

LOCUS MAP
(NOT TO SCALE)

COMPREHENSIVE PERMIT APPLICATION PLANS

19 & 35 RIVER STREET

MULTI-FAMILY REDEVELOPMENT

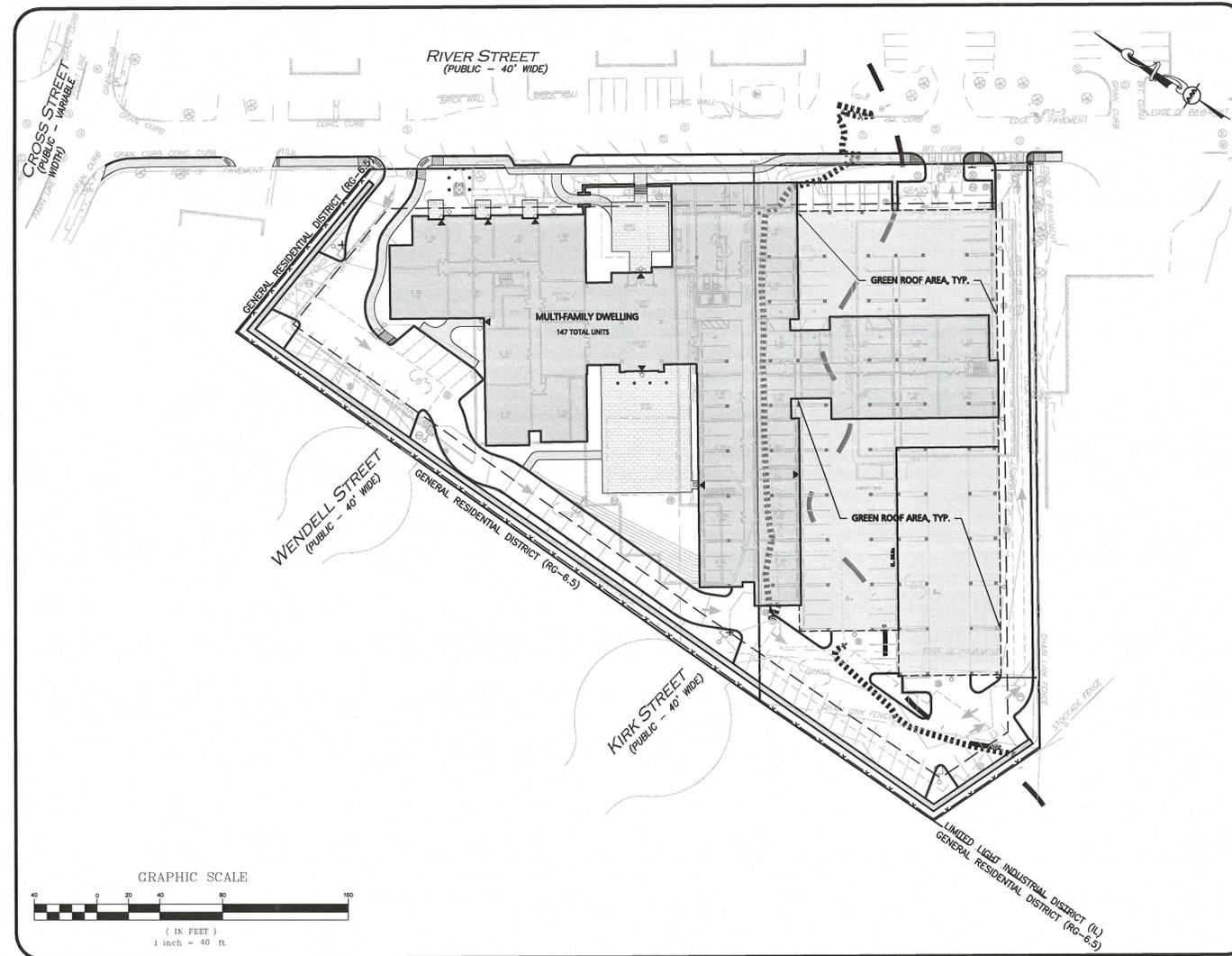
WINCHESTER, MA

APPLICANT/OWNER:
 SLV RIVER STREET, LLC
 C/O GEOFF ENGLER & JUSTIN KREBS
 257 HILLSIDE AVENUE
 NEEDHAM, MA 02494
 617.782.2300

**CIVIL SITE ENGINEERS &
 LAND SURVEYORS:**
 ALLEN & MAJOR ASSOCIATES, INC.
 100 COMMERCE WAY, SUITE 5
 WOBURN, MA 01801
 781.935-6889

ARCHITECT:
 EMBARC STUDIO
 60 K STREET, THIRD FLOOR
 BOSTON, MA 02127
 617.766.8330

LANDSCAPE ARCHITECT:
 BOHLER ENGINEERING
 352 TURNPIKE ROAD
 SOUTHBOROUGH, MA 01772
 508.480.9900



LIST OF DRAWINGS

| CIVIL | | | |
|-----------------------------------|---------------|------------|---------|
| DRAWING TITLE | SHEET NO. | ISSUED | REVISED |
| EXISTING CONDITIONS | V-101 | 6-11-19 | — |
| ABBREVIATIONS & NOTES | C-001 - C-002 | 6-11-19 | — |
| EROSION CONTROL & DEMOLITION PLAN | C101 | 6-11-19 | — |
| LAYOUT & MATERIALS PLAN | C102 | 6-11-19 | — |
| GRADING & DRAINAGE PLAN | C103 | 6-11-19 | — |
| UTILITIES PLAN | C104 | 6-11-19 | — |
| FIRE TRUCK TURNING PLAN | C105 | 6-11-19 | — |
| TEST PITS PLAN | C106 | 6-11-19 | — |
| PHOTOMETRICS PLAN | C107 | 6-11-19 | — |
| DETAILS | C501 - C-504 | 6-11-19 | — |
| ARCHITECTURAL PLANS | | | |
| PROJECT METRICS PLAN | A005 | 06-11-2019 | — |
| SITE PLAN | A010 | 06-11-2019 | — |
| SITE SECTIONS | A011 | 06-11-2019 | — |
| PARKING LEVEL PLAN | A100 | 06-11-2019 | — |
| GROUND LEVEL PLAN | A101 | 06-11-2019 | — |
| TYPICAL UPPER FLOOR PLAN | A102 | 06-11-2019 | — |
| FIFTH FLOOR PLAN | A103 | 06-11-2019 | — |
| ROOF PLAN | A104 | 06-11-2019 | — |
| BUILDING ELEVATIONS | A200 | 06-11-2019 | — |
| BUILDING ELEVATIONS | A201 | 06-11-2019 | — |
| BUILDING PERSPECTIVES | A400 | 06-11-2019 | — |
| TYPICAL UNITS | A500 | 06-11-2019 | — |
| LANDSCAPE PLANS | | | |
| CONCEPT PLAN | — | 06-05-2019 | — |

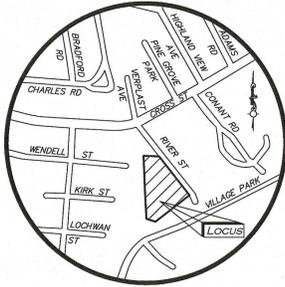


PROFESSIONAL ENGINEER FOR
 ALLEN & MAJOR ASSOCIATES, INC.

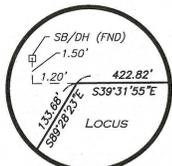
PREPARED BY:

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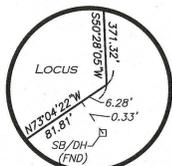
COMPREHENSIVE PERMIT PLAN SET SUBMISSION: JUNE 11, 2019



LOCUS MAP
(NOT TO SCALE)



DETAIL A
(NOT TO SCALE)



DETAIL B
(NOT TO SCALE)

LOCUS REFERENCES

- TOWN OF WINCHESTER ASSESSORS MAP 13, LOT 256
- DEED BOOK 27139, PAGE 26
- PLAN 1113 OF 1956
- PLAN 598 OF 1959
- OWNER OF RECORD: 19 RIVER STREET LLC
- TOWN OF WINCHESTER ASSESSORS MAP 13, LOT 254
- DEED BOOK 27024, PAGE 165
- PLAN 598 OF 1959
- OWNER OF RECORD: 35 RIVER STREET LLC

PLAN REFERENCES

- PLAN BOOK 71, PLAN 49
- PLAN 451 OF 1970
- PLAN 701 OF 1935
- 1906 COUNTY LAYOUT OF CROSS STREET

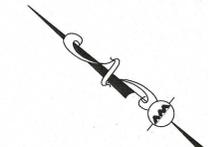
NOTES

- NORTH ARROW IS BASED ON MASSACHUSETTS GRID COORDINATE SYSTEM (MAINLAND ZONE) (NAD 83).
- BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM MIDDLESEX (SOUTH) REGISTRY OF DEEDS IN CAMBRIDGE, MA.
- VERTICAL DATUM IS NAVD 88.
- CONTOUR INTERVAL IS ONE FOOT (1').
- SURVEY PERFORMED UNDER SNOW & ICE CONDITIONS.
- 100 YEAR FLOOD ELEVATION SHOWN HEREON TAKEN FROM THE FLOOD INSURANCE STUDY REPORT ASSOCIATED WITH FLOOD INSURANCE RATE MAP 25017C0409E HAVING AN EFFECTIVE DATE OF JUNE 4, 2010.

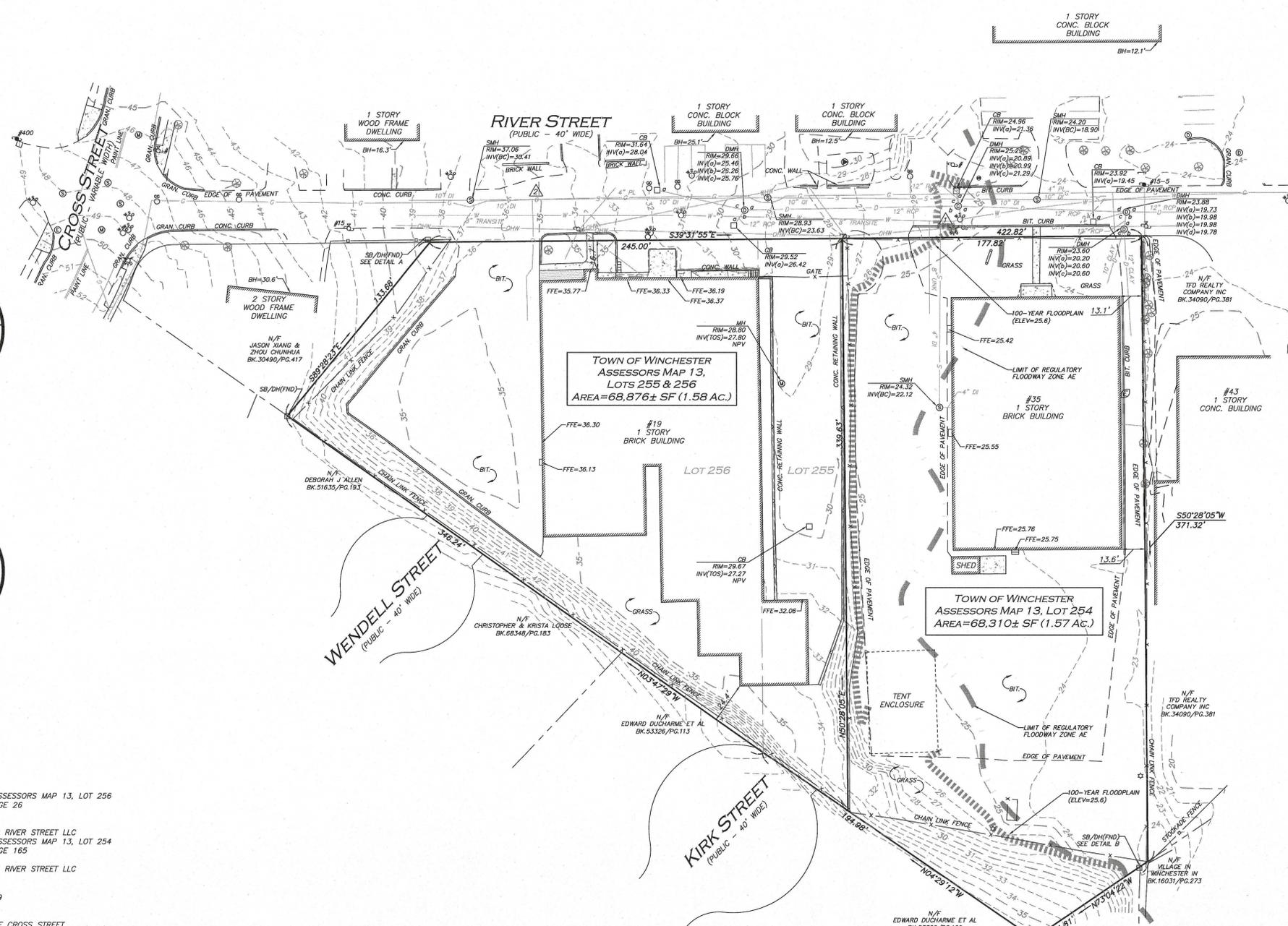
UTILITY STATEMENT

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. ALLEN & MAJOR ASSOCIATES, INC. (A&M) MAKES NO GUARANTEE THAT THE UTILITIES SHOWN HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. A&M FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. A&M HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

| BENCHMARK SUMMARY | | |
|-------------------|---------------------------|-------|
| TBM # | DESCRIPTION | ELEV. |
| △ | X-CUT FLANGE BOLT HYDRANT | 28.63 |
| △ | MAG NAIL SET IN PAVEMENT | 35.10 |



WE HEREBY CERTIFY THAT:
THIS PLAN IS THE RESULT OF AN ACTUAL ON THE GROUND SURVEY PERFORMED ON OR BETWEEN MARCH 7, 2018 AND APRIL 22, 2019.
ALLEN & MAJOR ASSOCIATES, INC.
NORMAN L. UPSITZ
PROFESSIONAL LAND SURVEYOR FOR ALLEN & MAJOR ASSOCIATES, INC.
6/11/19



| LEGEND | |
|---------------------------|----------|
| STONE BOUND (SB) | □ |
| DRAIN MANHOLE (DMH) | ⊗ |
| SEWER MANHOLE (SMH) | ⊙ |
| MISC. MANHOLE (MH) | ⊚ |
| CATCH BASIN (CB) | ⊠ |
| UTILITY POLE | ⊕ |
| UTILITY POLE W/ RISER | ⊕ |
| UTILITY POLE W/ LIGHT | ⊕ |
| FIRE HYDRANT | ⊕ |
| WATER GATE | ⊕ |
| GAS GATE | ⊕ |
| LIGHT | ⊕ |
| TREE | ⊕ |
| SIGN | ⊕ |
| SIGN | ⊕ |
| ELECTRIC METER | ⊕ |
| CONCRETE | ▨ |
| LANDSCAPED AREA (LSA) | ▨ |
| BUILDING | ▨ |
| BUILDING OVERHANG | ▨ |
| 1' CONTOUR | ---23--- |
| 5' CONTOUR | ---25--- |
| PROPERTY LINE | --- |
| ABUTTER'S LINE | --- |
| CONCRETE RETAINING WALL | --- |
| EDGE OF PAVEMENT | --- |
| CURB | --- |
| CHAIN LINK FENCE | x |
| STOCKADE FENCE | o |
| WATER LINE | --- |
| SEWER LINE | --- |
| DRAIN LINE | --- |
| GAS LINE | --- |
| OVERHEAD WIRES | --- |
| FINISHED FLOOR ELEVATION | FFE |
| BITUMINOUS | BIT. |
| CONCRETE | CONC. |
| GRANITE | GRAN. |
| BOTTOM CENTER | (BC) |
| REINFORCED CONCRETE PIPE | RCP |
| PLASTIC | PL |
| DUCTILE IRON PIPE | DI |
| NO PIPES VISIBLE | NPV |
| TOP OF SILT | TOS |
| BUILDING HEIGHT | BH |
| STONE BOUND W/ DRILL HOLE | SB/DH |
| FOUND | FND |
| NOW OR FORMERLY | N/F |
| BOOK | BK. |
| PAGE | PG. |
| PLAN BOOK | PB. |
| PLAN | PL. |

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |

APPLICANT/OWNER:
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257 HILLSIDE AVENUE
NEEDHAM, MA 02494

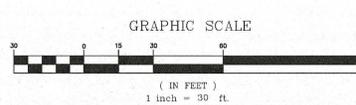
PROJECT:
19-35 RIVER STREET
WINCHESTER, MA

| | | | |
|-------------|----------|-------------|-------------|
| PROJECT NO. | 2459-01 | DATE: | 06/11/19 |
| SCALE: | 1" = 30' | DWG. NAME: | S2459-01-EC |
| DRAFTED BY: | KAC | CHECKED BY: | COB/NIL |

Prepared by:

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GENERAL NOTES:

- 1. FOR EXISTING CONDITIONS SURVEY, SEE PLAN ENTITLED "EXISTING CONDITIONS", AS PREPARED BY ALLEN & MAJOR ASSOCIATES, INC., SHEET V-101, DATED JUNE 11, 2019, ORIGINAL SCALE 1"=30'. ON-THE-GROUND SURVEY PERFORMED ON OR BETWEEN MARCH 7, 2018 AND APRIL 22, 2019.
2. ZONING DISTRICT IS LIMITED LIGHT INDUSTRIAL DISTRICT (LI) AND FLOOD PLAIN OVERLAY DISTRICT (FP0D).
3. THE PROJECT IS PROPOSED ON TWO LOTS NOTED BY THE TOWN OF WINCHESTER ASSESSOR'S OFFICE AS ASSESSORS MAP 13, LOT 255 & 256 (19 RIVER STREET) AT 1.58± ACRES AND TOWN OF WINCHESTER ASSESSOR'S OFFICE ASSESSORS MAP 13, LOT 254 (35 RIVER STREET) AT 1.57± ACRES. OVERALL PROJECT LOT SIZE: 3.15± ACRES.
4. DURING CONSTRUCTION, ALL VEHICLES MUST BE PARKED ON SITE.
5. DURING CONSTRUCTION, ALL STAGING AND DELIVERIES WILL OCCUR ON SITE.
6. EXTERIOR CONSTRUCTION ACTIVITIES ON THE SITE SHALL NOT COMMENCE PRIOR TO 7:00 A.M. AND SHALL CEASE NO LATER THAN 6:00 P.M. MONDAY THROUGH FRIDAY; 8:00 A.M. TO 6:00 P.M. SATURDAY AND NOT AT ALL ON SUNDAYS. IF HOURS ARE MORE STRINGENT PER THE LOCAL PERMIT REQUIREMENTS THESE ARE TO BE FOLLOWED. THIS DOES NOT INCLUDE OFF SITE UTILITY WORK.
7. THIS PROJECT WILL BE SERVED BY PUBLIC WATER AND SEWER, NATURAL GAS, TELEPHONE, CABLE AND ELECTRIC. ALL UTILITY LINES WILL BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS AT NO ADDITIONAL COST.
9. ALL MAIN BUILDING ENTRANCES AND WALKS SHALL BE HANDICAP ACCESSIBLE PER FEDERAL ADA & MAAB REGULATIONS AT NO ADDITIONAL COST TO THE OWNER.
10. ALL SITE WORK DONE FOR THIS PROJECT SHALL BE IN STRICT ACCORDANCE WITH THE SITE PLANS AND SITE WORK SPECIFICATIONS FOR CONSTRUCTION.
11. ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTIES DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
12. ALL PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED AND RESTORED BY A SURVEYOR REGISTERED IN THE STATE OF MASSACHUSETTS AT THE CONTRACTOR'S EXPENSE.
13. ALL APPLICABLE PERMITS AND AN APPROVED SET OF PLANS SHALL BE AVAILABLE AT THE CONSTRUCTION SITE.
14. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRECONSTRUCTION MEETING WITH THE APPROPRIATE TOWN DEPARTMENTS, THE APPROPRIATE UTILITY COMPANIES, THE OWNER AND OWNER'S REPRESENTATIVE. THE MEETING SHALL TAKE PLACE PRIOR TO THE START OF CONSTRUCTION AND THE CONTRACTOR MUST PROVIDE 48 HOURS NOTICE TO ALL ATTENDEES PRIOR TO THE START OF THE MEETING.
15. APPROPRIATE WARNING SIGNS, MARKERS, BARRICADES AND/OR FLAG MEN SHALL BE PROVIDED TO REGULATE TRAFFIC. CONSTRUCTION TRAFFIC CONTROLS SHALL BE IMPLEMENTED AND OPERATED ACCORDING TO THE MASSDOT STANDARDS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE LOCAL AUTHORITY.
16. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ADDITIONAL BENCHMARK INFORMATION IF REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING BENCHMARKS. IF IT IS NECESSARY TO RELOCATE A BENCHMARK, IT SHALL BE RELOCATED BY A MASSACHUSETTS PROFESSIONAL LAND SURVEYOR AND DONE SO AT THE CONTRACTOR'S EXPENSE.
17. ALL BUILDING DIMENSIONS ARE MEASURED TO THE OUTSIDE FACE OF THE BUILDING.
18. ALL RADI ARE 3 FEET UNLESS OTHERWISE NOTED.
19. ALL PARKING AND AISLE DIMENSIONS ARE TAKEN FROM THE FACE OF CURB AND INDICATE EDGE OF PAVEMENT.
20. CONSTRUCTION DURING WET WEATHER OR WINTER CONDITIONS IS TO BE ANTICIPATED AND PROVISIONS TO ADEQUATELY ADDRESS THESE CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST.
21. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO CARRY OUT THE WORK INCLUDING BUT NOT LIMITED TO DEMOLITION.
22. DISPOSAL OF ALL DEMOLISHED MATERIALS INCLUDING EXISTING MISC. CONSTRUCTION DEBRIS FILL IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL MUNICIPAL REQUIREMENTS AT NO ADDITIONAL COST.
23. ALL DISTURBED AREAS NOT NOTED TO RECEIVE OTHER TREATMENT ARE TO RECEIVE SIX INCHES (6") MINIMUM OF TOPSOIL & SEED, AND BE MAINTAINED UNTIL ESTABLISHED & ACCEPTED.
24. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. SEE DEMOLITION PLAN.
25. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH THE TOWN OF WINCHESTER'S GOVERNING AUTHORITY'S SPECIFICATIONS AND SHALL BE APPROVED BY SUCH.
26. THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO DETERMINE EXACT POINT OF SERVICE CONNECTION AND DISCONNECTION AT EXISTING UTILITY.
27. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE BENCHMARK AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR AT GROUND BREAKING.
28. EXISTING AND PROPOSED GAS SERVICE LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL CONFIRM WITH THE GAS COMPANY THAT THE GAS LINE INSTALLATION & DISCONNECTION SHALL BE BY THE LOCAL GAS COMPANY. THE CONTRACTOR SHALL GIVE THE GAS COMPANY ADVANCE NOTICE OF WHEN THE GAS LINE CAN BE INSTALLED.
29. EXISTING & PROPOSED ELECTRIC AND COMMUNICATIONS (TELEPHONE AND CABLE) SYSTEMS LOCATIONS ARE APPROXIMATE ONLY AND SHALL BE COORDINATED AND SCHEDULED WITH THE APPROPRIATE UTILITY COMPANY SERVICING THE PROJECT SITE.
30. CONTRACTOR IS RESPONSIBLE FOR DIGGING TEST HOLES AND VERIFYING ANY EXISTING UTILITY OR STRUCTURE PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY THAT BASED ON EXACT LOCATION OF EXISTING UTILITIES, THERE ARE NO CONFLICTS BETWEEN THEM AND THE PROPOSED UTILITIES.
31. THE CONTRACTOR SHALL ADHERE TO ALL PERMIT CONDITIONS PROVIDED BY ALL GOVERNING AGENCIES AT NO ADDITIONAL COSTS. THIS INCLUDES BUT IS NOT LIMITED TO BUILDING PERMITS, DEMOLITION PERMITS, PLUMBING, GAS, AND ELECTRICAL PERMITS. PERMITS FROM THE PLANNING BOARD OR TOWN.
32. IT IS THE CONTRACTORS RESPONSIBILITY TO PROPERLY DISPOSE OF AND ABATE ALL BUILDING MATERIALS OR HAZARDOUS MATERIALS ON-SITE IN ACCORDANCE WITH ALL STATE, FEDERAL, AND LOCAL LAWS AND REGULATIONS AT NO ADDITIONAL COST TO THE OWNER.

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1-888-344-7233

GENERAL NOTES (CONTINUED):

- 33. DURING EXCAVATION, ANY EXISTING EARTH CUT MATERIALS THAT DO NOT MEET THE ORDINARY FILL SPECIFICATIONS OR LOAM SPECIFICATIONS AND CANNOT BE REUSED SHALL BE REMOVED OFFSITE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNERS. MATERIAL WHICH DOES NOT MEET THE SPECIFICATION INCLUDES ALL BUILDERS, ROCKS, CONSTRUCTION DEBRIS, AND MISC. MATERIAL. PRIOR TO REUSE, CONTRACTOR TO PROVIDE TESTING REPORT OF SIEVE ANALYSIS TO ENGINEER FOR APPROVAL. CONTRACTOR CAN AMEND MATERIALS AND CONTINUE TO RETEST AS NECESSARY AT NO ADDITIONAL COST TO OWNER. AFTER AMENDING THE MATERIAL STILL DOES NOT MEET THE SPECIFICATIONS IT IS TO BE REMOVED FROM SITE AT NO ADDITIONAL COST TO THE OWNER AND IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
34. ANY PROPOSED SIGNAGE SHALL BE APPROVED BY SEPARATE APPLICATION TO THE DIRECTOR OF INSPECTORIAL SERVICES AND/OR THE APPROPRIATE MUNICIPAL AUTHORITY INCLUDING BUT NOT LIMITED TO THE ZONING BOARD OF APPEALS AND TOWN COUNCIL.

GRADING & DRAINAGE NOTES:

- 1. EXISTING PAVEMENT SHALL BE SAW-CUT AND PAVEMENT JOINT SHALL BE INSTALLED WHERE NECESSARY TO ENSURE A SMOOTH CONTINUOUS GRADE.
2. THE ARCHITECTURAL PLANS SHALL BE REFERRED TO IN ORDER TO DETERMINE THE EXACT LOCATIONS OF DOORS, ROOF DRAIN LATERALS AND PRECISE BUILDING DIMENSIONS.
3. ALL GRADING OPERATIONS SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANIES.
4. IN LANDSCAPED AREAS THE TOP ELEVATION OF MANHOLES SHALL MATCH THE FINISH GRADE OF THE TOPSOIL. IN PAVED AREAS THE TOP ELEVATIONS OF MANHOLES SHALL MATCH FINISH GRADE.
5. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED AS SOON AS POSSIBLE UPON COMPLETION OF CONSTRUCTION WORK IN THE AREA.
6. TEMPORARY STRAW BALE PROTECTION AND/OR SILT SACK SHALL BE INSTALLED AND MAINTAINED AT EXISTING DRAINAGE STRUCTURES DURING CONSTRUCTION, TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE DRAINAGE SYSTEM.
7. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE.
8. ALL CATCH BASINS, MANHOLES, INFILTRATION SYSTEMS, AND WATER QUALITY STRUCTURES ARE TO BE CLEANED PRIOR TO FINAL APPROVAL TO REMOVE ALL CONSTRUCTION SILT AND DEBRIS.
9. IF ANY EXISTING UTILITY STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER AT NO ADDITIONAL COST.
10. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.
11. ALL STORM DRAIN MANHOLES SHALL HAVE TRAFFIC BEARING RING & COVERS & SHALL BE LABELED "DRAIN".
12. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
13. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE SIX INCHES (6") OF TOPSOIL. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH LANDSCAPE & CIVIL SPECIFICATIONS & DRAWINGS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
14. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER.
15. ALL DRAINAGE SHALL CONFORM TO LOCAL REQUIREMENTS.

UTILITY NOTES:

- 1. THE LATEST STANDARDS OF THE TOWN OF WINCHESTER SHALL BE FOLLOWED WHEN INSTALLING ANY SANITARY SEWER AND STORM DRAIN WORK. BOTH SEWER AND STORM DRAIN WORK SHALL BE INSPECTED BY TOWN OF WINCHESTER PERSONNEL AND ALL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE LATEST STANDARDS OF THE TOWN OF WINCHESTER SHALL BE FOLLOWED WHEN INSTALLING ANY WATER LINE WORK. WATER LINE WORK WILL BE INSPECTED BY TOWN OF WINCHESTER PERSONNEL AND ALL COSTS SHALL INCLUDE PRESSURE TESTING, DISINFECTING, AND FLUSHING OF LINES. INSPECTION COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND REMOVAL OF ALL NECESSARY DISINFECTING AND FLUSHING TAPS AS DIRECTED BY THE TOWN.
3. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL & PLUMBING DRAWINGS AND SPECIFICATIONS FOR ACTUAL LOCATION OF ALL ROOF DRAIN LATERALS AND UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRIC, TELEPHONE, AND NATURAL GAS SERVICE. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND COORDINATE WITH THE PROPER AGENCY THE LOCATION AND SCHEDULING OF CONNECTIONS WITH THEIR FACILITIES.
4. 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 ENGINEER FOR RESOLUTION.
5. ABANDONED EXISTING UTILITIES AND UTILITIES TO BE ABANDONED SHALL EITHER BE ABANDONED IN PLACE AS NOTED OR SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED. ANY UTILITIES 4" OR LARGER ARE TO BE REMOVED. ALL UTILITIES SCHEDULED FOR ABANDONMENT OR REMOVAL AND DISPOSAL MUST BE COORDINATED BY THE CONTRACTOR WITH THE RESPECTIVE UTILITY OWNER. WHEN ABANDONED UTILITIES ARE TO BE LEFT IN PLACE, PLUG OR CAP THE ENDS OF THE CONDUITS AND PIPES. REMOVE ABANDONED UTILITY MANHOLES, JUNCTION BOXES AND SIMILAR STRUCTURES TO A MINIMUM DEPTH OF 4 FEET BELOW FINISHED GRADE AND PUNCTURE OR BREAK THE BOTTOM SLABS OF MANHOLES AND SIMILAR STRUCTURE TO ALLOW DRAINAGE. BACKFILL AND COMPACT EXCAVATIONS RESULTING FROM REMOVAL OF UTILITY FACILITIES, AS REQUIRED TO RESTORE THE ORIGINAL GRADE.
6. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENTS OF NATURAL GAS, ELECTRIC, TELEPHONE AND ANY OTHER UTILITY BY THE UTILITY OWNER.
7. THE CONTRACTOR SHALL USE THE FOLLOWING PIPE MATERIALS:
• SEWER - PVC (POLYVINYL CHLORIDE), SDR 35 (UNLESS OTHERWISE SPECIFIED ON PLAN)
• C.L.D.I. (CEMENT LINED CAST IRON) (CAST IRON, WHERE SPECIFIED ON PLAN)
• DRAIN - HDPE (HIGH DENSITY CORRUGATED POLYETHYLENE PIPE WITH SMOOTH INNER WALL), ASTM D2321 (UNLESS OTHERWISE SPECIFIED ON PLAN)
• RCP CLASS IV OR V (REINFORCED CONCRETE PIPE, WHERE SPECIFIED ON PLAN)
• WATER - C.L.D.I. (CEMENT LINED DUCTILE IRON)
8. REFER TO EROSION CONTROL PLAN FOR EXISTING DRAINAGE STRUCTURES TO BE REMOVED AND UTILITY ABANDONMENT.
9. BEFORE UTILITY WORK BEGINS, THE CONTRACTOR WILL COORDINATE WITH THE TOWN OF WINCHESTER THE APPROPRIATE PERMIT AND INSPECTION FEES.
10. ALL UTILITY CONNECTIONS THROUGH THE BUILDING WALL SHALL BE BY MEANS OF FLEXIBLE JOINTS.
11. ALL WATER GATES TO PROPOSED HYDRANTS ARE 6" DIAMETER UNLESS NOTED.
12. A MINIMUM OF 10 FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER MAINS AND/OR STORM DRAINS. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET TO A WATER MAIN, THE WATER MAIN SHALL BE LAID IN A SEPARATE TRENCH AND THE DIFFERENCE IN ELEVATION BETWEEN THE WATER MAIN AND THE SEWER MAIN SHALL BE AT LEAST 18 INCHES.
13. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
14. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITY'S INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
15. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
16. ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING AT BENDS.
17. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5'-0" COVER ON ALL WATERLINES AND A MAXIMUM OF 8'-0" COVER.

UTILITY NOTES:

- 18. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE BETWEEN THE PIPES, WHERE THE WATERLINE IS LESS THAN THE 18" VERTICAL CLEARANCE AND MEETING 10' HORIZONTAL CLEARANCE CANNOT BE MET, THE WATER MUST BE ENCASED IN CONCRETE TO MEET THE REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50).
19. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 P.S.I.
20. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER, SEWER, GAS AND ELECTRICAL AND TELECOMMUNICATIONS LINES.
21. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
22. ALL HYDRANTS SHALL MEET LOCAL MUNICIPAL SPECIFICATION REQUIREMENTS AND SHALL BE TESTED IN ACCORDANCE WITH THE TOWN OF WINCHESTER REQUIREMENTS.
23. DOMESTIC WATER SERVICES SHALL BE INSTALLED WITH APPROPRIATELY SIZED GATE, BOX, AND TEE FITTINGS.
24. ALL WATER MAIN APPURTENANCES, MATERIALS, METHODS OF INSTALLATION AND TESTING REQUIREMENTS SHALL MEET OR EXCEED THE TOWN OF WINCHESTER REQUIREMENTS.
25. PRESSURE AND LEAKAGE TEST, DISINFECTING AND FLUSHING SHALL BE IN ACCORDANCE WITH ALL LOCAL AND MUNICIPAL STANDARDS AND REQUIREMENTS.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS IN CONNECTION WITH THE UTILITY TESTS, FLUSHING AND INSPECTIONS AS REQUIRED BY THE LOCAL MUNICIPALITY.
27. SEWER PIPE BEDDING MATERIAL SHALL BE AS SPECIFIED ON THE DRAWINGS. IF LOCAL OR STATE AUTHORITIES REQUIRE DIFFERENT BEDDING OR BACKFILL MATERIAL, THEN THE MORE STRINGENT SHALL APPLY.
28. DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING UTILITIES.

EROSION & SEDIMENTATION CONTROL NOTES:

- 1. EROSION CONTROL SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE ADEQUATE TO MAINTAIN SEDIMENT ON SITE. ANY MODIFICATIONS TO SILT CONTROLS SHOWN ON THE APPROVED PLANS AS A RESULT OF ACTUAL FIELD CONDITIONS OR CONSTRUCTION PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH SWPPP (BEST MANAGEMENT PRACTICES) PER THE E.P.A. 2017 "CONSTRUCTION GENERAL PERMIT" MANUAL, AND MASSACHUSETTS 2003 EROSION & SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, ANY SUCH MODIFICATIONS FROM THE ABOVE MANUALS SHALL BE INSTALLED AS APPROVED BY THE ENGINEER.
2. AREAS OF EXPOSED SOIL UNDERGOING CONSTRUCTION THAT WILL NOT BE COVERED AND/OR FINISHED GRADED SHALL BE STABILIZED AS SOON AS PRACTICABLE BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY (UNLESS TOWN HAS STRICTER REQUIREMENTS WHICH SHALL BE FOLLOWED) IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY EROSION CONTROL MEASURES SHALL INCLUDE EROSION CONTROL MESH, NETTING OR MULCH AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND SHOWN ON THE DESIGN PLANS. IF MULCH IS USED, STRAW MULCH SHALL BE APPLIED AT THE RATE OF 4 BLES PER 1,000 SQUARE FEET. APPLICABLE AREA SHALL BE SUFFICIENTLY COVERED WITH MULCH TO AVOID ANY VISIBLE SOIL EXPOSURE. MULCH SHALL BE KEPT MOIST TO AVOID LOSS DUE TO WIND. MULCH AND NETTING SHALL BE APPLIED IN THE BASE OF ALL GRASSED WATERWAYS, IN VEGETATIVE SLOPES WHICH EXCEED 15% AND DISTURBED AREAS WITHIN 100 FEET OF WETLANDS OR STREAMS.
3. IF DISTURBED AREAS DO NOT RECEIVE FINAL SEEDING BY OCTOBER 1ST OF THE CONSTRUCTION YEAR, THEN ALL DISTURBED AREAS SHALL BE SEEDED WITH A WINTER COVER CROP AT THE RATE OF 3 LBS PER 1,000 SQUARE FEET. WINTER SEEDING SHALL BE COVERED WITH EROSION CONTROL MESH (MULCH AND NETTING). HEAVY GRADE MATS SHALL BE USED IN THE BASE OF ALL GRASSED WATERWAYS ON VEGETATED SLOPES IN EXCESS OF 15%, AND ANY DISTURBED AREAS WITHIN 100 FEET OF WETLANDS OR STREAMS. MULCH AND NETTING SHALL ALSO BE PROVIDED FOR ADDITIONAL WINTER PROTECTION.
4. ALL TOPSOIL SHALL BE COLLECTED, STOCKPILED, SEEDED WITH RYE AT 3 LBS PER 1,000 SQUARE FOOT AND MULCHED, AND REUSED AS REQUIRED. SILTATION FENCING SHALL BE INSTALLED AND MAINTAINED THROUGHOUT CONSTRUCTION. ALL STOCKPILED SOILS SHALL BE COVERED WITH MULCH AND NETTING. MULCH AND NETTING SHALL BE STOCKPILED AT LOCATIONS DESIGNATED BY THE OWNER AND ENGINEER.
5. ALL FILTER BARRIERS, SILT SACKS, AND EROSION CONTROL BERMS SHALL BE INSTALLED ACCORDING TO THE EROSION CONTROL PLAN. THESE SHALL BE MAINTAINED DURING DEVELOPMENT TO REMOVE SEDIMENT FROM RUNOFF WATER. ALL THE FILTER BARRIERS AND EROSION CONTROL BERMS SHALL BE INSPECTED AFTER ANY RAINFALL OR RUNOFF EVENT, MAINTAINED AND CLEANED UNTIL ALL AREAS HAVE AT LEAST 85-90% VIGOROUS PERENNIAL COVER OF GRASSES.
6. ADJACENT ROADS SHALL BE PERIODICALLY SWEEP OR WASHED TO AVOID TRACKING MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA AS OFTEN AS PRACTICABLE (WHICH COULD BE ON A DAILY BASIS) TO REMOVE ANY SOIL OR SEDIMENTS AT NO ADDITIONAL COST TO THE OWNER. A WATERING TRUCK WILL BE USED TO PERIODICALLY SPRINKLE CONSTRUCTION AREAS IN ORDER TO KEEP THE LEVEL OF DUST TO A MINIMUM DURING THE DRY MONTHS AT NO ADDITIONAL COST TO THE OWNER.
7. THE CONTRACTOR SHALL USE EXTREME CAUTION TO AVOID ALLOWING SEDIMENTS TO ENTER THE STORM DRAIN SYSTEM DURING CONSTRUCTION. BOTH EXISTING AND PROPOSED CATCH BASIN INLETS SHALL BE PROTECTED DURING CONSTRUCTION BY THE USE OF SILT SACKS AND/OR STRAW BALE BARRIERS AROUND EACH INLET AS NOTED ON THE PLANS. INLET PROTECTION MAY BE REMOVED ONLY AFTER FINISHED AREAS AND VEGETATED SLOPES ARE ESTABLISHED WITH AT LEAST 85-90% OF VIGOROUS PERENNIAL GROWTH.
8. AS APPLICABLE, EROSION CONTROL MESH SHALL BE APPLIED IN ACCORDANCE WITH THE PLANS OVER ALL FINISHED SEEDED AREAS AS SPECIFIED ON THE DESIGN PLANS.
9. AT A MINIMUM, ALL STRAW BALES, SILT FENCE AND FILTER FABRIC SHALL REMAIN IN PLACE UNTIL SEEDING OR PLANTING HAS BECOME ESTABLISHED. THE TOWN OF WINCHESTER MUST APPROVE THE REMOVAL OR RELOCATION OF ANY OF THE STRAW BALES AND FILTER FABRIC. ONCE THE STRAW BALES AND SILT FENCE IS REMOVED THE AREAS ARE TO BE LOAM AND SEEDED TO ACHIEVE FULL STABILIZATION.

EROSION & SEDIMENTATION CONTROL NOTES (CONTINUED):

- 17. TOP OF STOCKPILES SHALL BE COVERED IN SUCH MANNER THAT STORMWATER DOES NOT INFILTRATE THE MATERIALS AND THEREBY RENDER THE SAME UNSUITABLE FOR FILL USE.
18. ALL DISTURBED OR EXPOSED AREAS SUBJECT TO EROSION SHALL BE STABILIZED WITH MULCH OR SEEDED FOR TEMPORARY VEGETATIVE COVER. NO AREA SUBJECT TO EROSION SHALL BE LEFT DISTURBED AND UNSTABILIZED FOR PERIODS LONGER THAN IS ABSOLUTELY NECESSARY TO CARRY OUT THAT PORTION OF THE CONSTRUCTION WORK OR SIX MONTHS AFTER SOIL HAS BEEN DISTURBED WHICHEVER IS LESS.
19. CULVERT/PIPE INLETS AND OUTFALLS SHALL BE PROTECTED BY STRAW BALE FILTERS AND STONE CHECK DAMS UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
20. STRAW BALE DIKES SHALL BE CONSTRUCTED AT ALL EXISTING & PROPOSED CATCH BASINS, NO SEDIMENTATION SHALL ENTER THE ON-SITE OR OFF-SITE DRAINAGE SYSTEMS AT ANY TIME.
21. ALL EROSION CONTROL MEASURES SHALL BE ROUTINELY INSPECTED, CLEANED AND REPAIRED OR REPLACED AS NECESSARY THROUGHOUT ALL PHASES OF CONSTRUCTION. IN ADDITION, INSPECTION SHALL TAKE PLACE WEEKLY AND BEFORE AND AFTER EACH RAINFALL EVENT.
22. ALL PROPOSED SLOPES EQUAL TO OR GREATER THAN 3:1 SHALL BE STABILIZED WITH STRAW MESH AND PROTECTED FROM EROSION UNTIL WORK IS COMPLETE AND GROUND COVER IS ESTABLISHED.
23. THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES ADDITIONAL STRAW BALES AND EXTRA SILTATION FABRIC FOR INSTALLATION AT THE DISCRETION OF THE ENGINEER OR THE TOWN ENGINEER TO MITIGATE ANY EMERGENCY CONDITION.
24. AS CONSTRUCTION DISTURBANCE IS GREATER THAN 1 ACRE, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT NOI AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WILL NEED TO BE SUBMITTED TO THE EPA.
25. OWNER AND CONTRACTOR ARE RESPONSIBLE FOR COMPLIANCE WITH THE CONSTRUCTION GENERAL PERMIT NOI. WEEKLY SWPPP INSPECTION REPORTS TO BE PERFORMED BY CONTRACTOR. COPIES OF ALL SWPPP INSPECTION REPORTS SHALL BE PROVIDED TO THE TOWN OF WINCHESTER, EPA, DEP, OR ANY OTHER AUTHORITY REQUESTING THEM WITHIN 3 DAYS OF EACH INSPECTION.
26. APPLICABLE WORK AND MATERIALS SHALL COMPLY WITH ALL TOWN OF WINCHESTER, MA DEP, EPA CONSTRUCTION GENERAL PERMIT STANDARDS. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE SITE PLAN REGULATIONS FROM THE TOWN OF WINCHESTER AND USDA SOIL CONSERVATION SERVICE VEGETATIVE PRACTICES IN SITE DEVELOPMENT.
27. A WATERING TRUCK SHALL BE USED TO PERIODICALLY SPRINKLE CONSTRUCTION AREAS IN ORDER TO KEEP THE LEVEL OF DUST TO A MINIMUM DURING THE DRY MONTHS AND AS REQUIRED.
28. IF DETERMINING IS NECESSARY IT SHALL ONLY BE COMPLETED AS FOLLOWS: THE DISCHARGE SHALL BE STOPPED IMMEDIATELY IF THE RECEIVING AREA SHOWS ANY SIGN OF CHUTEWAYS, SWALES OR ANY OTHER CHANNELS. ALL CHANNELS TO BE DISCHARGING WATER FROM THE EXCAVATED AREA SHALL BE STABLE PRIOR TO DIRECTING DISCHARGE TO THEM. IF A CONSTRUCTION EQUIPMENT BUCKET IS USED, IT SHALL EMPTY THE MATERIAL TO A STABLE AREA. NO DEWATERING SHALL OCCUR DURING PERIODS OF INTENSE HEAVY RAIN FLOW TO THE SEDIMENT REMOVAL STRUCTURE SHALL NOT EXCEED THE STRUCTURES CAPACITY TO SETTLE AND FILTER FLOW OR ITS VOLUME CAPACITY. WHENEVER POSSIBLE, THE DISCHARGE FROM THE SEDIMENT REMOVAL STRUCTURE SHALL DRAIN TO A WELL-VEGETATED BUFFER BY SHEET FLOW WHILE MAXIMIZING THE DISTANCE TO THE NEAREST WATER RESOURCE AND MINIMIZING THE SLOPE OF THE BUFFER AREA. THERE SHALL BE NO DIRECT DISCHARGE TO EXISTING WETLANDS OR STREAMS. ALL DISCHARGE SHALL BE IN COMPLIANCE WITH STATE, LOCAL, AND FEDERAL REQUIREMENTS.
29. INITIATE STABILIZATION IMMEDIATELY IF CONSTRUCTION WORK TEMPORARILY OR PERMANENTLY CEASES.
30. ALL DISCHARGES FROM POLLUTION SOURCES IS PROHIBITED ON-SITE SUCH AS FUELS, WASTEWATER FROM WASH OUT OF CONCRETE, WASTEWATER FROM CLEAN OUT OF PAILS, FORM RELEASE OILS, SOLVENTS, ADHESIVES, CURING COMPOUNDS, POLLUTANTS USED FOR MAINTENANCE OF VEHICLES AND EQUIPMENT, SOAPS & SOLVENTS, TOXIC OR HAZARDOUS SUBSTANCES, CHEMICALS AND OILS. IF A POLLUTANT IS DISCHARGED IT SHALL BE IMMEDIATELY CLEANED UP BY REMOVING THE CHEMICAL AND AFFECTED SOIL OR AREA OF SPILL FROM THE SITE IN ACCORDANCE WITH BOTH THE MANUFACTURER RECOMMENDATIONS, FEDERAL, STATE, AND LOCAL REQUIREMENTS. DO NOT HOSE DOWN AND SPREAD SPILLED ITEM. ALL CHEMICALS USED ON THE SITE SHALL BE IN LEAK-PROOF CONTAINERS STORED AWAY FROM WETLANDS, SURFACE WATERS, STORMWATER INLETS, AND DRAINAGE MEASURES. SPILL KITS SHALL BE AVAILABLE ON-SITE FOR EMERGENCY USE. THERE SHALL BE A SECONDARY CONTAINMENT MEASURE FOR ALL CHEMICALS IN ADDITION TO SPILL-PROOF CONTAINERS.
31. PRIOR TO COMMENCEMENT OF CONSTRUCTION, APPLICABLE CONTRACTOR PERSONNEL MUST HAVE AN UNDERSTANDING OF THE EPA CONSTRUCTION GENERAL PERMIT REQUIREMENTS AND THEIR SPECIFIC RESPONSIBILITIES UNDER THE PERMIT. AT A MINIMUM, PERSONNEL MUST BE TRAINED AND UNDERSTAND THE FOLLOWING: LOCATION OF ALL STORMWATER CONTROLS AND HOW TO MAINTAIN THEM. PROCEDURES FOR COMPLYING WITH THE POLLUTION PREVENTION REQUIREMENTS. PROCEDURES FOR CONDUCTING INSPECTIONS, RECORDING FINDINGS, AND TAKING CORRECTIVE ACTION.
32. ALL SEDIMENT TRACKED ONTO ROADWAYS MUST BE REMOVED AT END OF EACH WORK DAY.
33. ALL USE OF CATIONIC TREATMENT CHEMICALS (EXAMPLES INCLUDE POLYMERS, CHITOSAN, CATIONIC PAM, FLOCCULANTS OR OTHER CHEMICAL UTILIZED FOR STABILIZATION) ARE PROHIBITED. IF ALL OTHER AVAILABLE STABILIZATION MEASURES ARE NOT POSSIBLE AND USE OF CATIONIC CHEMICALS IS ABSOLUTELY NECESSARY THE CONTRACTOR SHALL CONTACT THE EPA NEW ENGLAND OFFICE IN WRITING FOR APPROVAL. AND SPECIFIC REQUIREMENTS (MAXIMUM DOSAGE RATE, RESIDUAL TESTING, SPECIFIC LIMITATIONS, ETC) PRIOR TO USE.
34. IF USING NON-VEGETATIVE STABILIZATION MEASURES, IT MUST BE COMPLETED NO LATER THAN 14 DAYS AFTER INITIATING STABILIZATION. ALL AREAS OF EXPOSED SOILS MUST BE COVERED.
35. INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE AT LEAST EVERY 7 DAYS BY THE CONTRACTOR. AT A MINIMUM INSPECTIONS SHALL INCLUDE ALL DISTURBED AREAS, ALL STORMWATER CONTROLS AND POLLUTION PREVENTION MEASURES. ALL LOCATIONS WHERE STABILIZATION MEASURES HAVE BEEN IMPLEMENTED, EQUIPMENT AND MATERIAL STORAGE AREAS, ALL AREAS WHERE STORMWATER FLOWS AND ALL POINTS OF DISCHARGE. WHEN CORRECTIVE ACTIONS ARE REQUIRED, THE CONTRACTOR MUST IMMEDIATELY TAKE ALL STEPS TO PREVENT POLLUTANT DISCHARGES UNTIL A PERMANENT SOLUTION IS IMPLEMENTED. AS NECESSARY NEW OR MODIFIED CONTROLS MUST BE INSTALLED AND OPERATIONAL. THE REPAIR MUST BE COMPLETED WITHIN 7 DAYS FROM THE TIME OF DISCOVERY. WITHIN 24 HOURS OF A TRIGGERING CONDITION OCCURRING THAT REQUIRES A CORRECTIVE ACTION, A CORRECTIVE ACTION REPORT MUST BE COMPLETED.

MAINTENANCE:

- ALL MEASURES STATED ON THE STORMWATER POLLUTION PREVENTION PLANS, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION BY CONTRACTOR UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A HEALTHY STAND OF GRASS IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. ALL SEDIMENT CONTROLS SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE TUBULAR SEDIMENT CONTROLS WHEN IT REACHES HALF THE HEIGHT OF THE CONTROL MEASURE OR AS REQUESTED BY THE OWNER OR ENGINEER.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
12. IF ANY EVIDENCE OF SEDIMENTATION IS OBSERVED AT THE STORMWATER MANAGEMENT AREA, INLETS, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROVIDE A PLAN TO THE ENGINEER TO REMOVE ANY ACCUMULATED SEDIMENT IN THESE AREAS. THE CONTRACTOR SHALL ALSO IMMEDIATELY PROVIDE ADDITIONAL ON SITE EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT FURTHER DEGRADATION OF THE AREA.
13. FOLLOWING THE TEMPORARY OR FINAL SEEDING, THE CONTRACTOR SHALL INSPECT THE WORK AREA SEMI-MONTHLY TO ENSURE THE AREAS HAVE A MINIMUM OF 85% PERENNIAL VEGTATION GROWTH. RE-SEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.
14. CONTRACTOR & ALL SITE SUBCONTRACTORS SHALL BE FAMILIAR WITH & FOLLOW ALL APPROVED PERMITS AND CONDITIONS. CONTRACTOR SHALL MAINTAIN A COPY OF ALL APPROVED PERMITS ON-SITE. ALL CONDITIONS & RECOMMENDATIONS WITHIN THE APPROVED PERMITS SHALL BE COMPLETED.
15. ALL EROSION MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE ADEQUATE TO MAINTAIN SEDIMENT ON SITE. ANY MODIFICATIONS SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR THE TOWN OF WINCHESTER.
16. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN IN PLACE UNTIL ALL SITE WORK IS COMPLETE AND GROUND COVER IS ESTABLISHED.

CONSTRUCTION GENERAL PERMIT NOTES AND NARRATIVE:

THE STORMWATER POLLUTION PREVENTION PLANS CONSIST OF THE EROSION CONTROL PLANS TOGETHER WITH EXISTING CONDITIONS PLANS, GRADING PLANS, ABBREVIATIONS AND NOTES SHEETS, AND DETAIL SHEETS.
THE EROSION CONTROL PLAN WILL BE IMPLEMENTED TO:
A. TREAT EROSION AS SOON AS POSSIBLE AFTER DISTURBANCE.
B. PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA AND ENTERING THE RECEIVING WATERS.
C. CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED TO MINIMIZE EROSION.
D. ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.



PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

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APPLICANT/OWNER:
SLV RIVER STREET, LLC
c/o GEOFF ENGLER & JUSTIN KREBS
257 HILLSIDE AVENUE
NEEDHAM, MA, 02494

PROJECT:
MULTI-FAMILY RESIDENTIAL REDEVELOPMENT PROJECT
19 & 35 RIVER STREET
WINCHESTER, MA

PROJECT NO. 2459-01 DATE: JUNE 11, 2019
SCALE: NTS DWG. NAME: C2459-01

DESIGNED BY: DMR CHECKED BY: CMQ



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DRAWING TITLE: ABBREVIATIONS AND NOTES SHEET No. C-001

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ABBREVIATIONS:

| | | | |
|-----------|----------------------------------|------|-----------------------|
| ABAN | ABANDON | TB | TEST BORING |
| ADA | AMERICANS WITH DISABILITIES ACTS | TC | TOP OF CURB |
| ADJ | ADJUST | TD | TRENCH DRAIN |
| B | BORING | TEL | TELEPHONE |
| BC | BOTTOM OF CURB | TMH | TELEPHONE MANHOLE |
| BIT | BITUMINOUS | TOS | TOP OF SLOPE |
| BLDG | BUILDING | TOW | TOP OF WALL |
| BM | BENCH MARK | TP | TEST PIT |
| BOS | BOTTOM OF SLOPE | TYP | TYPICAL |
| BOW | BOTTOM OF WALL | UD | UNDERDRAIN |
| BV&B | BUTTERFLY VALVE & BOX | UP | UTILITY POLE |
| BWV | BORDERING VEGETATED WETLAND | V | VERTICAL |
| | | VCP | VITRIFIED CLAY PIPE |
| | | VERT | VERTICAL |
| | | VGC | VERTICAL GRANITE CURB |
| CATV | CABLE TELEVISION | WG | WATER GATE |
| CB | CATCH BASIN | WM | WATER MAIN |
| CF | CUBIC FEET | WMH | WATER MANHOLE |
| CFS | CUBIC FEET PER SECOND | WSO | WATER SHUTOFF |
| CI | CAST IRON (PIPE) | | |
| CL | CENTERLINE | | |
| CLDI | CEMENT LINED DUCTILE IRON (PIPE) | | |
| CLF | CHAIN LINK FENCE | | |
| CMP | CORRUGATED METAL PIPE | | |
| CO | CLEAN OUT | | |
| CONC | CONCRETE | | |
| CONST | CONSTRUCTION | | |
| CONT | CONTRACTOR | | |
| CRD | COORDINATE | | |
| CUL | CULVERT | | |
| CY | CUBIC YARD | | |
| DB | DISTRIBUTION BOX | | |
| DBL | DOUBLE | | |
| DEM | DEMOLISH | | |
| DET | DETENTION | | |
| DIA | DIAMETER | | |
| DI | DUCTILE IRON (PIPE) | | |
| DM | DIMENSION | | |
| DMH | DRAIN MANHOLE | | |
| DW | DOMESTIC WATER (OR DRY WELL) | | |
| DWG | DRAWING | | |
| DYCL | DOUBLE YELLOW CENTERLINE | | |
| EHH | ELECTRIC HANDHOLE | | |
| EL | ELEVATION | | |
| ELEC | ELECTRIC | | |
| EMH | ELECTRIC MANHOLE | | |
| EOP | EDGE OF PAVEMENT | | |
| EOR | EDGE OF ROAD | | |
| EW | EDGE OF WETLANDS | | |
| ETC | ELECTRIC, TELEPHONE, CABLE | | |
| EXIST | EXISTING | | |
| EXT | EXTERIOR | | |
| FCC | FLUSH CONCRETE CURB | | |
| FES | FLARED END SECTION | | |
| FFE | FINISH FLOOR ELEVATION | | |
| FPS | FEET PER SECOND | | |
| FS | FIRE SERVICE | | |
| FT | FOOT/FEET | | |
| GC | GENERAL CONTRACTOR | | |
| GEN | GENERAL | | |
| GG | GAS GATE | | |
| GR | GUIDE RAIL | | |
| GRAN | GRANITE | | |
| GV | GATE VALVE | | |
| GV&B | GATE VALVE & BOX | | |
| GW | GROUND WATER | | |
| H | HORIZONTAL | | |
| HOR | HORIZONTAL | | |
| HT | HEIGHT | | |
| HW | HEADWALL | | |
| HWY | HIGHWAY | | |
| HYD | HYDRANT | | |
| ID | INSIDE DIAMETER | | |
| IN | INCHES | | |
| INCL | INCLUDE | | |
| INST | INSTALLED | | |
| INV, I.E. | INVERT, INVERT ELEVATION | | |
| L | LENGTH | | |
| LP | LIGHT POLE | | |
| MAT | MATERIAL | | |
| MAX | MAXIMUM | | |
| MH | MANHOLE | | |
| MIN | MINIMUM | | |
| MISC | MISCELLANEOUS | | |
| MTD | MOUNTED | | |
| MW | MONITORING WELL | | |
| N | NORTH | | |
| NIC | NOT IN CONTRACT | | |
| NO | NUMBER | | |
| NTS | NOT TO SCALE | | |
| OC | ON CENTER | | |
| OD | OUTSIDE DIAMETER | | |
| OHW | OVERHEAD WIRE | | |
| OVD | OVERHEAD | | |
| OW | OBSERVATION WELL | | |
| PC | POINT OF CURVATURE | | |
| PCC | PRECAST CONCRETE CURB | | |
| PI | POINT OF INTERSECTION | | |
| PL | PROPERTY LINE | | |
| PCC | POINT ON CURVATURE | | |
| POT | POINT ON TANGENT | | |
| PRC | POINT OF REVERSE CURVATURE | | |
| PROP, P | PROPOSED | | |
| PT | POINT (OR POINT OF TANGENT) | | |
| PVC | POLYVINYL CHLORIDE (PIPE) | | |
| R&R | REMOVE & RESET | | |
| R&S | REMOVE & STACK | | |
| RCP | REINFORCED CONCRETE PIPE | | |
| RD | ROAD (OR ROOF DRAIN) | | |
| RELOC | RELOCATE | | |
| REM | REMOVE | | |
| RET | RETAIN | | |
| ROW | RIGHT OF WAY | | |
| RR | RAILROAD | | |
| RWY | ROADWAY | | |
| SD | SUBDRAIN | | |
| SF | SQUARE FEET | | |
| SGC | SLOPED GRANITE CURB | | |
| SMH | SEWER MANHOLE | | |
| SP | STANDPIPE | | |
| SPEC | SPECIFICATION | | |
| STA | STATION | | |
| STD | STANDARD | | |
| SWEL | SOLID WHITE EDGE LINE | | |
| SW | SIDEWALK | | |
| SWLL | SOLID WHITE LANE LINE | | |
| SYCL | SOLID YELLOW CENTERLINE | | |

STORMWATER POLLUTION PREVENTION PLAN

2.1 GENERAL

FOR GRADING AND DRAINAGE SEE DRAWING SHEET C-103.

2.1.1. THE FIRST STAGE INVOLVES ACTIVITIES NEEDED TO ADDRESS STORMWATER MANAGEMENT: EXCAVATING MATERIAL DESIGNATED FOR OFF-SITE REMOVAL OR ON-SITE RELOCATION; AND FENCING SELECTED AREAS. STAGE ONE WILL PREPARE SITE FOR CONVENTIONAL CONSTRUCTION.

2.1.2. THE SECOND STAGE WILL CONSIST OF ROUTINE CONSTRUCTION INVOLVING DEMOLITION, PAVING, LANDSCAPING AND UTILITIES.

2.1.3. THERE ARE GENERAL PHASES OF CONSTRUCTION AS IDENTIFIED BELOW. IN EACH PHASE OF CONSTRUCTION, IMPLEMENT STANDARD EROSION AND SEDIMENT CONTROL PRACTICES PRIOR TO INITIATING EARTH DISTURBING ACTIVITIES, AND MAINTAIN THESE PRACTICES THROUGHOUT THE COURSE OF CONSTRUCTION.

TYPICAL PRACTICES TO BE APPLIED TO THE SITE INCLUDE THE FOLLOWING:

- PRIOR TO DEMOLITION AND EARTH DISTURBANCE IN ANY WORK AREA, INSTALL SILTATION BARRIERS (BALES OR SILT FENCE WITH BALES) BETWEEN THE WORK AREA AND THE AREA(S) TO WHICH IT DRAINS.
- DISCHARGE WATER FROM DEWATERING OPERATIONS TO A TEMPORARY SILTATION TRAP OR SEDIMENTATION BASIN.
- PROVIDE TEMPORARY BERMS AND SWALES TO DIVERT SURFACE WATER AWAY FROM THE AREAS THAT WILL BE EXPOSED BY CONSTRUCTION ACTIVITY TO MINIMIZE THE AMOUNT OF SURFACE WATER COMING INTO CONTACT WITH EXPOSED SOILS. PROVIDE STABLE OUTLETS FOR THESE DEVICES, AND LINE OR VEGETATE THESE DIVERSIONS TO PROVIDE FOR DEVICES, AND LINE OR VEGETATE THESE DIVERSIONS TO PROVIDE FOR THEIR STABILITY DURING CONSTRUCTION.
- LIMIT THE EXTENT OF EXPOSED SOILS TO AREAS THAT CAN BE WORKED AND RESTABILIZED WITHIN THE CONSTRUCTION SEASON AND DURING THE SPECIFIC CONSTRUCTION PHASE. WHEN EARTHWORK CONSTRUCTION ACTIVITY IN AN AREA IS COMPLETE, STABILIZE THE AREA WITH A SUITABLE SURFACE AS DESCRIBED BELOW.

IN ADDITION TO THESE PRACTICES, FOLLOW THE SPECIAL PRACTICES DESCRIBED BELOW. COMPLY WITH THE DIRECTIONS OF THE OWNER'S REPRESENTATIVE TO ADDRESS EROSION AND SEDIMENTATION CONDITIONS THAT MAY ARISE ON A CASE BY CASE BASIS DURING CONSTRUCTION.

THE FOLLOWING IS A DESCRIPTION OF MINIMUM CONSTRUCTION REQUIREMENTS AND DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES WITH REGARD TO DETERMINING THE ADEQUACY OF MEANS AND METHODS OF CONSTRUCTION.

2.2 ESTIMATED CONSTRUCTION SEQUENCING

THE FOLLOWING IS AN ESTIMATED CONSTRUCTION SEQUENCING. SOME ACTIVITIES MAY OCCUR AT THE SAME TIME RATHER THAN AT SEPARATE TIMES OR OUT OF SEQUENCE DUE TO ACTUAL FIELD CONDITIONS OR OTHER FACTORS. ACTUAL SCHEDULING WILL BE COMPLETED BY THE SITE CONTRACTOR.

(CONTRACTOR TO FOLLOW ANY ADDITIONAL PERMIT REQUIREMENTS OR STEPS AT NO ADDITIONAL COST TO THE OWNERS FROM EITHER STATE OR LOCAL PERMITS.

- INSTALL ALL EROSION CONTROL MEASURES INCLUDING BUT NOT LIMITED TO TEMPORARY STRAW BALE FILTERS, SILT SACKS, CONSTRUCTION ENTRANCES, AND STRAW BALES AND SILT FENCE.
- SETUP STAGING AND MATERIAL STORAGE / STOCKPILE AREAS.
- IF REQUIRED, CONSTRUCT TEMPORARY SILT / DEWATERING BASINS.
- PROTECT AND MARK ALL EXISTING ITEMS NOTED TO REMAIN.
- PERFORM DEMOLITION WORK. SURVEY AND IDENTIFY LIMITS OF SITE CLEARING. CONDUCT SITE CLEARING.
- DEMO EXISTING MATERIALS AS NOTED IN THE DEMOLITION PLAN. NOT ALL REQUIRED DEMOLITION ITEMS MAY BE SHOWN ON PLAN.
- REMOVE EXISTING LOAM AND SUBSOIL AND STOCKPILE FOR REUSE.
- PERFORM ROUGH GRADING AND CONSTRUCT BUILDING FOUNDATIONS.
- INSTALL UNDERGROUND UTILITIES.
- PERFORM FINE GRADING; PLACE BINDER PAVEMENT COURSE.
- PLACE PAVEMENT TOP COURSE; CONSTRUCT SIDEWALKS AND ALL OTHER SITE IMPROVEMENTS.
- INSTALL PAVEMENT MARKINGS, SITE SIGNAGE & COMPLETE LANDSCAPING.
- REMOVE TEMPORARY SILT CONTROLS AFTER SITE IS STABILIZED.

2.3 MAINTENANCE

2.3.1 DURING THE PERIOD OF CONSTRUCTION AND/OR UNTIL LONG TERM VEGETATION IS ESTABLISHED: SEEDED AREAS SHALL BE FERTILIZED AND RESEED AS NECESSARY TO INSURE VEGETATION ESTABLISHMENT.

2.3.2 TEMPORARY SEDIMENTATION BASINS SHALL BE CHECKED AFTER EACH SIGNIFICANT RAINFALL AND NO LESS THAN WEEKLY, AND CLEANED AS NEEDED TO RETAIN STORAGE CAPACITY.

2.3.3 TEMPORARY DRAINAGE SWALES SHALL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY.

2.3.4 THE HAYBALE AND SILTATION FENCING BARRIERS AND OTHER EROSION AND SEDIMENT CONTROL MEASURES/DEVICES SHALL BE INSPECTED, CLEANED, REPLACED AND/OR REPAIRED AS NECESSARY, AND NO LESS THAN WEEKLY, AND AFTER EACH SIGNIFICANT RAINFALL. ACCUMULATED SEDIMENTS SHALL BE REMOVED WHEN THEY REACH HALF THE HEIGHT OF THE BARRIER.

2.4 GENERAL

2.4.1. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH (USDA) NATURAL RESOURCES CONSERVATION SERVICE (NRCS, FORMERLY SCS) GUIDELINES AND ALL LOCAL MUNICIPAL REGULATIONS.

2.4.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.

2.4.3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY SITEWORK OR EARTHWORK OPERATIONS, SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN IN PLACE UNTIL ALL SITEWORK IS COMPLETE AND GROUND COVER IS ESTABLISHED.

2.4.4. ALL WORK SHALL BE IN ACCORDANCE WITH THE PERMITS AND APPROVALS ISSUED BY THE LOCAL PLANNING BOARD, THEIR AGENTS, AND THE CONSTRUCTION SPECIFICATIONS.

2.4.5. STOCKPILES SHALL BE SURROUNDED ON THEIR PERIMETERS WITH STAKED BALES AND/OR SILTATION FENCES TO PREVENT AND/OR CONTROL SILTATION AND EROSION.

2.4.6. TOPS OF STOCKPILES SHALL BE COVERED IN SUCH A MANNER THAT STORMWATER DOES NOT INFILTRATE THE MATERIALS AND THEREBY RENDER THE SAME UNSUITABLE FOR FILL USE.

2.4.7. ALL DISTURBED OR EXPOSED AREAS SUBJECT TO EROSION SHALL BE STABILIZED WITH MULCH OR SEEDED FOR TEMPORARY VEGETATIVE COVER. NO AREA, SUBJECT TO EROSION SHALL BE LEFT DISTURBED AND UNSTABILIZED FOR PERIODS LONGER THAN IS ABSOLUTELY NECESSARY TO CARRY OUT THAT PORTION OF THE CONSTRUCTION WORK.

2.4.8. BALE DIKES SHALL BE CONSTRUCTED AT ALL EXISTING & PROPOSED CATCH BASINS LOCATED IN AREAS SUBJECT TO STORMWATER RUN-OFF FROM PROPOSED CONSTRUCTION, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. NO SEDIMENTS SHALL ENTER THE OFF-SITE DRAINAGE SYSTEMS AT ANY TIME. SEDIMENT DISCHARGE TO OFF-SITE PROPERTY IS PROHIBITED.

2.4.9. CULVERT/PIPE INLETS AND OUTFALLS SHALL BE PROTECTED FROM INCOMING SILT UNTIL ALL DISTURBED AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED.

2.4.10. ANY DEWATERING REQUIRED DURING CONSTRUCTING ON THE SITE SHALL DISCHARGE INTO A DEWATERING FILTER OR TEMPORARY SILT BASIN PRIOR TO DISCHARGE.

2.4.11. BALES AND SILTATION FENCING AND TEMPORARY SILT BASIN SHALL BE INSPECTED NO LESS THAN WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL AND REPLACED AS REQUIRED.

2.4.12. ALL PROPOSED NON-RIPRAP SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH EROSION CONTROL FABRIC AND PROTECTED FROM EROSION.

2.4.13. THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES ADDITIONAL BALES AND EXTRA SILTATION FENCING FOR INSTALLATION AT THE DIRECTION OF THE OWNERS REPRESENTATIVE OR THE MUNICIPAL AGENTS TO MITIGATE ANY EMERGENCY CONDITION.

2.4.14. TEST PITS WERE PERFORMED FOR THE PURPOSE OF DESIGN AND SHOW CONDITIONS AT PIT LOCATIONS ONLY. THEY DO NOT NECESSARILY SHOW THE NATURE OF ALL MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.

2.4.15. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO CARRY OUT THE WORK INCLUDING BUT NOT LIMITED TO DEMOLITION.

2.4.16. DISPOSAL OF ALL DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL MUNICIPAL REQUIREMENTS.

2.4.17. THE CONTRACTOR SHALL PROTECT AND/OR CAP OFF ALL EXISTING ON-SITE UTILITY SERVICES DESIGNATED ON THESE DRAWINGS. SERVICES SHALL BE CAPPED OFF WHERE SAME ENTER THE PERIMETER PROPERTY LINE.

2.4 GENERAL (CONTINUED):

2.4.18 THE LIMIT OF WORK LINE FOR THE AREA TO BE CLEARED AND GRUBBED SHALL BE THE SAME AS THE LIMIT OF WORK LINE NECESSARY FOR GRADING PURPOSES, (I.E., THE GRADING LIMITS AROUND THE PERIMETER OF THE PROJECT AREA).

2.4.19 THE AREA OR AREAS OF ENTRANCE AND EXIT TO AND FROM THE SITE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

2.4.20 FOLLOWING THE INSTALLATION OF THE BINDER COURSE, THE CONTRACTOR SHALL SWEEP ALL ON-SITE PAVEMENT, IF NECESSARY, UNTIL ALL SITE CONSTRUCTION IS COMPLETED.

IF APPLICABLE, EFFORTS SHALL BE MADE TO AVOID STOCKPILING CUT GLACIAL TILL SOILS SINCE STOCKPILING INCREASES EXPOSURE TO PRECIPITATION AND PROVIDES GREATER OPPORTUNITY FOR FROST PENETRATION. SOME OF THE STEPS IN SEQUENCING MAY OCCUR SIMULTANEOUSLY, PARTICULARLY CUT AND FILL OPERATIONS, IN AN EFFORT TO AVOID STOCKPILING.



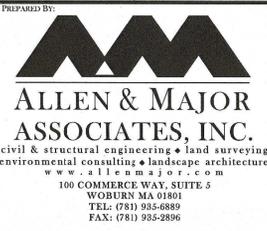
PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
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APPLICANT/OWNER:
 SLV RIVER STREET, LLC
 c/o GEOFF ENGLER & JUSTIN KREBS
 257 HILLSIDE AVENUE
 NEEDHAM, MA, 02494

PROJECT:
MULTI-FAMILY RESIDENTIAL REDEVELOPMENT PROJECT
19 & 35 RIVER STREET
 WINCHESTER, MA

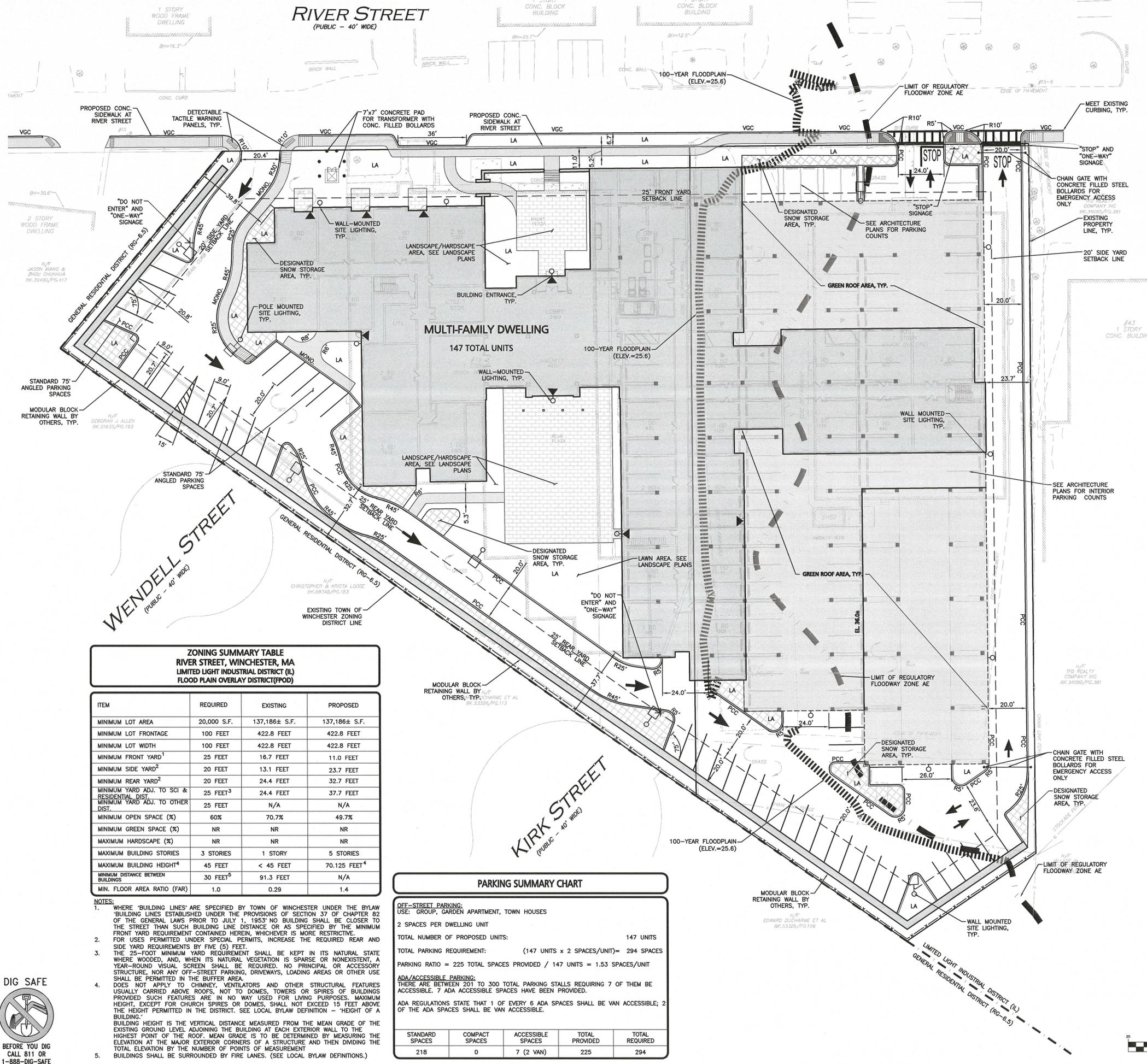
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|--------------|---------|-------------|---------------|
| PROJECT NO. | 2459-01 | DATE: | JUNE 11, 2019 |
| SCALE: | NTS | DWG. NAME: | C2459-01 |
| DESIGNED BY: | DMR | CHECKED BY: | CMQ |



WOBURN, MA • LARKVILLE, MA • MANCHESTER, NH

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| | |
|-------------------------|-----------|
| DRAWING TITLE: | SHEET No. |
| ABBREVIATIONS AND NOTES | C-002 |



LEGEND

| | |
|--------------------------|-----|
| PROPERTY LINE | --- |
| SIGN | - |
| BOLLARD | • |
| BUILDING | ▭ |
| BUILDING ARCHITECTURE | ▭ |
| BUILDING INTERIOR WALLS | ▭ |
| EXTERIOR DOORWAY | ▭ |
| CURB | ▭ |
| RETAINING WALL | ▭ |
| PARKING STRIPING | ▭ |
| ROADWAY STRIPING | ▭ |
| TRAFFIC ARROWS | ▭ |
| HEAVY DUTY CONCRETE | ▭ |
| SIDEWALK | ▭ |
| BRICK SIDEWALK | ▭ |
| ADA ACCESSIBLE RAMP | ▭ |
| ADA DET. WARNING SURFACE | ▭ |
| SETBACK LINE | --- |
| BASELINE | --- |
| SAW-CUT LINE | --- |
| PARKING COUNT | ⊙ |
| TRANSFORMER | ⊕ |
| CHAIN LINK FENCE | ▭ |
| SNOW STORAGE | ▭ |

- NOTES:**
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
 - THE CONTRACTOR SHALL CONTACT "DIGSAFE" AND THE TOWN OF WINCHESTER DEPARTMENT OF PUBLIC WORKS AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST THE LOCATION OF THE EXISTING UTILITIES.
DIGSAFE: 1-800-344-7233
WINCHESTER DEPT. OF PUBLIC WORKS: (781) 721-7100
 - SEE THE ABBREVIATIONS AND NOTES PLAN AND DETAILS FOR FURTHER INFORMATION.
 - ALL CURBING RADII SHALL BE 3' UNLESS OTHERWISE NOTED.
 - ALL ADA CURB CUT RAMP ARE TO BE CONCRETE.
 - ALL ELEVATIONS REFER TO NAVD88 DATUM.
 - THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.
 - SNOW TO BE STOCKPILED ON SITE IN LOCATIONS SHOWN ON THIS PLAN UNTIL THE ACCUMULATED SNOW BECOMES A HAZARD TO THE DAILY OPERATIONS OF THE SITE. IT WILL BE THE RESPONSIBILITY OF THE SNOW REMOVAL CONTRACTOR TO PROPERLY DISPOSE OF TRANSPORTED SNOW OFFSITE ACCORDING TO MASSACHUSETTS DEP. BUREAU OF RESOURCE PROTECTION - SNOW DISPOSAL GUIDELINE #BWR 0201-01, GOVERNING THE PROPER DISPOSAL OF SNOW.
 - 4,500± TOTAL SQUARE FEET OF SNOW STORAGE PROVIDED ON-SITE, AS SHOWN.



PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

ZONING SUMMARY TABLE RIVER STREET, WINCHESTER, MA LIMITED LIGHT INDUSTRIAL DISTRICT (LL) FLOOD PLAIN OVERLAY DISTRICT (FOD)

| ITEM | REQUIRED | EXISTING | PROPOSED |
|--|----------------------|---------------|--------------------------|
| MINIMUM LOT AREA | 20,000 S.F. | 137,186± S.F. | 137,186± S.F. |
| MINIMUM LOT FRONTAGE | 100 FEET | 422.8 FEET | 422.8 FEET |
| MINIMUM LOT WIDTH | 100 FEET | 422.8 FEET | 422.8 FEET |
| MINIMUM FRONT YARD ¹ | 25 FEET | 16.7 FEET | 11.0 FEET |
| MINIMUM SIDE YARD ² | 20 FEET | 13.1 FEET | 23.7 FEET |
| MINIMUM REAR YARD ² | 20 FEET | 24.4 FEET | 32.7 FEET |
| MINIMUM YARD ADJ. TO SCI & RESIDENTIAL DIST. | 25 FEET ³ | 24.4 FEET | 37.7 FEET |
| MINIMUM YARD ADJ. TO OTHER DIST. | 25 FEET | N/A | N/A |
| MINIMUM OPEN SPACE (%) | 60% | 70.7% | 49.7% |
| MINIMUM GREEN SPACE (%) | NR | NR | NR |
| MAXIMUM HARDSCAPE (%) | NR | NR | NR |
| MAXIMUM BUILDING STORIES | 3 STORIES | 1 STORY | 5 STORIES |
| MAXIMUM BUILDING HEIGHT ⁴ | 45 FEET | < 45 FEET | 70.125 FEET ⁴ |
| MINIMUM DISTANCE BETWEEN BUILDINGS | 30 FEET ⁵ | 91.3 FEET | N/A |
| MIN. FLOOR AREA RATIO (FAR) | 1.0 | 0.29 | 1.4 |

- NOTES:**
- WHERE "BUILDING LINES" ARE SPECIFIED BY TOWN OF WINCHESTER UNDER THE BYLAW "BUILDING LINES ESTABLISHED UNDER THE PROVISIONS OF SECTION 37 OF CHAPTER 82 OF THE GENERAL LAWS PRIOR TO JULY 1, 1957" NO BUILDING SHALL BE CLOSER TO THE STREET THAN SUCH BUILDING LINE DISTANCE OR AS SPECIFIED BY THE MINIMUM FRONT YARD REQUIREMENT CONTAINED HEREIN, WHICHEVER IS MORE RESTRICTIVE. FOR USES PERMITTED UNDER SPECIAL PERMITS, INCREASE THE REQUIRED REAR AND SIDE YARD REQUIREMENTS BY FIVE (5) FEET.
 - THE 25-FOOT MINIMUM YARD REQUIREMENT SHALL BE KEPT IN ITS NATURAL STATE WHERE WOODED, AND, WHEN ITS NATURAL VEGETATION IS SPARSE OR NONEXISTENT, A YEAR-ROUND VISUAL SCREEN SHALL BE REQUIRED. NO PRINCIPAL OR ACCESSORY STRUCTURE, NOR ANY OFF-STREET PARKING, DRIVEWAYS, LOADING AREAS OR OTHER USE SHALL BE PERMITTED IN THE BUFFER AREA.
 - DOES NOT APPLY TO CHIMNEY, VENTILATORS AND OTHER STRUCTURAL FEATURES USUALLY CARRIED ABOVE ROOFS, NOT TO DOMES, TOWERS OR SPIRES OF BUILDINGS PROVIDED SUCH FEATURES ARE IN NO WAY USED FOR LIVING PURPOSES. MAXIMUM HEIGHT, EXCEPT FOR CHURCH SPIRES OR DOMES, SHALL NOT EXCEED 15 FEET ABOVE THE HEIGHT PERMITTED IN THE DISTRICT. SEE LOCAL BYLAW DEFINITION - "HEIGHT OF A BUILDING". BUILDING HEIGHT IS THE VERTICAL DISTANCE MEASURED FROM THE MEAN GRADE OF THE EXISTING GROUND LEVEL ADJOINING THE BUILDING AT EACH EXTERIOR WALL TO THE HIGHEST POINT OF THE ROOF. MEAN GRADE IS TO BE DETERMINED BY MEASURING THE ELEVATION AT THE MAJOR EXTERIOR CORNERS OF A STRUCTURE AND THEN DIVIDING THE TOTAL ELEVATION BY THE NUMBER OF POINTS OF MEASUREMENT.
 - BUILDINGS SHALL BE SURROUNDED BY FIRE LANES. (SEE LOCAL BYLAW DEFINITIONS.)

PARKING SUMMARY CHART

OFF-STREET PARKING:
USE: GROUP, GARDEN APARTMENT, TOWN HOUSES

2 SPACES PER DWELLING UNIT

TOTAL NUMBER OF PROPOSED UNITS: 147 UNITS

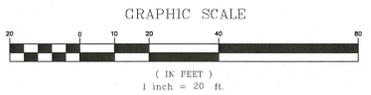
TOTAL PARKING REQUIREMENT: (147 UNITS x 2 SPACES/UNIT) = 294 SPACES

PARKING RATIO = 225 TOTAL SPACES PROVIDED / 147 UNITS = 1.53 SPACES/UNIT

ADA/ACCESSIBLE PARKING:
THERE ARE BETWEEN 201 TO 300 TOTAL PARKING STALLS REQUIRING 7 OF THEM BE ACCESSIBLE. 7 ADA ACCESSIBLE SPACES HAVE BEEN PROVIDED.

ADA REGULATIONS STATE THAT 1 OF EVERY 6 ADA SPACES SHALL BE VAN ACCESSIBLE; 2 OF THE ADA SPACES SHALL BE VAN ACCESSIBLE.

| STANDARD SPACES | COMPACT SPACES | ACCESSIBLE SPACES | TOTAL PROVIDED | TOTAL REQUIRED |
|-----------------|----------------|-------------------|----------------|----------------|
| 218 | 0 | 7 (2 VAN) | 225 | 294 |



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APPLICANT/OWNER:
SLV RIVER STREET, LLC
c/o GEOFF ENGLER & JUSTIN KREBS
257 HILLSIDE AVENUE
NEEDHAM, MA, 02494

PROJECT:
MULTI-FAMILY RESIDENTIAL REDEVELOPMENT PROJECT
19 & 35 RIVER STREET
WINCHESTER, MA

PROJECT NO. 2459-01 DATE: JUNE 11, 2019
SCALE: 1" = 20' DWG. NAME: C-2459-01
DESIGNED BY: DMW CHECKED BY: CMQ
PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil & structural engineering • land surveying
environmental consulting • landscape architecture
www.allenmajor.com
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DRAWING TITLE: LAYOUT & MATERIALS PLAN SHEET No. C-102

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RIVER STREET
(PUBLIC - 40' WIDE)

LEGEND:

- DRAIN MANHOLE
- CATCH BASIN
- WATER QUALITY UNIT
- OUTLET CONTROL STRUCTURE
- DRAIN LINE
- INSPECTION PORT
- STORMWATER CHAMBER
- 5' CONTOUR
- 1' CONTOUR
- SPOT GRADE
- ISOLATOR ROW
- STORMWATER SYSTEM FOOTPRINT
- UNDERDRAIN
- AREA DRAIN
- EXISTING
- TO BE REMOVED
- TOP OF CURB
- BOTTOM OF CURB
- TOP OF WALL
- BOTTOM OF WALL
- TOP OF
- BOTTOM OF
- INV.
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

- NOTES:**
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
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 - THE CONTRACTOR SHALL CONTACT "DIGSAFE" AND THE CITY OF WALTHAM DEPARTMENT OF PUBLIC WORKS AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST THE LOCATION OF THE EXISTING UTILITIES.
DIGSAFE: 1-800-344-7233
WINCHESTER DEPT. OF PUBLIC WORKS: (781) 721-7100
 - SEE THE ABBREVIATIONS AND NOTES PLAN, UTILITIES PLAN AND CIVIL DETAILS, AS WELL AS THE ARCHITECTURAL AND LANDSCAPE PLANS FOR FURTHER INFORMATION.
 - ALL ELEVATIONS REFER TO NAVD83 DATUM.
 - EXISTING CONDITIONS BASE PLAN TAKEN FROM A PLAN ENTITLED "EXISTING CONDITIONS" PREPARED BY ALLEN & MAJOR ASSOCIATES, SHEET V-101, ORIGINAL SCALE 1"=30'.
 - ALL RIMS AND OBSERVATION PORTS SHALL BE TO FINISHED GRADE UNLESS OTHERWISE NOTED.



PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
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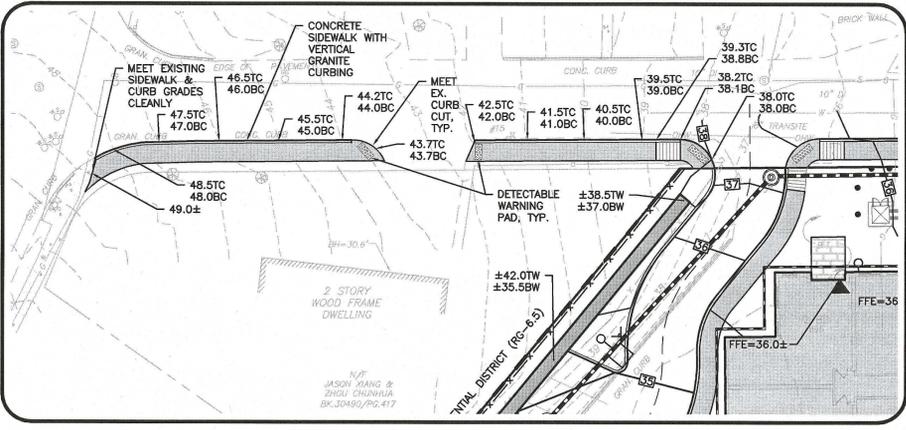
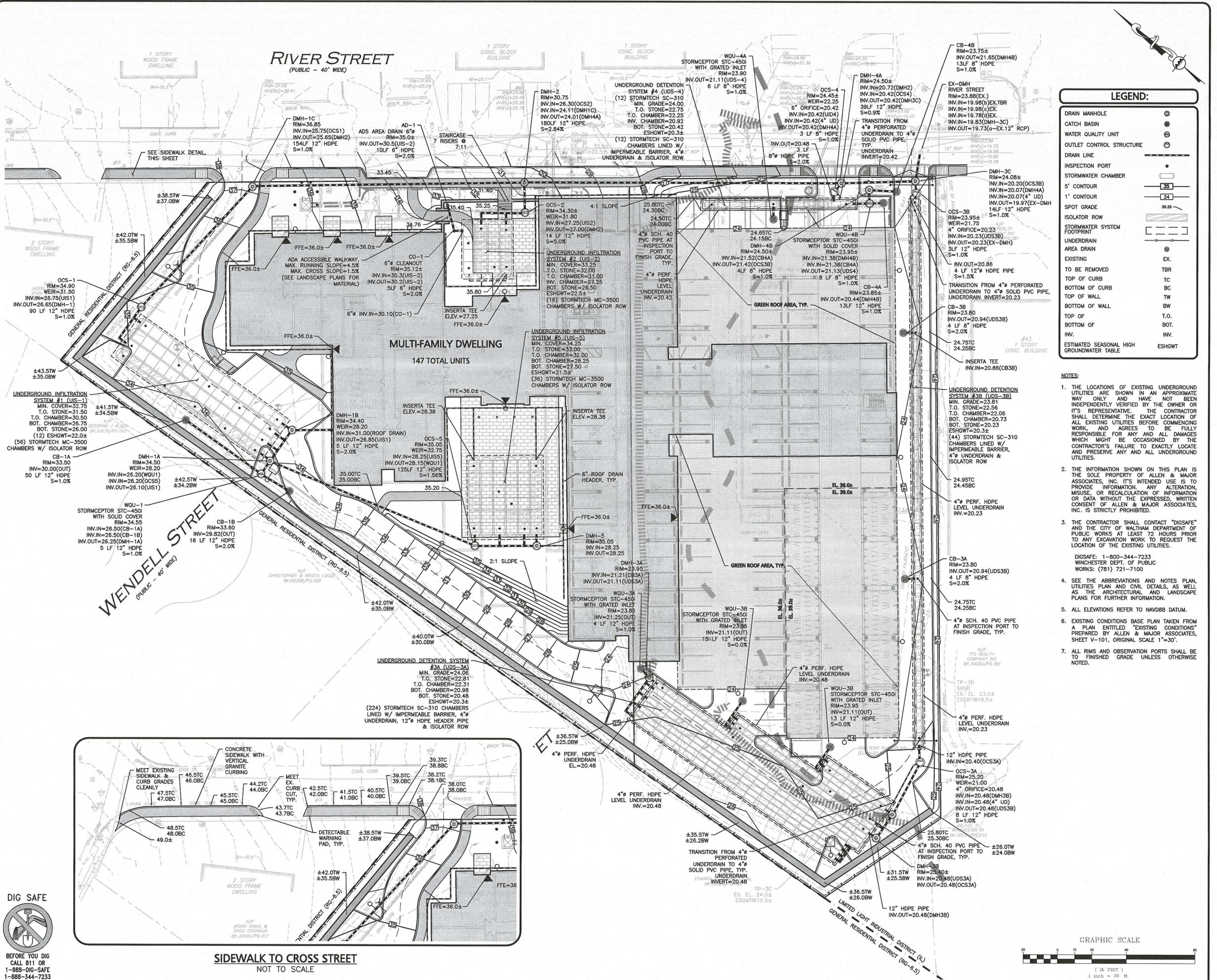
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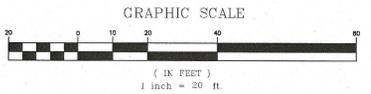
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ALLEN & MAJOR ASSOCIATES, INC.
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DRAWING TITLE: **GRADING & DRAINAGE PLAN** SHEET NO. **C-103**



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1-888-344-7233



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RIVER STREET
(PUBLIC - 40' WIDE)

WENDELL STREET
(PUBLIC - 40' WIDE)

KIRK STREET
(PUBLIC - 40' WIDE)

LEGEND

- SEWER MANHOLE
- SEWER CLEANOUT
- SEWER VENT
- SEWER LINE
- WATER (FIRE SERVICE)
- WATER (DOMESTIC SERVICE)
- WATER VALVE
- HYDRANT
- WATER LINE REDUCER
- GAS LINE
- GAS VALVE
- HAND HOLE
- IRRIGATION SLEEVE
- ELEC/TELE/CABLE CONDUIT
- ELECTRICAL CONDUIT

- NOTES:**
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
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 - THE CONTRACTOR SHALL CONTACT "DIGSAFE" AND THE TOWN OF WINCHESTER DEPARTMENT OF PUBLIC WORKS AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST THE LOCATION OF THE EXISTING UTILITIES.

DIGSAFE:
1-800-344-7233
WINCHESTER DEPT. OF PUBLIC WORKS:
(781) 314-3800
 - SEE THE ABBREVIATIONS AND NOTES PLAN AND DETAILS FOR FURTHER INFORMATION.
 - ALL ELEVATIONS REFER TO NAVD88 DATUM.
 - ALL UTILITIES & METERS SHOWN ON THIS PLAN ARE FOR GENERAL COORDINATION PURPOSES ONLY. INDIVIDUAL UTILITY PROVIDERS AND MEP ENGINEER SHALL DETERMINE THE EXACT LOCATION IN THE BUILDING & SIZE OF EACH UTILITY & METER.
 - EXISTING CONDITIONS BASE PLAN TAKEN FROM A PLAN ENTITLED "EXISTING CONDITIONS" PREPARED BY ALLEN & MAJOR ASSOCIATES, SHEET V-101, ORIGINAL SCALE 1"=30'.



PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

APPLICANT/OWNER:
SLV RIVER STREET, LLC
c/o GEOFF ENGLER & JUSTIN KREBS
257 HILLSIDE AVENUE
NEEDHAM, MA, 02494

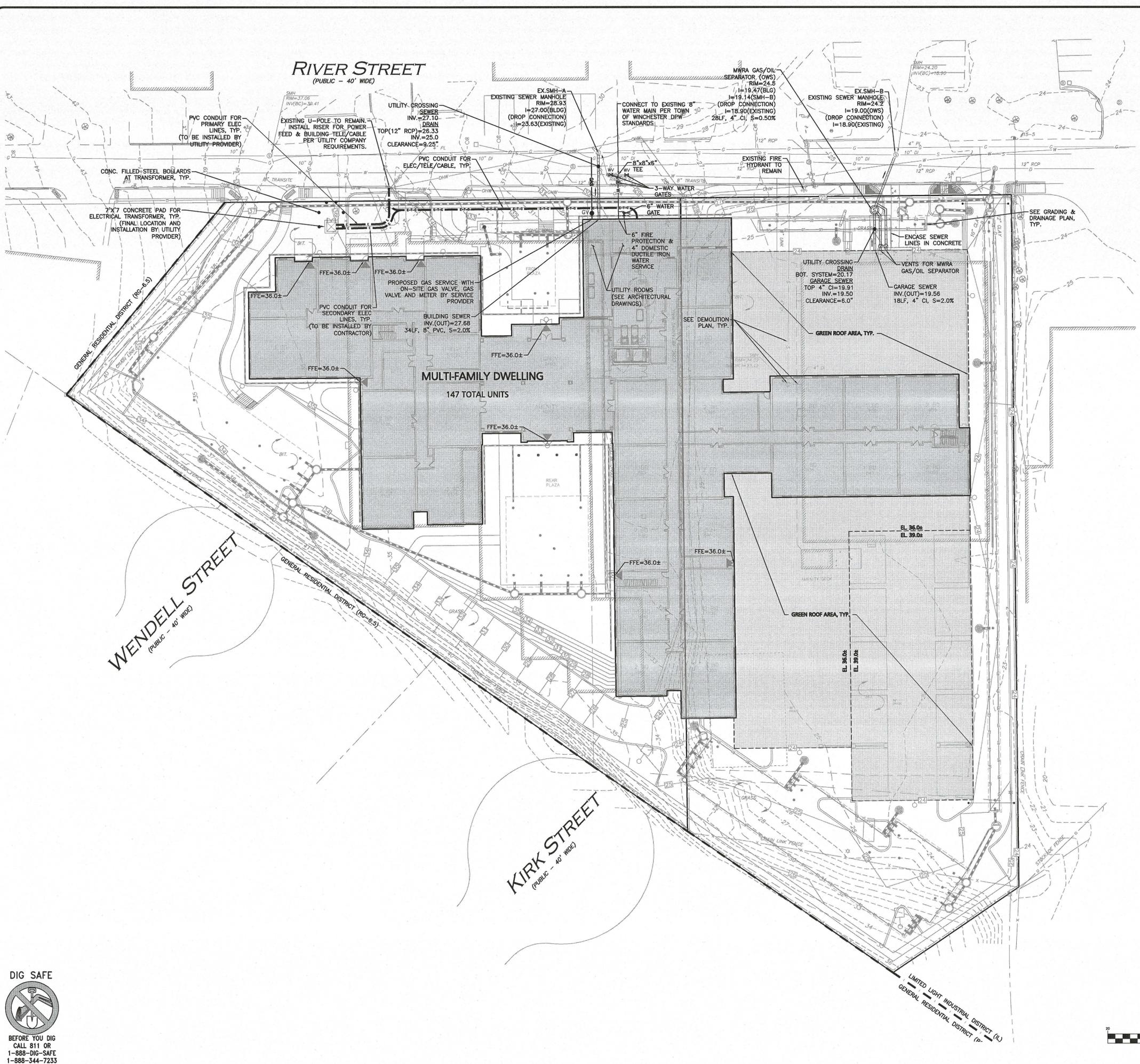
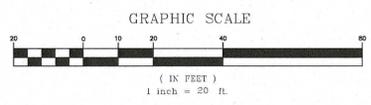
PROJECT:
MULTI-FAMILY RESIDENTIAL REDEVELOPMENT PROJECT
19 & 35 RIVER STREET
WINCHESTER, MA

PROJECT NO. 2459-01 DATE: JUNE 11, 2019
SCALE: 1" = 8' DWG. NAME: C-2459-01
DESIGNED BY: DMR CHECKED BY: CMQ

ALLEN & MAJOR ASSOCIATES, INC.
civil & structural engineering • land surveying
environmental consulting • landscape architecture
w w w . a l l e n & m a j o r . c o m
100 COMMERCE WAY, SUITE 5
WOBBURN MA 01801
TEL: (781) 935-6889
FAX: (781) 935-2896
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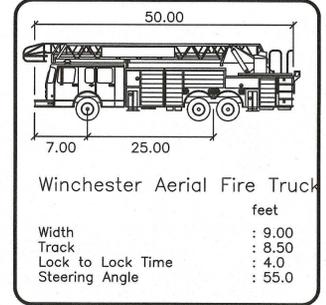
DRAWING TITLE: UTILITIES PLAN SHEET NO. C-104



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RIVER STREET
(PUBLIC - 40' WIDE)



- NOTES:
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PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |
| | | |
| | | |
| | | |

APPLICANT/OWNER:
SLV RIVER STREET, LLC
c/o GEOFF ENGLER & JUSTIN KREBS
257 HILLSIDE AVENUE
NEEDHAM, MA, 02494

PROJECT:
MULTI-FAMILY RESIDENTIAL
REDEVELOPMENT PROJECT
19 & 35 RIVER STREET
WINCHESTER, MA

PROJECT NO. 2459-01 DATE: JUNE 11, 2019

SCALE: DWG. NAME: C2459-01

DESIGNED BY: DMR CHECKED BY: CMQ

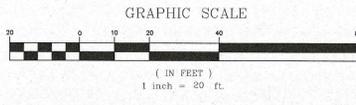
PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil & structural engineering • land surveying
environmental consulting • landscape architecture
www.allenmajor.com
100 COMMERCE WAY, SUITE 5
WOBURN, MA 01801
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FAX: (781) 935-2896

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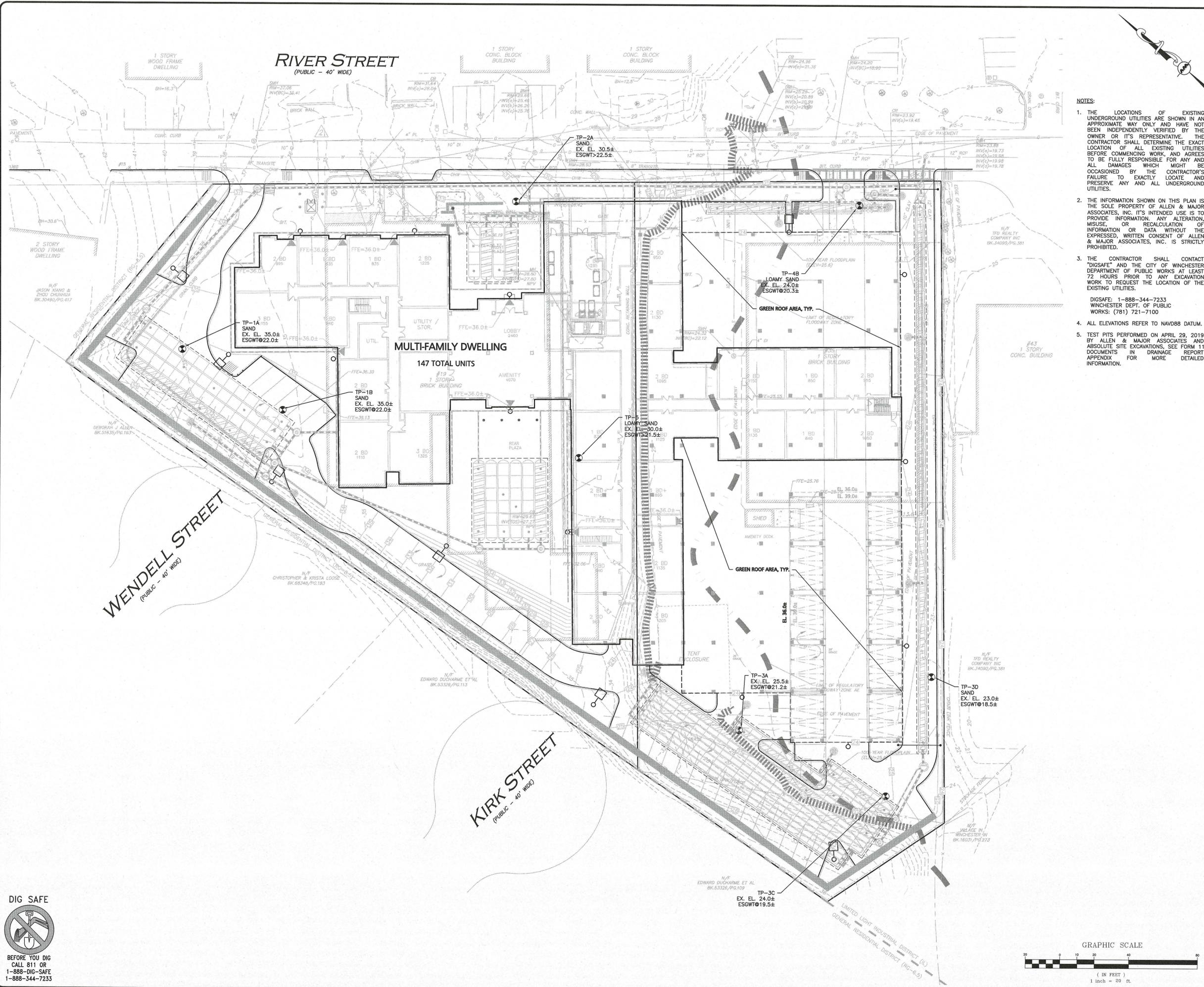
DRAWING TITLE: FIRE TRUCK TURNING PLAN SHEET NO. C-105



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N:\PROJECTS\2459-01\CIVIL\DRAWINGS\CURRENT\C-2459-01_FIRE TRUCK TURNING.DWG



- NOTES:**
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DIGSAFE: 1-888-344-7233
WINCHESTER DEPT. OF PUBLIC WORKS: (781) 721-7100
 4. ALL ELEVATIONS REFER TO NAVD88 DATUM.
 5. TEST PITS PERFORMED ON APRIL 29, 2019 BY ALLEN & MAJOR ASSOCIATES AND ABSOLUTE SITE EXCAVATIONS, SEE FORM 11 DOCUMENTS IN DRAINAGE REPORT APPENDIX FOR MORE DETAILED INFORMATION.



PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |

APPLICANT/OWNER:
SLV RIVER STREET, LLC
c/o GEOFF ENGLER & JUSTIN KREBS
257 HILLSIDE AVENUE
NEEDHAM, MA, 02494

PROJECT:
MULTI-FAMILY RESIDENTIAL REDEVELOPMENT PROJECT
19 & 35 RIVER STREET
WINCHESTER, MA

PROJECT NO.: 2459-01 **DATE:** JUNE 11, 2019

SCALE: 1"=20' **DWG. NAME:** C-2459-01

DESIGNED BY: DMR **CHECKED BY:** CMQ

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil & structural engineering • land surveying
environmental consulting • landscape architecture
www.allenmajor.com
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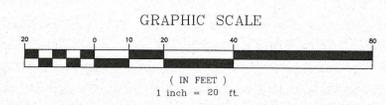
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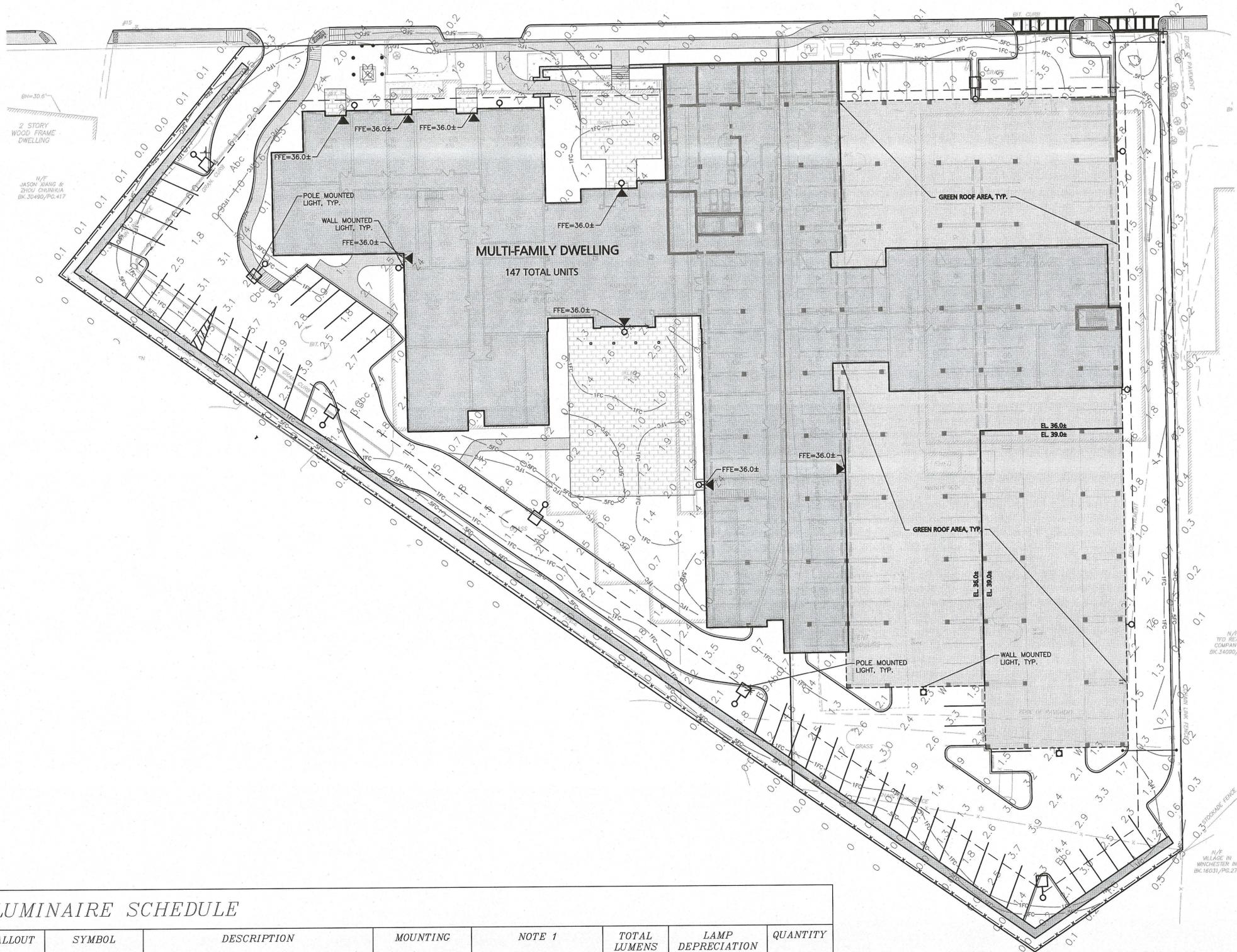
DRAWING TITLE: TEST PITS PLAN **SHEET NO.:** C-106

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GENERAL NOTES:

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LEGEND

| | |
|---------------------------------------|---------------------|
| DOUBLE POLE LIGHT | |
| SINGLE POLE LIGHT | |
| WALL MOUNT LIGHT | |
| BOLLARD LIGHT | |
| 1 FOOTCANDLE CONTOUR | —1FC— |
| .5 FOOTCANDLE CONTOUR | —0.5FC— |
| LIGHTING LEVELS GIVEN IN FOOT-CANDLES | 0.0 0.1 0.2 0.4 0.8 |

LIGHTING NOTES:

1. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.
2. FOOT CANDLE VALUES SHOWN ON THE PLAN ARE PRODUCED UTILIZING DESIGN MASTER PHOTOMETRICS SOFTWARE AND ASSOCIATED IES FILES BY THE MANUFACTURER FOR THE PROPOSED LIGHT FIXTURE.
3. ALL PHOTOMETRIC DATA REFERS TO UNITS IN FOOT CANDLES (FC). THE LIMIT OF 1.0 FC ILLUMINATION IS SHOWN IN A RED SOLID LINE AND THE LIMIT OF THE 0.5 FOOT CANDLE (FC) ILLUMINATION IS SHOWN IN BLUE.
4. QUANTITY SHOWN IN LUMINAIRE SCHEDULE TABLE DENOTES NUMBER OF FIXTURE HEADS. REFER TO PLAN FOR POLES WITH DOUBLE FIXTURES.
5. MOUNTING HEIGHTS:
 - 5.1. A MOUNTING HEIGHT OF 14'-6" CONSIST OF A 14' POLE WITH A 6" REVEAL ON THE CONCRETE LIGHT POLE BASE;
 - 5.2. A MOUNTING HEIGHT OF 16'-6" CONSIST OF A 14' POLE WITH A 2'-6" REVEAL ON THE CONCRETE LIGHT POLE BASE;
 - 5.3. A MOUNTING HEIGHT OF 20'-6" CONSIST OF A 20' POLE WITH A 6" REVEAL ON THE CONCRETE LIGHT POLE BASE;
 - 5.4. A MOUNTING HEIGHT OF 22'-6" CONSIST OF A 20' POLE WITH A 2'-6" REVEAL ON THE CONCRETE LIGHT POLE BASE.



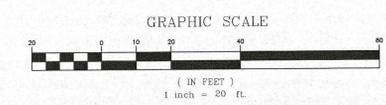
PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

LUMINAIRE SCHEDULE

| CALLOUT | SYMBOL | DESCRIPTION | MOUNTING | NOTE 1 | TOTAL LUMENS | LAMP DEPRECIATION | QUANTITY |
|---------|--------|---|----------|------------------------|--------------|-------------------|----------|
| Abc | | CIMARRON LED CL1 60 LEDs - 3000K - 80 CRI SPAULDING LIGHTING, CL1-60L-3K-2-BC | POLE | Mounting Height 18'-6" | 12437 | 0.9 | 4 |
| Bbc | | CIMARRON LED CL1 60 LEDs - 3000K - 80 CRI SPAULDING LIGHTING, CL1-60L-3K-3-BC | POLE | Mounting Height 18'-6" | 12498 | 0.9 | 1 |
| Cbc | | CIMARRON LED CL1 60 LEDs - 3000K - 80 CRI SPAULDING LIGHTING, CL1-60L-3K-4-BC | POLE | Mounting Height 18'-6" | 12578 | 0.9 | 2 |
| W | | CIMARRON LED CL1 60 LEDs - 3000K - 80 CRI SPAULDING LIGHTING, CL1-60L-3K-4-BC | WALL | Mounting Height 16'-0" | 12578 | 0.9 | 2 |
| Z | | Lotepak Series Medium LNC3 HUBBELL OUTDOOR, LNC3-24L3K-075-2 | WALL | Mounting Height 15'-0" | 5512 | 0.9 | 3 |
| Z3 | | Lotepak Series Medium LNC3 HUBBELL OUTDOOR, LNC3-24L3K-075-3 | WALL | Mounting Height 15'-0" | 5424 | 0.9 | 2 |
| Z4 | | Lotepak Series Medium LNC3 HUBBELL OUTDOOR, LNC3-24L3K-075-4-U | WALL | Mounting Height 15'-0" | 5461 | 0.9 | 4 |

GENERAL PHOTOMETRIC SCHEDULE

| | |
|----------------------|------|
| AVERAGE FOOT-CANDLES | 1.23 |
| MAXIMUM FOOT-CANDLES | 7.0 |
| MINIMUM FOOT-CANDLES | 0.0 |



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| REV | DATE | DESCRIPTION |
|-----|------|-------------|
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APPLICANT/OWNER:
SLV RIVER STREET, LLC
c/o GEOFF ENGLER & JUSTIN KREBS
257 HILLSIDE AVENUE
NEEDHAM, MA, 02494

PROJECT:
MULTI-FAMILY RESIDENTIAL REDEVELOPMENT PROJECT
19 & 35 RIVER STREET
WINCHESTER, MA

PROJECT NO. 2459-01 DATE: JUNE 11, 2019
SCALE: 1" = 20' DWG. NAME: C-2459-01
DESIGNED BY: DMR CHECKED BY: CMQ

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civil & structural engineering • land surveying
environmental consulting • landscape architecture
w i n c h e s t e r , m a

100 COMMERCE WAY, SUITE 5
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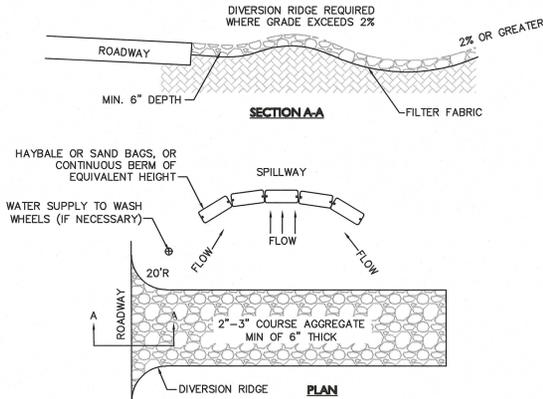
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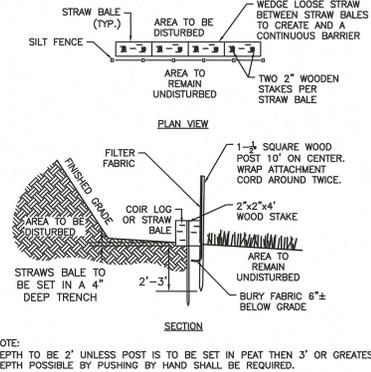
DRAWING TITLE: **PHOTOMETRICS PLAN** SHEET No. **C-107**

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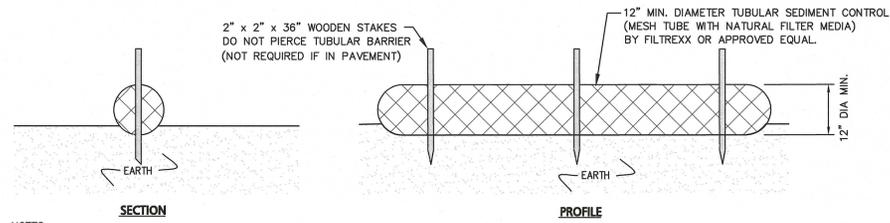
- NOTES:**
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTERING THE PUBLIC RIGHT-OF-WAY.
 3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
 4. USE SANDBAGS, HAYBALES, OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.
 5. SEE EROSION CONTROL PLAN FOR PAD DIMENSIONS AND LOCATION.



TEMPORARY CONSTRUCTION ENTRANCE/TRACKING PAD
NOT TO SCALE

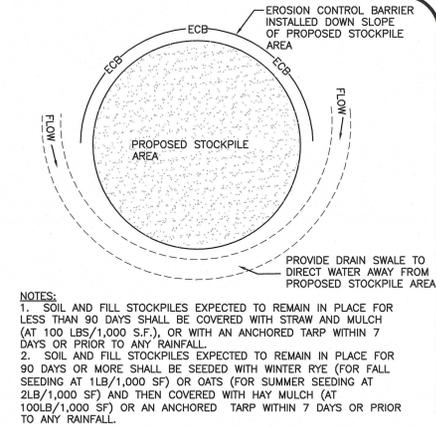


SILT FENCE AND STRAW BALE DETAIL
NOT TO SCALE



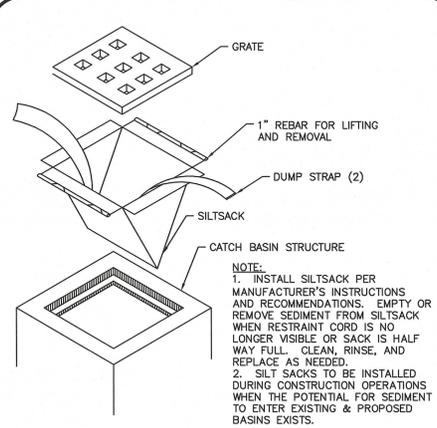
- NOTES:**
1. ALL MATERIALS TO MEET MANUFACTURERS SPECIFICATIONS.
 2. INSTALL WOODEN STAKES IN A CRISS-CROSS PATTERN EVERY 8' ON CENTER.
 3. THE CONTRACTOR SHALL MAINTAIN THE TUBULAR BARRIERS IN A FUNCTIONAL CONDITION AT ALL TIMES. THE CONTROLS SHALL BE ROUTINELY INSPECTED BY THE CONTRACTOR.
 4. WHERE THE TUBULAR BARRIERS REQUIRE REPAIR OR SEDIMENT REMOVAL, IT WILL BE COMPLETED BY THE CONTRACTOR AT NO ADDITIONAL COST.
 5. AT A MINIMUM, THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE WHEN THEY REACH 1/3 THE EXPOSED HEIGHT OF THE BARRIER.

TUBULAR SEDIMENT BARRIER DETAIL
NOT TO SCALE

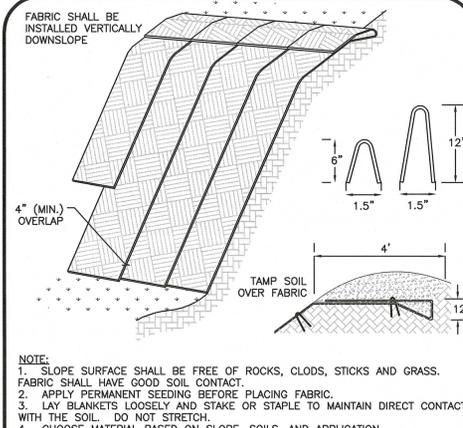


- NOTES:**
1. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 90 DAYS SHALL BE COVERED WITH STRAW AND MULCH (AT 100 LBS/1,000 S.F.), OR WITH AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.
 2. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR 90 DAYS OR MORE SHALL BE 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

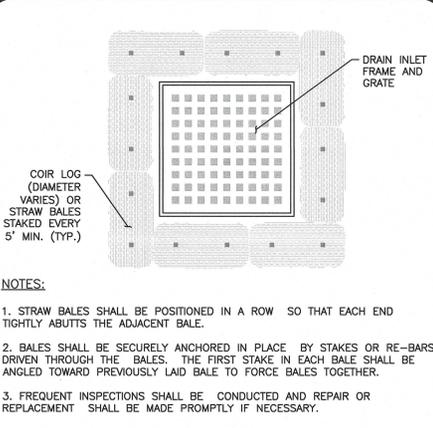


SILTSACK INLET DETAIL
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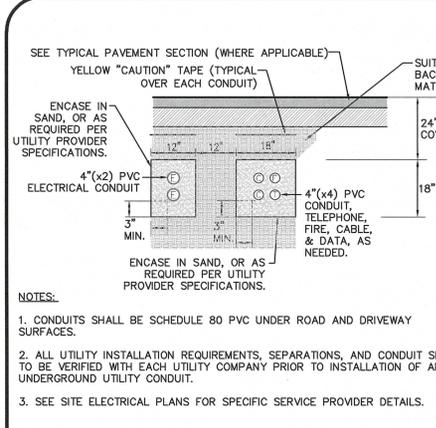
- NOTE:**
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. FABRIC SHALL HAVE GOOD SOIL CONTACT.
 2. APPLY PERMANENT SEEDING BEFORE PLACING FABRIC.
 3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
 4. CHOOSE MATERIAL BASED ON SLOPE, SOILS, AND APPLICATION.

EROSION CONTROL FABRIC
NOT TO SCALE



- NOTES:**
1. STRAW BALES SHALL BE POSITIONED IN A ROW SO THAT EACH END TIGHTLY ABUTTS THE ADJACENT BALE.
 2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANCHORED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
 3. FREQUENT INSPECTIONS SHALL BE CONDUCTED AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY IF NECESSARY.

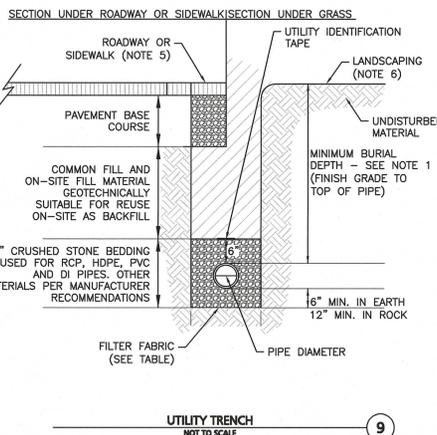
TYPICAL STRAW BALE FILTER DETAIL
NOT TO SCALE



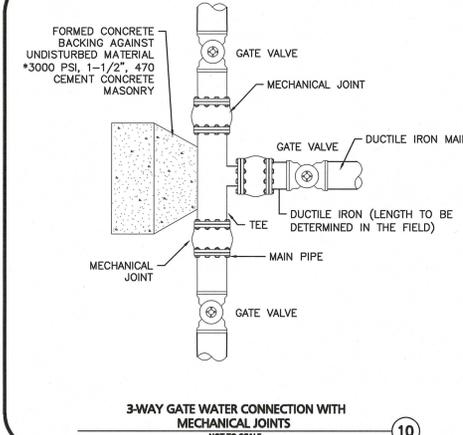
- NOTES:**
1. CONDUITS SHALL BE SCHEDULE 80 PVC UNDER ROAD AND DRIVEWAY SURFACES.
 2. ALL UTILITY INSTALLATION REQUIREMENTS, SEPARATIONS, AND CONDUIT SIZES TO BE VERIFIED WITH EACH UTILITY COMPANY PRIOR TO INSTALLATION OF ANY UNDERGROUND UTILITY CONDUIT.
 3. SEE SITE ELECTRICAL PLANS FOR SPECIFIC SERVICE PROVIDER DETAILS.

BURIED CONDUIT DETAIL
NOT TO SCALE

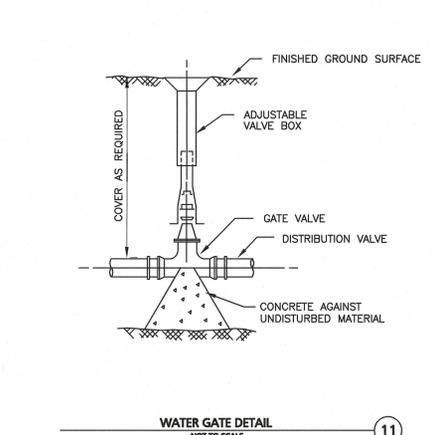
- NOTES:**
1. MINIMUM BURIAL DEPTH (FINISH GRADE TO TOP OF PIPE) GRAVITY PIPE (SEWER & DRAIN) - SEE PLAN OR PROFILE. PRESSURE PIPE UNDER PAVED - 4'. PRESSURE PIPE BENEATH UNPAVED - 3'. WATER PIPE - 5'.
 2. WHERE BACKFILL IS DESIGNATED AS COMPACTED, THIS MEANS 90 TO 95% STANDARD PROCTOR, AASHTO T-99. ALL FILL PLACED BELOW PIPES AND STRUCTURES MUST MEET THIS REQUIREMENT.
 3. TRENCHES WITHIN PUBLIC RIGHT OF WAY MAY REQUIRE FLOWABLE FILL. VERIFY WITH MUNICIPAL ENGINEER.
 4. WHERE WASTE FILLS ARE ENCOUNTERED AT SUBGRADE LEVEL FOR NEW UTILITIES, THE FILL SHOULD BE OVER-EXCAVATED. THE SUBGRADE SHOULD BE RE-COMPACTED, AND BACKFILL CONSISTING OF PIPE BEDDING MATERIAL, CRUSHED STONE OR OTHER SUITABLE GRANULAR FILL SHOULD BE PLACED TO A SUFFICIENT DEPTH TO CREATE A FIRM AND STABLE SUBGRADE (TYPICALLY 12 TO 18 INCHES OVER-EXCAVATION).
 5. REFER TO PAVING, CURBS, WALKS AND DRIVEWAY DETAILS.
 6. REFER TO LANDSCAPING DETAILS.



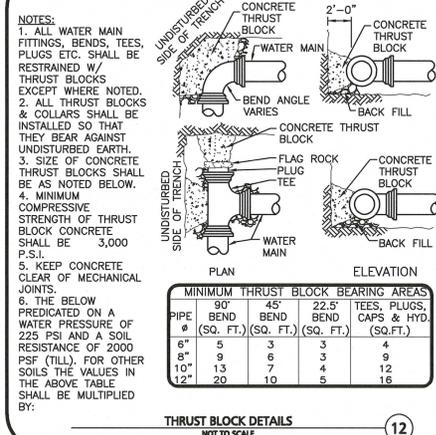
UTILITY TRENCH
NOT TO SCALE



3-WAY GATE WATER CONNECTION WITH MECHANICAL JOINTS
NOT TO SCALE



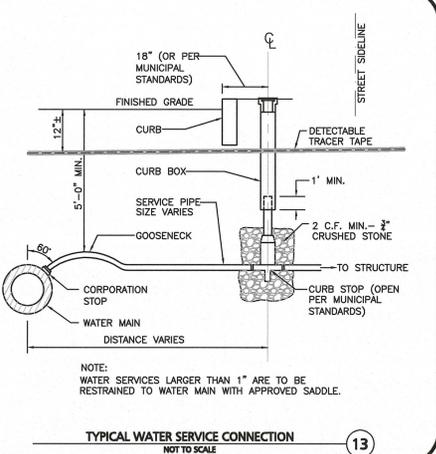
WATER GATE DETAIL
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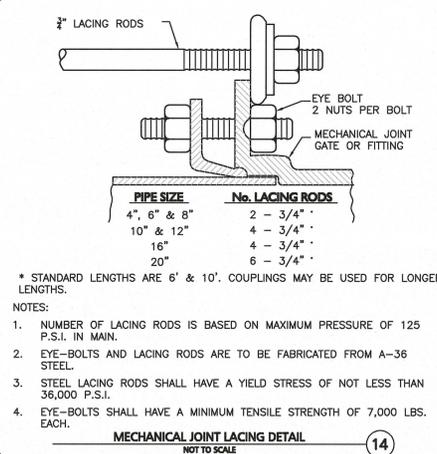
THRUST BLOCK DETAILS
NOT TO SCALE

FILTER FABRIC USE

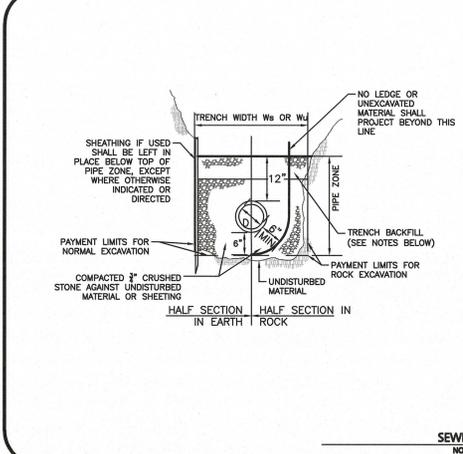
| | SOIL TYPE | |
|--------------------|----------------------------|----------------------------|
| | SILT OR CLAY | GRANULAR SOIL |
| ABOVE GROUND WATER | FILTER FABRIC NOT REQUIRED | FILTER FABRIC NOT REQUIRED |
| BELOW GROUND WATER | FILTER FABRIC REQUIRED | FILTER FABRIC NOT REQUIRED |



TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE



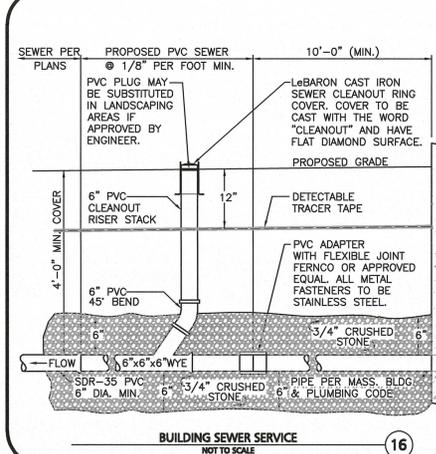
MECHANICAL JOINT LACING DETAIL
NOT TO SCALE



SEWER TRENCH
NOT TO SCALE

- NOTES:**
1. TRENCH BACKFILL TO BE USED WITHIN THE RIGHT-OF-WAY SHALL CONSIST OF EITHER GRAVEL BORROW MEETING MHD SPECIFICATION M1.03.0, TYPE "B" OR PROCESSED GRAVEL BORROW FOR SUBBASE MEETING MHD SPECIFICATION M1.03.1.
 2. WHERE THE REMOVAL OF 100 SQUARE FEET OR LESS OF ASPHALT IS REQUIRED WITHIN THE RIGHT OF WAY, THEN THE TRENCH BACKFILL MATERIAL SHALL CONSIST OF CONTROLLED DENSITY FILL MEETING MHD SPECIFICATION M4.08.0, TYPE "1E" OR "2E".
 3. TRENCH BACKFILL MATERIAL TO BE USED OF THE RIGHT-OF-WAY MAY CONSIST OF MATERIAL GENERATED DURING EXCAVATIONS PROVIDED ALL STONES GREATER THAN 4" ARE REMOVED PRIOR TO PLACEMENT AND COMPACTION.
 4. GRANULAR TRENCH BACKFILL MATERIAL USED WITHIN THE RIGHT-OF-WAY SHALL BE PLACED IN MAXIMUM 6" LIFTS AND MECHANICALLY COMPACTED TO A MINIMUM OF 95% OF THE MATERIAL'S MAXIMUM DRY DENSITY AND TO 90% ELSEWHERE AS DETERMINED BY ASTM D 1557.

SEWER TRENCH
NOT TO SCALE



BUILDING SEWER SERVICE
NOT TO SCALE



PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |

APPLICANT/OWNER:
SLV RIVER STREET, LLC
c/o GEOFF ENGLER & JUSTIN KREBS
257 HILLSIDE AVENUE
NEEDHAM, MA, 02494

PROJECT:
MULTI-FAMILY RESIDENTIAL REDEVELOPMENT PROJECT
19 & 35 RIVER STREET
WINCHESTER, MA

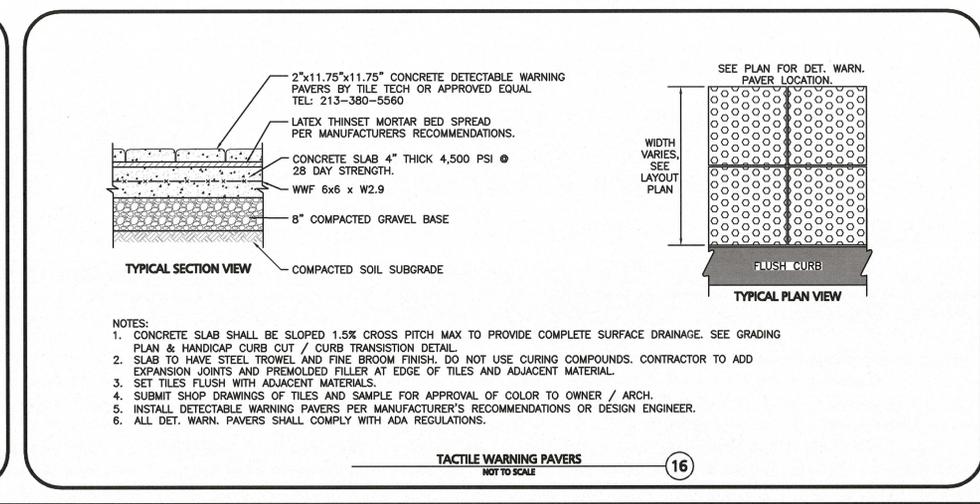
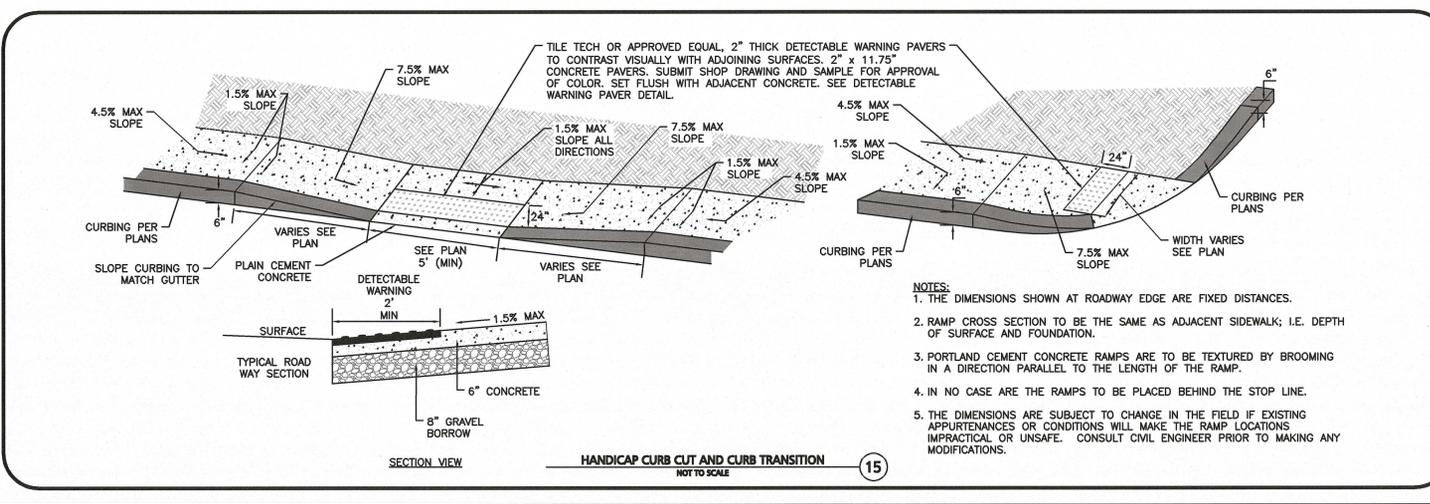
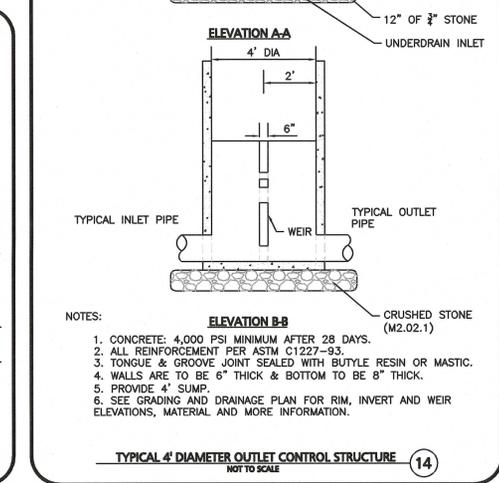
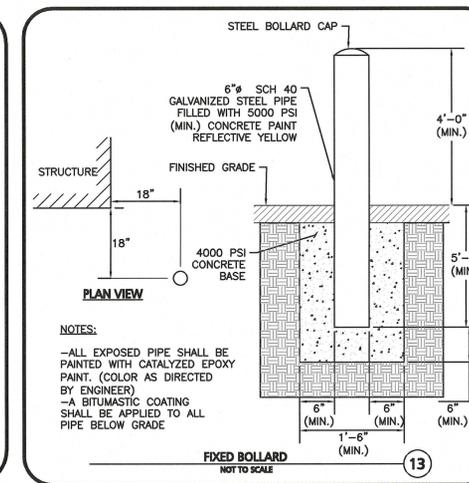
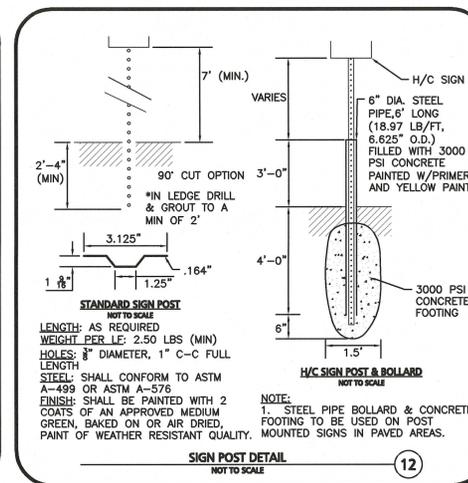
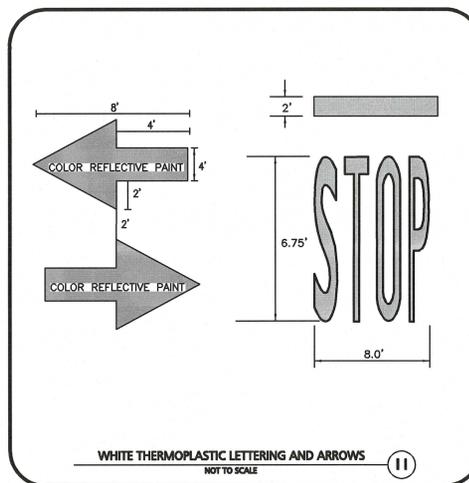
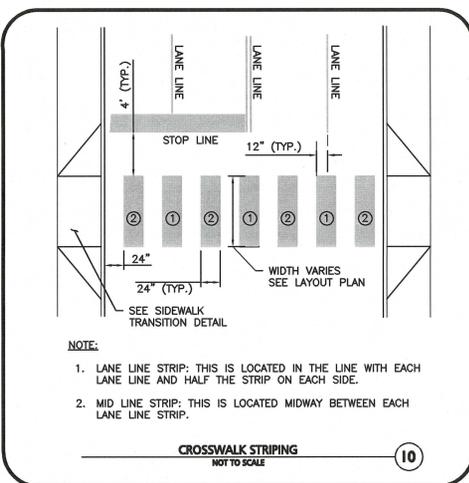
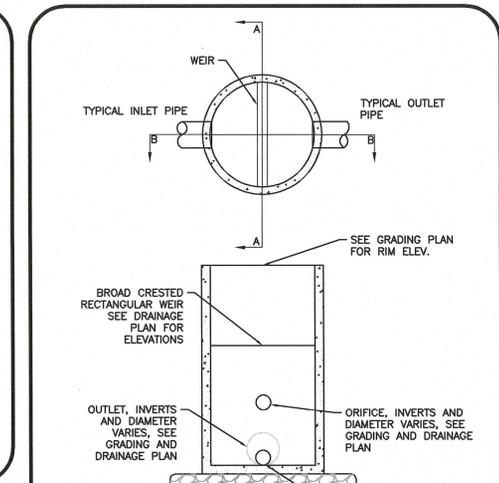
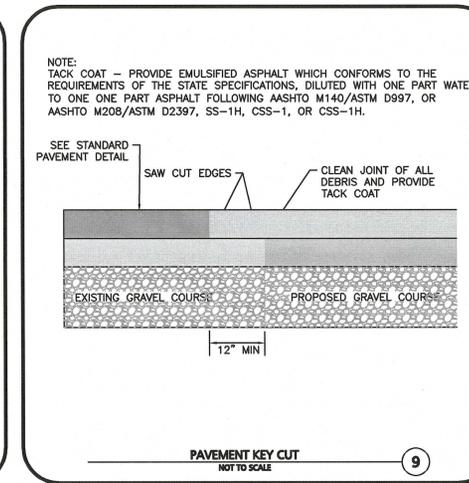
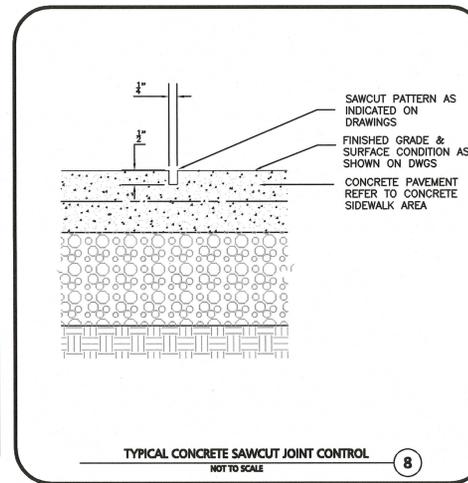
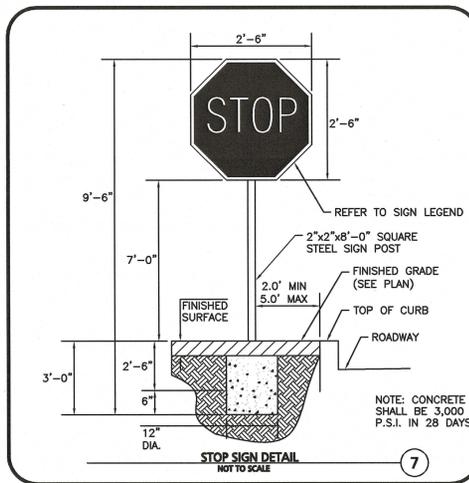
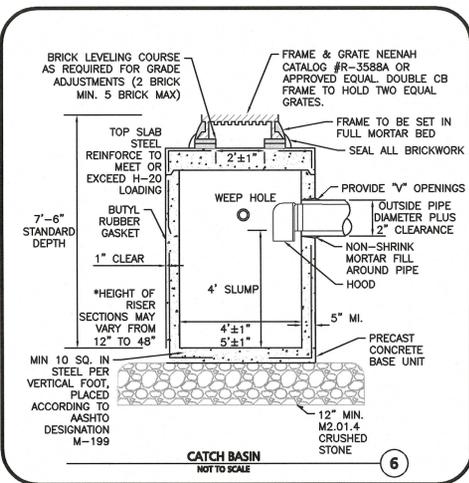
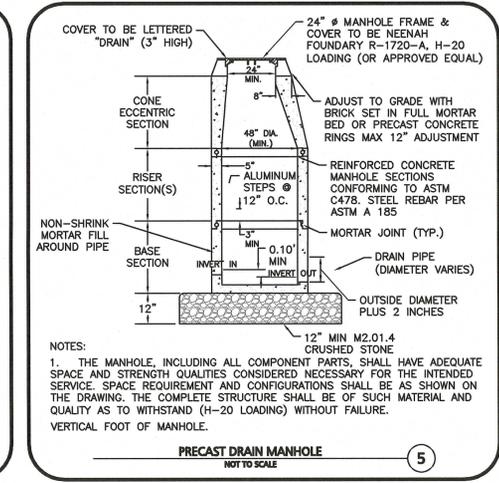
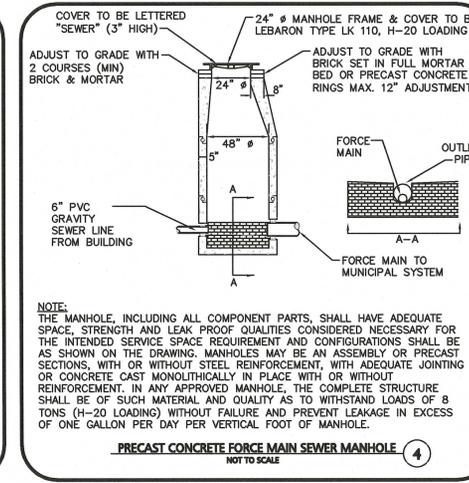
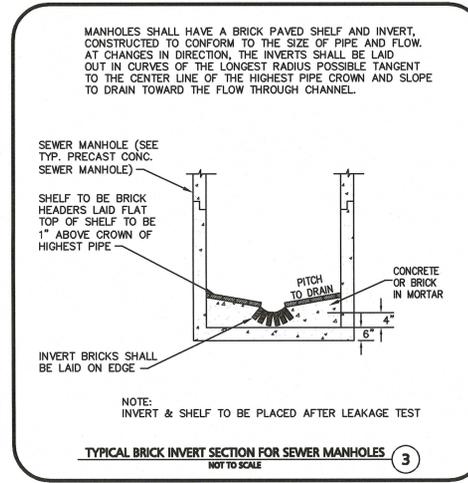
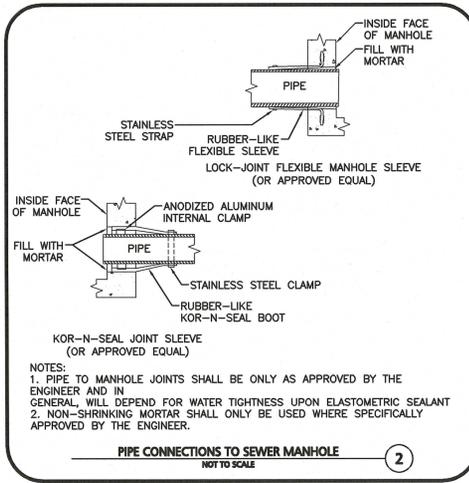
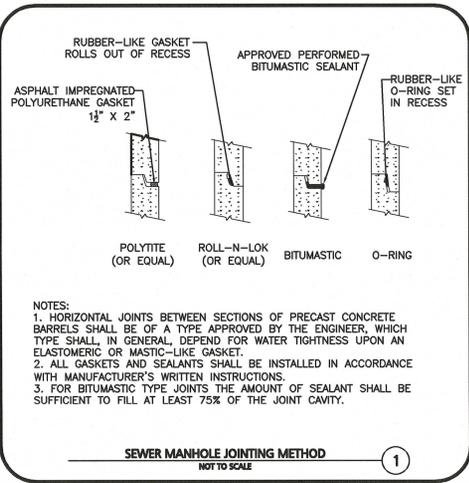
PROJECT NO. 2459-01 DATE: JUNE 11, 2019
SCALE: N.T.S. DWG. NAME: C2459-01
DESIGNED BY: DMR CHECKED BY: CMO
PREPARED BY:

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APPLICANT/OWNER:
SLV RIVER STREET, LLC
c/o GEOFF ENGLER & JUSTIN KREBS
257 HILLSIDE AVENUE
NEEDHAM, MA, 02494

PROJECT:
MULTI-FAMILY RESIDENTIAL REDEVELOPMENT PROJECT
19 & 35 RIVER STREET
WINCHESTER, MA

PROJECT NO. 2459-01 DATE: JUNE 11, 2019
SCALE: N.T.S. DWG. NAME: C-2459-01
DESIGNED BY: DMR CHECKED BY: CMQ

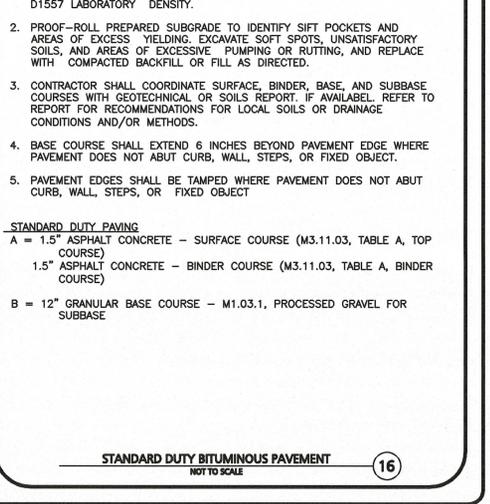
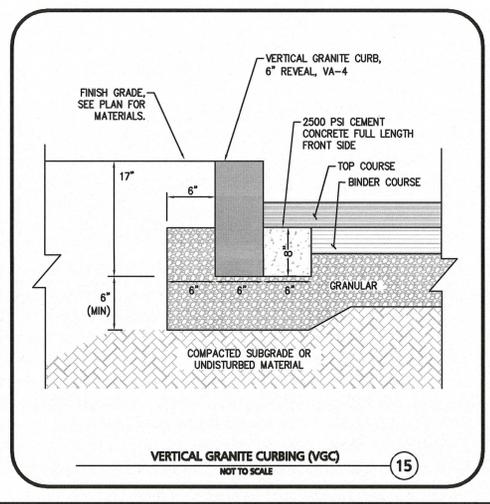
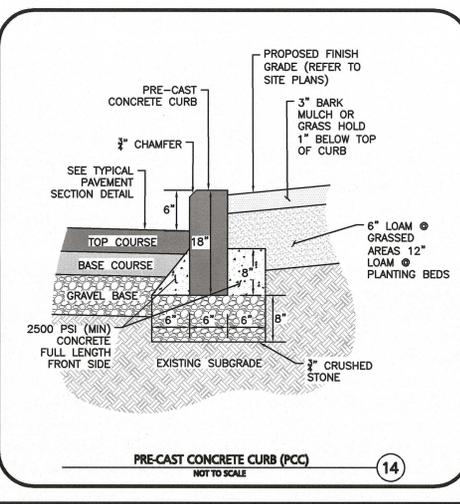
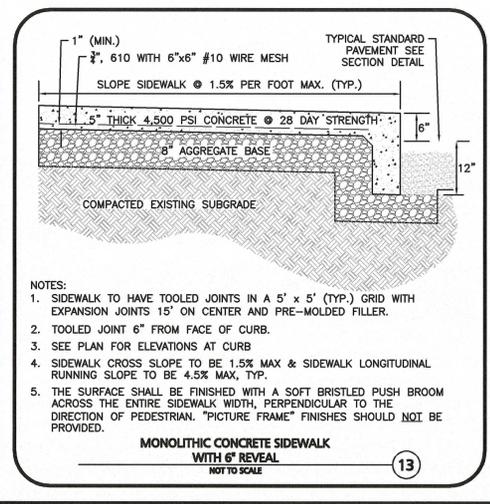
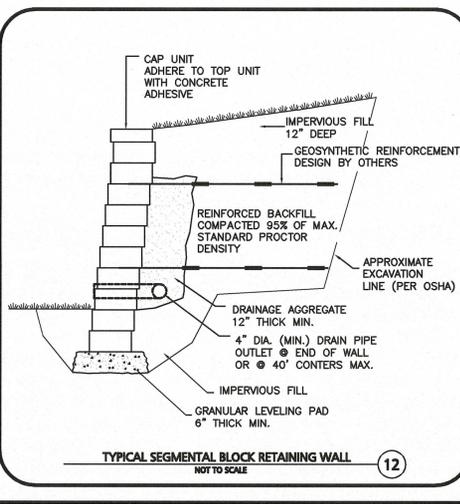
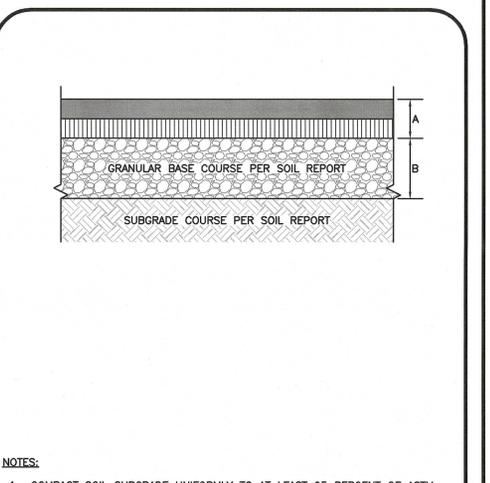
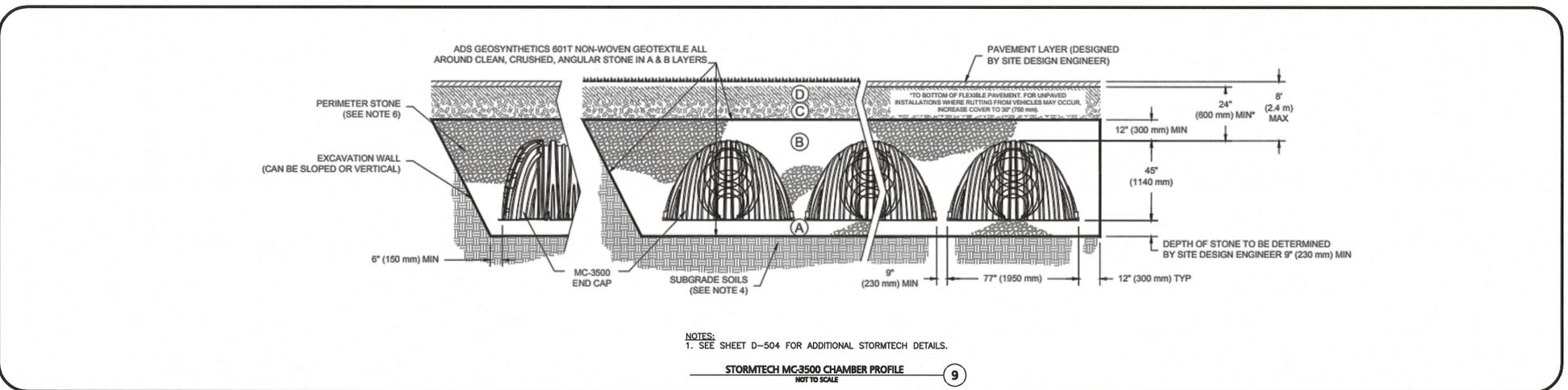
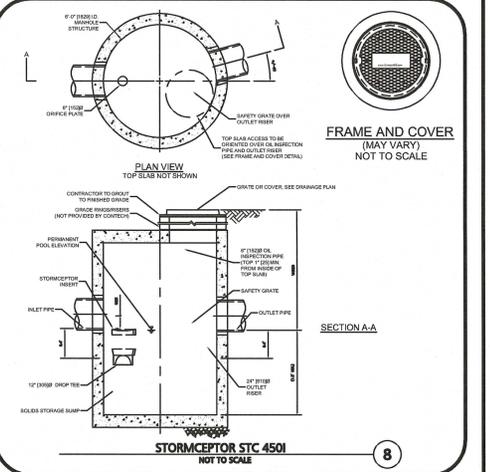
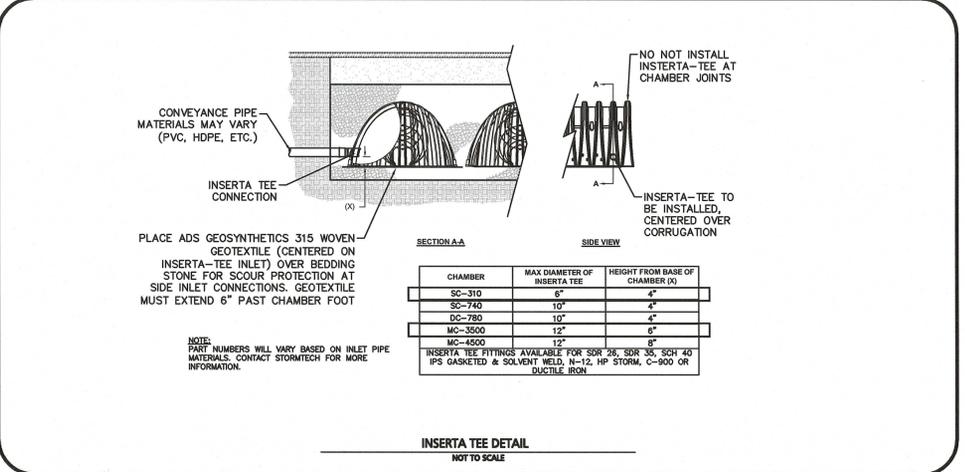
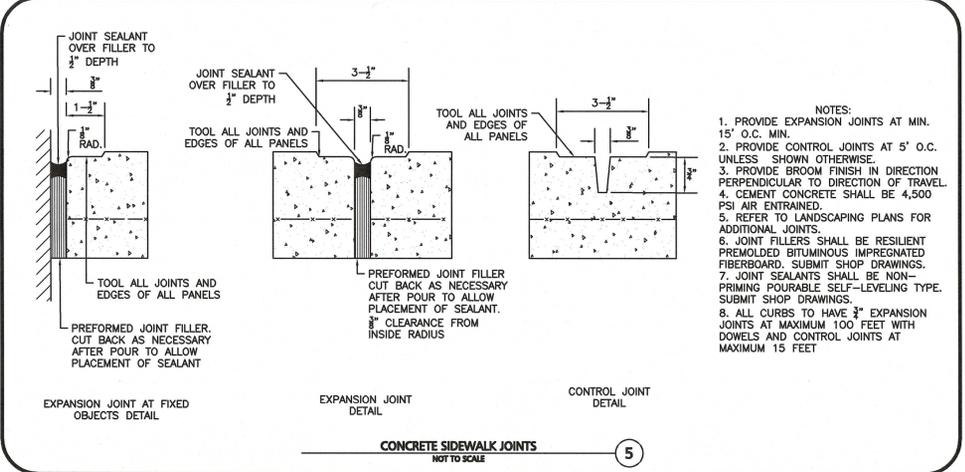
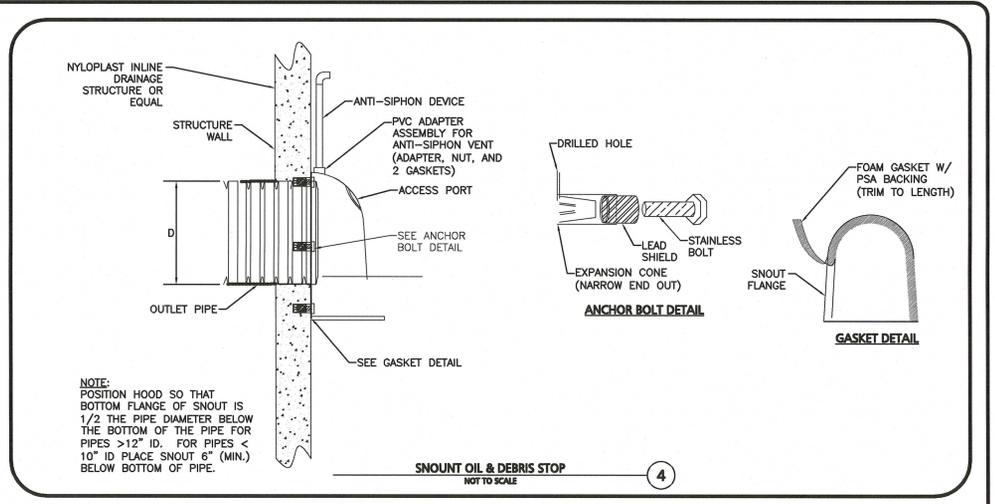
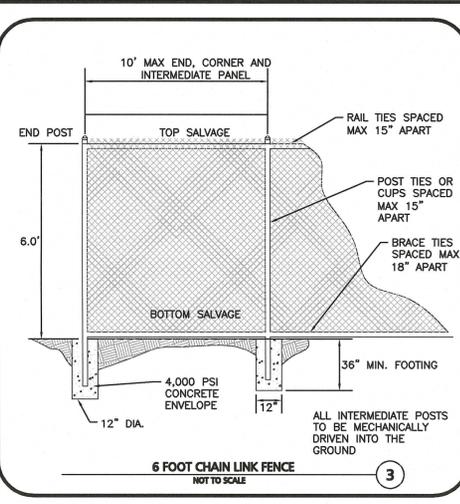
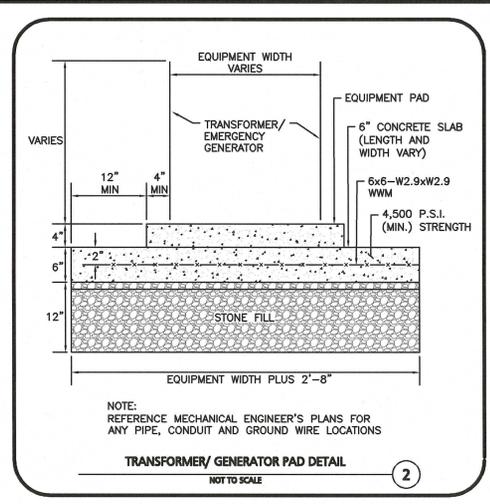
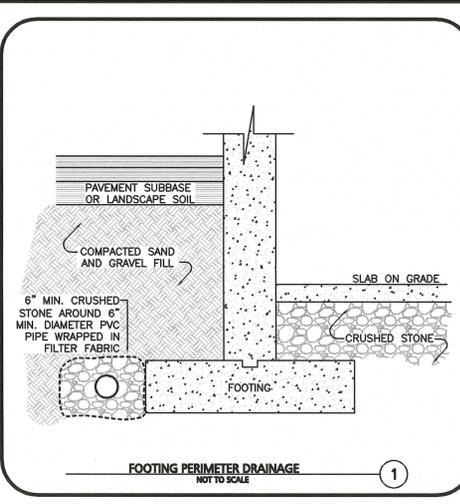
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PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

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PROJECT:
MULTI-FAMILY RESIDENTIAL REDEVELOPMENT PROJECT
19 & 35 RIVER STREET
WINCHESTER, MA

PROJECT NO. 2459-01 DATE: JUNE 11, 2019
SCALE: N.T.S. DWG. NAME: C-2459-01
DESIGNED BY: DMR CHECKED BY: CMQ

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STORMWATER CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740, SC-310, OR APPROVED EQUAL.
- CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
 - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310/SC-740 SYSTEM

- STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
 - STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-780 CONSTRUCTION GUIDE".
 - CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.
- STORMTECH RECOMMENDS 3 BACKFILL METHODS:
- STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUB-GRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
 - JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
 - MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
 - EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
 - THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
 - ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER Tired LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

GENERAL NOTES

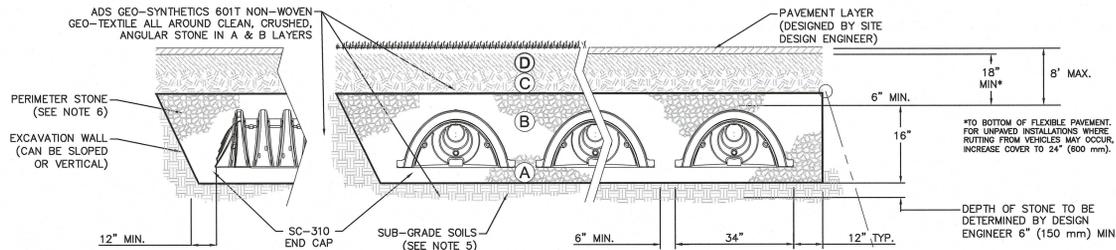
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| MATERIAL LOCATION | DESCRIPTION | AASHTO MATERIAL CLASSIFICATIONS | COMPACTION / DENSITY REQUIREMENT |
|-------------------|--|---|--|
| D | FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUB-BASE MAY BE PART OF THE 'D' LAYER. | N/A | PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS. |
| C | INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUB-BASE MAY BE A PART OF THE 'C' LAYER. | AASHTO M145* A-1, A-2-4, A-3 OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 | BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN). |
| B | EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE. | AASHTO M43* 3, 357, 4, 467, 5, 56, 57 | NO COMPACTION REQUIRED. |
| A | FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUB-GRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER. | AASHTO M43* 3, 357, 4, 467, 5, 56, 57 | PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. * * |

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

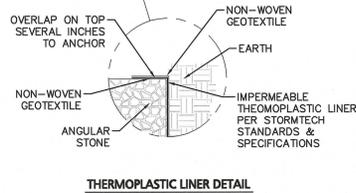


NOTES:

- SC-310 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUB-GRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUB-BASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

NOT TO SCALE



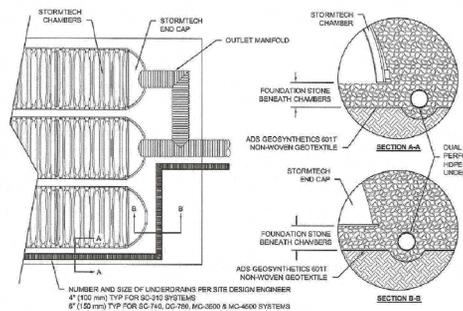
THERMOPLASTIC LINER DETAIL

NOT TO SCALE

2



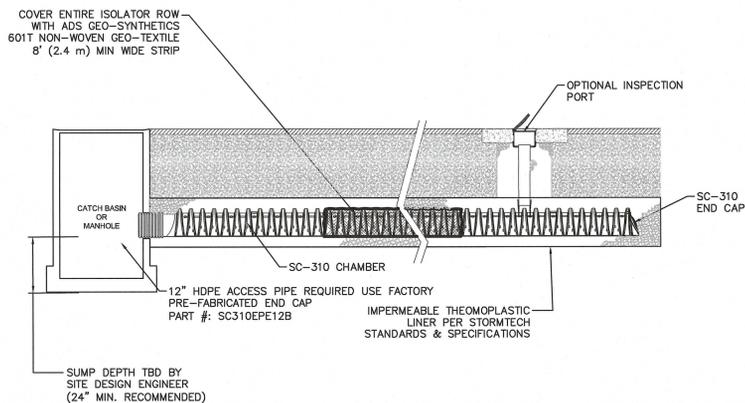
70 INWOOD ROAD, SUITE 3 | ROCKY HILL | CT | 06067
860-529-8188 | 888-892-2694 | WWW.STORMTECH.COM



UNDERDRAIN DETAIL

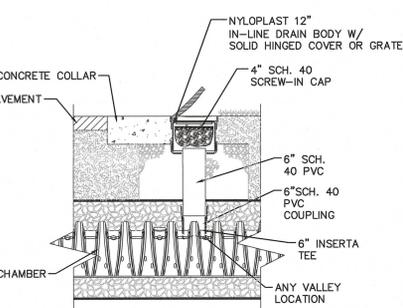
NOT TO SCALE

3



ISOLATOR ROW & INSPECTION PORT

NOT TO SCALE



NOTES:

- INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY
- ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.

4



PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |

APPLICANT/OWNER:
SLV RIVER STREET, LLC
c/o GEOFF ENGLER & JUSTIN KREBS
257 HILLSIDE AVENUE
NEEDHAM, MA, 02494

PROJECT:
MULTI-FAMILY RESIDENTIAL REDEVELOPMENT PROJECT
19 & 35 RIVER STREET
WINCHESTER, MA

PROJECT NO. 2459-01 DATE: JUNE 11, 2019

SCALE: N.T.S. DWG. NAME: C-2459-01

DESIGNED BY: DMR CHECKED BY: CMO

PREPARED BY:



WOBURN, MA • LAKEVILLE, MA • MANCHESTER, NH

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DRAWING TITLE: SHEET No.

DETAILS C-504

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PERSPECTIVE RENDERING AT RIVER ST.



EXISTING SITE AERIAL



PROJECT DESCRIPTION

THIS PROJECT IS THE NEW CONSTRUCTION OF A MULTI-FAMILY RESIDENTIAL BUILDING CONSISTING OF 147 DWELLING UNITS AT THE COMBINED LOTS OF 19 AND 35 RIVER STREET IN THE TOWN OF WINCHESTER, MASSACHUSETTS.

THE STRUCTURE WILL BE 5-STORIES OF RESIDENTIAL RENTAL UNITS OVER A PARTIAL 1-STORY PARKING GARAGE. THERE WILL BE 225 TOTAL PARKING SPACES, THE MAJORITY OF WHICH ARE COVERED BY A FRONT AND REAR RESIDENTIAL AMENITY DECK.

THE FIRST FLOOR OF THE BUILDING FEATURES AN AMENITY AREA ALIGNED BETWEEN FRONT AND REAR COURTYARD SPACES, FULLY ACCESSIBLE FOR RESIDENTS.

PROJECT METRICS

SEE CIVIL DRAWINGS FOR ZONING AND PARKING INFORMATION.

| BUILDING GSF / FAR | | | |
|--------------------|------------|-----------------|------|
| LEVEL | AREA | TOTAL SITE AREA | FAR |
| GRADE AT PARKING | 3,170 SF | 137,186 SF | 0.02 |
| 1ST FLOOR | 40,380 SF | 137,186 SF | 0.29 |
| 2ND FLOOR | 39,940 SF | 137,186 SF | 0.29 |
| 3RD FLOOR | 39,940 SF | 137,186 SF | 0.29 |
| 4TH FLOOR | 39,470 SF | 137,186 SF | 0.29 |
| 5TH FLOOR | 29,080 SF | 137,186 SF | 0.21 |
| TOTAL BUILDING GSF | 191,970 SF | | 1.40 |

TOTAL SQUARE FOOTAGE OF COVERED PARKING: 50,970 SF (NOT INCLUDED IN FAR)

| UNIT BREAKDOWN | COUNT | PERCENTAGE | AVERAGE SIZE |
|----------------|-------|------------|--------------|
| 1 BEDROOM | 31 | 22 | 855 SF |
| 1+ BEDROOM | 2 | 1 | 925 SF |
| 2 BEDROOM | 77 | 51 | 1,030 SF |
| 2+ BEDROOM | 18 | 13 | 1,175 SF |
| 3 BEDROOM | 19 | 13 | 1,190 SF |
| TOTAL COUNT | 147 | | 1,031 SF |

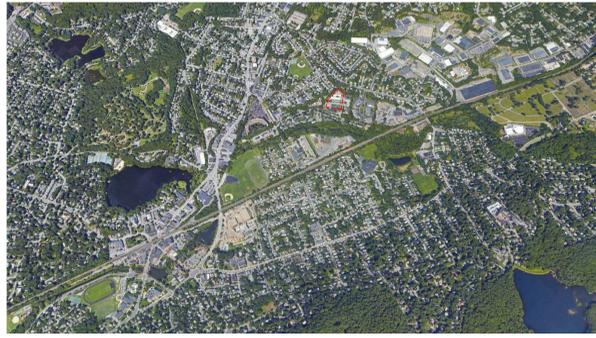
PROJECT AXONOMETRIC



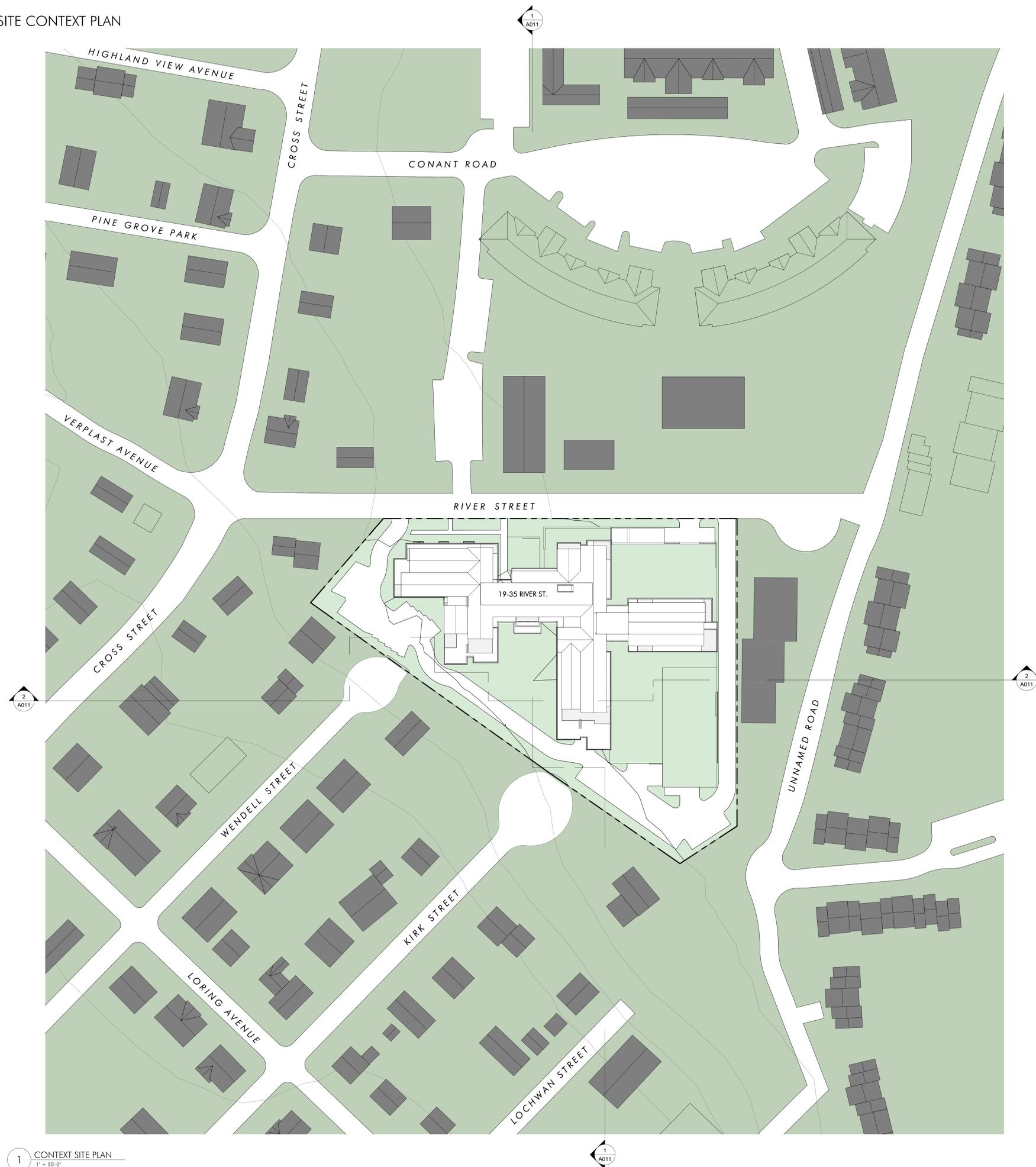
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AERIAL CONTEXT



SITE CONTEXT PLAN



1 CONTEXT SITE PLAN
1" = 50'-0"

ARCHITECT
EMBARC
60 K STREET, 3RD FLOOR
BOSTON, MA 02127
O: 617.766.8330
www.embarcstudio.com

OWNER
SLV RIVER STREET, LLC
252 HILLSIDE AVE. NEEDHAM, MA 02494

CONSULTANTS

19-35 RIVER ST
19-35 RIVER ST, WINCHESTER, MA 01890
COMPREHENSIVE PERMIT PLAN SET SUBMISSION

REVISIONS

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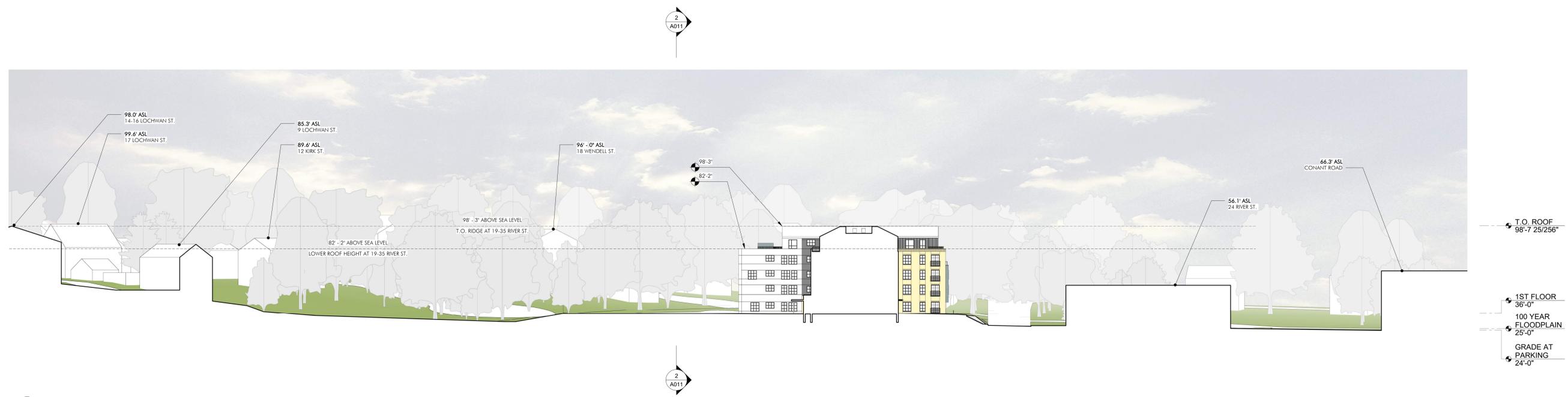


DRAWING INFORMATION
COMPREHENSIVE PERMIT PLAN SET SUBMISSION
DATE: JUNE 11, 2019
PROJECT #: 18032
SCALE: 1" = 50'-0"

DRAWING TITLE
SITE PLAN

DRAWING NUMBER
A010
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1 SITE SECTION, EAST WEST
 1" = 30'-0"



2 SITE SECTION, NORTH SOUTH
 1" = 30'-0"

19-35 RIVER ST
 19-35 RIVER ST, WINCHESTER, MA 01890
COMPREHENSIVE PERMIT PLAN SET SUBMISSION

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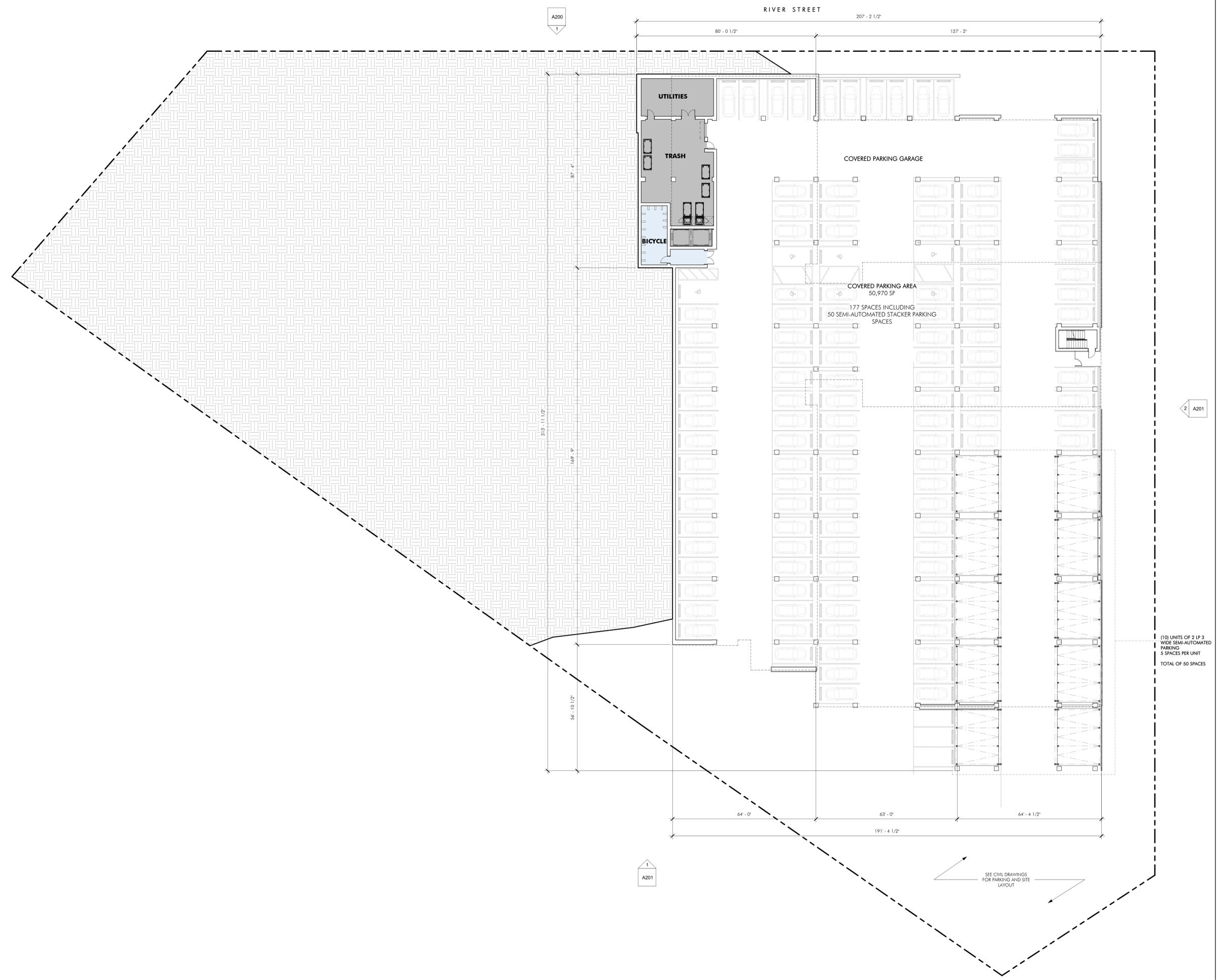
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| SCALE: | 1" = 30'-0" |

DRAWING TITLE
SITE SECTIONS

DRAWING NUMBER
A011

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 DATE: JUNE 11, 2019
 PROJECT #: 18032
 SCALE: 1/16" = 1'-0"

DRAWING TITLE
 PARKING LEVEL PLAN

DRAWING NUMBER
A100



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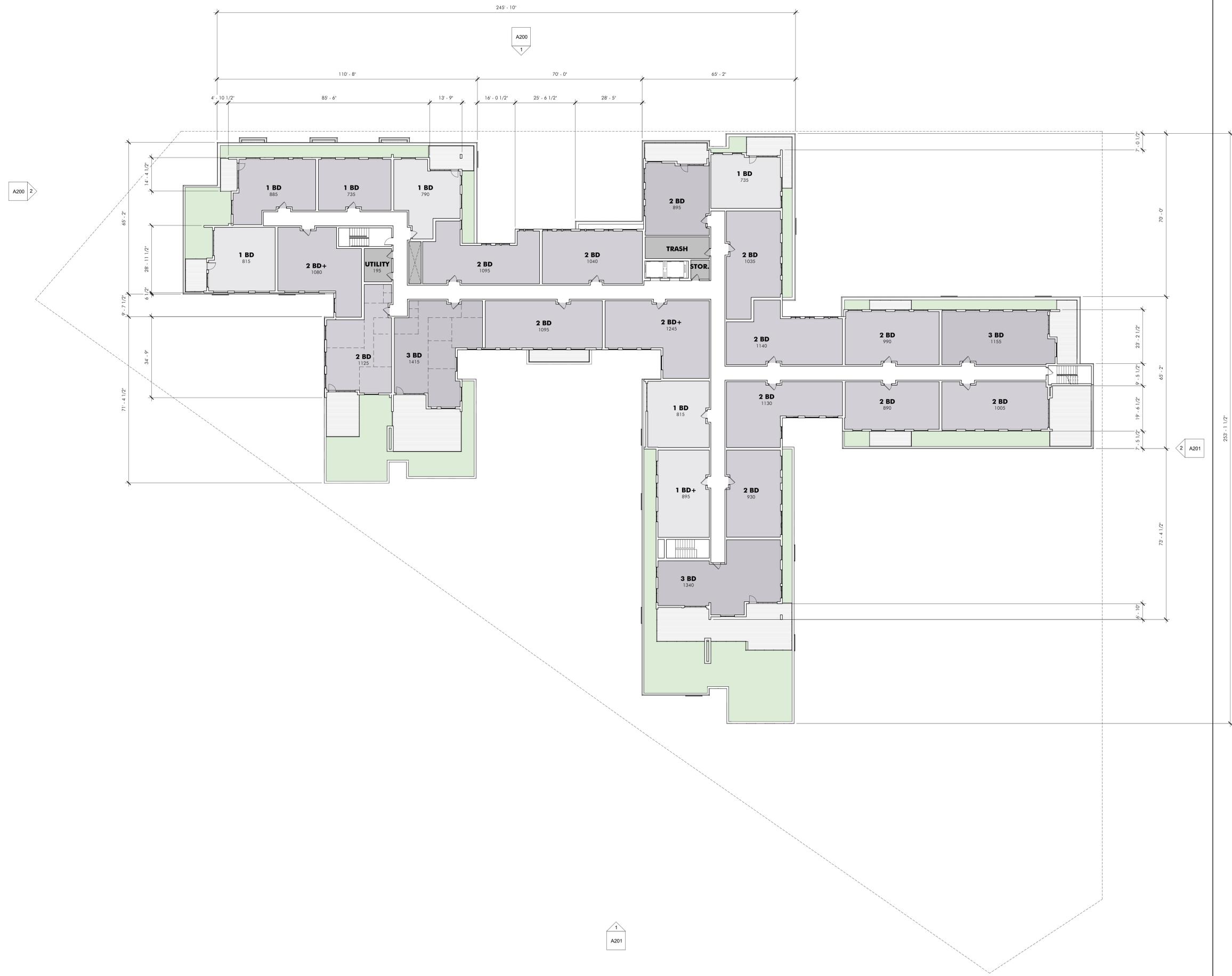
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 PROJECT #: 18032
 SCALE: 1/16" = 1'-0"

DRAWING TITLE
GROUND LEVEL PLAN

DRAWING NUMBER
A101

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| DATE: | JUNE 11, 2019 |
| PROJECT #: | 18032 |
| SCALE: | 1/16" = 1'-0" |

DRAWING TITLE
ROOF PLAN

DRAWING NUMBER
A104

A200

A200

A201

A201



1 NORTH ELEVATION - RIVER STREET
 1/16" = 1'-0"



2 WEST ELEVATION
 1/16" = 1'-0"

19-35 RIVER ST
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 DATE: JUNE 11, 2019
 PROJECT #: 18032
 SCALE: 1/16" = 1'-0"

DRAWING TITLE
BUILDING ELEVATIONS

DRAWING NUMBER
A200



- T.O. ROOF
98'-7 25/256"
- 18'-5 25/256"
- 5TH FLOOR
80'-2"
- 10'-8"
- 4TH FLOOR
69'-6"
- 10'-8"
- 3RD FLOOR
58'-10"
- 10'-8"
- 2ND FLOOR
48'-2"
- 12'-2"
- 1ST FLOOR
36'-0"
- 100 YEAR FLOODPLAIN
25'-0"
- GRADE AT PARKING
24'-0"

1 SOUTH ELEVATION
1/16" = 1'-0"



- T.O. ROOF
98'-7 25/256"
- 5TH FLOOR
80'-2"
- 4TH FLOOR
69'-6"
- 3RD FLOOR
58'-10"
- 2ND FLOOR
48'-2"
- 1ST FLOOR
36'-0"
- 100 YEAR FLOODPLAIN
25'-0"
- GRADE AT PARKING
24'-0"

2 EAST ELEVATION
1/16" = 1'-0"

19-35 RIVER ST
19-35 RIVER ST, WINCHESTER, MA 01890
COMPREHENSIVE PERMIT PLAN SET SUBMISSION

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| PROJECT #: | 18032 |
| SCALE: | 1/16" = 1'-0" |

DRAWING TITLE
BUILDING ELEVATIONS

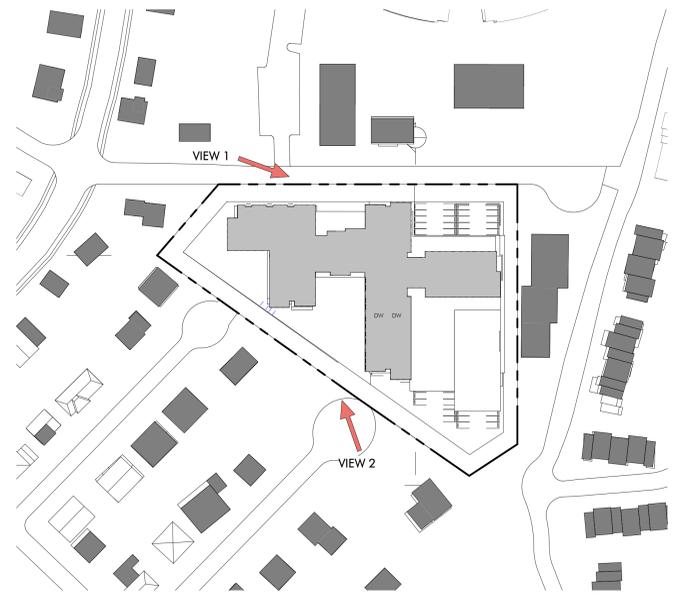
DRAWING NUMBER
A201



1 PERSPECTIVE RENDERING
 LOOKING SOUTH ON RIVER STREET



2 PERSPECTIVE RENDERING
 LOOKING NORTH-EAST FROM KIRK ST.



3 PERSPECTIVE KEY PLAN

19-35 RIVER ST
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DRAWING INFORMATION
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 SET SUBMISSION
 DATE: JUNE 11, 2019
 PROJECT #: 18032
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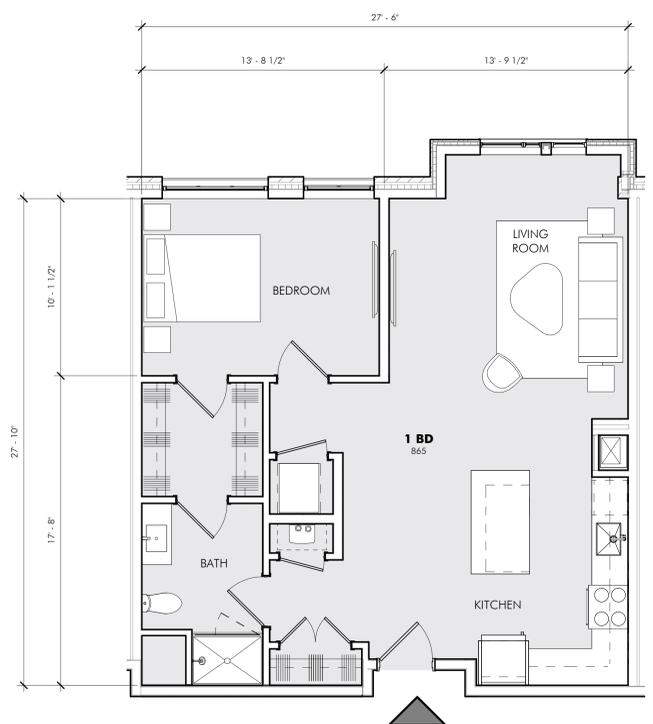
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**BUILDING
 PERSPECTIVES**

DRAWING NUMBER
A400

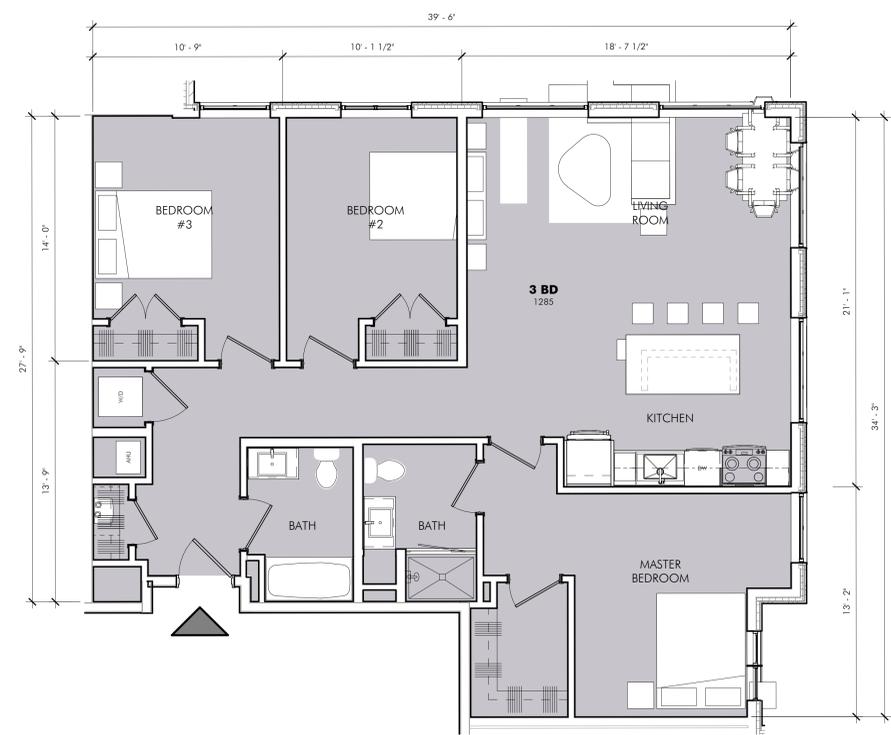
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2 TYPICAL 2-BEDROOM PLAN
 1/4" = 1'-0"



1 TYPICAL 1-BEDROOM PLAN
 1/4" = 1'-0"



3 TYPICAL 3-BEDROOM PLAN
 1/4" = 1'-0"

19-35 RIVER ST
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 DATE: JUNE 11, 2019
 PROJECT #: 18032
 SCALE: 1/4" = 1'-0"

DRAWING TITLE
 TYPICAL UNITS

DRAWING NUMBER
A500



CONCEPT LAYOUT PLAN NOTES

1. THIS PLAN HAS BEEN PREPARED BASED ON REFERENCES INCLUDING:
-GOOGLE EARTH AERIAL IMAGERY
-MASSGIS ORTHOIMAGERY
2. EXACT LOCATION OF PROPOSED BUILDING AND IMPROVEMENTS MUST BE CONFIRMED AND EVALUATED UPON COMPLETION OF SURVEY.
3. THIS PLAN IS INTENDED FOR CONCEPTUAL REVIEW PURPOSES ONLY. THE EXISTING CONDITIONS SHOWN HEREON IS BASED UPON INFORMATION THAT WAS SUPPLIED TO OUR OFFICE AT THE TIME OF PLAN PREPARATION AND MAY BE SUBJECT TO CHANGE AND MUST BE UPDATED UPON PERFORMANCE OF A SURVEY.