DEFINITIVE SITE PLAN APPROVAL
DCU/RETAIL EXPANSION PROJECT
225 SHREWSBURY STREET
WORCESTER, MASSACHUSETTS

ISSUED FOR DEFINITIVE SITE PLAN APPROVAL / SPECIAL PERMIT: JUNE 6TH, 2024

LOCATION PLAN
SCALE:1"=200'

PROJECT TEAM

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SUMMARY OF REQUIRED PERMITS & ZONING RELIEF REQUESTED

ZO SECTION	SPGA	REQUIREMENT	REQUEST
§IX-7	PLANNING BOARD	SITE PARKING REQUIREMENTS	ALLOWABLE REDUCTION OF SITE PARKING REQUIREMENTS IN THE COMMERCIAL CORRIDOR OVERLAY DISTRICT BY 41%
§IX-4.C.1	ZONING BOARD OF APPEALS	PERMITTED USE REGULATION	ALLOW FOR RELOCATION OF EXISTING DRIVE-THRU
§IV-7	ZONING BOARD OF APPEALS	LOADING REQUIREMENTS	WAIVER OF THE REQUIREMENT TO PROVIDE ONE (1) LOADING SPACES FOR THE PROPOSED BUILDING

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06-06-2024

DCU/RETAIL EXPANSION PROJECT
225 SHREWSBURY STREET
WORCESTER, MA
OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE:
PERMIT
ISSUE DATE:
06/06/2024
PROJECT NUMBER:
24009

DRAWN BY: MJH
CHECKED BY: DTB/DJH

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SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T100

ISSUED FOR : PERMIT

GENERAL NOTES

1. THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER ANY SIGNIFICANT VARIATIONS IN EXISTING SITE CONDITIONS FROM THOSE SHOWN ON THESE PLANS. ANY PROPOSED REVISIONS TO THE WORK, IF REQUIRED BY THESE SITE CONDITIONS, SHALL NOT BE UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER AND THE ENGINEER.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE ANY AND ALL SAFETY MEASURES NECESSARY TO PROTECT THE PUBLIC SAFETY DURING CONSTRUCTION. THESE SHALL INCLUDE SIGNS, BARRICADES, FENCES, POLICE OFFICERS, ETC. AS IS NECESSARY, OR AS DIRECTED BY THE PUBLIC AUTHORITIES AND THE OWNER. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. THE EXISTING SITE CONDITIONS SHOWN ON THESE PLANS WERE DETERMINED BY A FIELD SURVEY AND COMPILATION OF PLANS OF RECORD. ANY VARIATIONS FROM THE CONDITIONS SHOWN ON THESE PLANS SHOULD BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE PROPOSED WORK.
4. UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SPECIFICATIONS ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 EDITION OR THE LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INCLUDING (BUT NOT LIMITED TO) DEMOLITION PERMIT, UTILITY CONNECTIONS PERMIT, GENERAL PERMIT, ETC.
6. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION MEANS AND METHODS.
7. LIMIT OF WORK SHALL BE DELINEATED BY LOW LINE.
8. CONTRACTOR TO VERIFY UTILITY STUB LOCATIONS AND ELEVATIONS IN THE FIELD PRIOR TO COMMENCING WORK.
9. ANY ALTERATION TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL NOT BE PERFORMED WITHOUT WRITTEN CONSENT FROM ENGINEER. CONTRACTOR SHALL KEEP A RECORD OF ALL CHANGES MADE DURING OCNSTRUCTION.
10. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
11. ALL WORK TO BE DONE WITHIN PUBLIC RIGHT-OF-WAYS SHALL CONFORM TO CITY OF WORCESTER LOCAL STANDARD CONSTRUCTION REQUIREMENTS FOR THE INSTALLATION OF AND/OR REPAIR OF UNDERGROUND FACILITIES, EXCAVATIONS AND PAVING IN THE PUBLIC WAY.
12. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL AND SHALL NOTIFY THE OWNER/ENGINEER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
13. WRITTEN NOTICE OF FINAL DISPOSITION OF MATERIALS SHALL BE PROVIDED TO THE WORCESTER PLANNING BOARD

EXISTING SYMBOL LEGEND

Symbol	Description
	ACCESSIBLE PARKING PAVEMENT MARKING
	SIGN
CW	CONCRETE WALL
CC	CONCRETE CURB
CCB	CAPE COD BERM
VGC	VERTICAL GRANITE CURB
	REINFORCED CONCRETE SIDEWALK
	PEASTONE
	VARIOUS TREES
-99-	MINOR CONTOUR
-100-	MAJOR CONTOUR
	PROPERTY LINE
	RIGHT OF WAY
	EASEMENT
	TREELINE
SD	STORM DRAIN LINE
UGE	UNDER GROUND ELECTRIC
W	WATER LINE
GAS	GAS LINE
T	TELEPHONE LINE
SS	SEWER LINE
	STONE WALL
	CONCRETE WALL
HANDRAIL	HANDRAIL
	SITE LIGHTING
	DRAIN MANHOLE
	CATCH BASIN
NF	FLARED END SECTION
	FLARED END SECTION w/ RIP RAP
CLEANOUT CO	CLEANOUT
	TELEPHONE MANHOLE
	CABLE MANHOLE
	ELECTRIC MANHOLE
HH ELECT. H.H.	HAND HOLE
WML GLSPL	VARIOUS LIGHTING
	MANHOLE
	SEWER MANHOLE
ICV	IRRIGATION CONTROL VALVE
WG	WATER GATE
WSO	WATER SHUT OFF
	HYDRANT
PIV PIV	POST INDICATOR VALVE
	BOLLARD

SEDIMENTATION/EROSION CONTROL NOTES

1. UNLESS DIRECTED OTHERWISE, ALL EXISTING TURF OR VEGETATED AREAS WITHIN THE PROPOSED LIMITS OF WORK FOR EXCAVATION, GRADING, OR IMPROVEMENT SHALL BE CLEARED AND GRUBBED. WITHIN THE CLEARING AND GRUBBING AREA, REMOVE ALL TREES, SHRUBS AND ROOTS UNLESS DESIGNATED OTHERWISE. CLEARING SHALL INCLUDE THE FELLING, CUTTING AND OFF-SITE DISPOSAL OF ALL TREES, SHRUBS, STUMPS AND VEGETATIVE DEBRIS PRODUCED THROUGH THE CLEARING OPERATIONS.
2. UNLESS OTHERWISE STATED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), THE FOLLOWING EROSION CONTROL SPECIFICATIONS SHOWN ON SHEET C100 SHALL BE INSTITUTED.
3. THE LOCATION OF EROSION CONTROL BARRIERS SHOWN ON DRAWINGS ARE INTENDED TO BE MINIMUM REQUIREMENTS AND A GUIDE FOR THE PLACEMENT OF THESE BARRIERS. OTHER MEASURES MAY BE WARRANTED BASED UPON EXPERIENCE AT THE SITE. WHEN NO SEDIMENTATION CONTROL SYSTEM IS SHOWN ON THE DRAWING, THE CONTRACTOR SHALL BE REQUIRED TO ESTABLISH A SYSTEM TO PREVENT SILTATION OR POLLUTION OF ADJACENT PROPERTY. THE SYSTEMS SHOWN SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PLACING ADDITIONAL BARRIERS OR REPLACING BARRIERS AS REQUIRED BY SITE CONDITIONS. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT AND ADDITIONS TO THESE SYSTEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. AS CONSTRUCTION PROGRESSES AND SEASONAL CONDITIONS DICTATE, MORE SILTATION CONTROL FACILITIES MAY BE REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS NEW CONDITIONS THAT MAY BE CREATED.
4. THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE AND DISPOSED AT A LEGAL DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.
5. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION CONTROL MEASURES ON AN AS NECESSARY BASIS, SUCH THAT EXCESSIVE SOIL EROSION DOES NOT OCCUR. MEASURES SHALL INCLUDE HAY BALE DIKES AROUND DRAINAGE INLETS, MULCHING, AND PLANTING OF DISTURBED AREAS.
7. AN EROSION CONTROL BARRIER IS TO BE INSTALLED AT THE PROPOSED DOWN GRADIENT TOE OF SLOPE AT ALL LOCATIONS WHERE EARTHWORK IS PROPOSED.
8. DURING CONSTRUCTION THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT GENERATING MORE THAN 1/4" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY, TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE.
9. ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS. ANY SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY.
10. EXPOSED SLOPES GREATER THAN 50' IN LENGTH ARE TO HAVE CHECK DAMS, TERRACES AND/OR MULCHING INSTALLED IN ORDER TO REDUCE EROSION AND TO ENHANCE SURFACE STABILIZATION. IF CHECK DAMS ARE USED, THEY SHOULD BE PLACED APPROXIMATELY 50' O/C PARALLEL WITH THE FACE OF THE SLOPE.
11. UNTIL DRIVEWAYS ARE PAVED, TEMPORARY DIKES ARE TO BE STAKED ACROSS DRIVEWAYS AS REQUIRED TO DIRECT RUNOFF WATER TO CATCH BASINS. SILT SCREENS ARE TO BE INSTALLED AT CATCH BASIN GRATES (SEE DETAIL) AND SUMPS OF BASINS ARE TO BE CLEANED AS NECESSARY TO PREVENT SILT FROM ENTERING THE SUBSURFACE DRAINAGE SYSTEM.
12. FILTER FABRIC SHALL BE MIRAFI 140N OR APPROVED EQUAL.
13. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. ANY DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
14. ANY WATER PUMPED FROM EXCAVATIONS WILL BE CONVEYED BY HOSE TO AN UPLAND AREA AND DISCHARGED INTO HAYBALE CORRALS OR SEDIMENTATION BAGS
15. ALL AREAS DISTURBED DURING CONSTRUCTION AND NOT SPECIFIED FOR PAVEMENT OR NOT LEFT IN A NATURAL CONDITION SHALL RECEIVE SIX (6) INCHES OF LOAM AND SEED.
16. AREAS NOT DISTURBED BY CONSTRUCTION SHALL BE LEFT NATURAL. CARE SHALL BE TAKEN TO PRESERVE EXISTING TREES, GROUND COVER AND OTHER NATURAL FEATURES WHENEVER POSSIBLE.
17. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL STATE AT THE CONTRACTOR'S EXPENSE.
18. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
19. ALL STOCKPILE AREAS SHALL BE LOCATED WITHIN LIMIT OF WORK LINE AND STABILIZED TO PREVENT EROSION. REFER TO STORMWATER POLLUTION PREVENTION PLAN FOR STABILIZATION REQUIREMENTS.
20. ALL DEBRIS GENERATED DURING SITE PREPARATION ACTIVITIES SHALL BE LEGALLY DISPOSED OF OFF-SITE.
21. SITE ELEMENTS TO REMAIN MUST BE PROTECTED FOR DURATION OF PROJECT.
22. ALL TOPSOIL ENCOUNTERED WITHIN WORK AREA SHALL BE STRIPPED TO ITS FULL DEPTH AND STOCKPILED FOR REUSE. EXCESS TOPSOIL SHALL BE DISPOSED OF ON-SITE AS DIRECTED BY OWNER. TOPSOIL PILES SHALL REMAIN SEGREGATED FROM EXCAVATED SUBSURFACE SOIL MATERIALS.
23. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE.
24. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING ENVIRONMENTALLY SENSITIVE OR JURISDICTIONAL RESOURCE AREAS.
25. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15 SHALL BE SEEDED OR PROTECTED BY THAT DATE.
26. LOAMING AND SEEDING OR MULCHING OF NON-PAVEMENT AREAS SHALL TAKE PLACE AS SOON AS PRACTICABLE.
27. ALL SLOPES WITH SURFACE GRADES STEEPER THAN 3:1 AND PRESERVED EXISTING GRADES STEEPER THAN 15% SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS.
28. STRAW WATTLES, HAYBALES, SILT FENCE OR OTHER SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
29. AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. A THOROUGH INSPECTION OF THE WORK PERIMETER IS TO BE MADE AND ALL DISCARDED MATERIALS, BLOWN OR WATER CARRIED DEBRIS, SHALL BE COLLECTED AND REMOVED FROM THE SITE. THE CONTRACTOR SHALL NOT REMOVE ANY SILTATION CONTROLS UNTIL AUTHORIZED (IN WRITING) BY THE OWNER OR OWNER'S REPRESENTATIVE.
30. AT THE END OF CONSTRUCTION ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS. EROSION CONTROL BARRIERS ARE TO BE REMOVED AND DISPOSED OF IN ACCORDANCE TO LOCAL REQUIREMENTS.

SITE LAYOUT AND MATERIALS NOTES

1. CONTRACTOR SHALL REPORT SIGNIFICANT CONFLICTS TO THE OWNER OR OWNER'S REPRESENTATIVE FOR RESOLUTION.
2. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
3. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
4. CROSSWALKS SHALL BE STRIPED WITH 12" WIDE LINES OF WHITE THERMO PLASTIC SPACED 2' ON CENTER. STOP LINES SHALL BE STRIPED WITH 12" WIDE LINES OF WHITE THERMO PLASTIC. ALL OTHER STRIPING SHALL BE 4" WIDE LINES OF THERMO PLASTIC IN COLORS INDICATED HEREON.
5. NEW CURBS SHALL BE PRECAST CONCRETE CURB, CAPE COD BERM OR VERTICAL CONCRETE CURB AS SHOWN ON SHEET C200 OR UNLESS OTHERWISE NOTED.
6. EXISTING CURBS TO REMAIN AS SHOWN HEREON ARE ASSUMED TO BE IN SATISFACTORY CONDITION BUT ARE TO BE PARGED OR REPLACED IN KIND IN LOCATIONS OF DAMAGE.
7. INSTALL EXPANSION AND CONTROL JOINTS IN SIDEWALKS AT INTERVALS OF 5 FEET AND 25 FEET, RESPECTIVELY. PROVIDE BROOM FINISH IN TRANSVERSE DIRECTION ON ALL WALKS.
8. SIDEWALK WIDTHS INDICATED HEREON ARE MEASURED FROM BACK OF CURB TO BACK OF SIDEWALK. 6" WIDTH OF CURBS NOT INCLUDED.
9. ALL CURB RADIUS DIMENSIONS SHOWN HEREON ARE MEASURED ALONG FACE OF CURB.
10. ALL WORK CONDUCTED WITHIN PUBLIC RIGHT-OF-WAYS SHALL CONFORM TO THE LOCAL REQUIREMENTS AND SPECIFICATIONS.
11. THE FOLLOWING LAYOUT CRITERIA SHALL CONTROL UNLESS OTHERWISE NOTED ON THE PLAN:
    - DIMENSIONS FROM BUILDING ARE FROM FACE OF BUILDING.
    - DIMENSIONS ARE TO FACE OF CURB AT GUTTER LINE.
    - DIMENSIONS ARE TO THE CENTER OF PAVEMENT MARKINGS.
13. ALL LINES AND DIMENSIONS AND TIES TO PROPERTY LINES ARE PERPENDICULAR TO THE PROPERTY LINE UNLESS OTHERWISE NOTED.
14. COORDINATE THE LOCATION OF ALL SITE LIGHT STANDARDS WITH IMPROVEMENTS SHOWN ON THESE DRAWINGS.
15. CONTRACTOR SHALL FURNISH AND SET ALL LINES AND GRADES REQUIRED AND PROTECT ALL PERMANENT BENCHMARKS OR MONUMENTS. DAMAGED MONUMENTS SHALL BE REPLACED BY A LICENSED SURVEYOR AT NO COST TO THE OWNER.
16. ALL BITUMINOUS CONCRETE PAVING SHALL COMPLY WITH THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 2020 EDITION AS AMENDED. THE CONTRACTOR SHALL SUBMIT A JOB MIX FORMULA DEMONSTRATING COMPLIANCE WITH THESE SPECIFICATIONS. THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A CERTIFICATE OF COMPLIANCE SUPPLIED BY THE PAVING CONTRACTOR.
17. BITUMINOUS CONCRETE PAVEMENT: CLASS I, TYPE I-1 CONFORMING TO THE STANDARD SPECIFICATIONS, SECTIONS 420 AND 460, AND M3.11.03 FOR BINDER COURSE AND TOP COURSE JOB MIX FORMULAS.
18. ALL CONCRETE WORK SHALL COMPLY WITH ACI301, "SPECIFICATION FOR STRUCTURAL CONCRETE," AND ACI 316R, UNLESS MODIFIED BY THE CONTRACT DOCUMENTS. COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT. COMPLY WITH ACI 306.1 FOR COLD WEATHER PROTECTION, AND FOLLOW RECOMMENDATIONS IN ACI 350R FOR HOT WEATHER PROTECTION DURING CURING. COMPLY WITH ACI 304 "GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE."
19. SAW-CUT EXISTING PAVEMENT WHERE NEW BITUMINOUS CONCRETE PAVEMENT IS TO COME IN CONTACT. PRIME COAT THE CUT EDGE PRIOR TO PLACEMENT.
20. CONTRACTOR(S) SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.
21. OUT OF FUNCTION OR SCREENED IMAGES REPRESENT EXISTING CONDITIONS. WHERE EXISTING CONDITIONS LIE UNDER OR ARE IMPACTED BY PROPOSED BUILDINGS AND/OR SITE ELEMENTS, THE EXISTING CONDITION WILL BE REMOVED, ABANDONED AND/OR CAPPED OR DEMOLISHED AS REQUIRED.
22. PAVEMENT OR BASE MATERIALS SHALL NOT BE PLACED ON A MUDDY OR FROZEN SUBGRADE.

GRADING NOTES

1. THE CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER OR HIS REPRESENTATIVE.
2. ALL STUMPS, PEAT, CONSTRUCTION DEBRIS AND OTHER DELETERIOUS MATERIALS ON THE SITE AT THE TIME OF CONSTRUCTION ARE TO BE REMOVED FROM THE SITE TO AN APPROVED LANDFILL. NO SUCH MATERIALS ARE TO BE BURIED OR OTHERWISE DISPOSED OF ON THE SITE. MATERIAL FOR BACKFILL SHALL NOT INCLUDE UNSUITABLE MATERIAL SUCH AS PEAT, TRASH, STUMPS, DEBRIS OR HAZARDOUS WASTE.
3. FILL MATERIAL SHALL BE AS SPECIFIED BY THE ARCHITECT/ENGINEER AND SELECTED FROM ON-SITE EXCAVATION MATERIAL WHERE POSSIBLE.
4. AT ALL LOCATIONS WHERE EXISTING CURB OR PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. BLEND NEW PAVEMENT, CURBS AND EARTHWORK SMOOTHLY INTO EXISTING BY MATCHING LINES, GRADES AND JOINTS. PITCH EVENLY BETWEEN SPOT GRADES. GRADE ALL AREAS TO DRAIN.
5. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS, STRUCTURES AND PLANTING BEDS.
6. THE CONTRACTOR SHALL SCHEDULE HIS WORK TO ALLOW THE FINISHED SUBGRADE ELEVATIONS TO DRAIN PROPERLY WITHOUT PUDDLING. SPECIFICALLY, ALLOW WATER TO ESCAPE WHERE PROPOSED CURB MAY RETAIN RUNOFF PRIOR TO APPLICATION OF THE FINISH SUBGRADE AND/OR SURFACE PAVING. PROVIDE TEMPORARY POSITIVE DRAINAGE AS REQUIRED.
7. PITCH EVENLY BETWEEN SPOT GRADES. GRADE ALL AREAS TO DRAIN. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM OF 1/8" PER FOOT UNLESS OTHERWISE SPECIFIED (1/16" PER FOOT MAY BE ALLOWED AT SPECIFICALLY DEFINED DRAINAGE GUTTER LINES). ANY DISCREPANCIES NOT ALLOWING THIS MINIMUM PITCH SHALL BE REPORTED TO THE OWNER OR HIS REPRESENTATIVE PRIOR TO CONTINUING WORK.
8. ACCESSIBLE CURB RAMPS, RAMP, LANDINGS, WALKWAYS, CROSSWALKS, PATIOS/PLAZAS AND PARKING AREAS SHALL BE PER THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) AND THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY REQUIREMENTS. WALKWAY AND CROSSWALK ALONG ACCESSIBLE ROUTE(S) SHALL HAVE 5% MAX. LONGITUDINAL SLOPE AND 2% MAX CROSS SLOPE. LANDINGS, PATIOS/PLAZAS, AND ACCESSIBLE PARKING SPACES SHALL BE 2% MAX IN ALL DIRECTIONS. RAMPS SHALL BE 1:12 MAXIMUM.
9. A GEOTECHNICAL ENGINEER MAY BE RETAINED BY THE OWNER TO OBSERVE PERFORMANCE OF WORK, FOR CONFORMANCE WITH THESE CONTRACT DOCUMENTS, IN CONNECTION WITH EXCAVATING, TRENCHING, FILLING, BACKFILLING AND GRADING, AND TO PERFORM ASSOCIATED FIELD TESTS.
10. DURING THE PROGRESS OF THE WORK, THE CONTRACTOR MAY BE REQUIRED TO EXCAVATE ADDITIONAL TEST PITS FOR THE PURPOSE OF LOCATING UNDERGROUND UTILITIES OR STRUCTURES AS AN AID IN ESTABLISHING THE PRECISE LOCATION OF NEW WORK. THIS WORK IS TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. TEST PITS SHALL BE BACKFILLED, AS SOON AS THE DESIRED INFORMATION HAS BEEN OBTAINED.
11. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS CREATED BY CONTRACTOR OPERATIONS.
12. EXISTING TREES AND SHRUBS OUTSIDE THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON PRIOR APPROVAL OF THE OWNER.
13. FILL DEPRESSIONS CAUSED BY TEST PITS AND CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED.
14. THE CONTRACTOR SHALL PREVENT SURFACE WATER AND SUBSURFACE OR GROUNDWATER FROM FLOWING INTO EXCAVATIONS OR EARTHWORK AREAS WHICH WOULD CAUSE FLOODING OF THE PROJECT SITE AND SURROUNDING AREA, OR SOFTENING OR LOOSENING OF THE SOIL AT EXCAVATION OR EARTHWORK SUB-GRADES.
15. THE CONTRACTOR SHALL PROVIDE, INSTALL, OPERATE, MAINTAIN AND REMOVE ADEQUATE AND SATISFACTORY DEWATERING SYSTEMS AND DRAINAGE OF EXCAVATIONS TO PERMIT CONSTRUCTION TO PROCEED "IN THE DRY". THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE ADEQUACY OF THE METHODS, MATERIALS AND EQUIPMENT EMPLOYED. THE CONTRACTOR SHALL BEAR THE FULL COST OF PROVIDING ALL NECESSARY DEWATERING.
16. THE CONTRACTOR SHALL PROHIBIT SEEPAGE, GROUNDWATER FLOW OR SURFACE INFILTRATION AND RUNOFF FROM UNDERMINING OR OTHERWISE DAMAGING ADJACENT STRUCTURES AND UTILITIES.
17. ESTABLISHMENT OF GRADES, GRADE CONTROL, AND CONFORMANCE TO REQUIRED GRADE TOLERANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
18. PROTECT GRADED, FINISHED OR PAVED AREAS FROM DAMAGE AND KEEP THEM FREE OF TRASH AND DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS. REPAIR AND RE-ESTABLISH GRADES IN SETTLED, ERODED AND RUTTED AREAS.
19. PAVEMENT, LAWN OR PLANTING AREAS EXCAVATED DURING UTILITY CONSTRUCTION, WHETHER ON THE SITE OR ADJACENT PROPERTIES, SHALL BE RESTORED AND MATCHED WITH EXACTLY THE SAME MATERIALS AND TOLERANCES AS PRIOR TO DISRUPTION, AT NO ADDITIONAL COST TO THE OWNER, OR ADJACENT PROPERTY OWNERS.

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER ANY SIGNIFICANT VARIATIONS IN EXISTING SITE CONDITIONS FROM THOSE SHOWN ON THESE PLANS. ANY PROPOSED REVISIONS TO THE WORK, IF REQUIRED BY THESE SITE CONDITIONS, SHALL NOT BE UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER AND THE ENGINEER.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, WORCESTER DPW AND/OR CONSERVATION COMMISSION AT LEAST 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
3. IN ORDER TO PROTECT THE PUBLIC SAFETY DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING AT ALL TIMES ALL NECESSARY SAFETY DEVICES AND PERSONNEL, WARNING LIGHTS, BARRICADES, AND POLICE OFFICERS FOR ALL WORK IN AND NEAR SHREWSBURY ST, CASCO ST, AND ALBANY ST.
4. THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION CONTROL MEASURES ON AN AS NECESSARY BASIS, SUCH THAT EXCESSIVE SOIL EROSION DOES NOT OCCUR. MEASURES SHALL INCLUDE FILTER SOCK MEMBRANE BARRIERS ALONG THE PERIMETER OF CUTS AND FILLS, MULCHING, AND PLANTING OF DISTURBED AREAS. EROSION CONTROL FEATURES SHALL BE REGULARLY INSPECTED AND ADJUSTED IF NECESSARY.
6. AT THE END OF CONSTRUCTION THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. A THOROUGH INSPECTION OF THE WORK PERIMETER IS TO BE MADE AND ALL DISCARDED MATERIALS AND BLOWN OR WATER CARRIED DEBRIS, SHALL BE COLLECTED AND REMOVED FROM THE SITE. FILTER SOCK BARRIERS ARE TO BE REMOVED.
7. AT THE END OF CONSTRUCTION, AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE CONTRACTOR SHALL CLEAN THE SUMPS OF ALL CATCH BASINS AND THE INVERTS OF ALL DRAIN MANHOLES.
8. THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE, OR BY WAY OF DESIGN AND/OR AS-BUILT PLANS OF RECORD. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR IS TO CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-800-322-4844.
9. THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXTENDING THEM. IF THE NEW WORK POSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER IS TO BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.
10. HDPE (HIGH DENSITY POLYETHYLENE) PIPE SHALL BE ADS N-12 OR APPROVED EQUIVALENT. SEWER PIPE SHALL SDR 35 WITH RUBBER RING JOINTS.
11. NO LEDGE, BOULDERS, OR OTHER UNYIELDING MATERIALS SHALL BE LEFT WITHIN 6" OF THE WATER AND SEWER IN THE TRENCH, NOR ARE THEY TO BE USED FOR BACKFILL FOR THE FIRST 12" ABOVE THE PIPES.
12. HYDRANTS AND MINIMUM SIZING OF WATER PIPES SHALL BE SUBJECT TO THE APPROVAL OF THE WORCESTER FIRE CHIEF.
13. MATERIAL FOR BACKFILL SHALL NOT INCLUDE UNSUITABLE MATERIAL SUCH AS PEAT, TRASH, STUMPS, DEBRIS OR HAZARDOUS WASTE.
14. ALL MATERIALS FOR INSTALLATION OF WATER, SEWER, DRAIN, GAS, DATA/TELECOM. AND ELECTRICITY SHALL BE IN ACCORDANCE WITH LOCAL STATE AND UTILITY COMPANY STANDARDS AND REGULATIONS AS THEY APPLY.
15. CITY OF WORCESTER WATER AND FIRE DEPARTMENTS SHALL BE NOTIFIED PRIOR TO THE START OF ANY WORK ON THE WATER SYSTEM.
16. CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED PRIOR TO THE START OF ANY WORK ON THE SANITARY SEWER SYSTEM.
17. ALL STUMPS, PEAT, CONSTRUCTION DEBRIS AND OTHER DELETERIOUS MATERIALS ON THE SITE AT THE TIME OF CONSTRUCTION ARE TO BE REMOVED FROM THE SITE TO AN APPROVED LANDFILL. NO SUCH MATERIALS ARE TO BE BURIED OR OTHERWISE DISPOSED OF ON THE SITE.

UTILITY NOTES

1. THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON EXISTING CONDITIONS PLANS AND POTENTIALLY INFORMATION PROVIDED BY THE LOCAL MUNICIPALITIES. ADDITIONAL INFORMATION MAY BE SUPPLEMENTED BY FIELD INVESTIGATIONS WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-888-DIG-SAVE.
2. UNDERGROUND UTILITIES WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE AND ASSUMED.
3. ALL PVC SANITARY SEWER PIPE SHALL BE SDR 35 WITH RUBBER RING JOINTS UNLESS OTHERWISE NOTED.
4. REFER TO PLUMBING PLANS FOR EXACT SIZE AND LOCATION OF SANITARY CONNECTIONS.
5. THE LOCAL MUNICIPAL WATER AND FIRE DEPARTMENTS SHALL BE NOTIFIED PRIOR TO THE START OF ANY WORK ON THE WATER SYSTEM.
6. THE PROPOSED WATER MAINS ARE TO BE CL 52 CLDI. ALL FITTINGS, HYDRANTS, VALVES, ETC., USED ON THE SITE ARE TO BE IN ACCORDANCE WITH THE LOCAL MUNICIPAL WATER DEPARTMENT SPECIFICATIONS.
7. HYDRANTS AND MINIMUM SIZING OF WATER PIPES SHALL BE SUBJECT TO THE APPROVAL OF THE CITY OF WORCESTER FIRE CHIEF. HYDRANTS ARE TO CONFORM TO THE CITY OF WORCESTER STANDARD SPECIFICATIONS.
8. THE CONTRACTOR SHALL NOTIFY THE LOCAL MUNICIPAL DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
9. UNDERGROUND INFRASTRUCTURE LOCATED IN THE PUBLIC WAY SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL MUNICIPAL DEPARTMENT OF PUBLIC WORKS.
10. NO LEDGE, BOULDERS, OR OTHER UNYIELDING MATERIALS SHALL BE LEFT WITHIN 6" OF THE WATER AND SEWER IN THE TRENCH, NOR ARE THEY TO BE USED FOR BACKFILL FOR THE FIRST 12" ABOVE THE PIPES.
11. THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXTENDING THEM. IF THE NEW WORK POSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER IS TO BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.
12. EXCAVATION SHALL BE TO THE LINES AND ELEVATIONS AS SHOWN ON THE PLANS.
13. ALL MATERIALS FOR INSTALLATION OF WATER, SEWER, DRAIN, GAS, DATA/TELECOM. AND ELECTRICITY SHALL BE IN ACCORDANCE WITH LOCAL STATE AND UTILITY COMPANY STANDARDS AND REGULATIONS AS THEY APPLY.
14. ALL BENDS, TEES, VALVES, AND HYDRANTS ARE TO BE SECURED BY MEANS OF THREADED TIE RODS.
15. UNLESS OTHERWISE NOTED, ALL UTILITY TRENCHES ARE TO BE BACKFILLED WITH BANK RUN GRAVEL. NO STONES GREATER THAN 3" IN DIAMETER ARE TO BE USED WITHIN 12" OF THE PIPES. THE TRENCHES, WHEN UNDER PROPOSED PAVED AREAS, ARE TO BE MECHANICALLY COMPACTED IN 12" LIFTS.
16. THE SITE CONTRACTOR IS TO INSTALL A GAS SERVICE IN THE APPROXIMATE LOCATION SHOWN ON THE MEP PLANS. THE SIZE AND EXACT LOCATION OF THE SERVICE IS TO BE DETERMINED AND COORDINATED WITH THE PLUMBING PLANS.
17. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES, AS REQUIRED. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE OWNER AND ARCHITECT FOR RESOLUTION.
18. ALL UTILITY COVERS, GRATES, ETC. SHALL BE ADJUSTED TO BE FLUSH WITH THE PAVEMENT FINISH GRADE UNLESS OTHERWISE NOTED. RIM ELEVATIONS OF DRAINAGE STRUCTURES AND MANHOLES ARE APPROXIMATE.
19. CONTRACTOR SHALL PROTECT ALL UNDERGROUND DRAINAGE, SEWER AND UTILITY FACILITIES FROM EXCESSIVE VEHICULAR LOADS DURING CONSTRUCTION. ANY DAMAGE TO THESE FACILITIES RESULTING FROM CONSTRUCTION LOADS WILL BE RESTORED TO ORIGINAL CONDITION AT NO COST TO OWNER. NO EXCAVATION SHALL BE DONE UNTIL UTILITY COMPANIES ARE PROPERLY NOTIFIED IN ADVANCE.
20. EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
21. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE.
22. PROVIDE UNDERGROUND ELECTRIC CONDUIT FOR SITE LIGHTS AS APPROPRIATE. REFER TO MEP PLANS.
23. ENSURE ALL EXISTING (TO REMAIN) AND PROPOSED MANHOLE COVERS PROPERLY IDENTIFY UTILITY SERVED.
24. UNLESS OTHERWISE INDICATED, ABANDONED EXISTING UTILITY LINES SHALL BE CAPPED AND ABANDONED IN PLACE UNLESS THEY CONFLICT WITH PROPOSED IMPROVEMENTS. CAP REMAINING PORTIONS WHERE PARTIALLY REMOVED.
25. REFER TO ELECTRICAL DRAWINGS FOR ALL SITE ELECTRICAL WORK.
26. THE CONTRACTOR SHALL COLLECT AND DISPOSE OF WATER FROM ALL SYSTEMS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES, ORDINANCES AND REGULATIONS AND OBTAIN ALL NECESSARY PERMITS.

DRAINAGE NOTES

1. ALL STORM DRAIN SHALL HIGH DENSITY POLYETHYLENE (HDPE) PIPE UNLESS OTHERWISE NOTED. INSTALLATION OF ALL DRAINAGE STRUCTURES SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION.
2. MANHOLES SHALL BE 48-INCH DIAMETER (UNLESS OTHERWISE SPECIFIED). CAST-IN-PLACE BASES SHALL BE USED WHERE MANHOLES ARE CONSTRUCTED OVER EXISTING PIPES.
3. FRAMES AND COVERS FOR DRAINAGE STRUCTURES SHALL PROVIDE 24-INCH MINIMUM DRAINAGE STRUCTURE COVERS SHALL HAVE THE WORD "DRAIN" CENTERED ON THE COVERS IN 3-INCH HIGH LETTERS.
4. SINGLE AND DOUBLE CATCH BASIN FRAMES AND GRATES SHALL BE BY EAST JORDAN IRON WORKS AND SHALL CONFORM TO THE STANDARDS OF THE CITY OF WORCESTER DPW.
5. FRAMES, GRATES AND COVERS SHALL BE SET FIRM AND TRUE TO GRADE, ADJUST FOR GRADE WITH BRICK MASONRY.
6. PRE-CAST CONCRETE STRUCTURES INCLUDING TANKS, BARREL SECTIONS, CATCH BASINS AND BASES SHALL CONFORM TO ASTM C478 AND AASHTO HS20-44. PLACEMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS. ALL PRE-CAST STRUCTURES INCLUDING JOINTS, SEALS, OPENINGS, ETC. MUST BE WATERTIGHT.
7. AT THE END OF CONSTRUCTION, AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE CONTRACTOR SHALL CLEAN THE SUMPS OF ALL CATCH BASINS AND THE INVERTS OF ALL DRAIN MANHOLES.
8. ALL DRAIN LINES SHOWN SHALL BE MINIMUM 12" DIAMETER (EXCEPT TRENCH DRAINS) UNLESS OTHERWISE REQUIRED BY THE WORCESTER ENGINEERING DEPARTMENT.

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163 Washington street
Auburn, MA 01501

CONSULTANT:

SEAL

06-06-2024

DCU/RETAIL EXPANSION PROJECT

225 SHREWSBURY STREET
WORCESTER, MA

OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE:
PERMIT

ISSUE DATE:
06/06/2024

PROJECT NUMBER:
24009

DRAWN BY: MJH

CHECKED BY: DTB/DJH

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SHEET TITLE:

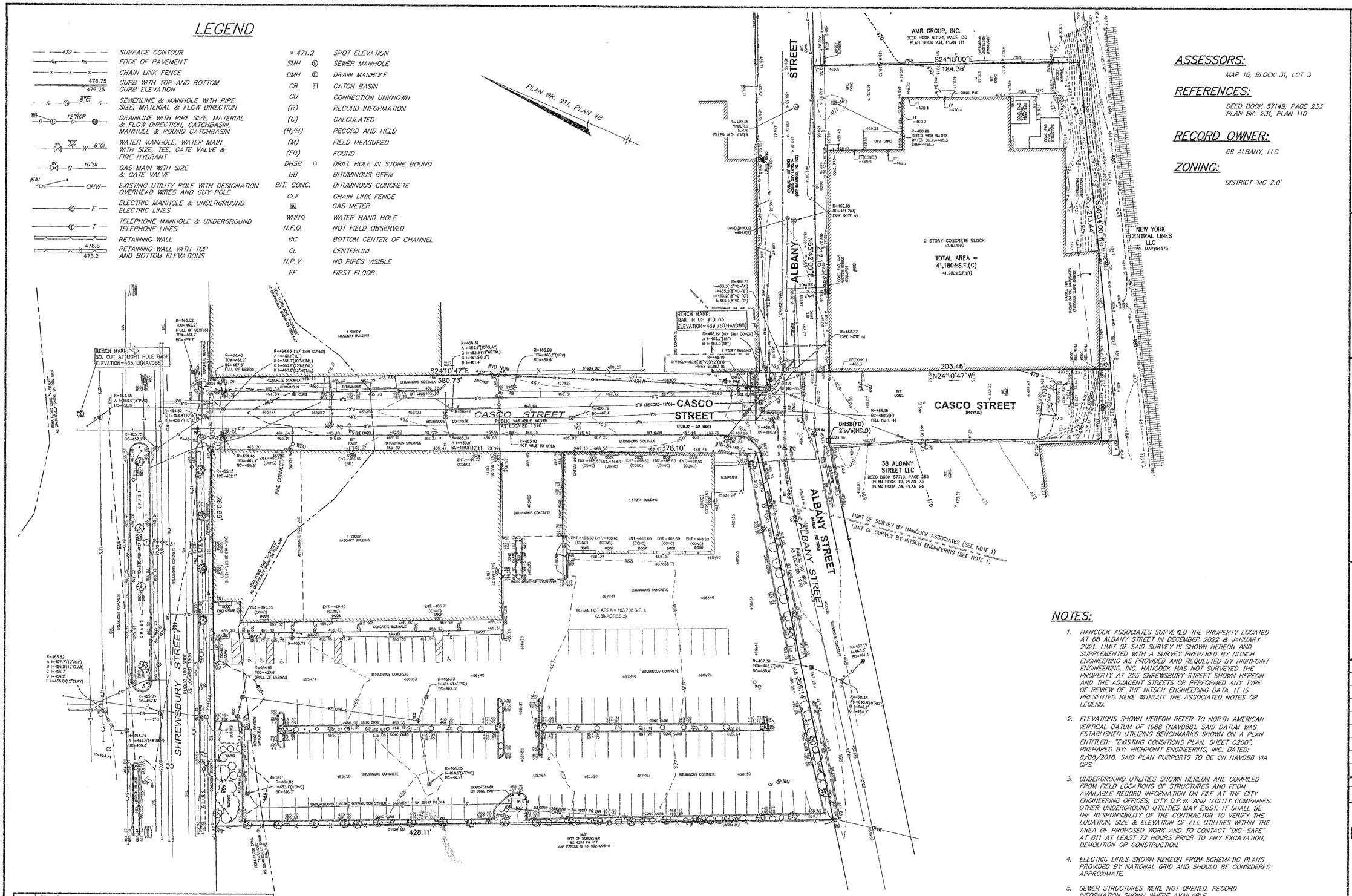
GENERAL NOTES

SHEET NUMBER:

G001

LEGEND

472	SURFACE CONTOUR	× 471.2	SPOT ELEVATION
	EDGE OF PAVEMENT	SMH	SEWER MANHOLE
	CHAIN LINK FENCE	DMH	DRAIN MANHOLE
476.75 / 476.25	CURB WITH TOP AND BOTTOM CURB ELEVATION	CB	CATCH BASIN
8"CI	SEWERLINE & MANHOLE WITH PIPE SIZE, MATERIAL & FLOW DIRECTION	CU	CONNECTION UNKNOWN
12"RCP	DRAINLINE WITH PIPE SIZE, MATERIAL & FLOW DIRECTION, CATCHBASIN, MANHOLE & ROUND CATCHBASIN	(R)	RECORD INFORMATION
		(C)	CALCULATED
	WATER MANHOLE, WATER MAIN WITH SIZE, TEE, GATE VALVE & FIRE HYDRANT	(R/H)	RECORD AND HELD
6"CI		(M)	FIELD MEASURED
		(FD)	FOUND
10"DI	GAS MAIN WITH SIZE & GATE VALVE	DHSB	DRILL HOLE IN STONE BOUND
		BB	BITUMINOUS BERM
#181 OHW	EXISTING UTILITY POLE WITH DESIGNATION OVERHEAD WIRES AND GUY POLE	BIT. CONC.	BITUMINOUS CONCRETE
		CLF	CHAIN LINK FENCE
E	ELECTRIC MANHOLE & UNDERGROUND ELECTRIC LINES		GAS METER
T	TELEPHONE MANHOLE & UNDERGROUND TELEPHONE LINES	WH/HO	WATER HAND HOLE
		N.F.O.	NOT FIELD OBSERVED
	RETAINING WALL	BC	BOTTOM CENTER OF CHANNEL
478.8 / 473.2	RETAINING WALL WITH TOP AND BOTTOM ELEVATIONS	CL	CENTERLINE
		N.P.V.	NO PIPES VISIBLE
		FF	FIRST FLOOR



ASSESSORS:

MAP 16, BLOCK 31, LOT 3

REFERENCES:

DEED BOOK 57149, PAGE 233
PLAN BK. 231, PLAN 110

RECORD OWNER:

68 ALBANY, LLC

ZONING:

DISTRICT 'MG 2.0'

NOTES:

1. HANCOCK ASSOCIATES SURVEYED THE PROPERTY LOCATED AT 68 ALBANY STREET IN DECEMBER 2022 & JANUARY 2021. LIMIT OF SAID SURVEY IS SHOWN HEREON AND SUPPLEMENTED WITH A SURVEY PREPARED BY NITSCH ENGINEERING AS PROVIDED AND REQUESTED BY HIGHPOINT ENGINEERING, INC. HANCOCK HAS NOT SURVEYED THE PROPERTY AT 225 SHREWSBURY STREET SHOWN HEREON AND THE ADJACENT STREETS OR PERFORMED ANY TYPE OF REVIEW OF THE NITSCH ENGINEERING DATA. IT IS PRESENTED HERE WITHOUT THE ASSOCIATED NOTES OR LEGEND.
2. ELEVATIONS SHOWN HEREON REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). SAID DATUM WAS ESTABLISHED UTILIZING BENCHMARKS SHOWN ON A PLAN ENTITLED: "EXISTING CONDITIONS PLAN, SHEET C200", PREPARED BY: HIGHPOINT ENGINEERING, INC. DATED: 8/08/2018. SAID PLAN PURPORTS TO BE ON NAVD88 VIA GPS.
3. UNDERGROUND UTILITIES SHOWN HEREON ARE COMPILED FROM FIELD LOCATIONS OF STRUCTURES AND FROM AVAILABLE RECORD INFORMATION ON FILE AT THE CITY ENGINEERING OFFICES, CITY D.P.W. AND UTILITY COMPANIES. OTHER UNDERGROUND UTILITIES MAY EXIST. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, SIZE & ELEVATION OF ALL UTILITIES WITHIN THE AREA OF PROPOSED WORK AND TO CONTACT "DIG-SAFE" AT 811 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION OR CONSTRUCTION.
4. ELECTRIC LINES SHOWN HEREON FROM SCHEMATIC PLANS PROVIDED BY NATIONAL GRID AND SHOULD BE CONSIDERED APPROXIMATE.
5. SEWER STRUCTURES WERE NOT OPENED. RECORD INFORMATION SHOWN WHERE AVAILABLE.

SCALE: 1" = 30'

0 30 60 120

▲ ELEVATION BENCH MARKS

DATUM: NAVD88 (SEE NOTE 2)

NO.	DESCRIPTION	ELEV.
1.	LIGHT POLE BASE: BOX CUT	465.13
2.	UP#10-85: NAIL(FD) (1.0'A.G.)	469.78
3.	UP#11: NAIL(FD) (1.0'A.G.)	470.75

#68 ALBANY STREET & #225 SHREWSBURY STREET

Worcester, Massachusetts 01604

PREPARED FOR:

LUNDGREN EQUITY PARTNERS

c/o CM&B, Inc.
75 Sylvan Street , Building C
Danvers, Massachusetts 01923

HANCOCK ASSOCIATES

Civil Engineers

Land Surveyors

Wetland Scientists

185 CENTRE STREET, DANVERS, MA 01923
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WWW.HANCOCKASSOCIATES.COM

COMMONWEALTH OF MASSACHUSETTS WAYNE C. JALBERT No. 30110 PROFESSIONAL LAND SURVEYOR

8/8/22
FOR HANCOCK USE ONLY - SEE NOTE 1

NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION

DATE: 7/29/2022	DRAWN BY: MMM
SCALE: 1" = 30'	CHECK BY: WCJ

EXISTING CONDITIONS PLAN OF LAND IN WORCESTER, MA

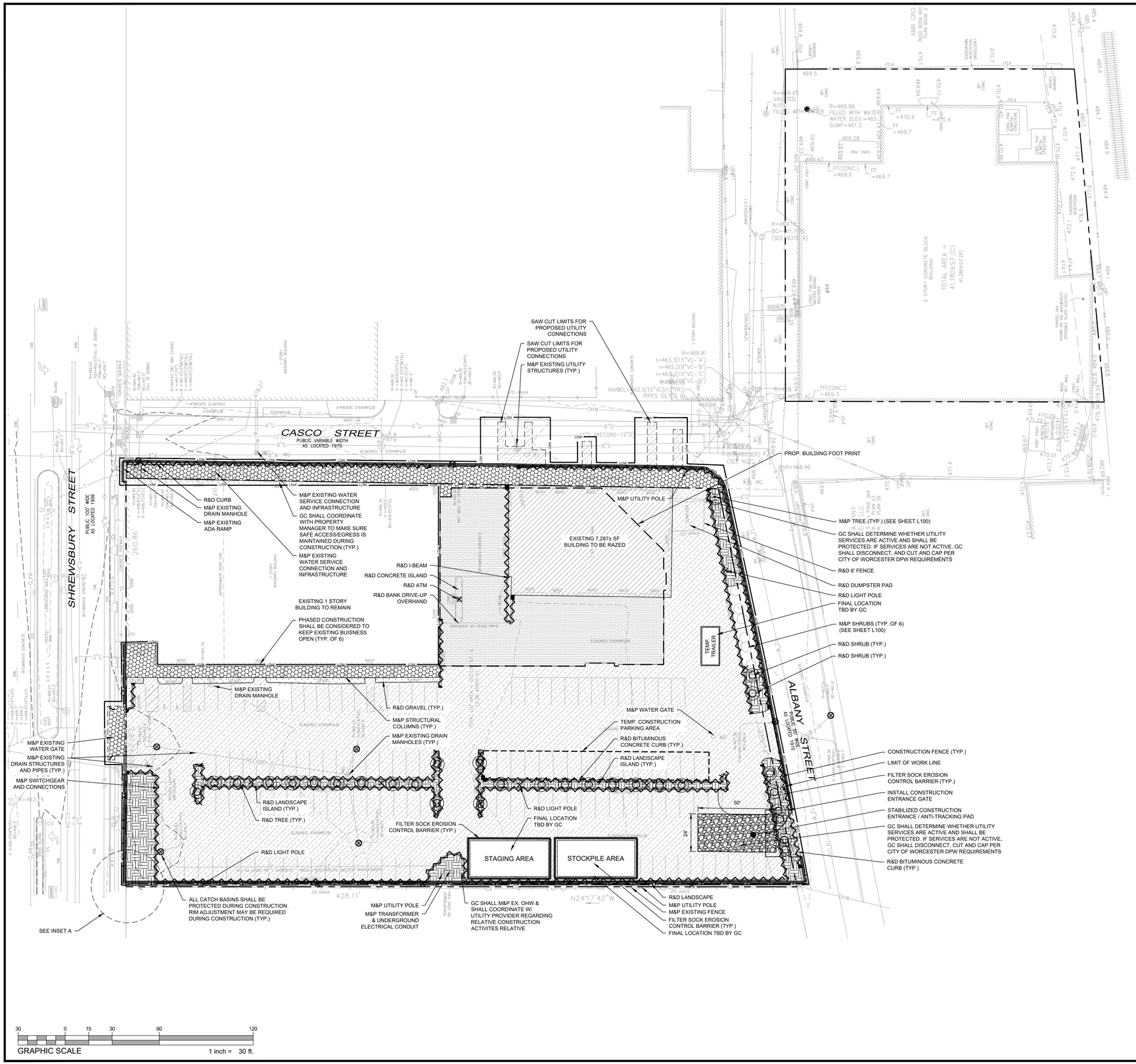
PLOT DATE: Jul 29, 2022 5:15 pm
PATH: F:\Civil 3D Projects\24392-Lundgren-Worcester\Surv\DWG\

DWG: 24392ec2.dwg

LAYOUT: EC

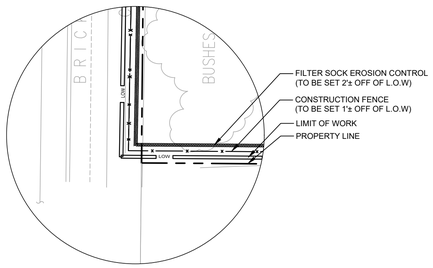
SHEET: 1 OF 1

PROJECT NO.: 24392



DEMOLITION & EROSION CONTROL LEGEND

R&D	REMOVE AND DISPOSE
M&P	MAINTAIN AND PROTECT
R/S	REMOVE AND STOCKPILE
	DEMOLISH AND REMOVE PAVEMENT TO FULL BASE DEPTH IN PREPARATION FOR BUILDING
	DEMOLISH AND REMOVE PAVEMENT / BINDER COURSE
	DEMOLISH AND REMOVE SIDEWALK
	REMOVE TOPSOIL AND ALL VEGETATION AND SURFACE FEATURES; OVER-EXCAVATE AS NECESSARY
	DEMOLISH AND REMOVE CURB OR BERM
×	REMOVE AND DISPOSE EXISTING OBJECT
⊗	SILTSACK INLET PROTECTION DEVICE
—x—	TEMPORARY CONSTRUCTION FENCE
	FILTER SOCK EROSION CONTROL BARRIER
	LIMIT OF WORK
	SAW CUT LINE
	REMOVE GRAVEL AREA
	DEMOLISH AND REMOVE EXISTING BUILDING
	STABILIZED CONSTRUCTION ENTRANCE
	TREE TO BE REMOVED



INSET A
1" = 10'

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DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
06-06-2024

DCU/RETAIL EXPANSION PROJECT

225 SHREWSBURY STREET
WORCESTER, MA

OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE:
PERMIT
ISSUE DATE:
06/06/2024
PROJECT NUMBER:
24009

DRAWN BY: MJH
CHECKED BY: DTB/DJH

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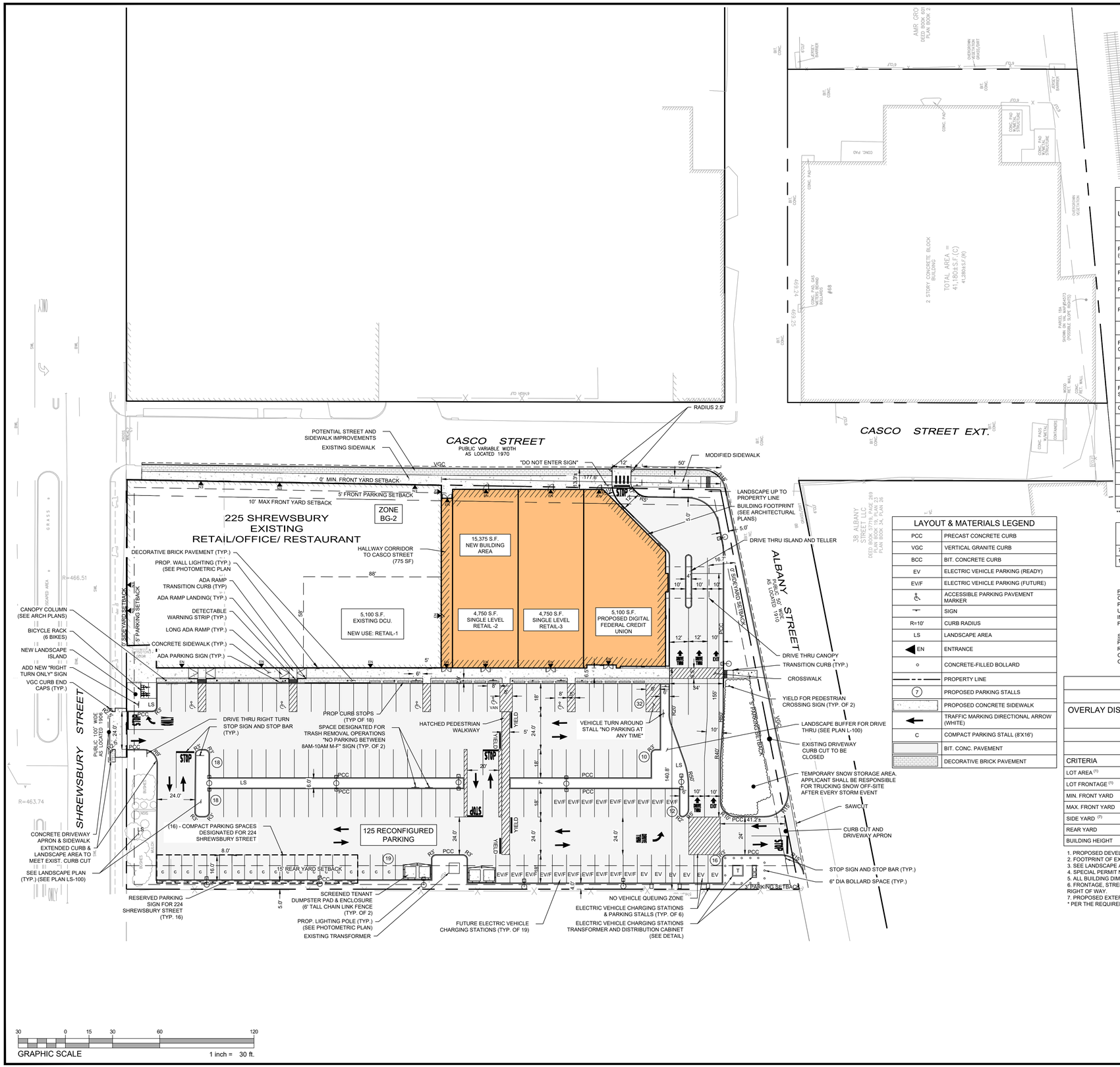
SHEET TITLE:
SITE PREPARATION, DEMOLITION, & EROSION CONTROL PLAN

SHEET NUMBER:
C100

ISSUED FOR : PERMIT



LAYOUT & MATERIALS LEGEND

PCC	PRECAST CONCRETE CURB
VGC	VERTICAL GRANITE CURB
BCC	BIT. CONCRETE CURB
EV	ELECTRIC VEHICLE PARKING (READY)
EV/F	ELECTRIC VEHICLE PARKING (FUTURE)
♿	ACCESSIBLE PARKING PAVEMENT MARKER
	SIGN
R=10'	CURB RADIUS
LS	LANDSCAPE AREA
EN	ENTRANCE
○	CONCRETE-FILLED BOLLARD
	PROPERTY LINE
7	PROPOSED PARKING STALLS
	PROPOSED CONCRETE SIDEWALK
	TRAFFIC MARKING DIRECTIONAL ARROW (WHITE)
C	COMPACT PARKING STALL (8'X16')
	BIT. CONC. PAVEMENT
	DECORATIVE BRICK PAVEMENT

OFF STREET PARKING DEMAND SUMMARY

USE/TENANT	CCOD-S MINIMUM PARKING REQUIREMENT	CCOD-S MINIMUM PARKING CALCULATION	BASE PARKING REQUIREMENT
PROPOSED USES			
PROPOSED RETAIL -1 (CURRENTLY DCU BANK)	1/500 SF	5,100 SF	11 SPACES
PROPOSED RETAIL-2	1/500 SF	4,750 SF	10 SPACES
PROPOSED RETAIL-3	1/500 SF	4,750 SF	10 SPACES
PROPOSED DCU BANK	1/400 SF & 0.75/1 TELLER STATION	5,100 SF 7 TELLER STATIONS 3 ATMS	21 SPACES
EXISTING USES TO REMAIN			
FOOD SERVICE (IN-HOUSE COFFEE)	1/4 OCCUPANTS	32 TOTAL OCCUPANTS 25 SEATS 7 EMPLOYEES	8 SPACES
FOOD SERVICE (MEXICALI)	1/4 OCCUPANTS	258 OCCUPANTS 238 SEATS 20 EMPLOYEES	65 SPACES
FOOD SERVICE (ALL SYSTEMS GO)	1/4 OCCUPANTS	123 OCCUPANTS 110 SEATS 13 EMPLOYEES	31 SPACES
CLINIC (DENTIST)	3 / TREATMENT RM	11 ROOMS	33 SPACES
BASE PARKING REQUIREMENT=			189 SPACES
**BICYCLE PARKING CREDIT=			(-) 3 SPACES
BASE PARKING REQUIREMENT (AFTER BICYCLE CREDITS)=			186 SPACES
TOTAL PARKING IN 225 SHREWSBURY LOT =			125 SPACES
PARKING LEASED (SPACES FOR 224 SHREWSBURY ST)=			(-) 16 SPACES
TOTAL PARKING AVAILABLE FOR 225 SHREWSBURY STREET TENANTS=			109 SPACES
PARKING RELIEF REQUIRED WITHOUT PARKING CREDIT=			77 SPACES
MIXED USE PARKING CREDIT SOUGHT BY SPECIAL PERMIT (MAX. 50%)=			41%

**BICYCLE PARKING CREDIT OF 3 SPACES BY ADMINISTRATIVE APPROVAL PURSUANT TO ARTICLE IV, SECTION 7.C.1.

ELECTRICAL VEHICLE PARKING STALLS (20% REQUIRED= 25 SPACES)

7% EV READY (EV):	8 SPACES
13% EV FUTURE (EV/F):	17 SPACES

PROPOSED OFF-STREET PARKING TYPE BREAKDOWN

ADA PARKING	5 SPACES
COMPACT PARKING	19 SPACES (15.2%)
STANDARD PARKING	101 SPACES

PER ZONING ORDNANCE: OFF STREET ACCESSORY PARKING REQUIREMENTS NOTE 3
COMPACT SPACES – IN PARKING LOTS CONTAINING MORE THAN TEN (10) SPACES, UP TO TWENTY-FIVE PERCENT (25%) OF THE REQUIRED PARKING MAY BE SET ASIDE FOR COMPACT CARS AS A MATTER OF RIGHT. UPON GRANT OF A SPECIAL PERMIT, THE PERCENTAGE OF PARKING SPACES FOR COMPACT CARS MAY BE INCREASED TO NOT MORE THAN FIFTY PERCENT (50%). EACH COMPACT SPACE SHALL BE NOT LESS THAN (8) FEET IN WIDTH AND SIXTEEN (16) FEET IN LENGTH.

SECTION 7 – OFF-STREET ACCESSORY PARKING & LOADING REQUIREMENTS (CCOC)
PARKING LOTS WITH UP TO 16 SPACES SHALL NOT BE REQUIRED TO CONFORM TO THE DIMENSIONAL REQUIREMENTS FOR PARKING SPACES AND AISLE WIDTHS, BUT MUST PROVIDE SAFE VEHICULAR ACCESS AND CIRCULATION AS DEFINED BY PROFESSIONAL TRAFFIC ENGINEERING STANDARDS AND TO THE SATISFACTION OF THE BUILDING COMMISSIONER OR ZONING ENFORCEMENT OFFICER.

ZONING ORDINANCE DIMENSIONAL SUMMARY - 225 SHREWSBURY STREET

ZONING DISTRICT: BG-2

OVERLAY DISTRICTS: COMMERCIAL CORRIDOR OVERLAY DISTRICT - SHREWSBURY STREET (CCOD-S), UNION STATION VIEW CORRIDOR SIGN OVERLAY DISTRICT (USOD)

USE: BUSINESS

DIMENSIONAL REQUIREMENTS

CRITERIA	BG-2.0	CCOD-S*	EXISTING	PROPOSED	ZONING COMPLIANCE
LOT AREA (1)	5,000 SF	-	2.38 ac.	2.38 ac.	YES
LOT FRONTAGE (1)	40.0'	40.0'	178'±	178'	YES
MIN. FRONT YARD	N/A	0'	0'±	1'±	YES
MAX. FRONT YARD	N/A	10.0'	0'±	1'±	YES
SIDE YARD (7)	N/A	-	0'±	16.7'±	YES
REAR YARD	15.0'	-	141'±	141'±	YES
BUILDING HEIGHT	50.0'	-	<50'	-	-

1. PROPOSED DEVELOPMENT FRONTAGE AND YARD SETBACKS SHOWN ARE TAKEN FROM CASCO STREET.
2. FOOTPRINT OF EXISTING SHOPPING PLAZA BUILDING IS NOT CHANGING.
3. SEE LANDSCAPE AND ARCHITECTURAL PLANS FOR MORE INFORMATION.
4. SPECIAL PERMIT NEEDED FROM PLANNING BOARD TO RELOCATE EXISTING DRIVE THRU TO ACCOMMODATE NEW DCU BANK.
5. ALL BUILDING DIMENSIONS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED BY LICENSED LAND SURVEYOR.
6. FRONTAGE, STREET - A CONTINOUS PORTION OF A LOT ABUTTING ONE (1) STREET MEASURED ALONG THE FRONT LOT LINE DIVIDING THE LOT FROM THE RIGHT OF WAY.
7. PROPOSED EXTERIOR SIDE YARD SETBACK IS BASED UPON ALBANY STREET AND SHREWSBURY STREET.
* PER THE REQUIREMENTS OF ARTICLE IX OF THE CITY OF WORCESTER ZONING BY LAW.

HIGHPOINT ENGINEERING, INC.
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163 Washington street
Auburn, MA 01501

CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
06-06-2024

DCU/RETAIL EXPANSION PROJECT

225 SHREWSBURY STREET
WORCESTER, MA

OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE:
PERMIT
ISSUE DATE:
06/06/2024
PROJECT NUMBER:
24009

DRAWN BY: DTB/MJH
CHECKED BY: DJH/DTB

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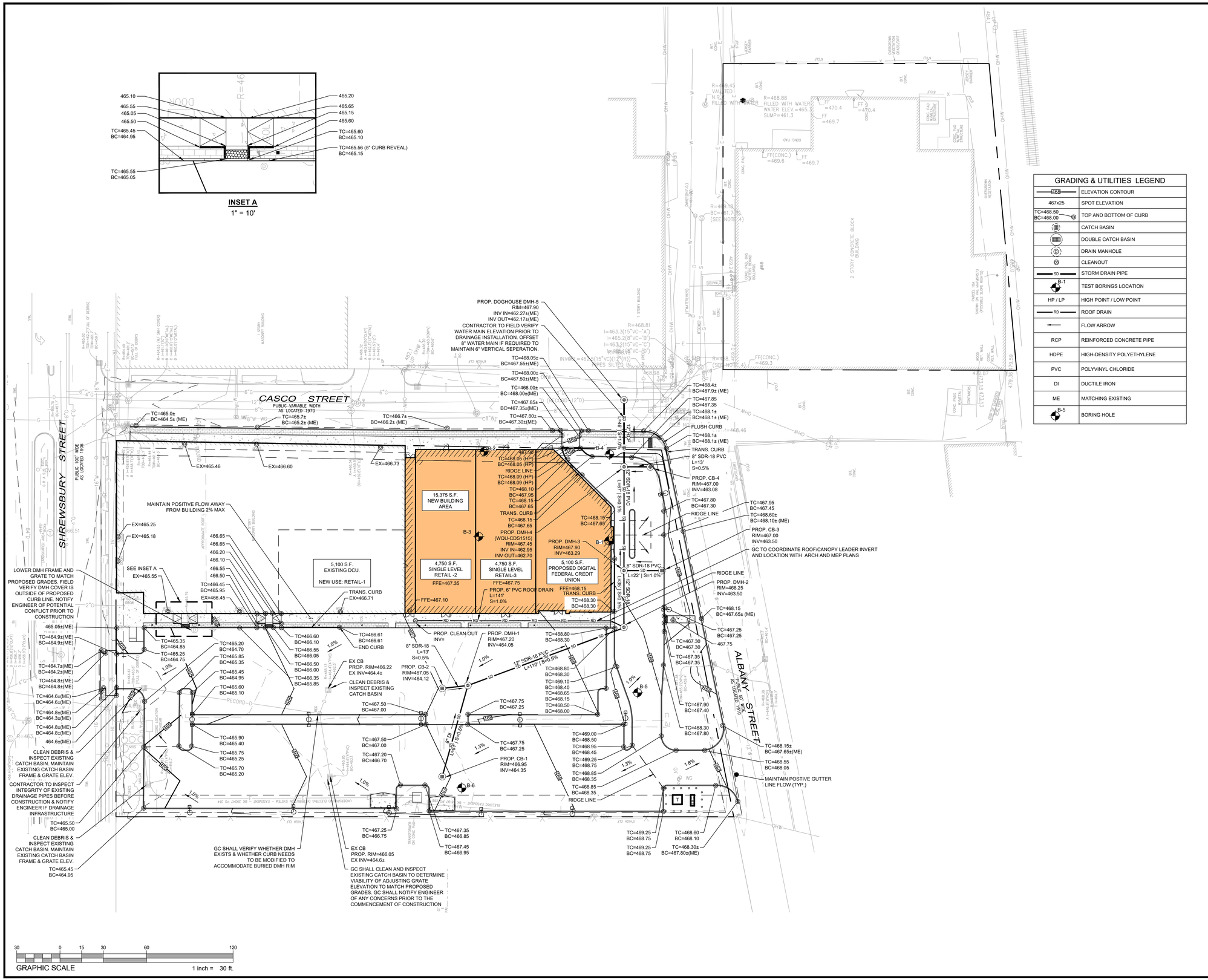
SHEET TITLE:
LAYOUT & MATERIALS PLAN

SHEET NUMBER:
C200

ISSUED FOR : PERMIT



GRADING & UTILITIES LEGEND

467	ELEVATION CONTOUR
467x25	SPOT ELEVATION
TC=468.50 BC=468.00	TOP AND BOTTOM OF CURB
	CATCH BASIN
	DOUBLE CATCH BASIN
	DRAIN MANHOLE
	CLEANOUT
SD	STORM DRAIN PIPE
B-1	TEST BORINGS LOCATION
HP / LP	HIGH POINT / LOW POINT
RD	ROOF DRAIN
	FLOW ARROW
RCP	REINFORCED CONCRETE PIPE
HDPE	HIGH-DENSITY POLYETHYLENE
PVC	POLYVINYL CHLORIDE
DI	DUCTILE IRON
ME	MATCHING EXISTING
B-5	BORING HOLE

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06/06/2024

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24009

DRAWN BY: MJH

CHECKED BY: DTB/DJH

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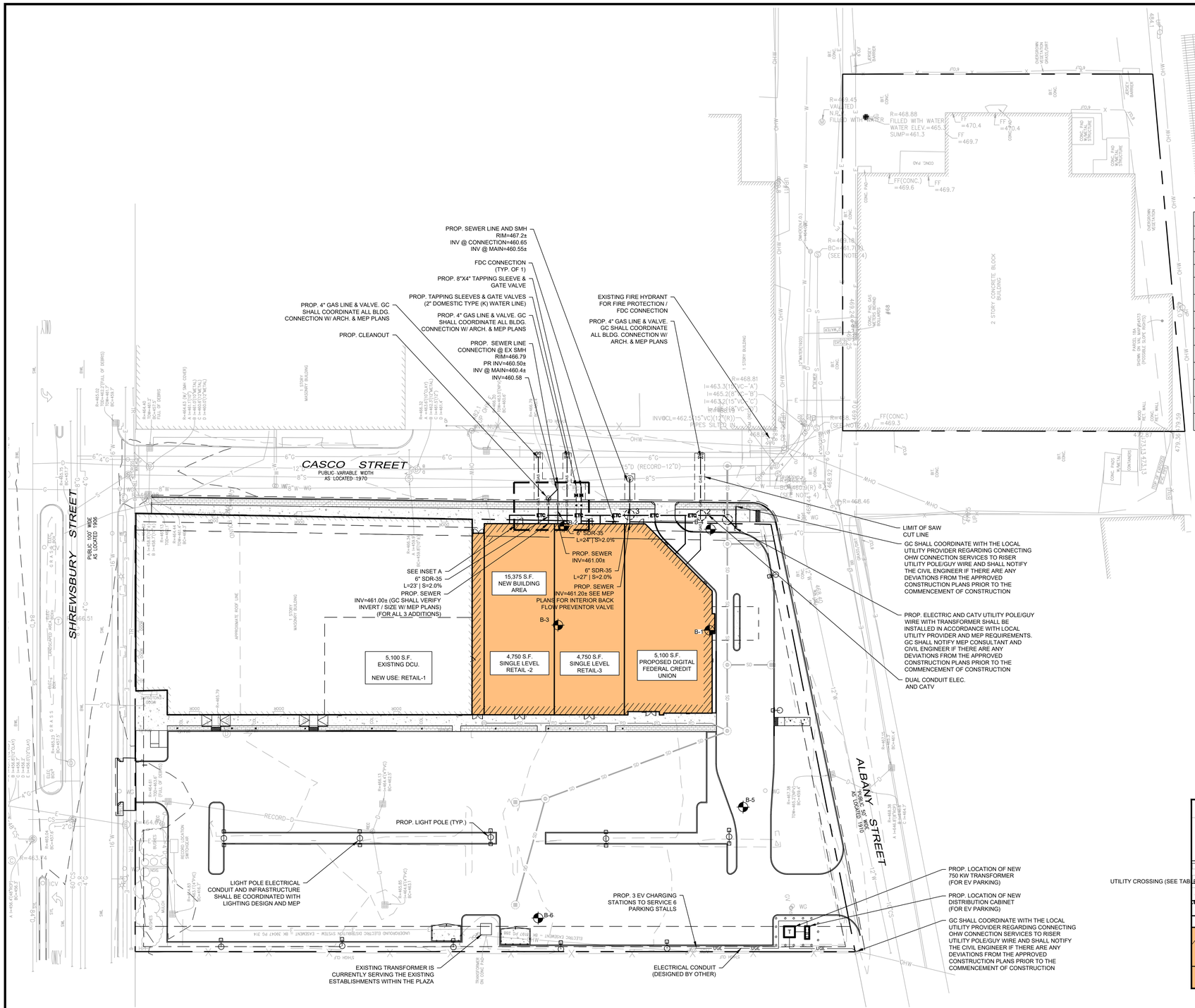
SHEET TITLE:
GRADING & DRAINAGE PLAN

SHEET NUMBER:
C300

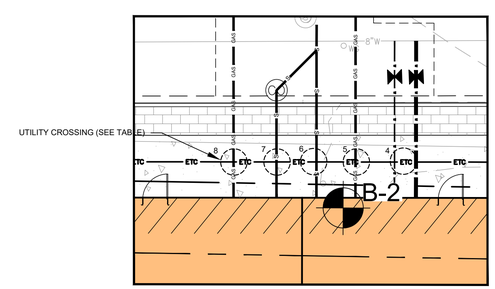
ISSUED FOR : PERMIT



UTILITIES LEGEND

—W—W—W—W—	WATER SERVICE
—S—S—	SEWER LINE
(S)	SANITARY MANHOLE
(CO)	SEWER CLEAN OUT
—GAS—GAS—GAS—	GAS LINE
—UGE—UGE—	UNDERGROUND ELECTRIC
—OHW—OHW—	OVERHEAD ELECTRIC
—ETC—ETC—	DUEL ELECTRIC AND CATV CABLE
	UTILITY POLE
T	ELECTRIC TRANSFORMER
	GATE VALVE
	UTILITY CROSSING
	DISTRIBUTION CABINET
	THRUST BLOCK

SANITARY/ DRAIN/ WATER/GAS/CABLE CROSSING	
1	INVERT OF PROPOSED 12" DRAIN = 462.55± CROWN OF PROPOSED 12" DRAIN = 463.55± PROPOSED CABLE = 466.00± CLEARANCE = 2.4'±
2	INVERT OF PROPOSED 4" GAS = 465.00± CROWN OF PROPOSED 4" GAS = 465.33± PROPOSED CABLE = 466.00± CLEARANCE = 0.7'±
3	INVERT OF PROPOSED 6" SEWER = 461.10± CROWN OF PROPOSED 6" SEWER = 461.60± PROPOSED CABLE = 466.00± CLEARANCE = 4.4'±
4	INVERT OF PROPOSED WATER = 463.00± CROWN OF PROPOSED WATER = 463.33± PROPOSED CABLE = 466.00± CLEARANCE = 2.7'±
5	INVERT OF PROPOSED 4" GAS = 465.00± CROWN OF PROPOSED 4" GAS = 465.33± PROPOSED CABLE = 466.00± CLEARANCE = 0.7'±
6	INVERT OF PROPOSED 6" SEWER = 460.90± CROWN OF PROPOSED 6" SEWER = 461.40± PROPOSED CABLE = 466.00± CLEARANCE = 4.6'±
7	INVERT OF PROPOSED 6" SEWER = 460.90± CROWN OF PROPOSED 6" SEWER = 461.40± PROPOSED CABLE = 466.00± CLEARANCE = 4.6'±
8	INVERT OF PROPOSED 4" GAS = 465.00± CROWN OF PROPOSED 4" GAS = 465.33± PROPOSED CABLE = 466.00± CLEARANCE = 0.7'±



INSET A

30 0 15 30 60 120
GRAPHIC SCALE 1 inch = 30 ft.

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225 SHREWSBURY STREET
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OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

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06/06/2024
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24009

DRAWN BY: MJH
CHECKED BY: DTB/DJH

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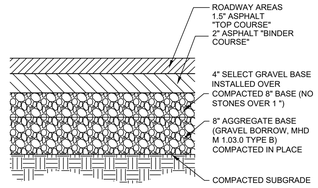
SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C400

ISSUED FOR : PERMIT



GRAVEL BORROW (MHD M1.03.0 TYPE B)

GRAVEL BORROW SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE AND COARSE SAND, FREE FROM LOAM AND CLAY, SURFACE COATING, AND DELETERIOUS MATERIALS.

GRADATION REQUIREMENTS FOR GRAVEL SHALL BE DETERMINED BY AASHTO-T11 AND T27 AND SHALL CONFORM TO THE FOLLOWING:

SIEVE DESIGNATION	PERCENT PASSING
1/2 IN.	
NO. 4	
NO. 50	
NO. 200	

MAXIMUM SIZE OF STONE IN GRAVEL SHALL BE AS FOLLOWS:

M1.03.0 TYPE A	6 INCHES LARGEST DIMENSION
M1.03.0 TYPE B	3 INCHES LARGEST DIMENSION
M1.03.0 TYPE C	2 INCHES LARGEST DIMENSION

BITUMINOUS CONCRETE PAVEMENT
NOT TO SCALE **C2**

GRAVEL BEDDING (FOR UTILITIES) SHALL BE GRAVEL, CRUSHED QUARRY ROCK OR CRUSHED GRAVEL, FROM OFF-SITE SOURCES GRADED WITHIN THE FOLLOWING LIMITS:

SIEVE SIZE	% PASSING BY WEIGHT
1 IN.	100
3/4 IN.	90-100
3/8 IN.	20-55
NO. 4	0-10
NO. 8	0-5

STONE (FOR UTILITIES) SHALL BE A DURABLE, CRUSHED STONE OR GRAVEL FROM OFF-SITE SOURCES, GRADED WITHIN THE FOLLOWING LIMITS:

SIEVE SIZE	% PASSING BY WEIGHT
2-1/2 IN.	100
2 IN.	60-90
1-1/4 IN.	25-50
3/4 IN.	0

SELECT FILL SHALL BE A COARSE GRANULAR MATERIAL CONSISTING OF HARD, DURABLE, ANGULAR MATERIAL, GRADED WITHIN THE FOLLOWING LIMITS. MATERIAL PASSING THE NO. 40 SIEVE SHALL HAVE A PLASTICITY INDEX OF NOT MORE THAN 10 AND A LIQUID LIMIT NOT TO EXCEED 35%.

SIEVE SIZE	% PASSING BY WEIGHT
4 IN.	100
1 IN.	60-100
NO. 4	30-80
NO. 40	5-30
NO. 200	0-8

GRANULAR FILL SHALL CONSIST OF WELL GRADED NATURAL SANDS AND GRAVELS, FREE FROM PLASTIC FINES, ORGANIC MATTER AND DELETERIOUS MATERIAL AND SHALL HAVE THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING BY WEIGHT
2 IN.	100
1 IN.	60-100
NO. 4	25-85
NO. 20	10-60
NO. 50	4-35
NO. 200	3-10

PROCESSED GRAVEL FILL SHALL CONSIST OF WELL GRADED NATURAL GRAVELS AND SANDS, FREE FROM PLASTIC FINES, ORGANIC MATTER AND DELETERIOUS MATERIAL AND SHALL HAVE THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING BY WEIGHT
2 IN.	100
1 1/2 IN.	70-100
3/4 IN.	50-85
NO. 4	30-60
NO. 200	0-10

3/4 INCH MINUS CRUSHED STONE FILL SHALL HAVE THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING BY WEIGHT
1 IN.	100
3/4 IN.	90-100
1/2 IN.	10-50
3/8 IN.	0-20
NO. 4	0-5

COMMON FILL (IN **LANDSCAPED AREAS)** SHALL BE BANK RUN SAND, GRAVEL, OR MIXTURE THEREOF, GRADED WITHIN THE FOLLOWING LIMITS:

SIEVE SIZE	% PASSING BY WEIGHT
6 IN.	100
NO. 4	30-95
NO. 200	0-15

DENSE GRADED CRUSHED STONE SHALL CONSIST OF CRUSHER-RUN COARSE AGGREGATES OF CRUSHED STONE OR GRAVEL AND FINE AGGREGATES OF NATURAL SAND OR STONE SCREENINGS; UNIFORMLY PRE-MIXED WITH A PREDETERMINED QUANTITY OF WATER. COARSE AGGREGATE SHALL HAVE A PERCENTAGE OF WEAR OF NOT MORE THAN 45 BY THE LOS ANGELES TEST.

THE COMPOSITE MATERIAL SHALL BE FREE FROM CLAY, LOAM AND ALL OTHER PLASTIC MATERIALS, AND SHALL CONFORM TO THE FOLLOWING GRADATION REQUIREMENTS:

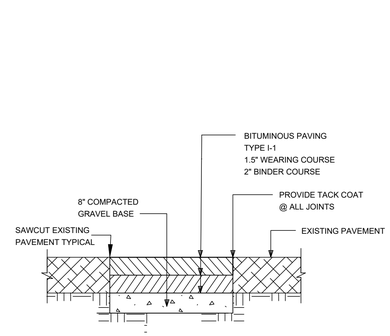
SIEVE DESIGNATION	PERCENTAGE BY MASS PASSING SQ. MESH SIEVES
2 inches	100
1 1/2 inches	70-100
3/4 inch	50-85
No. 4	30-55
No. 50	8-24
No. 200	3-10

SAMPLING AND TESTING SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARD AASHTO METHODS:

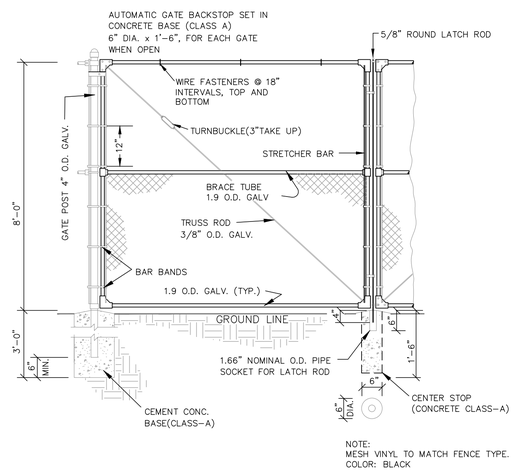
- SIEVE ANALYSIS: AASHTO T27
- PASSING No. 200 SIEVE: AASHTO T11

ALL GRANULAR FILL AND PROCESSED GRAVEL FILL SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY DETERMINED BY ASTM D1557.

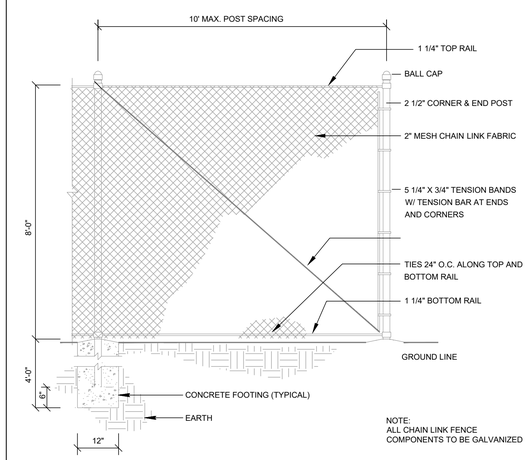
BACKFILL MATERIAL GRADATION REQUIREMENTS
NOT TO SCALE **C1**



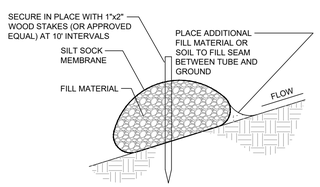
PAVEMENT MATCH SAWCUT
NOT TO SCALE **B3**



CHAIN LINK GATE
NOT TO SCALE **B2**



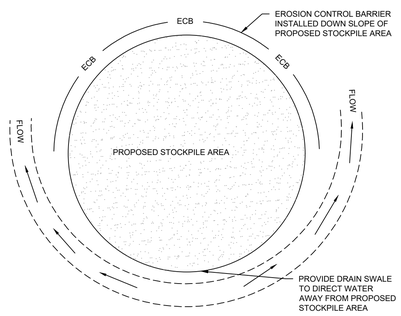
CHAIN LINK FENCE
NOT TO SCALE **B1**



NOTES

1. SOCK MEMBRANE SHALL BE 12" DIAMETER OVAL-TO-ROUND MESH TUBE.
2. FILL MATERIAL SHALL BE WOOD CHIPS, MULCH OR A COMBINATION THEREOF, AND SCREENED TO REMOVE FINES.
3. IN AREAS WHERE STAKING IS INFEASIBLE, I.E. ON PAVED SURFACES, FILTER MEDIA SHALL CONSIST OF CLEAN BANK-RUN GRAVEL.
4. THE SOCK SHALL BE FILLED USING A PNEUMATIC BLOWER OR SIMILAR DEVICE. HAND FILLING IS NOT ACCEPTABLE.

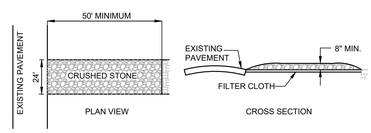
FILTER SOCK EROSION BARRIER
NOT TO SCALE **A4**



NOTES

1. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 90 DAYS SHALL BE COVERED WITH HAY AND MULCH (AT 100LBS/1,000 SF), OR WITH AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.
2. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR 90 DAYS OR MORE SHALL BE SEEDED WITH WINTER RYE (FOR FALL SEEDING AT 1LB/1,000 SF) OR OATS (FOR SUMMER SEEDING AT 2LB/1,000 SF) AND THEN COVERED WITH HAY MULCH (AT 100LB/1,000 SF) OR AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.

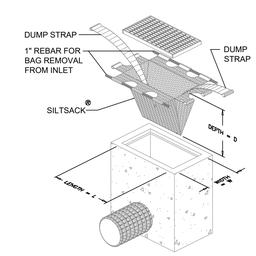
STOCKPILE PROTECTION
NOT TO SCALE **A3**

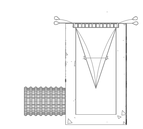


TRACKING PAD NOTES

1. STONE SIZE - USE 2" ANGULAR CRUSHED STONE
2. FILTER CLOTH - SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
3. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHOULD BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHOULD BE PERMITTED.
4. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANING OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

CRUSHED STONE TRACKING PAD
NOT TO SCALE **A2**





INSTALLATION DETAIL

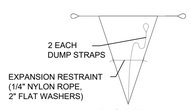
SILTSACK®
SPECIFICATIONS

NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE SPECIFICATIONS PROVIDED.

REGULAR FLOW SILTSACK ®

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1



BAG DETAIL

SILTSACK INLET PROTECTION PROTECTION
NOT TO SCALE **A1**

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CONSULTANT:

SEAL

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CHECKED BY: DTB/DJH

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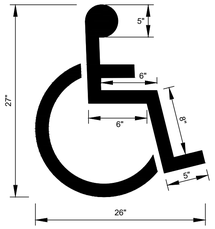
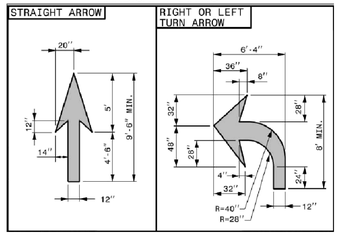
SHEET TITLE:
DETAILS

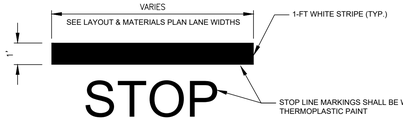
SHEET NUMBER:
C500

ISSUED FOR : PERMIT

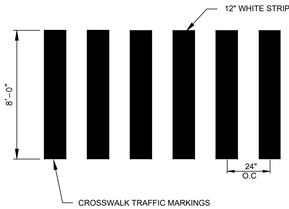


HANDICAP MARKING





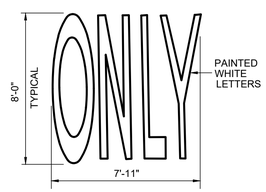
STOP BAR



CROSSWALK STRIPING

NOTES:

1. THE LONGITUDINAL SPACE BETWEEN LINES OR SYMBOL MESSAGES, INCLUDING ARROWS, SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTER FOR LOW SPEED ROADS AND DRIVEWAYS BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTER UNDER ANY CONDITIONS
2. THE SPACING OF THE PAVEMENT MARKINGS WILL BE AS SHOWN ON THE PLAN AND AS PER THE MUTCD STANDARDS.
3. SYMBOLS AND WORDS SHALL MEET THE REQUIREMENTS OF THE FHWA "STANDARD ALPHABET AND SYMBOLS FOR HIGHWAY PAVEMENT MARKINGS".



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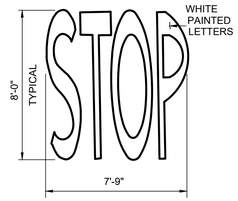
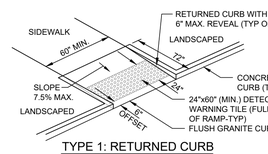
(NOT TO SCALE)



PAINTED "STOP" DETAIL

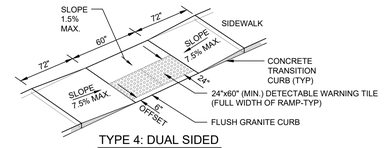
(NOT TO SCALE)

PAVEMENT MARKINGS
NOT TO SCALE
C3



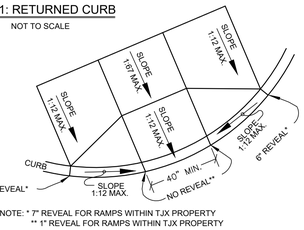
TYPE 1: RETURNED CURB

NOT TO SCALE



TYPE 4: DUAL SIDED

NOT TO SCALE



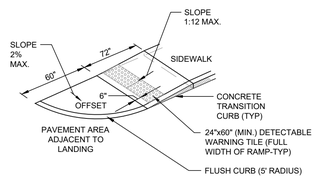
NOTE: * 7" REVEAL FOR RAMPS WITHIN TJX PROPERTY
** 1" REVEAL FOR RAMPS WITHIN TJX PROPERTY

1. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1.5% EXCEPT THE RAMP AREA PROPER WHICH IS EXEMPT.
2. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 36" SHALL BE MAINTAINED.
3. THE WHEELCHAIR RAMP SLOPE AND SIDE OF SLOPES (TRANSITIONS), MUST NOT EXCEED 7.5%, HOWEVER THESE SLOPES MAY BE FLATTER THAN 7.5% WHEN WARRANTED BY SURROUNDING CONDITIONS.
4. ALL REQUIREMENTS OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) AND THE AMERICANS WITH DISABILITIES ACT (ADA) SHALL GOVERN OVER THESE REGULATIONS.
5. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH ROADWAY.
6. 24"x48" DETECTABLE WARNING TILE SHALL BE YELLOW, EMBEDMENT PANEL, SOUND ATTENUATING CURB RAMP TILE BY ADS SOLUTIONS, INC., PART NO. 2460IDPAV2 OR APPROVED EQUAL.
7. DETECTABLE WARNING TILE SHALL HAVE DOME SPACING OF 2.35 INCHES.
8. DETECTABLE WARNING TILE SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. (PER MASSDOT E107.65)

NOTE: ALL TRANSITION ON WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH VERTICAL GRANITE CURB

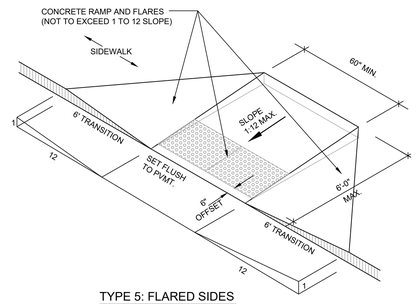
TYPE 2: ON CURVE - FLARED SIDES

NOT TO SCALE



TYPE 3: SINGLE SIDED

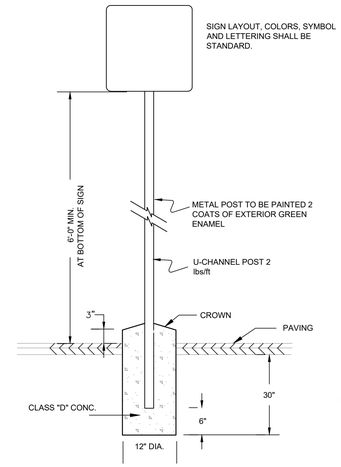
NOT TO SCALE

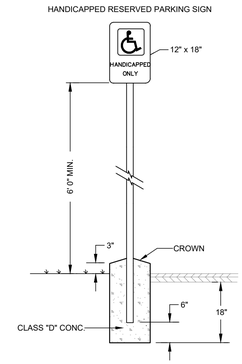


TYPE 5: FLARED SIDES

NOT TO SCALE

HANDICAP RAMP AND DETECTABLE WARNING SURFACE
NOT TO SCALE
C2





R1-1

ONE WAY

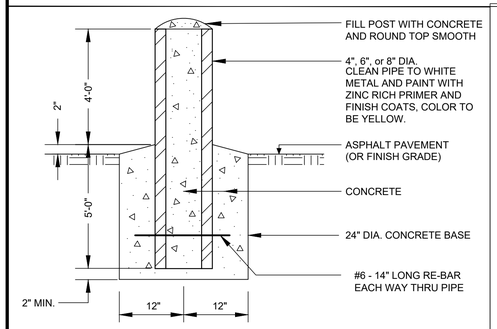
ELEVATION

NOTE:
1. SIGN LAYOUT, COLORS, SYMBOL AND LETTERING SHALL BE STANDARD.
2. TO BE LOCATED ON SITE AS DIRECTED.
3. METAL POST TO BE PAINTED 2 COATS OF EXTERIOR GREEN ENAMEL (SEE SPECS.).
4. TO BE LOCATED AT APPROPRIATE SPACES.

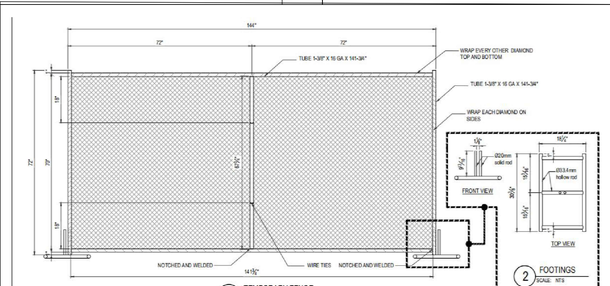
NOTES:

1. ALL REGULATORY SIGNS / MOUNTINGS SHALL CONFORM TO UNIFORM TRAFFIC CONTROL DEVICES UTCD.

SIGN DETAIL
NOT TO SCALE
C1



CONCRETE FILLED PIPE BOLLARD
NOT TO SCALE
B4

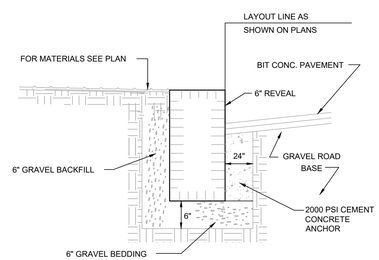


MATERIALS	QTY
TUBE 1-3/8" X 16 GA X 141-3/4"	2
TUBE 1-3/8" X 16 GA X 72	2
TUBE 1-3/8" X 16 GA X 67-3/4"	1

1 TEMPORARY FENCE
SCALE: NTS

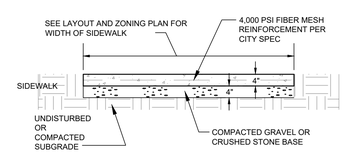
2 FOOTINGS
SCALE: NTS

TEMPORARY CONSTRUCTION FENCE
NOT TO SCALE
B3



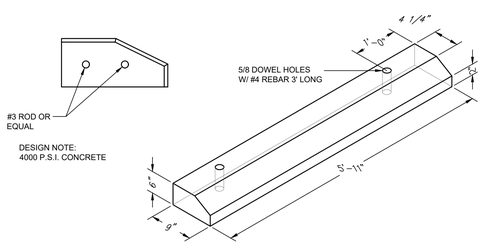
GRANITE CURBING TO CONFORM TO VA.4 TYPE PER DEPT. OF PUBLIC WORKS, MASS. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES. M6-03-1

VERTICAL GRANITE CURB
NOT TO SCALE
B2

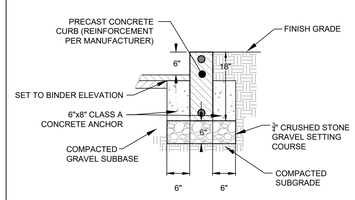


NOTE: PROVIDE EXPANSION JOINTS AT 25' O.C. (MAX.)

CONCRETE WALKWAY
NOT TO SCALE
B1

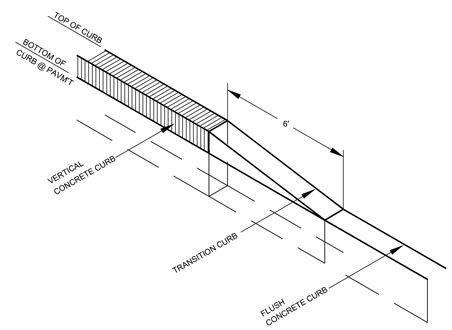


PRECAST CONCRETE CURB STOP
NOT TO SCALE
C4

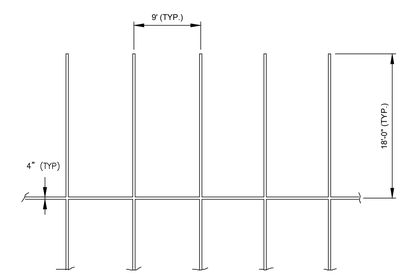


PRECAST CONCRETE CURB

PRECAST CONCRETE CURB
NOT TO SCALE
A3



TRANSITION CONCRETE CURB
NOT TO SCALE
A2



STRIPING SHALL BE 4" WIDE STRAIGHT LINES OF WHITE TRAFFIC PAINT, TO BE INSTALLED AS SHOWN ON LAYOUT AND MATERIALS PLAN

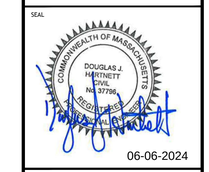
TYPICAL PARKING SPACE STRIPING
NOT TO SCALE
A1

HIGHPOINT ENGINEERING, INC.
LAND PLANNING
PERMIT EXPEDITING
CIVIL ENGINEERING
CONSULTING
580 WASHINGTON STREET
SUITE 216
DEDHAM, MA 02026
www.HighpointEng.com

CLIENT:
LUNDGREN EQUITY PARTNERS
163 Washington street
Auburn, MA 01501

CONSULTANT:

SEAL



06-06-2024

DCU/RETAIL EXPANSION PROJECT

225 SHREWSBURY STREET
WORCESTER, MA

OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE:
PERMIT

ISSUE DATE:
06/06/2024

PROJECT NUMBER:
24009

DRAWN BY: MJH

CHECKED BY: DTB/DJH

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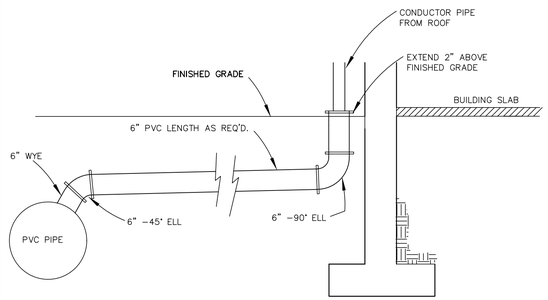
SHEET TITLE:

DETAILS

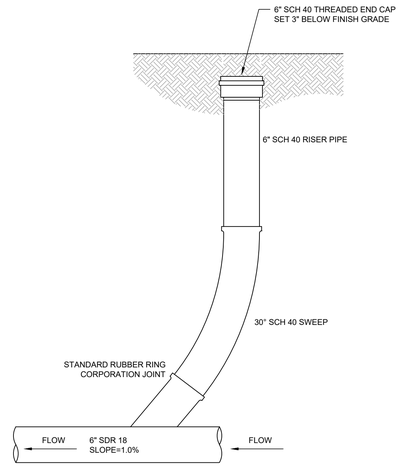
SHEET NUMBER:

C501

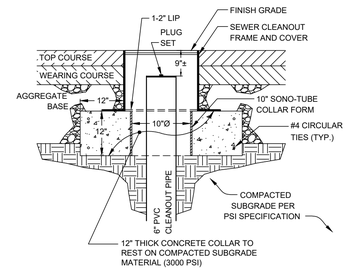
ISSUED FOR : PERMIT



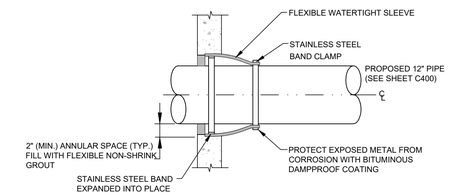
TYPICAL ROOF DRAIN CONNECTION DETAIL — C4
NOT TO SCALE



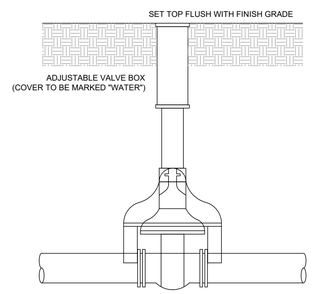
AT-GRADE CLEANOUT (ROOF DRAIN) — C3
NOT TO SCALE



SEWER CLEANOUT COVER — C2
NOT TO SCALE



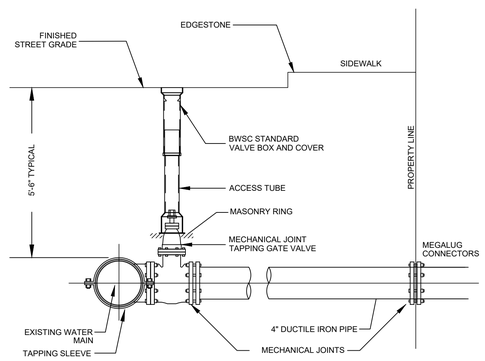
FLEXIBLE SLEEVE CONNECTION TO MANHOLE — C1
NOT TO SCALE



NOTES:

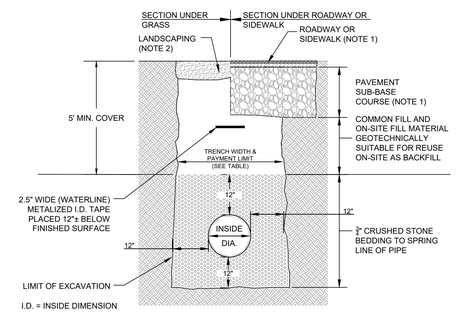
1. VALVE BOXES SHALL BE PROVIDED FOR EACH GATE VALVE AND TAPPING SLEEVE AND VALVE.
2. VALVE BOXES SHALL BE CAST IRON AND OF THE TELESCOPIC DESIGN WITH TWO PIECE CONSTRUCTION, TOP WITH A COVER AND A BOTTOM. THE TOP SECTION SHALL HAVE A TOP FLANGE TO INCREASE THE STABILITY OF THE BOX TO REMAIN AT PRESENT HEIGHT. THE LOWER SECTION OF THE BOX SHALL HAVE A BELL SHAPED BOTTOM DESIGNED TO ENCLOSE THE OPERATING NUT AND STUFFING BOX OF THE VALVE WITHOUT SETTLING.
3. THE GATE BOX SHALL COME COMPLETE WITH COVER ON WHICH THE WORD "WATER" SHALL BE CAST. THE COVER OF THE GATE BOX SHALL BE CLOSE FITTING AND SUBSTANTIALLY TIGHT AND FLUSH WITH THE TOP OF THE BOX RIM.
4. GATE BOXES SHALL BE INSTALLED FOR EACH BURIED VALVE.
5. VALVE BOXES SHALL BE CP TEST SERVICES, INC. OR EQUAL.
6. CAST IRON BOXES SHALL BE GENERAL FOUNDRY BUFFALO BOXES OR EQUAL. VALVE SHALL OPEN IN DIRECTION APPROVED BY CITY OF WORCESTER

WATER GATE VALVE BOX — B4
NOT TO SCALE



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

WATER PIPE CONNECTION WITH TAPPING SLEEVE & GATE VALVE — B3
NOT TO SCALE



I.D. = INSIDE DIMENSION

FOR TRENCHES GREATER THAT 5' DEEP ADD MAXIMUM 3' FOR TEMPORARY SUPPORT OF EXCAVATION

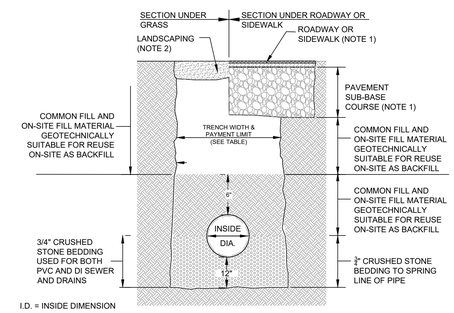
NOTE:

1. TRENCHING, BACKFILLING, COMPACTION, AND GRANULAR FILL MATERIALS SHALL CONFORM TO WORCESTER DPW STANDARD SPECIFICATIONS FOR EXCAVATION WITHIN PUBLIC RIGHT OF WAY BACKFILL TRENCH WITH EXCAVATEABLE CONTROLLED DENSITY FILL

TRENCH PAY LIMIT TABLE FOR PIPES

PIPE SIZE (DIA.)	MAX TRENCH WIDTH
LESS THAN 2"	2'-0"
2" TO 6"	3'-0"
8" TO 22"	4'-0"
24" & GREATER	I.D. + 2'-0"

WATER TRENCH — B2
NOT TO SCALE



I.D. = INSIDE DIMENSION

FOR TRENCHES GREATER THAT 5' DEEP ADD MAXIMUM 3' FOR TEMPORARY SUPPORT OF EXCAVATION

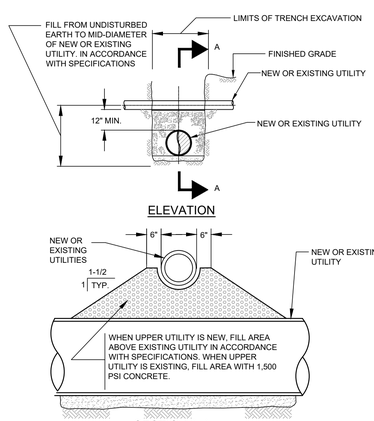
NOTES:

1. REFER TO PAVING AND SURFACING, AND CURBS, WALKS AND DRIVEWAYS REQUIREMENTS.
2. REFER TO LANDSCAPING REQUIREMENTS
3. REFER TO "TRENCH PAY LIMIT TABLE FOR PIPES" FOR PAYMENT OF ALL ITEMS IN WHICH PAY TRENCH WIDTH IS A VARIABLE FOR CALCULATIONS OF QUANTITIES EXCEPT FOR TRENCH PAVEMENT
4. REFER TO TRENCH PAVEMENT DETAIL FOR PAVEMENT PAYMENT WIDTHS

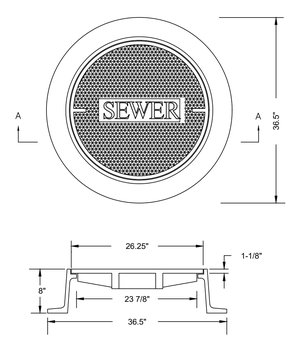
TRENCH PAY LIMIT TABLE FOR PIPES

PIPE SIZE (DIA.)	MAX TRENCH WIDTH
LESS THAN 2"	2'-0"
2" TO 6"	3'-0"
8" TO 22"	4'-0"
24" & GREATER	I.D. + 2'-0"

SEWER AND DRAINAGE TRENCH — B1
NOT TO SCALE



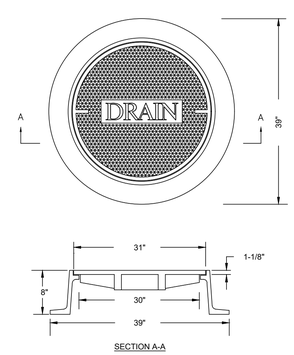
UTILITY CROSSING — A4
NOT TO SCALE



NOTE:

1. FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS CATALOG NOS. 2110A & 2114Z MARKED "SEWER", OR APPROVED EQUAL.
2. MANHOLE FRAME AND COVER TO BE LOCKABLE TYPE WITH GASKET. (WATER TIGHT)

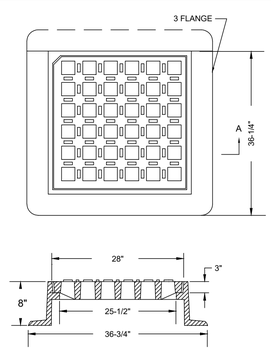
SEWER MANHOLE FRAME & COVER — A3
NOT TO SCALE



NOTE:

1. FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS CATALOG NOS. 0MA200000024 (8" FRAME) & 0MA200000027 (COVER) MARKED "DRAIN", OR APPROVED EQUAL.

DRAIN MANHOLE FRAME AND COVER — A2
NOT TO SCALE



NOTE:

FRAME AND GRATE SHALL BE EAST JORDAN IRON WORKS CATALOG NOS. 0MA7288000015 (3 FLANGE), 0MA7288000016 (4 FLANGE), 0MA7288000017 (GRATE) OR APPROVED EQUAL.

CATCH BASIN FRAME AND COVER — A1
NOT TO SCALE

HIGHPOINT ENGINEERING, INC.
LAND PLANNING
PERMIT EXPEDITING
CIVIL ENGINEERING
CONSULTING
980 WASHINGTON STREET
SUITE 216
DEDHAM, MA 02026
www.HighpointEng.com

CLIENT:
LUNDGREN EQUITY PARTNERS
163 Washington street
Auburn, MA 01501

CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
06-06-2024

DCU/RETAIL EXPANSION PROJECT

225 SHREWSBURY STREET
WORCESTER, MA

OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE: PERMIT
ISSUE DATE: 06/06/2024
PROJECT NUMBER: 24009

DRAWN BY: MJH
CHECKED BY: DTB/DJH

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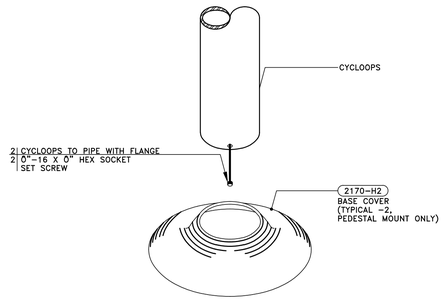
SHEET TITLE:
DETAILS

SHEET NUMBER:
C502

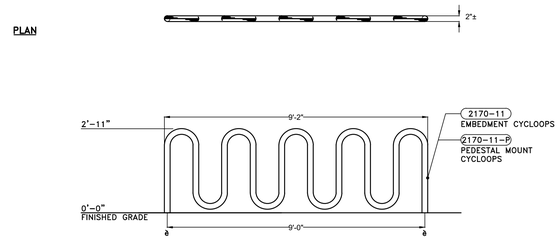
ISSUED FOR : PERMIT



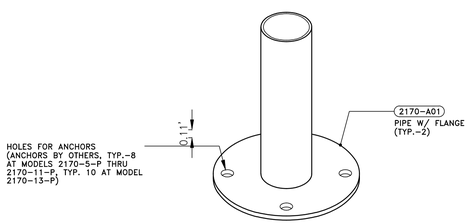
INSTALLATION SEQUENCE

1. USE CYCLOOPS AND PIPE WITH FLANGE TO LOCATE ANCHORS.
2. INSTALL PIPE WITH FLANGE (TYPICAL -2).
3. SLIDE BASE COVER (TYPICAL -2) ONTO BOTTOM OF CYCLOOPS AS SHOWN.
4. SLIDE CYCLOOPS ONTO PIPES.
5. WHILE HOLDING BASE COVER OUT OF THE WAY, INSERT AND TIGHTEN HEX SOCKET SET SCREWS.
6. ALLOW THE BASE COVER TO SLIDE DOWN TO GRADE.

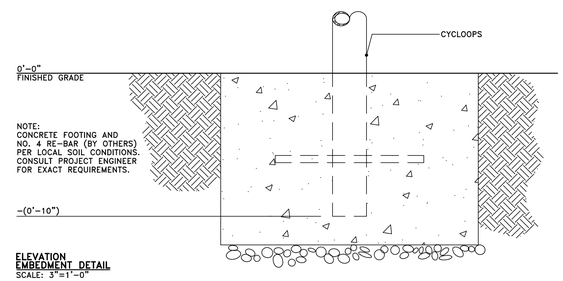
NOTE: MODEL NO. 2170-13-P HAS AN ATTACHED CENTER PEDESTAL REQUIRING TWO ANCHORS. THE CENTER PEDESTAL DOES NOT INCLUDE A BASE COVER.



ELEVATION
MODEL NO. 2170-11
SCALE: 0"=1'-0"

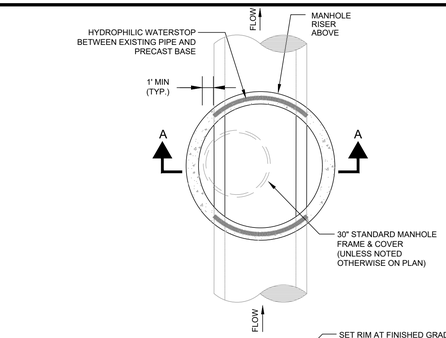


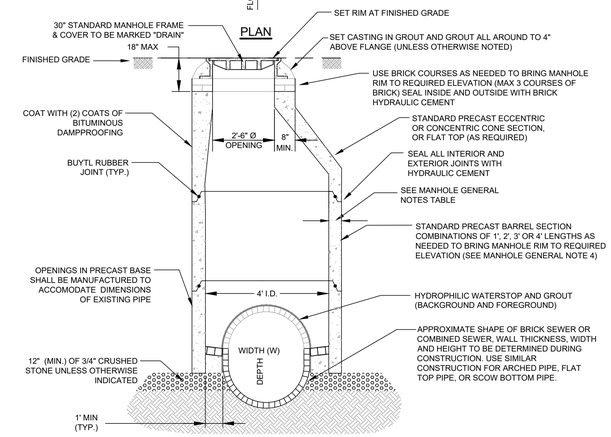
ISOMETRIC
PEDESTAL MOUNT DETAIL
SCALE: N.T.S.



ELEVATION
EMBEDMENT DETAIL
SCALE: 3"=1'-0"

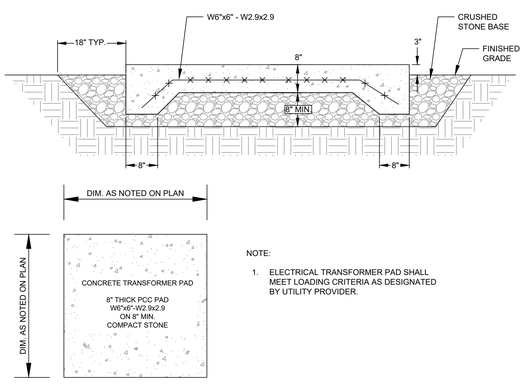
VISITOR'S BICYCLE PARKING RACK
NOT TO SCALE
B2





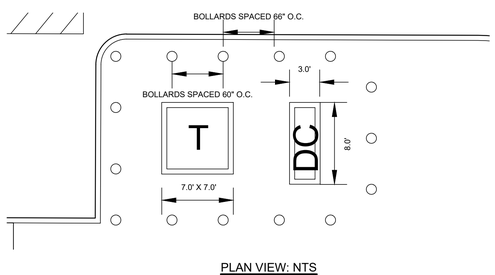
SECTION A-A

PRECAST DROP-OVER DRAIN MANHOLE
NOT TO SCALE
B1



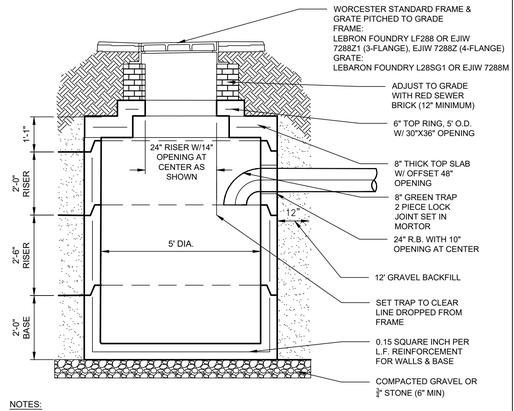
NOTE:

1. ELECTRICAL TRANSFORMER PAD SHALL MEET LOADING CRITERIA AS DESIGNATED BY UTILITY PROVIDER.



PLAN VIEW: NTS

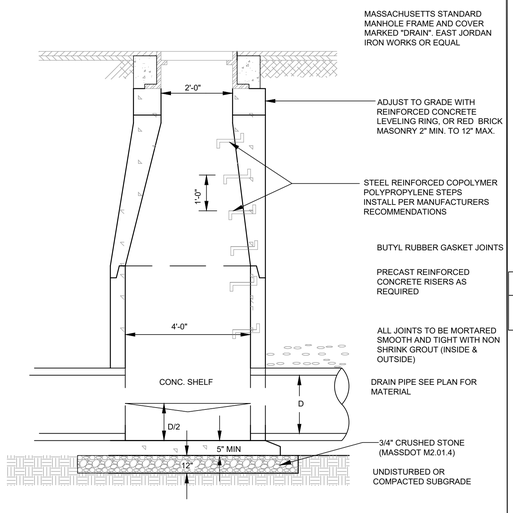
TYPICAL ELECTRICAL TRANSFORMER PAD
NOT TO SCALE
A4



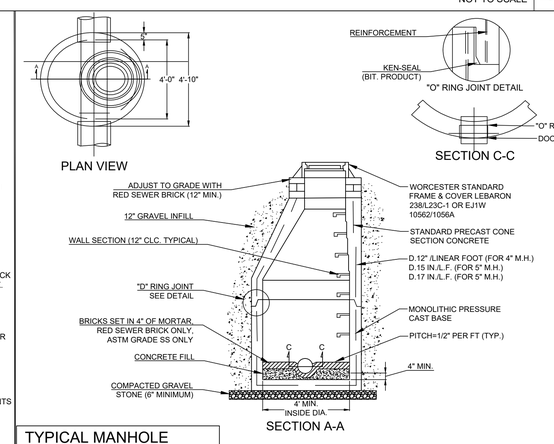
NOTES:

- Catch basins shall be constructed of the materials, size, form thickness and in the manner shown in detail on a plan titled Typical Pre-Cast Catch Basin and shall conform to the applicable provisions of Section 201, (MSSHB).
- Pre-cast concrete basins shall consist of pre-cast reinforced riser sections, a flat slab top and top ring, and a base section conforming to the typical catch basin details.
- Pre-cast catch basin sections shall be manufactured in accordance with ASTM Designation C478. The minimum compressive strength of the concrete for all sections shall be 4,000 PSI on a 28 Day Test. The circumferential steel reinforcement for riser sections and base walls shall be 0.17 square inch per lineal Reinforcing in the bottoms of bases shall be of the same design. Reinforcing in top slabs to be as given on the standard catch basin detail. Reinforcing shall extend into the tongue and groove of each catch basin section wall.
- Each section of the pre-cast manhole shall have two holes for the purpose of handling and laying. These holes shall be tapered and shall be plugged with hydraulic cement after installation.
- Type II cement to be used. Sections shall be set so as to be vertical and in true alignment. Joints shall be completely mortared by buttering the groove and immediately prior to setting a section, or approved alternative sealant, assuring a watertight sump.
- Catch basin connection to the catch basin shall be made prior to constructing the catch basin above the invert grade of the trap.
- Red sewer brick shall be used in the catch basins. Limits of Class B rock excavation will be six (6) inches below and twelve (12) inches outside the base.
- GRAVEL BACKFILL SHALL BE FURNISHED BY THE CONTRACTOR AT NO ADDITIONAL COST, AND SHALL BE POWER TAMPED IN TWELVE (12) INCH LIFTS, JETTED OR CDF MAY BE USED AS DIRECTED BY THE CONTRACTING OFFICER.
- All excavated material, except as directed by the Contracting Officer, shall be removed from the site 3/4" crushed stone foundation six (6) inches in depth is required under the pre-cast base at no additional cost.
- Traps, frames, grates and inlets shall be furnished and installed as specified under their respective items. A minimum of 12 inches of red sewer brick shall be used under the frame. The grates shall fit so as to prevent rocking or unnecessary space at the joints.

TYPICAL PRECAST CATCH BASIN
NOT TO SCALE
A3

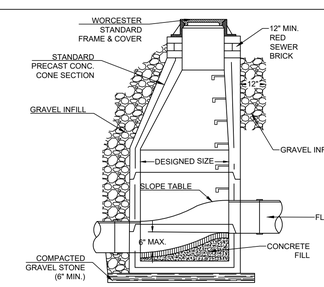


DRAIN MANHOLE
NOT TO SCALE
A2



TYPICAL MANHOLE

TYPICAL STEP MANHOLE



SANITARY SEWER MANHOLE
NOT TO SCALE
A1

HIGHPOINT ENGINEERING, INC.
LAND PLANNING
PERMIT EXPEDITING
CIVIL ENGINEERING
CONSULTING
580 WASHINGTON STREET
SUITE 216
DEDHAM, MA 02026
www.HighpointEng.com

CLIENT:
LUNDGREN EQUITY PARTNERS
163 Washington street
Auburn, MA 01501

CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
06-06-2024

DCU/RETAIL EXPANSION PROJECT

225 SHREWSBURY STREET
WORCESTER, MA

OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE: PERMIT
ISSUE DATE: 06/06/2024
PROJECT NUMBER: 24009

DRAWN BY: MJH
CHECKED BY: DTB/DJH

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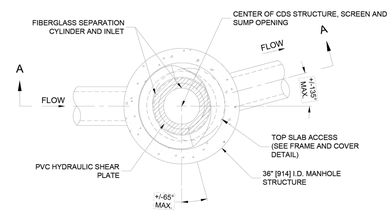
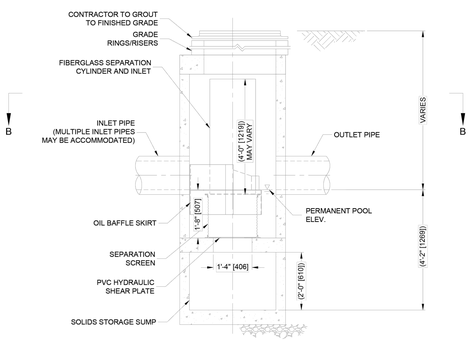
SHEET TITLE:
DETAILS

SHEET NUMBER:
C503

ISSUED FOR : PERMIT



PLAN VIEW B-B
N.T.S.

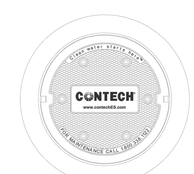


ELEVATION A-A
N.T.S.

CDS1515-3-C DESIGN NOTES

CDS1515-3-C RATED TREATMENT CAPACITY IS 1.0 CFS, OR PER LOCAL REGULATIONS.

THE STANDARD CDS1515-3-C CONFIGURATION IS SHOWN.



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (CFS OR L/s)			*
PEAK FLOW RATE (CFS OR L/s)			*
RETURN PERIOD OF PEAK FLOW (YRS)			*
SCREEN APERTURE (2400 OR 4700)			*
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*
RIM ELEVATION			*
ANTI-FLOTATION BALLAST		WIDTH	HEIGHT
		*	*
NOTES/SPECIAL REQUIREMENTS:			
* PER ENGINEER OF RECORD			

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CDS

THIS PROJECT REPRESENTS THE STANDARD OF QUALITY AND SERVICE THAT YOU CAN EXPECT FROM CONTECH. ANY DEVIATIONS, EXCEPTIONS OR ALTERNATE BIDS WILL BE REJECTED FOR INCONSISTENCY, OR OTHER REASON TO FOREBID.

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CDS1515-3-C
ONLINE CDS
STANDARD DETAIL

CONTECH CDS1515-3-C (DMH-4)
NOT TO SCALE

A1

HIGHPOINT ENGINEERING, INC.
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CONSULTING
180 WASHINGTON STREET
SUITE 216
DEDHAM, MA 02026
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CLIENT:
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163 Washington street
Auburn, MA 01501

CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
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No. 37796
REGISTERED PROFESSIONAL ENGINEER
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WORCESTER, MA

OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

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ISSUE TYPE:
PERMIT

ISSUE DATE:
06/06/2024

PROJECT NUMBER:
24009

DRAWN BY: MJH

CHECKED BY: DTB/DJH

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SHEET TITLE:
DETAILS

SHEET NUMBER:
C504

ISSUED FOR : PERMIT

TEST BORING LOG — SHEET 1

Soil Exploration Corp.
Geotechnical Drilling
Groundwater Monitor Well
148 Pioneer Drive
Leominster, MA 01453
978 840-0391

Proposed Building
Site: 233 Shrewsbury St.
Worcester, MA

BORING B-1 (Page 1/2)
PROJECT NO. 17-0604
DATE: June 2, 2017

Ground Elevation:
Date Started: June 2, 2017
Date Finished: June 2, 2017
Driller: PG
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION
6/2/17	7 ft	n/a	Upon Completion

Depth Ft.	Casing blt/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
						3"	Asphalt
1		1	12"	0'0"-2'0"	8-6-4-3		Brown, fine to medium Sand, some gravel, little silt (FILL)
		2	9"	2'0"-4'0"	2-1-1-1		Sand, gravel, ash, cinders (FILL)
5		3	15"	5'0"-7'0"	3-2-3-2		Same, trace brick (URBAN FILL)
		4	15"	7'0"-9'0"	2-1-1-1		Same, wet
10		5	18"	10'0"-12'0"	woh-1-1-1	10'	
		6	24"	12'0"-14'0"	1-1-1-1		Black, Organic silty-fibrous Peat, wet (ORGANIC)
15		7	21"	15'0"-17'0"	3-4-3-2	15'	Grey, Silt, Clay & Fine Sand (FLUVIAL)
20		8	21"	20'0"-22'0"	2-2-2-3		Grey, Silt w/ clay, wet
25		9	24"	25'0"-27'0"	woh-1-1-1		Brown, Silt & Clay, wet w/ sand seams
30		10	21"	30'0"-32'0"	woh-1-1-1		Brown, Fine Sand w/ silt and clay (FLUVIAL)
35		11	18"	35'0"-37'0"	3-4-4-5	34'	Tan, fine to medium Sand, trace gravel, trace silt, wet (Continued)

Notes: Hollow Stem Auger Size - 4 1/4"

Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, 10 -30 M Dense, 30 -50 Dense, 50+ V	Trace 0 to 10%		CASING	SAMPLE	CORE TYPE
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M	Little 10 to 20%	ID SIZE (IN)		SS	
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard.	Some 20 to 35%	HAMMER WGT (LB)		140 lb.	
	And 35% to 50%	HAMMER FALL (IN)		30"	

TEST BORING LOG — SHEET 2

Soil Exploration Corp.
Geotechnical Drilling
Groundwater Monitor Well
148 Pioneer Drive
Leominster, MA 01453
978 840-0391

Proposed Building
Site: 233 Shrewsbury St.
Worcester, MA

BORING B-1 (Page 2/2)
PROJECT NO. 17-0604
DATE: June 2, 2017

Ground Elevation:
Date Started: June 2, 2017
Date Finished: June 2, 2017
Driller: PG
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION
6/2/17	7 ft	n/a	Upon Completion

Depth Ft.	Casing blt/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
40		12	18"	40'0"-42'0"	13-18-21-26		Grey, coarse Sand & Gravel, little silt
45							End of boring 42 ft Water at 7 ft upon completion
50							
55							
60							
65							
70							
75							
79							

Notes: Hollow Stem Auger Size - 4 1/4"

Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, 10 -30 M Dense, 30 -50 Dense, 50+ V	Trace 0 to 10%		CASING	SAMPLE	CORE TYPE
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M	Little 10 to 20%	ID SIZE (IN)		SS	
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard.	Some 20 to 35%	HAMMER WGT (LB)		140 lb.	
	And 35% to 50%	HAMMER FALL (IN)		30"	

TEST BORING LOG — SHEET 3

Soil Exploration Corp.
Geotechnical Drilling
Groundwater Monitor Well
148 Pioneer Drive
Leominster, MA 01453
978 840-0391

Proposed Building
Site: 233 Shrewsbury St.
Worcester, MA

BORING B-2 (Page 1/2)
PROJECT NO. 17-0604
DATE: June 2, 2017

Ground Elevation:
Date Started: June 2, 2017
Date Finished: June 2, 2017
Driller: PG
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION
6/2/17	5 ft	n/a	Upon Completion

Depth Ft.	Casing blt/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
						5"	Asphalt
1		1	15"	0'0"-2'0"	3-4-4-3		Sand, silt, gravel, ash, cinders
		2	6"	2'0"-4'0"	2-1-1-2		(URBAN FILL)
5		3	9"	5'0"-7'0"	2-1-1-1		Same, trace brick, rubble, wet
		4	6"	7'0"-9'0"	1-1-2-2		
10		5	15"	10'0"-12'0"	1-1-1-1	10'	
		6	18"	12'0"-14'0"	1-1-1-2		Black, Organic, silty-fibrous Peat (ORGANIC)
15		7	21"	15'0"-17'0"	woh-1-1-2		Dark Brown, Organic Silt w/ fibers, wet (ORGANIC)
		8	24"	17'0"-19'0"	2-1-1-1		
20		9	21"	20'0"-22'0"	1-1-1-2	20'	Grey, Silt, Clay & Fine Sand, wet (FLUVIAL)
25		10	21"	25'0"-27'0"	woh-1-1-1		
30		11	21"	30'0"-32'0"	woh-1-1-2		Brown, Silt & Clay w/ fine sand, wet
35		12	24"	35'0"-37'0"	1-2-2-1		Tan, Silt, wet (FLUVIAL) (Co ntinued)

Notes: Hollow Stem Auger Size - 4 1/4"

Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, 10 -30 M Dense, 30 -50 Dense, 50+ V	Trace 0 to 10%		CASING	SAMPLE	CORE TYPE
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M	Little 10 to 20%	ID SIZE (IN)		SS	
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard.	Some 20 to 35%	HAMMER WGT (LB)		140 lb.	
	And 35% to 50%	HAMMER FALL (IN)		30"	

TEST BORING LOG — SHEET 4

Soil Exploration Corp.
Geotechnical Drilling
Groundwater Monitor Well
148 Pioneer Drive
Leominster, MA 01453
978 840-0391

Proposed Building
Site: 233 Shrewsbury St.
Worcester, MA

BORING B-2 (Page 2/2)
PROJECT NO. 17-0604
DATE: June 2, 2017

Ground Elevation:
Date Started: June 2, 2017
Date Finished: June 2, 2017
Driller: PG
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION

Depth Ft.	Casing blt/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
40		13	21"	40'0"-42'0"	woh-1-1-1		
45		14	24"	45'0"-47'0"	1-1-1-1		Tan, Silt & Clay wet w/ sand seams (FLUVIAL)
50		15	18"	50'0"-52'0"	woh-1-1-2	53'	Brown, Silt, Clay & Fine Sand
55		16	21"	55'0"-57'0"	6-8-8-9		Tan, fine to medium Sand, trace gravel, trace silt (SAND)
60							End of boring 57 ft Water at 6 ft upon completion
65							
70							
75							
79							

Notes: Hollow Stem Auger Size - 4 1/4"

Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, 10 -30 M Dense, 30 -50 Dense, 50+ V	Trace 0 to 10%		CASING	SAMPLE	CORE TYPE
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M	Little 10 to 20%	ID SIZE (IN)		SS	
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard.	Some 20 to 35%	HAMMER WGT (LB)		140 lb.	
	And 35% to 50%	HAMMER FALL (IN)		30"	

TEST BORING LOG — SHEET 5

Soil Exploration Corp.
Geotechnical Drilling
Groundwater Monitor Well
148 Pioneer Drive
Leominster, MA 01453
978 840-0391

Proposed Building
Site: 233 Shrewsbury St.
Worcester, MA

BORING B-3 (Page 1/2)
PROJECT NO. 17-0604
DATE: June 6, 2017

Ground Elevation:
Date Started: June 6, 2017
Date Finished: June 6, 2017
Driller: TF
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION
6/6/17	6 ft	n/a	

Depth Ft.	Casing blt/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
						3"	Asphalt
1		1		1'0"-3'0"	7-6-7-5		Dark Brown, loamy, silty Sand w/ gravel (FILL)
		2		3'0"-5'0"	5-4-6-6	3'	Brown, Sand, ash, gravel, cinders (URBAN FILL)
5		3		5'0"-7'0"	4-5-5-6		Sand, silt, clay w/ trace wood, brick, organic
		4		7'0"-9'0"	3-3-3-4		Sand, silt, gravel w/ trace wood, brick, glass (FILL)
10		5		10'0"-12'0"	1-2-1-2	9'	Black, Organic Silt
		6		12'0"-14'0"	1-1-1-2		Black, Organic Silt, trace fibers, wet (ORGANIC)
15		7		15'0"-17'0"	2-3-3-3	15'	Grey, Silt & Clay w/ fine sand (FLUVIAL)
20		8		20'0"-22'0"	1-1-2-2		
25		9		24'0"-26'0"	1-1-2-3		(FLUVIAL)
30		10		29'0"-31'0"	woh-1-1-2		Grey, Fine Sand w/ silt, wet (FLUVIAL)
35		11		34'0"-36'0"	1-2-1-1		Grey, Silt & Clay w/ sand seams (Continued)

Notes: Hollow Stem Auger Size - 4 1/4"

Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, 10 -30 M Dense, 30 -50 Dense, 50+ V Dense.	Trace 0 to 10%		CASING	SAMPLE	CORE TYPE
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M	Little 10 to 20%	ID SIZE (IN)		SS	
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard.	Some 20 to 35%	HAMMER WGT (LB)		140 lb.	
	And 35% to 50%	HAMMER FALL (IN)		30"	

TEST BORING LOG — SHEET 6

Soil Exploration Corp.
Geotechnical Drilling
Groundwater Monitor Well
148 Pioneer Drive
Leominster, MA 01453
978 840-0391

Proposed Building
Site: 233 Shrewsbury Street
Worcester, MA

BORING B-3 (Page 2/2)
PROJECT NO. 17-0604
DATE: June 6, 2017

Ground Elevation:
Date Started: June 6, 2017
Date Finished: June 6, 2017
Driller: TF
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION
6/6/17	6 ft	n/a	

Depth Ft.	Casing blt/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
40		12	24"	39'0"-41'0"	1-1-1-1		Brown, Silt & Clay, wet (FLUVIAL) w/ sand lenses
45		13	20"	44'0"-46'0"	11-11-13-15	44'	Brown, fine to coarse Sand, little gravel, trace silt, wet
50		14	14"	49'0"-51'0"	9-10-11-9		Brown, fine to medium Sand, little silt (SAND)
55		15	14"	54'0"-56'0"	10-10-13-14		Brown, fine to medium Sand, trace/little silt
60		16	16"	59'0"-61'0"	9-12-13-12		Brown, fine to coarse Sand, some gravel, trace silt
65							End of boring 61 ft Water at 6 ft upon completion
70							
75							

Notes: NW Casing

Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, 10 -30 M Dense, 30 -50 Dense, 50+ V	Trace 0 to 10%		CASING	SAMPLE	CORE TYPE
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M	Little 10 to 20%	ID SIZE (IN)		SS	
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard.	Some 20 to 35%	HAMMER WGT (LB)		140 lb.	
	And 35% to 50%	HAMMER FALL (IN)		30"	

TEST BORING LOG — SHEET 7

Soil Exploration Corp.
Geotechnical Drilling
Groundwater Monitor Well
148 Pioneer Drive
Leominster, MA 01453
978 840-0391

Proposed Buiding
Site: 233 Shrewsbury St.
Worcester, MA

BORING B-4 (Page 1/2)
PROJECT NO. 17-0604
DATE: June 12, 2017

Ground Elevation:
Date Started: June 12, 2017
Date Finished: June 12, 2017
Driller: TF
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION
6/12/17	7 ft	n/a	Upon Completion

Depth Ft.	Casing blt/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
						4"	Asphalt
1		1	8"	1'0"-3'0"	7-5-6-5		Sand, cinders, ash, gravel
		2	6"	3'0"-5'0"	5-4-5-6		Same w/ rubble, dry (FILL)
5		3	8"	5'0"-7'0"	4-4-3-2		Brown Sand, ash, gravel, brick, glass (URBAN FILL)
		4	4"	7'0"-9'0"	1-2-1-2		Sand, gravel, trace ash (FILL)
10		5	16"	10'0"-12'0"	1-1-2-2	9'	Black, Organic Silt w/ fibers, wet (ORGANIC)
		6	16"	12'0"-14'0"	1-1-1-2		Black, Organic, silty-fibrous Peat
15		7	24"	15'0"-17'0"	2-1-2-1	15'	
20		8	18"	19'0"-21'0"	2-1-1-1		Clay & Silt w/ fine sand seams
25		9	24"	24'0"-26'0"	1-1-1-1		
30		10	24"	29'0"-31'0"	1-1-1-1		Brown, Silt & Clay (FLUVIAL) w/ sand seams
35		11	24"	34'0"-36'0"	woh-1-1-1	39'	Continued

Notes: NW Casing

Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, 10 -30 M Dense, 30 -50 Dense, 50+ V	Trace 0 to 10%		CASING	SAMPLE	CORE TYPE
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M	Little 10 to 20%	ID SIZE (IN)		SS	
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard.	Some 20 to 35%	HAMMER WGT (LB)		140 lb.	
	And 35% to 50%	HAMMER FALL (IN)		30"	

TEST BORING LOG — SHEET 8

Soil Exploration Corp.
Geotechnical Drilling
Groundwater Monitor Well
148 Pioneer Drive
Leominster, MA 01453
978 840-0391

Proposed Building
Site: 233 Shrewsbury St.
Worcester, MA

BORING B-4 (Page 2/2)
PROJECT NO. 17-0604
DATE: June 12, 2017

Ground Elevation:
Date Started: June 12, 2017
Date Finished: June 12, 2017
Driller: TF
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION
6/12/17	7 ft	n/a	Upon Completion

Depth Ft.	Casing blt/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
40		12	12"	39'0"-41'0"	5-6-6-7	39'	Brown, fine to medium Sand, trace silt (SAND)
45		13	12"	44'0"-46'0"	12-16-13-20		Brown, fine to coarse Sand, little gravel
50		14	12"	49'0"-51'0"	14-17-18-25	48'	weathered rock, shale (WEATHERED ROCK)
55		15	10"	54'0"-56'0"	19-24-29-52		End of Boring at 56 ft Water at 7 ft upon completion
60							
65							
70							
75							

Notes: NW Casing

Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, 10 -30 M Dense, 30 -50 Dense, 50+ V	Trace 0 to 10%		CASING	SAMPLE	CORE TYPE
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M	Little 10 to 20%	ID SIZE (IN)		SS	
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard.	Some 20 to 35%	HAMMER WGT (LB)		140 lb.	
	And 35% to 50%	HAMMER FALL (IN)		30"	

BORING LOG 225 SHREWSBURY STREET
NOT TO SCALE
A1

HIGHPOINT ENGINEERING, INC.
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CLIENT:
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CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
06-06-2024

DCU/RETAIL EXPANSION PROJECT
225 SHREWSBURY STREET
WORCESTER, MA
OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE: PERMIT
ISSUE DATE: 06/06/2024
PROJECT NUMBER: 24009

DRAWN BY: MJH
CHECKED BY: DJH/DTB

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SHEET TITLE:
TEST BORING LOGS SHEET 1

SHEET NUMBER:
C600

ISSUED FOR : PERMIT

TEST BORING LOG — SHEET 1

Soil Exploration Corp.
Geotechnical Drilling
Groundwater Monitor Well
148 Pioneer Drive
Leominster, MA 01453
978 840-0391

Proposed Building
Site: 233 Shrewsbury Street
Worcester, MA

BORING B-5
PROJECT NO. 17-0647
DATE: June 30, 2017

Ground Elevation:
Date Started: June 29, 2017
Date Finished: June 29, 2017
Driller: TF
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION
6/29/17	7 ft	n/a	

Depth Ft.	Casing bl/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
						4"	Asphalt
1		1	12"	1'0" – 3'0"	4-5-7-6		Dark Brown, fine to medium Sand, little gravel, little trace, brick, cinders
5		2	6"	5'0" – 7'0"	4-4-6-6		Sand & Gravel w/ silt, rubble, ash, wet (FILL)
10		3	10"	10'0" – 12'0"	4-4-6-7		Brown, fine to coarse Sand, trace rubble, wet (FILL)
		4	12"	12'0" – 14'0"	1-1-1-1	12'	Dark Brown, Organic Silt, wood fibers (ORGANIC)
15		5	12"	15'0"- 17'0"	9-8-4-3	15'	Grey, Clay & Silt, little fine sand (FLUVIAL)
20		6	21"	20'0" – 22'0"	WOH-1-1-1	23'	
25		7	18"	25'0" – 27'0"	4-5-7-8		Brown, medium to coarse Sand, little gravel, minor silt, wet
30							End of Boring at 30 ft due to "Running Sand" Water at 7 ft upon completion
35							

Notes: Hollow Stem Auger Size - 4 1/4"

Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, 10 -30 M Dense, 30 -50 Dense, 50+ V
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard

Trace 0 to 10%
Little 10 to 20%
Some 20 to 35%
And 35% to 50%

	CASING	SAMPLE	CORE TYPE
ID SIZE (IN)		SS	
HAMMER WGT (LB)		140 lb.	
HAMMER FALL (IN)		30"	

TEST BORING LOG — SHEET 2

Soil Exploration Corp.
Geotechnical Drilling
Groundwater Monitor Well
148 Pioneer Drive
Leominster, MA 01453
978 840-0391

Proposed Building
Site: 233 Shrewsbury Street
Worcester, MA

BORING B-6 (Page 1/2)
PROJECT NO. 17-0647
DATE: June 30, 2017

Ground Elevation:
Date Started: June 29, 2017
Date Finished: June 29, 2017
Driller: TF
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION
6/29/17	8 ft	n/a	

Depth Ft.	Casing bl/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
						4"	Asphalt
1		1	10"	1'0" – 3'0"	5-7-8-6		Brown, fine to medium Sand, little gravel, little silt
5		2	6"	5'0" – 7'0"	4-5-9-7		Brick, rubble (FILL) Trace cinders, concrete
10		3	12"	10'0" – 12'0"	5-5-6-7		f-c Sand, little gravel, wet (FILL)
						14'	
15		4	12"	15'0"- 17'0"	2-2-2-3		Organic Silt, fibers (ORGANIC)
						18'	
20		5	24"	20'0" – 22'0"	WOH-1-1		
25		6	24"	25'0" – 27'0"	1-1-1-1		Clay & Silt little some fine sand seams and fine sand layers (FLUVIAL)
30		7	24"	30'0"-32'0"	WOH-1-1-1		
35		8	24"	35'0" – 37'0"	1-1-1-1		Continued

Notes: Hollow Stem Auger Size - 4 1/4"

Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, 10 -30 M Dense, 30 -50 Dense, 50+ V
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard

Trace 0 to 10%
Little 10 to 20%
Some 20 to 35%
And 35% to 50%

	CASING	SAMPLE	CORE TYPE
ID SIZE (IN)		SS	
HAMMER WGT (LB)		140 lb.	
HAMMER FALL (IN)		30"	

TEST BORING LOG — SHEET 3

Soil Exploration Corp.
Geotechnical Drilling
Groundwater Monitor Well
148 Pioneer Drive
Leominster, MA 01453
978 840-0391

Proposed Building
Site: 233 Shrewsbury Street
Worcester, MA

BORING B-6 (page 2/2)
PROJECT NO. 17-0647
DATE: June 30, 2017

Ground Elevation:
Date Started: June 29, 2017
Date Finished: June 29, 2017
Driller: TF
Soil Engineer/Geologist:

GROUNDWATER OBSERVATIONS			
DATE	DEPTH	CASING	STABILIZATION
6/29/17	8 ft	n/a	

Depth Ft.	Casing bl/ft	Sample No.	Pen/Rec	Sample Depth	Blows/6"	Strata	Visual Identification of Soil and / or Rock Sample
40							
45		9	24"	45'0" – 47'0"	1-1-2-2		
50		10	24"	50'0" – 52'0"	1-1-2-3		Clay & Silt little fine sand seams and fine sand layers (FLUVIAL)
						54'	
55		11	12"	55'0" – 57'0"	11-16-17-22		Grey, fine to medium Sand, some gravel, some silt, cobble (GLACIAL)
60		12	10"	60'0" – 62'0"	17-25-29-43		weathered rock at bottom
65							End of Boring at 62 ft Water at 8 ft upon completion
70							
75							

Notes: Hollow Stem Auger Size - 4 1/4"

Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, 10 -30 M Dense, 30 -50 Dense, 50+ V
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M
8 -15 Stiff, 15 -30 V. Stiff, 30 + Hard

Trace 0 to 10%
Little 10 to 20%
Some 20 to 35%
And 35% to 50%

	CASING	SAMPLE	CORE TYPE
ID SIZE (IN)		SS	
HAMMER WGT (LB)		140 lb.	
HAMMER FALL (IN)		30"	

BORING LOG 225 SHREWSBURY STREET
NOT TO SCALE

B1

HIGHPOINT ENGINEERING, INC.
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CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
06-06-2024

DCU/RETAIL EXPANSION PROJECT
225 SHREWSBURY STREET
WORCESTER, MA
OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE:
PERMIT
ISSUE DATE:
06/06/2024
PROJECT NUMBER:
24009

DRAWN BY: AUA
CHECKED BY: DJH/DTB

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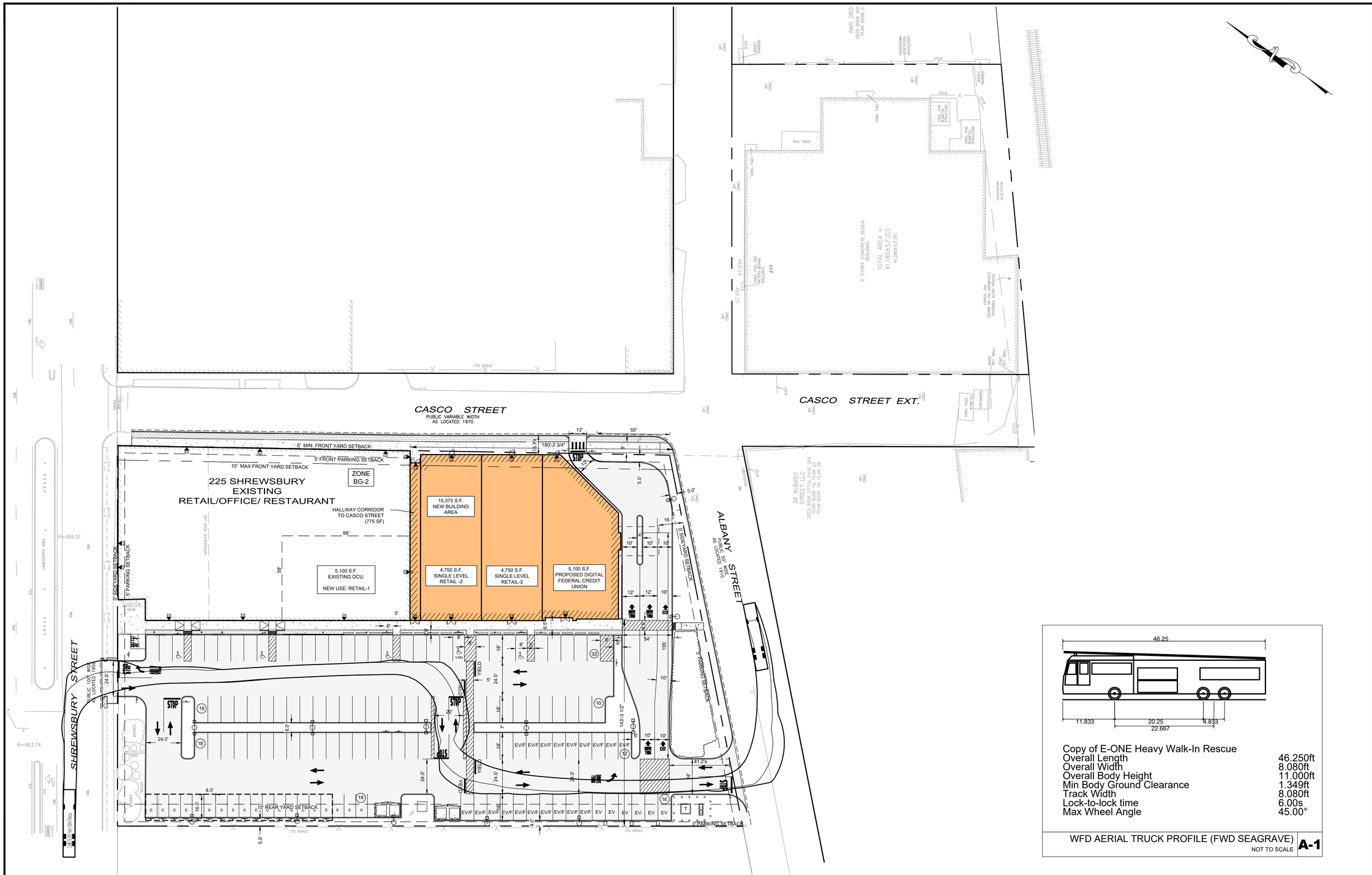
SHEET TITLE:
TEST BORING LOGS SHEET 2

SHEET NUMBER:
C601

ISSUED FOR : PERMIT



Copy of E-ONE Heavy Walk-In Rescue	
Overall Length	46.250ft
Overall Width	8.080ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.349ft
Track Width	8.080ft
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°

WFD AERIAL TRUCK PROFILE (FWD SEAGRAVE)
NOT TO SCALE

A-1

HIGHPOINT ENGINEERING, INC.
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PERMIT EXPEDITING
CIVIL ENGINEERING
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COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
06-06-2024

DCU/RETAIL EXPANSION PROJECT

225 SHREWSBURY STREET
WORCESTER, MA

OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE:
PERMIT

ISSUE DATE:
06/06/2024

PROJECT NUMBER:
24009

DRAWN BY: DTB/MJH

CHECKED BY: DJH/DTB

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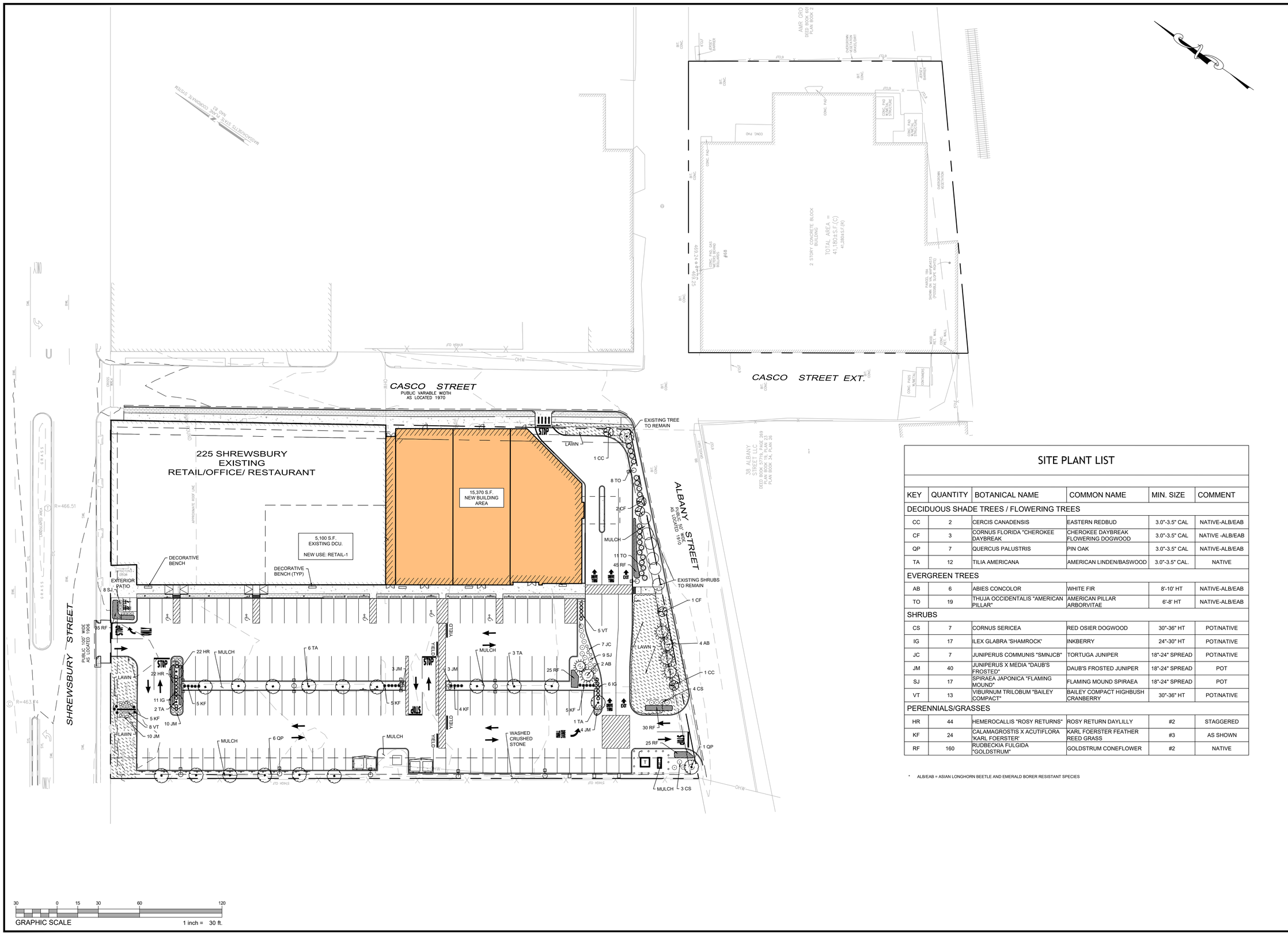
SHEET TITLE:
FIRE TRUCK
TURN PLAN

SHEET NUMBER:
C700

ISSUED FOR : PERMIT



SITE PLANT LIST

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	MIN. SIZE	COMMENT
DECIDUOUS SHADE TREES / FLOWERING TREES					
CC	2	CERCIS CANADENSIS	EASTERN REDBUD	3.0"-3.5" CAL	NATIVE-ALB/EAB
CF	3	CORNUS FLORIDA "CHEROKEE DAYBREAK	CHEROKEE DAYBREAK FLOWERING DOGWOOD	3.0"-3.5" CAL	NATIVE -ALB/EAB
QP	7	QUERCUS PALUSTRIS	PIN OAK	3.0"-3.5" CAL	NATIVE-ALB/EAB
TA	12	TILIA AMERICANA	AMERICAN LINDEN/BASWOOD	3.0"-3.5" CAL.	NATIVE
EVERGREEN TREES					
AB	6	ABIES CONCOLOR	WHITE FIR	8'-10' HT	NATIVE-ALB/EAB
TO	19	THUJA OCCIDENTALIS "AMERICAN PILLAR"	AMERICAN PILLAR ARBORVITAE	6'-8' HT	NATIVE-ALB/EAB
SHRUBS					
CS	7	CORNUS SERICEA	RED OSIER DOGWOOD	30"-36" HT	POT/NATIVE
IG	17	ILEX GLABRA 'SHAMROCK'	INKBERRY	24"-30" HT	POT/NATIVE
JC	7	JUNIPERUS COMMUNIS "SMNJCB"	TORTUGA JUNIPER	18"-24" SPREAD	POT/NATIVE
JM	40	JUNIPERUS X MEDIA "DAUB'S FROSTED"	DAUB'S FROSTED JUNIPER	18"-24" SPREAD	POT
SJ	17	SPIRAEA JAPONICA "FLAMING MOUND"	FLAMING MOUND SPIRAEA	18"-24" SPREAD	POT
VT	13	VIBURNUM TRILOBUM "BAILEY COMPACT"	BAILEY COMPACT HIGHBUSH CRANBERRY	30"-36" HT	POT/NATIVE
PERENNIALS/GRASSES					
HR	44	HEMEROCALLIS "ROSY RETURNS"	ROSY RETURN DAYLILLY	#2	STAGGERED
KF	24	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	#3	AS SHOWN
RF	160	RUDBECKIA FULGIDA "GOLDSTRUM"	GOLDSTRUM CONEFLOWER	#2	NATIVE

* ALB/EAB = ASIAN LONGHORN BEETLE AND EMERALD BORER RESISTANT SPECIES

HIGHPOINT ENGINEERING, INC.
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508.736.6144
www.RadnerDesign.com

SEAL

DCU/RETAIL EXPANSION PROJECT

225 SHREWSBURY STREET
WORCESTER, MA

OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE:
PERMIT

ISSUE DATE:
06/06/2024

PROJECT NUMBER:
24009

DRAWN BY: CM

CHECKED BY: DTB/DJH

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SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L100

ISSUED FOR : PERMIT

LANDSCAPE NOTES

ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF WORCESTER, MA.
ALL PLANTING SHALL COME FROM THE BEST DEVELOPMENT PRACTICES GUIDEBOOK.

PLANTING PLAN IS DIAGRAMMATIC IN NATURE. FINAL PLACEMENT OF PLANTS TO BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES, ANY PERMITTING AGENCIES, AND "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS IN ADVANCE OF ANY WORK THAT WILL REQUIRE EXCAVATION. CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE OF NAY CONFLICTS IN WRITING.

NO PLANT MATERIAL SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA. ANY TREES NOTED AS "SEAL OR SELECTED SPECIMEN" SHALL BE TAGGED AND SEALED BY THE LANDSCAPE ARCHITECT.

ALL TREES SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.

CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON PLANT LIST. QUANTITIES SHOWN ON PLANS SHALL GOVERN OVER PLANT LIST.

ANY PROPOSED PLANT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.

ALL PLANT MATERIALS INSTALLED SHALL MEET THE GUIDELINES ESTABLISHED BY THE STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF ACCEPTANCE.

ALL DISTURBED AREAS NOT OTHERWISE NOTED SHALL RECEIVE 6" OF SUITABLE LOAM & SEED LAWNS WITH 3:1 OR GREATER SLOPES SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET.

ANY FALL TRANSPLANTING HAZARD PLANTS SHALL BE DUG IN THE SPRING AND STORED FOR FALL PLANTING.

TREES SHALL HAVE A MINIMUM CALIPER AS INDICATED ON THE PLANTING SCHEDULE TAKEN ONE FOOT ABOVE THE ROOT CROWN.

ALL PLANT BEDS AND TREE SAUCERS TO RECEIVE 3" OF PINE BARK MULCH. GROUND COVER AREAS SHALL RECEIVE 1" OF PINE BARK MULCH

ALL DECIDUOUS TREES ADJACENT TO WALKWAYS AND ROADWAYS SHALL HAVE A BRANCHING PATTERN TO ALLOW FOR A MINIMUM OF 7' OF CLEARANCE BETWEEN THE GROUND AND THE LOWEST BRANCH.

ALL TREE STAKES SHALL BE STAINED DARK BROWN.

CONTRACTOR RESPONSIBLE FOR WATERING, AND RESEEDING OF BARE SPOTS UNTIL A UNIFORM STAND OF VEGETATION IS ESTABLISHED AND ACCEPTED.

ALL LANDSCAPE AREAS WITH SHRUBS, TREES AND PERENNIALS TO HAVE 18" MINIMUM DEPTH OF TOPSOIL. THE 18" OF TOPSOIL AROUND TREES AND SHRUBS DOES NOT INCLUDE AMENDED PLANTING SOIL WITHIN TREE/SHRUB PIT FOR FULL DEPTH OF ROOTBALLS. SEE PLANTING DETAILS FOR PLANTING DEPTH AT SHRUB AND TREES. ALL AREAS OF LOAM AND SEED TO HAVE A MINIMUM OF 6" DEPTH OF TOPSOIL. TOPSOIL TO BE TESTED BY CONTRACTOR AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE AND OR PLACEMENT. GENERAL CONTRACTOR, DEMOLITION CONTRACTOR AND LANDSCAPE CONTRACTOR TO COORDINATE PROPER DEPTH OF EXISTING MATERIAL REMOVAL ACROSS THE SITE SO THAT 18" MINIMUM AND 6" MINIMUM DEPTHS OF PROPOSED TOPSOIL NOTED ABOVE ARE MET AT NO ADDITIONAL COST TO THE OWNER. SEE TOPSOIL DETAIL.

LOAM AND SEEDING NOTES:

CONTRACTOR SHALL SEED ALL DISTURBED AREAS NOT NOTED TO RECEIVE OTHER MATERIALS, AND AT AREAS SHOWN ON THE PLAN PER SPECIFICATIONS BELOW

SCIENTIFIC NAME	COMMON NAME	PROPORTION BY WEIGHT	PERCENT PURITY	PERCENTGERMINATION
FESTUCA RUBRA "RUBRA"	CREEPING RED FESCUE	37%	95%	90%
PAO PRAENTENSIS "BARON"	BARON KENTUCKY BLUEGRASS	40%	85%	90%
LOLIUM PERENNE "PALMER"	PALMER PERENNIAL RYEGRASS	15%	95%	90%
FESTUCA RUBRA COMMUTATA WILMA	WILMA CHEWINGS	8%	95%	80%

1.SEED TO BE SPREAD AT MINIMUM RATE OF 5 LBS. PER 1000 SQ. FT.

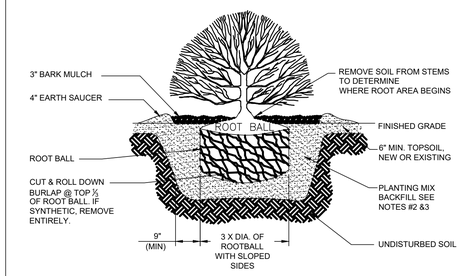
2. SEEDING TO BE COMPLETED "IN SEASON" BETWEEN APRIL 1 TO JUNE 15 OR AUGUST 15 TO OCTOBER 1, EXCEPT FOR RESEEDING OF BARE SPOTS. IF UNABLE TO SEED WITHIN THESE TIMEFRAMES, CONTRACTOR TO INSTALL EROSION CONTROL MATS ON ALL SLOPES 3:1 AND OVER, HYDROSEED ALL EXPOSED AREAS, ADD SOIL STABILIZER "FLUX TERRA HP-FGM SOIL STABILIZER" AS MANUFACTURED BY "PROFILE" TO HYDROSEED (AT RATE OF 3,000 LBS PER ACRE), AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR TO COMPLETE ALL ABOVE "OUT OF SEASON" REQUIREMENTS AND THEN ALSO BE RESPONSIBLE FOR RE-GRADING AND RE-SEEDING ALL DISTURBED, ERODED, OR BARE SPOTS WITHIN NEXT CLOSEST PLANTING SEASON IN FALL OR SPRING AT NO ADDITIONAL COST TO OWNER. CONTRACTOR RESPONSIBLE FOR ALL MAINTENANCE UNTIL FINAL ACCEPTANCE OF LAWN AREAS INCLUDING: WATERING, ADDING FERTILIZERS AND LIME AND MOWING AT NO ADDITIONAL COST TO OWNER.

3.COMMERCIAL FERTILIZER SHALL BE APPLIED AT THE RATE OF 25 POUNDS PER 1000 SQ. FT. OR AS RECOMMENDED BY THE TESTING AGENCY. LIME TO BE SPREAD AT THE RATE OF 100 POUNDS PER 1000 SQ. FT OR AS RECOMMENDED BY THE TESTING AGENCY. COMMERCIAL FERTILIZER SHALL BE A COMPLETE FERTILIZER CONTAINING AT LEAST 50% OF THE NITROGEN OF WHICH IS DERIVED FROM NATURAL ORGANIZE SOURCES OF UREAFORM. IT SHALL CONTAIN THE FOLLOWING PERCENTAGES BY WEIGHT: NITROGEN (N) 10%, PHOSPHORUS (P) 6%, POTASH (K) 4%. LIME SHALL BE AN APPROVED AGRICULTURAL LIMESTONE CONTAINING NOT LESS THAN 85% OF TOTAL CARBONATES. LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT 50% WILL PASS A 100 MESH SIEVE AND 90% WILL PASS THROUGH A 20 MESH SIEVE.

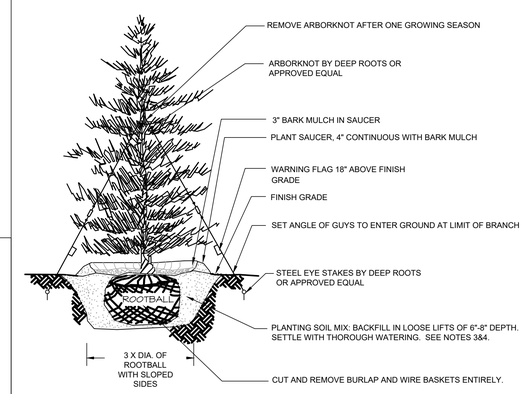
4. LAWN AREAS TO BE SEEDED BY SOWING EVENLY WITH AN APPROVED MECHANICAL SEEDER AT THE RATE OF TEN POUNDS PER 1000 SQUARE FEET.

5.CONTRACTOR RESPONSIBLE FOR WATERING, MOWING, AND RESEEDING OF LAWN BARE SPOTS UNTIL A UNIFORM, HEALTHY STAND OF GRASS IS ESTABLISHED AND ACCEPTED.

NOTES:
1. ALL SHRUBS SHALL HAVE THE SAME RELATIONSHIP TO FINISH GRADE AFTER PLANTING AS THEY HAD AT THE ORIGINAL NURSERY SETTING. SET SHRUB 1"-2" ABOVE FINISH GRADE.
2. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH) 20% PEAT MOSS, 10% SAND.
3. ADD MYCORRHIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.
4. SHRUB BEDS TO HAVE 24" MIN. OF CONTINUOUS PLANTING SOIL.



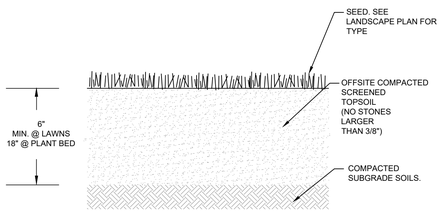
SHRUB PLANTING DETAIL **C1**
NOT TO SCALE



NOTES

1. TREES SHALL BEAR SAME RELATIONSHIP TO FINISH GRADE AS IT BORE TO NURSERY OR FIELD GRADE. ROOT FLARE SHALL BE 2" ABOVE FINISH GRADE. REMOVE SOIL FROM TRUNK FLARE OF TREE TO DETERMINE ACTUAL TOP OF ROOTBALL AREA.
2. INSTALL THREE GUYS PER TREE; EQUALLY SPACED AROUND BALL.
3. ATTACH GUYS AT 2/3 HEIGHT OF TREE.
4. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH) 20% PEAT MOSS, 10% SAND.
5. ADD MYCORRHIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.

EVERGREEN TREE DETAIL **B1**
NOT TO SCALE

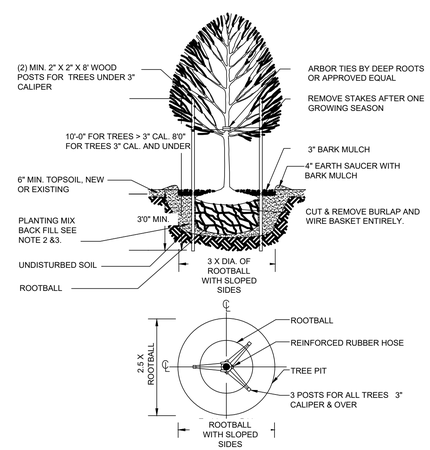


TEXTURE CLASS	% OF TOTAL WEIGHT
SAND	45% - 65%
SILT	15% - 35%
CLAY	5% - 20%

SIEVE	% PASSING
3/8"	100
NO. 4	85-100
NO. 40	60-85
NO. 100	38-60
NO. 200	10-35
20 u m	LESS THAN 5%

NOTES:
1. TOP OF LOAM (TOPSOIL) IS FINISH GRADE.
2. ALL TOPSOIL (BOTH ONSITE AND OFFSITE SOURCES) SHALL BE COMPOSED OF A NATURAL, FERTILE, FRIABLE SOIL TYPICAL OF CULTIVATED TOPSOILS OF THE LOCALITY. OFFSITE SOIL SHALL BE SUITABLE FOR THE GERMINATION OF SEEDS AND SUPPORT OF VEGETATIVE GROWTH. WITH ADDITIVES, IF REQUIRED, TO ACHIEVE PARTICLE DISTRIBUTION AND ORGANIC CONTENT BELOW. TOPSOIL SHALL BE TAKEN FROM A WELL-DRAINED, ARIABLE SITE, FREE OF SUBSOIL, LARGE STONES, EARTH CLODS, STICKS, STUMPS, CLAY LUMPS, ROOTS, OTHER OBJECTIONABLE, EXTRANEOUS MATTER OR DEBRIS NOR CONTAIN TOXIC SUBSTANCES.
3. THE CONTRACTOR SHALL PROVIDE THE OWNER / LANDSCAPE ARCHITECT WITH TOPSOIL TEST RESULTS (RECOMMEND UMASS AMHERST SOIL TESTING LAB) FOR APPROVAL PRIOR TO OBTAINING AND PLACING THE SOIL. IF ANY TOPSOIL IS PURCHASED OR PLACED PRIOR TO APPROVAL BY OWNER / LANDSCAPE ARCHITECT, IT IS AT CONTRACTORS RISK, AND IT CAN BE REMOVED AT NO ADDITIONAL COST TO THE OWNER. IF THE PLANTING SOIL (BOTH ONSITE AND OFFSITE SOURCES) DOES NOT FALL WITHIN THE REQUIRED SIEVE ANALYSIS, TEXTURAL CLASS, ORGANIC CONTENT, OR PH RANGE, IT SHALL BE ADJUSTED TO MEET THE SPECIFICATIONS THROUGH THE ADDITION OF SAND, COMPOST, LIMESTONE, OR ALUMINUM SULFATE TO BRING IT WITHIN THE SPECIFIED LIMITS AT NO ADDITIONAL COST TO THE OWNER.
4. TOPSOIL SHALL HAVE A PH VALUE BETWEEN 5.5 AND 6.5. TOPSOIL SHALL CONTAIN 8% ORGANIC MATTER OF TOTAL DRY WEIGHT AND SHALL CONFORM TO THE FOLLOWING GRADATION AND TEXTURE CLASS ABOVE.

TOP SOIL FOR LAWN,TREES,SHRUBS & PERENNIALS **A2**
NOT TO SCALE



NOTES:

1. ALL TREES SHALL HAVE THE SAME RELATIONSHIP TO FINISH GRADE AFTER PLANTING AS THEY HAD AT THE ORIGINAL NURSERY SETTING. ROOT FLARE SHALL BE 2" ABOVE FINISH GRADE. REMOVE SOIL FROM TRUNK FLARE OF TREE TO DETERMINE ACTUAL ROOTBALL AREA.
2. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH) 20% PEAT MOSS, 10% SAND.
3. ADD MYCORRHIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.

DECIDUOUS TREE DETAIL **A1**
NOT TO SCALE

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SEAL

DCU/RETAIL EXPANSION PROJECT

225 SHREWSBURY STREET
WORCESTER, MA

OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS

REV	DATE	DESCRIPTION

ISSUE TYPE:
PERMIT

ISSUE DATE:
06/06/2024

PROJECT NUMBER:
24009

DRAWN BY: CM

CHECKED BY: DTB/DJH

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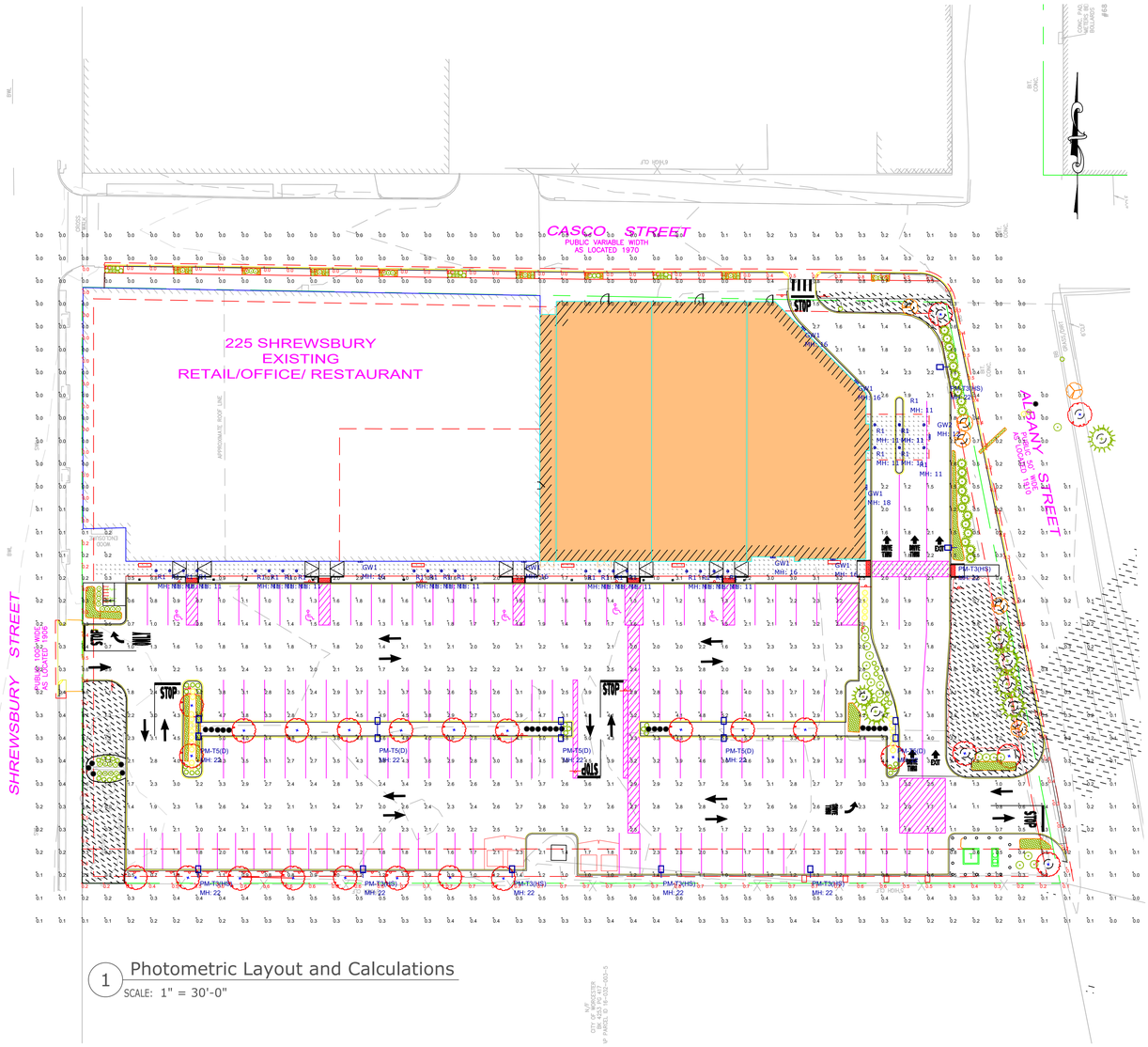
SHEET TITLE:

LANDSCAPE DETAILS PLAN

SHEET NUMBER:

L101

ISSUED FOR : PERMIT


CASCO STREET
PUBLIC VARIABLE WIDTH
AS LOCATED 1970
225 SHREWSBURY
EXISTING
RETAIL/OFFICE/ RESTAURANT
SHREWSBURY STREET
PUBLIC 100'-WIDE
AS LOCATED 1906
ALBANY STREET
PUBLIC 50' WIDE
AS LOCATED 1906
GW1
MH: 16
MH: 18
MH: 13
MH: 11
MH: 22
R1
PM-T5(D)
PM-T3(HS)
PM-T3(US)
PM-T3(HS)
STOP
EXIT
APPROXIMATE ROOF LINE
GRASS
DRIVE
DRIVE OUT
DRIVE IN
DRIVE OUT
DRIVE IN
DRIVE OUT
DRIVE IN