REQUIRED BY THE OWNER HAVING JURISDICTION.
- 78. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
- 79. SANITARY LATERAL SHALL MAINTAIN (10' MIN. HORIZONTAL 1.5' VERTICAL MIN.) SEPARATION DISTANCE FROM WATER LINES, OR ADDITIONAL PROTECTION MEASURES WILL BE REQUIRED WHERE PERMITTED, WHICH SHALL INCLUDE CONCRETE ENCASEMENT OF PIPING UNLESS OTHERWISE DIRECTED BY THE UTILITY PROVIDERS AND CIVIL ENGINEER.
- 80. RELOCATION OF UTILITY PROVIDER FACILITIES SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY PROVIDER.
- 81. THE CONTRACTOR SHALL COMPACT THE PIPE BACKFILL IN 8" LIFTS ACCORDING TO THE PIPE BEDDING DETAILS. TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED PER THE TRENCH DETAILS AND IN AREAS OF ROCK EXCAVATION.
- 82. CONTRACTOR TO PROVIDE STEEL SLEEVES AND ANNULAR SPACE SAND FILL FOR UTILITY PIPE AND CONDUIT CONNECTIONS UNDER FOOTINGS.
- 83. BUILDING UTILITY PENETRATIONS AND LOCATIONS ARE SHOWN FOR THE CONTRACTOR'S INFORMATION AND SHALL BE VERIFIED WITH THE BUILDING MEP, STRUCTURAL, AND ARCHITECTURAL DRAWINGS AND WITH THE OWNER'S CONSTRUCTION MANAGER.
- 84. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING, IN ACCORDANCE WITH THE APPROPRIATE UTILITY
- 85. A ONE-FOOT MINIMUM VERTICAL CLEARANCE BETWEEN WATER, GAS, ELECTRICAL, AND TELEPHONE LINES AND STORM PIPING SHALL BE PROVIDED. A SIX-INCH MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN STORM PIPING AND SANITARY SEWER WITH A CONCRETE ENCASEMENT. AN 18-INCH TO 6-INCH VERTICAL CLEARANCE BETWEEN SANITARY SEWER PIPING AND STORM PIPING SHALL REQUIRE CONCRETE ENCASEMENT OF THE PROPOSED
- 86. GRAVITY SANITARY SEWER PIPING AND PRESSURIZED WATERLINES SHALL BE LOCATED IN SEPARATE TRENCHES AT LEAST 10 FEET APART WHENEVER POSSIBLE. WHEN INSTALLED IN THE SAME TRENCH, THE WATER PIPE SHALL BE LAID ON A TRENCH BENCH AT LEAST 18 INCHES ABOVE THE TOP OF THE SANITARY SEWER PIPE AND AT LEAST 12 INCHES (PREFERABLY 18 INCHES) FROM THE SIDE OF THE SANITARY SEWER PIPE TRENCH.
- ROOF/FOOTING DRAIN CONNECTIONS TO ROOF LEADERS AND TO STORM DRAINAGE SYSTEM. 88. MANHOLE RIMS AND CATCH BASIN GRATES SHALL BE SET TO ELEVATIONS SHOWN. SET ALL EXISTING MANHOLE RIMS AND VALVE COVERS TO BE

87. SITE CONTRACTOR SHALL PROVIDE ALL BENDS, FITTINGS, ADAPTERS, ETC., AS REQUIRED FOR PIPE CONNECTIONS TO BUILDING STUB OUTS, INCLUDING

- RAISED OR LOWERED FLUSH WITH FINAL GRADE AS NECESSARY.
- 89. SITE CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUIT AND CABLES FOR SITE LIGHTING WITH THE BUILDING ELECTRICAL CONTRACTOR. 90. CONTRACTOR SHALL COORDINATE INSTALLATION FOR ELECTRICAL SERVICES TO PYLON SIGNS AND SITE LIGHTING WITH THE BUILDING ELECTRICAL
- 91. THE CONTRACTOR SHALL ARRANGE AND COORDINATE WITH UTILITY PROVIDERS FOR WORK TO BE PERFORMED BY UTILITY PROVIDERS. THE CONTRACTOR SHALL PAY ALL UTILITY FEES UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATION MANUAL AND GENERAL CONDITIONS, AND
- 92. ALL WATER LINES TO HAVE A MINIMUM COVER OF FIVE FEET. ALL LINES SHALL BE BEDDED IN 6" SAND AND INITIALLY BACKFILLED WITH 12" SAND.
- 93. ALL WATER MAINS, WATER SERVICES AND SANITARY SEWER LATERALS SHALL CONFORM TO THE APPLICABLE WATER UTILITY PROVIDER SPECIFICATIONS, AND TO THE APPLICABLE SANITARY SEWER PROVIDER SPECIFICATIONS, AS WELL AS TO OTHER APPLICABLE INDUSTRY CODES (AWWA) AND PROJECT SPECIFICATIONS FOR POTABLE WATER SYSTEMS, AND FOR SANITARY SEWER SYSTEMS.

- 94. THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS TO EXISTING BUILDINGS WITHOUT INTERRUPTION UNLESS/UNTIL AUTHORIZED TO DISCONNECT BY THE OWNERS, THE CIVIL ENGINEER, UTILITY PROVIDERS AND GOVERNING AUTHORITIES.
- 95. THE CONTRACTOR MAY SUBSTITUTE MASONRY STRUCTURES FOR PRECAST STRUCTURES IF APPROVED BY THE CIVIL ENGINEER AND ALLOWED BY THE GOVERNING AUTHORITY ENGINEER OR OTHER GOVERNING AUTHORITY.
- 96. PIPING SHALL BE LAID FROM DOWNGRADIENT END OF PIPE RUN IN AN UPGRADIENT DIRECTION WITH BELL END FACING UPGRADE IN THE DIRECTION OF
- 97. POLYVINYL CHLORIDE PIPE (PVCP) FOR STORM PIPING SHALL HAVE BUILT—IN RUBBER GASKET JOINTS. PVCP SHALL CONFORM TO ASTM D-3034 (SDR35) WITH COMPRESSION JOINTS AND MOLDED FITTINGS. PVCP SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS; ASTM-D2321 AND MANUFÁCTURERS RECOMMENDED PROCEDURE
- 98. ALL RCP SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-76; ALL RCP SHALL BE CLASS IV UNLESS OTHERWISE SHOWN. JOINTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.
- 99. MANHOLE SECTIONS AND CONSTRUCTION SHALL CONFORM TO ASTM C-478.
- 100. HIGH DENSITY POLYETHYLENE (HDPE) STORM SEWER 12" OR GREATER IN DIAMETER SHALL BE HI-Q SURE-LOK 10.8 PIPE AS MANUFACTURED BY HANCOR INC. OR APPROVED EQUAL. HDPE PIPE SHALL HAVE SMOOTH INTERIOR AND CORRUGATED EXTERIOR AND SHALL MEET THE REQUIREMENTS OF AASHTO M294, TYPE S. PIPE SECTIONS SHALL BE JOINED WITH BELL-AND-SPIGOT JOINT MEETING THE REQUIREMENTS OF AASHTO M294. THE BELL SHALL BE AN INTEGRAL PART OF THE PIPE AND PROVIDE A MINIMUM PULL-APART STRENGTH OF 400 POUNDS. THE JOINT SHALL BE WATERTIGHT ACCORDING TO THE REQUIREMENTS OF ASTM D3212. GASKETS SHALL BE MADE OF POLYISOPRENE MEETING THE REQUIREMENTS OF ASTM F477. ALTERNATIVE HDPE PIPE MAY BE USED IF APPROVED BY THE ENGINEER AND OWNER'S CONSTRUCTION MANAGER PRIOR TO ORDERING.
- 101, HIGH DENSITY POLYETHYLENE (HDPE) STORM SEWER LESS THAN 12" IN DIAMETER SHALL BE HI-Q PIPE AS MANUFACTURED BY HANCOR INC. OR APPROVED EQUAL. HDPE PIPE SHALL HAVE SMOOTH INTERIOR AND CORRUGATED EXTERIOR AND SHALL MEET THE REQUIREMENTS OF AASHTO 252, TYPE S. PIPE SECTIONS SHALL BE JOINED WITH COUPLING BANDS OR EXTERNAL SNAP COUPLERS COVERING AT LEAST 2 FULL CORRUGATIONS ON EACH END OF THE PIPE. SILT-TIGHT (GASKET) CONNECTIONS SHALL INCORPORATE A CLOSED SYNTHETIC EXPANDED RUBBER GASKET. MEETING THE REQUIREMENTS OF AASHTO D1056 GRADE 2A2. GASKETS SHALL BE INSTALLED ON THE CONNECTION BY THE PIPE MANUFACTURER. ALTERNATIVE HDPE PIPE MAY BE USED IF APPROVED BY THE ENGINEER AND OWNER'S CONSTRUCTION MANAGER PRIOR TO ORDERING.
- 102. COPPER PIPE SHALL BE TYPE K TUBING WITH COMPRESSION FITTINGS.
- 103. GAS PIPE MATERIAL SHALL BE PER GAS COMPANY REQUIREMENTS.
- 104. POLYVINYL CHLORIDE PIPE (PVCP) FOR SANITARY PIPING SHALL HAVE BUILT-IN RUBBER GASKET JOINTS. PVCP SHALL CONFORM TO ASTM D3034 (SDR35) WITH COMPRESSION JOINTS AND MOLDED FITTINGS. PVCP SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS, ASTM D2321 AND MANUFACTURER'S RECOMMENDED PROCEDURE.
- 105. DUCTILE IRON PIPE SHALL CONFORM TO AWWA C151 FOR CLASS 52 WITH CEMENT LINING IN ACCORDANCE WITH ANSI A21.4 FOR WATER MAINS AND SERVICES 3" ID AND LARGER. JOINTS SHALL BE MADE WITH CONCRETE THRUST BLOCKS OR WITH MEGAULUG RETAINER GLANDS OR WITH RODDING IN ACCORDANCE WITH PROJECT MANUAL SPECIFICATIONS AND IN ACCORDANCE WITH WATER UTILITY PROVIDER REQUIREMENTS TO EXTEND A MINIMUM OF 2 PIPE LENGTHS IN EITHER DIRECTION FROM FITTINGS AND ELBOWS (40 FT MINIMUM). ALL OTHER JOINTS SHALL BE PUSH-ON WITH RUBBER GASKETS (TYTON). USE OF OTHER TYPES OF RETAINER GLANDS SHALL REQUIRE USE WITH CLASS 53 OR GREATER DUCTILE IRON PIPE.
- 106. ADJUST ALL GATE BOX COVERS, CATCH BASIN FRAMES AND MANHOLE COVERS TO MATCH FINISHED GRADE.

<u>DEFINITIONS</u>

MUNICIPALITY SHALL MEAN TOWN OF MILLBURY

COUNTY SHALL MEAN WORCESTER COUNTY STATE SHALL MEAN COMMONWEALTH OF MASSACHUSETTS

WATER UTILITY PROVIDER SHALL MEAN AQUARION WATER COMPANY

SANITARY UTILITY PROVIDER SHALL MEAN MILLBURY SEWER DEPARTMENT



220 Norwood Park South Norwood, MA 02062 (781) 619-9500

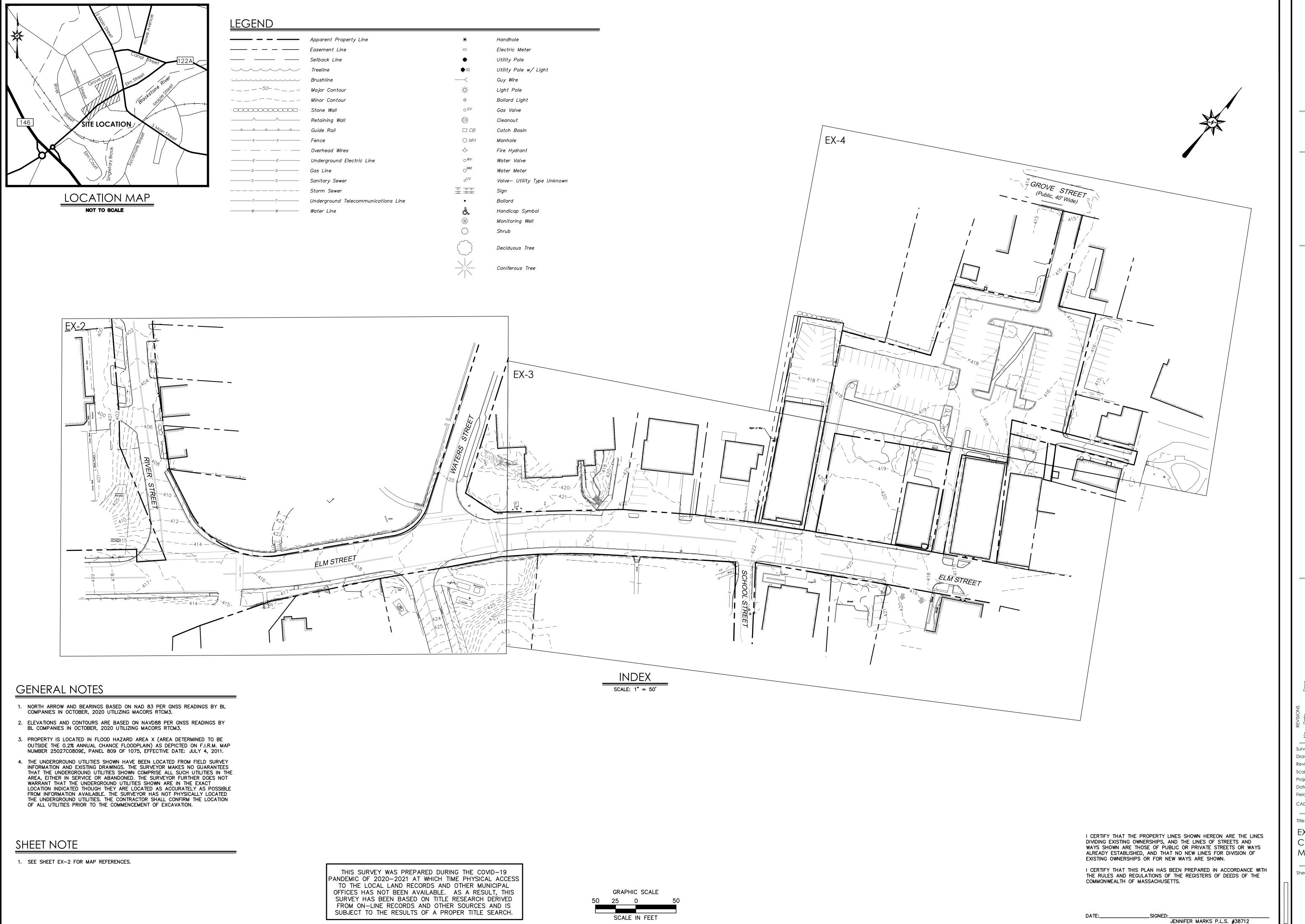
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E.A.E. Reviewed NONE Scale Project No. 2001478 FEBRUARY, 2022

GENERAL

GN200147801

CAD File



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355 Research Parkway Meriden, CT 06450 (203) 630-1406 (203) 630-2615 Fax

DOWNTOWN F ELM STREET BURY, MASSACHUSET

T.N.,J.W.,H.T. Surveyed Reviewed Project No

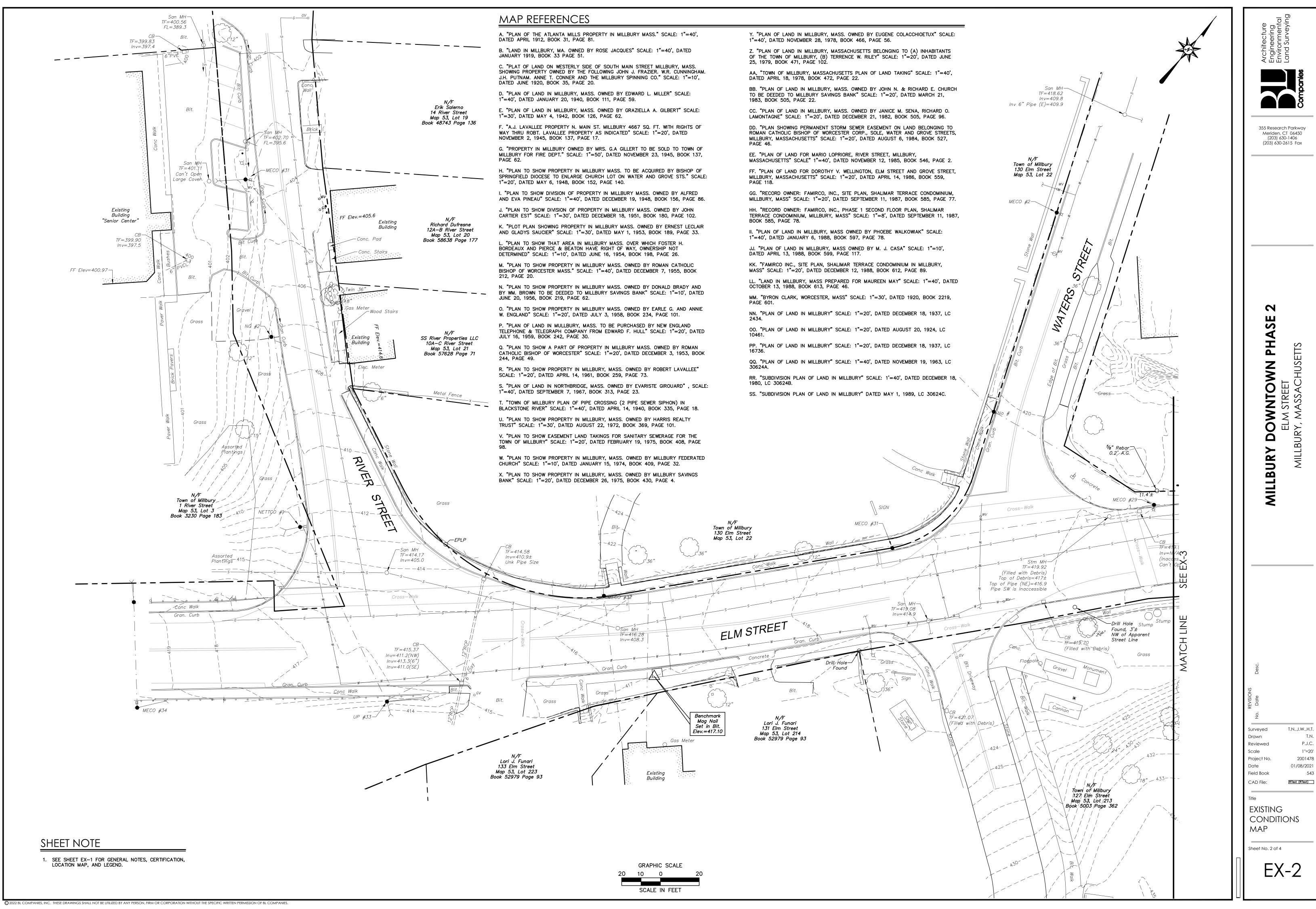
2001478 01/08/2021 Field Book CAD File: RText (RText)

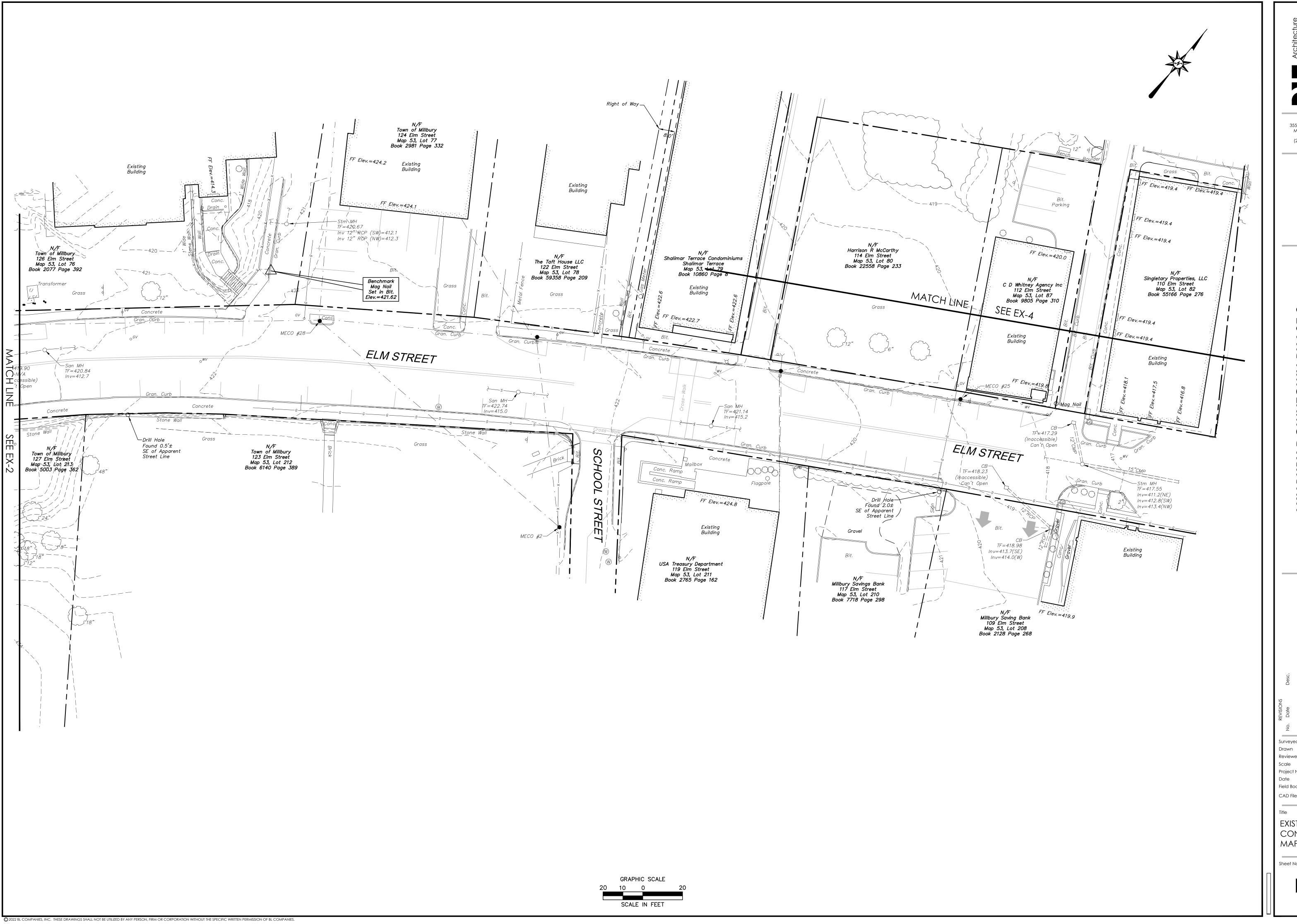
P.J.C.

1"=50'

EXISTING CONDITIONS MAP

Sheet No. 1 of 4







355 Research Parkway Meriden, CT 06450 (203) 630-1406 (203) 630-2615 Fax

SE SURY DOWNTOWN PHA ELM STREET MILLBURY, MASSACHUSETTS BURY

MILLI

T.N.,J.W.,H.T. Surveyed Reviewed Project No.

P.J.C.

1"=20'

2001478

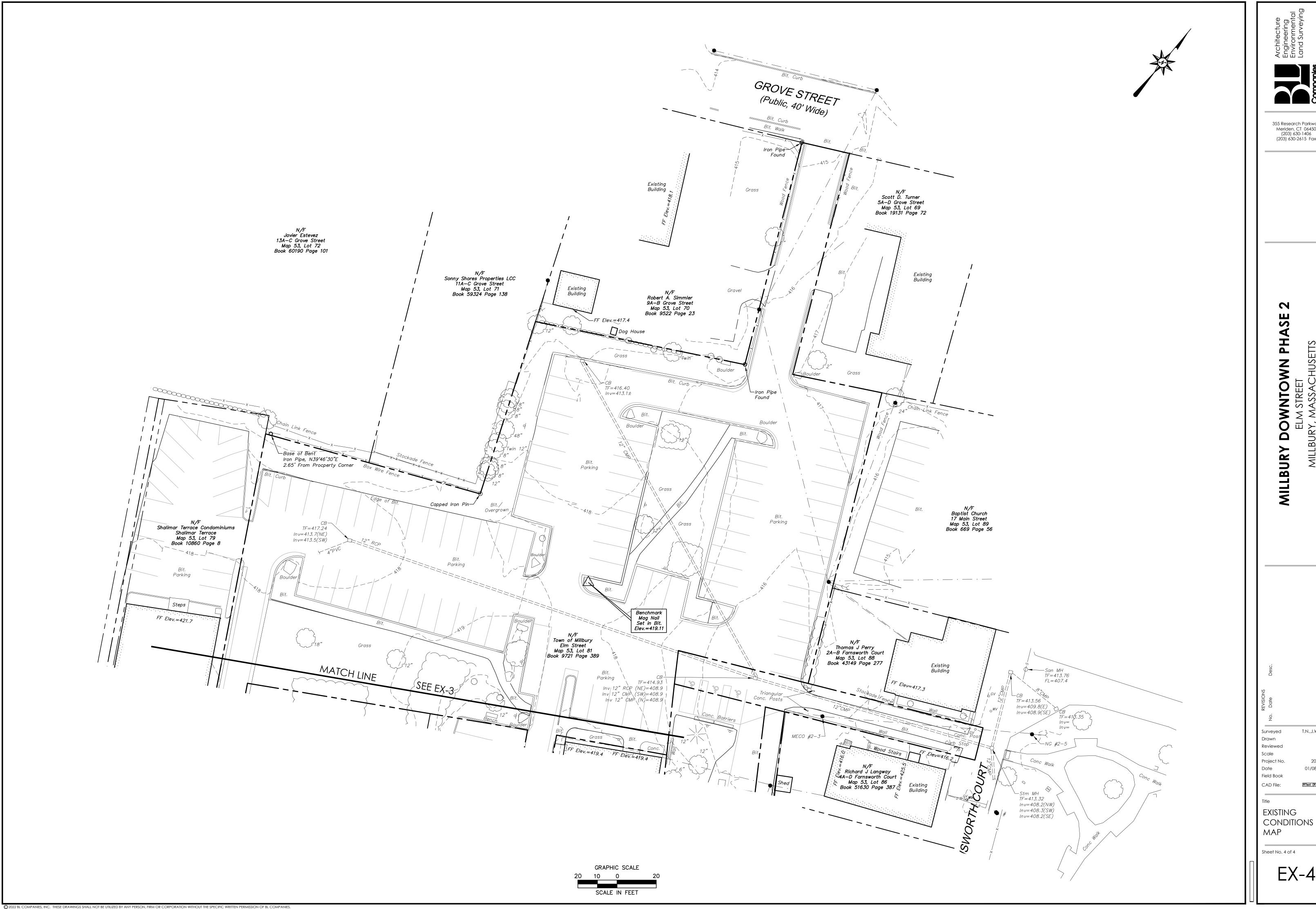
01/08/2021 Field Book CAD File: RText (RText)

EXISTING CONDITIONS

MAP

Sheet No. 3 of 4

EX-3





355 Research Parkway Meriden, CT 06450 (203) 630-1406 (203) 630-2615 Fax

SURY DOWNTOWN PHA ELM STREET MILLBURY, MASSACHUSETTS

T.N.,J.W.,H.T. 01/08/2021 RText (RText)

P.J.C.

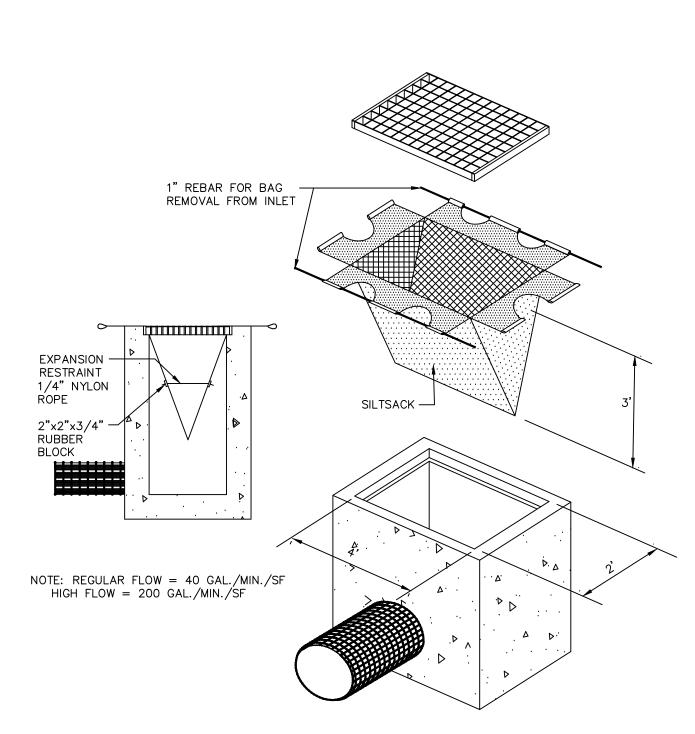
1"=20' 2001478

EX-4

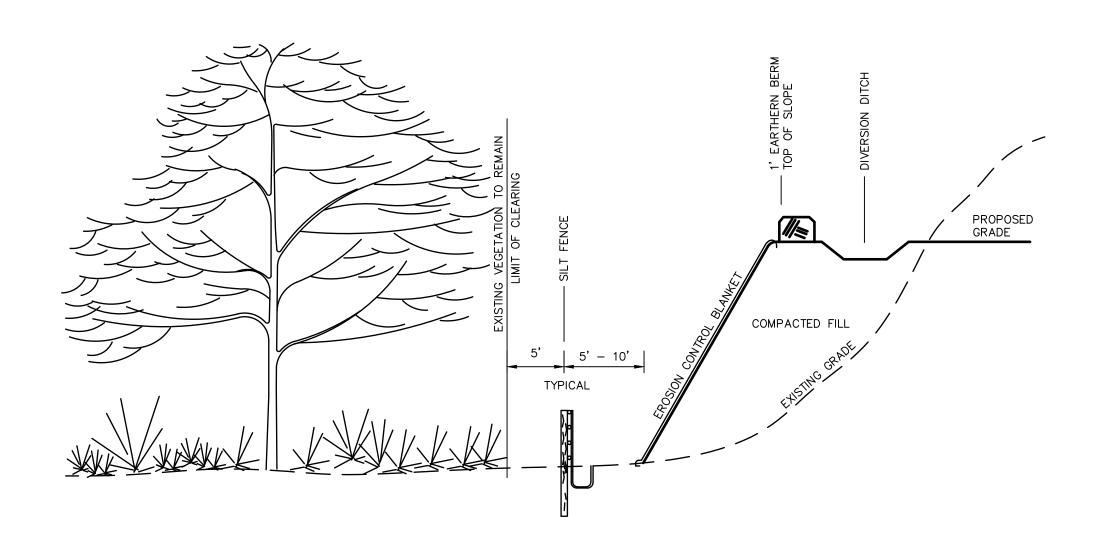
EROSION & SEDIMENT CONTROL NOTES:

- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE PUT INTO PLACE PRIOR TO BEGINNING ANY CONSTRUCTION OR DEMOLITION.
 REFER TO PLANS FOR APPROXIMATE LOCATION OF EROSION AND SEDIMENT CONTROL. REFER TO SPECIFICATION AND DETAILS FOR TYPE OF
 EROSION AND SEDIMENT CONTROL.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUAL MAINTENANCE OF ALL CONTROL DEVICES THROUGHOUT THE DURATION OF THE PROJECT
- 3. CONTRACTOR SHALL MEET ALL THE STATE OF MASSACHUSETTS AND THE TOWN OF MILLBURY WETLAND ORDINANCE REGULATIONS FOR SEDIMENT AND EROSION CONTROL.
- 4. EXCAVATED MATERIAL STOCKPILED ON THE SITE SHALL BE SURROUNDED BY A RING OF UNBROKEN SEDIMENT AND EROSION CONTROL FENCE. THE LIMITS OF ALL GRADING AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE APPROVED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THE LIMIT OF CONTRACT SHALL REMAIN TOTALLY UNDISTURBED UNLESS OTHERWISE APPROVED BY OWNER'S
- 5. ALL CATCH BASINS AND DRAIN GRATES WITHIN THE LIMIT OF WORK SHALL BE PROTECTED WITH SILT SACKS DURING THE ENTIRE DURATION
- 6. EROSION CONTROL BARRIERS TO BE INSTALLED AT THE TOE OF SLOPES. SEE GRADING AND DRAINAGE PLANS, NOTES, DETAILS, AND
- 7. THE CONTRACTOR SHALL PROVIDE DUST CONTROL FOR CONSTRUCTION OPERATIONS AS APPROVED BY THE OWNER'S REPRESENTATIVE AND MASSACHUSETTS D.E.P REQUIREMENTS.
- 8. ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ON TO PUBLIC/ PRIVATE ROADS.
- 9. ALL MATERIAL HAULING VEHICLES SHALL BE COMPLETELY COVERED PRIOR TO LEAVING THE SITE.
- 10. CONTRACTOR SHALL BE RESPONSIBLE FOR WHEEL CLEANING OF ALL CONSTRUCTION VEHICLES PRIOR TO EXITING THE SITE. CONTRACTOR SHALL ENSURE THAT MATERIAL HAULING VEHICLES REMAIN ON PAVED SURFACES AS MUCH AS POSSIBLE.
- 11. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" PREPARED BY MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES.
- 12. ANY EROSION AND SEDIMENT CONTROL MEASURES FOR THE STABILIZATION OF SLOPES ARE TEMPORARY FOR CONSTRUCTION PHASES ONLY. SEE GRADING PLAN FOR FINAL STABILIZATION OF SLOPES.
- 13. SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF AND DURING ALL PHASES OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO AND IMMEDIATELY AFTER ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.
- 14. DAILY INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES SHALL BE PROVIDED TO ENSURE THAT THE INTENDED PURPOSES IS ACCOMPLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEDIMENT LEAVING THE LIMIT OF WORK. SEDIMENT CONTROL MEASURES SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKING DAY.
- 15. ALL SEDIMENT WILL BE PREVENTED FROM ENTERING ANY STORM DRAINAGE SYSTEM.
- 16. ALL DRAINAGE SWALES AND GROUND SURFACES WITHIN THE LIMIT OF WORK SHALL BE PROTECTED.
- 17. AFTER SIGNIFICANT RAINFALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED FOR INTEGRITY. ANY DAMAGED DEVICES SHALL BE CORRECTED IMMEDIATELY.
- 18. ALL STOCKPILES SHALL BE PROTECTED. STOCKPILES SHALL BE PROTECTED FROM CONTACT WITH ONSITE STORMWATER RUNOFF USING TEMPORARY PERIMETER SEDIMENT BARRIERS. A COVER (TARP) OR APPROPRIATE TEMPORARY STABILIZATION WILL BE PROVIDED TO MINIMIZE SEDIMENT DISCHARGE.
- 19. STABILIZED PORTIONS OF A SITE SHALL BE INSPECTED AT LEAST ONCE PER MONTH.
- 20. ANY SEDIMENT TRACKED ONTO PAVED AREAS SHALL BE SWEPT AT THE END OF EACH WORKING DAY.
- 21. ALL TOPSOIL ENCOUNTERED WITHIN THE WORK AREA SHALL BE STRIPPED TO ITS FULL DEPTH AND STOCKPILED FOR REUSE. TOPSOIL NOT NEEDED AFTER COMPLETION OF ALL FINAL TOPSOIL SPREADING AND GRASSING SHALL BE REMOVED FROM THE SITE AND LEGALLY RECYCLED OR DISPOSED OF. TOPSOIL PILES SHALL REMAIN SEGREGATED FROM EXCAVATED SUBSURFACE SOIL MATERIALS.
- 22. TEMPORARY DIVERSION DITCHES, PERMANENT DITCHES, CHANNELS, EMBANKMENTS AND ANY DENUDED SURFACE WHICH WILL BE EXPOSED FOR A PERIOD OF 14 CALENDAR DAYS OR MORE SHALL BE CONSIDERED CRITICAL VEGETATION AREAS. THESE AREAS SHALL BE MULCHED WITH STRAW. MULCH SHALL BE SPREAD UNIFORMLY IN A CONTINUOUS BLANKET OF SUFFICENT THICKNESS TO COMPLETELY HIDE THE SOIL FROM VIEW.
- 23. AN EROSION CONTROL BARRIER SHALL BE INSTALLED ALONG THE EDGE OF PROJECT PRIOR TO COMMENCEMENT OF DEMOLITION OR CONSTRUCTION ACTIVITIES.
- 24. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL EROSION AND SEDIMENT CONTROLS AT THE COMPLETION OF SITE CONSTRUCTION.
- 25. MEANS OF EROSION AND SEDIMENT PROTECTION AS NOTED ON THE DRAWINGS INDICATE THE MINIMUM PROVISIONS NECESSARY.

 ADDITIONAL MEANS OF PROTECTION SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED FOR CONTINUED OR UNFORSEEN EROSION PROBLEMS, AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 26. THE CONTRACTOR SHALL USE TEMPORARY SEEDING, MULCHING OR OTHER APPROVED STABILIZATION MEASURES TO PROTECT EXPOSED AREAS DURING PROLONGED CONSTRUCTION OR OTHER LAND DISTURBANCES.
- 27. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PREPARED BY THE CONTRACTOR AND APPROVED BY BL COMPANIES PRIOR TO THE BEGINNING OF CONSTRUCTION CONSISTENT WITH THE REQUIREMENTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT. THE CONTRACTOR WILL BE RESPONSIBLE FOR COMPLIANCE WITH CONDITIONS OF THE SWPPP THROUGHOUT CONSTRUCTION



CATCH BASIN SILT SACK INSERT



TYPICAL EROSION CONTROL ON SLOPES

BLEC-011

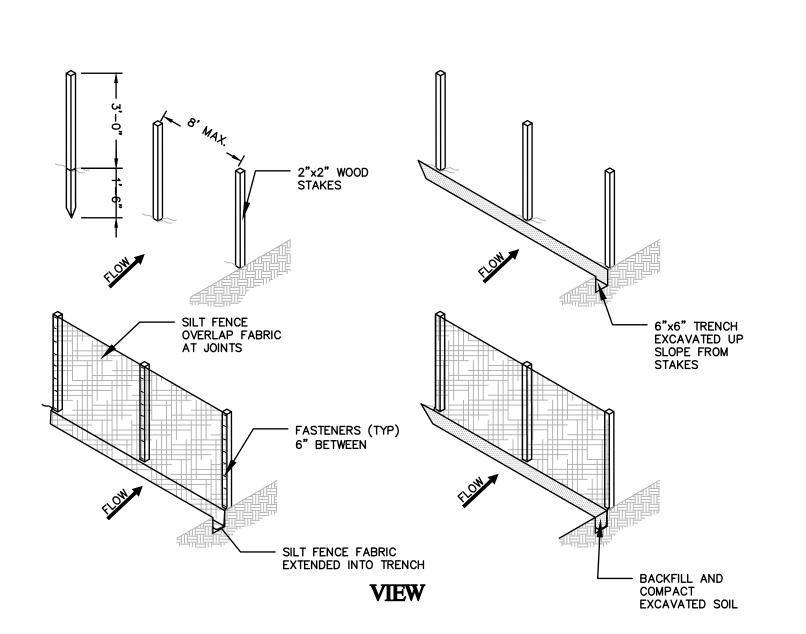
TEMPORARY MOUNTING CURB

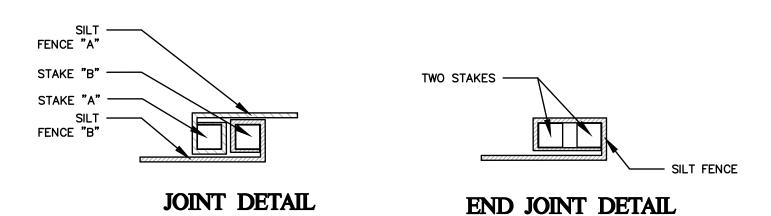
EXISTING ROADWAY -

TEMPORARY BITUMINOUS CONCRETE BERM-

BOND BREAKER AT ROAD AND CURB SURFACE -

N.



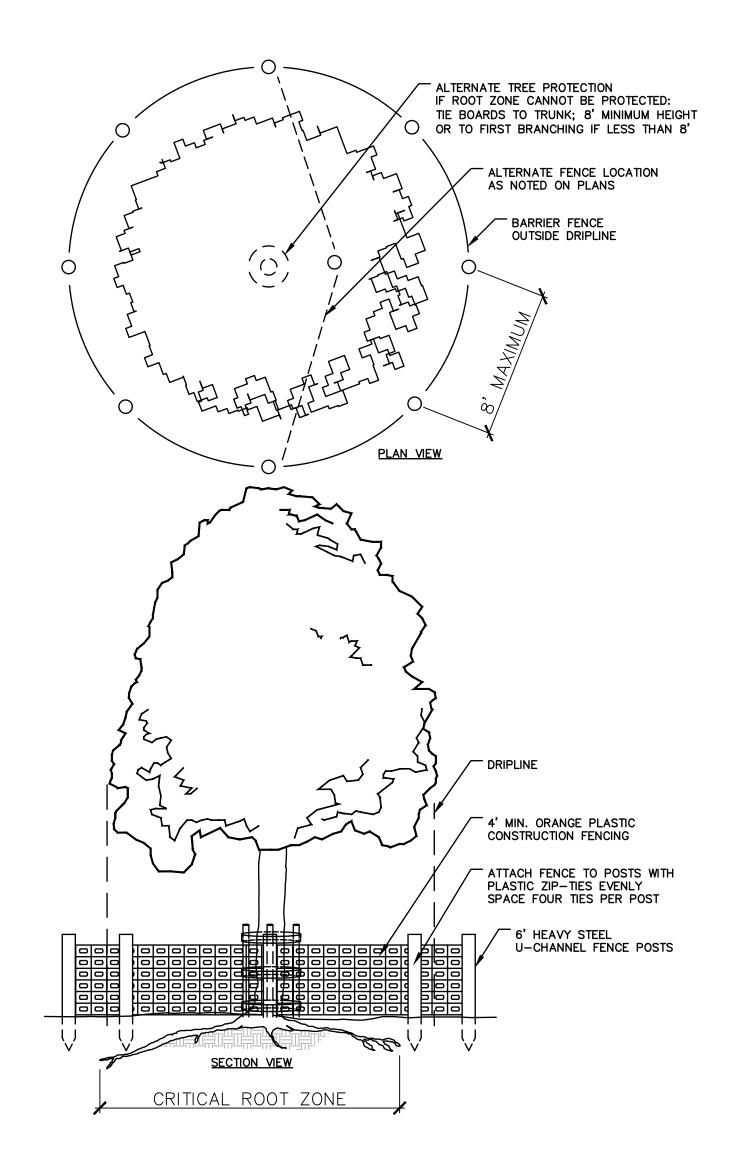


INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT

MAINTENANCE SHALL OCCUR WHEN NECESSARY AND PER SEDIMETN AND EROSION CONTROL NOTES. SILT FENCE SHALL BE REPLACED EVERY 6 MONTHS AND STACKS SHALL BE INSPECTED TO ENSURE STRUCTURAL INTEGRITY. SILT FENCE SHALL BE INSPECTED WEEKLY AND ALL MAINTENANCE ISSUES SHALL BE CORRECT AT THAT TIME.

SILT FENCE BARRIER

N.T.S.



1'-0" MIN.

TREE PROTECTION

N.T.S.

Architecture Engineering Environmental Land Surveying

220 Norwood Park South Norwood, MA 02062 (781) 619-9500

-EXISTING GRANITE CURB

-EXISTING SIDEWALK

SUBGRADE

OWNTOWN PHA ELM STREET AILLBURY, MA

S

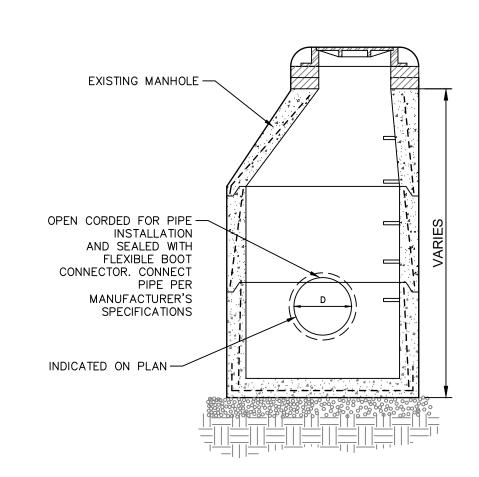
Designed
Drawn
Reviewed

Drawn K.A.
Reviewed M.M.
Scale
Project No. 2001478
Date FEBRUARY, 2022
CAD File:

SITE
PREPARATION
NOTES & DETAILS

CI

DN200147801



- NOTES:

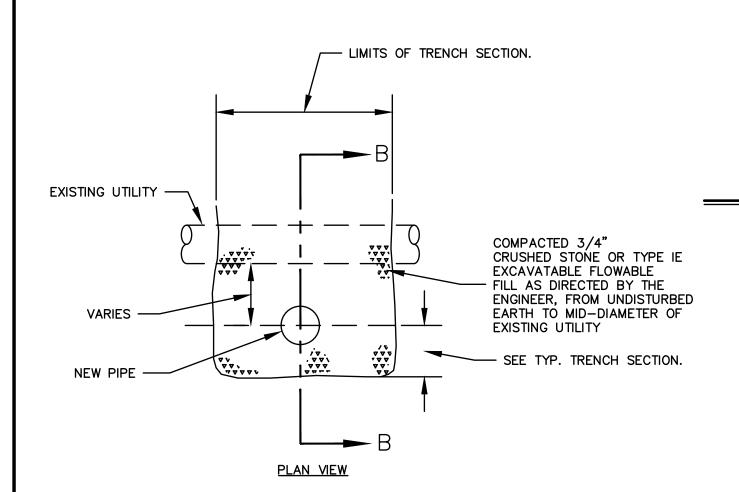
 1. A FLEXIBLE PIPE TO MANHOLE CONNECTION SHALL BE USED WHENEVER A PIPE PENETRATES INTO A MANHOLE STRUCTURE.

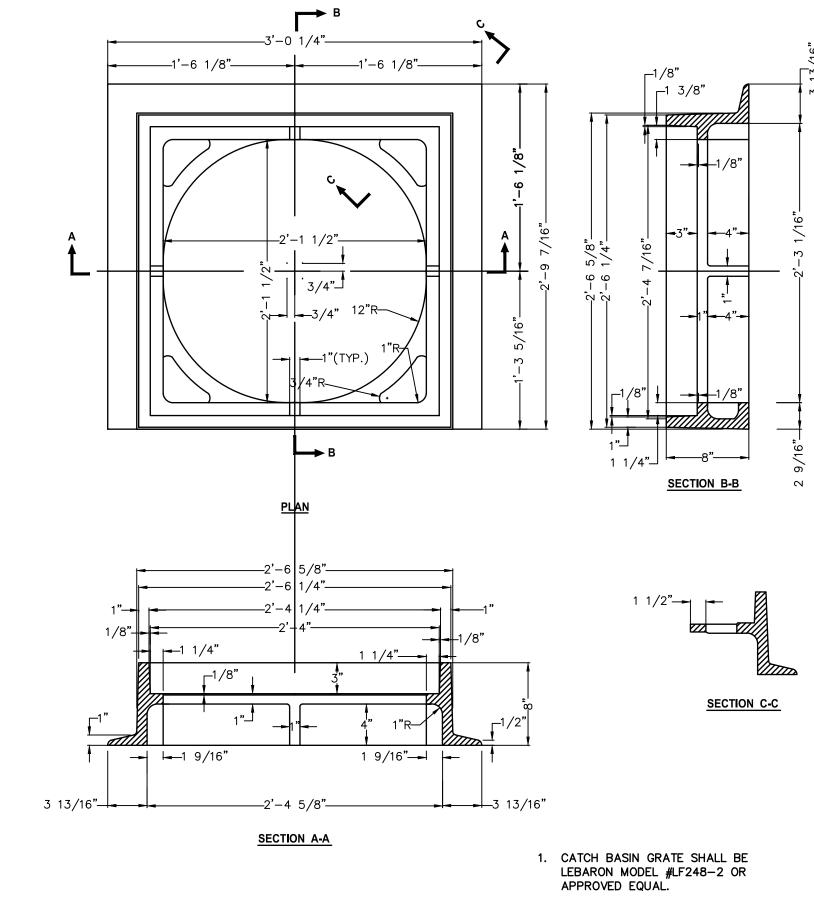
 2. THE DESIGN OF THE CONNECTOR SHALL PROVIDE A WATERTIGHT SEAL BETWEEN THE PIPE AND CONCRETE STRUCTURE.

 3. CONNECT DRAIN PIPE TO MANHOLE WITH MIN. 4' HDPE. TRANSITION FROM
- PERFORATED HDPE TO HDPE USING ADAPTER OR COUPLING.
 4. SEE PLANS FOR LOCATION OF STORM PIPE(S) AT INLET.
 5. SEE EROSION & SEDIMENT CONTROL PLAN FOR INLET PROTECTION MEASURES.
 MAINTAIN MEASURES UNTIL FINAL STABILIZATION IS ACHIEVED.

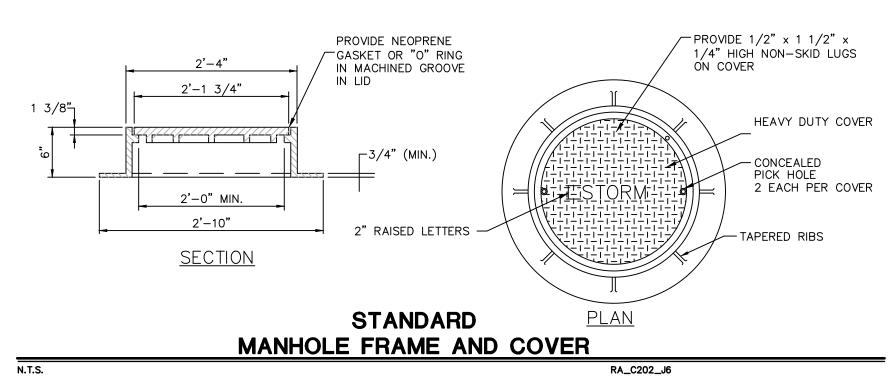
CONNECTING TO EXISTING MANHOLE

N.T.S.





CATCH BASIN FRAME



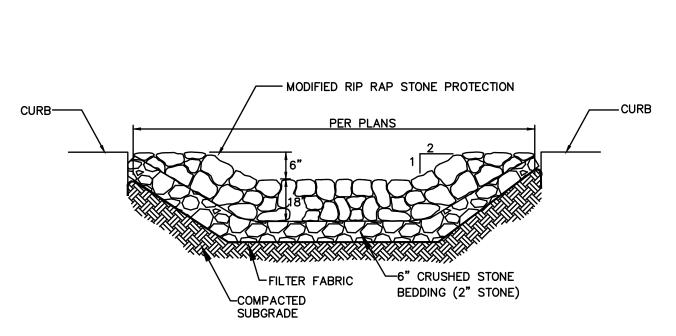
EXISTING UTILITY 1'-0" VARIES SECTION B-B

UTILITY CONFLICT

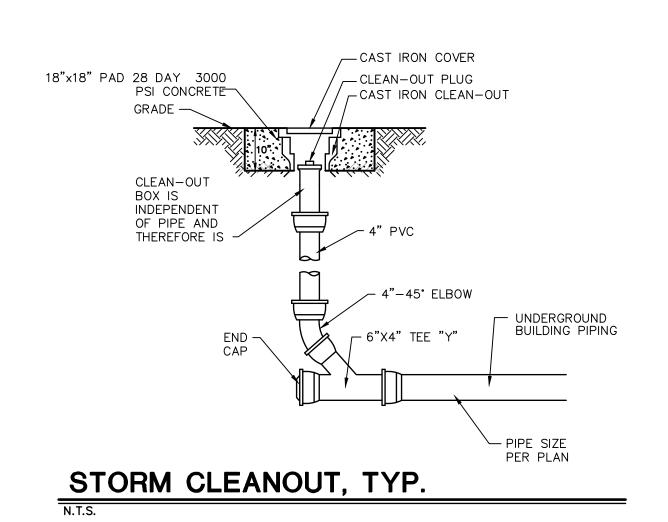
UNDISTURBED

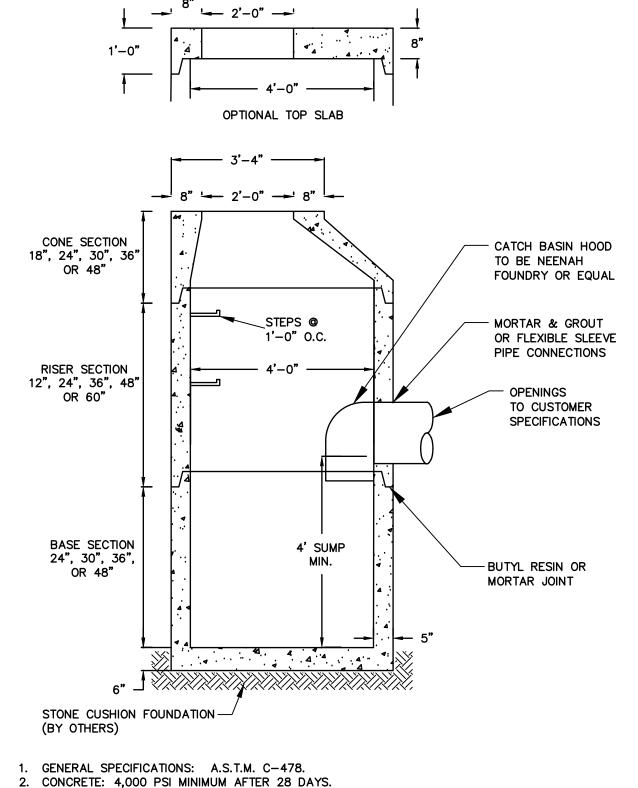
N.T.S.

MATERIAL



RIPRAP APRON SECTION

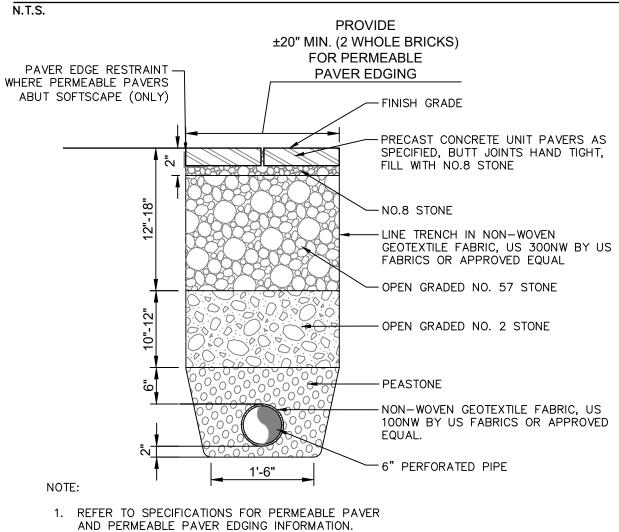




BUTYL RESIN JOINT TO CONFORM TO ASTM C990.
 REINFORCED STEEL CONFORMS TO ASTM A185 SPEC. 0.12 SQ. IN./LINEAL
 AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.

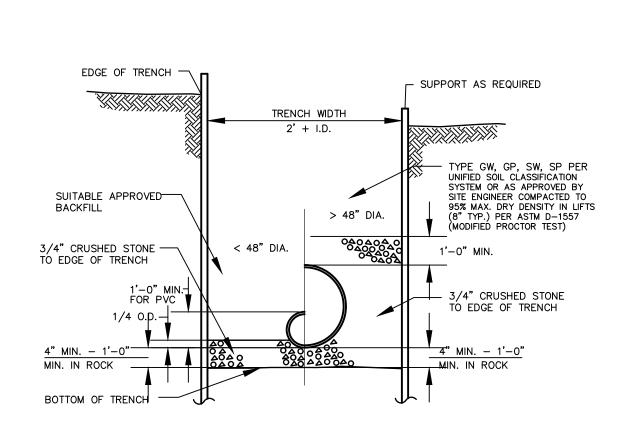
5. DESIGN LOADING PER AASHTO HS-20, 1 TO 5 FEET OF COVER
 6. CATCH BASIN HOOD TO COMPLY WITH MASSDEP STORMWATER STANDARDS FOR DEEP HOODED SUMP CATCH BASINS

CATCH BASIN WITH HOOD



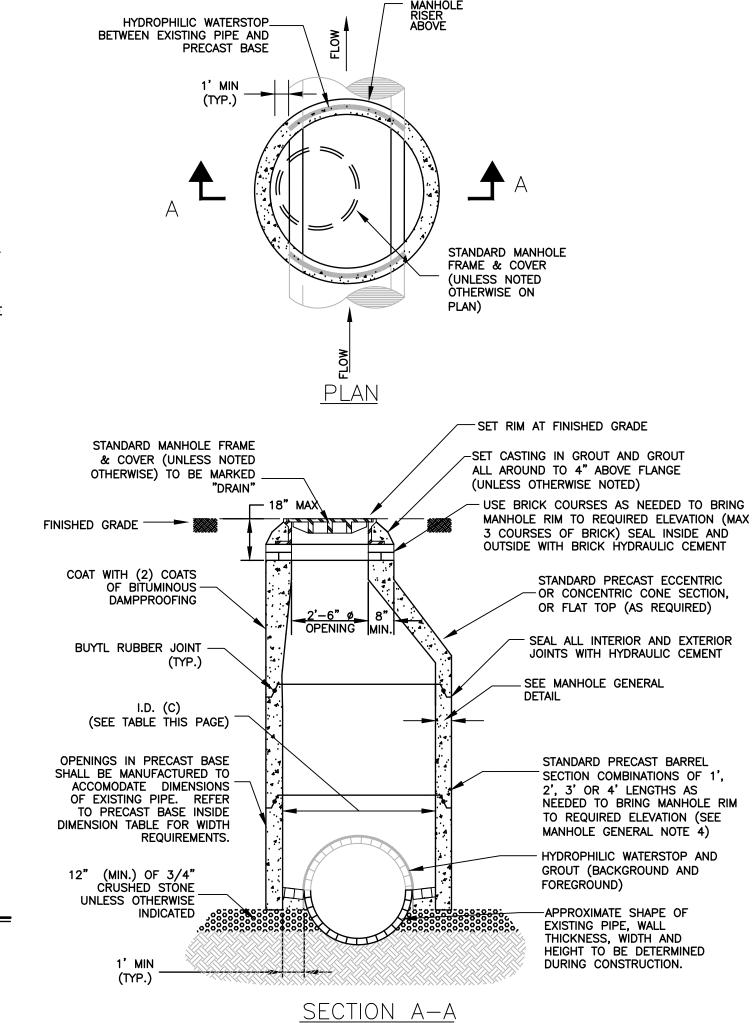
PERMEABLE PAVER & PERMEABLE PAVER EDGING & UNDERDRAIN DETAIL

N.T.S.



TYPICAL STORM SEWER TRENCH

6.



NOTES:

1. REMOVE EXISTING PIPE TO MID—POINT WITHIN THE INSIDE OF THE PRECAST MANHOLE BASE AND CONSTRUCT THE INVERT AS SHOWN.

PR	ECAST BASE INSID	E DIMENSION TAB
	WIDTH (W)	I.D. (C)
	8" TO 24"	4' ø
	27" TO 36"	5' ø
	48" TO 66"	6' ø
	66" TO 72"	8' ø
	> 72"	10' ø

I.D. = INSIDE DIMENSION

DROPOVER MANHOLE OVER EXISTING PIPE

DRAIN MANHOLE FRAME & COVER ADJUST TO GRADE WITH MAX. OF FOUR COURSES OF BRICK PRECAST REINFORCED CONCRETE MANHOLE ECCENTRIC CONE MINIMUM REINFORCING 0.12
 SQ. IN. PER LINEAR FOOT OR AS SPECIFIED 3' CONE - LIFTING HOLES (TYP.) (FILL WITH MORTAR) PRECAST REINFORCED CONCRETE TONGUE AND GROOVE RISERS MANUFACTURED IN 1',2',3' & **VARIES** 4' LENGTHS. - PREFORMED PLASTIC GASKET OR FLEXIBLE WATERTIGHT RUBBER - KNOCKOUTS AS REQUIRED **─**4'-0" DIA.—

PRECAST STORM MANHOLE DETAIL

PHASE 2

220 Norwood Park South

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MILLBURY DOWNTOWN
ELM STREET
MILLBURY , MA

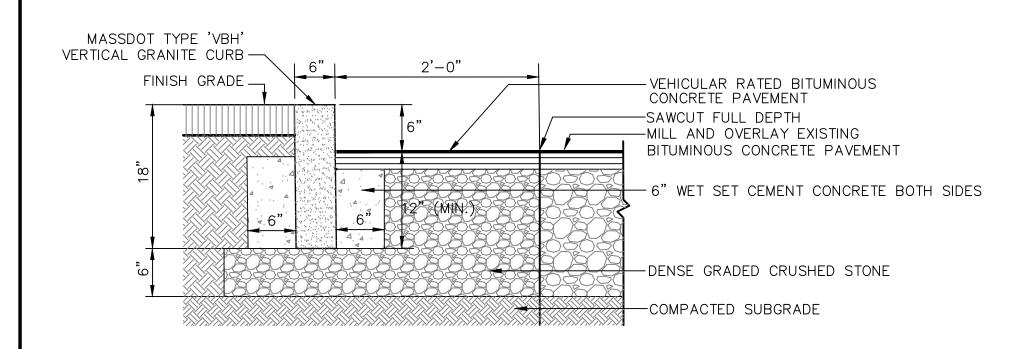
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Drawn
Reviewed
Scale
Project No.

Reviewed M.M.
Scale
Project No. 2001478
Date FEBRUARY, 2022
CAD File:
DN200147801
Title

SITE DRAINAGE DETAILS

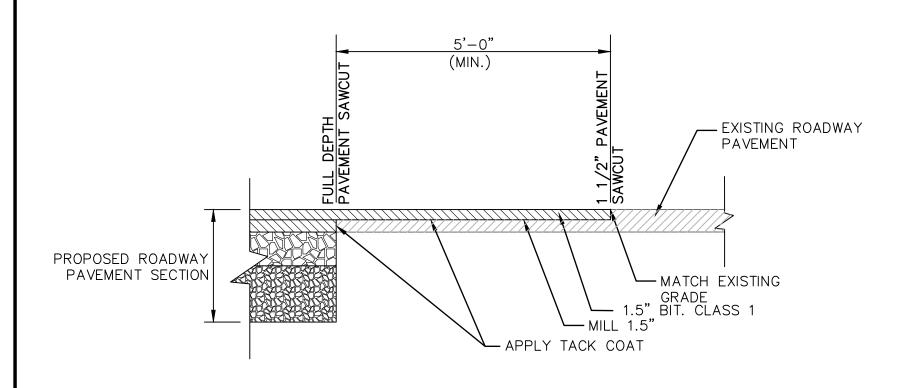
VEHICULAR RATED BITUMINOUS CONCRETE PAVEMENT

N.T.S.



VERTICAL GRANITE CURB

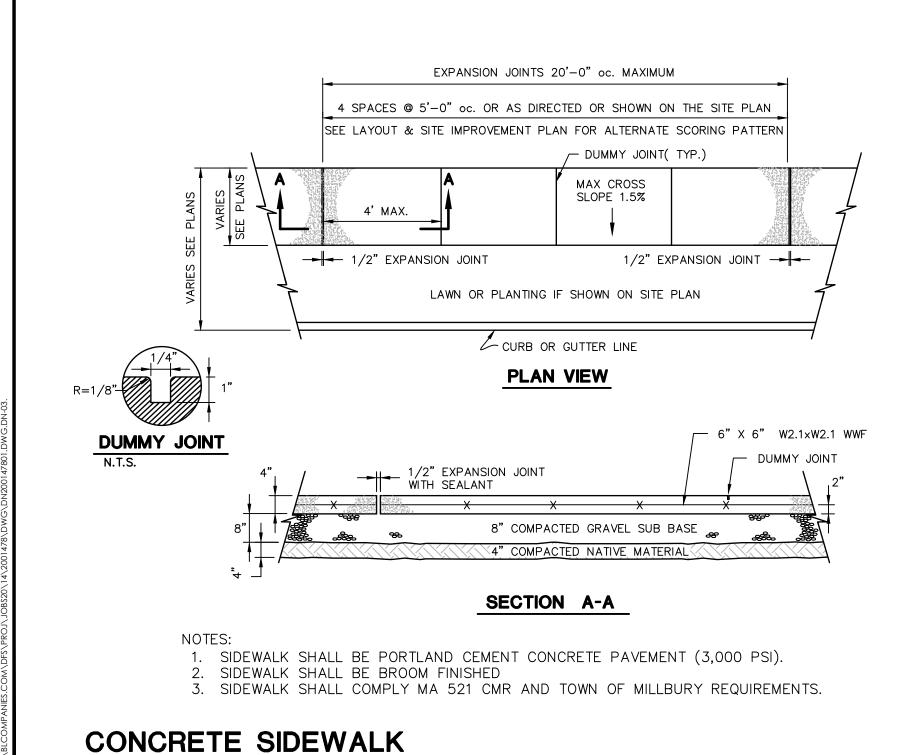
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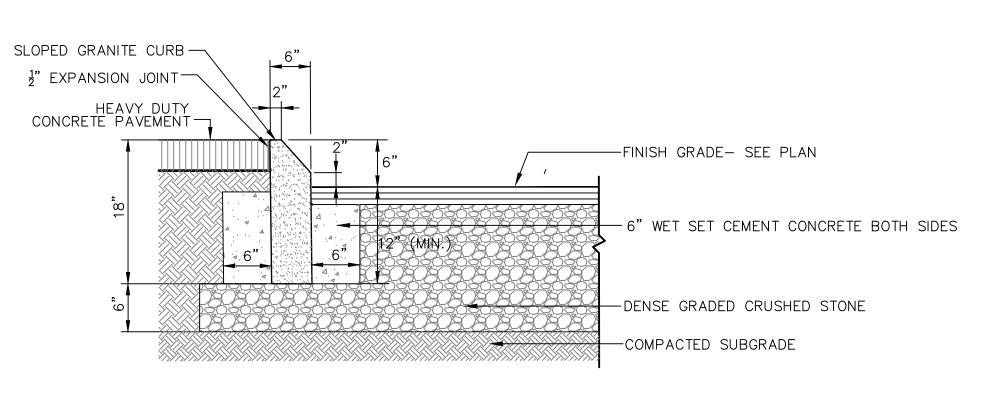


PAVEMENT MATCHING DETAIL

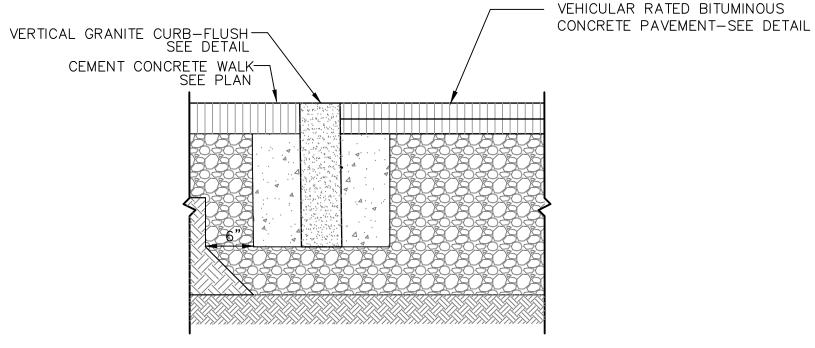
N.T.S.

N.T.S.





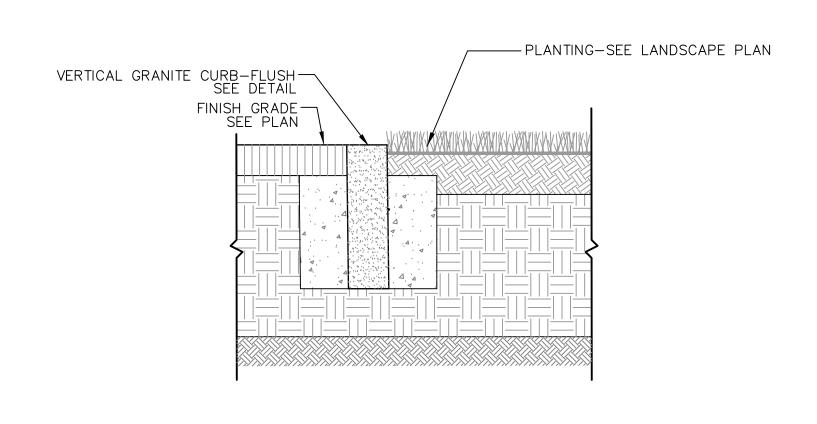
SLOPED GRANITE CURB



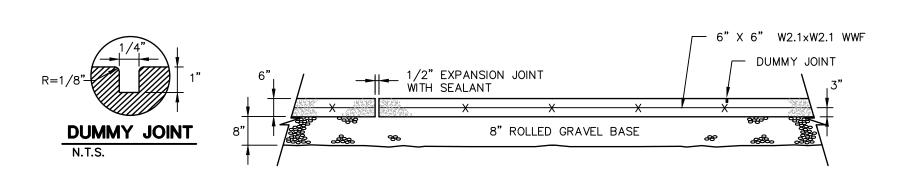
NOTES: 1. CEMENT CONCRETE SHALL EXTEND TO THE BOTTOM OF THE BITUMINOUS CONCRETE 2. ANY CLASS OF CEMENT CONCRETE ACCEPTABLE UNDER SECTION M4 OF THE MASS. "SSHB MAY BE USED.

VERTICAL GRANITE CURB-FLUSH

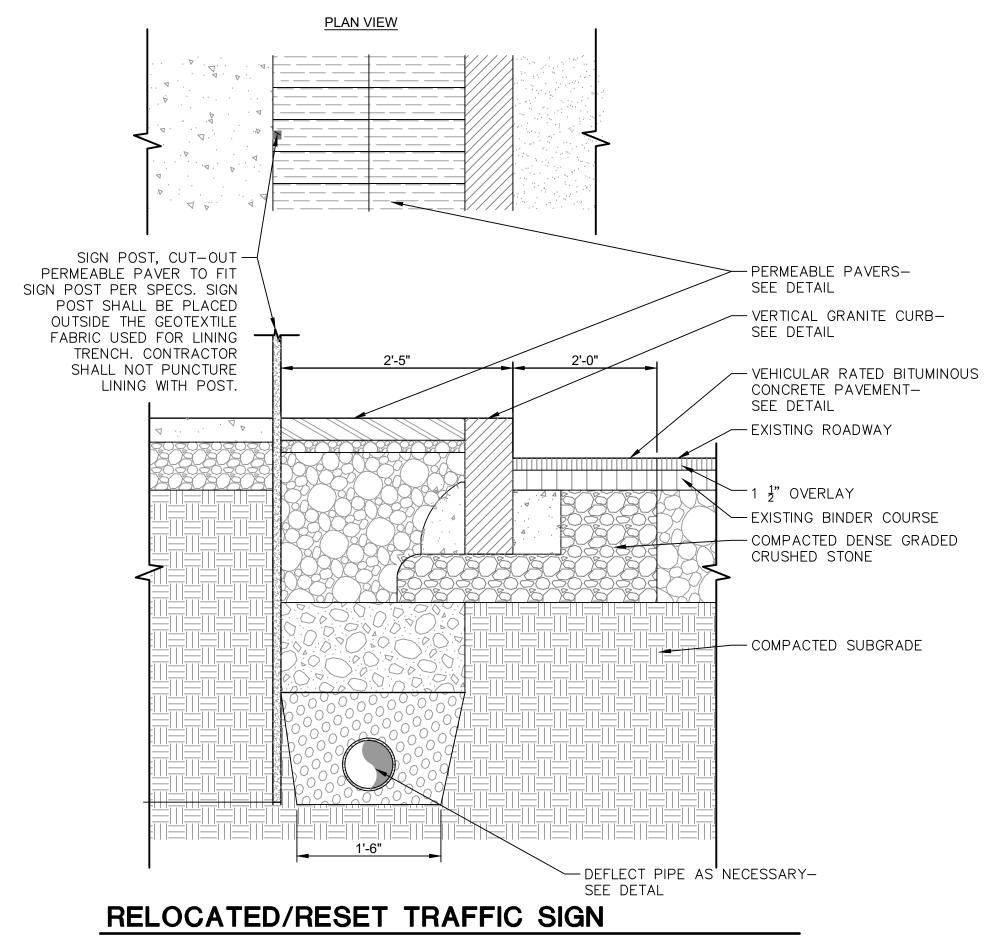
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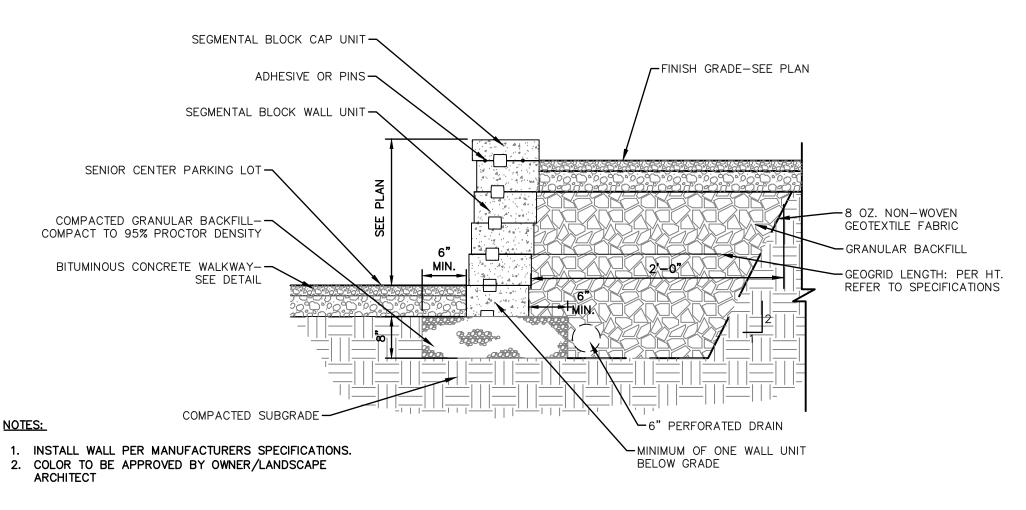


VERTICAL GRANITE CURB-FLUSH AT PLANTING



HEAVY DUTY CONCRETE PAVEMENT



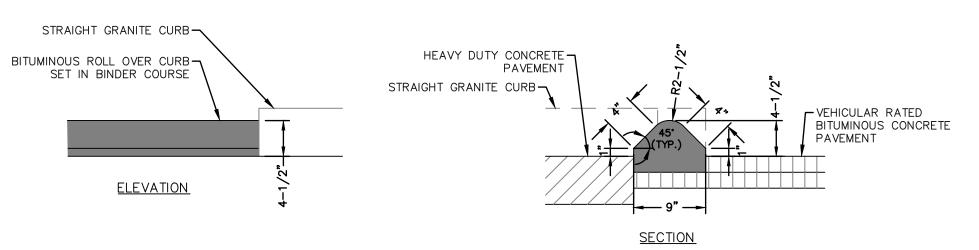


SEGMENTAL BLOCK RETAINING WALL

SCALE: NTS
MANUFACTURER: PAVERS BY IDEAL (OR APPROVED EQUAL)
PHONE: 978-692-3076
WEBSITE: WWW.IDEALCONCRETEBLOCK.COM

N.T.S.

WALL STONE: ROMAN PISA; COLOR— QUARRY BLEND; PATTERN OPTION— ASHLAR CAP STONE: ANCESTRAL COPING; COLOR— QUARRY BLEND



BITUMINOUS ROLL OVER CURB

S ROLL OVER CLIBB

Architecture Engineering Environmental Land Surveying

Archi Engin Envird Land

> 220 Norwood Park South Norwood, MA 02062 (781) 619-9500

(781) 619-9500

HASE 2

BURY DOWNTOWN PIELM STREET
MILLBURY, MA

Desc.

Designed K...

Drawn K...

Reviewed M.N.

Scale

Designed K.A.

Drawn K.A.

Reviewed M.M.

Scale

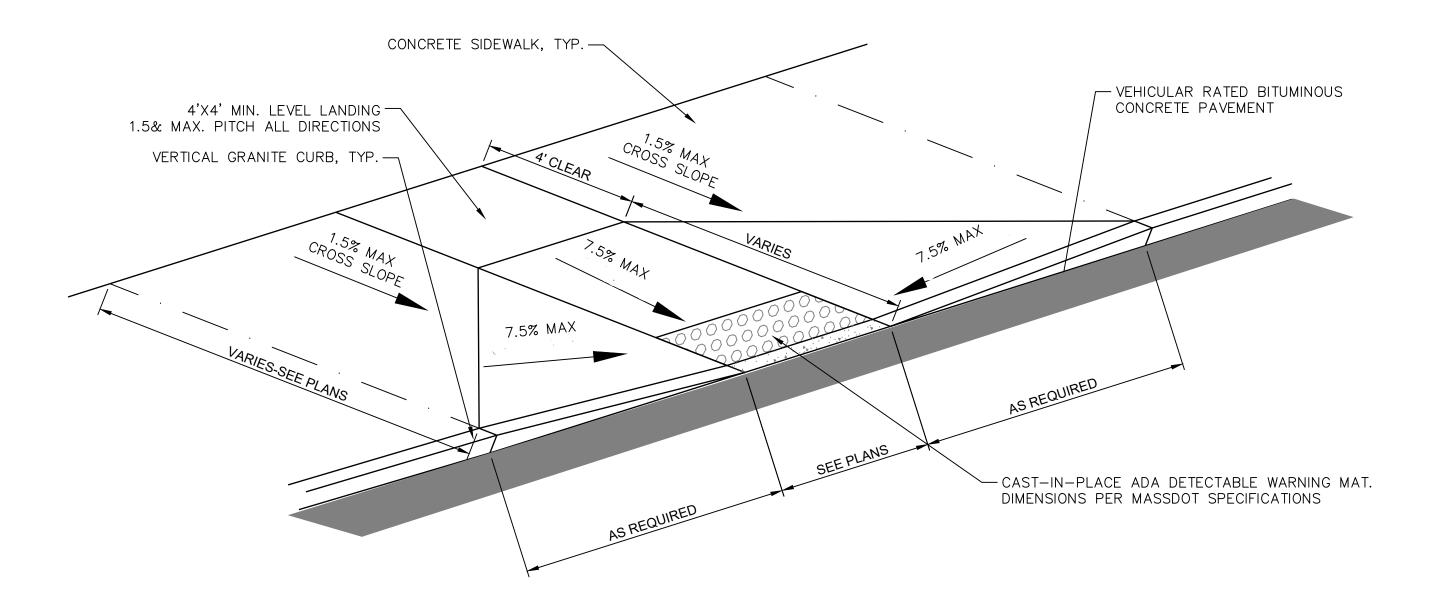
Project No. 2001478

Date FEBRUARY, 2022

CAD File:
DN200147801

SITE DETAILS

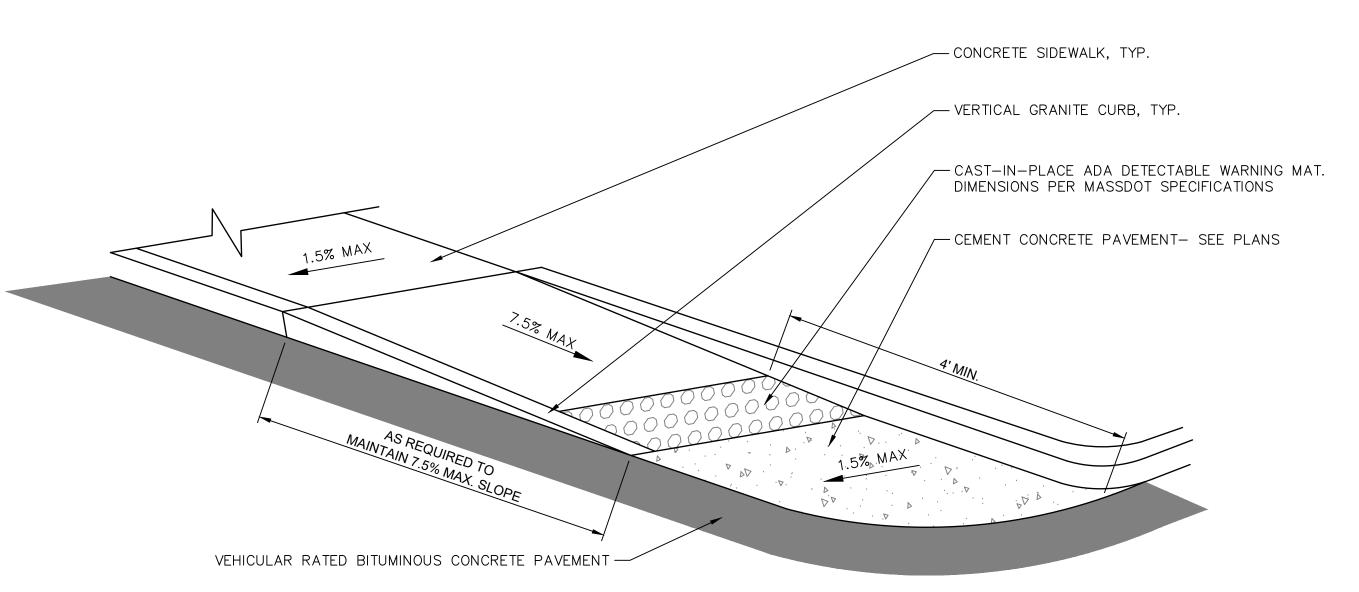
SITE DETAILS



1. CONTRACTOR SHALL PROVIDE CLEAN AND STRAIGHT SAWCUT LINES AT LIMIT OF REMOVAL OF EXISTING ASPHALT PAVEMENT TO REMAIN. CONTRACTOR SHALL VERIFY LIMITS OF EXISTING ASPHALT PAVEMENT

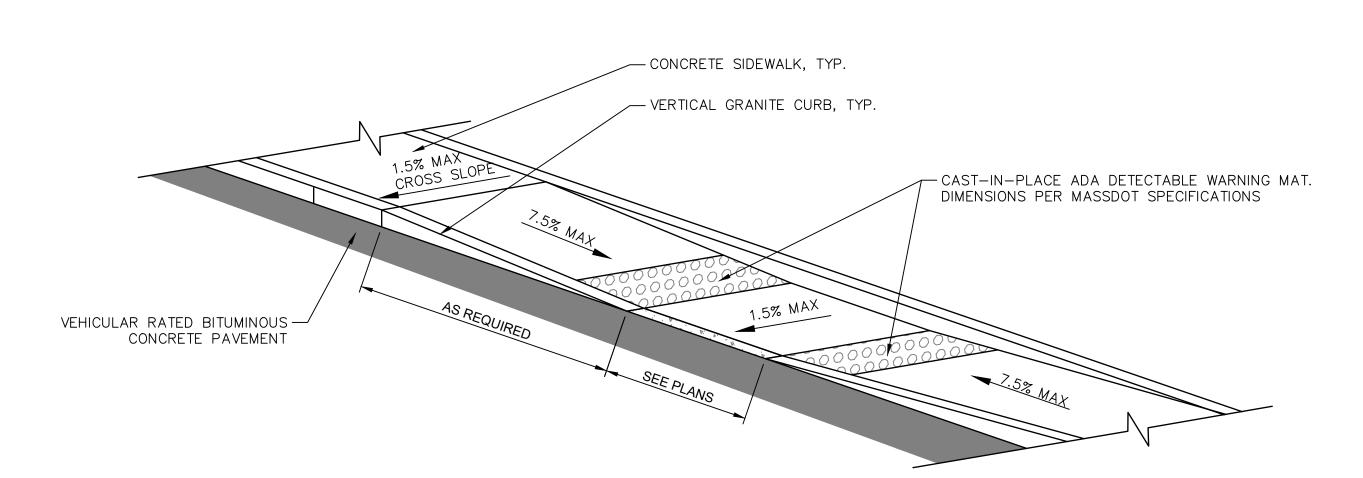
- REMOVAL PRIOR TO COMMENCING DEMOLITION 2. CONTRACTOR SHALL REMOVE AND REPLACE ASPHALT PAVEMENT, GRAVEL BORROW, AND SUBGRADE NECESSARY
- TO CONSTRUCT A CLEAN, SMOOTH TRANSITION AT ADA CURB CUT.
- 3. INSTALL DETECTABLE WARNING PANEL ACCORDING TO MASSDOT DWG M/E 107.6.5R 4. RAMP SHALL COMPLY WITH MA 521 CMR AND TOWN OF MILLBURY STANDARDS.

ADA CURB RAMP TYPE A



- 1. CONTRACTOR SHALL PROVIDE CLEAN AND STRAIGHT SAWCUT LINES AT LIMIT OF REMOVAL OF EXISTING
- ASPHALT PAVEMENT TO REMAIN. CONTRACTOR SHALL VERIFY LIMITS OF EXISTING ASPHALT PAVEMENT REMOVAL PRIOR TO COMMENCING DEMOLITION
- 2. CONTRACTOR SHALL REMOVE AND REPLACE ASPHALT PAVEMENT, GRAVEL BORROW, AND SUBGRADE NECESSARY TO CONSTRUCT A CLEAN, SMOOTH TRANSITION AT ADA CURB CUT.
- 3. INSTALL DETECTABLE WARNING PANEL ACCORDING TO MASSDOT DWG M/E 107.6.5R
- 4. RAMP SHALL COMPLY WITH MA 521 CMR AND TOWN OF MILLBURY STANDARDS.

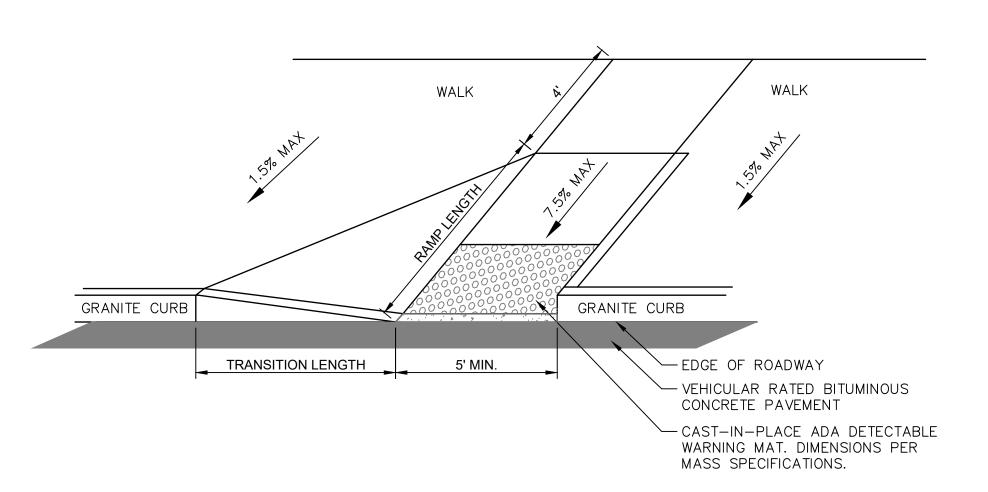
ADA CURB RAMP TYPE C



1. CONTRACTOR SHALL PROVIDE CLEAN AND STRAIGHT SAWCUT LINES AT LIMIT OF REMOVAL OF EXISTING ASPHALT PAVEMENT TO REMAIN. CONTRACTOR SHALL VERIFY LIMITS OF EXISTING ASPHALT PAVEMENT REMOVAL PRIOR TO COMMENCING DEMOLITION

- 2. CONTRACTOR SHALL REMOVE AND REPLACE ASPHALT PAVEMENT, GRAVEL BORROW, AND SUBGRADE NECESSARY
- TO CONSTRUCT A CLEAN, SMOOTH TRANSITION AT ADA CURB CUT. 3. INSTALL DETECTABLE WARNING PANEL ACCORDING TO MASSDOT DWG M/E 107.6.5R
- 4. RAMP SHALL COMPLY WITH MA 521 CMR AND TOWN OF MILLBURY STANDARDS.

ADA CURB RAMP TYPE B



- 1. INSTALL DETECTABLE WARNING PANEL ACCORDING TO MASSDOT DWG M/E 107.6.5R
- 2. EXISTING GRANITE DRIVEWAY GRANITE CURB TRANSITION STONES SHALL BE REMOVED AND RESET OR REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER.
- 3. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF RAMP WITHIN TOLERANCES GIVEN UNLESS OTHERWISE
- NOTED. FAILURE TO MEET TOLERANCES, OR PRIOR NOTICE TO ENGINEER THAT TOLERANCES CANNOT BE MET,
- WILL REQUIRE RECONSTRUCTION TO PROPER TOLERANCES AT NO EXPENSE TO THE OWNER. 4. SLOPE TOLERANCE FOR CONSTRUCTION 0.5% \pm
- 5. RAMP SHALL COMPLY WITH MA 521 CMR AND TOWN OF MILLBURY STANDARDS.

ADA CURB RAMP TYPE D

220 Norwood Park South Norwood, MA 02062 (781) 619-9500

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DOWNTOWN I ELM STREET MILLBURY, MA

Scale Project No. FEBRUARY, 2022

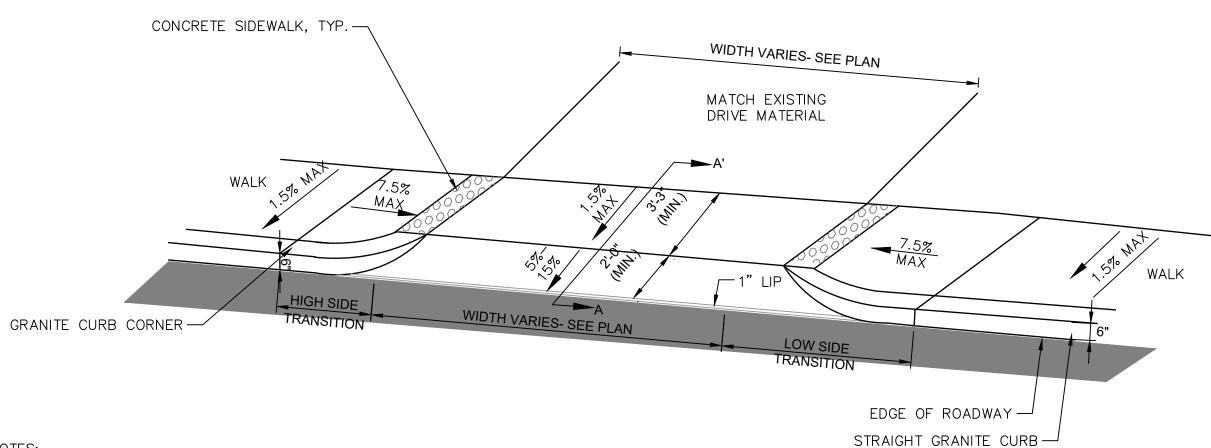
CAD File: DN200147801

SITE DETAILS

STRAIGHT GRANITE CURB —

- 1. INSTALL DETECTABLE WARINING PANEL ACCORDING TO MASSDOT DWG M/E 107.6.5R 2. EXISTING GRANITE DRIVEWAY GRANITE CURB TRANSITION STONES SHALL BE REMOVED AND RESET OR REMOVED
- AND REPLACED AS DIRECTED BY ENGINEER.
- 3. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF RAMP WITHIN TOLERANCES GIVEN UNLESS OTHERWISE NOTED. FAILURE TO MEET TOLERANCES, OR PRIOR TO NOTICE TO ENGINEER THAT TOLERANCES CANNOT BE MET, WILL REQUIRE RECONSTRUCTION TO PROPER TOLERANCES AT NO EXPENSE TO OWNER.
- 4. SEE GRADING PLAN FOR ACTUAL DIFFERENCES IN GRADE BREAK ELEVATION AT BOTTOM OF RAMP.
- 5. SLOPE TOLERANCE FOR CONSTRUCTION 0.5% \pm 6. RAMPS SHALL COMPLY WITH MA 521 CMR AND TOWN OF MILLBURY STANDARDS.

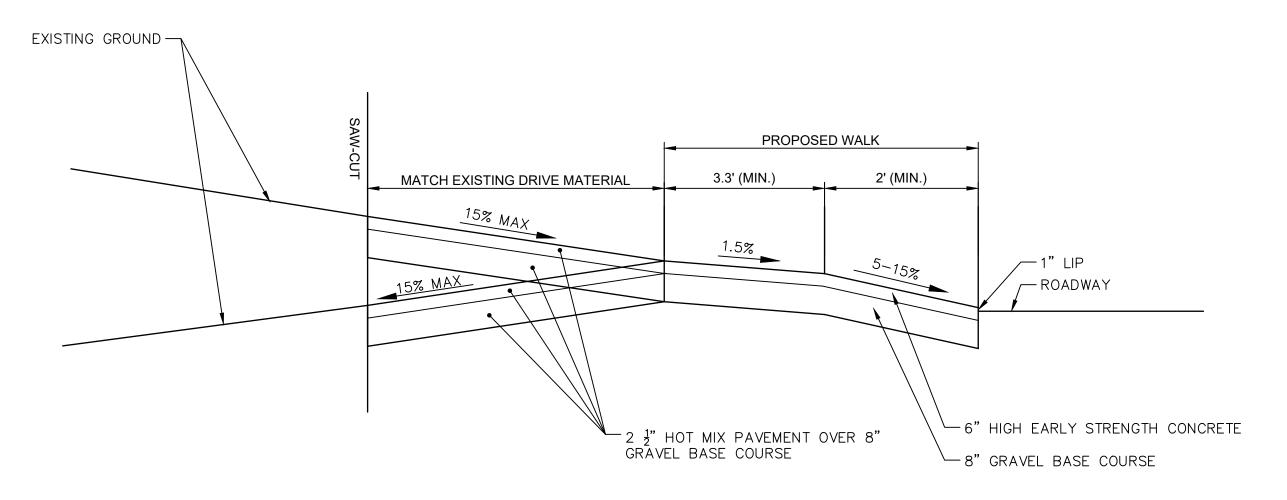
CONCRETE DRIVEWAY APRON WITH DRIVE STONES



- 1. INSTALL DETECTABLE WARINING PANEL ACCORDING TO MASSDOT DWG M/E 107.6.5R EXISTING GRANITE DRIVEWAY GRANITE CURB TRANSITION STONES SHALL BE REMOVED AND RESET OR REMOVED AND REPLACED AS DIRECTED BY ENGINEER.
- 3. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF RAMP WITHIN TOLERANCES GIVEN UNLESS OTHERWISE NOTED. FAILURE TO MEET TOLERANCES, OR PRIOR TO NOTICE TO ENGINEER THAT TOLERANCES CANNOT BE MET, WILL REQUIRE RECONSTRUCTION TO PROPER TOLERANCES AT NO EXPENSE TO OWNER.
- 4. SEE GRADING PLAN FOR ACTUAL DIFFERENCES IN GRADE BREAK ELEVATION AT BOTTOM OF RAMP.
- 5. SLOPE TOLERANCE FOR CONSTRUCTION 0.5% \pm 6. RAMPS SHALL COMPLY WITH MA 521 CMR AND TOWN OF MILLBURY STANDARDS.

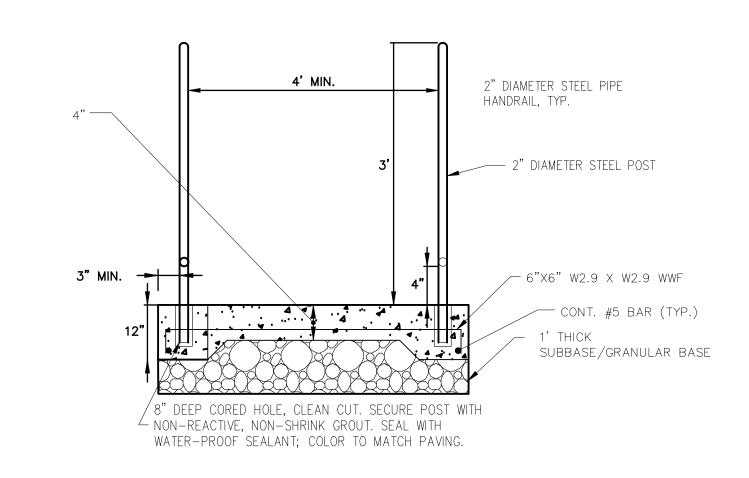
CONCRETE DRIVEWAY APRON WITH RADIUS CURBS

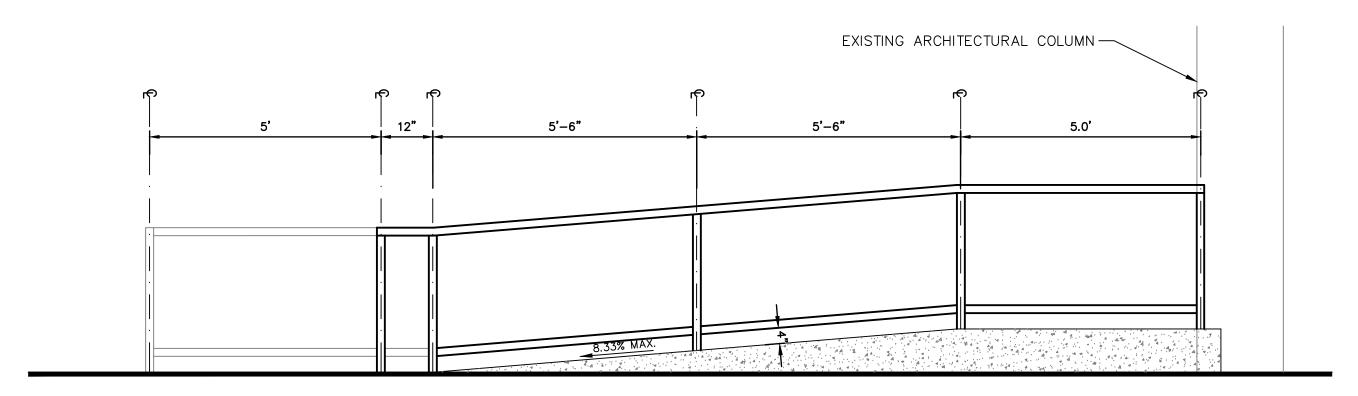
N.T.S.



- 1. USE 8" GRAVEL BASE COURSE FOR DRIVES WITH NO PAVED SURFACE. USE 6" CEMENT CONCRETE OVER 8"
- GRAVEL BASE COURSE FOR DRIVES WITH CEMENT CONCRETE.
- 2. DRIVEWAYS SHALL BE INSTALLED WITH EITHER A 2' OR 3' RADIUS GRANITE CURB CORNER. SEE LAYOUT PLAN FOR CURB RADII. CONTRACTOR SHALL CONTACT OWNER OR OWNERS REPRESENTATIVE IF ANY DISCREPANCIES
- 3. DRIVEWAY APRON TO BE CONSTRUCTED TO TOWN OF MILLBURY CONSTRUCTION STANDARD.

CONCRETE DRIVEWAY APRON CROSS SECTION A-A'





NOTES:

1. RAMP TO COMPLY WITH MA 521 CMR AND TOWN OF MILLBURY STANDARDS

CONCRETE RAMP AND HANDRAIL

N.T.S.

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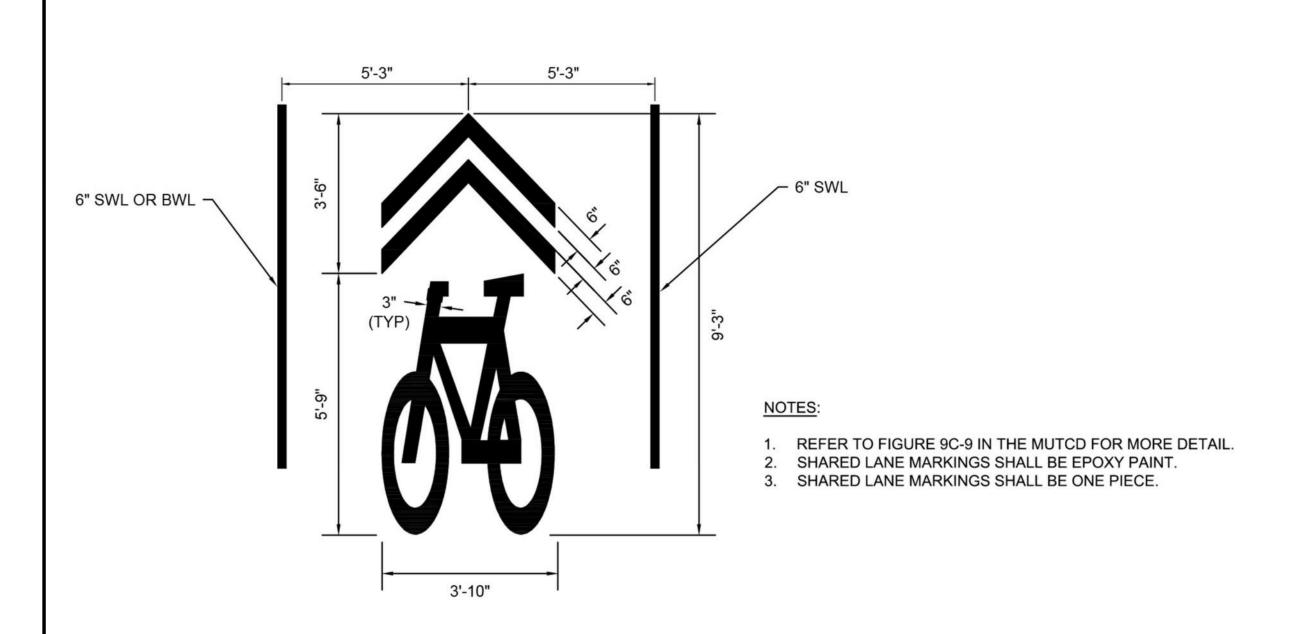
DOWNTOWN I ELM STREET MILLBURY, MA R

S

Scale

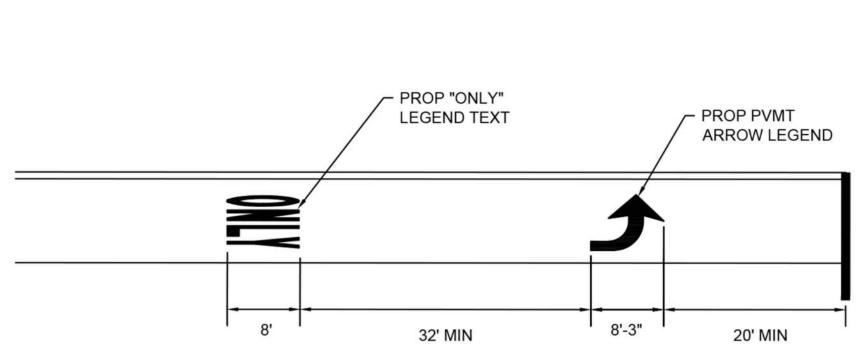
Project No. FEBRUARY, 2022 CAD File: DN200147801

SITE DETAILS

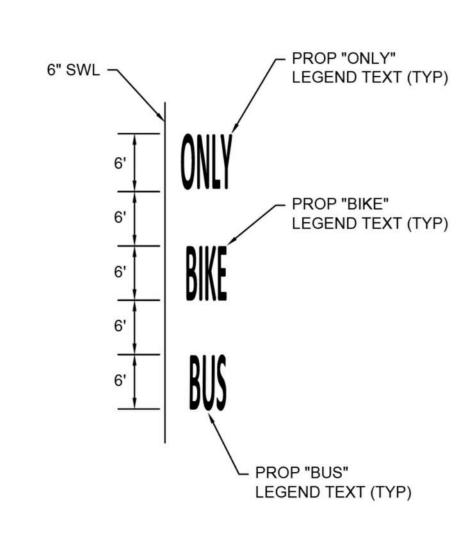


SHARED LANE PAVEMENT LEGEND DETAIL

NOT TO SCALE



PAVEMENT ARROW AND LEGEND DETAIL NOT TO SCALE

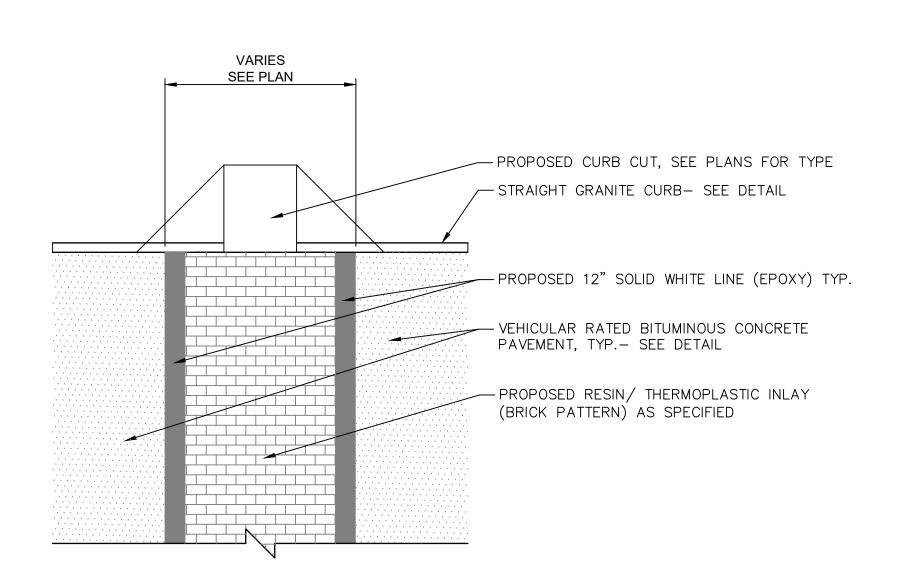


NOTE

 BUS/BIKE/ONLY PAVEMENT MARKINGS SHOULD BE CENTERED IN THE LANE UNLESS OTHERWISE NOTED.

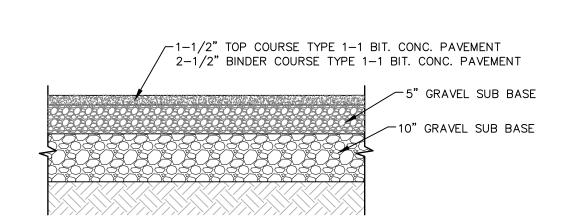
BUS BIKE ONLY PAVEMENT MARKING AND LEGEND DETAIL NOT TO SCALE

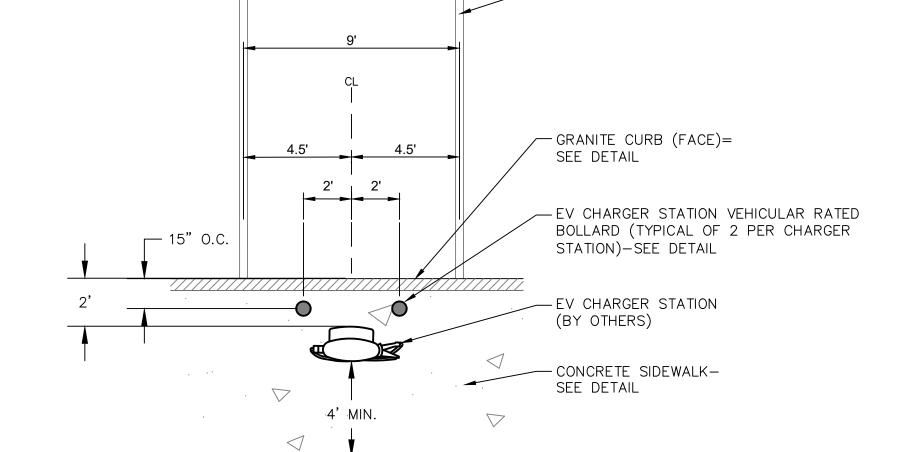
PARKING STRIPING





ENDURABLEND- BRICK RED HERRINGBONE PATTERN





EV CHARGING STATION AND BOLLARD LAYOUT

N.T.S.

2/9/2022, KALFRED, \\BLCOMPANIES.COM\DFS\PROJ\JOB\$20\14\2001478\DWG\DN2001478\

22 HA COMPANIES INC. THESE DRAWINGS SHALL MOT RESIDENCE VIA VAN DE CORDE OF MELLO STRANGED STREET OF MELLO STRANGED STREET OF MELLO STRANGED STREET OF MELLO S

RESIN CROSS WALK

N.T.S.

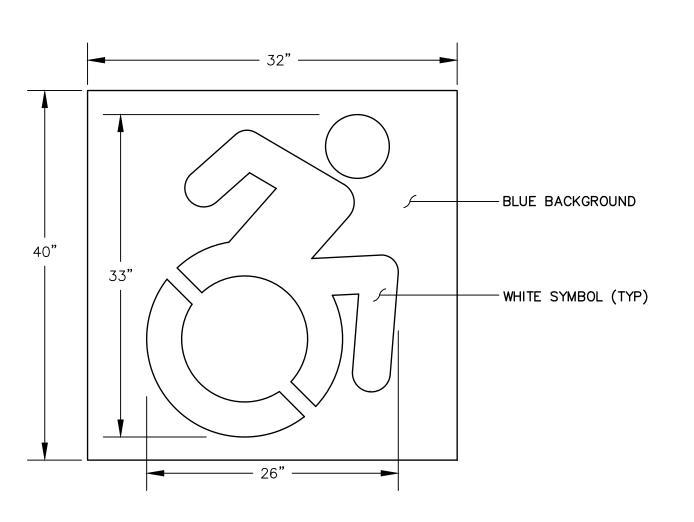
Designed K.A.
Drawn K.A.
Reviewed M.M.
Scale
Project No. 2001478
Date FEBRUARY, 2022
CAD File:
DN200147801
Title
SITE DETAILS

DN-06

220 Norwood Park South Norwood, MA 02062 (781) 619-9500

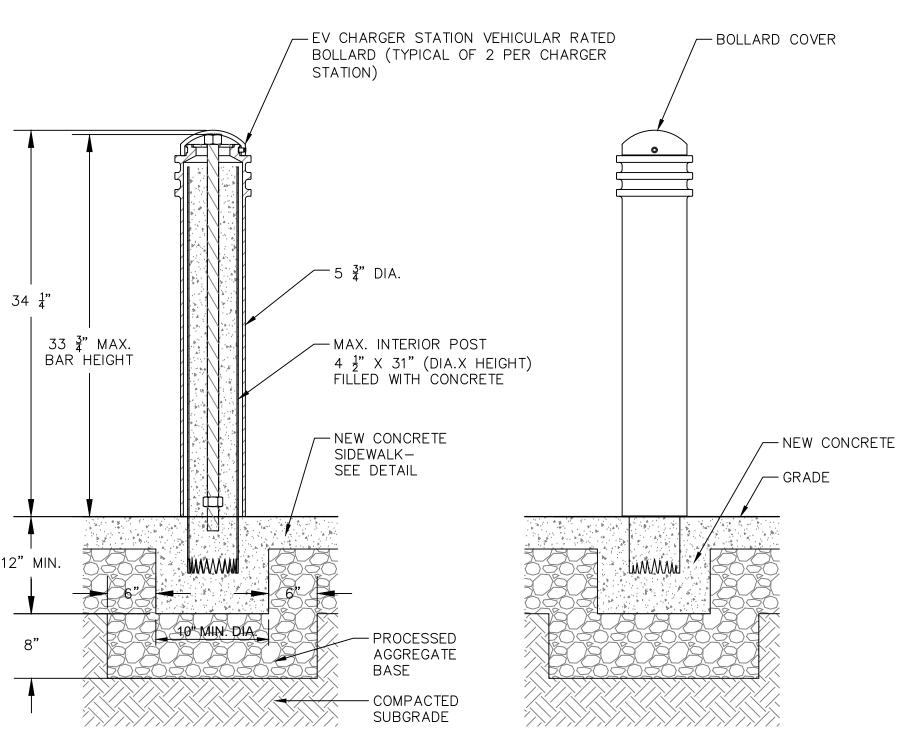
SE

DOWNTOWN PHAS ELM STREET MILLBURY, MA



NOTE: HANDICAP SYMBOL TO ADHERE TO STATE BUILDING CODE, LATEST EDITION

INTERNATIONAL HANDICAP SYMBOL



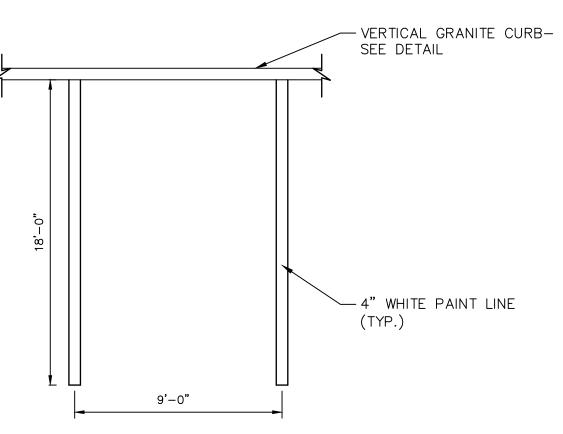
1. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

EV CHARGER STATION VEHICULAR RATED BOLLARD

MANUFACTURER: RELIANCE FOUNDRY (OR APPROVED EQUAL) PHONE: 1-877-789-3245

WEBSITE: WWW.RELIANCE-FOUNDRY.COM

PRODUCTS: R-7576 DECORATIVE BOLLARD COVER (COLOR: BLACK), ASTM C40 BOLLARD



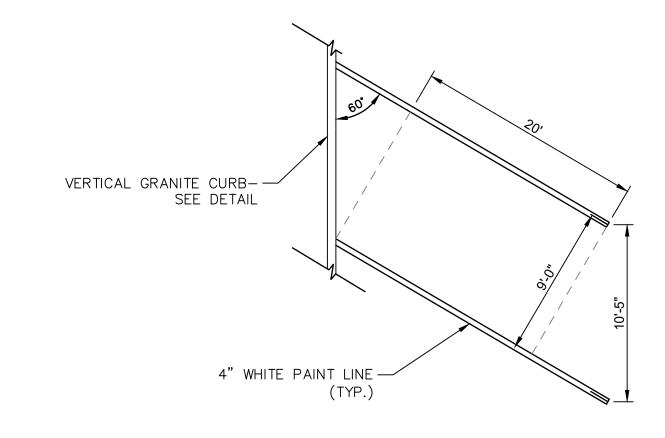
<u>PLAN VIEW</u>

FINISH GRADE-SEE PLAN

NOTE: 1. PROVIDE 2 COATS OF PAINT ON ALL SURFACES. 2. SEE PLAN FOR ACTUAL SPACE LOCATION AND DIMENSIONS.

TYPICAL PARKING SPACE DETAIL

CONCRETE IN BOLLARD TUBE -



NOTE: 1. PROVIDE 2 COATS OF PAINT ON ALL SURFACES. 2. SEE PLAN FOR ACTUAL SPACE LOCATION AND DIMENSIONS.

60 DEGREE ANGLED PARKING

VEHICULAR RATED BOLLARD AT KIOSK

MANUFACTURER: RELIANCE FOUNDRY (OR APPROVED EQUAL) PHONE: 1-877-789-3245 WEBSITE: WWW.RELIANCE-FOUNDRY.COM PRODUCTS: R-7533 DECORATIVE BOLLARD COVER (COLOR: BLACK), ASTM C40 BOLLARD



1. REFER TO SPECIFICATIONS FOR PRODUCT

2. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

SITE DETAILS

Designed

Project No.

CAD File: DN200147801

DN-07

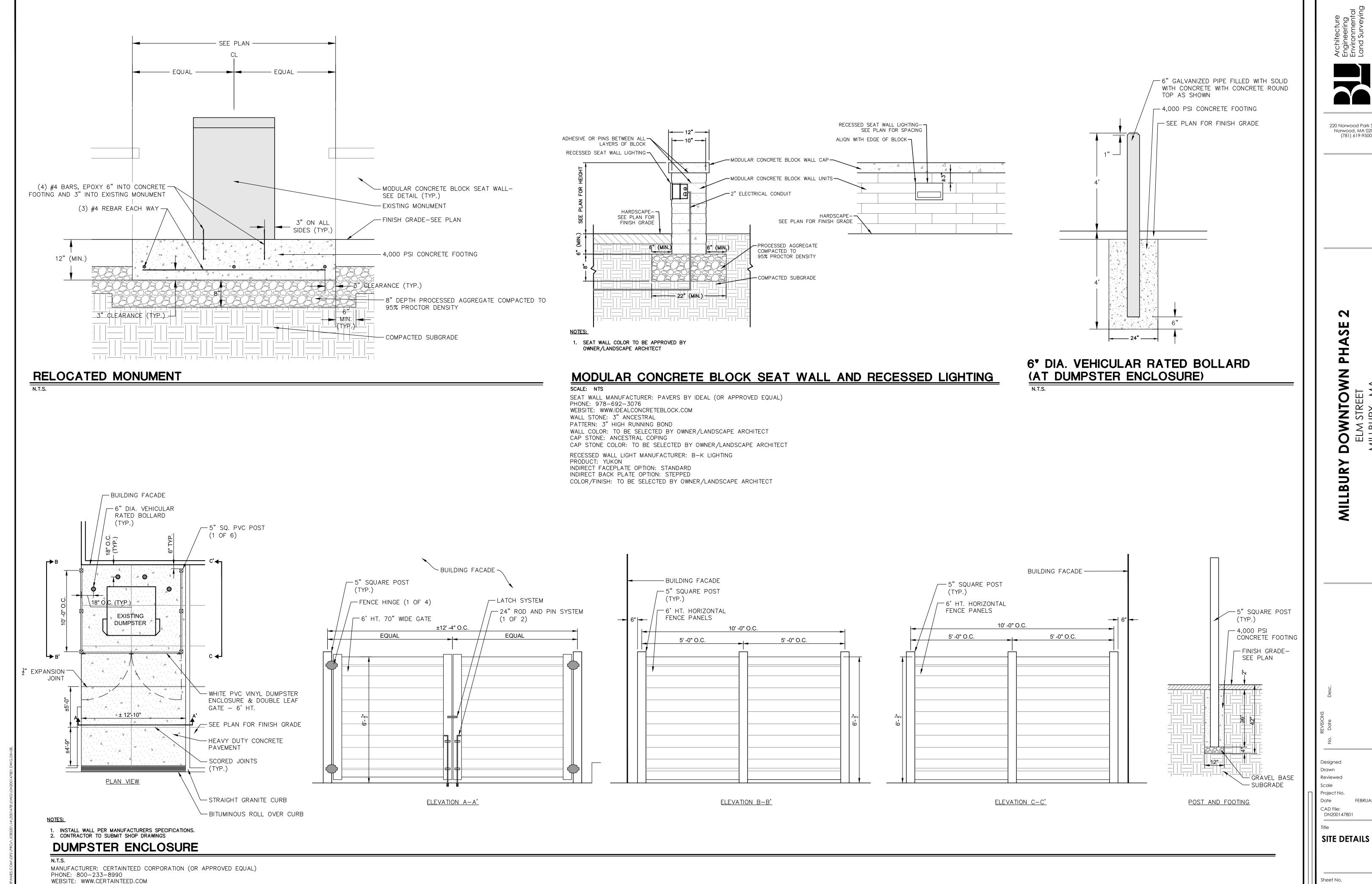
2001478

FEBRUARY, 2022

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SE

— 4000 PSI CONCRETE FOOTING 1" EXPANSION JOINT —
WHERE CONCRETE WALK
ABUTS CONCRETE FOOTING MASONRY BLOCKS TO ELEVATE —/
BOLLARD OFF SUBGRADE 1. INSTALL PER MANUFACTURER'S SPECIFICATIONS. 2. CONTRACTOR TO SUBMIT SHOP DRAWING FOR ENGINEER/TOWN APPROVAL. **BENCH**



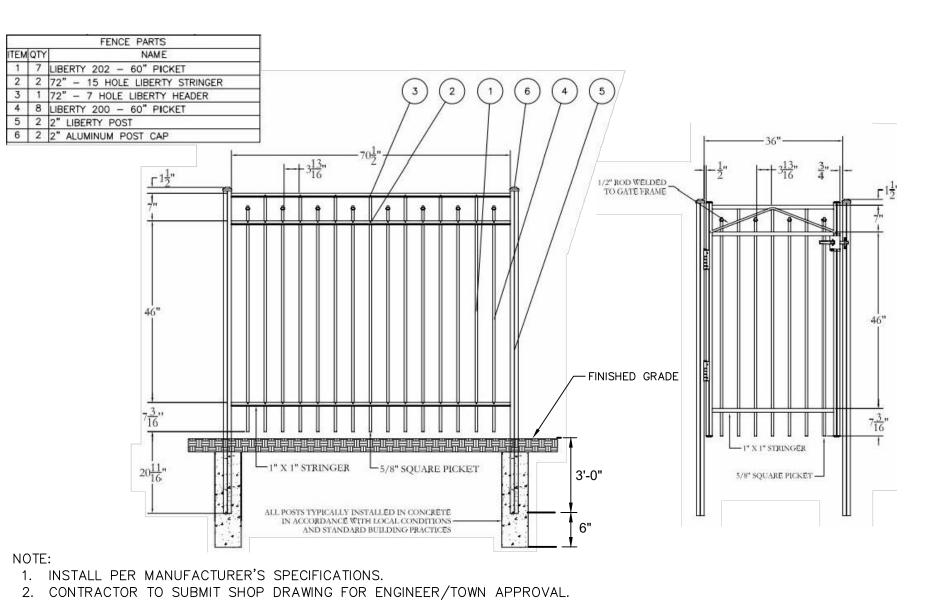
220 Norwood Park South Norwood, MA 02062 (781) 619-9500 S DOWNTOWN F ELM STREET MILLBURY, MA Designed Scale Project No. 2001478 FEBRUARY, 2022 Date

DN-08

🔾 2022 BL COMPANIES, INC. THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF BL COMPANIES.

PRODUCTS: 6' HT. BROOKLINE FENCE

COLOR: WHITE

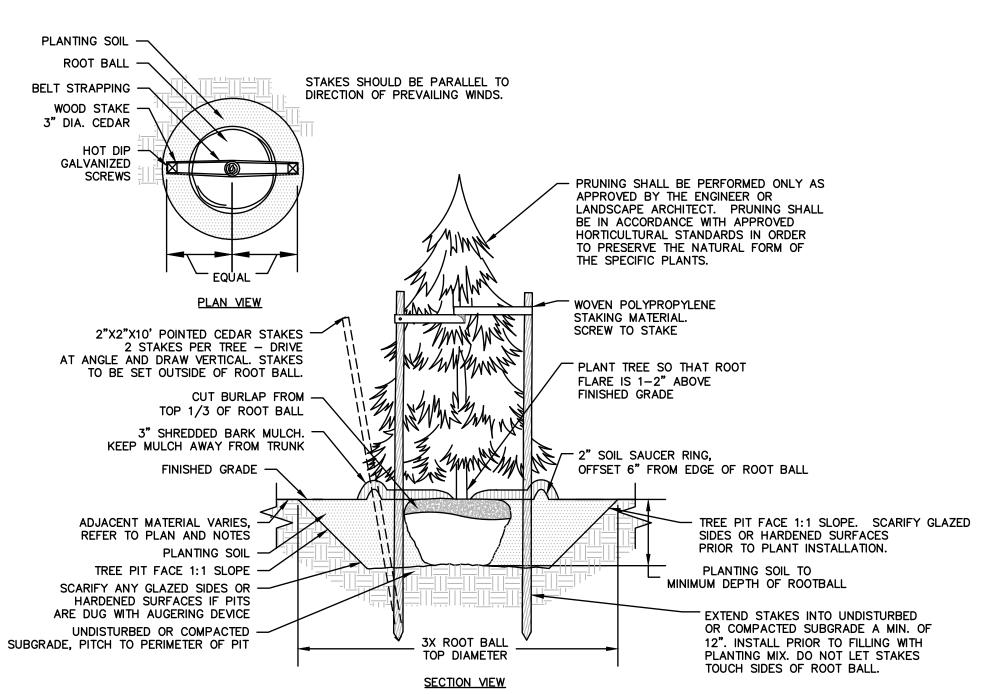


DECORATIVE METAL FENCE

MANUFACTURER: JERITH MANUFACTURING CO., INC (OR APPROVED EQUAL) ADDRESS: 14400 MCNULTY ROAD, PHILADELPHIA, PA 19154 PHONE: 800-344-2242 WEBSITE: WWW.JERITH.COM

FENCE STYLE: LIBERTY FENCE #200; 60" HEIGHT

GATE STYLE: LIBERTY GATE #200 60" HEIGHT X 36" WIDE FENCE AND GATE COLOR: PÖWDERCOATED BLACK

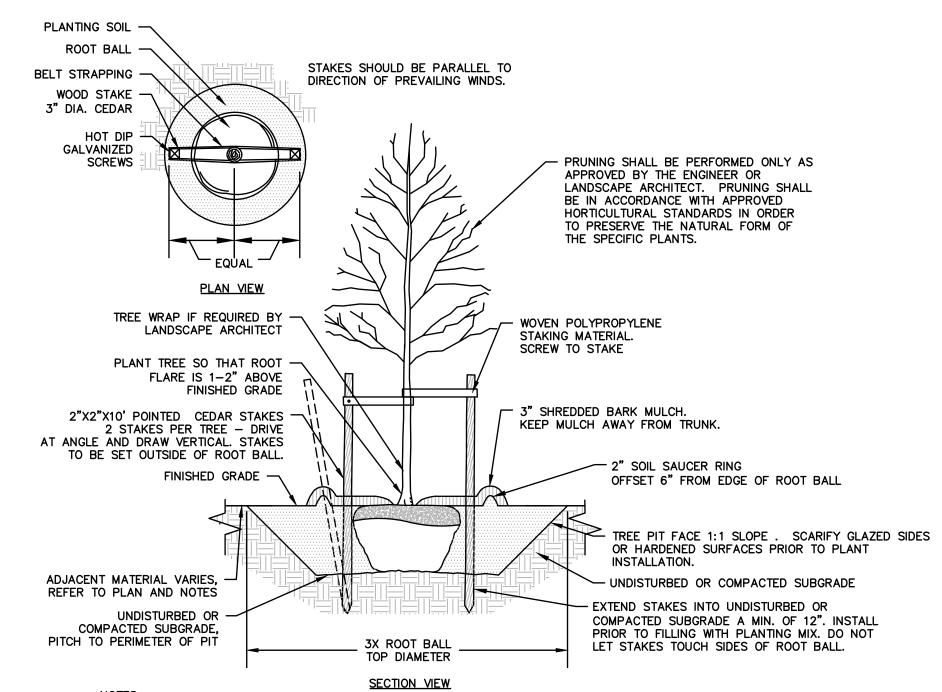


1. STAKING FOR TREES ON 4:1 SLOPES OR LESS TO BE PERFORMED AT CONTRACTOR'S DISCRETION.

- 2. WOVEN POLYPROPYLENE STAKING MATERIAL SHALL BE DEEPROOT ARBORTIE (GREEN) OR APPROVED EQUIVALENT. MATERIAL SHALL BE LOOPED AROUND TREE THROUGH EACH OTHER, TWISTED, AND SECURED TO THE STAKE. INSTALL SPECIFIED MATERIAL IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS.
- 3. BEFORE IN HOLE, REMOVE BOTTOM OF CAGE. ONCE IN HOLE, REMOVE REST OF CAGE FROM ROOT BALL. REMOVE TWINE AND BURLAP FROM TOP 1/3 OF ROOT BALL - SCORE REMAINING 2/3 OF BURLAP. IF BURLAP IS SYNTHETIC OR HAS BEEN TREATED WITH ANTI-DESSICENT, COMPLETELY REMOVE IT FROM ROOT BALL.

EVERGREEN TREE PLANTING

N.T.S

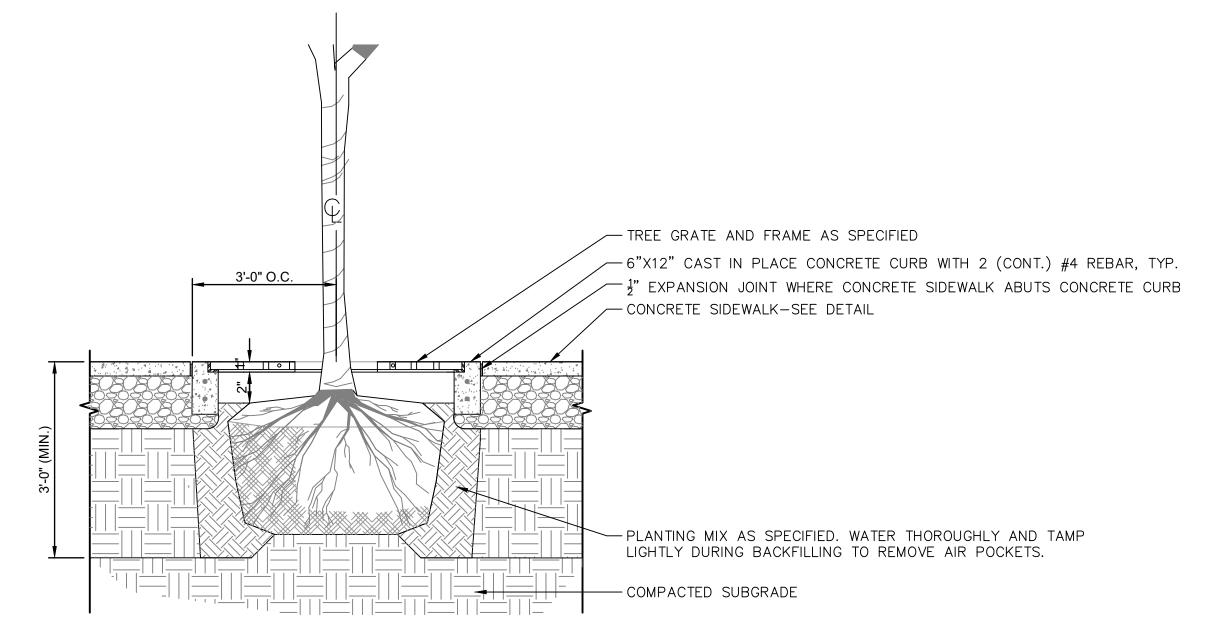


1. STAKING FOR TREES ON 4:1 SLOPES OR LESS THAN 3" CALIPER TO BE PERFORMED AT CONTRACTORS DISCRETION.

- 2. WOVEN POLYPROPYLENE STAKING MATERIAL SHALL BE DEEPROOT ARBORTIE (GREEN) OR APPROVED EQUIVALENT. MATERIAL SHALL BE LOOPED AROUND TREE THROUGH EACH OTHER, TWISTED, AND SECURED TO THE STAKE. INSTALL SPECIFIED MATERIAL IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS.
- 3. BEFORE IN HOLE, REMOVE BOTTOM OF CAGE. ONCE IN HOLE, REMOVE REST OF CAGE FROM ROOT BALL. REMOVE TWINE AND BURLAP FROM TOP 1/3 OF ROOT BALL - SCORE REMAINING 2/3 OF BURLAP. IF BURLAP IS SYNTHETIC OR HAS BEEN TREATED WITH ANTI-DESSICANT, COMPLETELY REMOVE IT FROM ROOT BALL.

DECIDUOUS TREE PLANTING

N.T.S

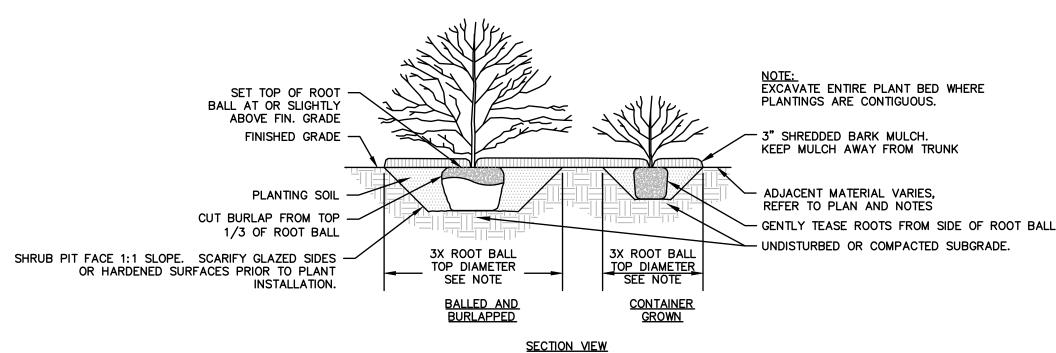


-6" LOAM TOP SOIL AMEND SOIL MIX - SCARIFIED SUBGRADE

- HYDROMULCH SEED

TREE GRATE

LOAM AND SEED, TYP.



SPACING AS SPECIFIED LOOSEN CIRCLING ROOTS OF CONTAINER **GROWN PLANTS** 3" SHREDDED BARK MULCH. FINISHED GRADE ADJACENT MATERIAL VARIES, REFER TO PLAN AND NOTES 12" MINIMUM PLANTING SOIL SCARIFIED SUBGRADE UNDISTURBED OR COMPACTED SUBGRADE

SECTION VIEW

GROUNDCOVER/PERENNIAL PLANTING N.T.S.

KEEP BARE ROOT PLANTS MOIST AND SHAPED

DURING INSTALLATION

-FINISH GRADE -3" DEPTH BARK MULCH — HARDSCAPE TOP OF MULCH TO BE 1/2" TO 1" BELOW HARDSCAPE EDGE

— SUBGRADE

- PLANTING SOIL MIX AS SPECIFIED

MULCH PLANT BED

SHRUB PLANTING, TYP.

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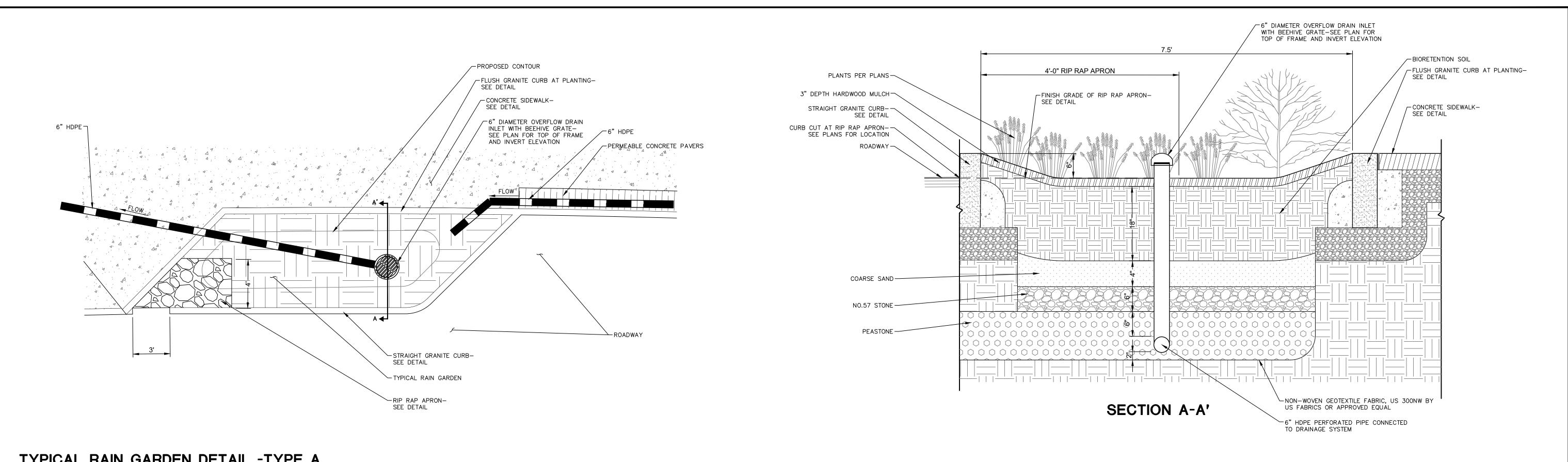
> DOWNTOWI ELM STREET MILLBURY, MA

SCHEDULE FOR SPACING OR PLANT AS DIRECTED BY LANDSCAPE ARCHITECT

Designed Drawn Reviewed Scale Project No. FEBRUARY, 2022 Date CAD File:

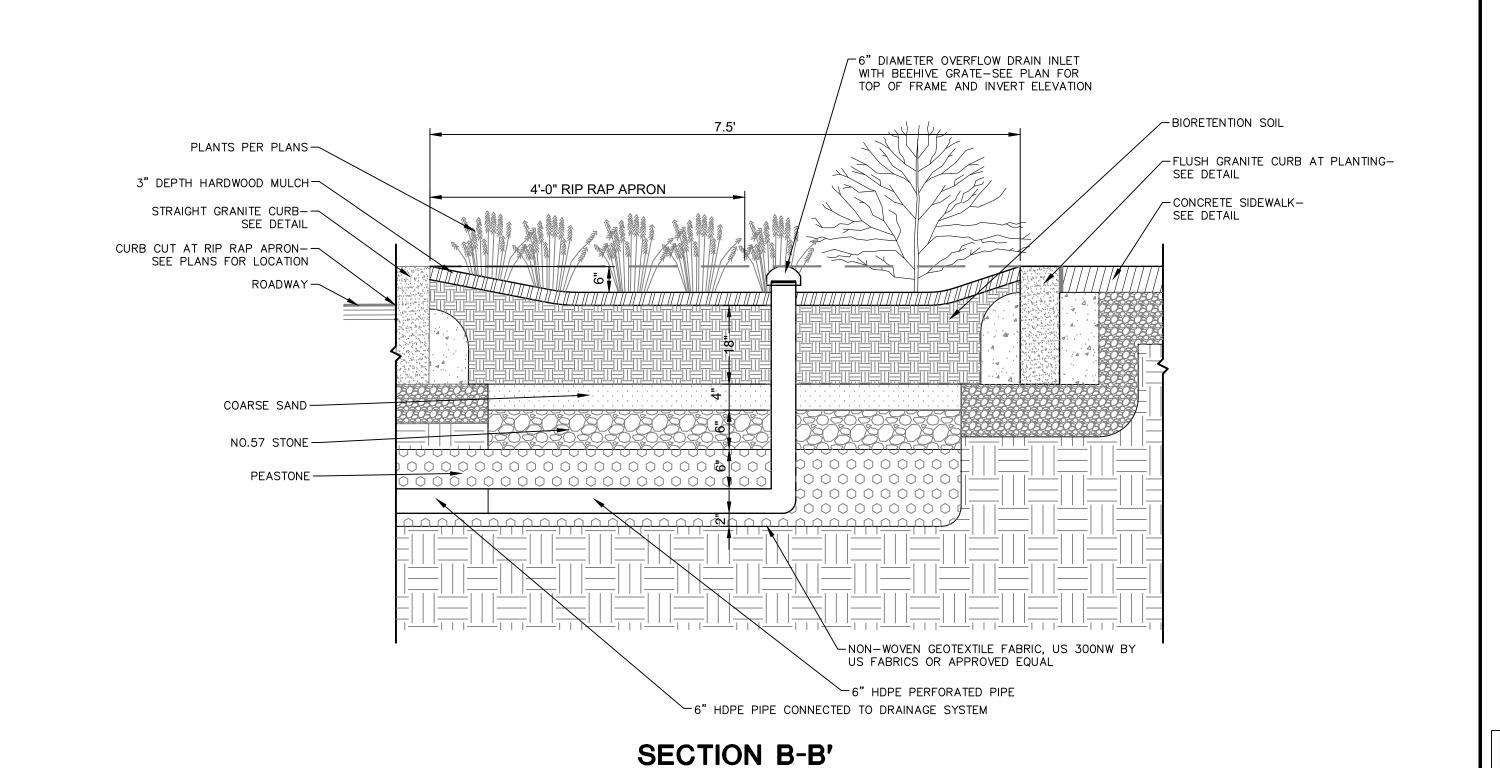
DN200147801 SITE LANDSCAPE

DETAILS



TYPICAL RAIN GARDEN DETAIL -TYPE A

∕-6"HDPE ROADWAY — -TYPICAL RAIN GARDEN -STRAIGHT GRANITE CURB-_RIP RAP APRON-(TYP.) SEE DETAIL CONCRETE SIDEWALK-SEE DETAIL 6" DIAMETER OVERFLOW DRAIN— INLET WITH BEEHIVE GRATE— SEE PLAN FOR TOP OF FRAME AND INVERT ELEVATION PROPOSED CONTOUR FLUSH GRANITE CURB AT PLANTING-SEE DETAIL



TYPICAL RAIN GARDEN DETAIL -TYPE B

N.T.S.

DN-10

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PH DOWNTOWN F ELM STREET MILLBURY , MA

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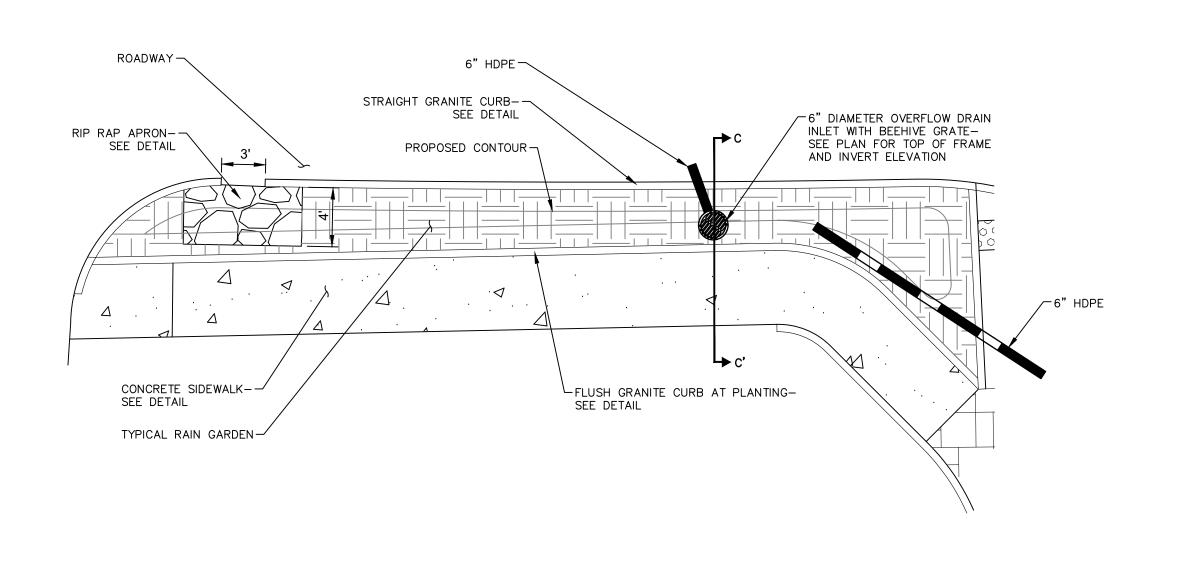
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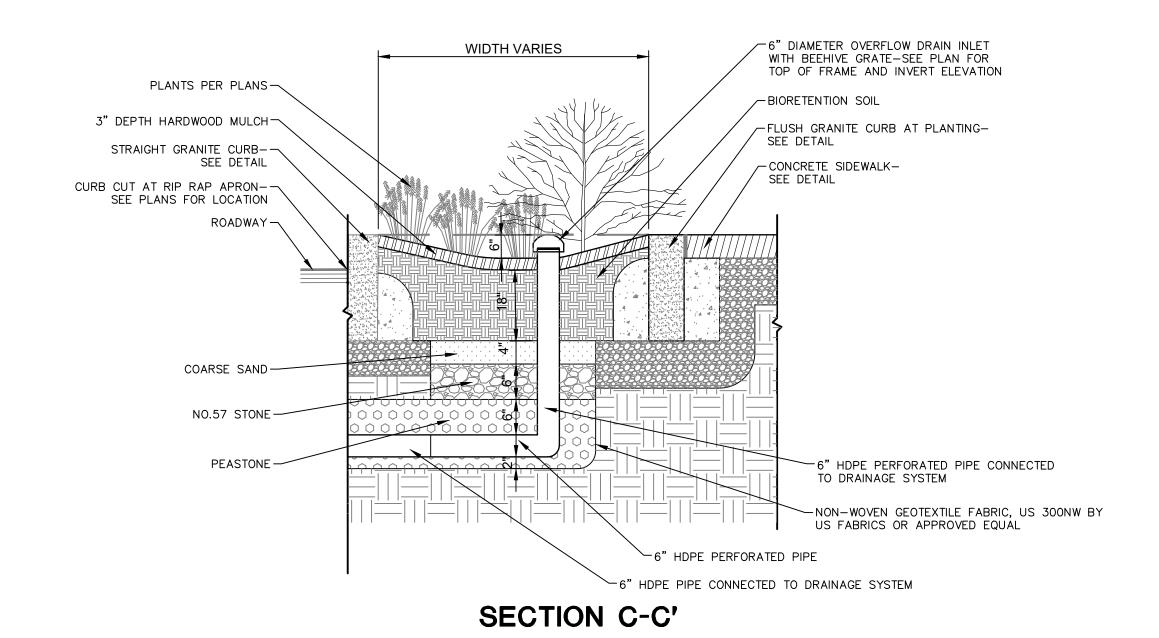
2001478 FEBRUARY, 2022

CAD File: DN200147801

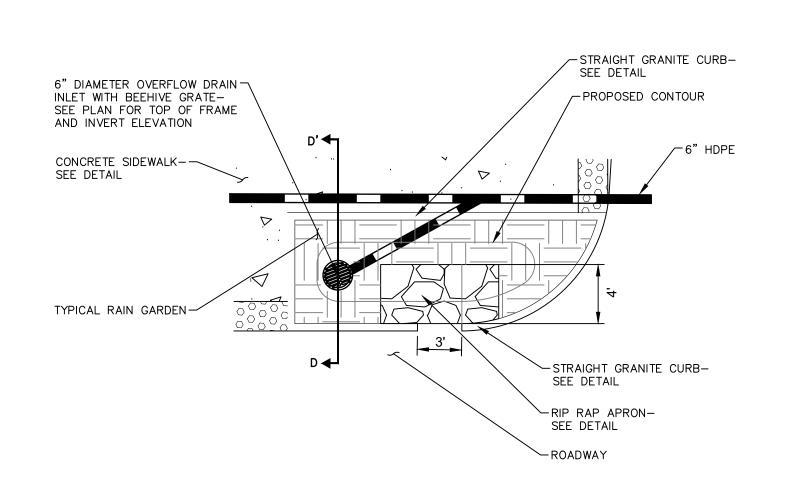
LANDSCAPE

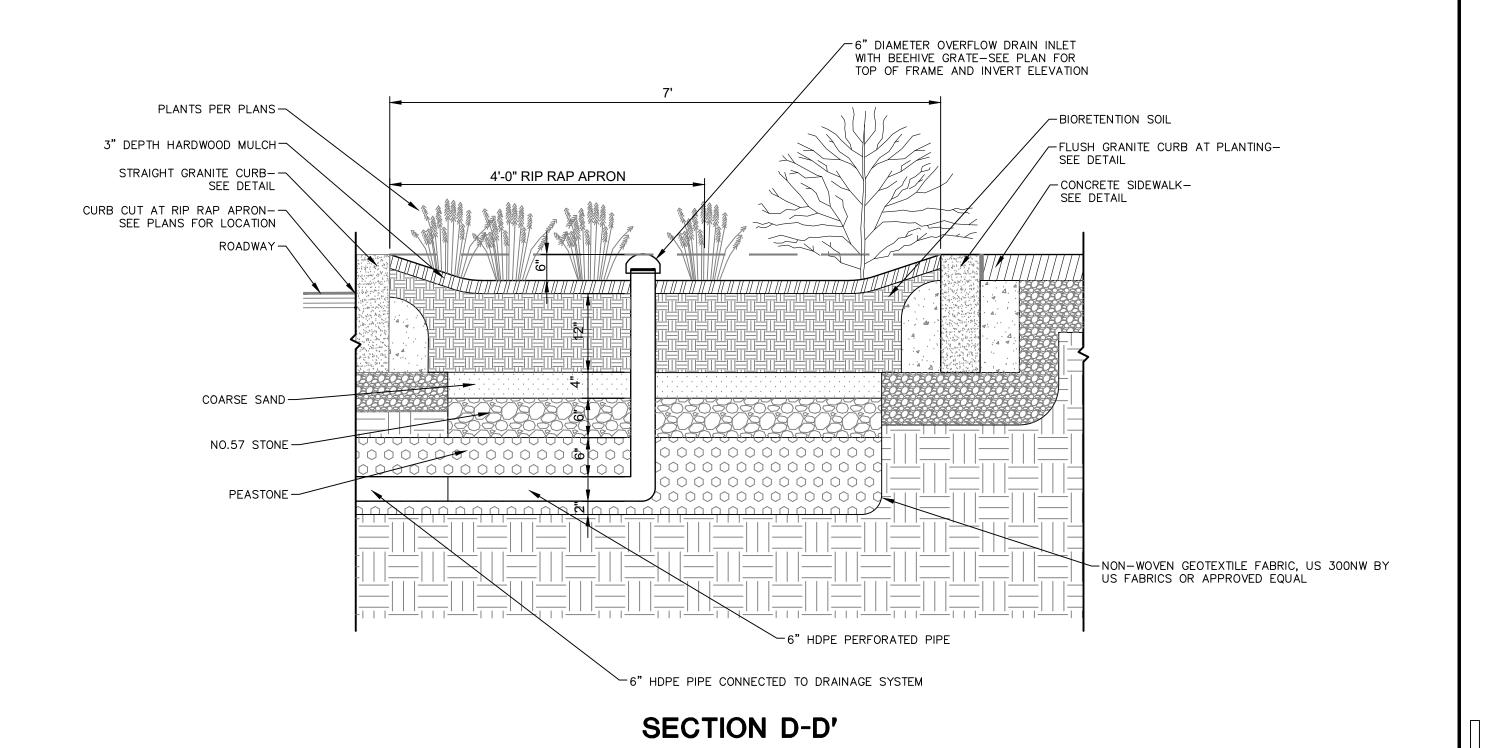
DETAILS





TYPICAL RAIN GARDEN DETAIL -TYPE C





TYPICAL RAIN GARDEN DETAIL -TYPE D

N.T.S.

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SE

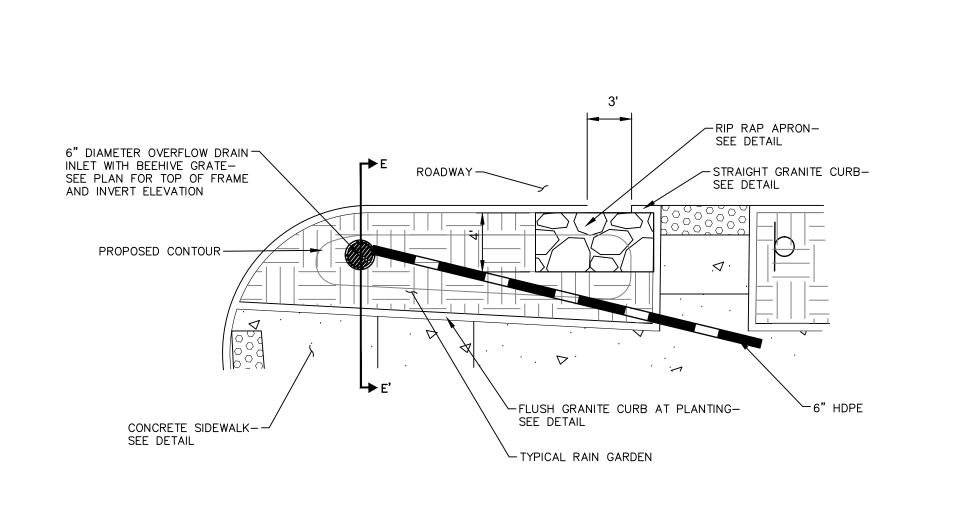
DOWNTOWN F ELM STREET MILLBURY , MA

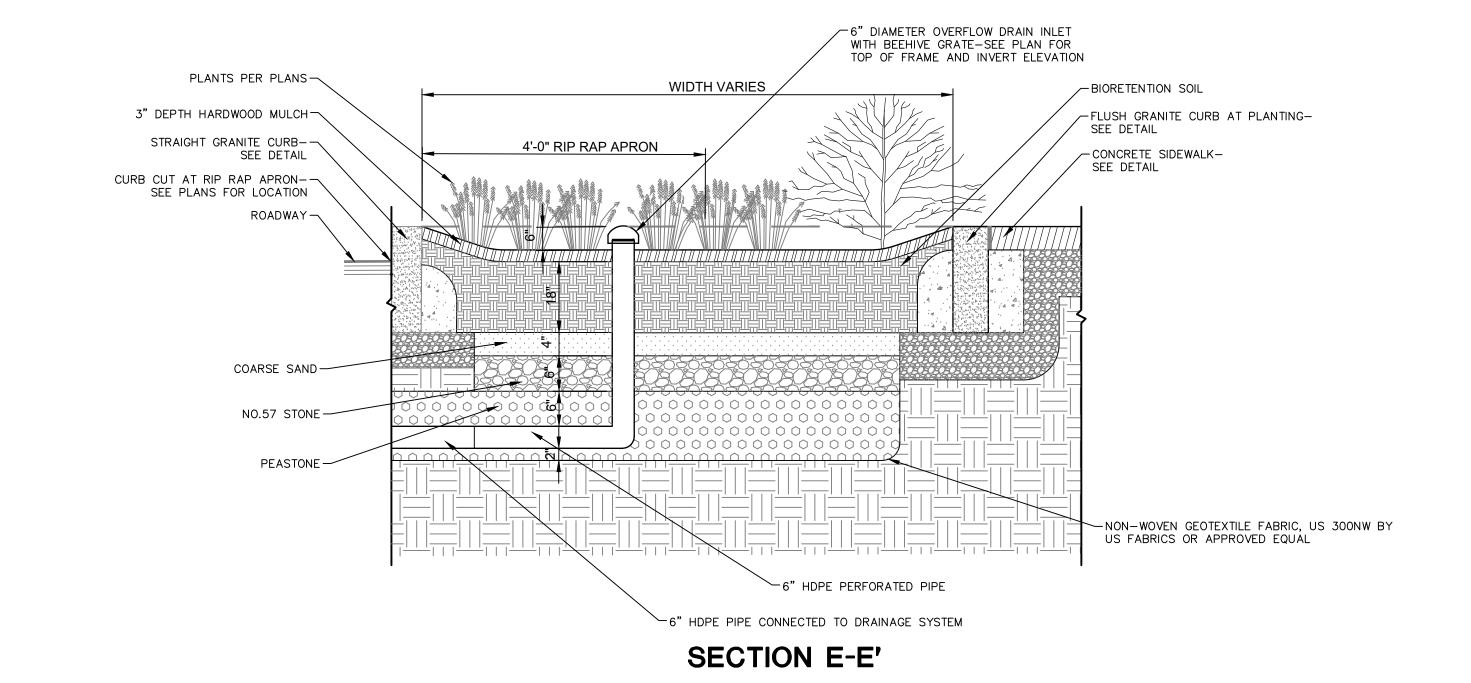
Designed Drawn M.M. Reviewed Scale 2001478 Project No.

FEBRUARY, 2022 Date CAD File:

DN200147801

LANDSCAPE DETAILS





TYPICAL RAIN GARDEN DETAIL -TYPE E

EXISTING RETAINING WALL-CONCRETE SIDEWALK-SEE DETAIL FLUSH GRANITE CURB AT PLANTING-SEE DETAIL / 3" DEPTH HARDWOOD MULCH 6" DIAMETER OVERFLOW DRAIN INLET WITH BEEHIVE GRATE- SEE PLAN FOR TOP OF FRAME AND INVERT ELEVATION PLANTS PER PLANS -BIORETENTION SOIL -6" DIAMETER OVERFLOW DRAIN INLET WITH BEEHIVE GRATE-SEE PLAN FOR EXISTING RETAINING WALL — RIVER STREET RAINGARDEN-PROPOSED CONTOUR--SEE GRADING PLAN FLUSH GRANITE CURB AT PLANTING -EXISTING DRAINAGE PIPE \FLOW TO DRAINAGE SYSTEM COARSE SAND — EXISTING UNDISTURBED SUBGRADE NO.57 STONE ---FLOW TO RAIN GARDEN PEASTONE — 6"HDPE─ CONCRETE SIDEWALK 6" HDPE PIPE CONNECTED TO DRAINAGE SYSTEM NON-WOVEN GEOTEXTILE FABRIC, US 300NW BY US FABRICS OR APPROVED EQUAL SECTION A-A'

RIVER STREET RAIN GARDEN DETAIL

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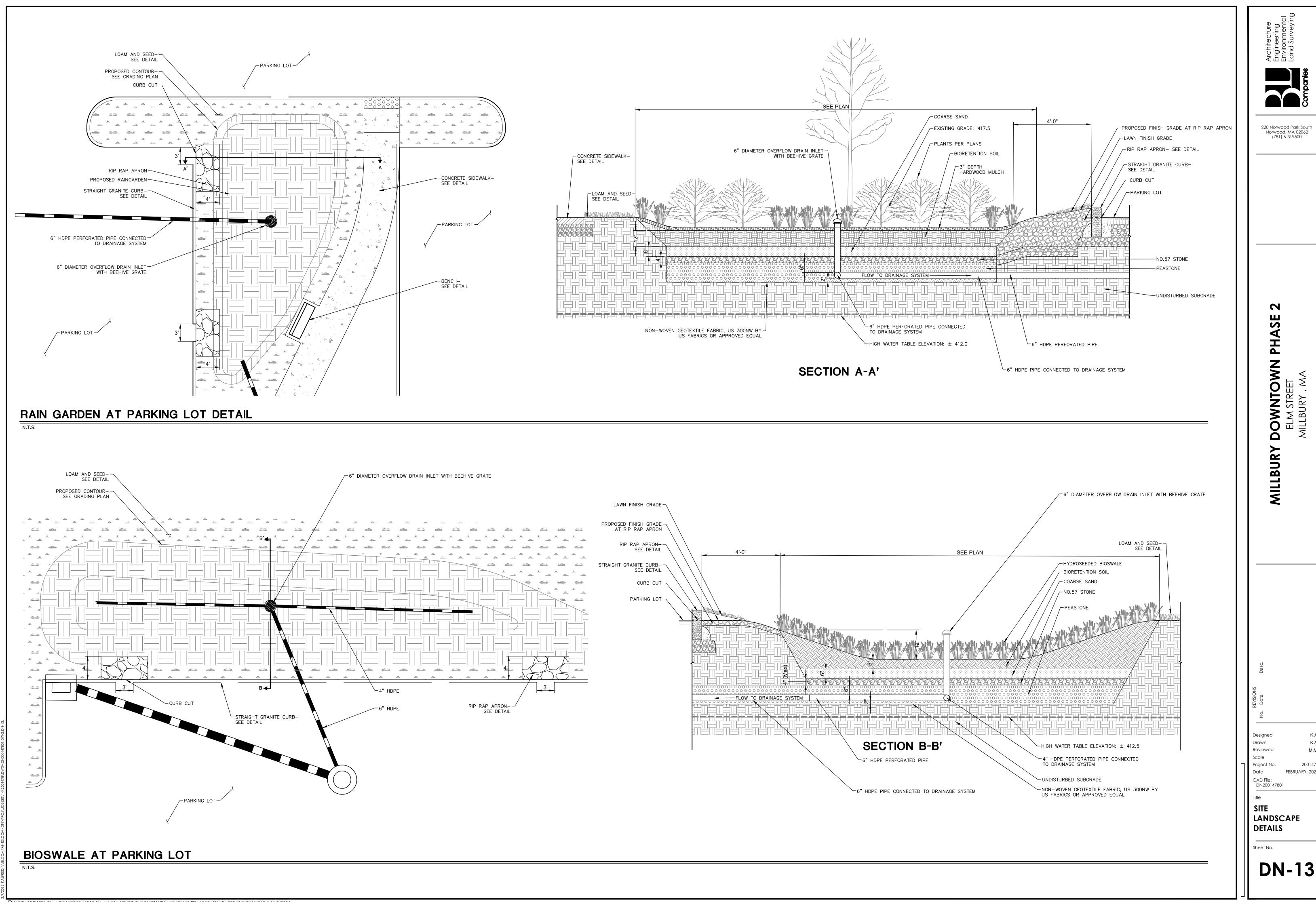
SE DOWNTOWN F ELM STREET MILLBURY, MA

Designed Drawn Reviewed

Scale Project No. FEBRUARY, 2022 CAD File:

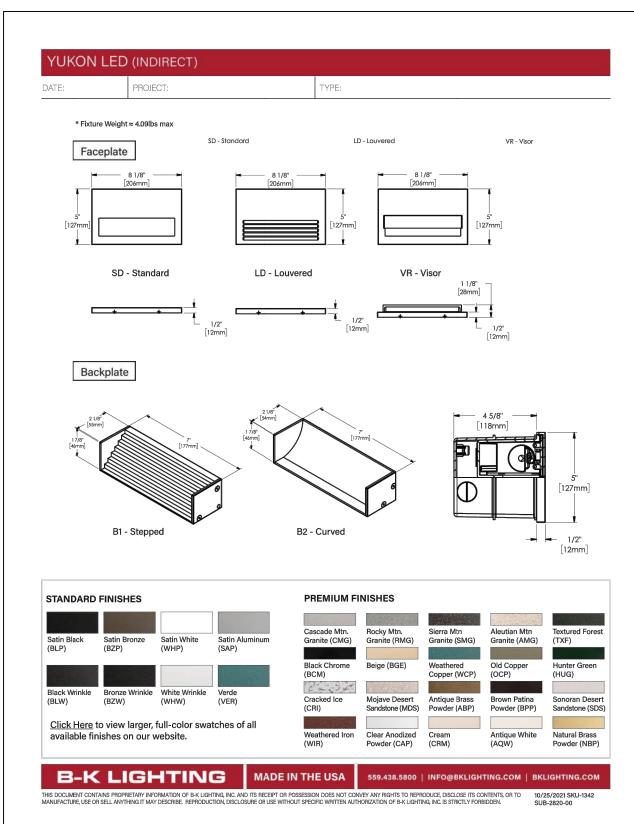
DN200147801

LANDSCAPE DETAILS



FEBRUARY, 2022





1. INSTALL PER MANUFACTURER'S SPECIFICATIONS

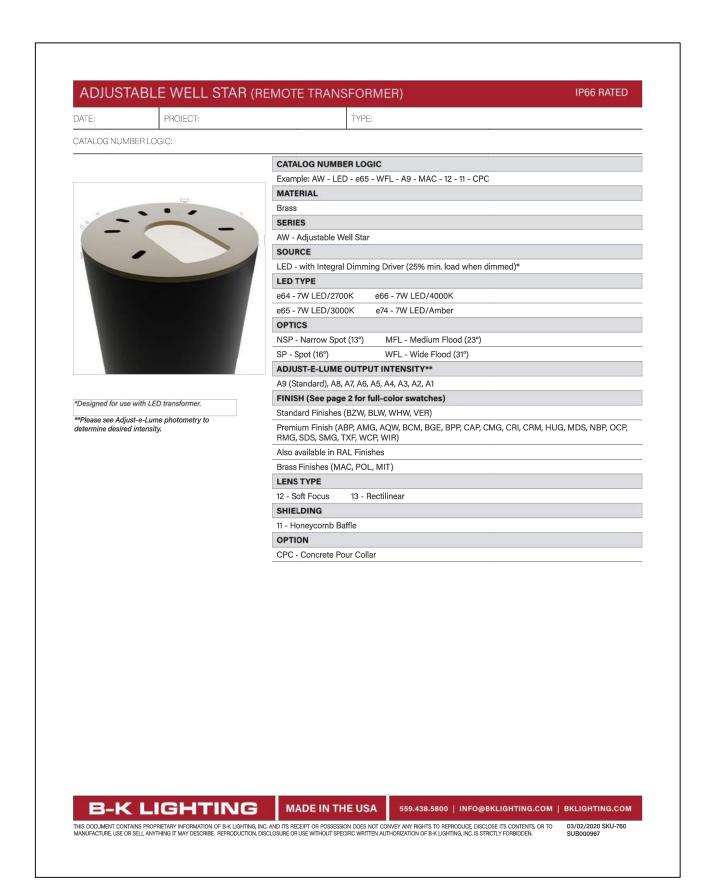
2. CONTRACTOR TO CONFIRM LOCATIONS OF LIGHT FIXTURES IN FIELD WITH OWNER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

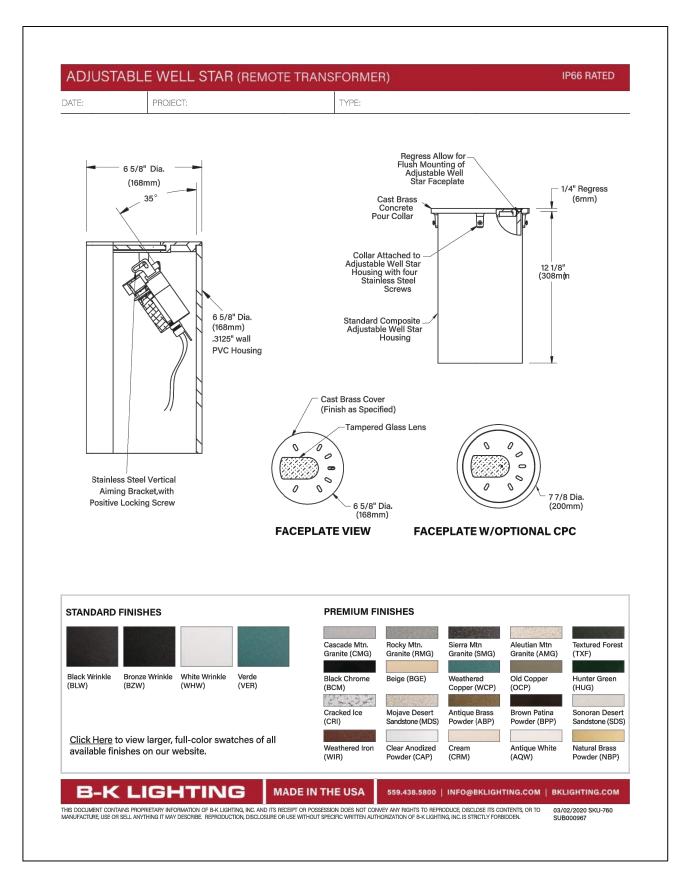
RECESSED WALL LIGHT

RECESSED WALL LIGHT MANUFACTURER: B-K LIGHTING PHONE: 559-438-5800 WEBSITE: WWW.BKLIGHTING.COM PRODUCT: YUKON INDIRECT FACEPLATE OPTION: STANDARD

INDIRECT BACK PLATE OPTION: STEPPED

COLOR/FINISH: TO BE SELECTED BY OWNER/LANDSCAPE ARCHITECT

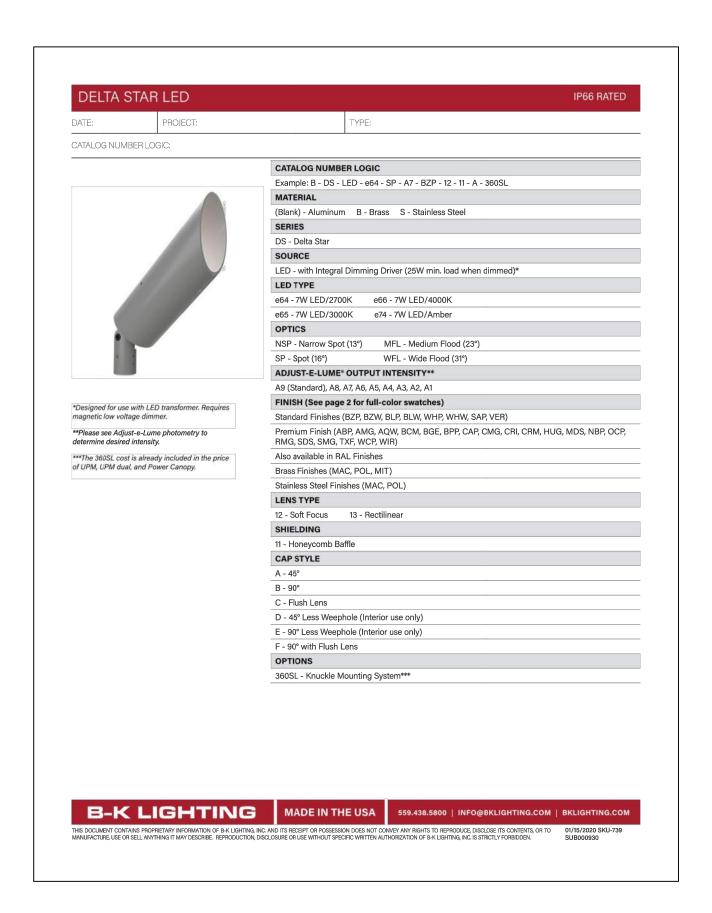


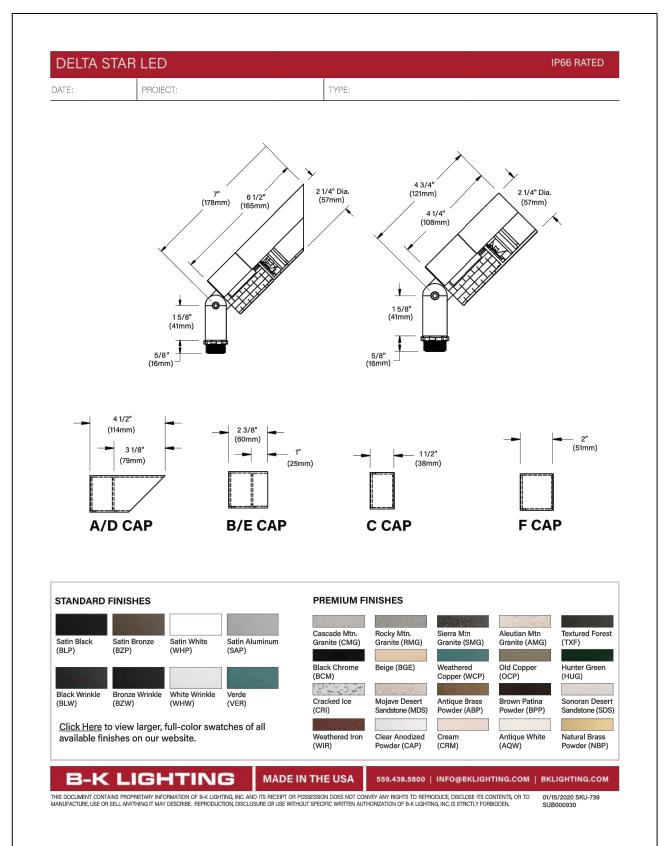


1. INSTALL PER MANUFACTURER'S SPECIFICATIONS 2. CONTRACTOR TO CONFIRM LOCATIONS OF LIGHT FIXTURES IN FIELD WITH OWNER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

IN GRADE LIGHT

IN GRADE LIGHT MANUFACTURER: B-K LIGHTING PHONE: 559-438-5800 WEBSITE: WWW.BKLIGHTING.COM PRODUCT: ADJUSTABLE WELL STAR COLOR/FINISH: TO BE SELECTED BY OWNER/LANDSCAPE ARCHITECT





1. INSTALL PER MANUFACTURER'S SPECIFICATIONS

2. CONTRACTOR TO CONFIRM LOCATIONS OF LIGHT FIXTURES IN FIELD WITH OWNER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

FLOOD LIGHT

FLOOD LIGHT MANUFACTURER: B-K LIGHTING PHONE: 559-438-5800 WEBSITE: WWW.BKLIGHTING.COM PRODUCT: DELTA STAR LED CAP OPTION: A/D CAP COLOR/FINISH: TO BE SELECTED BY OWNER/LANDSCAPE ARCHITECT

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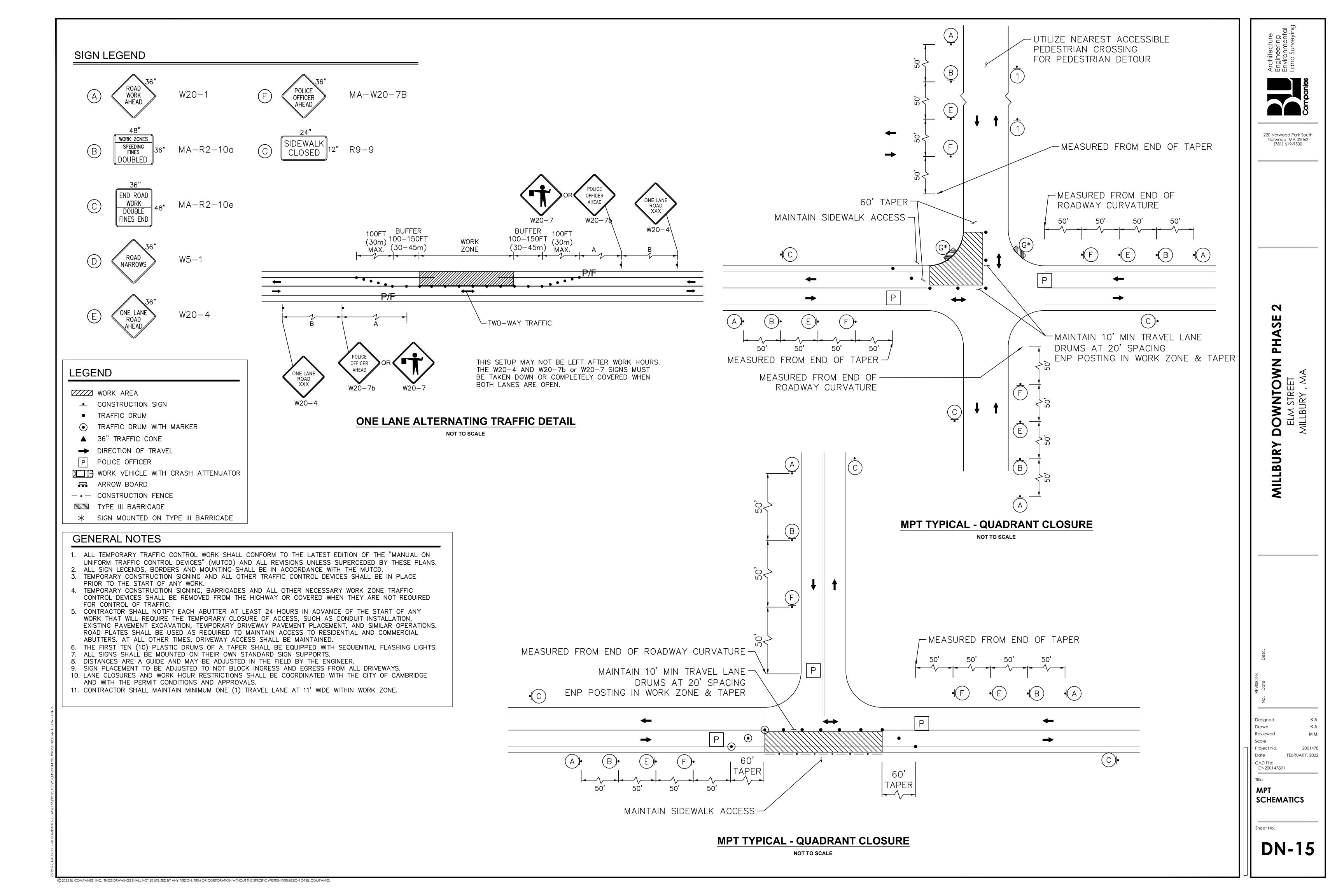
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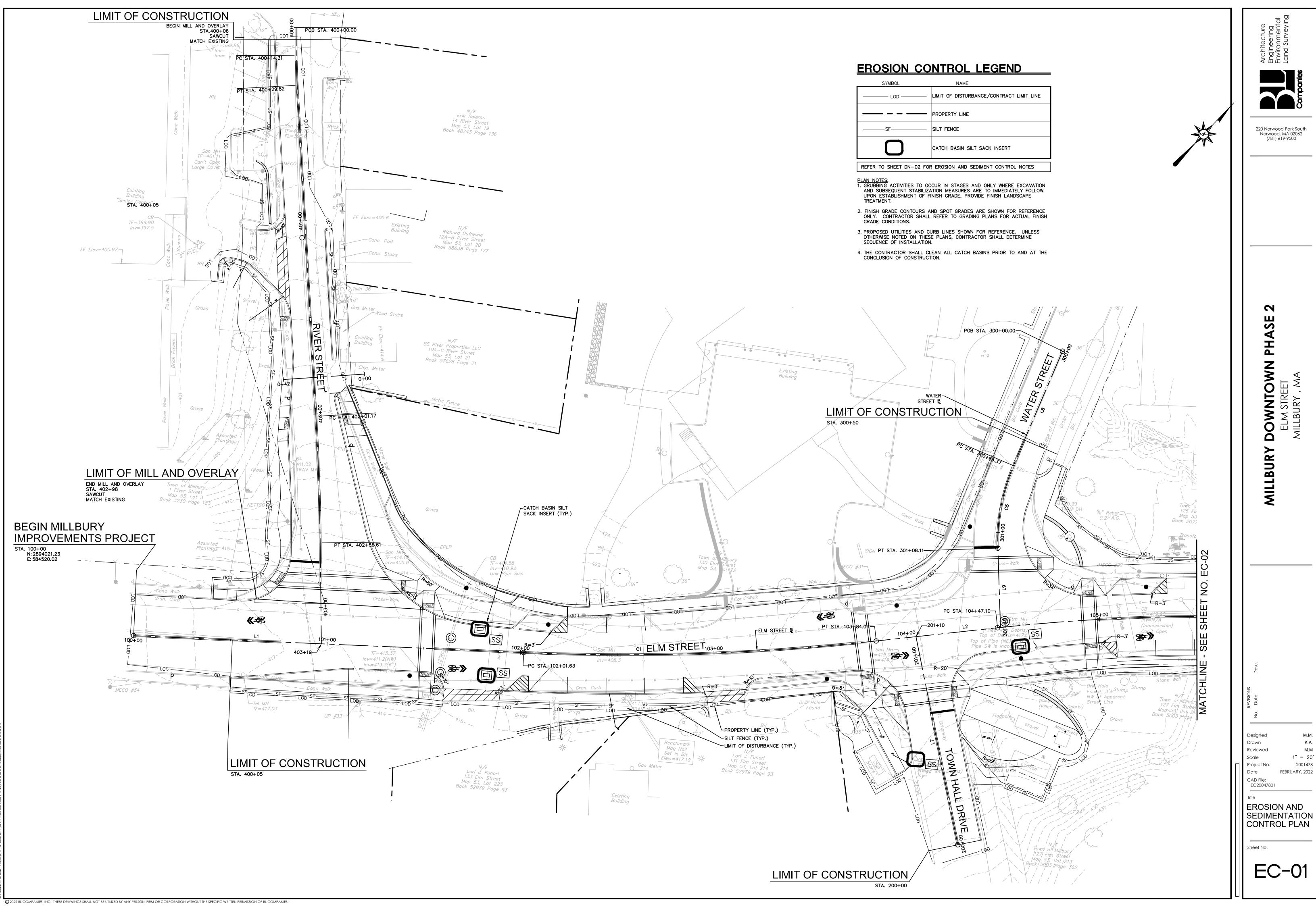
DOWNTOWN ELM STREET MILLBURY, MA

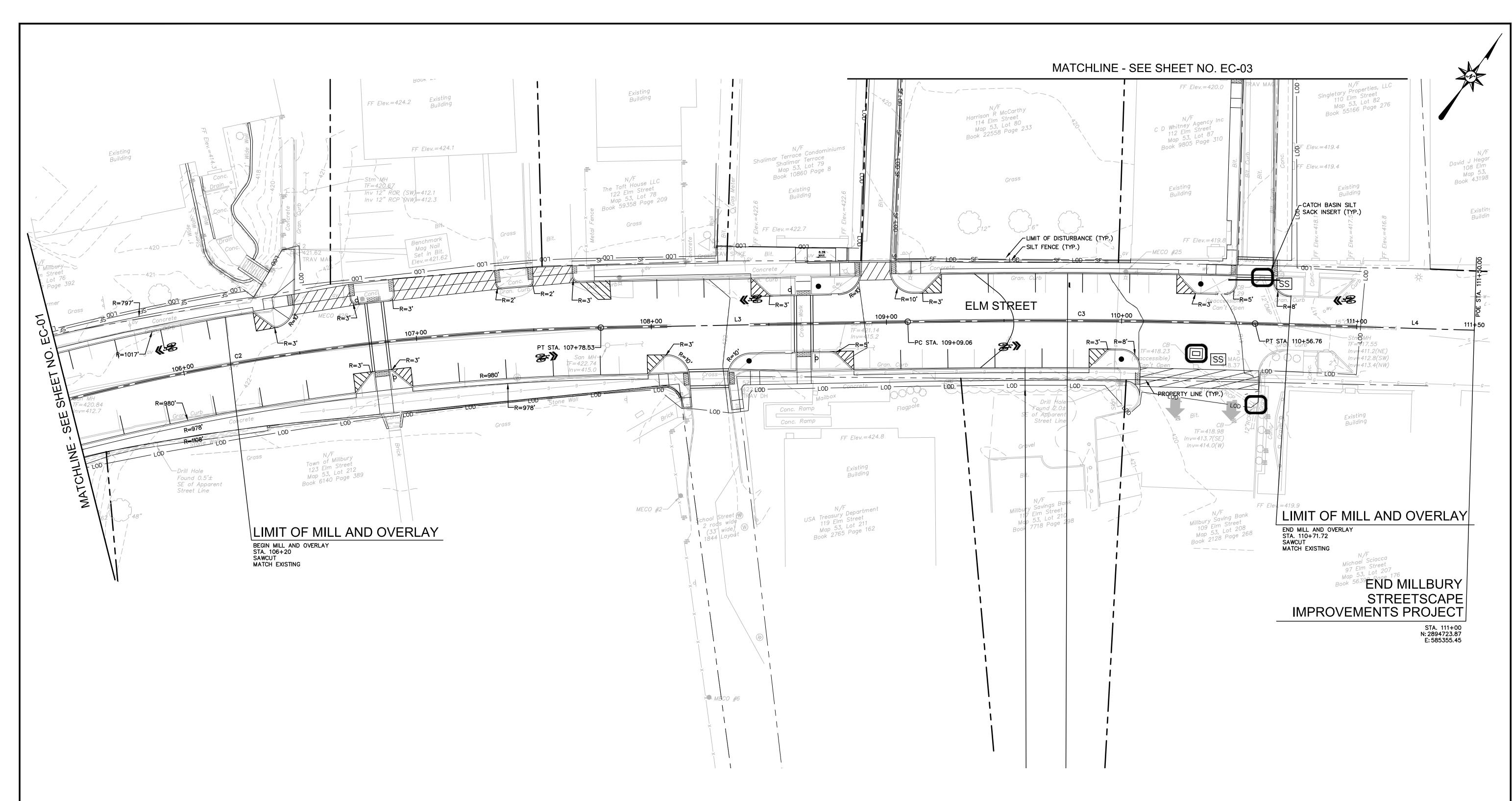
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Project No. 2001478 FEBRUARY, 2022 CAD File: DN200147801

SITE DETAILS







EROSION CONTROL LEGEND

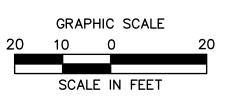
SYMBOL	NAME
LOD	LIMIT OF DISTURBANCE/CONTRACT LIMIT LINE
	PROPERTY LINE
SF	SILT FENCE
0	CATCH BASIN SILT SACK INSERT

REFER TO SHEET DN-02 FOR EROSION AND SEDIMENT CONTROL NOTES

PLAN NOTES:

1. GRUBBING ACTIVITIES TO OCCUR IN STAGES AND ONLY WHERE EXCAVATION AND SUBSEQUENT STABILIZATION MEASURES ARE TO IMMEDIATELY FOLLOW. UPON ESTABLISHMENT OF FINISH GRADE, PROVIDE FINISH LANDSCAPE TREATMENT.

- FINISH GRADE CONTOURS AND SPOT GRADES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL REFER TO GRADING PLANS FOR ACTUAL FINISH GRADE CONDITIONS.
- PROPOSED UTILITIES AND CURB LINES SHOWN FOR REFERENCE. UNLESS OTHERWISE NOTED ON THESE PLANS, CONTRACTOR SHALL DETERMINE SEQUENCE OF INSTALLATION.
- 4. THE CONTRACTOR SHALL CLEAN ALL CATCH BASINS PRIOR TO AND AT THE CONCLUSION OF CONSTRUCTION.



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DOWNTOWN PHA
ELM STREET
MILLBURY, MA

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Designed M.M.

Drawn K.A.

Reviewed M.M.

Scale 1" = 20'

Project No. 2001478

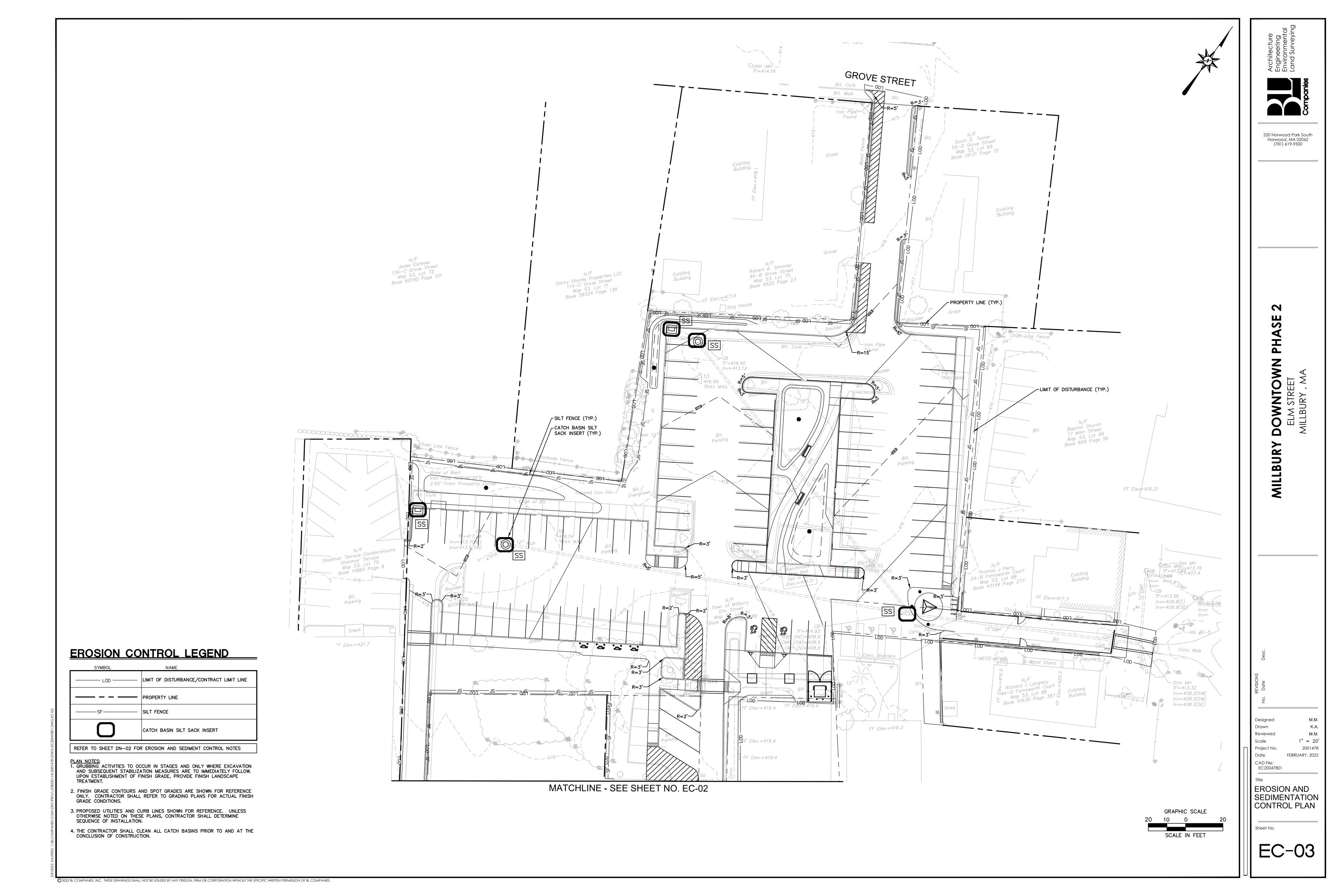
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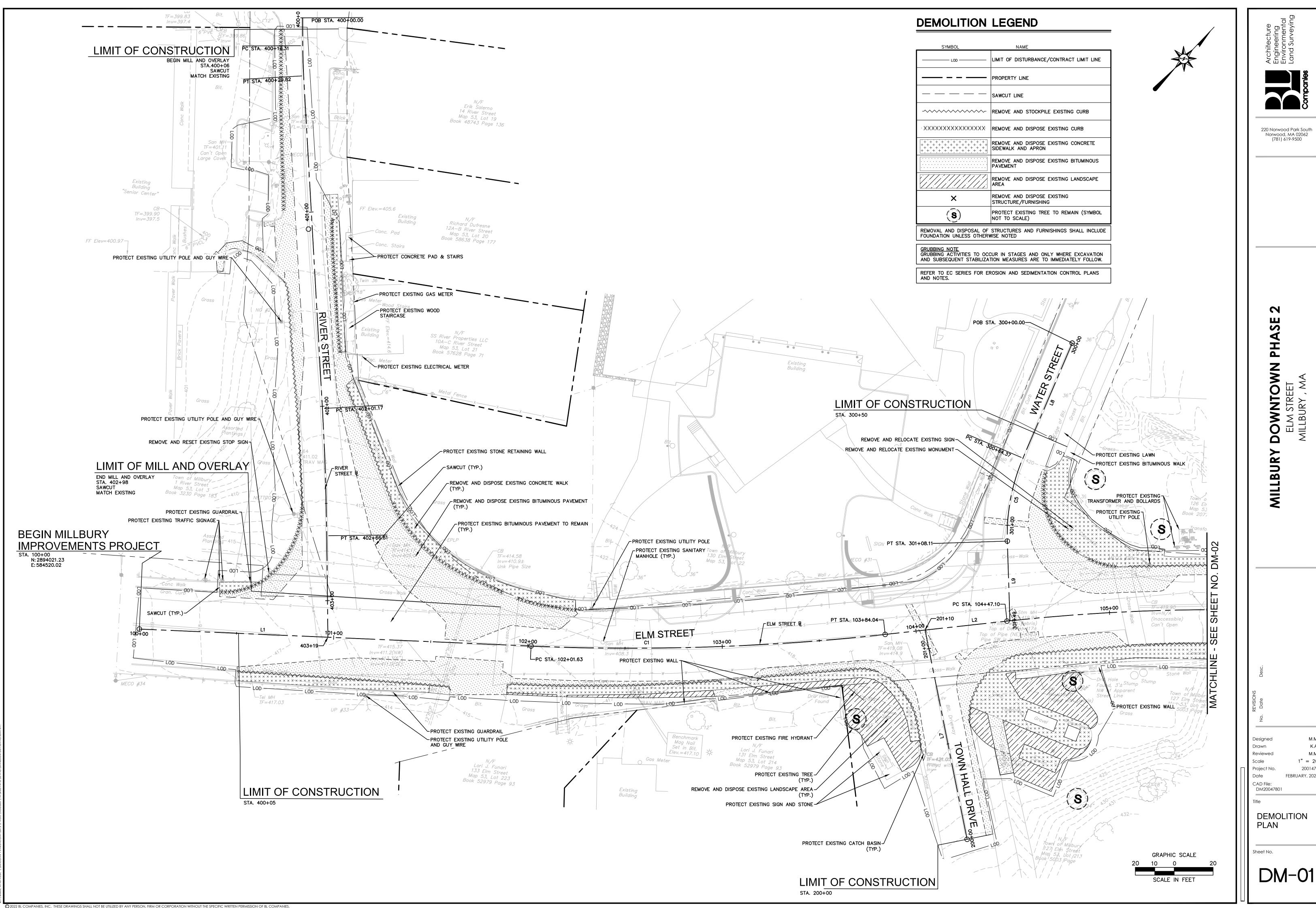
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Title
EROSION AND
SEDIMENTATION

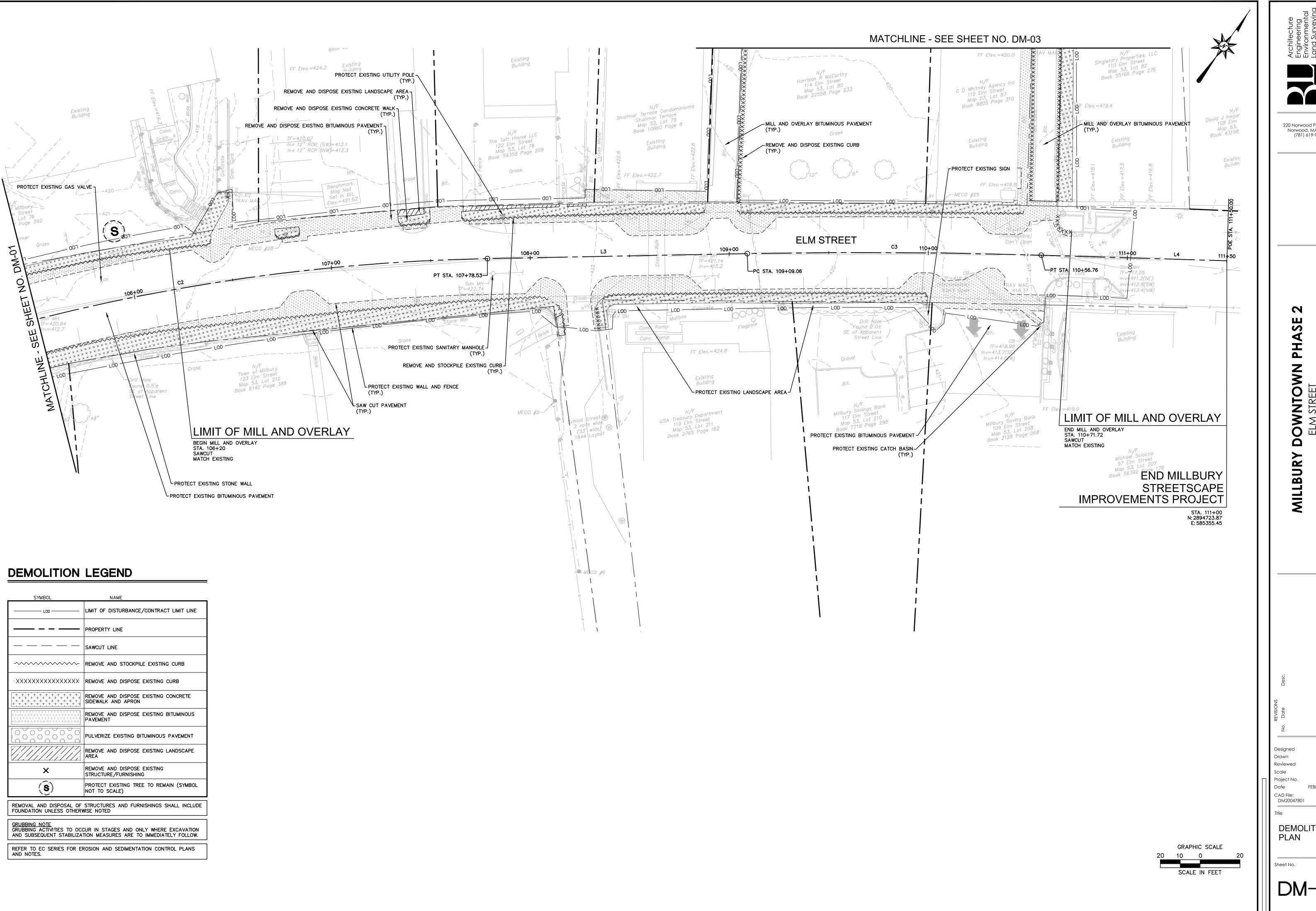
CONTROL PLAN

| EC_02





2001478 FEBRUARY, 2022



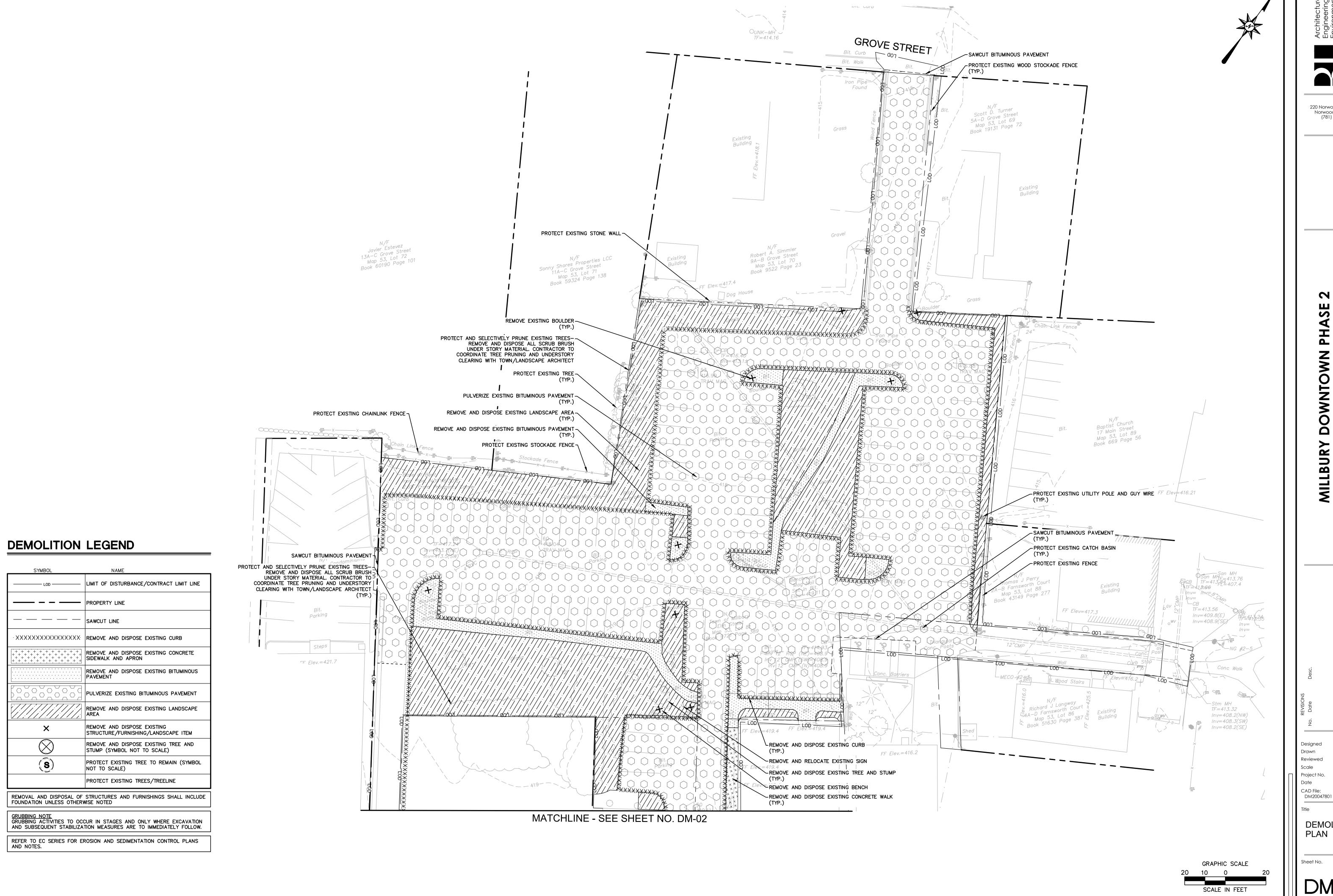
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B.C.T. N.R.G. 1" = 20'2001478 FEBRUARY, 2022

DEMOLITION

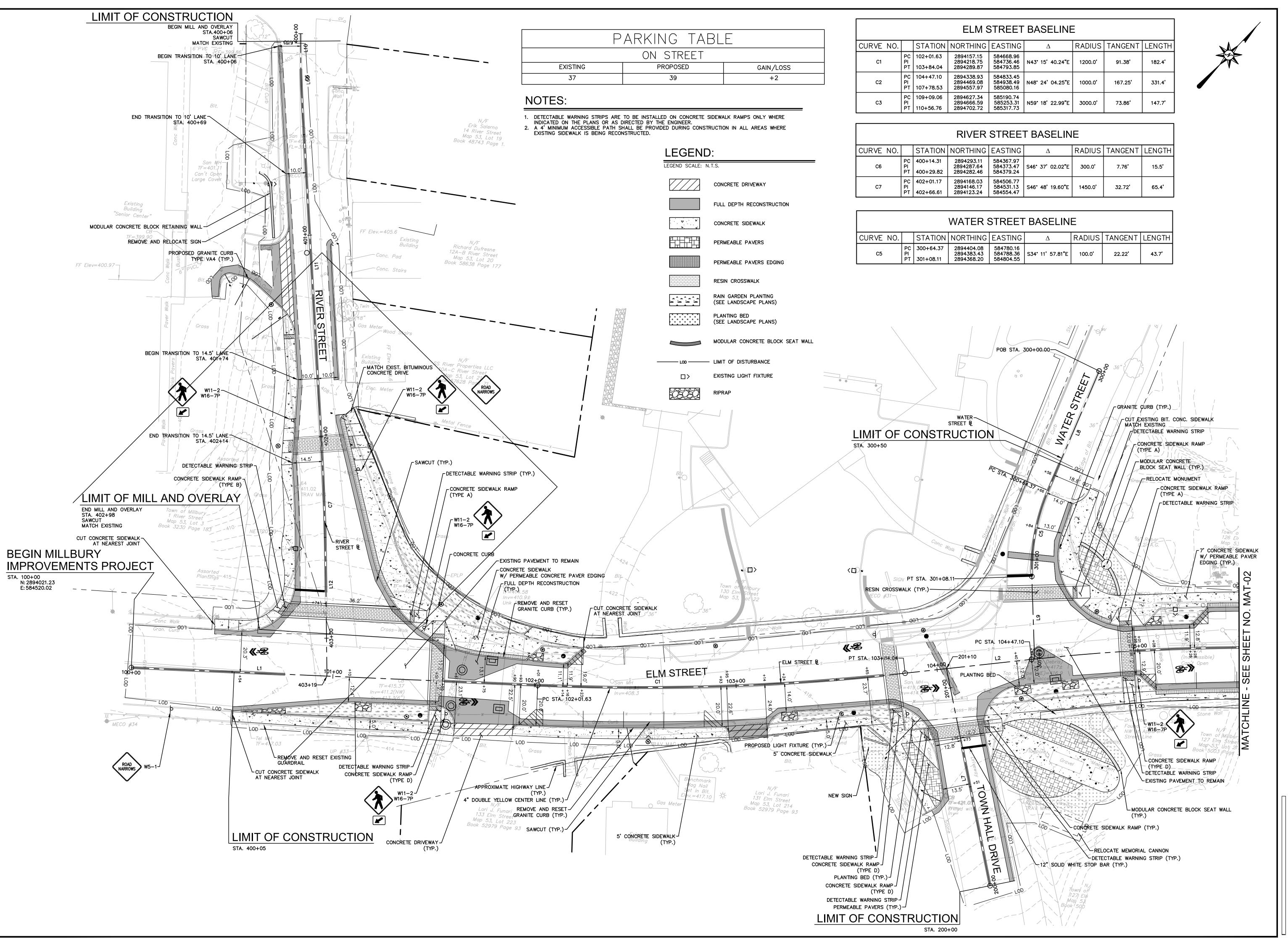
DM-02



DOWNTOWN I ELM STREET MILLBURY, MA

B.C.T. N.R.G. 1" = 20'2001478 FEBRUARY, 2022

DEMOLITION



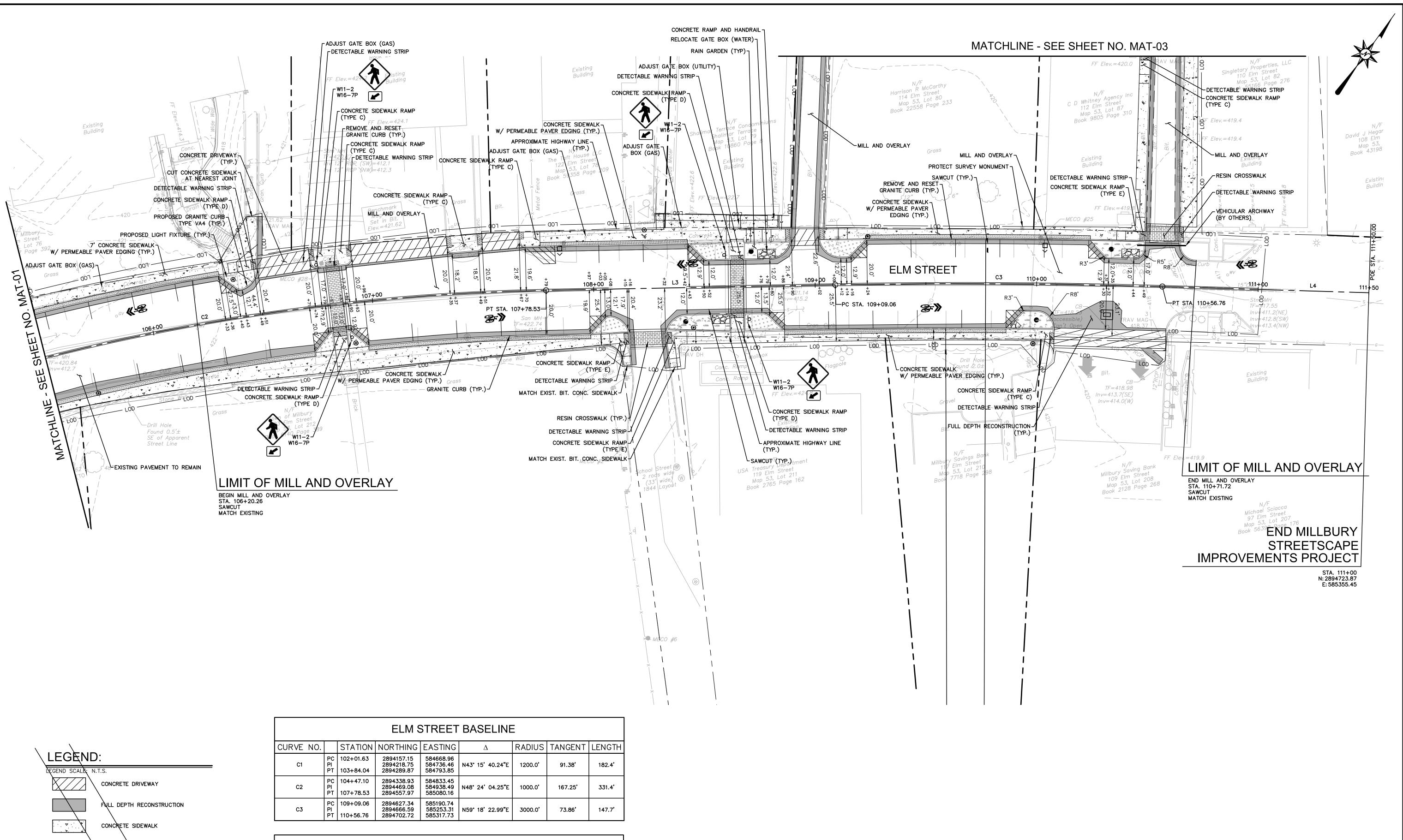


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DOWNTOWN I ELM STREET MILLBURY, MA

Designed Drawn Scale 2001478 Project No. FEBRUARY, 2022 Date CAD File: MAT20047801

MATERIALS PLAN



RIVER STREET BASELINE									
CURVE	NO.		STATION	NORTHING	EASTING	Δ	RADIUS	TANGENT	LENGTH
C6		PC PI PT	400+14.31 400+29.82	2894293.11 2894287.64 2894282.46	584367.97 584373.47 584379.24	S46° 37' 02.02"E	300.0'	7.76'	15.5'
C7		PC PI PT	402+01.17 402+66.61	2894168.03 2894146.17 2894123.24	584506.77 584531.13 584554.47	S46° 48' 19.60"E	1450.0'	32.72'	65.4'

WATER STREET BASELINE								
CURVE N	0.	STATION	NORTHING	EASTING	Δ	RADIUS	TANGENT	LENGTH
C5	PC PI PT	300+64.37 301+08.11	2894404.08 2894383.43 2894368.20	584780.16 584788.36 584804.55	S34° 11' 57.81"E	100.0'	22.22'	43.7'

PARKING TABLE					
ON STREET					
EXISTING	PROPOSED	GAIN/LOSS			
37	+2				

NOTES:

1. DETECTABLE WARNING STRIPS ARE TO BE INSTALLED ON CONCRETE SIDEWALK RAMPS ONLY WHERE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

2. A 4' MINIMUM ACCESSIBLE PATH SHALL BE PROVIDED DURING CONSTRUCTION IN ALL AREAS WHERE EXISTING SIDEWALK IS BEING RECONSTRUCTED.

GRAPHIC SCALE SCALE IN FEET

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MATERIALS PLAN

MAT-02

PERMEABLE PAVER EDGING

RÈSIN CROSSWALK

PLANTING BED

(BY OTHERS) — LIMIT OF DISTURBANCE

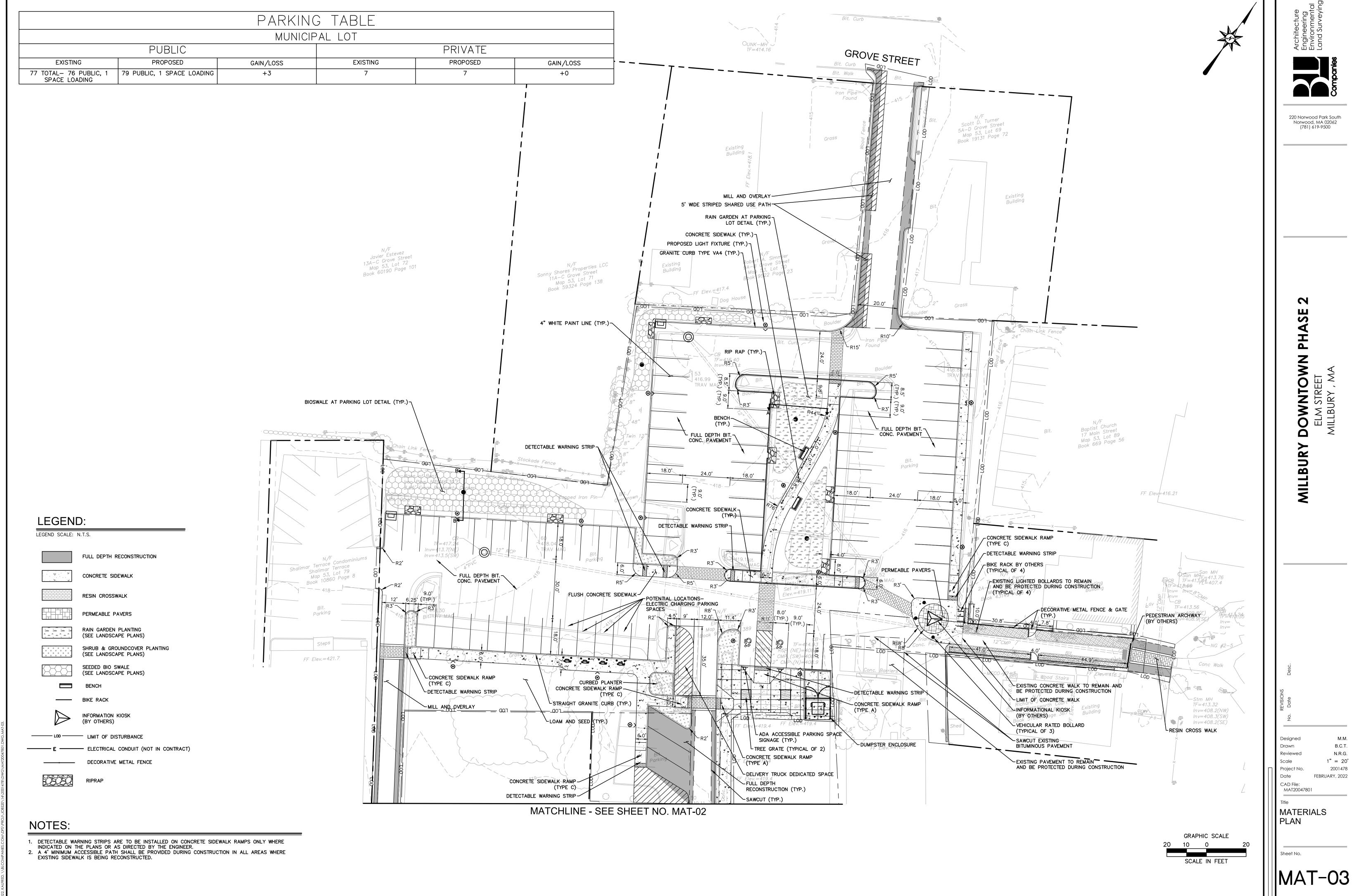
RAIN GARDEN PLANTING

(SEE LANDS&APE PLANS)

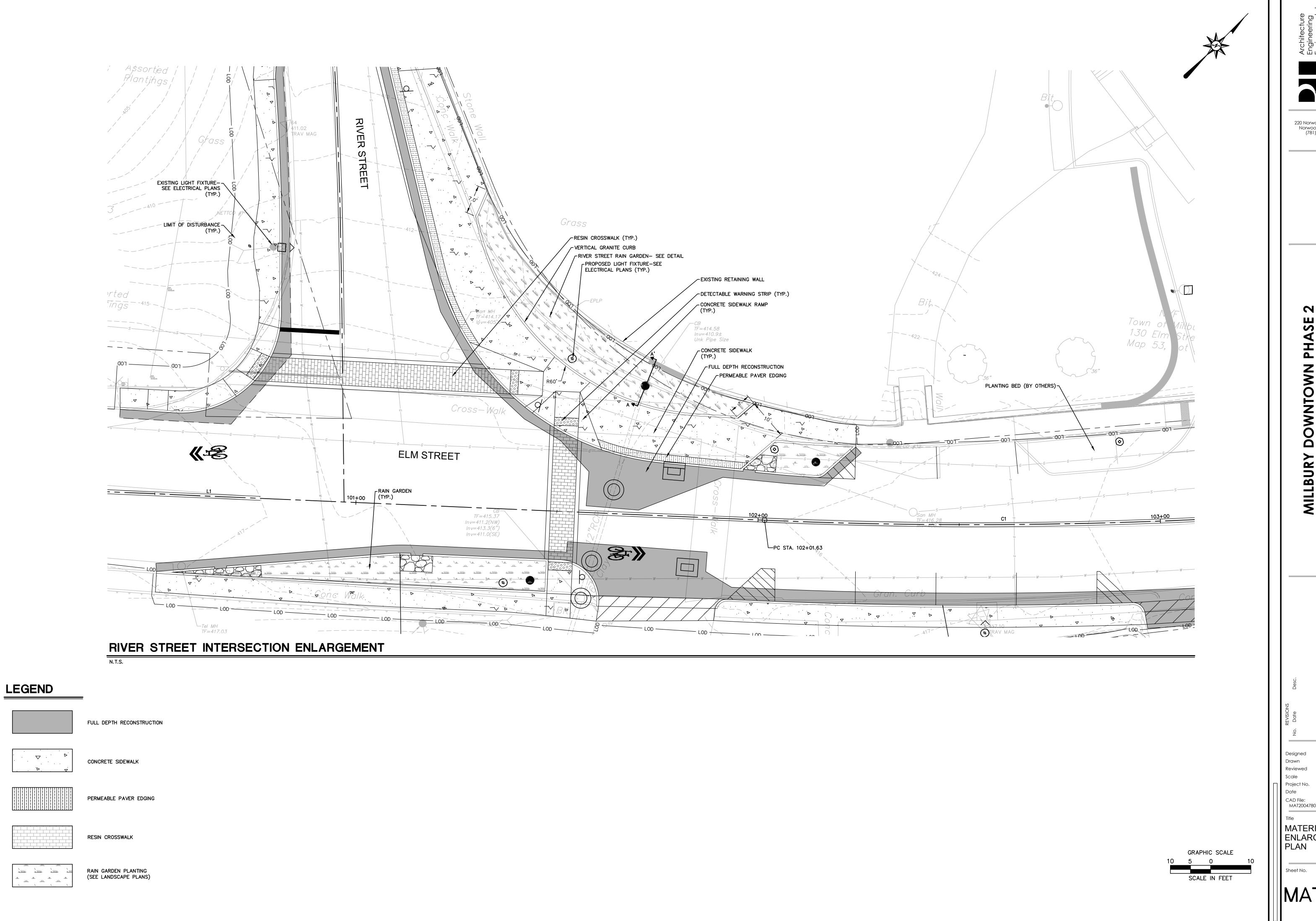
VEHICULAR ARCHWAY

EXISTING LIGHT FIXTURE

(SEE LANDSCAPE PLANS)



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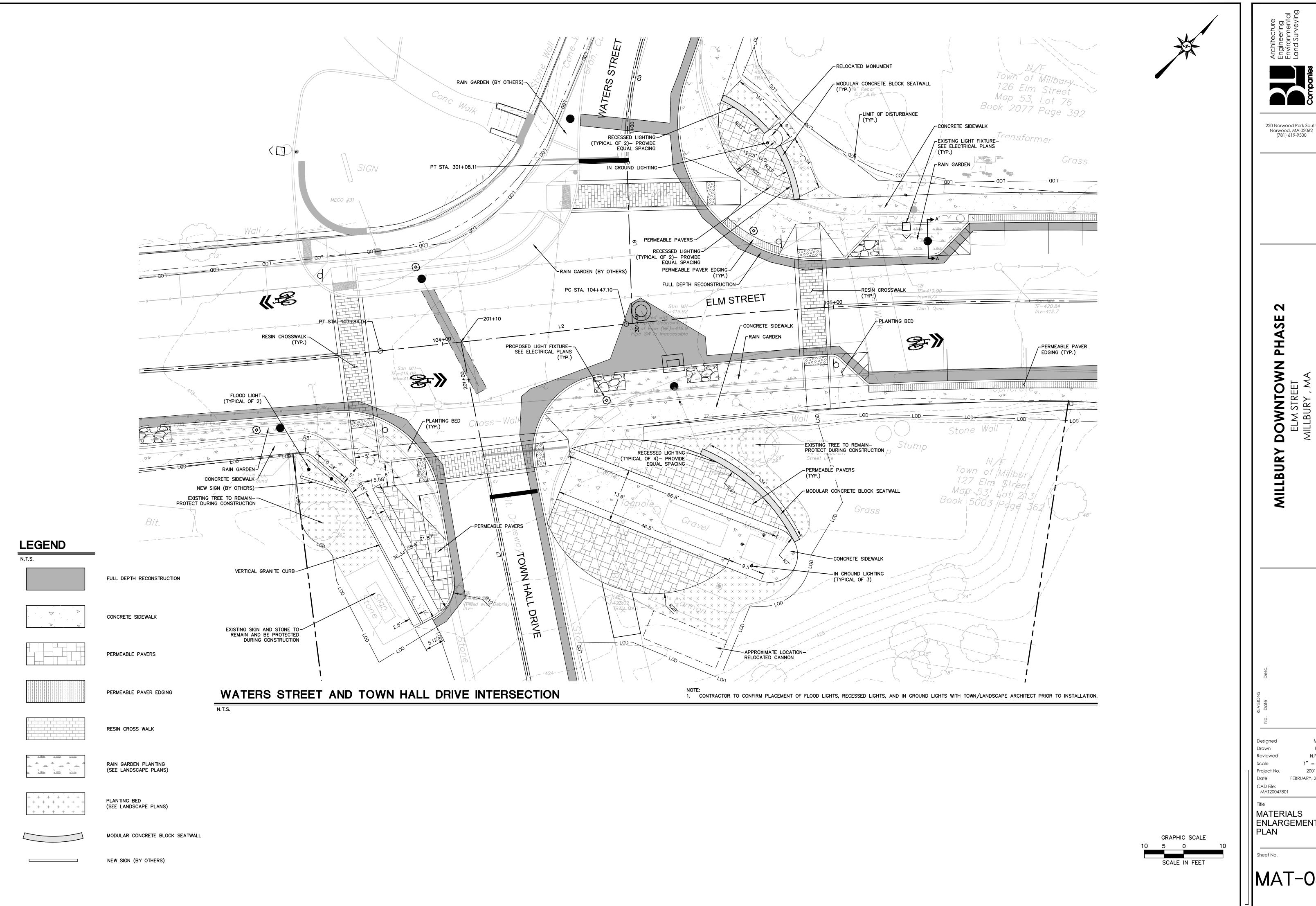


DOWNTOWN F ELM STREET MILLBURY, MA

N.R.G. 2001478 FEBRUARY, 2022

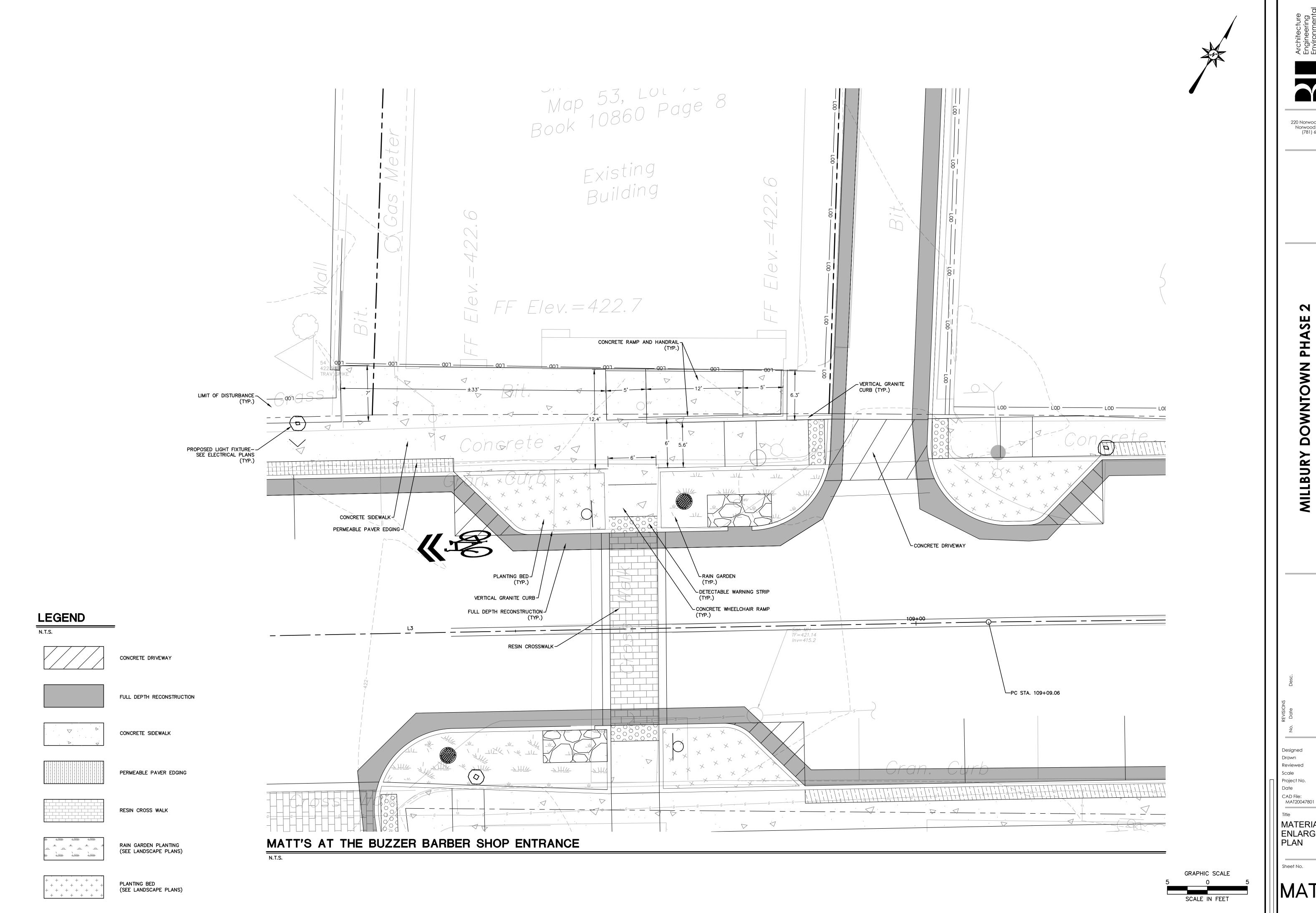
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MATERIALS ENLARGEMENT PLAN



N.R.G. 2001478 FEBRUARY, 2022

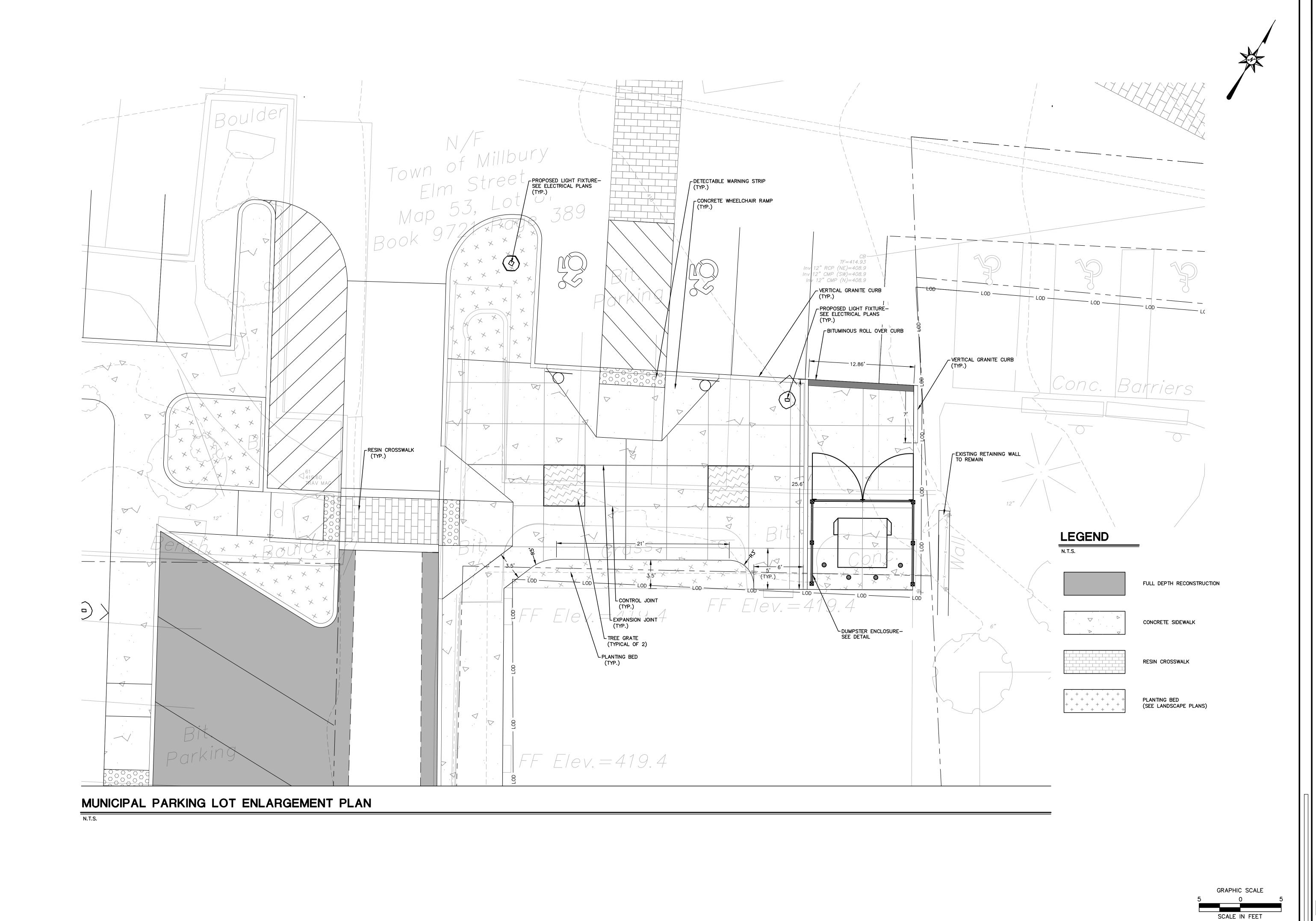
MATERIALS ENLARGEMENT



C DOWNTOWN PHASE 2 ELM STREET MILLBURY, MA

N.R.G. 2001478 FEBRUARY, 2022

MATERIALS ENLARGEMENT



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WNTOWN PHASE 2

MILLBURY DOWNTC
ELM STREE

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No. Date

 Designed
 M.M.

 Drawn
 K.A.

 Reviewed
 N.R.G.

 Scale
 1" = 5'-0"

 Project No.
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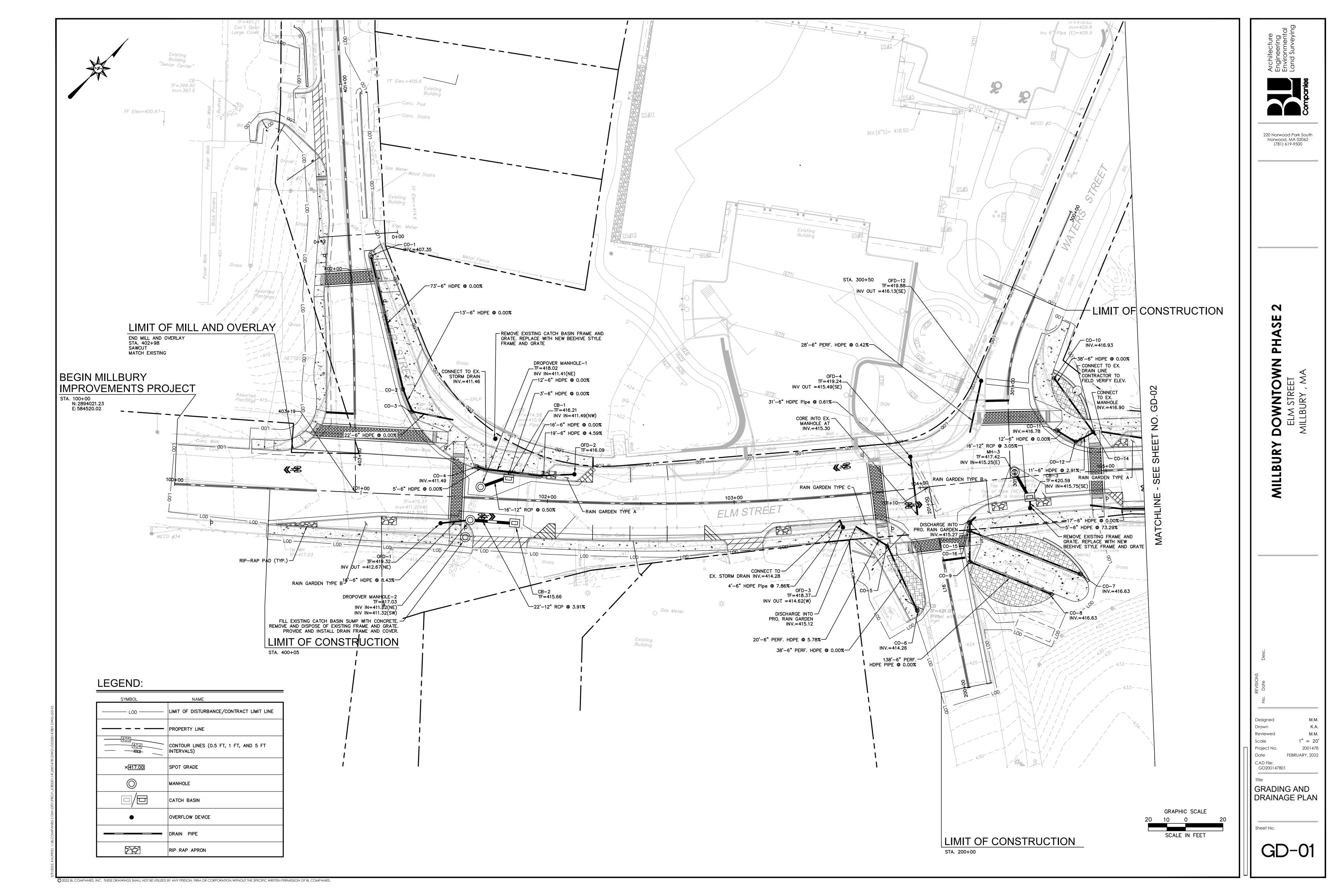
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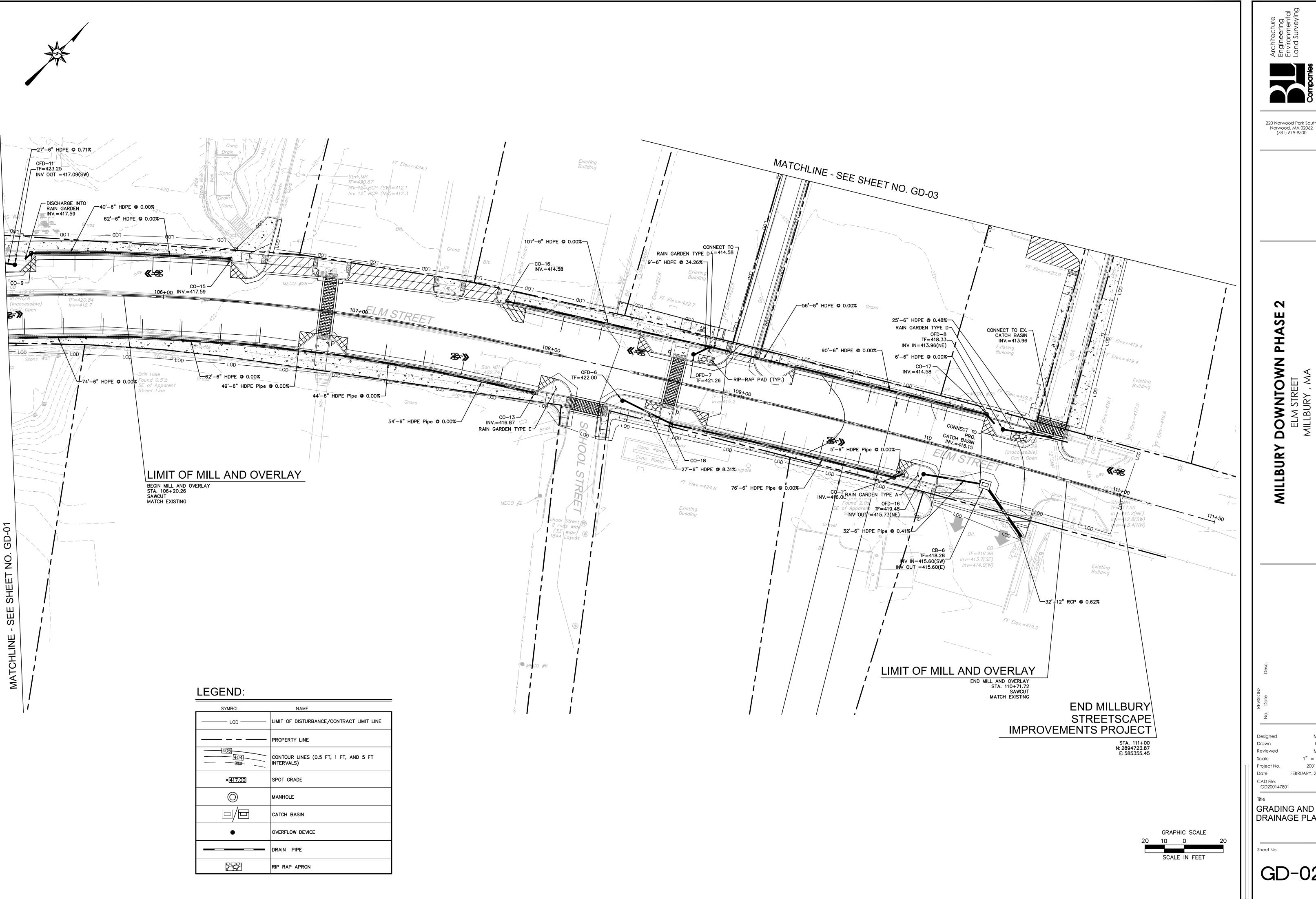
Date FEBRUARY, 2022

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MATERIALS ENLARGEMENT PLAN

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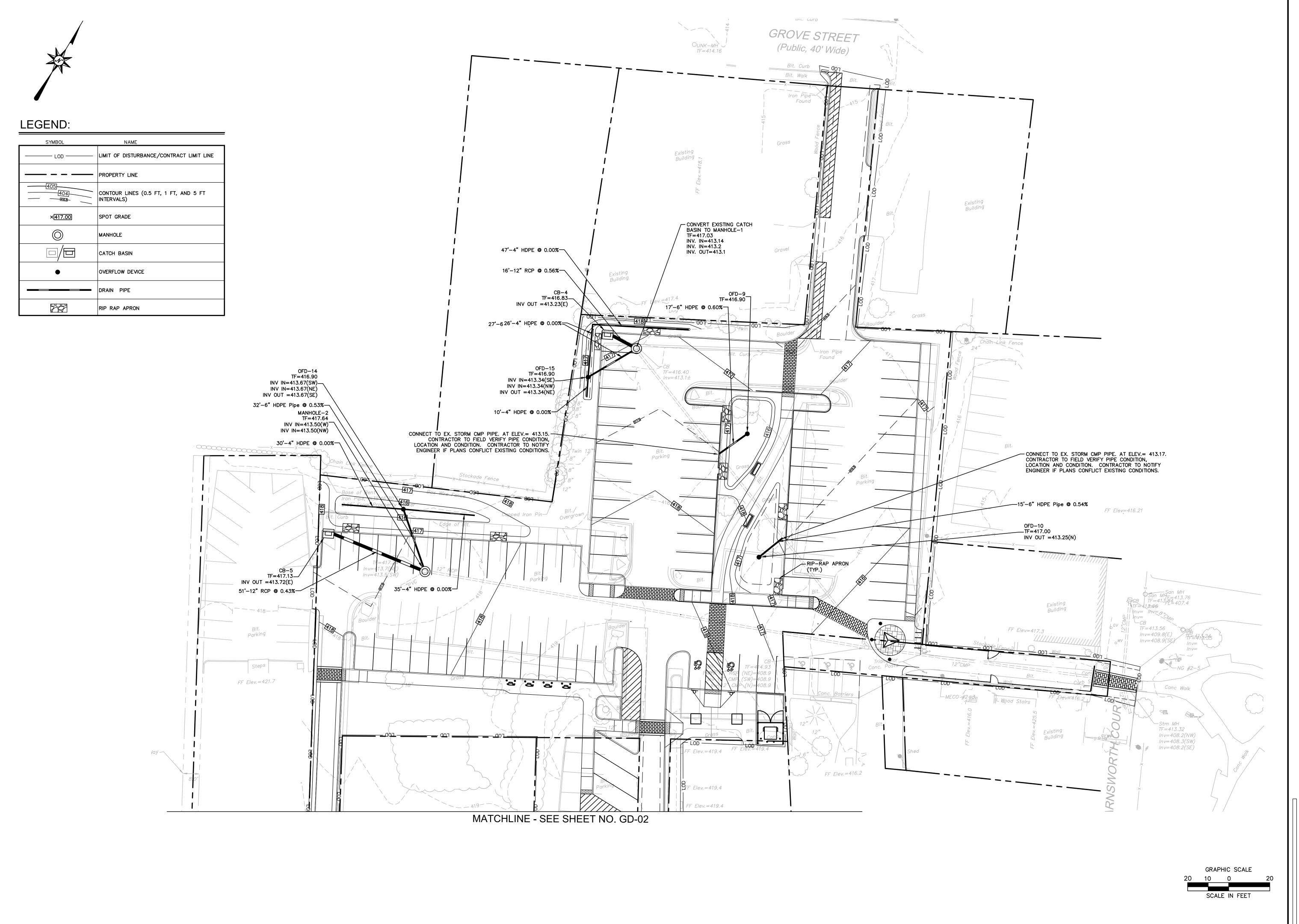
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M.M. 1" = 20'2001478 FEBRUARY, 2022

GRADING AND DRAINAGE PLAN

GD-02



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ASE 2

URY DOWNTOWN PHELM STREET
MILLBURY, MA

No. Date

Designed M.M.
Drawn K.A.
Reviewed M.M.
Scale 1" = 20'
Project No. 2001478

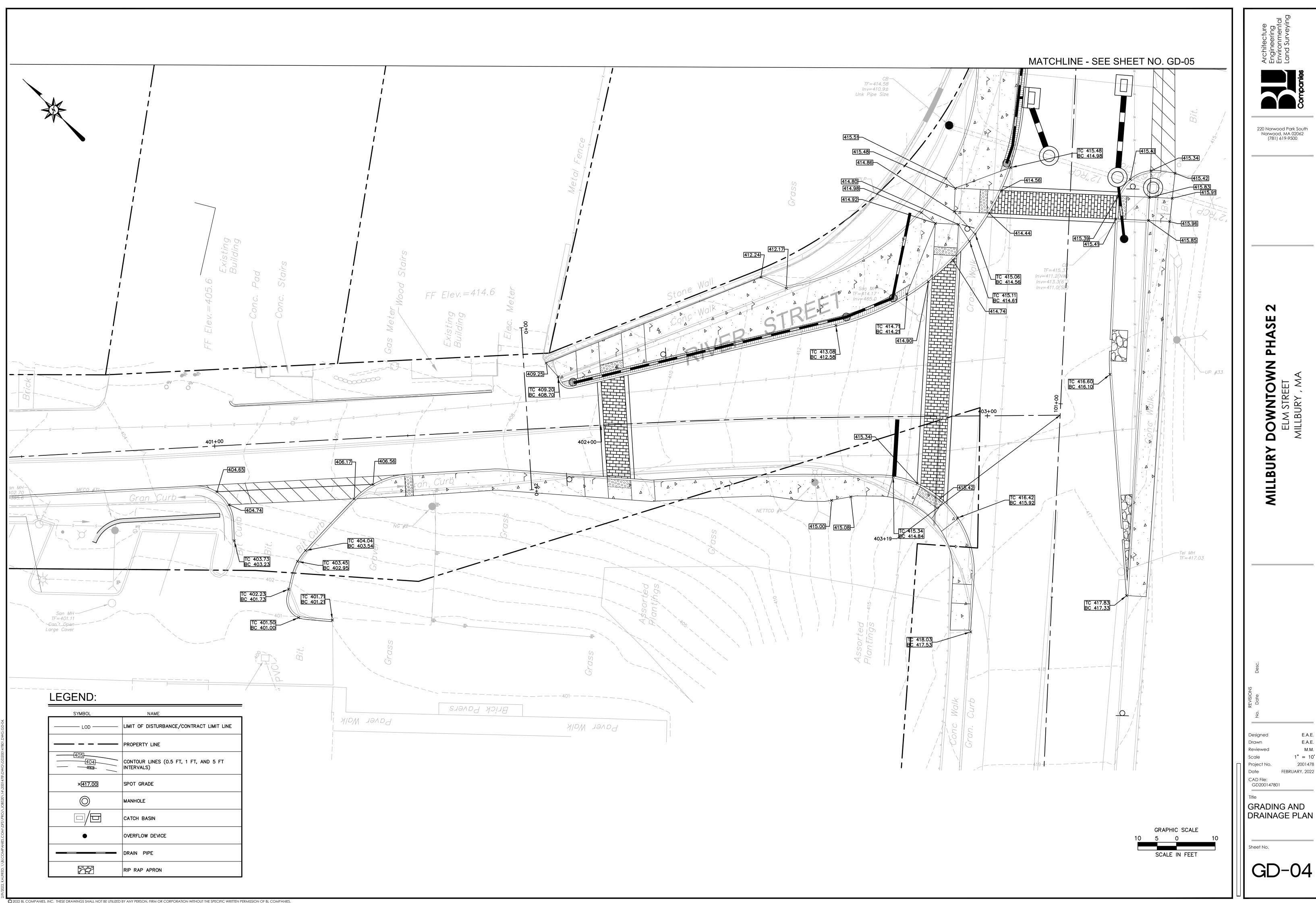
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Date FEBRUARY, 2022

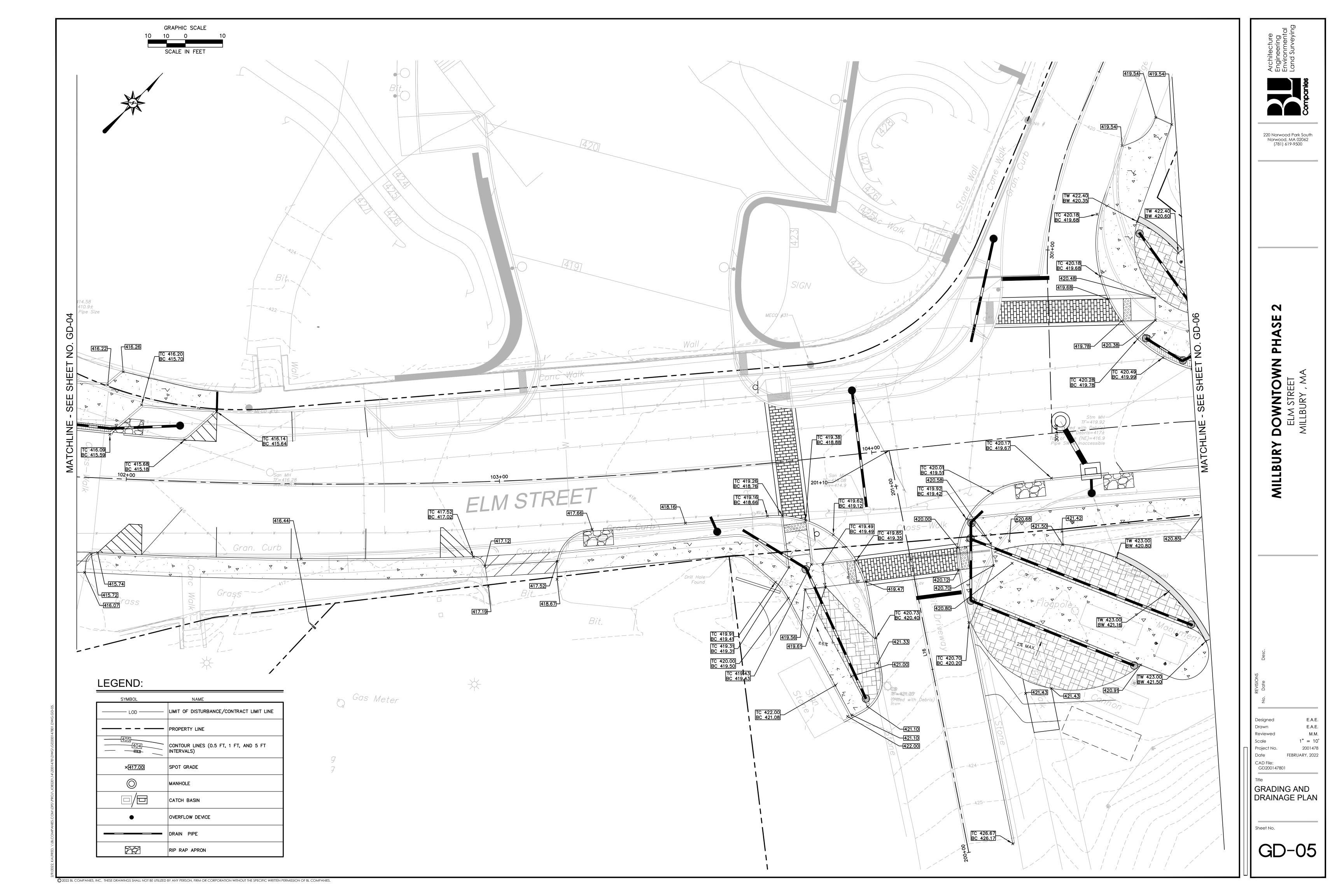
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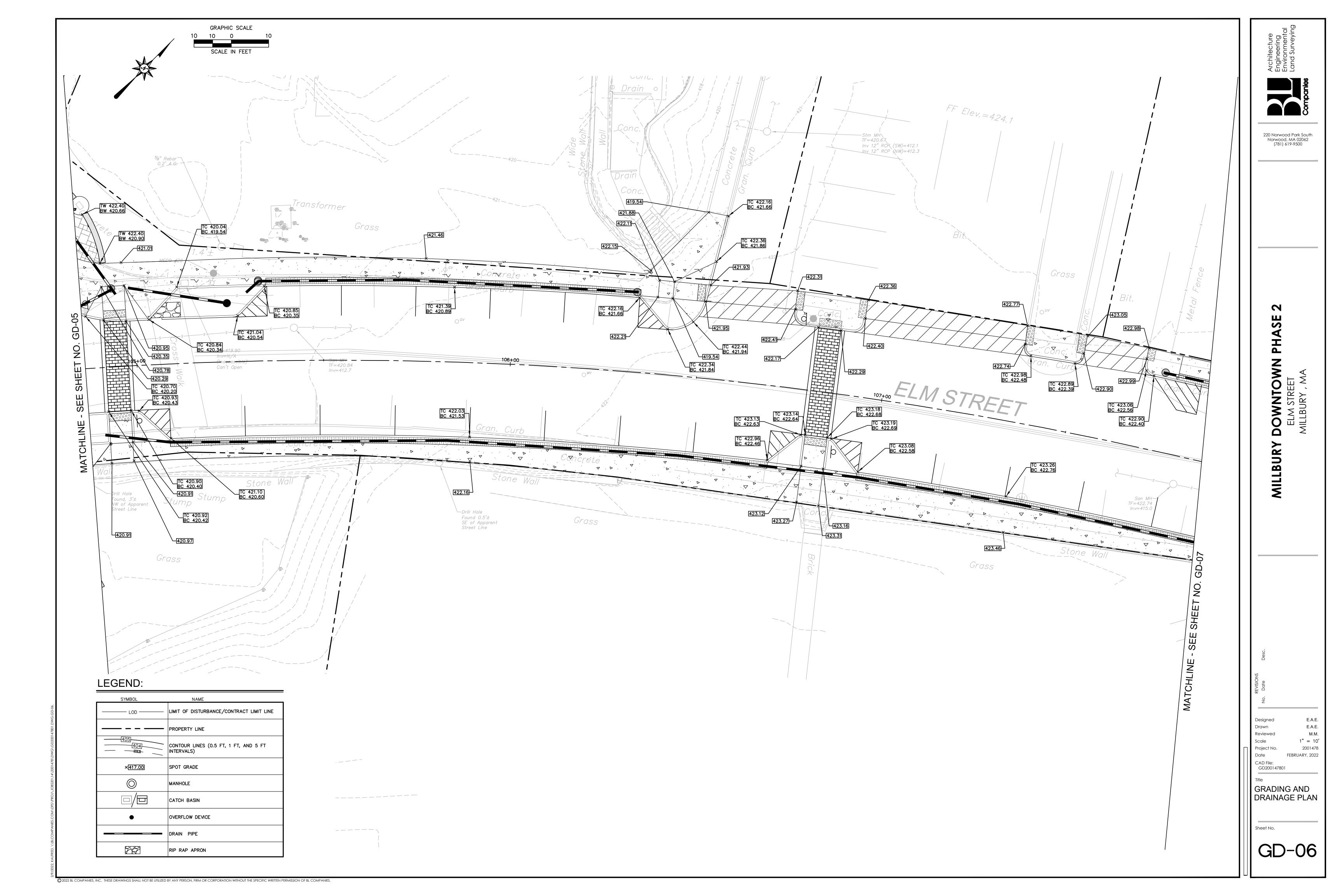
GRADING AND DRAINAGE PLAN

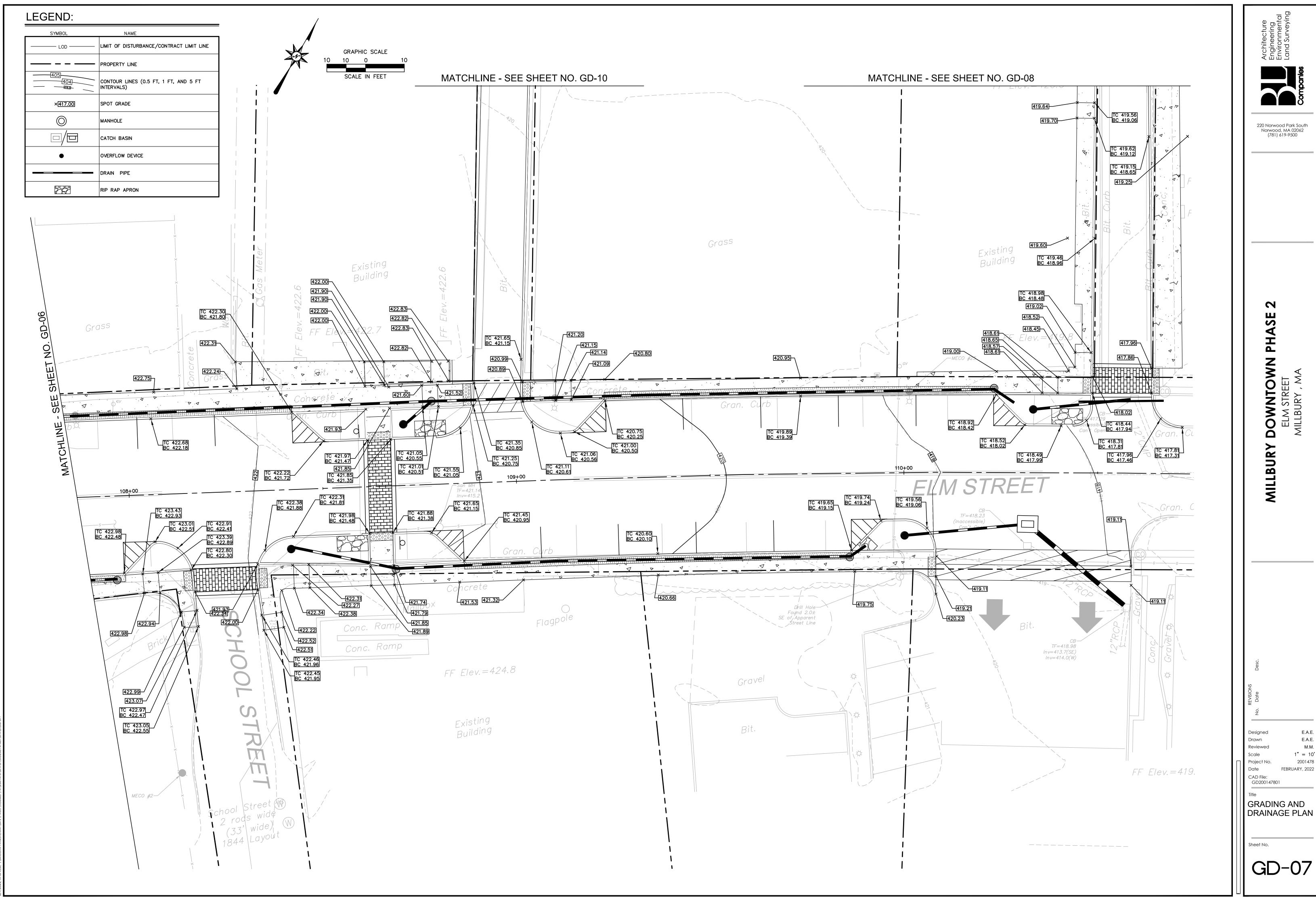
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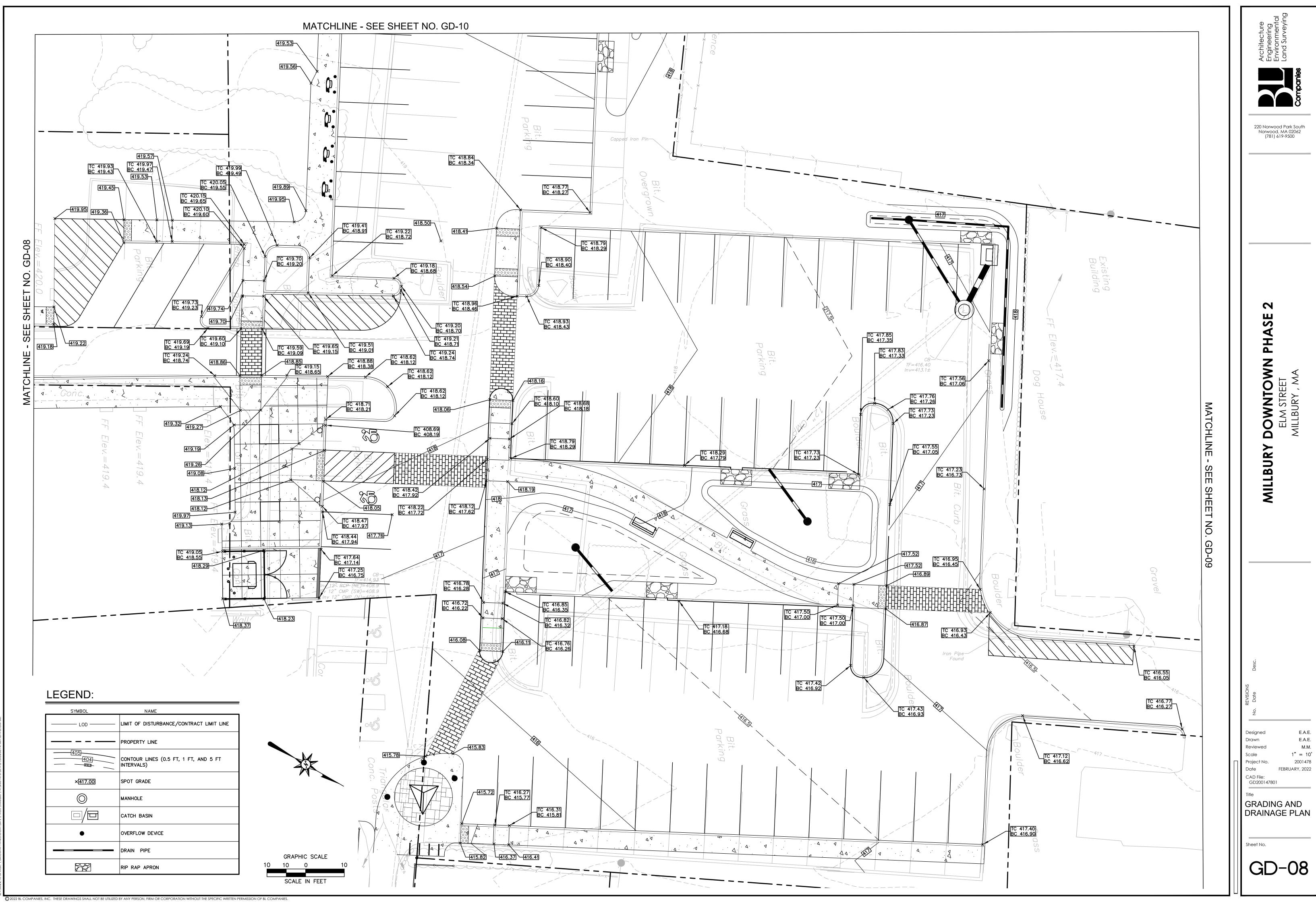


E.A.E. E.A.E. 2001478



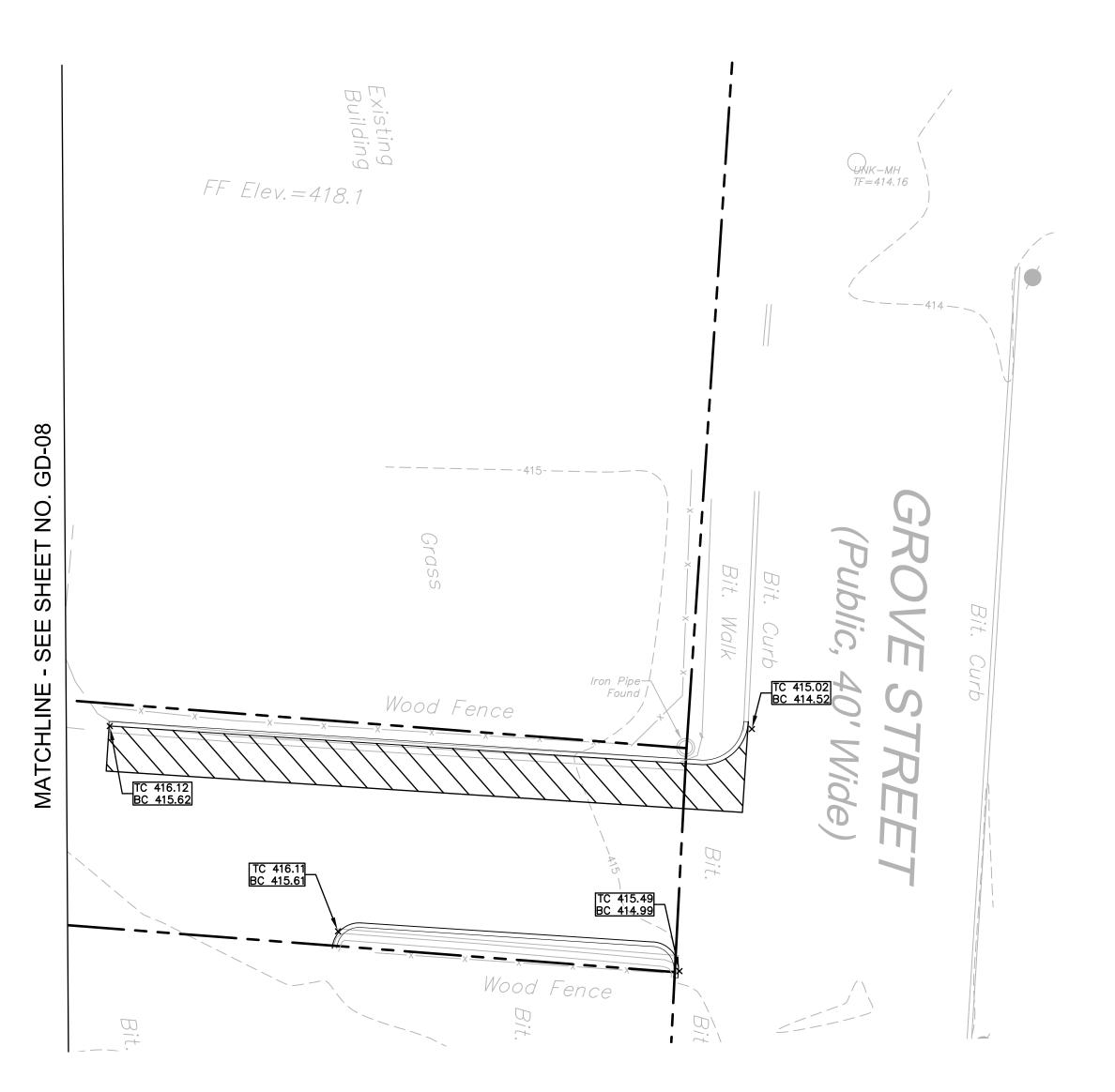


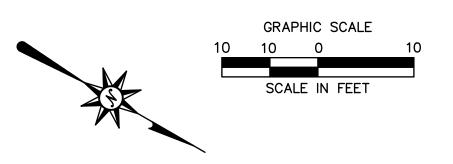




LEGEND:

SYMBOL	NAME
LOD	LIMIT OF DISTURBANCE/CONTRACT LIMIT LINE
	PROPERTY LINE
405	CONTOUR LINES (0.5 FT, 1 FT, AND 5 FT INTERVALS)
× <u>417.00</u>	SPOT GRADE
0	MANHOLE
	CATCH BASIN
•	OVERFLOW DEVICE
	DRAIN PIPE
	RIP RAP APRON





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7

MILLBURY DOWNTOWN PHASE
ELM STREET
MILLBURY , MA

Desc.

to. Date

Designed
Drawn
Reviewed
Scale
Project No.

E.A.E.

Date FEBRUARY, 2022 CAD File: GD200147801

GRADING AND DRAINAGE PLAN

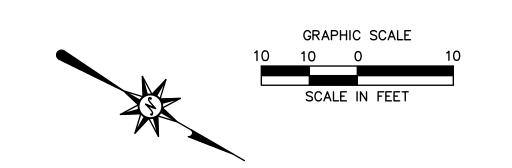
Sheet No.

GD-09

LEGEND:

SYMBOL	NAME
LOD	LIMIT OF DISTURBANCE/CONTRACT LIMIT LINE
	PROPERTY LINE
404	CONTOUR LINES (0.5 FT, 1 FT, AND 5 FT INTERVALS)
×[417.00]	SPOT GRADE
0	MANHOLE
	CATCH BASIN
•	OVERFLOW DEVICE
	DRAIN PIPE
	RIP RAP APRON

	417.40
MATCHLINE - SEE SHEET NO. GD-07	TC 418.07 EC 417.53 FC 418.03 EC 417.53
	MATCHLINE - SEE SHEET NO. GD-08



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f DOWNTOWN PHASE 2
ELM STREET
MILLBURY, MA

MILLBURY

Desc.

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Date FEBRUARY, 2022
CAD File:
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GRADING AND DRAINAGE PLAN

Sheet No.

GD-10

2/9/2022, KA

	ELECTRICAL A	BBRE	EVIATIONS
A OR AMP	AMPERES	MCA	MINIMUM CIRCUIT AMPS
AAC	ABOVE ACCESSIBLE CEILING	MCB	MAIN CIRCUIT BREAKER
AC	ALTERNATING CURRENT	MCC	MOTOR CONTROL CENTER
AFF	ABOVE FINISHED FLOOR	MCM	THOUSAND CIRCULAR MILS
AFG	ABOVE FINISHED GRADE	MD	MOTORIZED DAMPER
AHJ	AUTHORITY HAVING JURISDICTION	MDP	MAIN DISTRIBUTION PANEL
AHU	AIR HANDLING UNIT.	MFR, MFTR	MANUFACTURER
AIC	INTERRUPTING CAPACITY(RMS SYMMETRICAL AMPERES)	MH	MECHANICALLY HELD
ATS	AUTOMATIC TRANSFER SWITCH	MIC	MICROPHONE
BB	DEVICE MOUNTED IN BASEBOARD TRIM	MLO	MAIN LUGS ONLY
BFG	BELOW FINISHED GRADE	MO	MOTOR OPERATED
BKBD	BACKBOARD	MTD	MOUNTED
C OR COND	CONDUIT	MUA, MAU	MAKE-UP AIR UNIT
C/T	CURRENT TRANSFORMER	MW	MICROWAVE POWER RECEPTACLE
CB, C/B	CIRCUIT BREAKER	NC	NORMALLY CLOSED
CFA	CALL FOR ASSISTANCE	NEC	NATIONAL ELECTRIC CODE
CH	MOUNT DEVICE AT 6" ABOVE COUNTER OR BACK SPLASH		
	CEILING		NOT FUSED
CLG		NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CDT	CONSTRUCTION MANAGER	NIC	NOT IN CONTRACT
CPT	CURRENT POTENTIAL TRANS.	NL	NIGHT LIGHT
CTR	DEVICE MOUNTED ABOVE COUNTER/BACKSPLASH	NO	NORMALLY OPEN
CU	CONDENSING UNIT	NTS	NOT TO SCALE
DC	DIRECT CURRENT	OC	OCCUPANCY SENSOR
DISC. SW	DISCONNECT SWITCH	Р	POLE
DN	DOWN	PB	PULL BOX
dh	DAYLIGHT HARVEST CONTROLLED LIGHT FIXTURE	PE	PNEUMATIC ELECTRIC SWITCH
EBB	ELECTRIC BASEBOARD HEATER	PH	PHASE
EDH	ELECTRIC DUCT HEATER	P/T	POTENTIAL TRANSFORMER
EF	EXHAUST FAN	PTR	PRINTER POWER RECEPTACLE
EM	EMERGENCY	PVC	POLYVINYL CHLORIDE
EO	ELECTRICALLY OPERATED	REF	REFRIGERATOR POWER RECEPTACLE
EP	ELECTRIC PNEUMATIC SWITCH	RGS	RIGID GALVANIZED STEEL
ETR, E	EXISTING TO REMAIN	RMC	RIGID METALLIC CONDUIT
EUH	ELECTRIC UNIT HEATER	RTU	ROOFTOP UNIT
EWC	ELECTRIC WATER COOLER	SW	SWTCH
EWH	ELECTRIC WALL HEATER	SWBD	SWTCHBOARD
FA	FIRE ALARM	TEL	TELEPHONE
FACP	FIRE ALARM CONTROL PANEL	TYP	TYPICAL
FCU	FAN COIL UNIT.	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
FLA	FULL LOAD AMPS	UF	UNDERFLOOR
GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UG	UNDERGROUND
G, GND	GROUND	UL	UNDERWRITERS LABORATORIES
HOA	HANDS-OFF AUTOMATIC SWITCH	UP	UP
HP	HORSEPOWER	UTP	UNSHIELDED TWISTED PAIR
HVAC		V	VOLTS
	HEATING, VENTILATING AND AIR CONDITIONING		1
IG	ISOLATED GROUND	VAV	VARIABLE AIR VOLUME
IMC	INTERMEDIATE METALLIC CONDUIT	VM	VENDING MACHINE POWER RECEPTACLE
JB	JUNCTION BOX	VP	VAPIARIE FREGUENCY PRIVE
KCMIL	1000 CIRCULAR MILS	VFD	VARIABLE FREQUENCY DRIVE
KV	KILOVOLTS (1000 VOLTS)	VSD	VARIABLE SPEED DRIVE
KVA	KILOVOLT AMPERES (1000 VOLT-AMPERES)	W/	WITH
KW	KILOWATTS (1000 WATTS)	WP	WEATHERPROOF
LRA	LOCKED ROTOR AMPS	XFMR, TXFMR	TRANSFORMER
		EXISTING E	ELECTRICAL EQUIPMENT ABBREVIATIONS
			ISTING TO REMAIN.
		RE RE	MOVE EXISTING.
		RL RE	LOCATE EXISTING.
		NL NE	W LOCATION OF EXISTING RELOCATED.
		NR NE	W TO REPLACE EXISTING.
		RR RE	MOVE AND REPLACE ON NEW SURFACE.
NOTE: NOT ALL AE	BBREVIATIONS MAY APPEAR ON THE DRAWINGS.		

ELE	CTRICAL SYMBOLS LEGEND							
SYMBOL	DESCRIPTION							
T1	TRANSFORMER							
	SURFACE MOUNTED PANEL BOARD							
-	HOME RUN CIRCUIT WIRING TO POWER PANEL							
	LINE VOLTAGE WIRING							
	UNDERGROUND WIRING IN CONDUIT							
NOTE: NOT ALL	SYMBOLS MAY APPEAR ON THE DRAWINGS.							

ELECTRICAL GENERAL NOTES

- UPON COMPLETION OF THE JOB, IT WILL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO TURN OVER A SET OF AS-BUILT DRAWINGS TO THE OWNER IN REPRODUCIBLE FORM. THESE DRAWINGS DO NOT HAVE TO BE MADE FROM SCRATCH: THE CONTRACT REFLECTED CEILING AND POWER PLANS MAY BE USED AS BACKGROUNDS WITH THE ACTUAL CIRCUIT CHANGES ADDED.
- 2. ALL ELECTRICAL WORK MUST BE PERFORMED IN ACCORDANCE WITH AND SHALL CONFORM IN ALL ASPECTS TO THE NATIONAL ELECTRICAL CODE (NFPA CODES & LOCAL BUILDING
- ALL PERMITS, LICENSES AND CERTIFICATES COVERING THE COMPLETE INSTALLATION OF THE ELECTRICAL WORK MUST BE OBTAINED AND PAID FOR BY THE CONTRACTOR. ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ELECTRICAL PERMITS AS REQUIRED FOR ALL ELECTRICAL WORK DESCRIBED IN THE CONSTRUCTION DRAWINGS AND DOCUMENTS.
- . ALL CORE-BORING, CAPPING OF EXISTING CORES OR BACKFILLING AND RESURFACING OF EXISTING CORES, REQUIRED FOR THE ELECTRICAL WORK, MUST BE PROVIDED BY ELECTRICAL CONTRACTOR.
- 5. ALL CUTTING PATCHING AND REFINISHING OF WALLS, FLOORS AND CEILINGS, REQUIRED FOR THE ELECTRICAL WORK, MUST BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- 6. THESE DRAWINGS ARE DIAGRAMMATIC ONLY; EXACT LOCATIONS OF ALL CONDUIT, ETC. MUST BE FIELD DETERMINED AND RUN TO AVOID OBSTRUCTIONS AND EQUIPMENT BY
- WORK NOT INCLUDED IN CONTRACT ('N.I.C.'); ANY WIRING OR EQUIPMENT NOT TO BE FURNISHED BY CONTRACTOR MUST BE INDICATED ON PLANS AS N.I.C.
- . SITE VISITATION PRIOR TO SUBMITTING A BID FOR HIS WORK, THE CONTRACTOR SHALL VISIT THE SITE TO INSPECT THE NATURE AND EXTENT OF THE EXISTING CONDITIONS AND EQUIPMENT, AND DETERMINE HOW THEY WILL AFFECT THE INSTALLATION OF ELECTRICAL WORK. NO ADDITIONAL PAYMENT IN EXCESS OF THE CONTRACT PRICE WILL BE AUTHORIZED FOR "EXTRA" WORK PERFORMED DUE TO EXISTING CONDITIONS WHICH ARE OBVIOUS UPON INSPECTION.
- 9. ALL UNUSED CONDUIT AND WIRING MUST BE DROPPED TO THE FLOOR BY THE ELECTRICIAN FOR REMOVAL FROM THE BUILDING BY THE CONTRACTOR.
- 10. ALL EQUIPMENT AND DEVICES MUST BE NEW & BEAR U.L. LABEL. ALL DEVICES MUST BE "SPECIFICATION" GRADE.
- . WORKMANSHIP: ONLY THE BEST IN WORKMANSHIP IN ACCORDANCE WITH PRESENT STANDARDS WILL BE ACCEPTABLE. ANY WORK INSTALLED AND ADJUDGED BY THE ENGINEER TO BE BELOW STANDARDS WILL BE TAKEN OUT AND REPLACED WITH PROPERLY DONE WORK AT CONTRACTOR'S EXPENSE.
- 12. GUARANTEE: CONTRACTOR MUST GUARANTEE ALL EQUIPMENT AND WIRING TO BE FREE FROM INHERENT MECHANICAL AND ELECTRICAL DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION OF PROJECT. ALL DEFECTS MUST BE REPAIRED, DURING THIS PERIOD, AT NO CHARGE TO OWNER (MISUSE OR ABUSE CAUSED PROBLEMS EXCEPTED).
- 13. ALL PROJECT SUBMITTALS TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. SUBSTITUTIONS OF EQUIPMENT: SPECIFIED PRODUCTS MUST BE USED AS THE BASIS OF BID AND SHALL BE PROVIDED; WHERE 2 OR MORE MANUFACTURERS ARE LISTED, THE CHOICE IS AT THE CONTRACTOR'S OPTION. AN APPROVED EQUAL SHALL BE DETERMINED By Engineer.
- 14. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES MUST BE FIRE STOPPED USING FIRE RETARDANT SEALANTS APPROVED BY THE ENGINEER. CONTRACTOR MUST SEAL ALL ELECTRICAL PENETRATIONS THRU FIRE RATED PARTITIONS WITH FIRE RATED MATERIAL EQUAL TO DOW CORNING FIRESTOP 3-6548 SILICONE RTV FOAM AS A MINIMUM. MATERIAL SELECTION SHALL BE BASED ON RATING OF PARTITION PENETRATED.
- 15. ALL SUPPLEMENTARY STEEL REQUIRED FOR ELECTRICAL WORK SHALL BE PROVIDED BY THE CONTRACTOR.
- 16. PROVIDE INSULATED GROUNDING CONDUCTOR IN ALL CONDUITS AND CABLE ASSEMBLIES AS NECESSARY TO COMPLY WITH NEC.
- 17. ALL EMPTY CONDUITS FOR FUTURE WORK MUST BE PROVIDED WITH A PULL STRING/ROPE.
- 18. ACCESS TO AND CLEARANCES AROUND ELECTRICAL EQUIPMENT SHALL CONFORM TO N.E.C. ARTICLE 110. CONSULT ENGINEER WHERE SPACE APPEARS INADEQUATE DUE TO ARCHITECTURAL CHANGES, EQUIPMENT LAYOUT CHANGES, OR FIELD CONDITIONS. DO NOT COVER, OBSCURE OR BLOCK ACCESS TO EQUIPMENT, DATA PLATES, ACCESS PANELS OR MAINTENANCE AREAS WITH THE ELECTRICAL WORK.
- 19. ALL PANEL DIRECTORIES, ASSOCIATED WITH THIS PROJECT, MUST BE "TYPED" AND COMPLETELY FILLED IN AT COMPLETION OF JOB IN ACCORDANCE WITH NEC 408.4. NO HAND-WRITTEN DIRECTORIES WILL BE ALLOWED.
- 20. CONTRACTOR MUST PRODUCE A LETTER ATTESTING THAT WORK HAS BEEN COMPLETED TO THE SATISFACTION OF THE OWNER WHO WILL CONFIRM HIS ACCEPTANCE BY AFFIXING HIS SIGNATURE TO THE LETTER IN A SPACE PROVIDED FOR THIS PURPOSE. WORK WILL NOT BE CONSIDERED AS BEING COMPLETE WITHOUT THIS LETTER.
- 21. PRIOR TO THE CONTRACTOR BEING RELEASED FROM ALL OBLIGATIONS, CONTRACTOR WILL OBTAIN AND TURN OVER TO THE OWNER THE ORIGINAL COPY OF THE "CERTIFICATE OF ELECTRICAL INSPECTION".
- 22. CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND LIGHTING IN ALL AREAS OF CONSTRUCTION DURING THE ENTIRE DURATION OF CONSTRUCTION AS REQUIRED. CONTRACTOR MUST NOT PLUG INTO EXISTING LOCAL GENERAL CONVENIENCE OUTLETS FOR CONSTRUCTION REQUIREMENTS. THE CONTRACTOR MUST REMOVE ALL TEMPORARY POWER AND LIGHTING UPON COMPLETION OF THE PROJECT.
- 23. CONTRACTOR MUST COORDINATE ALL PLANNED POWER SHUTDOWN REQUIREMENTS APPROXIMATELY 10 DAYS IN ADVANCE WITH OWNER. CONTRACTOR MUST NOT PROCEED WITH POWER SHUTDOWN WITHOUT WRITTEN AUTHORIZATION FROM OWNER.



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S **△** DOWNTOWN ELM STREET MILLBURY, MA

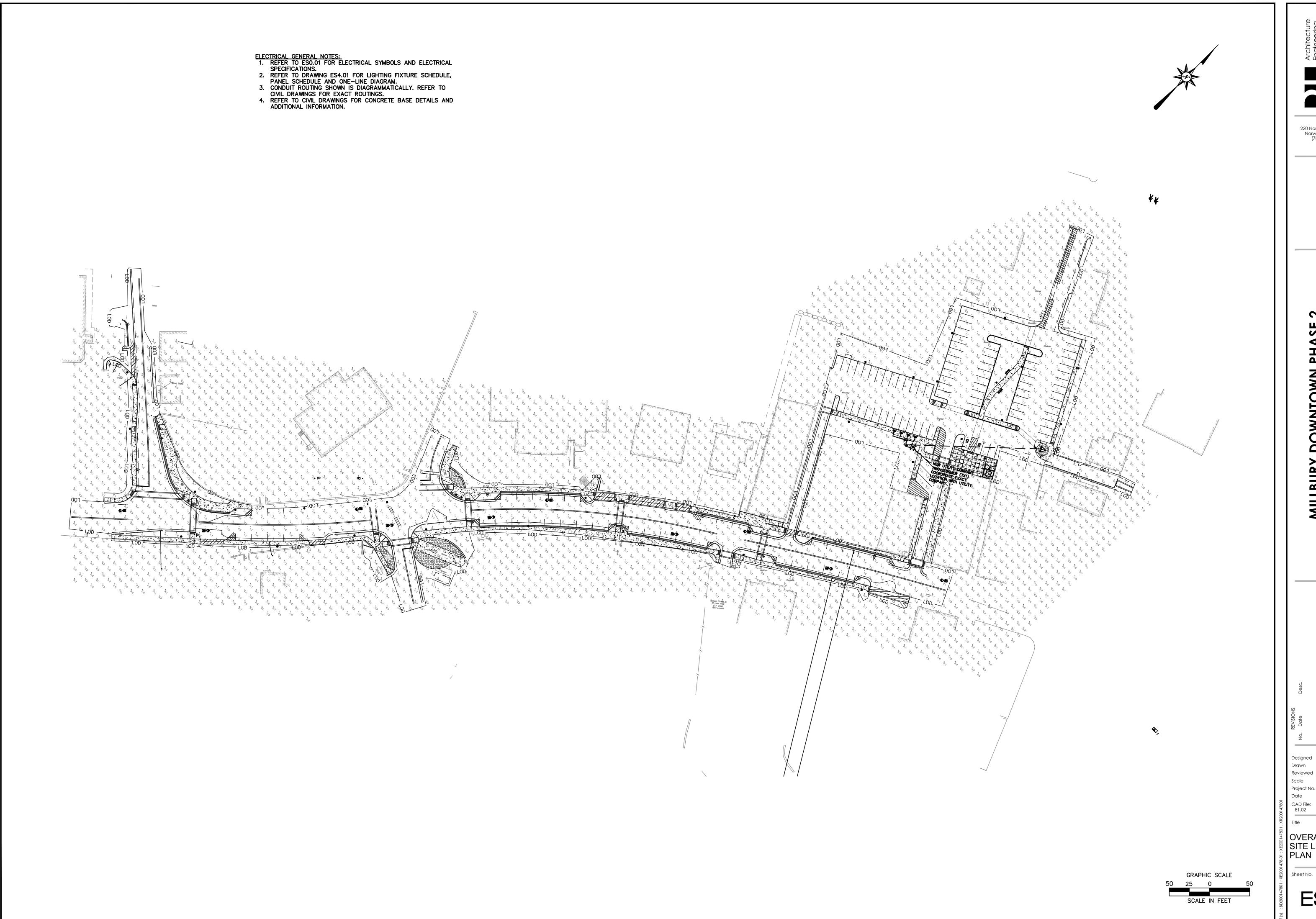
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D.J.H. Designed D.J.H Reviewed 2001478 Project No. FEBRUARY, 2022

CAD File: OVERALL

SITE LIGHTING PLAN

ES0.01





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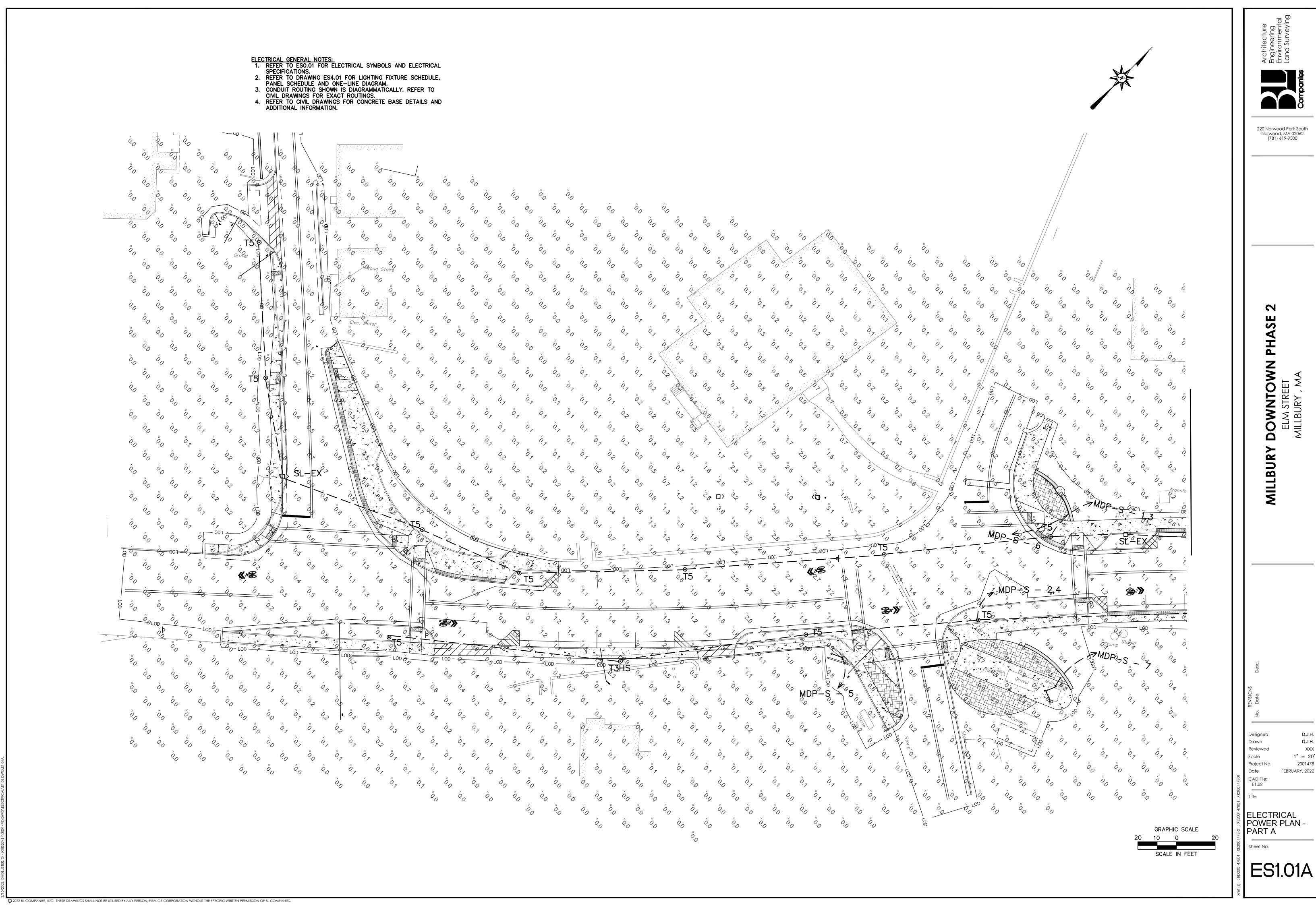
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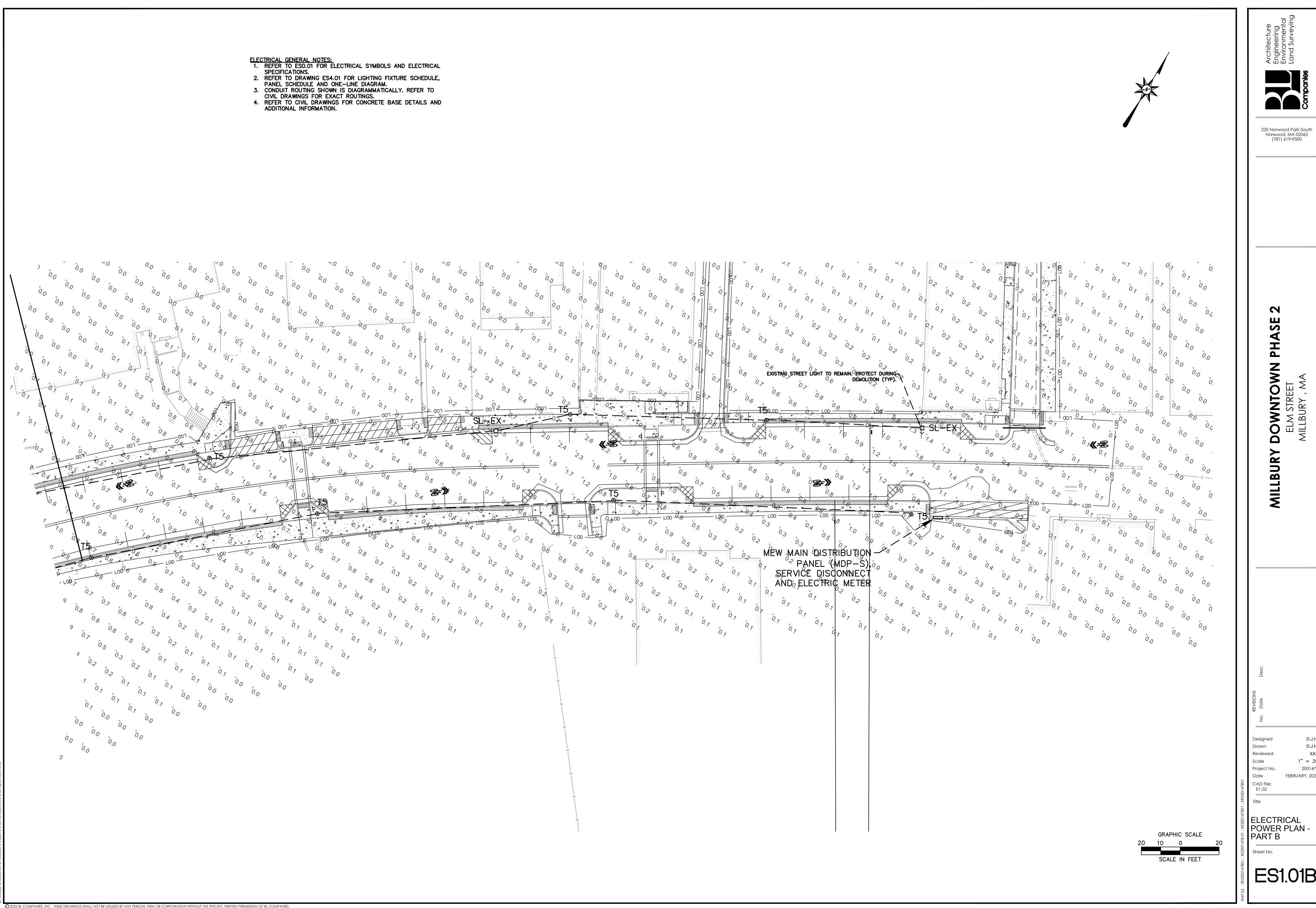
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Project No. CAD File: E1.02

OVERALL SITE LIGHTING

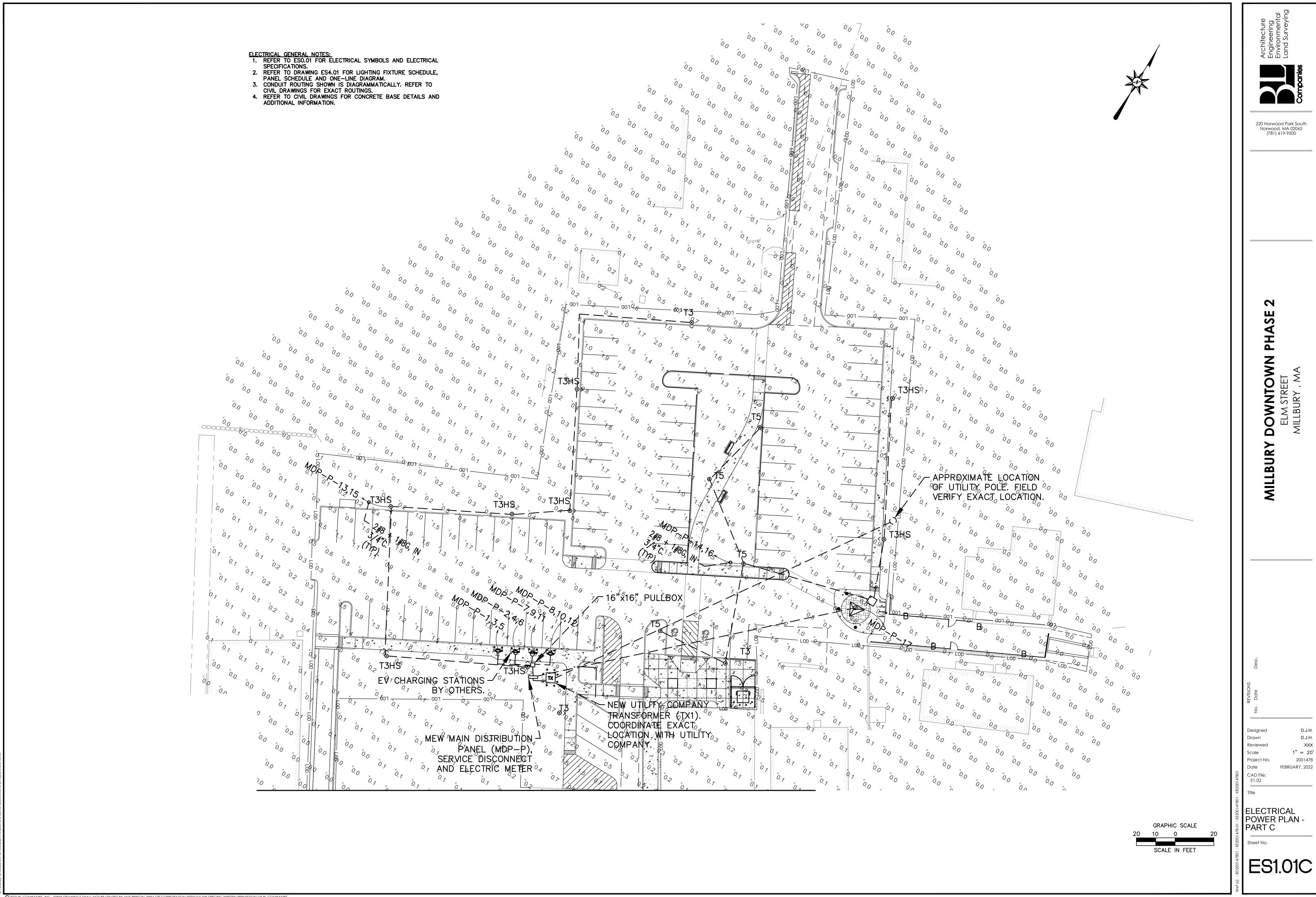
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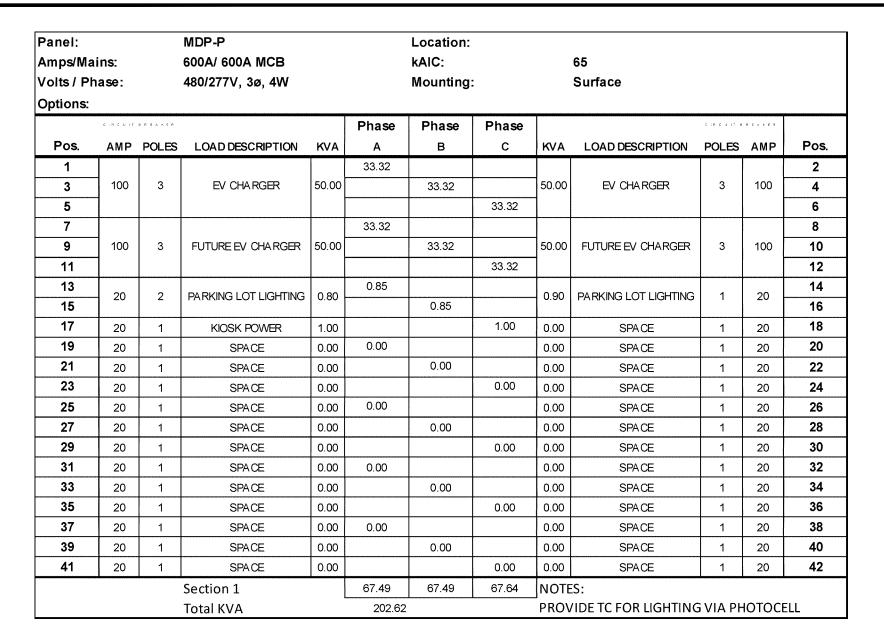




FEBRUARY, 2022

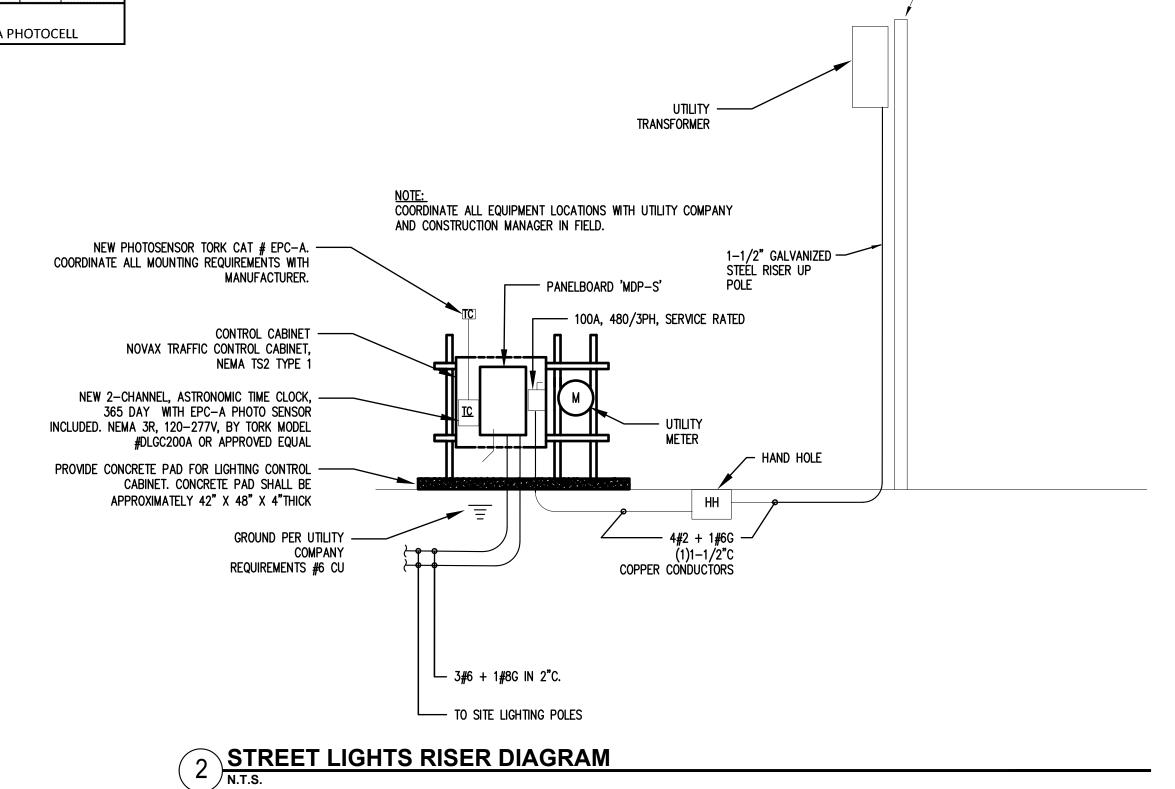
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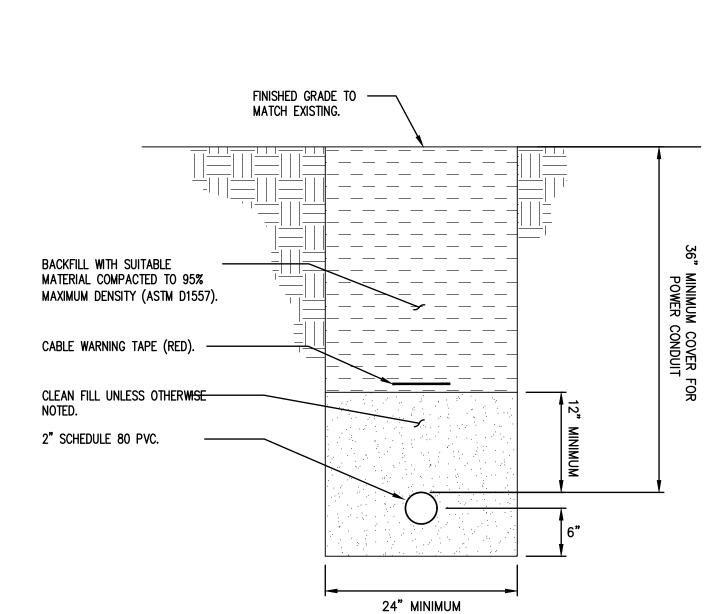




Amps/Mains:			MDP-S 100A/ 50A MCB 480/277V, 3ø, 4W		Location: kAIC: Mounting:				65 Surface			
	SIRCUIT	в я в я х є я			Phase	Phase	Phase			CIRCUIT B	A E A K E B	
Pos.	AMP	POLES	LOAD DESCRIPTION	KVA	Α	В	С	KVA	LOAD DESCRIPTION	POLES	AMP	Pos.
1	20	2	STREET LIGHTING	0.80	0.93			1.07	STREET LIGHTING	1	20	2
3	1 20		STREET LIGHTING	0.80		0.93		1.07	STREET LIGHTING	' '	20	4
5	20	1	SIGN FLOOD LIGHT	0.00			0.10	0.00	WALL WASHER LIGHTS	1	20	6
7	20	1	FLAG POLE LIGHTS	0.00	0.07			0.00	SPACE	1	20	8
9	20	1	SPA CE	0.00		0.00		0.00	SPACE	1	20	10
11	20	1	SPA CE	0.00			0.00	0.00	SPACE	1	20	12
			Section 1		2.78	1.78	1.03	NOTE	S:			
Total KVA				5.60	1		PROV	IDE TO FOR LIGHTING	VIA PH	IOTOCE	LL	

Schedule							_	_		_	
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Number Lamps	Filename	Lumens per Lamp	LLF	Wattage	Distribution
	T5	18	Holophane	GVD3 P30 30K XXXX GL5 RB	GranVille Gen3, P30 Performance Package, 3000K CCT, 70CRI, Type 5 distribution with Ribs and Bands	1	GVD3_P30_30K_ XXXX_GL5_RB.ie s	7616	0.9	61	TYPE VS, BUG RATING: B3 - U4 - G3
^ •	Т3	3	Holophane	GVD3 P30 30K XXXX GL3 RB	GranVille Gen3, P30 Performance Package, 3000K CCT, 70CRI, Type 3 distribution with Ribs and Bands	1	GVD3_P30_30K_ XXXX_GL3_RB.ie s	7517	0.9	61	TYPE IV, MEDIUM, BUG RATING: B2 - U4 - G5
^ •	T3HS	10	Holophane	GVD3 P30 30K XXXX GL3 RB GVDHSS18	GranVille Gen3, P30 Performance Package, 3000K CCT, 70CRI, Type 3 distribution with Ribs and Bands and with 180deg House Side Shield	1	GVD3_P30_30K_ XXXX_GL3_RB_ GVDHSS18.ies	5430	0.9	61	TYPE IV, MEDIUM, BUG RATING: B1 - U4 - G5
â •	SL-EX	4	American Electric Lighting	ATB2 40BLEDE10 XXXXX R4 3K	ATB2 SERIES LED 1000MA TYPE 4 3000K CCT	1	ATB2_40BLEDE1 0_XXXXX_R4_3 K.ies	15626	0.3	133	TYPE IV, SHORT, BUG RATING: B3 - U0 - G3
	SL-NEW	2	American Electric Lighting	ATB2 40BLEDE10 XXXXX R4 3K	ATB2 SERIES LED 1000MA TYPE 4 3000K CCT	1	ATB2_40BLEDE1 0_XXXXX_R4_3 K.ies	15626	0.7	133	TYPE IV, SHORT, BUG RATING: B3 - U0 - G3





WARNING: UNDERGROUND UTILITIES

THE CONTRACTOR IS TO BE FULLY RESPONSIBLE FOR CONTACTING THE LOCAL POWER, TELEPHONE, CABLE TELEVISION, GAS, WATER, AND SEWER COMPANIES AND ANY OTHER UTILITY COMPANIES WITHIN THE AREA PRIOR TO PROCEEDING WITH ANY EXCAVATION. BY LAW, THE CONTRACTOR IS REQUIRED TO CALL BEFORE DOING ANY EXCAVATION, DIGGING HOLES, OR DRIVING POSTS REGARDLESS OF WHETHER IT IS WITHIN THE STREET LINE OR ON PRIVATE PROPERTY. CONTRACTOR CAN OBTAIN INFORMATION REGARDING THE EXISTENCE AND LOCATION OF ANY UNDERGROUND FACILITIES BY CALLING: 1-800-922-4455 A MINIMUM OF (2) TWO FULL WORKING DAYS BEFORE ANY EXCAVATION.

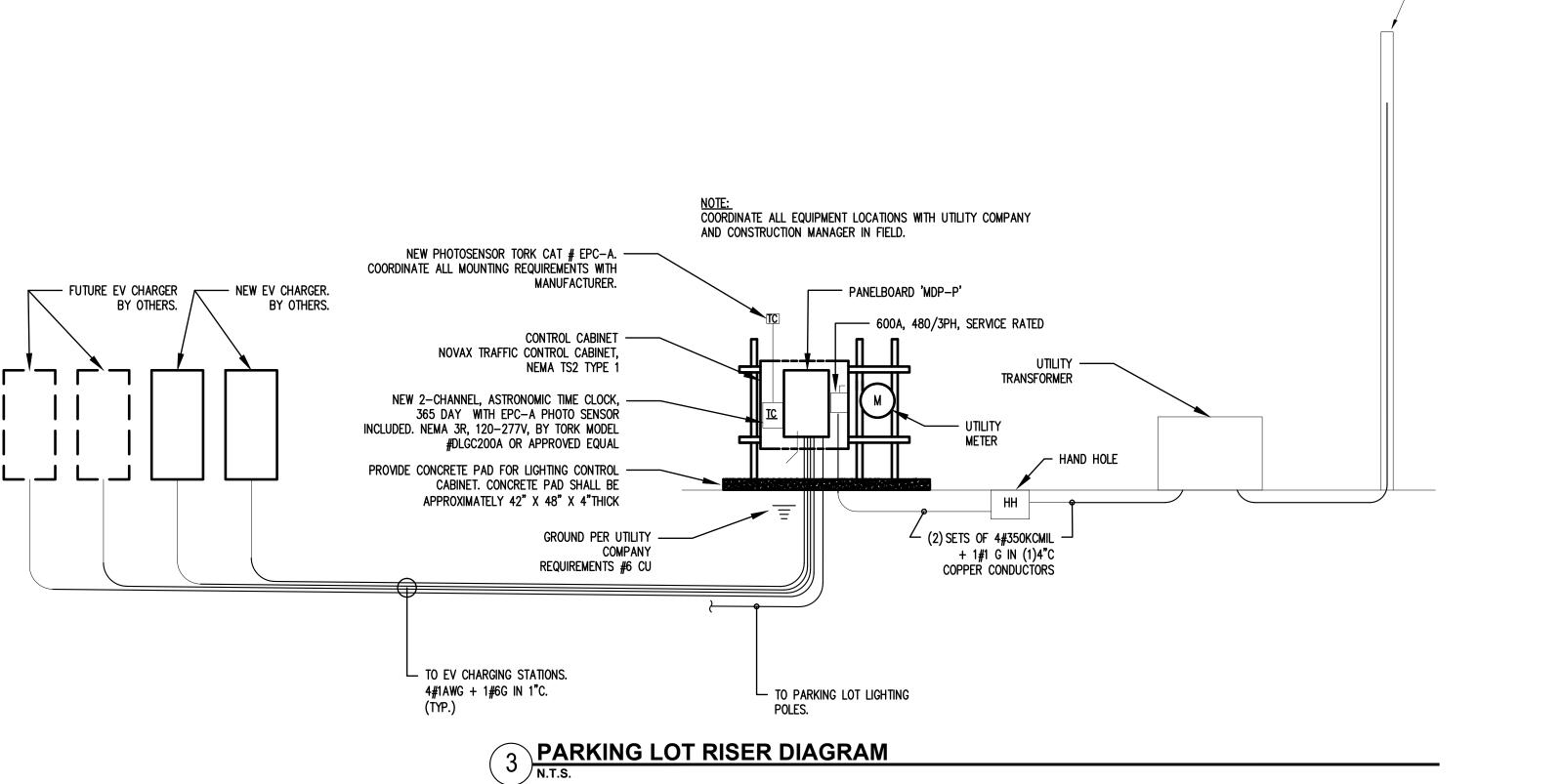
CALL TWO FULL WORKING DAYS IN ADVANCE



CALL BEFORE YOU DIG 1-800-922-4455 TOLL FREE STATEWIDE

TYPICAL TRENCH DETAIL NOTES:

- 1. THE CLEAN FILL SHALL PASS THROUGH A 🔏 MASH SCREEN AND SHALL NOT CONTAIN SHARP STONES. OTHER BACKFILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS LARGER THAN 2" IN MAXIMUM DIMENSION.
- WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.
- 3. COORDINATE ROUTING OF CONDUITS WITH OTHER TRADES TO MAINTAIN REQUIRED SEPARATION WITH GAS, WATER, ETC. SERVICES.
- 4. CABLE WARNING TAPE SHALL BE 6" DETECTABLE TYPE AND INSTALLED ENTIRE LENGTH OF EACH TRENCH.



TYPICAL TRENCH DETAIL - SECTION (A-A)

E4.01

-UTILITY POLE

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220 Norwood Park South Norwood, MA 02062 (781) 619-9500

S DOWNTOWN I ELM STREET MILLBURY, MA URY

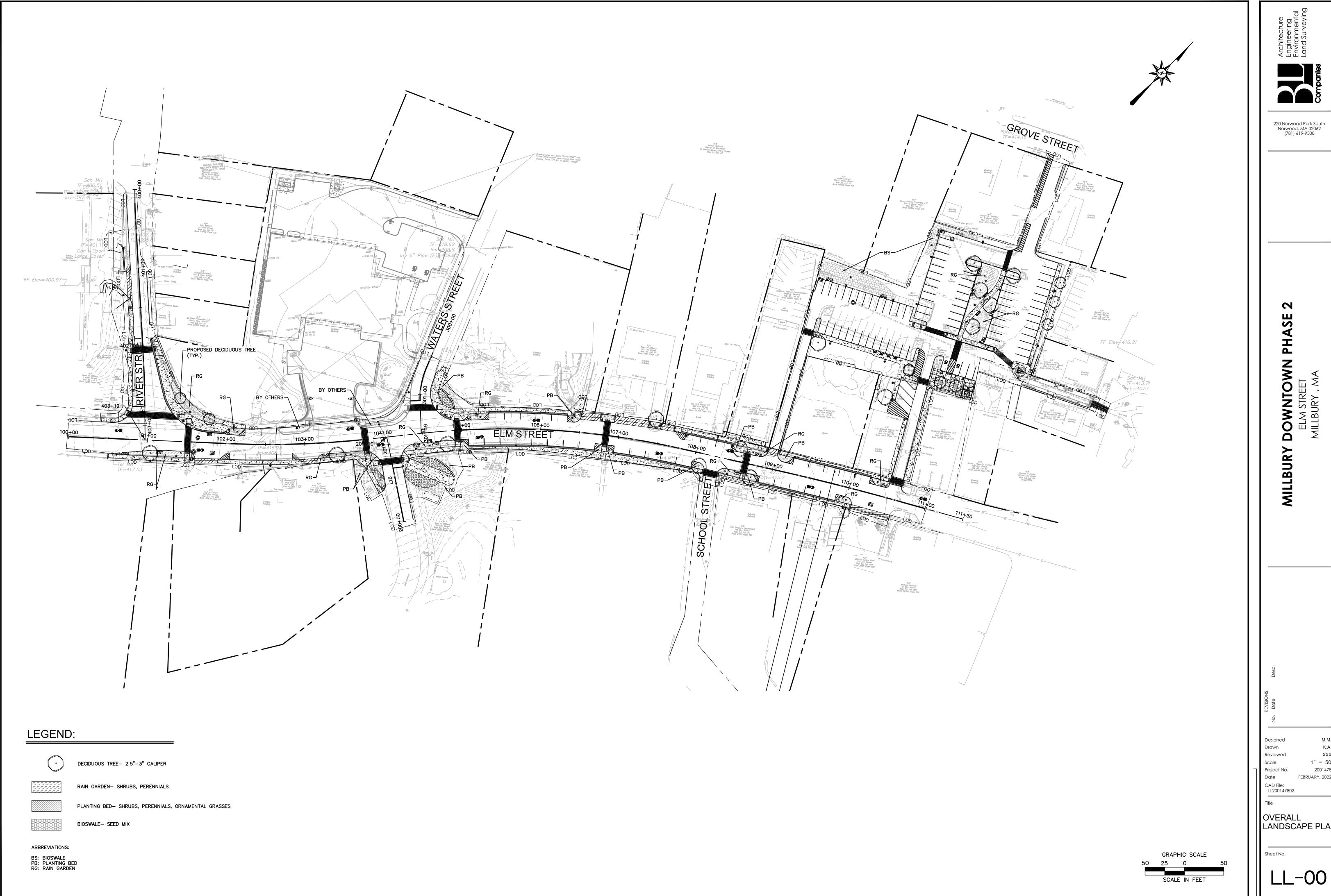
—UTILITY POLE

D.J.H. Designed D.J.H. Drawn XXX 2001478

Reviewed Scale Project No. FEBRUARY, 2022 Date CAD File: E1.02

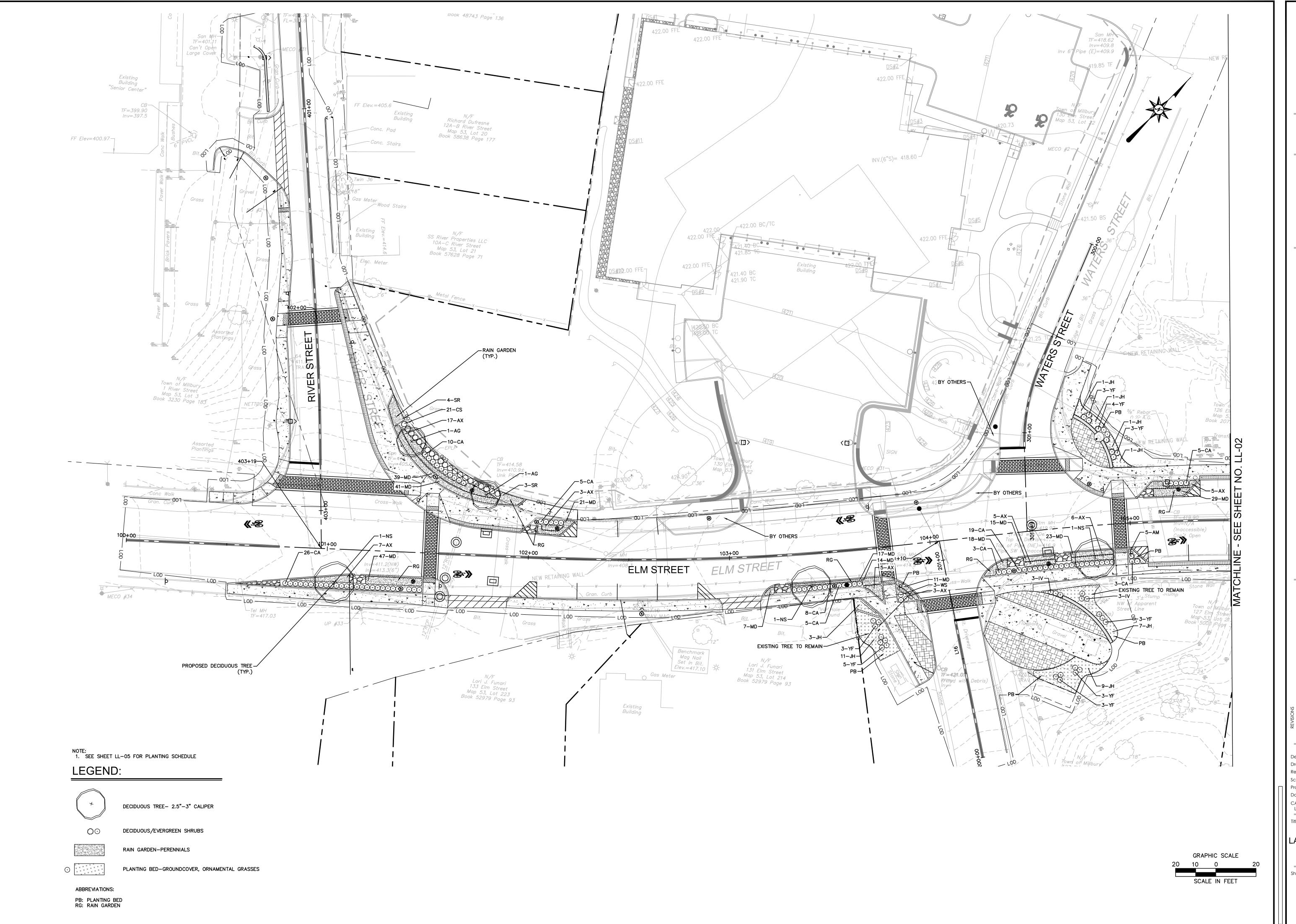
ELECTRICAL SITE PANEL

SCHEDULES Sheet No.



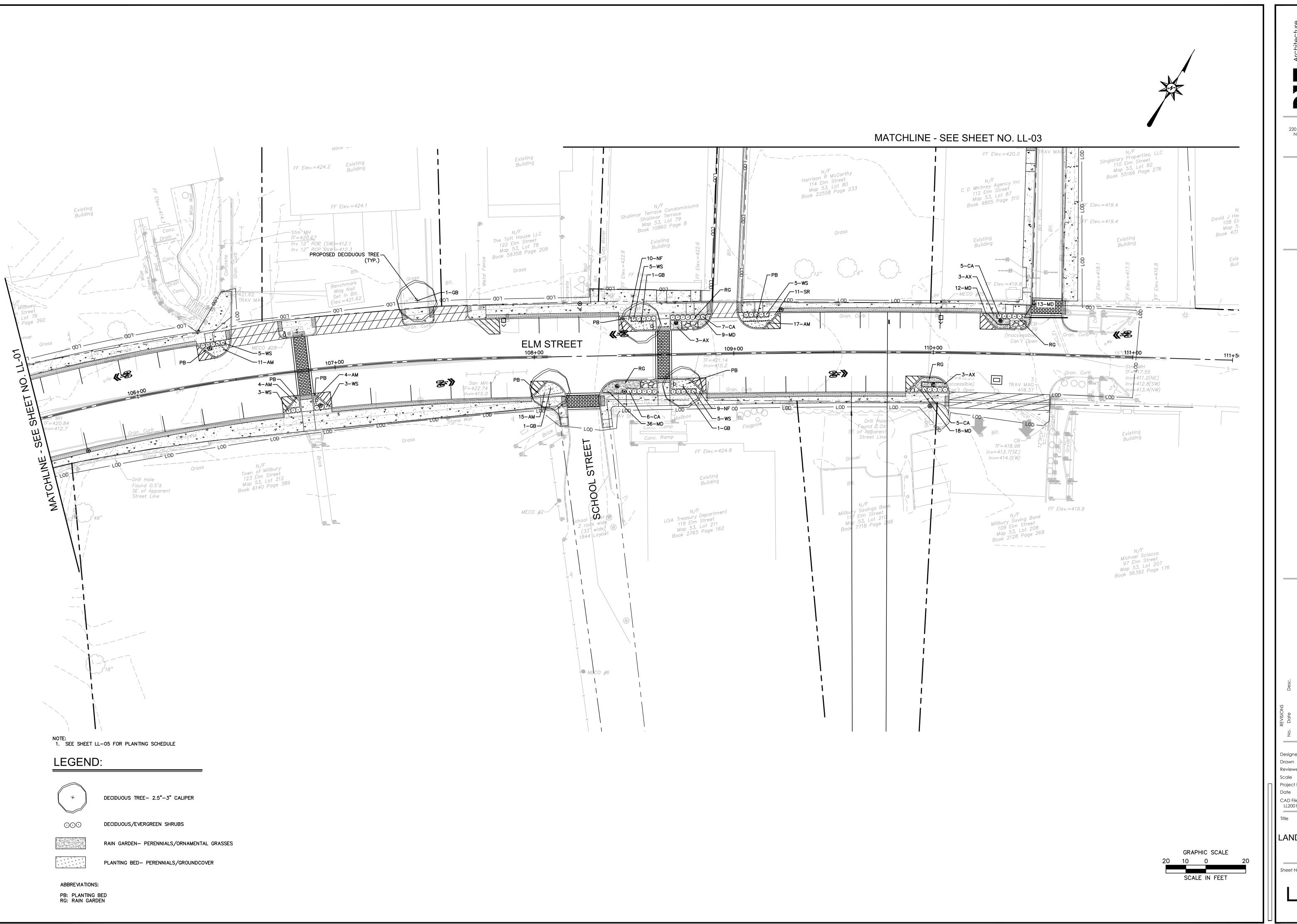
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220 Norwood Park South Norwood, MA 02062 (781) 619-9500 C DOWNTOWN PHASE 2
ELM STREET
MILLBURY, MA Designed Drawn 2001478 Project No. Date FEBRUARY, 2022 CAD File: LL200147802 OVERALL LANDSCAPE PLAN



220 Norwood Park South Norwood, MA 02062 (781) 619-9500 SE DOWNTOWN F ELM STREET MILLBURY, MA URY Designed Drawn Reviewed Scale 2001478 Project No. Date FEBRUARY, 2022 CAD File: LL200147802 LANDSCAPE PLAN

LL-01



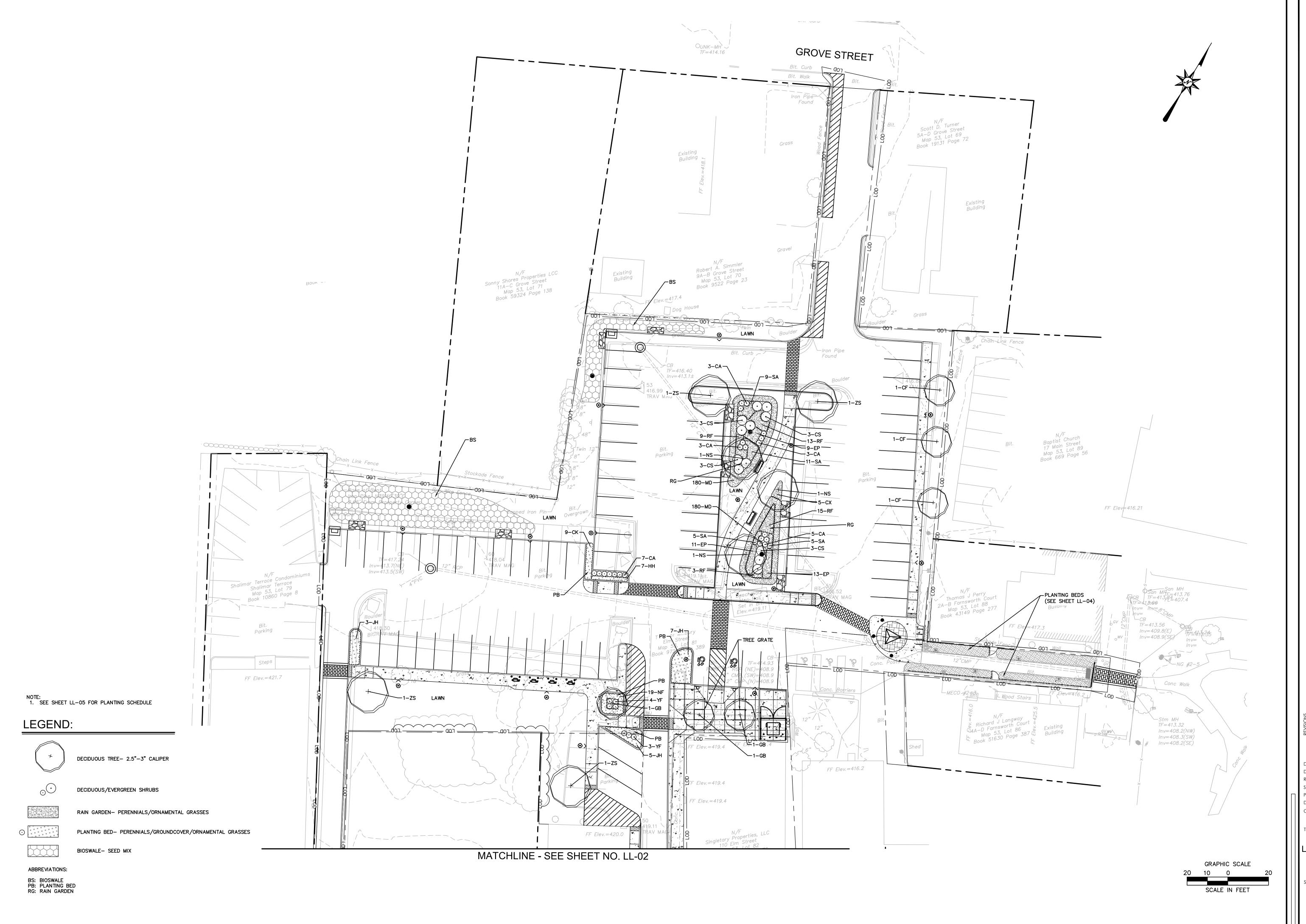
220 Norwood Park South Norwood, MA 02062 (781) 619-9500

Designed Drawn 2001478 Project No. FEBRUARY, 2022

CAD File: LL200147802

LANDSCAPE PLAN

LL-02



Architecture Engineering Environmental Land Surveying

220 Norwood Park South Norwood, MA 02062 (781) 619-9500

URY DOWNTOWN PHASE
ELM STREET
MILLBURY, MA

Desc.

No. Date

 Designed
 M.M.

 Drawn
 K.A.

 Reviewed
 M.M.

 Scale
 1" = 20'

 Project No.
 2001478

 Date
 FERRILARY 2022

Project No. 2001478

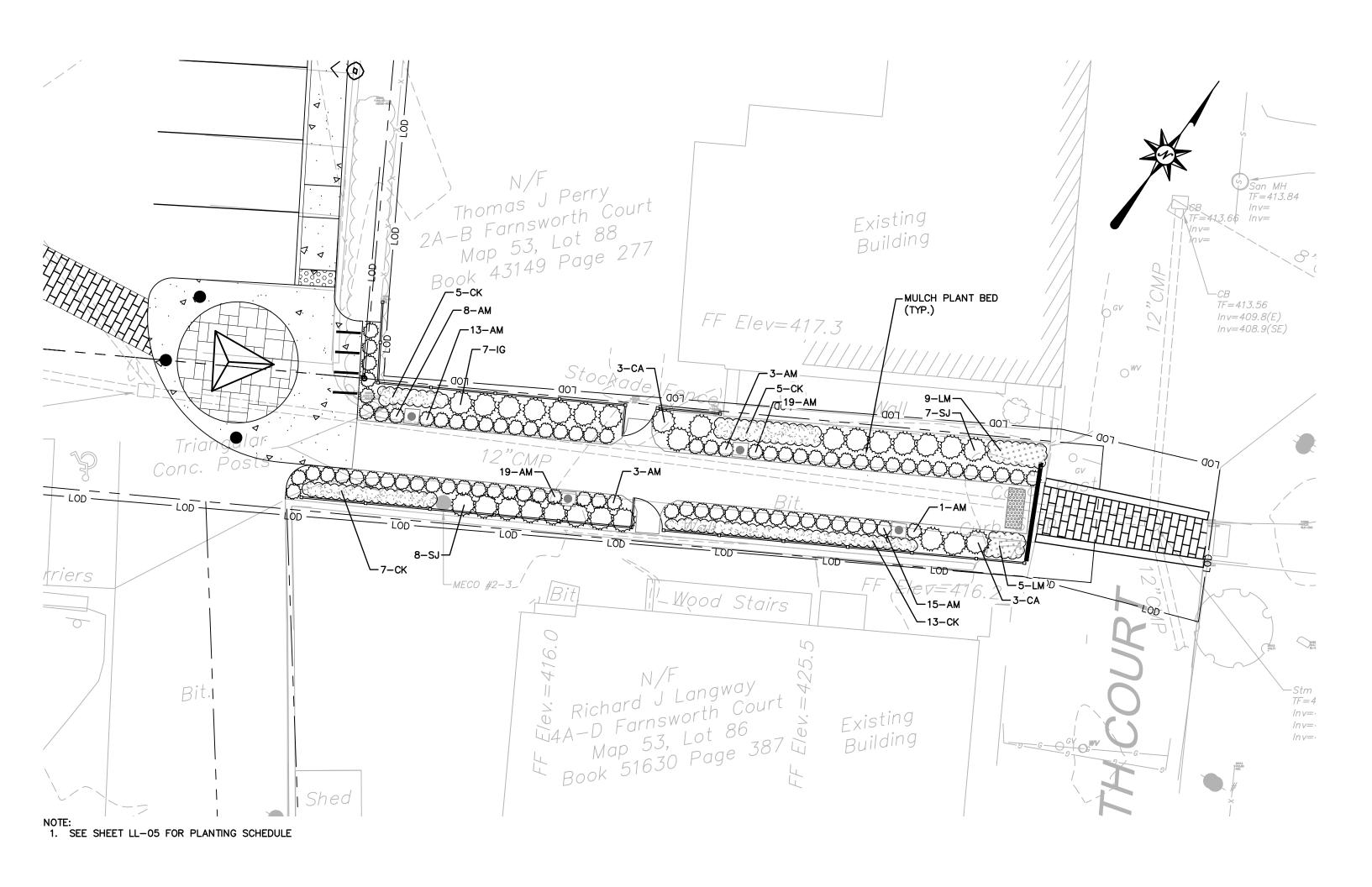
Date FEBRUARY, 2022

CAD File:
LL200147802

LANDSCAPE PLAN

Sheet No.

| LL-03



LEGEND:

PROPOSED PERENNIALS

PROPOSED ORNAMENTAL GRASSES

220 Norwood Park South Norwood, MA 02062 (781) 619-9500

C DOWNTOWN PHASE 2 ELM STREET MILLBURY, MA URY

Designed Drawn Reviewed 1" = 10' Scale 2001478 Project No. Date FEBRUARY, 2022

N.R.G.

CAD File: LL200147802 FARNSWORTH COURT

LANDSCAPE

LL-04

1. THE LANDSCAPE PLAN AND DETAIL SHEET ARE FOR LANDSCAPING INFORMATION ONLY. REFER TO THE SITE PLAN. GRADING AND DRAINAGE PLAN, SITE UTILITIES PLAN, LIGHTING PLAN AND DEMOLITION PLAN FOR ALL OTHER INFORMATION.

2. COORDINATE PLANT MATERIAL LOCATIONS WITH SITE UTILITIES. UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXERCISE CARE WHEN DIGGING IN AREAS OF POTENTIAL CONFLICT WITH UNDERGROUND OR OVERHEAD UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONTRACTOR'S NEGLIGENCE AND SHALL REPLACE OR REPAIR ANY DAMAGE AT CONTRACTOR'S EXPENSE.

3. THE LOCATIONS FOR PLANT MATERIAL ARE APPROXIMATE AND ARE SUBJECT TO FIELD ADJUSTMENT DUE TO UTILITY LOCATIONS AND SITE CONDITIONS. THE CONTRACTOR SHALL ACCURATELY STAKE OUT THE LOCATIONS FOR ALL PLANTS FOR THE REVIEW, ADJUSTMENT, AND APPROVAL BY OWNER OR LANDSCAPE ARCHITECT PRIOR TO PLANTING.

4. THE CONTRACTOR SHALL GUARANTEE THAT ALL PLANTS SHALL BE HEALTHY AND FREE OF DISEASE FOR A PERIOD OF ONE YEAR OR JUNE 1ST OF THE YEAR FOLLOWING INSTALLATION, WHICHEVER IS LONGER, AFTER SUBSTANTIAL COMPLETION AND ACCEPTANCE BY OWNER OR LANDSCAPE ARCHITECT. CONTRACTOR SHALL REPLACE ANY DEAD OR UNHEALTHY PLANTS AT CONTRACTOR'S EXPENSE. PLANT MATERIAL REPLACEMENTS SHALL BE GUARANTEED FOR ONE FULL YEAR FROM DATE OF REPLACEMENT. REPLACEMENT PLANTS SHALL BE THE SAME AS SPECIFIED FOR THE ORIGINAL PLANTING. REPLACEMENTS SHALL BE MADE AS MANY TIMES AS NECESSARY TO ENSURE HEALTHY PLANTS. FINAL ACCEPTANCE SHALL BE MADE IF ALL PLANTS MEET THE GUARANTEE REQUIREMENTS INCLUDING MAINTENANCE. MAINTENANCE RESPONSIBILITIES INCLUDE CULTIVATING. SPRAYING, WEEDING, WATERING, TIGHTENING GUYS, PRUNING, FERTILIZING, MULCHING, AND ANY OTHER OPERATIONS NECESSARY TO MAINTAIN PLANT VIABILITY. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND CONTINUE UNTIL THE END OF THE GUARANTEE PERIOD. DURING THE LANDSCAPE MAINTENANCE PERIOD (GUARANTEE) THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF ANY SITE CONSTRAINTS (PHYSICAL, ENVIRONMENT, ETC.) OR MAINTENANCE DEFICIENCIES THAT MAY AFFECT LANDSCAPE VEGETATION ESTABLISHMENT.

5. THE CONTRACTOR SHALL SUPPLY ALL LABOR, PLANTS, AND MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND LISTED IN THE PLANT SCHEDULE. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT SCHEDULE AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER SHALL APPLY. ALL PLANTS SHALL BE ACCLIMATED BY THE SUPPLY NURSERY TO THE LOCAL HARDINESS ZONE AND BE CERTIFIED THAT THE PLANTING MATERIAL HAS BEEN GROWN FOR A MINIMUM OF TWO YEARS AT THE SOURCE AND OBTAINED WITHIN 200 MILES OF PROJECT SITE UNLESS OTHERWISE APPROVED BY OWNER OR LANDSCAPE ARCHITECT.

PLANTS SHALL HAVE TAGS THAT IDENTIFY PLANT GENUS, SPECIES, CULTIVAR (IF APPLICABLE), PLANT COMMON NAME, NAME OF SOURCE NURSERY, AND SIZE OF PLANT FOR REVIEW OF OWNER OR LANDSCAPE ARCHITECT.

7. NO PLANT SHALL BE PLACED IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT. STAKING THE LOCATION OF ALL TREES AND SHRUBS SHALL BE COMPLETED PRIOR TO PLANTING FOR APPROVAL BY THE OWNER OR LANDSCAPE ARCHITECT.

8. FINAL GRADES SHALL BLEND SMOOTHLY WITH EXISTING GRADES, AND TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED. 9. ALL TREE AND SHRUB MASSINGS SHALL BE MULCHED TO A DEPTH OF 3". ANNUAL AND PERENNIAL BEDS SHALL BE

MULCHED TO A DEPTH OF 2". MULCH SHALL BE UNCOLORED TRIPLE-SHREDDED HARDWOOD BARK MULCH, AGED AT LEAST 6

10. IF TREE STAKING IS PROPOSED, TREE STAKING MUST BE COMPLETED THE SAME DAY AS THE TREE IS INSTALLED. ALL TREES SHALL BE STAKED OR GUYED PER DETAIL. 11. LANDSCAPE PLANTING AREAS MUST BE FREE DRAINING. PAVEMENT, COMPACTED SUBGRADE, DEAD OR DYING PLANT

MATERIAL. BLASTED ROCK, STONES GREATER THAN 1" IN DIAMETER, AND ANY OTHER MATERIAL HARMFUL TO PLANT GROWTH

SPECIFICATIONS. 12. PLANTING SOIL:

DEPTH: PLANTING SOIL SHALL BE INSTALLED AT A MINIMUM DEPTH OF 6" OR AS NOTED IN THE LANDSCAPE DETAILS. PLANTING SOIL SHALL BE UTILIZED IN ALL PLANTING AREAS INCLUDING SEEDED AREAS.

AND DEVELOPMENT SHALL BE REMOVED FROM AREAS TO BE LANDSCAPED AS REQUIRED BY PLANTING DETAILS OR

TESTING: CONTRACTOR SHALL SUBMIT (2) SOIL SAMPLES PER SOIL STOCKPILE TO A CERTIFIED TESTING LABORATORY TO DETERMINE ACIDITY, ORGANIC CONTENT, MECHANICAL ANALYSIS, AVAILABLE NUTRIENTS (N,P,K,Ca,Mg,S,Fe,Mn,Zn,Cu,B,AI,Pb) AND NECESSARY AMENDMENTS TO SOIL. THE CONTRACTOR SHALL SUBMIT THE TEST RESULTS TO THE OWNER OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. TEST RESULTS SHALL RECOMMEND AMENDMENTS THAT WILL ALTER THE SOIL CHARACTERISTICS SUCH THAT THE CHARACTERISTICS DESCRIBED BELOW ARE ACHIEVED AND THE SPECIFIED PLANTS (CONTRACTOR TO PROVIDE LIST TO TESTING LABORATORY) WILL ACHIEVE PROPER GROWTH THAT IS NEITHER DEFICIENT NOR EXCESSIVE. THE CONTRACTOR SHALL INCORPORATE THESE AMENDMENTS AT NO INCREASE IN CONTRACT PRICE.

CHARACTERISTICS: PLANTING SOIL MAY CONSIST OF EXISTING ON-SITE SOILS, AMENDED ON-SITE SOILS, OR IMPORTED SOILS MEETING THE FOLLOWING CRITERIA:

- A. NOT TO CONTAIN MATERIALS HARMFUL TO PLANT LIFE, TO BE CLEAN, FERTILE, FRIABLE, AND WELL DRAINING. ALL PLANTING SOIL SHALL BE FREE OF ANY SUBSOIL EARTH CLODS, SODS, STONES OVER 1" IN ANY DIMENSION, STICKS, ROOTS, WEEDS, LITTER AND OTHER DELETERIOUS MATERIAL. PLANTING SOIL SHALL BE UNIFORM IN QUALITY AND TEXTURE
- B. PLANTING SOIL SHALL HAVE THE FOLLOWING OPTIMUM RANGES UNLESS OTHERWISE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT.

ORGANIC CONTENT 3% - 6% FOR LAWN OR GRASS AREAS. 4% - 8% FOR TREE AND SHRUB PLANTERS. 8%-16% FOR RETENTION OR DETENTION BASINS.

(BY LOSS OF IGNITION AT 375 C METHOD OF TESTING)

- 6.0 7.3C. NUTRIENT LEVELS SHALL BE ACHIEVED BY THE CONTRACTOR'S ADDITION OF AMENDMENTS TO THE PLANTING SOIL TO MEET THE OPTIMUM NUTRIENT LEVELS SPECIFIED IN THE TESTING LABORATORY REPORT FOR EACH OF PLANTS TO BE INSTALLED.
- D. SOIL SHALL BE COMPACTED TO A SURFACE PENETRATION RESISTANCE OF 75-125 LBS/SQ.IN.
 E. SOIL MAY BE TREATED FOR WEEDS WITH PRE-EMERGENT OR POST-EMERGENT HERBICIDE, AS NEEDED AND AS APPROPRIATE FOR THE APPLICATION SEASON OR LOCATION, OR ELIMINATE GROWTH OF UNWANTED PLANT MATERIAL. APPLY HERBICIDES IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. HERBICIDE APPLICATOR MUST BE LICENSED IN THE STATE OF NEW HAMPSHIRE, AND PERFORM APPLICATIONS IN ACCORDANCE WITH LOCAL REQUIREMENTS, PERMITTING STIPULATIONS, AND ANY OTHER RESTRICTIONS INCLUDING
- AND IN EXCESS OF STATE AND FEDERAL REGULATIONS. F. PROPOSED TOPSOIL SHALL MEET THE USDA SOILS TEXTURAL PERCENTAGES OF SAND, SILT, AND CLAY FOR FOLLOWING CLASSIFICATIONS:
- SANDY LOAM WHERE SAND DOES NOT EXCEED 70% AND CLAY IS NOT LESS THAN 5%.
 SANDY CLAY LOAM WHERE SAND DOES NOT EXCEED 70% AND CLAY IS LESS THAN 28%.
 G. BIORETENTION SOILS: SOIL TO BE INSTALLED IN RETENTION BASINS, PONDS, OR OTHER STORMWATER MANAGEMENT ENVIRONS SHALL MEET THE ABOVE DESCRIBED CHARACTERISTICS AND AS FOLLOWS: - SOIL SHALL NOT CONTAIN MORE THAN 20% CLAY AND LESS THAN 40% SILT.
- SOIL SHALL HAVE AN INFILTRATION RATE BETWEEN 1/2" AND 3" PER HOUR. H. MODIFICATION TO THE PLANTING SOIL CHARACTERISTICS DESCRIBÉD ABOVE MAY BE SUBMITTED FOR APPROVAL BY THE LANDSCAPE ARCHITECT. CONTRACTOR MUST DEMONSTRATE PROPOSED CHARACTERISTICS ARE EQUAL TO OR SUPERIOR TO THE SPECIFIED CHARACTERISTICS WITH RESPECT TO SUPPORTING PLANT GROWTH, AND STORMWATER MANAGEMENT.

12. PLANTING AMENDMENTS: APPLY FERTILIZER AND OTHER AMENDMENTS AS RECOMMENDED FOR EACH PLANTING AREA BY SOIL ANALYSIS. APPLY AMENDMENTS IN A MANNER CONSISTENT WITH MANUFACTURER'S RECOMMENDATIONS. ANY ORGANIC AMENDMENTS SHALL HAVE A pH BETWEEN 4.5 AND 5.5 UNLESS OTHERWISE RECOMMENDED.

13. PLANT REQUIREMENTS: ALL PLANTS SHALL CONFORM IN SIZE AND GRADE TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 (LATEST EDITION). ALL PLANTS SHALL MEET THE ADDITIONAL REQUIREMENTS SET FORTH BELOW AND IN WRITTEN SPECIFICATIONS AS APPLICABLE. ALL TREES AND SHRUBS SHALL HAVE BEEN GROWN AT A COMMERCIAL NURSERY WITHIN 200 MILES OF THE PROJECT SITE UNLESS OTHERWISE APPROVED BY OWNER OR LANDSCAPE ARCHITECT. THEY SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. THEY SHALL BE HEALTHY, SYMMETRICAL, EVENLY AND DENSELY BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF BARK INJURY, DISEASE, AND INSECT PESTS. ALL TREES SHALL HAVE A STRAIGHT TRUNK WITH A SINGLE MAIN LEADER UNLESS OTHERWISE CHARACTERISTIC OF THE SPECIES OR VARIETY. THE OWNER OR LANDSCAPE ARCHITECT WILL ALLOW SUBSTITUTIONS ONLY UPON WRITTEN APPROVAL. SIZES SHALL CONFORM TO THE MEASUREMENT SPECIFIED ON THE DRAWINGS. PLANTS LARGER THAN SPECIFIED MAY BE USED IF APPROVED, BUT THE USE OF SUCH PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. ALL OVERSTORY TREES PLANTED ALONG PARKING AREAS, SIDEWALKS AND PEDESTRIAN ACCESSES SHALL NOT BRANCH BELOW 7' FEET IF THE TREE CALIPER IS 3" INCHES OR GREATER. ALL PLANT MATERIALS ARE SUBJECT TO INSPECTION AND ACCEPTANCE BY THE OWNER OR LANDSCAPE ARCHITECT AT THE NURSERY SOURCE. THE CONTRACTOR SHALL COORDINATE SOURCE VISITS WITH THE LANDSCAPE ARCHITECT AND SHALL ACCOMPANY THE OWNER AND/OR LANDSCAPE ARCHITECT FOR ALL INSPECTIONS. CERTIFICATES OF COMPLIANCE WITH SPECIFICATIONS ARE REQUIRED FOR ALL PLANTS.

14. INSPECTION AND REVIEW: ALL PLANT MATERIAL SHALL BE SUBJECT TO INSPECTION AND ACCEPTANCE BY THE OWNER OR LANDSCAPE ARCHITECT AT THE NURSERY SOURCE OR PLACE OF GROWTH. THE CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE ARCHITECT ON A SCHEDULE FOR SOURCE VISITS AND ACCOMPANY THE OWNER OR LANDSCAPE ARCHITECT FOR ALL SOURCE INSPECTIONS. CERTIFICATES OF COMPLIANCE ARE REQUIRED FOR ALL PLANT MATERIALS. PHOTOGRAPHIC REVIEW OF PLANT MATERIAL IS ACCEPTABLE IF APPROVED BY LANDSCAPE ARCHITECT. PHOTOGRAPHS MUST BE PROVIDED IN QUANTITY AND VARIETY TO ALLOW LANDSCAPE ARCHITECT SUFFICIENT INFORMATION TO MAKE A REASONABLE DETERMINATION AS TO THE PLANTS' QUALITY. OWNER AND LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT PLANT MATERIAL DELIVERED TO THE SITE BUT PREVIOUSLY ACCEPTED IF DAMAGED OR NOT PROPERLY MAINTAINED DURING THE DELIVERY PROCESS.

15. PLANTING SEASONS (UNLESS OTHERWISE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT)

<u>SPRING</u> APRIL 1 TO JUNE 15 EVERGREEN TREES AND SHRUBS SEPTEMBER 1 TO OCTOBER 15 DECIDUOUS TREES AND SHRUBS APRIL 1 TO JUNE 15 SEPTEMBER 15 TO NOVEMBER 15 GROUNDCOVERS APRIL 1 TO JUNE 15 SEPTEMBER 1 TO OCTOBER 15 SEPTEMBER 1 TO OCTOBER 15 PERENNIALS MAY 15 TO JUNE 15 PER MANUFACTURERS RECOMMENDATIONS OR AS LISTED IN SEED MIX NOTES SEED MIXES

16. SEEDING MIXTURES: REFER TO SEED MIX NOTES.

17. ALL SLOPES STEEPER THAN 3:1 RECEIVING A SEED MIX SHALL BE COVERED WITH AN EROSION CONTROL BLANKET OF STRAW FIBER AND BIODEGRADABLE OR PHOTODEGRADABLE NETTING.

18. UNLESS OTHERWISE NOTED IN DRAWING SET, NEW TREELINES SHALL EQUAL CLEARING AND GRUBBING LIMIT FOR

19. ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED SHALL BE SEEDED WITH THE LAWN SEED MIX.

SEED MIX NOTES

A. LAWN SEEDING MIX:

15 % PERENNIAL RYEGRASS (BLEND OF 3 IMPROVED HYBRIDS) 25 % FINE LEAF OR CREEPING FESCUE (BLEND OF 3 IMPROVED HYBRIDS) 60 % KENTUCKY BLUEGRASS (BLEND OF 3 IMPROVED HYBRIDS) SEEDING RATE: 5 LBS/1,000 S.F.

SEEDING DATES: AUGUST 15 - OCTOBER 1 AND APRIL 15 - JUNE 30 UNLESS OTHERWISE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT.

BIOSWALE SEEDING MIX:

MANUFACTURER: ERNST CONSERVATION SEEDS, (800) 873-3321, SALES@ERNSTSEED.COM PRODUCT: RAIN GARDEN GRASS MIX APPLICATION RATE: 15LB/ACRE

TREES	3				
ABRV.	QTY	BOTANICAL NAME	COMMON NAME	SIZE	NOTES
AG*	2	AMELANCHIER X GRANDIFLORA 'Autumn Brilliance'	'Autumn Brilliance' SERVICEBERRY	7-8' TALL* B&B	SPACE 15-20' O.C.
GB	4	GINGKO BILOBA 'Princeton Sentry'	'Princeton Sentry' COLUMNAR GINGKO	3-3.5" CAL B&B	SPACE 15' O.C.
NS	3	NYSSA SYLVATICA	Black Tupelo	3-3.5" CAL. B&B	SPACE 20' O.C.
SHRUE	38				
АМ	56	ARONIA MELANOCARPA 'Low Scape Mound'	'Low Scape Mound' BLACK CHOKEBERRY	#3 CONT.	SPACE 2' +/- O.C.
CA#	107	CLETHRA ALNIFOLIA 'Hummingbird'	'Hummingbird' SWEETSPIRE	#3 CONT.	SPACE 4' O.C.
CS#	21	CORNUS STOLONIFERA 'Farrow'	'Arctic Fire' RED TWIG DOGWOOD	#3 CONT.	SPACE 3-4' +/- O.C.
IV	6	ITEA VIRGINICA 'LITTLE HENRY'	LITTLE HENRY SWEETSPIRE	#3 CONT.	SPACE 3' O.C.
ws	29	WEIGELA FLORIDA 'Sonic Bloom Pink'	'Sonic Bloom Pink' WEIGELA	#3 CONT.	SPACE 5' O.C.
PEREN	INIALS/0	DRNAMENTAL GRASSES/GROUNDCOVER			•
AX#	60	ARUNCUS X 'Chantily Lace'	ARUNCUS X 'Chantily Lace'	#1 CONT.	SPACE 3' +/- O.C.
JH	31	JUNIPERUS HORIZONTALIS 'Hughes'	HUGHES SPREADING JUNIPER	#3 CONT.	SPACE 5' O.C.
MD#	290	MONARDA DIDYMA 'Pardon my Cerise' (RED)	'Pardon My Cerise' DWARF BEE BALM	#1 CONT.	SPACE 1.5' +/- 0.C.
NF	19	NEPETA X FAASSENII 'Walkers Low'	'Walkers Low' CATMINT	#1 CONT.	SPACE 2.5' O.C.
SR#	18	SAMBUCUS RACEMOSA 'Lemony Lace'	'Lemony Lace' ELDERBERRY	#1 CONT.	SPACE 4-5' +/- O.C.
YF	27	YUCCA FILAMENTOSA 'COLOR GUARD'	COLOR GUARD YUCCA	#2 CONT.	SPACE 2.5' +/- O.C.

^{*} MULTI-STEMMED FORM # RAIN GARDEN APPROPRIATE

TREES								
ABRV.	QTY	BOTANICAL NAME	COMMON NAME	SIZE	NOTES			
GB	3	GINGKO BILOBA 'Princeton Sentry'	'Princeton Sentry' COLUMNAR GINGKO	3-3.5" CAL B&B	SPACE 15' O.C.			
CF	3	CORNUS FLORIDA 'Cherokee Princess'	PINK FLOWERING DOGWOOD	2-2.5" CAL. B&B	SPACE 15-20' O.C.			
NS	3	NYSSA SYLVATICA	Black Tupelo	3-3.5" CAL. B&B	SPACE 20' O.C.			
zs	4	ZELKOVA SERRATA 'Village Green'	'Village Green' JAPANESE ZELKOVA	3-3.5" CAL. B&B	SPACE 30-50' O.C.			
SHRUBS	3		•	•				
CA#	21	CLETHRA ALNIFOLIA 'Hummingbird'	'Hummingbird' SWEETSPIRE	#3 CONT.	SPACE 4' O.C.			
CS#	12	CORNUS STOLONIFERA 'Farrow'	'Arctic Fire' RED TWIG DOGWOOD	#3 CONT.	SPACE 3-4' +/- O.C.			
PERENN	IIALS/ O	PRNAMENTAL GRASSES/ GROUNDCOVER	•	•				
СК	9	CALAMAGROSTIS X ACUIFLORA 'Karl Foerster'	FEATHER REED GRASS	#1 CONT.	SPACE 3' +/- O.C.			
EP	33	ECHINACEA PURPEREA	PURPLE COREFLOWER	#1 CONT.	SPACE 2' O.C.			
нн	7	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	#1 CONT.	SPACE 2' O.C.			
JH	15	JUNIPERUS HORIZONTALIS 'Hughes'	HUGHES SPREADING JUNIPER	#3 CONT.	SPACE 5' O.C.			
MD#	360	MONARDA DIDYMA 'Pardon my Cerise' (RED)	'Pardon My Cerise' DWARF BEE BALM	#1 CONT.	SPACE 1.5' +/- O.C.			
NF	19	NEPETA FAASSENII 'WALKERS LOW'	WALKER'S LOW CATMINT	#1 CONT.	SPACE 2' +/- O.C.			
RF	40	RUDBECKIA FULGIDA	BLACK-EYED SWAN	#1 CONT.	SPACE 2' O.C.			
SA#	30	SEEDUM 'Autumn Joy'	AUTUMN JOY SEEDUM	#1 CONT.	SPACE 2' O.C.			
YF	7	YUCCA FILAMENTOSA 'COLOR GUARD'	COLOR GUARD YUCCA	#2 CONT.	SPACE 2.5' +/- O.C.			

RAIN GARDEN APPROPRIATE

SHRI	JBS					
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SIZE	COMMENTS
АМ	80	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	'LOW SCAPE MOUND' BLACK CHOKEBERRY	CONT.	#2 CONT.	PLANT 2' O.C.
CA	6	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD SWEETSPIRE	CONT.	#3 CONT.	PLANT 3' O.C.
IG	7	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	CONT.	#3 CONT.	PLANT 3' O.C.
SJ	15	SPIREA JAPONICA 'DOUBLE PLAY GOLD'	'DOUBLE PLAY GOLD' SPIREA	CONT.	#3 CONT.	PLANT 3' O.C.
PERE	ENNIALS	S AND ORNAMENTAL GRASSES				
ск	30	CALAMAGROSTIS X ACUTIFLORA	FEATHER REED GRASS	CONT.	#2 CONT.	PLANT 2' O.C.
LM	14	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILY TURF	CONT.	#1 CONT.	PLANT 18" O.C.

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I **△ >** OWNTO ELM STREET AILLBURY, M

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Project No.

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LANDSCAPE