

SITE DEVELOPMENT PLANS FOR ORION STUDENT HOUSING

25, 27, 29 & 35 MAIN STREET DURHAM, NH

LOCUS MAP NOT TO SCALE

OWNER\APPLICANT:
ORION UNH LLC
225 FRANKLIN STREET, 26TH FLOOR
BOSTON, MA 02110

SITE ENGINEERS:
ALLEN & MAJOR ASSOCIATES, INC.
250 COMMERCIAL STREET
SUITE 1001

ARCHITECT:
DESTEFANO ARCHITECTS
23 HIGH STREET
PORTSMOUTH, NH 03801

MANCHESTER, NH 03101

ABUTTERS:

TAX MAP 5 LOT 1-5 37 MAIN STREET DURHAM LLC 6 PARK STREET NEWBURYPORT, MA 01950

TAX MAP 5 LOT 1-9 KYREAGES INC P O BOX 174 ELIOT, ME 03903

TAX MAP 5 LOT 1-15 KYREAGES INC P O BOX 174 ELIOT, ME 03903

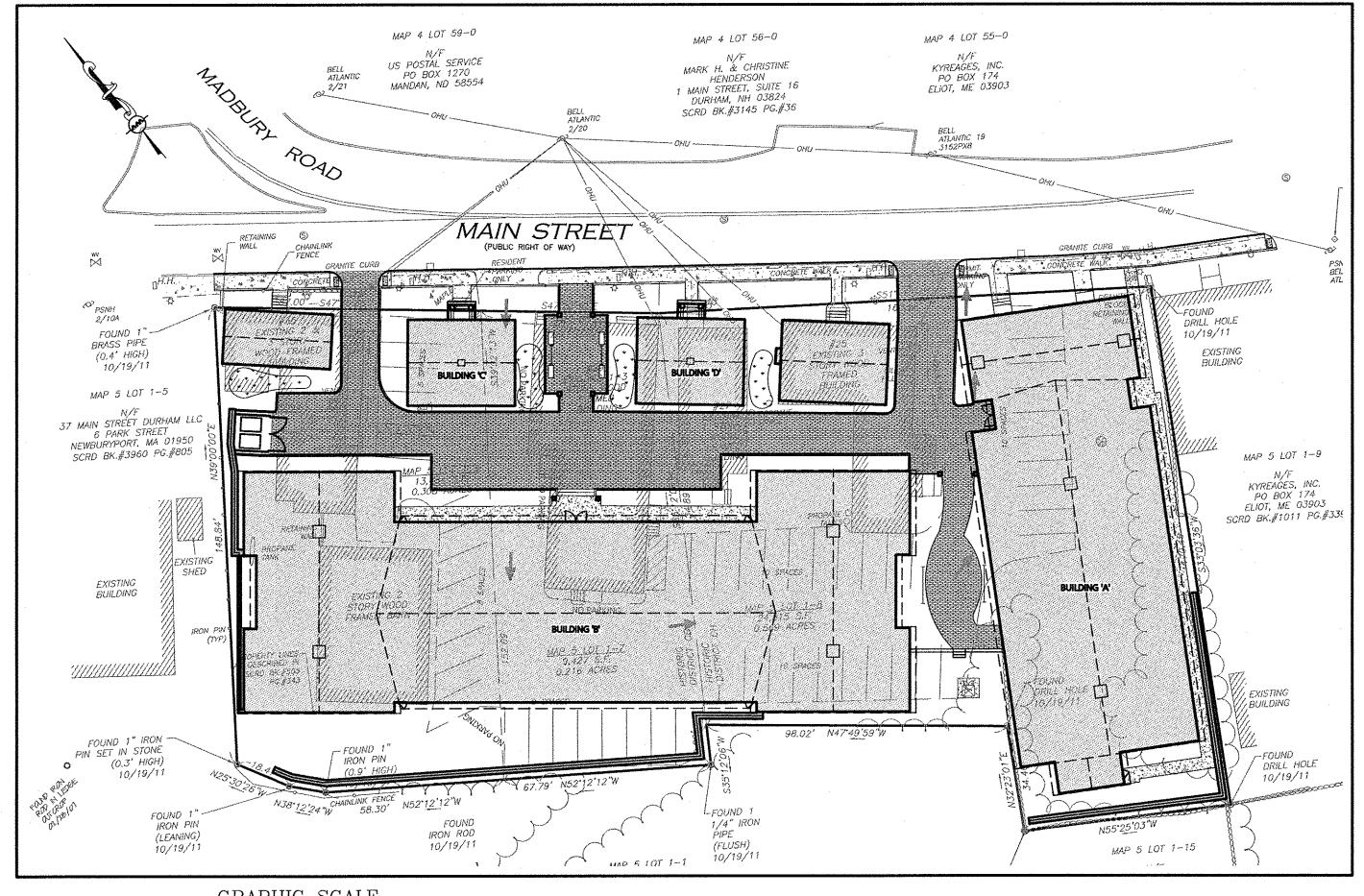
TAX MAP 5 LOT 1-1A/1B
COLONIAL DURHAM ASSOCIATES
ADMINISTRATIVE OFFICES
7 MILL ROAD UNIT C
DURHAM, NH 03824

TAX MAP 4 LOT 55-0 KYREAGES INC P O BOX 174 ELIOT, ME 03903

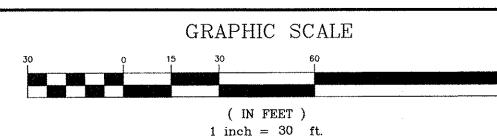
TAX MAP 4 LOT 56-0 HENDERSON, CHRISTINE & HENDERSON, MARK H 1 MAIN STREET, SUITE 16 DURHAM, NH 03824

TAX MAP 4 LOT 59-0 US POSTAL SERVICE P.O. BOX 1270 MANDAN, ND 58554

TAX MAP 4 LOT 1-0 HENDERSON, EARLE H & MARK H 1 MAIN STREET, SUITE 16 DURHAM, NH 03824



LIST OF DRAWINGS					
DRAWING TITLE	SHEET NO.	ISSUED	REVISED		
EXISTING CONDITIONS PLAN	EX-I	Feb. 2, 2012	=		
LAYOUT & MATERIALS PLAN	C-I	Sept. 4, 2013	-		
GRADING & DRAINAGE PLAN	C-2	Sept. 4, 2013	***		
UTILITY PLAN	C-3	Sept. 4, 2013	=		
LANDSCAPE PLAN	C-4	Sept. 4, 2013	=		
STORMWATER POLLUTION PREVENTION PLAN	SWPPPI	Sept. 4, 2013	-		
STORMWATER POLLUTION PREVENTION PLAN	SWPPP2	Sept. 4, 2013	-		
STORMWATER POLLUTION PREVENTION DETAILS	SWPPP3	Sept. 4, 2013	=		
DETAILS	D-I	Sept. 4, 2013	=		
DETAILS	D-2	Sept. 4, 2013	· =		
DETAILS	D-3	Sept. 4, 2013	440		
DETAILS	D-4	Sept. 4, 2013	***		
DETAILS	D-5	Sept. 4, 2013	***		
EXIST. WATERSHED PLAN	EWP	Sept. 4, 2013	-		
PROP. WATERSHED PLAN	PWP	Sept. 4, 2013	•		
BUILDING A ELEVATIONS	A-2.1	Sept. 4, 2013	=		
BUILDING A&B ELEVATIONS	A-2.2	Sept. 4, 2013	==		
BUILDING B ELEVATIONS	A-2.3	Sept. 4, 2013	=		
BUILDING B ELEVATIONS	A-2.4	Sept. 4, 2013	-		
BUILDING C&D ELEVATIONS	A-2.5	Sept. 4, 2013	-		





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250 COMMERCIAL STREET

SUITE 1001

MANCHESTER, NH 03101

TEL: (603) 627-5500

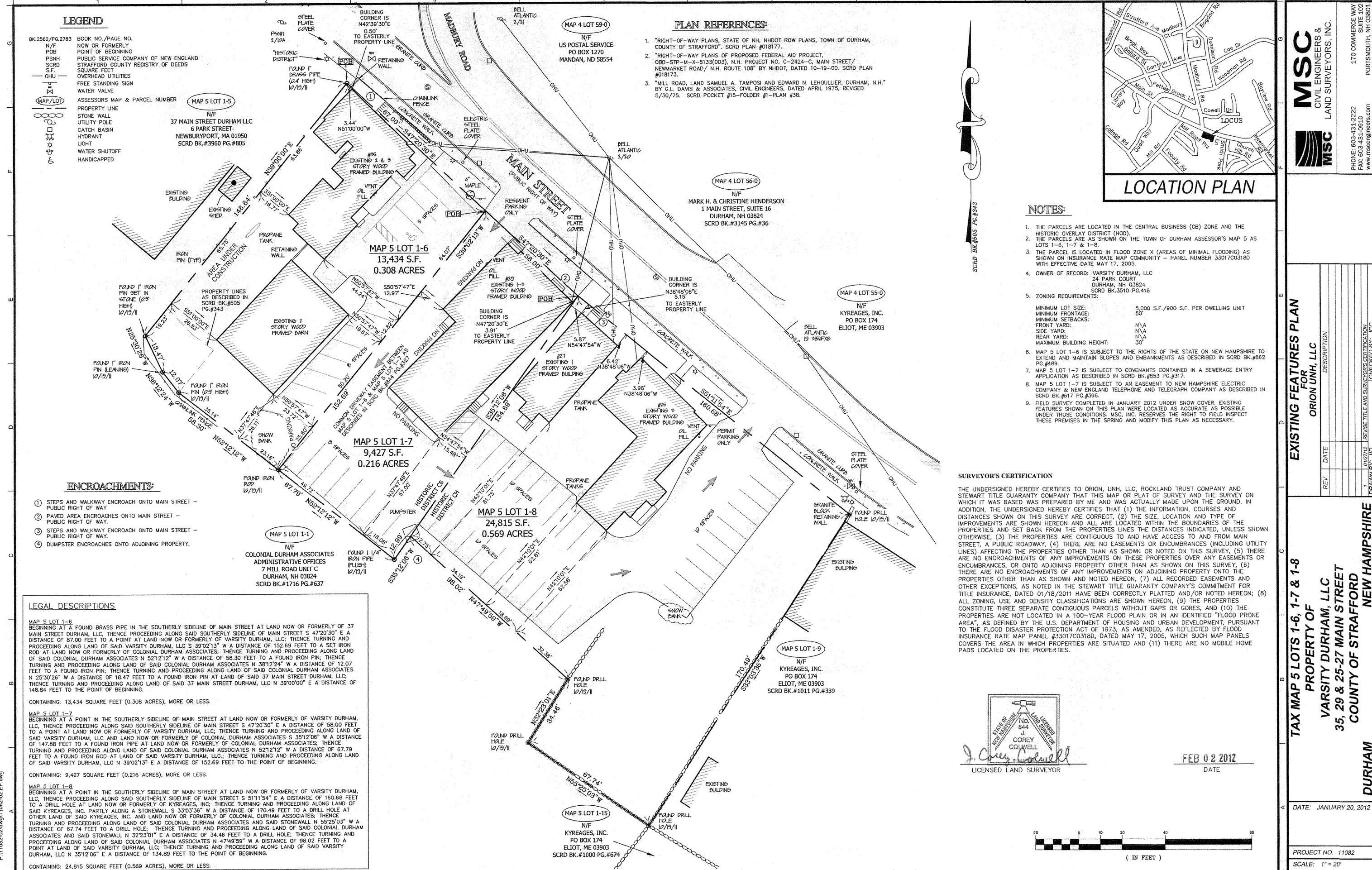
FAX: (603) 627-5501

WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

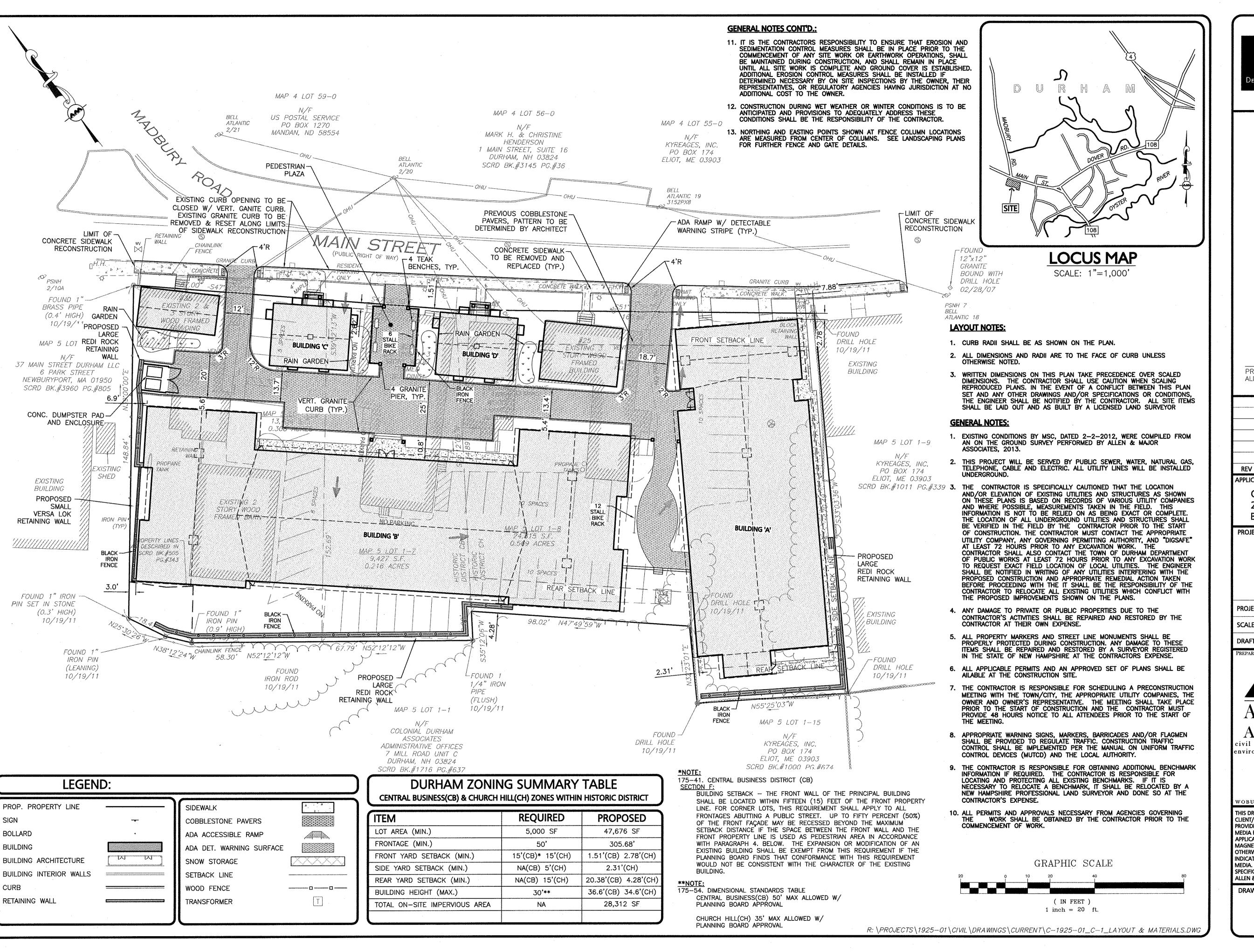
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ISSUED FOR PLANNING BOARD REVIEW: SEPTEMBER 4, 2013



Feb 02, 2012 - 11:08am



23 High Street Portsmouth, NH 03801

> 603.431.8701 603.422.8707

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV DATE DESCRIPTION

APPLICANT\OWNER:

ORION UNH LLC 225 FRANKLIN STREET, 26TH FLOOR BOSTON, MA 02110

PROJECT:

ORION STUDENT HOUSING **MAIN STREET** DURHAM, NEW HAMPSHIRE

PROJECT NO. 1925-01 DATE: 09-04-13 1" = 20' DWG. NAME: C - LAYOUT SCALE: **DRAFTED BY:** WBL | CHECKED BY:



civil & structural engineering • land surveying environmental consulting • landscape architecture www.allenmajor.com 250 COMMERCIAL STREET

SUITE 1001 MANCHESTER, NH 03101 TEL: (603) 627-5500

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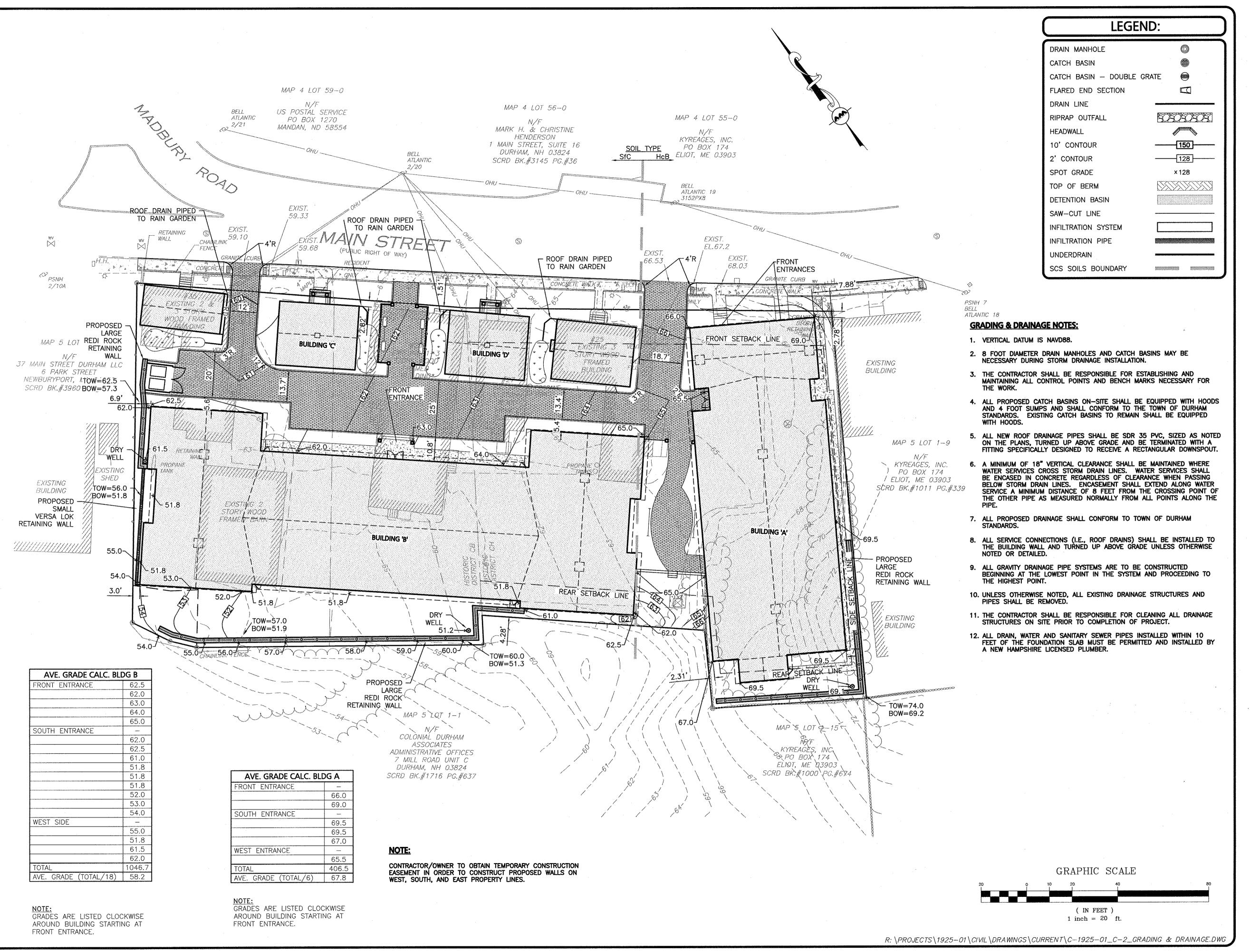
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DRAWING TITLE:

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LAYOUT & MATERIALS PLAN

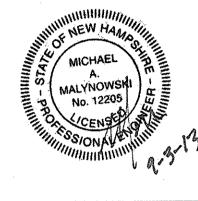
SHEET No.





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225 FRANKLIN STREET, 26TH FLOOR BOSTON, MA 02110

ORION

STUDENT HOUSING **MAIN STREET**

09-04-13

GRADING

DURHAM, NEW HAMPSHIRE

1925-01 DATE: PROJECT NO. 1" = 20' DWG. NAME:

SCALE: WBL | CHECKED BY: DRAFTED BY:



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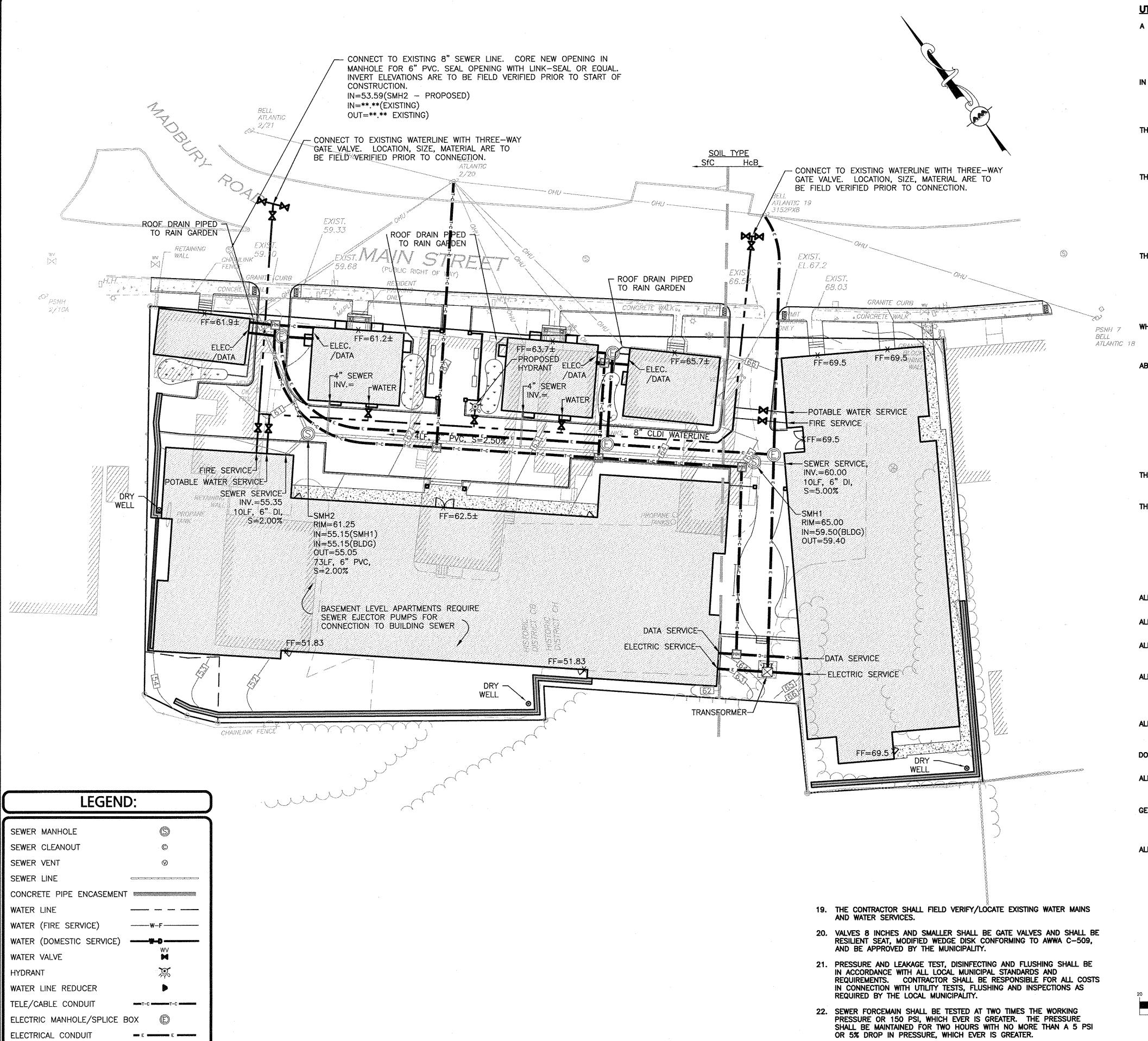
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DRAWING TITLE:

SHEET No.

GRADING & DRAINAGE PLAN



HAND HOLE

UTILITY NOTES:

- 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.
- IN THE CASE THAT WATER MAINS CROSS SANITARY SEWER MAINS AND/OR STORM DRAINS AND ARE SEPARATED BY LESS THAT 18" OF VERTICAL CLEARANCE, THE CROSSING SHALL BE ENCASED IN CONCRETE FOR THE ENTIRE WIDTH OF THE TRENCH AND FOR A DISTANCE OF 8 LINEAR FEET CENTERED ON THE CROSSING.
- THE LATEST STANDARDS OF THE TOWN OF DURHAM———, DEPARTMENT OF PUBLIC WORKS, WASTEWATER DIVISION SHALL BE FOLLOWED WHEN PERFORMING ANY SANITARY SEWER WORK. SEWER WORK WILL BE INSPECTED BY TOWN OF DURHAM———— PERSONNEL AND ALL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE LATEST STANDARDS OF THE TOWN OF DURHAM————— AND DEPARTMENT OF PUBLIC WORKS SHALL BE FOLLOWED WHEN INSTALLING ANY WATER LINES, AND ALL WATER LINE WORK WILL BE INSPECTED BY TOWN/CITY OF ————— PERSONNEL. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR 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.
- THE CONTRACTOR SHALL REFER TO ARCHITECTS PLANS 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 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
- 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.
- 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. 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 FACILITATES, AS REQUIRED TO RESTORE THE ORIGINAL GRADE.
- THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENTS OF NATURAL GAS, ELECTRIC, TELEPHONE AND ANY OTHER UTILITY BY THE UTILITY OWNER.
- THE CONTRACTOR SHALL USE THE FOLLOWING PIPE MATERIALS: SEWER: PVC (POLYVINYL CHLORIDE), SCHEDULE 35

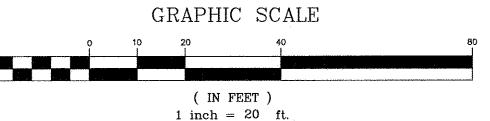
DRAIN: HDPE (HIGH DENSITY CORRUGATED POLYETHYLENE PIPE WITH SMOOTH INNER WALL), ASTM D2321 (UNLESS OTHERWISE SPECIFIED ON PLAN) RCP CLASS IV (REINFORCED CONCRETE PIPE, WHERE SPECIFIED ON PLAN)

WATER: CLDI (CEMENT LINED DUCTILE IRON) CLASS 52 AND SHALL BE RESTRAINED AT ALL JOINTS WITH MEGALUG TYPE

- ALL UTILITY CONNECTIONS THROUGH THE BUILDING WALL SHALL BE BY MEANS OF FLEXIBLE JOINTS.
- ALL WATER GATES TO PROPOSED HYDRANTS ARE 6" DIAMETER UNLESS
- OTHERWISE NOTED.
- ALL WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 4.5 FEET OF COVER AND A MAXIMUM OF 8 FEET OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE.
- ALL HYDRANTS SHALL BE INSTALLED WITH A 6 INCH CLDI RUNOUT AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED GATE VALVE, BOX, AND TEE FITTING. ALL HYDRANTS SHALL MEET LOCAL MUNICIPAL SPECIFICATION REQUIREMENTS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
- ALL WATER MAINS 3 INCHES AND LARGER SHALL BE CEMENT LINED DUCTILE IRON CLASS 52, AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED FITTINGS AND GATE VALVES.
- DOMESTIC WATER SERVICES SHALL BE INSTALLED WITH APPROPRIATELY SIZED GATE, BOX AND TEE FITTINGS.
- ALL WATER MAIN APPURTENANCES, MATERIALS, METHODS OF INSTALLATION AND TESTING REQUIREMENTS SHALL MEET OR EXCEED THE TOWN/CITY OF
- GENERALLY, WATER MAIN FITTINGS, VALVES AND HYDRANTS SHOWN ON THIS DRAWING ARE FOR INSTALLATION LOCATION PURPOSES. THE CONTRACTOR SHALL NOTE THAT NOT ALL FITTINGS, VALVES AND HYDRANTS ARE NOTED, SHOWN OR INDICATED.

---- REQUIREMENTS.

ALL WATER MAIN FITTINGS, VALVES AND TEES ETC. SHALL BE RESTRAINED
WITH THRUST BLOCKS AS REQUIRED BY THE TOWN/CITY OF ----WHERE ADEQUATE RESTRAINT CANNOT BE OBTAINED WITH THRUST
BLOCKS, USE OF RETAINER GLANDS IS RECOMMENDED.



R: \PROJECTS\1925-01\CIVIL\DRAWINGS\CURRENT\C-1925-01_C-3_UTILITIES.DWG



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WBL | CHECKED BY:

DRAFTED BY:



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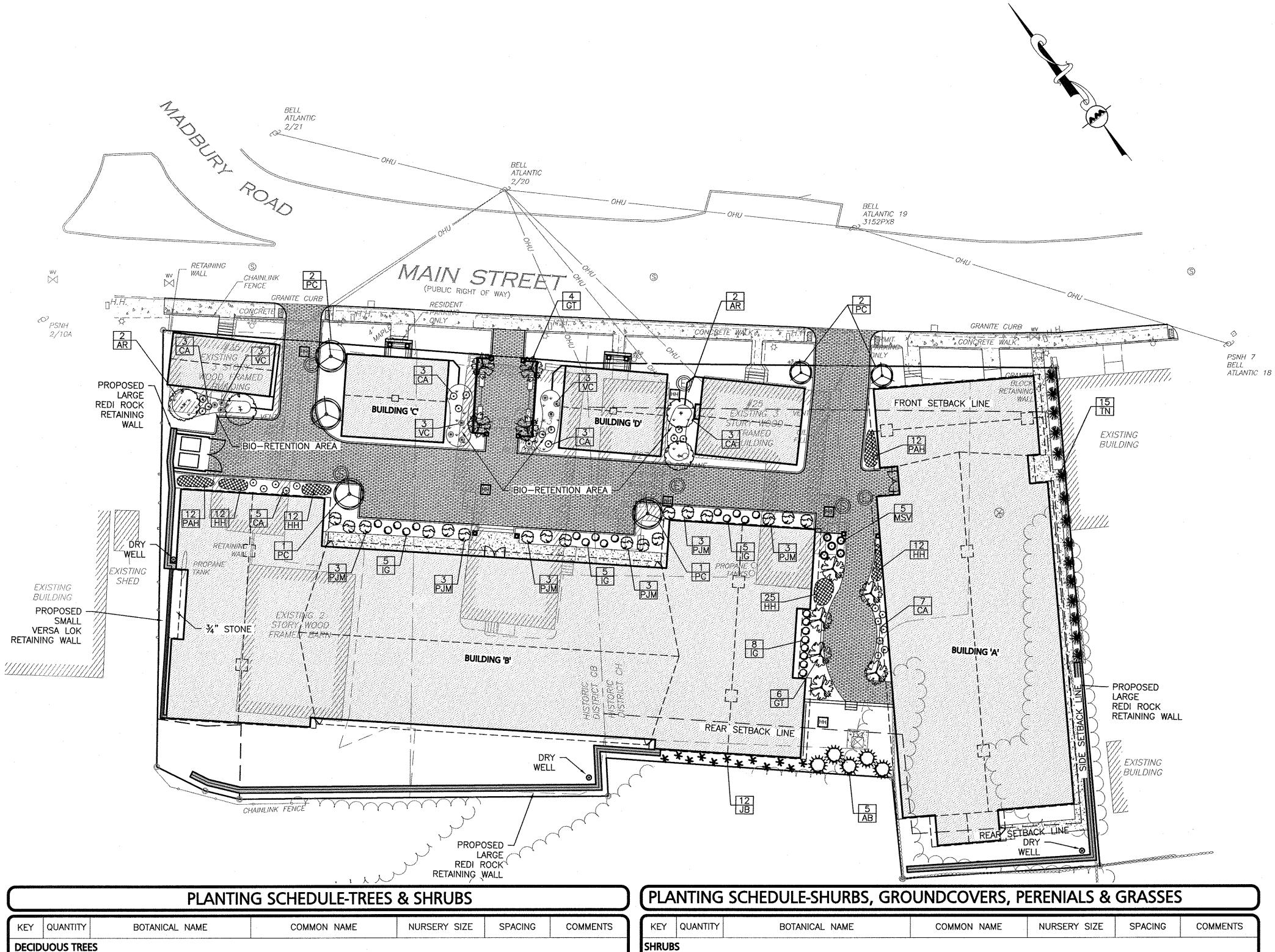
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UTILITY PLAN

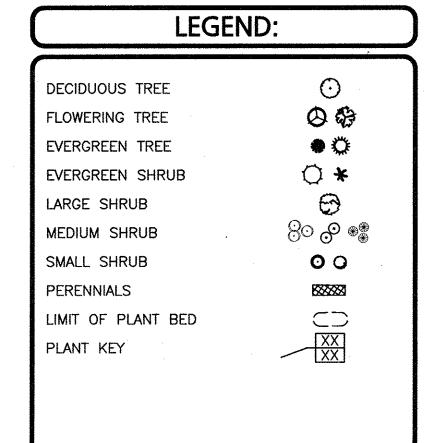


KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	NURSERY SIZE	SPACING	COMMENTS
DECID	UOUS TREE	S			, 	
AR	4	ACER RUBRUM	RED MAPLE	2½" CAL.	AS SHOWN	B&B
GT	10	GLEDITSIA TRIACANTHOS	HONEY LOCUST	2½" CAL.	AS SHOWN	B&B
EVERG	REEN & FLO	OWERING TREES				
AB	5	ABIES BALSAMEA	BALSAM FIR	8'10'	AS SHOWN	B&B
PC	6	PYRUS CALLERY 'CHANTICLEER'	CLEVELAND SELECT PEAR	2½" CAL.	AS SHOWN	B&B
TN	15	THUJA O. NIGRA	DARK AMERICAN ARBORVITAE	6'-8'	AS SHOWN	B&B

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	NURSERY SIZE	SPACING	COMMENTS
SHRUB	S				<u> </u>	
CA	24	CORNUS ALBA	RED TWIG DOGWOOD	3'-4'	AS SHOWN	B&B
JB	12	JUNIPERUS H. 'BAR HARBOR'	BAR HARBOR JUNIPER	2 GAL.	AS SHOWN	CONT.
IG	23	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	18" TO 24"	AS SHOWN	B&B
PJM	18	P.J.M. RHODENDRON	RHODENDRON	2'-2½'	AS SHOWN	B&B
VC	9	VACCINIUM CORYMBOSUM 'NORTHLAND'	HIGHBUSH BLUEBERRY	2'-21/2'	AS SHOWN	#3 POT
GROU	ND COVER	S, PERENIALS, AND GRASSES		3.1.3.334.6704		
НН	61	HEMEROCALLIS 'HAPPY RETURNS'	DAYLILLIES	1 GAL.	18" O.C.	STAGGERED
MSV	5	MISCANTHUS SINENSIS 'ZEBRINUS'	ZEBRA GRASS	2 GAL.	AS SHOWN	STAGGERED
PAH	24	PENNISETUM ALOPECUROIDES 'HAMELIN'	DWARF FOUNTAIN GRASS	1 GAL.	18" O.C.	STAGGERED
•						
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LANDSCAPE NOTES:

- 1. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF DURHAM.
- 2. PLANTING PLAN IS DIAGRAMMATIC IN NATURE. FINAL PLACEMENT OF PLANTS TO BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES, ANY PERMITTING AGENCIES, AND "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS IN ADVANCE OF ANY WORK THAT WILL REQUIRE EXCAVATION. CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE OF NAY CONFLICTS IN WRITING.
- 4. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA, ANY TREES NOTED AS "SEAL OR SELECTED SPECIMEN" SHALL BE TAGGED AND SEALED BY THE LANDSCAPE ARCHITECT.
- 5. ALL TREES SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER'S REPRESENTATIVE AND LANDSCAPE
- 6. CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON PLANT LIST. QUANTITIES SHOWN ON PLANS SHALL GOVERN OVER PLANT LIST.
- 7. ANY PROPOSED PLANT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
- 8. ALL PLANT MATERIALS INSTALLED SHALL MEET THE GUIDELINES ESTABLISHED BY THE STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- 9. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF ACCEPTANCE.
- 10. ALL DISTURBED AREAS NOT OTHERWISE NOTED SHALL RECEIVE 6" OF SUITABLE LOAM & SEED. LAWNS WITH OVER 3:1 SLOPES SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET.
- 11. ANY FALL TRANSPLANTING HAZARD PLANTS SHALL BE DUG IN THE SPRING AND STORED FOR SPRING PLANTING.
- 12. TREES SHALL HAVE A MINIMUM CALIPER OF 2.5" ONE FOOT ABOVE THE ROOT CROWN.
- 13. ALL PLANT BEDS AND TREE SAUCERS TO RECEIVE 3" OF PINE BARK MULCH, AND GROUND COVER AREAS SHALL RECEIVE 1" OF PINE BARK MULCH
- 14. ALL DECIDUOUS TREES ADJACENT TO WALKWAYS AND ROADWAYS SHALL HAVE A BRANCHING PATTERN TO ALLOW FOR A MINIMUM OF 7' OF CLEARANCE BETWEEN THE GROUND AND THE LOWEST BRANCH.
- 15. ALL TREE STAKES SHALL BE STAINED DARK BROWN.
- 16. CONTRACTOR RESPONSIBLE FOR WATERING, AND RESEEDING OF BARE SPOTS UNTIL A UNIFORM STAND OF VEGETATION IS ESTABLISHED AND ACCEPTED.
- 17. ALL PARKING ISLANDS PLANTED WITH SHRUBS SHALL HAVE 24" OF TOP SOIL. FINISH GRADE SHALL BE EQUAL TO THE TOP OF CURB.
- 18. SOIL SAMPLES AND TESTS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT OR THE OWNER.
- 19. ALL LANDSCAPE AREAS INCLUDING LAWNS SHALL BE PROVIDED WITH UNDERGROUND IRRIGATION. SCOPE OF IRRIGATION TO BE DETERMINED BY OWNER. DESIGN AND INSTALLATION OF IRRIGATION SYSTEM TO BE PERFORMED BY AN APPROVED IRRIGATION DESIGN BUILD CONTRACTOR OR BY AN APPROVED EQUAL, TO BE DETERMINED BY THE OWNERS REPRESENTATIVE AND LANDSCAPE ARCHITECT.



GRAPHIC SCALE

O 10 20 40 80

(IN FEET)
1 inch = 20 ft.

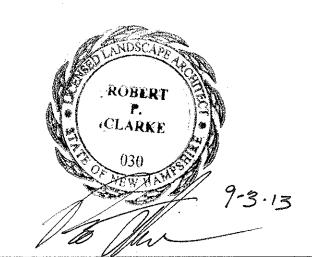
R: \PROJECTS\1925-01\CIVIL\DRAWINGS\CURRENT\C-1925-01_C-4_LANDSCAPE.DWG



23 High Street Portsmouth, NH 03801

P: 603.431.8701 E: 603.422.8707

"I, ROBERT P. CLARKE, HEREBY CERTIFY THAT I AM THE DESIGNER OF THIS LANDSCAPE PLAN, THAT I AM A PROFESSIONAL LANDSCAPE ARCHITECT LICENSED BY THE STATE OF NEW HAMPSHIRE AND/OR I AM A MEMBER OF THE GRANITE STATE LANDSCAPE ARCHITECTS".



REGISTERED LANDSCAPE ARCHITECT, A.S.L.A FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION	

APPLICANT\OWNER:

ORION UNH LLC 225 FRANKLIN STREET, 26TH FLOOR BOSTON, MA 02110

PROJEC

ORION
STUDENT HOUSING
MAIN STREET
DURHAM, NEW HAMPSHIRE

PROJECT NO.	1925-01	DATE:	09-04-13
SCALE:	1" = 20'	DWG. NAME:	GRADING
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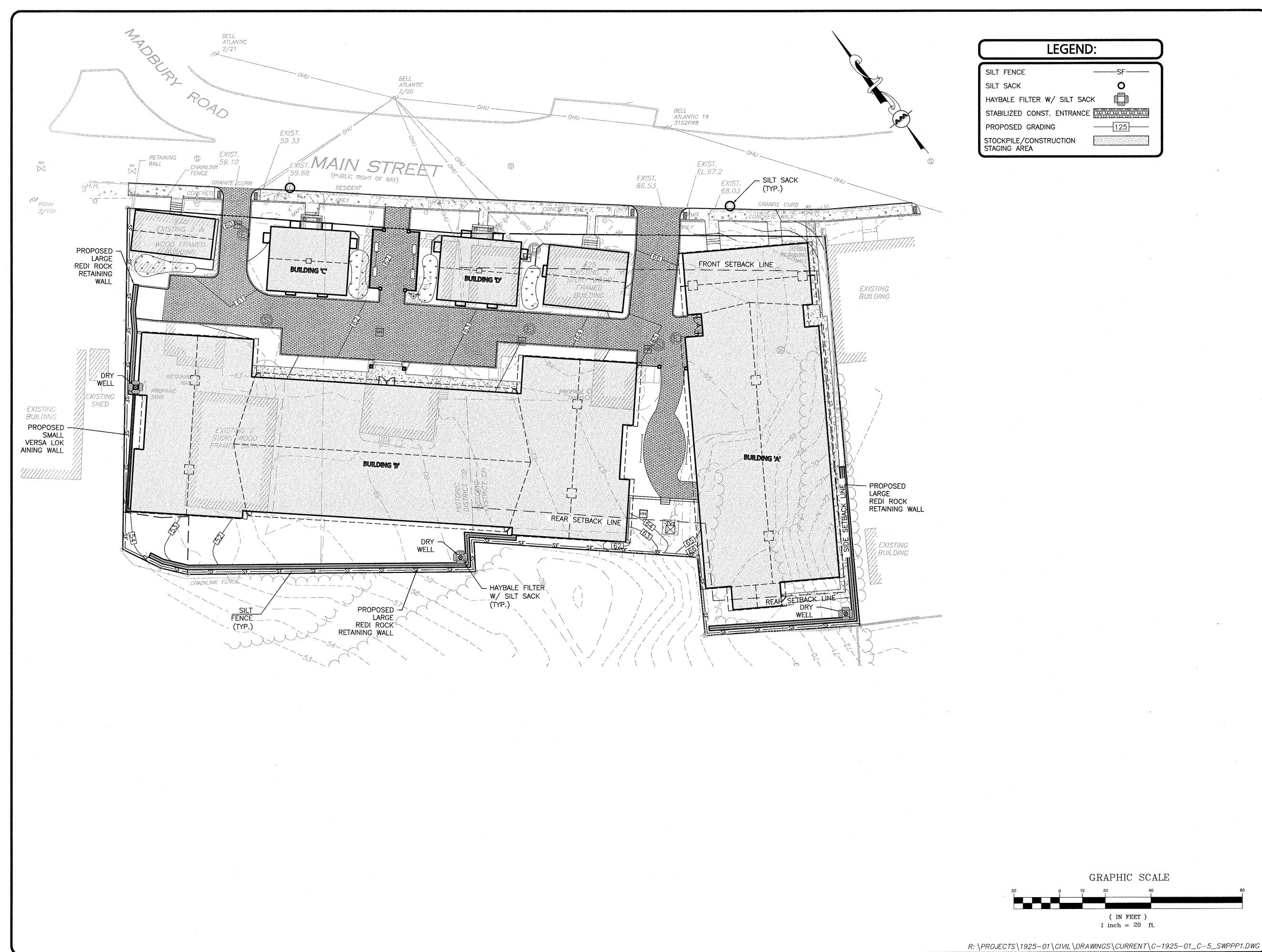
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DRAWING TITLE:

LANDSCAPE PLAN

SHEET No.

C-4





SILT SACK

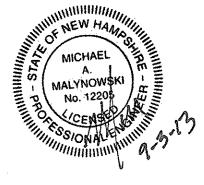
HAYBALE FILTER W/ SILT SACK

STABILIZED CONST. ENTRANCE

STOCKPILE/CONSTRUCTION STAGING AREA

23 High Street Portsmouth, NH 03801

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FAX: (603) 627-5501 WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NI

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DRAWING TITLE:

GRAPHIC SCALE

(IN FEET)

1 inch = 20 ft.

STORMWATER POLLUTION PREVENTION PLAN

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SHEET No.

SWPPP

CONSTRUCTION GENERAL PERMIT

- 1. THE OWNER, IN CONJUNCTION WITH THE CONTRACTOR (OPERATORS), NEEDS TO OBTAIN A CONSTRUCTION GENERAL PERMIT (CGP) FOR LARGE CONSTRUCTION ACTIVITIES (FIVE OR MORE ACRES) OR SMALL CONSTRUCTION ACTIVITIES (GREATER THAN ONE ACRE BUT LESS THAN FIVE ACRES) FROM THE ENVIRONMENTAL PROTECTION AGENCY (EPA). AS PART OF THE CGP, A STORM WATER NOTICE OF INTENT (NOI) WILL NEED TO BE SUBMITTED TO THE EPA AT LEAST 7 DAYS PRIOR TO COMMENCING CONSTRUCTION. THE NOI WILL NEED TO BE SUBMITTED TO STORM WATER NOTICE OF INTENT (4203M), USEPA, 1200 PENNSYLVANIA AVE. NW, WASHINGTON, DC 20460.
- 2. THE CGP OUTLINES A SET OF PROVISIONS MANDATING THE OWNER AND CONTRACTOR TO COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER REGULATIONS, INCLUDING, BUT NOT LIMITED TO, STORM WATER POLLUTION PREVENTION PLANS (SWPPP'S), IMPLEMENTATION OF EROSION AND SEDIMENTATION CONTROLS. EQUIPMENT MAINTENANCE GUIDELINES, ETC. PLEASE CONTACT USEPA OFFICE OF WASTEWATER MANAGEMENT AT 202-564-9545 OR AT WWW.EPA.GOV/NPDES/STORMWATER FOR ADDITIONAL INFORMATION. IN ADDITION, ONE CAN CONTACT ABBY SWAINE OF NEW ENGLAND'S EPA REGION 1 AT 617-918-1841.

- 1. IT IS BEING PROPOSED TO CONSTRUCT 4 BUILDINGS AND REHAB 2 EXISTING WITH ASSOCIATED PARKING.
- 2. TOTAL SITE AREA: 47,676 S.F. / 1.09 AC. TOTAL AREA OF DISTURBANCE: 51,900 S.F. / 1.19 AC.
- 3. SOILS SHOWN ARE FROM THE SOIL SURVEY OF STRAFFORD COUNTY, NH, PREPARED BY USDA-SOIL CONSERVATION SERVICES. SfC - SUFFIELD SILT LOAM
- HcB HOLLIS CHARLTON FINE SANDY LOAM
- 4. STORM WATER DRAINAGE SYSTEM IS SHOWN ON THE PLAN. SEE SHEET x OF xx FOR RIM, INVERT, PIPE LENGTH AND SLOPE INFORMATION. POST-CONSTRUCTION RUNOFF COEFFICIENT: C=0.xx TOTAL SITE AREA: 47,676 S.F. / 1.09 AC. TOTAL AREA OF DISTURBANCE: 51,900 S.F. / 1.19 AC. IMPERVIOUS SURFACE AREA: 28,692 S.F. / 0.73 AC.
- 5. STABILIZATION PRACTICES FOR EROSION AND SEDIMENTATION CONTROLS:

TEMPORARY STABILIZATION - TOPSOIL STOCKPILES AND DISTURBED AREAS OF THE CONSTRUCTION SITE THAT WILL NOT BE REDISTURBED FOR 21 DAYS OR MORE MUST BE STABILIZED BY THE 14TH DAY AFTER THE LAST DISTURBANCE. THE TEMPORARY SEED SHALL BE ANNUAL RYE APPLIED AT THE RATE OF 1.1 LBS PER 1,000 SQUARE FEET. PRIOR TO SEEDING, A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS PER ACRE OF 10-20-20 FERTILIZER SHALL BE APPLIED. AFTER SEEDING, EACH AREA SHALL BE MULCHED WITH 1.5 TONS PER ACRE OF HAY MULCH. MULCH TO BE ANCHORED IN PLACE WHERE NECESSARY. AREAS OF THE SITE THAT WILL BE PAVED WILL TEMPORARILY BE STABILIZED BY APPLYING GEOTEXTILES AND A STONE SUB-BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED. CALCIUM CHLORIDE SHALL BE USED FOR DUST CONTROL IF NEEDED.

PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASES SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE PERMANENT SEED MIX SHALL CONSIST OF 0.45 LBS/1,000 S.F. TALL FESCUE, 0.20 LBS/1,000 S.F. CREEPING RED FESCUE, AND 0.20 LBS/1,000 S.F. BIRDSFOOT TREFOIL. PRIOR TO SEEDING. A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS PER ACRE IF 10-20-20 FERTILIZER SHALL BE APPLIED. AFTER SEEDING, EACH AREA SHALL BE MULCHED WITH 1.5 TONS PER ACRE OF HAY MULCH. MULCH TO BE ANCHORED IN PLACE WHERE NECESSARY.

6. STRUCTURAL PRACTICES FOR EROSION AND SEDIMENTATION CONTROL

SILT FENCE - WILL BE CONSTRUCTED AROUND THE PERIMETER OF THE DISTURBED AREAS AND WILL DELINEATE THE LIMITS OF WORK FOR THE PROPOSED CONSTRUCTION. THE SILT FENCE WILL BE INSTALLED BY STRETCHING REINFORCED FILTER FABRIC BETWEEN POSTS WITH AT LEAST 6 INCHES OF THE FABRIC BURIED BELOW THE GROUND SURFACE TO PREVENT GAPS FROM FORMING NEAR THE GROUND SURFACE. RUNOFF WILL FLOW THROUGH THE OPENINGS IN THE FILTER FABRIC WHILE RETAINING THE SEDIMENT WITHIN THE CONSTRUCTION AREA.

STABILIZED CONSTRUCTION ENTRANCE - WILL BE INSTALLED AT THE ENTRANCE TO THE CONSTRUCTION SITE TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS OFF THE SITE. THE STABILIZED ENTRANCE WILL BE 10 FEET WIDE AND FLARE AT THE ENTRANCE TO THE PAVED ROAD AND HAVE A DEPTH OF 6 INCHES OF STONE. THE STABILIZED ENTRANCE SHALL BE MAINTAINED UNTIL THE REMAINDER OF THE CONSTRUCTION SITE HAS BEEN FULLY STABILIZED.

7. STORM WATER MANAGEMENT

STORM WATER DRAINAGE FOR THE MAJORITY OF DEVELOPED AREAS WILL BE COLLECTED VIA SHEET FLOW TO PERMEABLE BRICK PAVERS WITH SUBSURFACE STORAGE CAPACITY TO ATTENUATE PEAK FLOWS AND INFILTRATE. ADDITIONAL STORAGE, ATTENUATION, AND INFILTRATION WILL BE PROVIDED THROUGH THE CONSTRUCTION OF SEVERAL RAIN GARDENS WHICH WILL INTERCEPT ROOF RUNOFF.

- 8. ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURE DUMPSTERS OR APPROVED ENCLOSURE AND REMOVED FROM THE SITE ON A WEEKLY BASIS. NO CONSTRUCTION WASTE SHALL BE BURIED ON SITE. PORTABLE TOILET SANITARY WASTE FACILITIES WILL BE PROVIDED DURING CONSTRUCTION AND MAINTAINED/DISPOSED OF ON A REGULAR BASIS IN ACCORDANCE WITH TOWN AND STATE. REGULATIONS.
- 9. A STABILIZED CONSTRUCTION DRIVEWAY SHALL BE INSTALLED IN THE LOCATION SHOWN ON THE PLAN IN ACCORDANCE WITH THE DETAIL IN SWPPP-3, TO MINIMIZE TRACKING OF SEDIMENT OFFSITE BY CONSTRUCTION VEHICLES. THE PAVED STREET ADJACENT TO THE SITE SHALL BE SWEPT ON A WEEKLY BASIS TO REMOVE EXCESS MUD AND DIRT FROM BEING TRACKED FROM THE SITE. TRUCKS HAULING MATERIAL TO AND/OR FROM THE SITE SHALL BE COVERED WITH A TARPAULIN

NOTES CONTINUED

10. A LIST OF CONSTRUCTION ITEMS AND OTHER PRODUCTS USED ON THIS PROJECT SHALL BE KEPT ON RECORD WITH THIS PLAN ONSITE. ALL CHEMICALS, PETROLEUM PRODUCTS AND OTHER MATERIALS USED DURING CONSTRUCTION SHALL BE STORED IN A SECURE AREA, AND PRECAUTIONS USED TO PREVENT POTENTIAL SOURCES OF CONTAMINATION OR POLLUTION. ANY SPILL OF THESE TYPES OF SUBSTANCES SHALL BE CLEANED UP AND DISPOSED OF IN A LEGAL MANNER AS SPECIFIED BY STATE REGULATIONS AND THE MANUFACTURER. ANY SPILL IN AMOUNTS EQUAL TO OR EXCEEDING REPORTABLE QUANTITY AS DEFINED BY THE EPA SHALL TAKE THE FOLLOWING STEPS:

- NOTIFY THE NATIONAL RESPONSE CENTER IMMEDIATELY AT (800) 424-8802; IN WASHINGTON, D.C., CALL (202) 426-2675.

- WITHIN 14 DAYS, SUBMIT A WRITTEN DESCRIPTION OF THE RELEASE TO THE EPA REGIONAL OFFICE PROVIDING THE DATE AND CIRCUMSTANCES OF THE RELEASE AND THE STEPS TO BE TAKEN TO PREVENT ANOTHER RELEASE. - MODIFY THE POLLUTION PREVENTION PLAN TO INCLUDE THE INFORMATION LISTED ABOVE.

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.

- AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO
- DO THE JOB; - ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR
- PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL:
- SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED
- BY THE MANUFACTURER; - WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER;
- MANUFACTURERS' RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED: - THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND

DISPOSAL OF MATERIALS ONSITE. THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS

- PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE:
- ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION;
- IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON SITE:

PETROLEUM PRODUCTS:

ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOLID TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONTO THE SITE.

SPILL CONTROL PRACTICES:

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

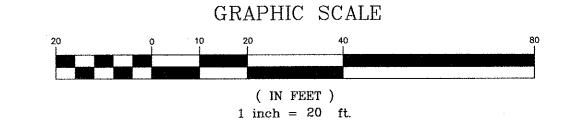
- MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE
- PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES. - MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY. - THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY. REGARDLESS OF SIZE.
- THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT. AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED. - THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THEY WILL DESIGNATE AT LEASE THREE OTHER SITE PERSONNEL WHO WILL EACH RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND

CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN

11. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN RECORDS OF CONSTRUCTION ACTIVITIES, INCLUDING DATES OF MAJOR GRADING ACTIVITIES, DATES WHEN CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED ON A PORTION OF THE SITE. DATES WHEN WORK IS COMPLETED ON A PORTION OF THE SITE, AND DATES WHEN STABILIZATION MEASURES ARE INITIATED ONSITE.

THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER ONSITE.

12. THE CONTRACTOR SHALL PERFORM INSPECTIONS OR HAVE A CONSULTING ENGINEER PERFORM INSPECTIONS EVERY SEVEN (7) DAYS OR WITHIN 24 HOURS AFTER A STORM OF 0.5 INCH OR GREATER. INSPECTIONS REPORTS ARE TO BE KEPT ON FILE AT THE SITE WITH THIS PLAN. MAINTENANCE OR MODIFICATION SHALL BE IMPLEMENTED AND ADDED TO THE PLAN AS RECOMMENDED BY THE QUALIFIED INSPECTOR.



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> 603.431.8701 603.422.8707

MALYNOWSK. No. 12205 PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

ORION UNH LLC 225 FRANKLIN STREET, 26TH FLOOR BOSTON, MA 02110

DATE DESCRIPTION

PROJECT:

APPLICANT\OWNER:

ORION STUDENT HOUSING **MAIN STREET** DURHAM, NEW HAMPSHIRE

PROJECT NO. 1925-01 DATE: 09-04-13 SWPP 1* = 20' DWG. NAME: DRAFTED BY: WBL | CHECKED BY:



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250 COMMERCIAL STREET SUITE 1001 MANCHESTER, NH 03101 TEL: (603) 627-5500

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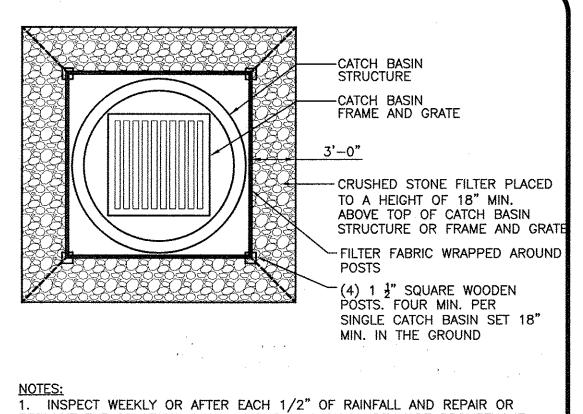
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SWPPP

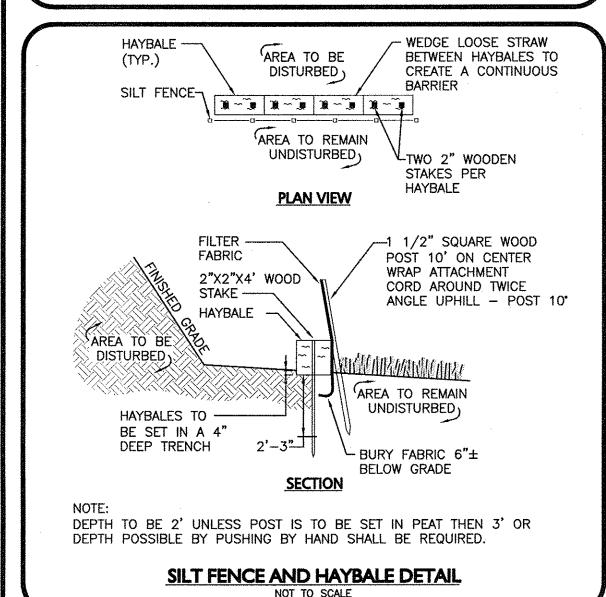
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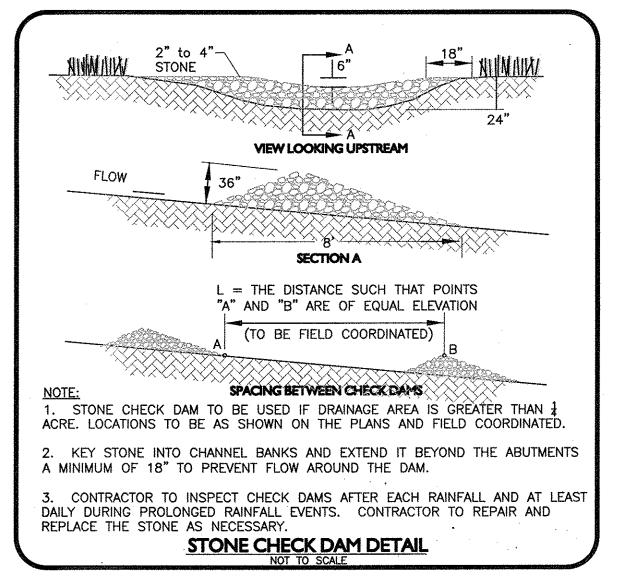
STORMWATER POLLUTION PREVENTION NOTES

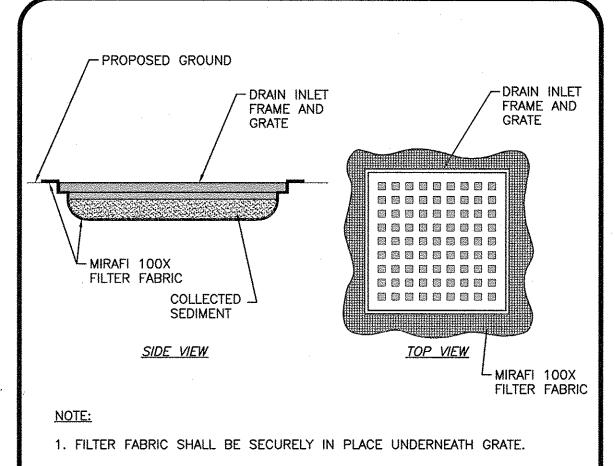


REPLACEMENT OF STONE AND FILTER FABRIC SHALL BE MADE PROMPTLY IF DAMAGED OR AS DIRECTED. 2. CONTRACTOR SHALL REMOVE SEDIMENT ACCUMULATION ONCE IT REACHES A DEPTH OF 6" MAX.

CRUSHED STONE CATCH BASIN INLET PROTECTION







2. FREQUENT INSPECTIONS SHALL BE CONDUCTED AND REPAIR OR

TYPICAL SILT SACK DETAIL

REPLACEMENT SHALL BE MADE PROMPTLY IF NECESSARY.

AREA

FABRIC SHALL BE -INSTALLED VERTICALLY

DOWNSLOPE.

OVERLAP.

STAPLE PER MANUFACTURERS

RECOMMENDATIONS.

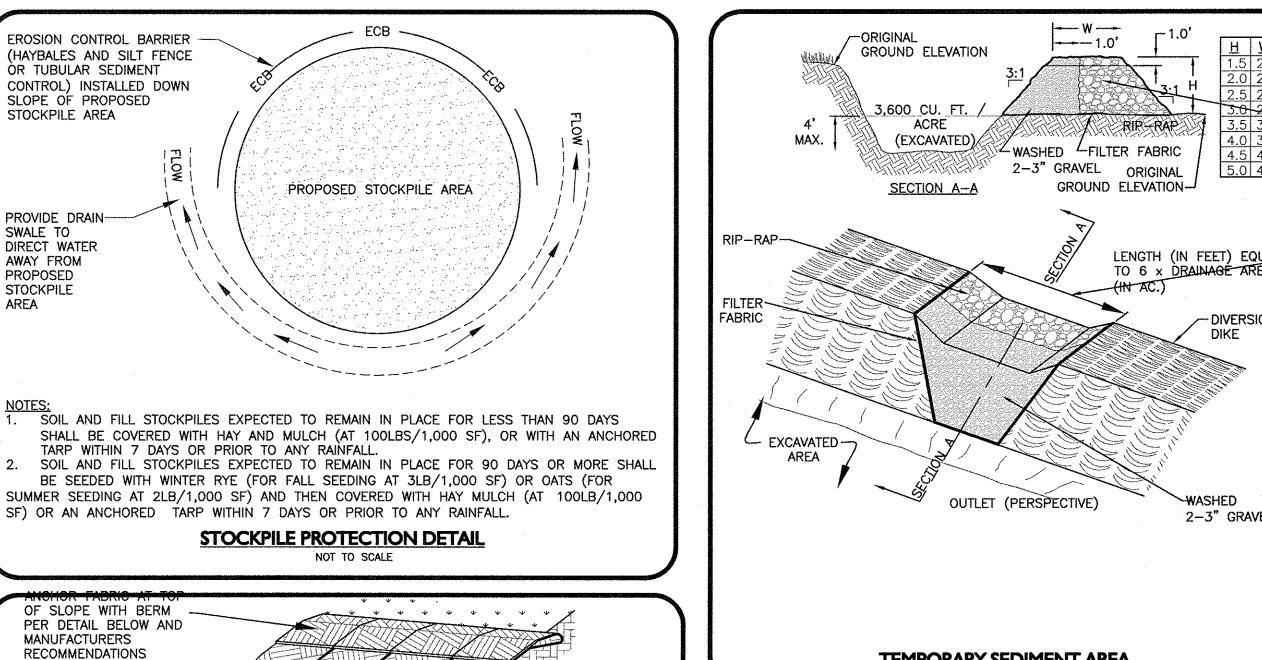
ISOMETRIC VIEW

AFTER SEEDING.

HAVE GOOD SOIL CONTACT.

SOIL, DO NOT STRETCH.

MINIMUM 3"-4" CLEAN STONE MIRAFI 600X > WOVEN GEOTEXTILE UNDERLINER 20' WIDE MINIMUM OR FULL WIDTH OF ACCESS ROAD, WHICHEVER IS GREATER. CONSTRUCTION ENTRANCE NOT TO SCALE



STAPLE DETAILS

ANCHOR BERM AT TOP OF SLOPE

TAMP SOIL FOVER FABRIC

NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. FABRIC SHALL

2. APPLY PERMANENT SEEDING BEFORE PLACING FABRIC. PLACE FABRIC WITHIN 24 HOURS

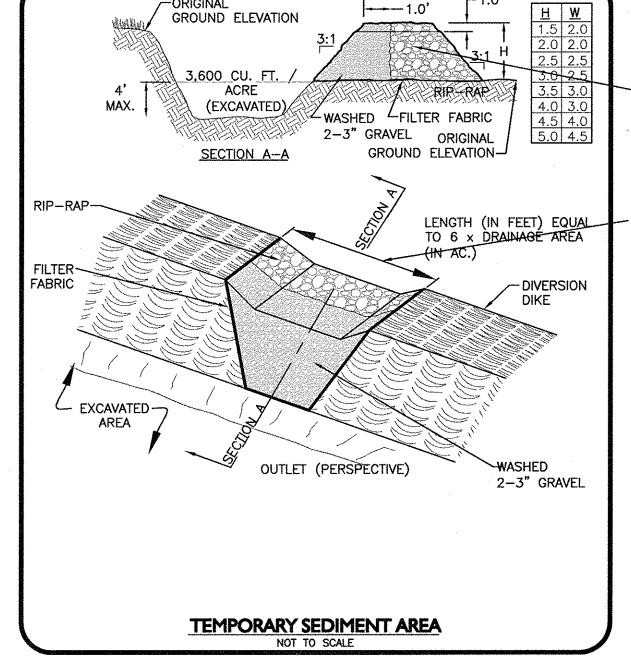
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE

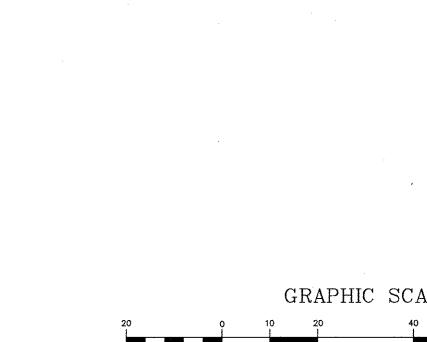
EROSION CONTROL FABRIC DETAIL

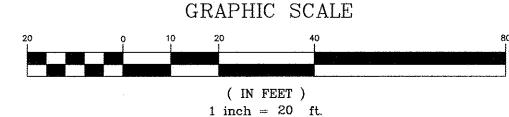
5. EROSION CONTROL FABRIC IS REQUIRED ON ALL SLOPES GREATER THAN 3:1.

4. CHOOSE MATERIAL BASED ON SLOPE, SOILS, AND APPLICATION.

6. PROVIDE SHOP DRAWING FOR APPROVAL PRIOR TO INSTALLATION.







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MICHAEL MALYNOWSKI No. 12205

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV DATE DESCRIPTION APPLICANT\OWNER:

ORION UNH LLC 225 FRANKLIN STREET, 26TH FLOOR BOSTON, MA 02110

PROJECT:

ORION STUDENT HOUSING **MAIN STREET**

DURHAM, NEW HAMPSHIRE

1925-01 DATE: 09-04-13 PROJECT NO. SWPPI SCALE: 1" = 20' DWG. NAME: **DRAFTED BY:** WBL | CHECKED BY:

ALLEN & MAJOR ASSOCIATES, INC.

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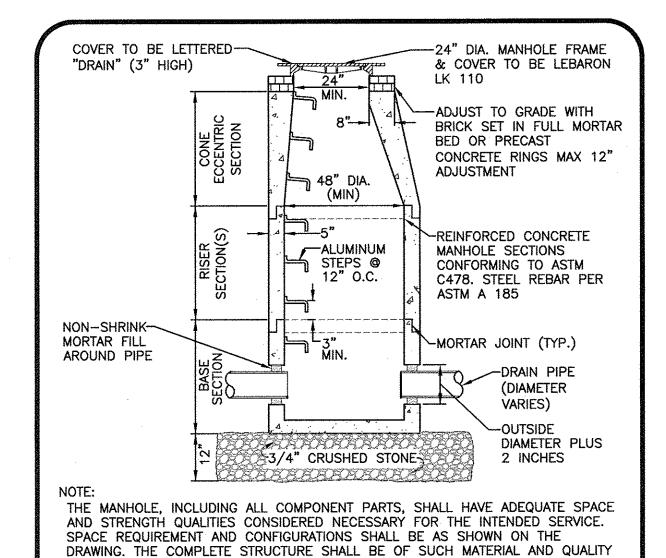
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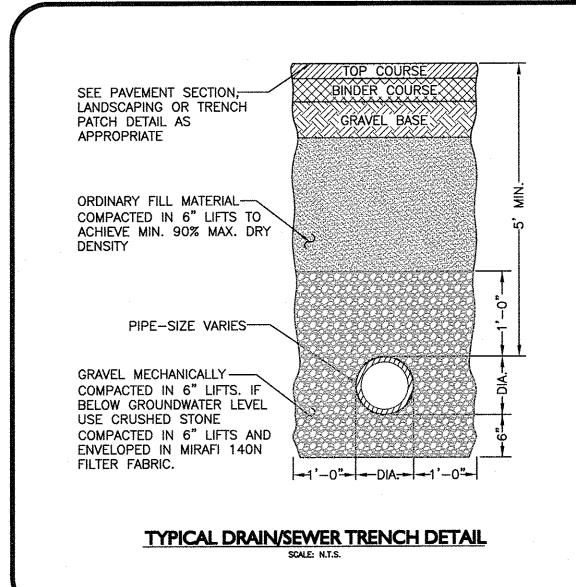
SHEET No. SWPPP STORMWATER POLLUTION

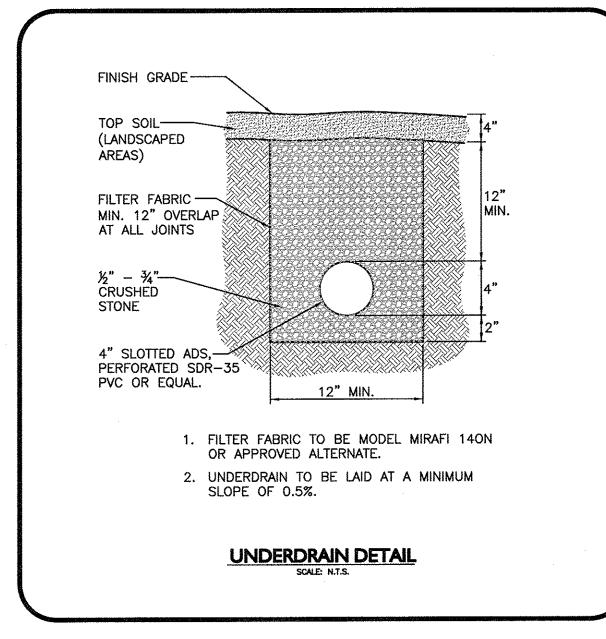
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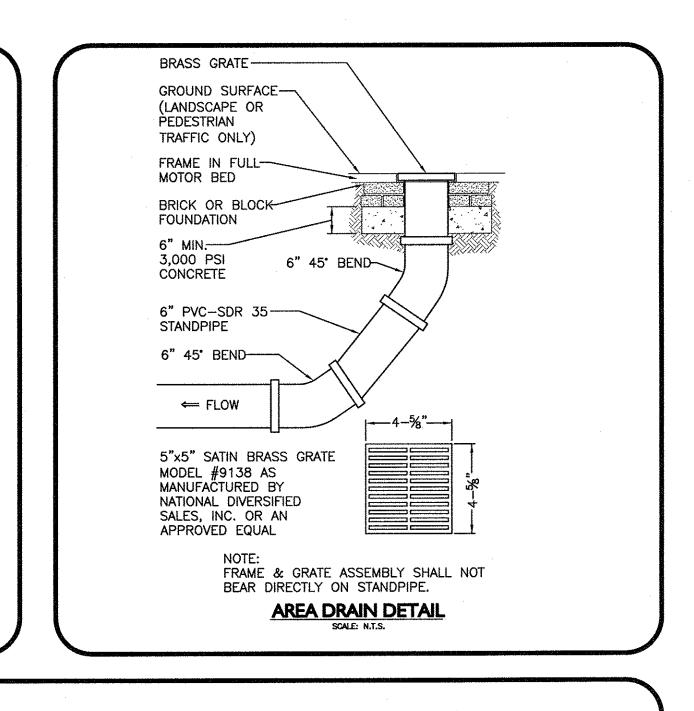


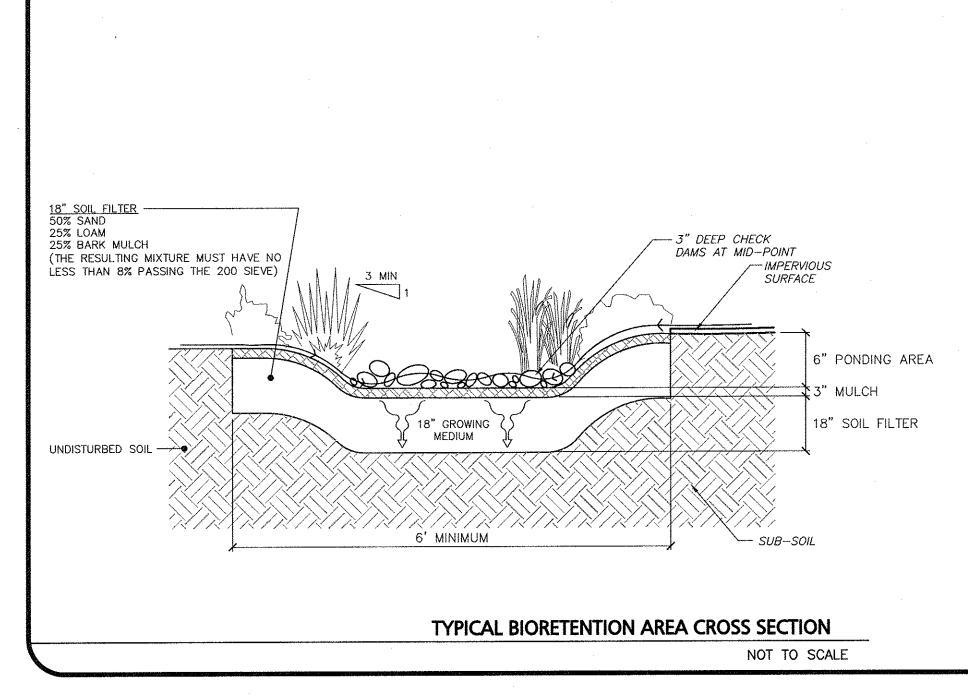
PRECAST CONCRETE DRAIN MANHOLE SCALE: N.T.S.

AS TO WITHSTAND (H-20 LOADING) WITHOUT FAILURE.









GENERAL EROSION CONTROL NOTES:

- 1. GRADING, AND PLANTING OF BIORETENTION SHALL BE COMPLETED IN EARLY PHASES OF CONSTRUCTION. PLANTS AND SEED ON SLOPES AND BOTTOM OF BASIN MUST BE ESTABLISHED PRIOR TO CONNECTING STORM DRAINAGE SYSTEM OUTLETS TO BIORETENTION AREA. PLANTS AND SEED MIX SHALL HAVE A MINIMUM OF 6 MONTHS GROWING, BE ESTABLISHED AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO CONNECTING STORM DRAINAGE SYSTEM OUTLETS TO BIORETENTION AREA.
- 2. EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN, SHALL BE IN PLACE PRIOR TO ANY REGRADING ACTIVITY.
- 3. EXCAVATION, FILLING AND PLANTING SHALL OCCUR IN THE DRY. WATER LEVELS MUST BE LOWERED IN THE BIOREMEDIATION AREA BY RELYING ON DRY SEASON AND OR DRY SPELLS; OR MAY BE ACCOMPLISHED THROUGH THE USE OF DEWATERING METHODS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ANY DEWATERING METHODS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- 4. WATER FROM ANY DEWATERING OPERATION SHALL BE TREATED TO REDUCE TOTAL SUSPENDED SOLIDS AND BE IN COMPLIANCE WITH STATE AND FEDERAL STANDARDS.

PLANTING & SOIL NOTES:

- 1. A NEW ENGLAND CONSERVATION / WILDLIFE MIX WILL BE DISPERSED IN AND ADJACENT TO THE BANK OF THE BIORETENTION AREA AT A RATIO OF 1 POUND PER 1,750 SQUARE FEET AS AVAILABLE FROM NEW ENGLAND WETLAND PLANTS OR APPROVED EQUAL, INC. 820 WEST ST., AMHERST, MA, 413-548-8000.
- 2. A NEW ENGLAND WETMIX WILL BE DISPERSED AT THE BOTTOM 6" OF THE BANK AND BELOW OF THE BIORETENTION AREA AT A RATIO OF 1 POUND PER 2,500 SQUARE FEET AS AVAILABLE FROM NEW ENGLAND WETLAND PLANTS, INC. 820 WEST ST., AMHERST, MA, 413-548-8000.
- 3. LOAM AND SEED ALL NON-BIOREMEDITATION AREAS WITH UPLAND MIX TO PROVIDE VEGETATIVE COVER AND EROSION CONTROL.
- 4. ALL PLANTINGS SHALL BE MONITORED AND REPLACED AS NECESSARY DURING THE TWO-YEAR ESTABLISHMENT PERIOD.
- 5. PLANTING SOIL SHALL HAVE PH RANGE OF 5.5-6.5%, ORGANIC MATTER OF 1.5-3.0%. PLANTING SOIL SHALL HAVE A SANDY LOAM, LOAMY SAND, OR LOAM TEXTURE PER USDA TEXTURAL TRIANGLE. MAXIMUM CLAY CONTENT IS <5%, 60-70% SAND; 10% LEAF COMPOST*; AND 25-30% TOPSOIL. THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILIAR OBJECTS LARGER THAN 2". LEAF COMPOST IS ESSENTIALLY COMPOSED OF AGED LEAF MULCH AND PROVIDES ADDED ORGANIC MATTER. A SIEVE ANALYSIS, PH, AND ORGANIC MATTER TEST SHALL BE SENT TO UMASS SOIL TESTING LAB OR APPROVED EQUAL FOR APPROVAL BY LANDSCAPE ARCHITECT. SOIL SHALL BE AMENDED TO MEET THESE SPECIFICATIONS FOR APPROVAL.

WETMIX
(BY NEW ENGLAND WETLAND PLANTS INC.):

COMMON NAME

1. LURID SEDGE

2. FOWL MEADOW GRASS

3. FRINGED SEDGE

4. JOE-PYE-WEED

5. BROOM SEDGE CA

6. SOFT RUSH

7. WOOLGRASS

8. BONESET

9. TUSSOCK

10. BLUE VERVAIN

LATIN NAME
CAREX LURIDA
SS GLYCERIA CANADENSIS
CAREX CRINITA
EUPATORIADELPHUS MACULATUS
CAREX SPP., OVALES GROUP
JUNCUS EFFUSUS
SCRIPUS CYPERINUS
EUPATORIUM PEFOLIATUM
SEDGE CAREX STRICTIA

VERBENA HASTATA

NEW ENGLAND CONSERVATION / WILDLIFE MIX (BY NEW ENGLAND WETLAND PLANTS INC.):

BIG BLUESTEM
 SWITCHGRASS
 LITTLE BLUESTEM
 CANADA WILD RYE
 FOX SEDGE
 PARTRIDGE PEA
 FRINGED BROMEGRASS
 PENNSYLVANIA SMARTWEED
 COMMON MILKWEED
 SHOWY TICK—TREFOIL
 NEW ENGLAND ASTER
 FLAT—TOP ASTER

13. NODDING BUR-MARIGOLD

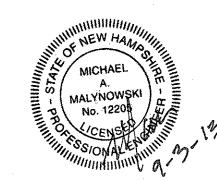
PANICUM VIRGATUM
SCHIZACHYRIUM SCOPARIUM
ELYMUS CANAENSIS
CAREX VULPINOIDEA
CHAMAECRISTA FASCICULATA
BROMUS CILIATUS
POLYGONUM PENSYLVANICUM
ASCLEPIAS SYRIACA
DESMODIUM CANADENSE
ASTER NOVAE—ANGLIAE
ASTER UMBELLATUS
BIDENS CCERNUA

ANDROPOGON GERARDII

DA DeStefano Architects

23 High Street Portsmouth, NH 03801

> 603.431.8701 603.422.8707



PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

			_

		Action to the control of the control	
REV	DATE	DESCRIPTION	_

REV | DATE | DESCRIPTION
APPLICANT\OWNER:

ORION UNH LLC 225 FRANKLIN STREET, 26TH FLOOR BOSTON, MA 02110

ORION
STUDENT HOUSING
MAIN STREET

DURHAM, NEW HAMPSHIRE

PREPARED BY:			· · ·
DRAFTED BY:	WBL	CHECKED BY:	RPC
SCALE:	1" = 20"	DWG. NAME:	C - DETAIL
PROJECT NO.	1925-01	DATE:	09-04-13



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civil & structural engineering • land surveying
environmental consulting • landscape architecture
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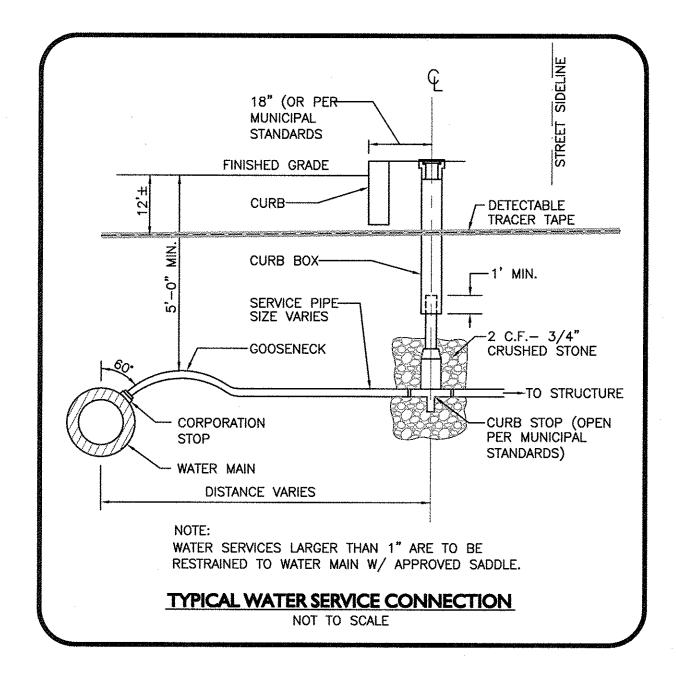
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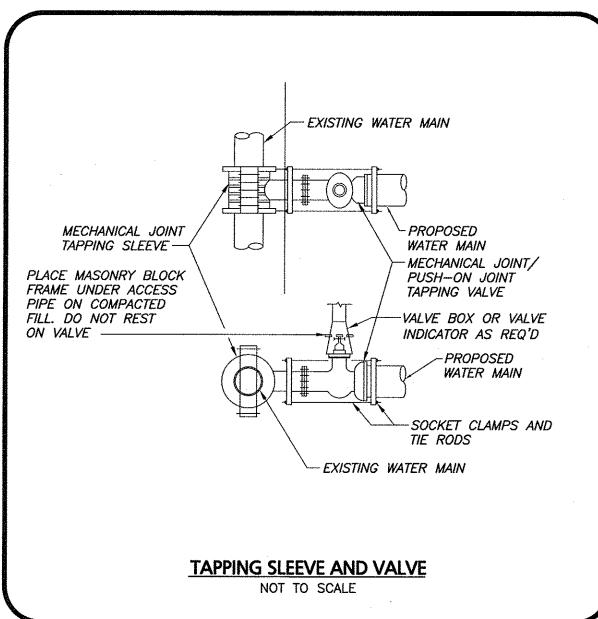
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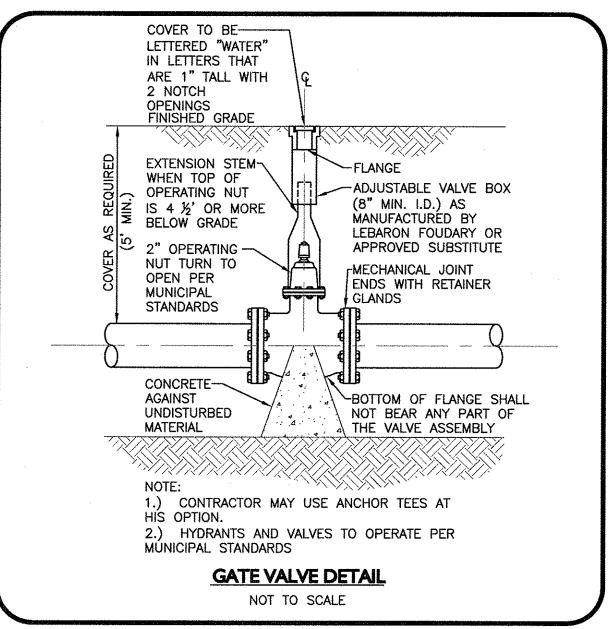
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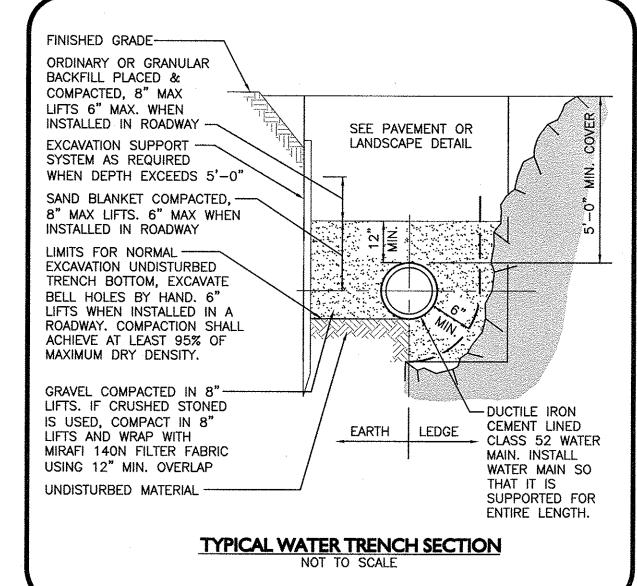
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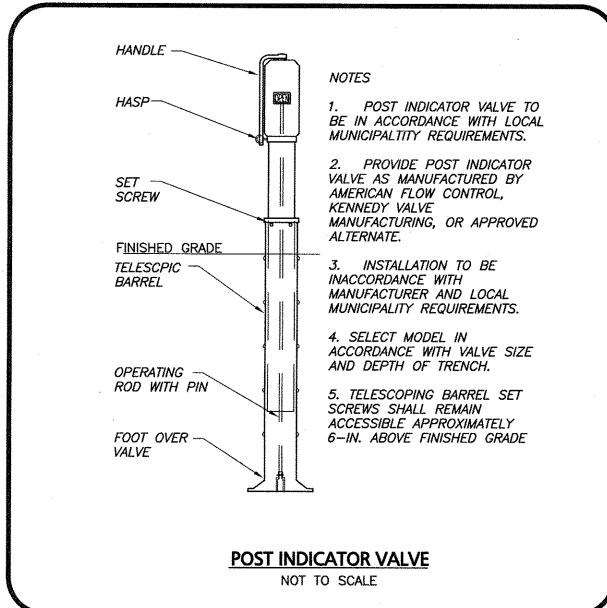
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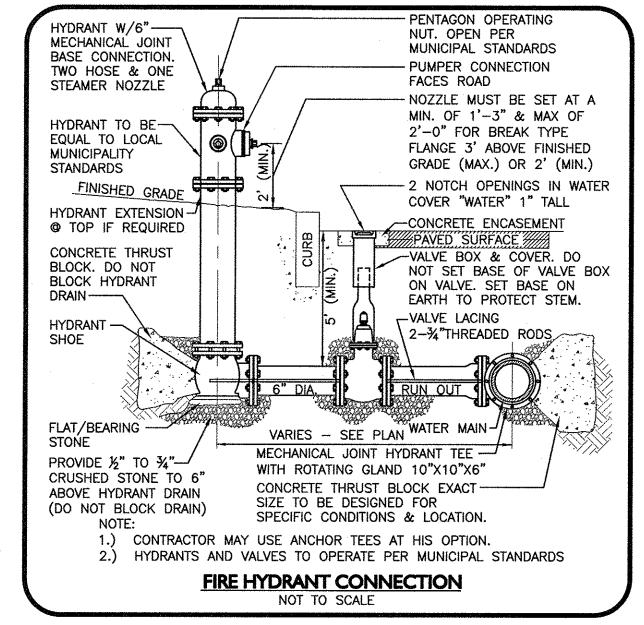


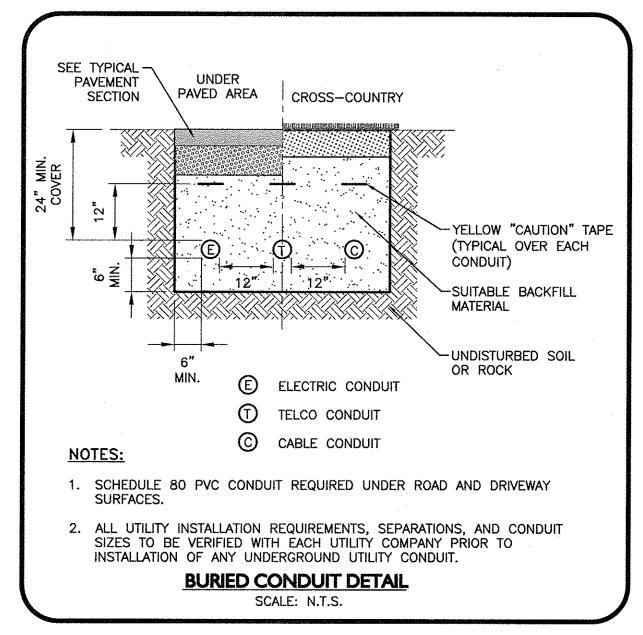


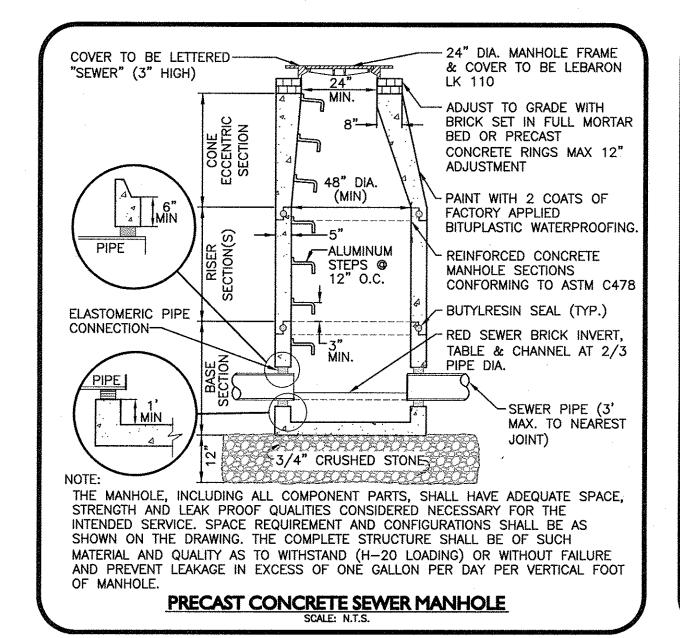


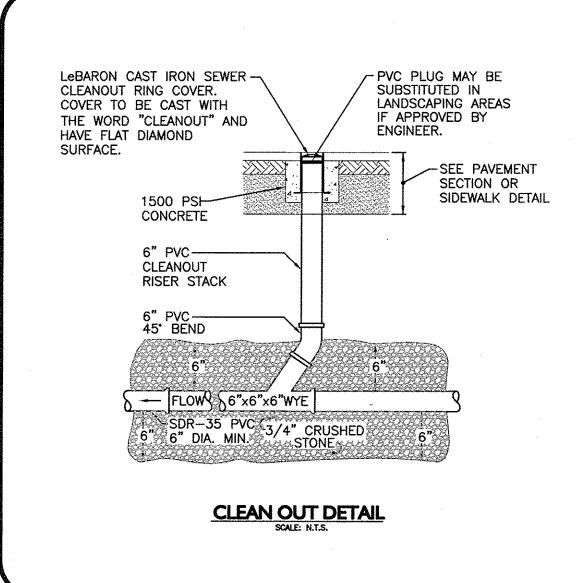


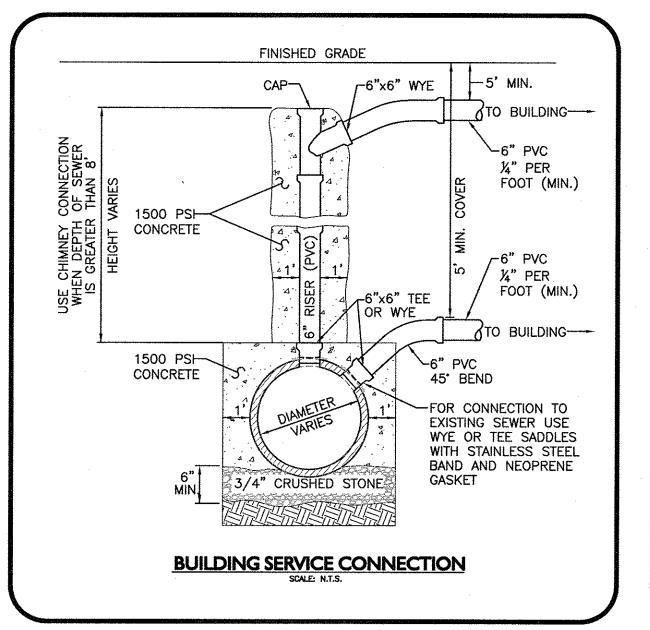


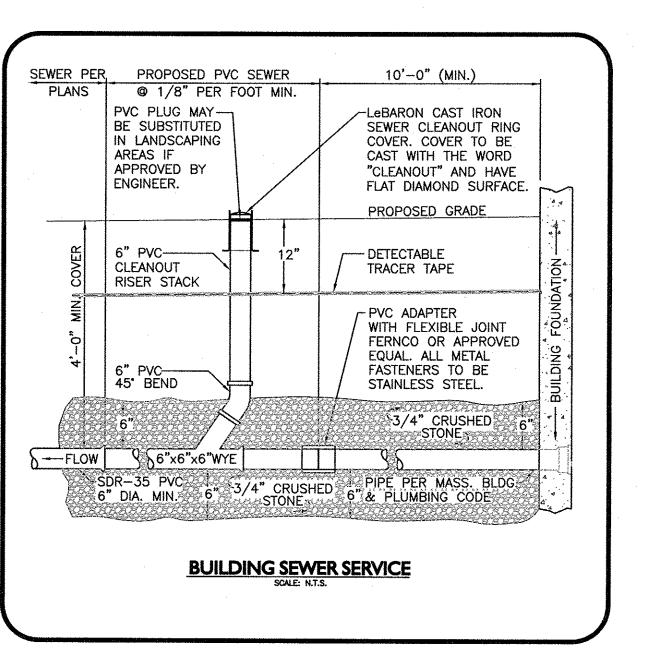












PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC. DATE DESCRIPTION REV APPLICANT\OWNER: ORION UNH LLC 225 FRANKLIN STREET, 26TH FLOOR BOSTON, MA 02110 PROJECT: STUDENT HOUSING **MAIN STREET DURHAM, NEW HAMPSHIRE** PROJECT NO. 1925-01 DATE: 1" = 20' DWG. NAME: C - DETAIL SCALE: DRAFTED BY: WOBURN, MA . LAKEVILLE, MA . MANCHESTER, NI SPECIFICATIONS ISSUED SHALL BE THE ONLY RECORD COPIES OF DRAWING TITLE: DETAILS Copyright@2013 Allen & Major Associates, Inc.
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ORION

09-04-13

23 High Street

603.431.8701

603.422.8707

Portsmouth, NH 03801

MICHAEL

MALYNOWSKI No. 12205 / 4

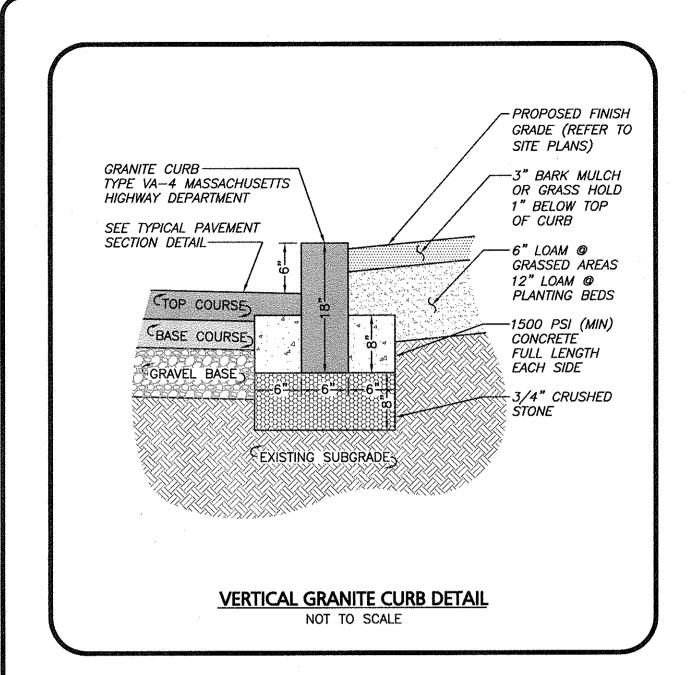
environmental consulting + landscape architecture www.allenmajor.com 250 COMMERCIAL STREET SUITE 1001

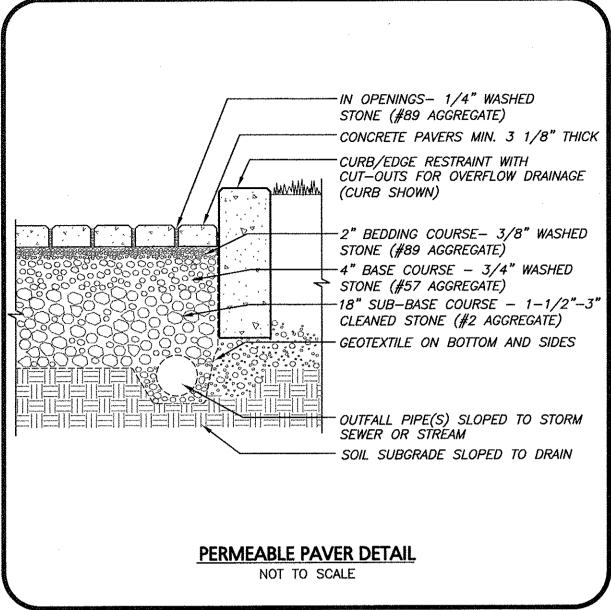
MANCHESTER, NH 03101 TEL: (603) 627-5500 FAX: (603) 627-5501

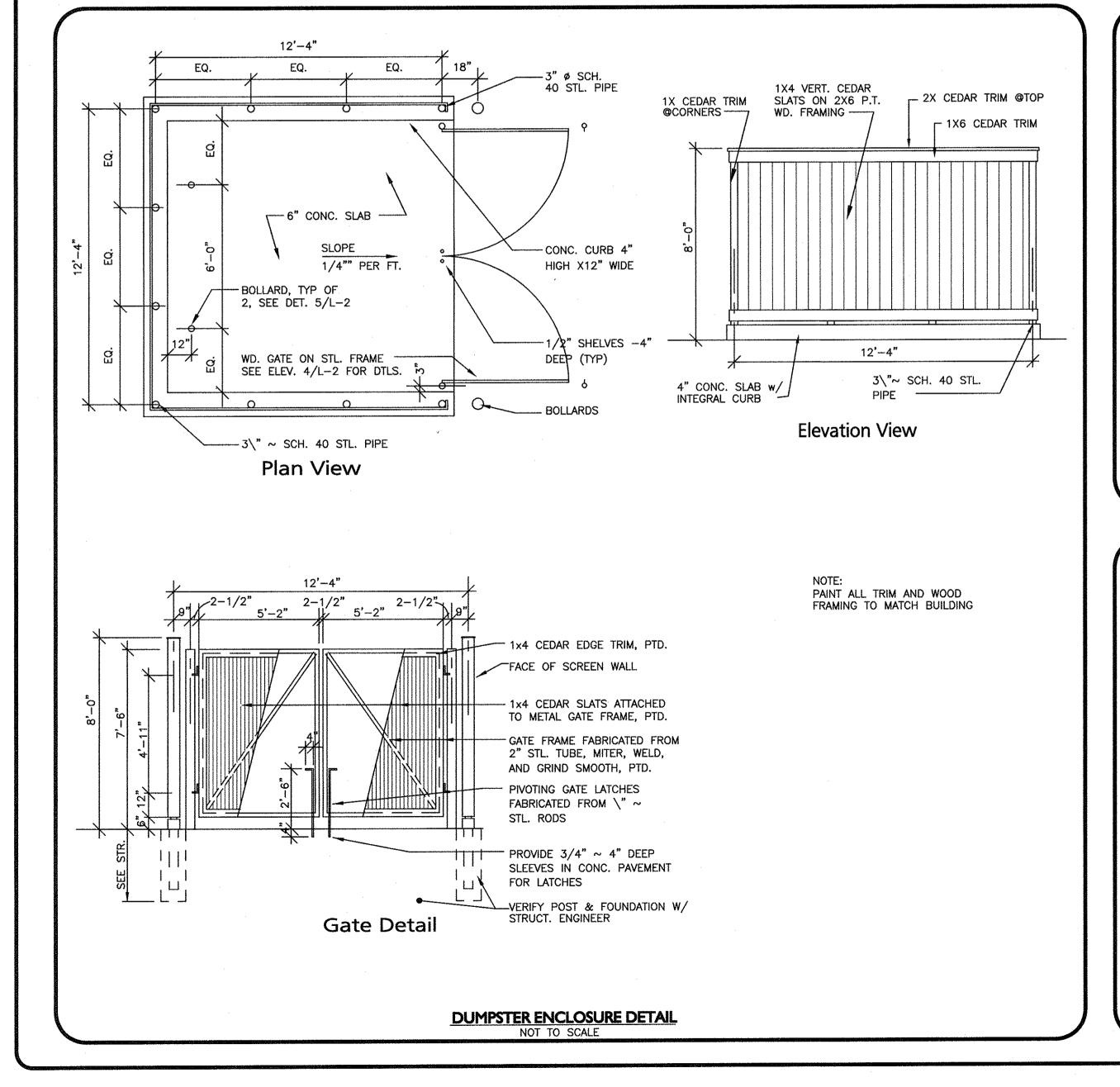
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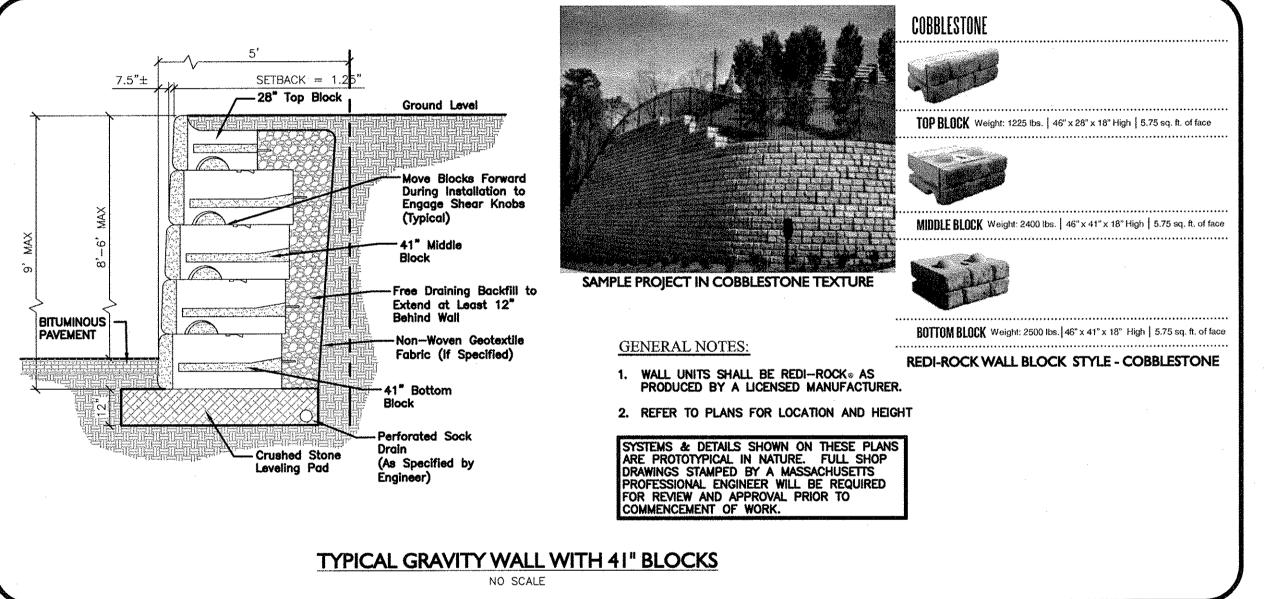
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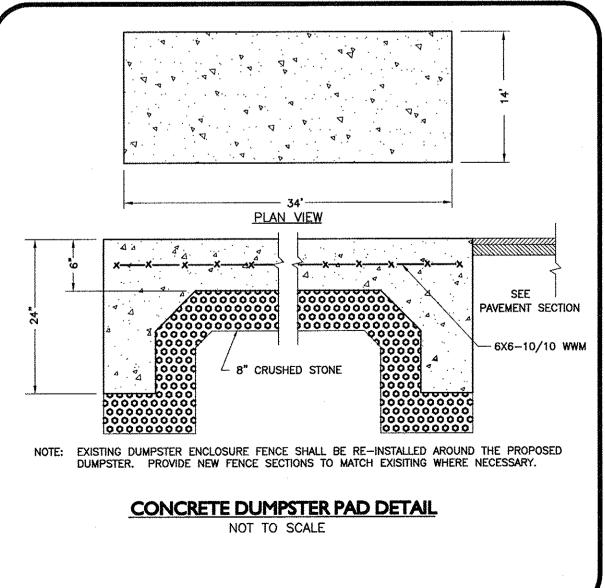
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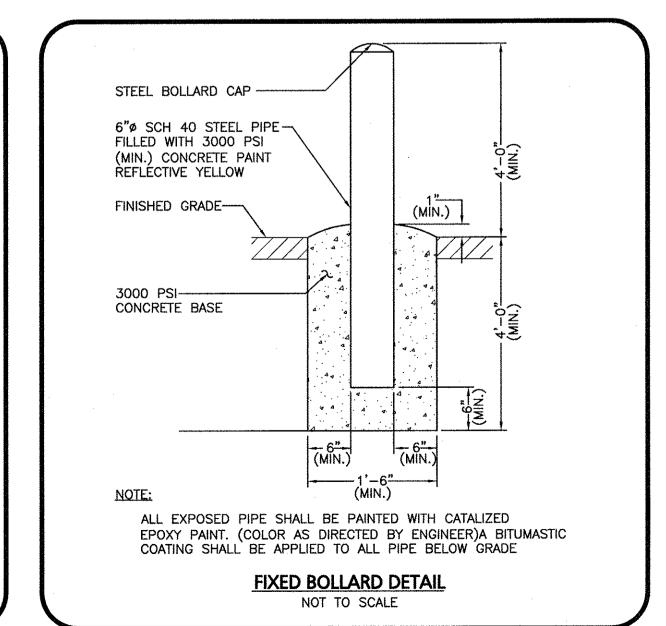










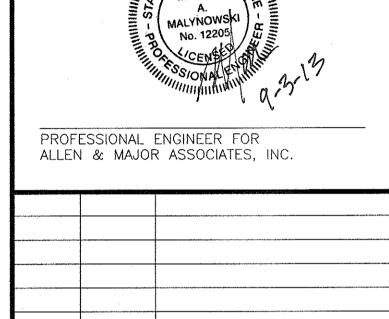


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23 High Street Portsmouth, NH 03801

> 603.431.8701 603.422.8707



PROJECT:
ORION
STUDENT HOUSING

225 FRANKLIN STREET, 26TH FLOOR

REV DATE DESCRIPTION

ORION UNH LLC

APPLICANT\OWNER:

MAIN STREET
DURHAM, NEW HAMPSHIRE

 PROJECT NO.
 1925-01
 DATE:
 09-04-13

 SCALE:
 1" = 20'
 DWG. NAME:
 C - DETAIL

 DRAFTED BY:
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LAKEVILLE, MA
MANCHESTER, NH

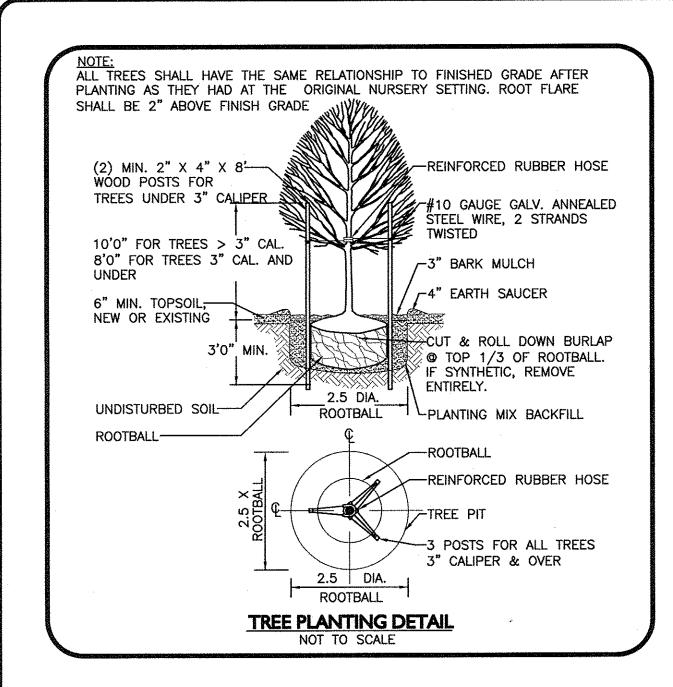
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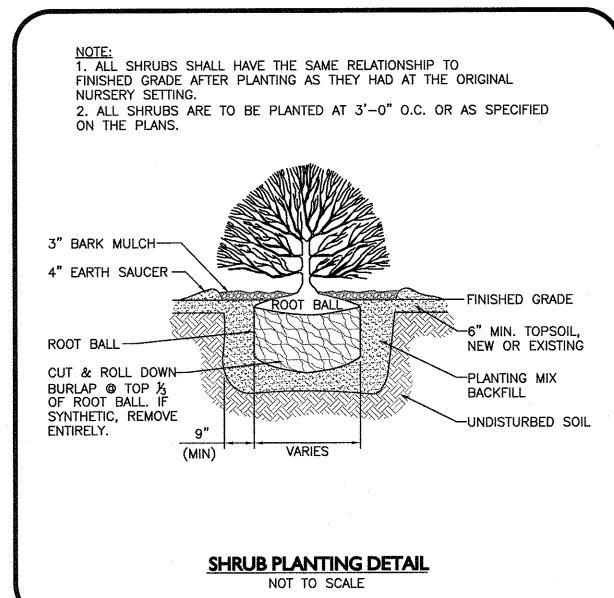
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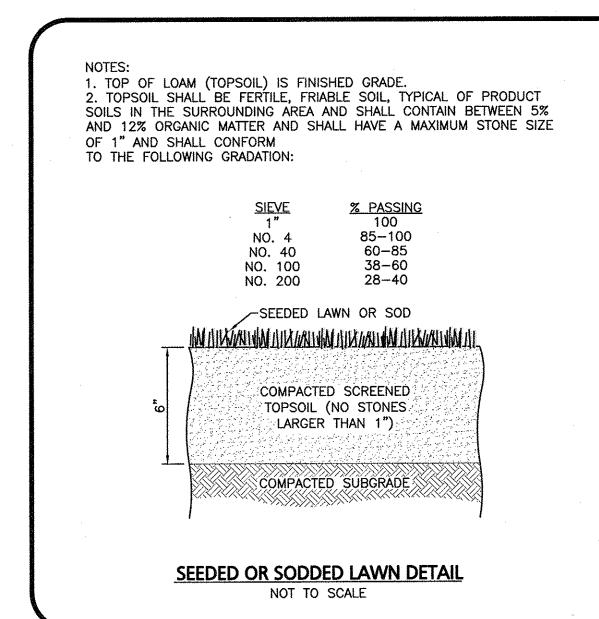
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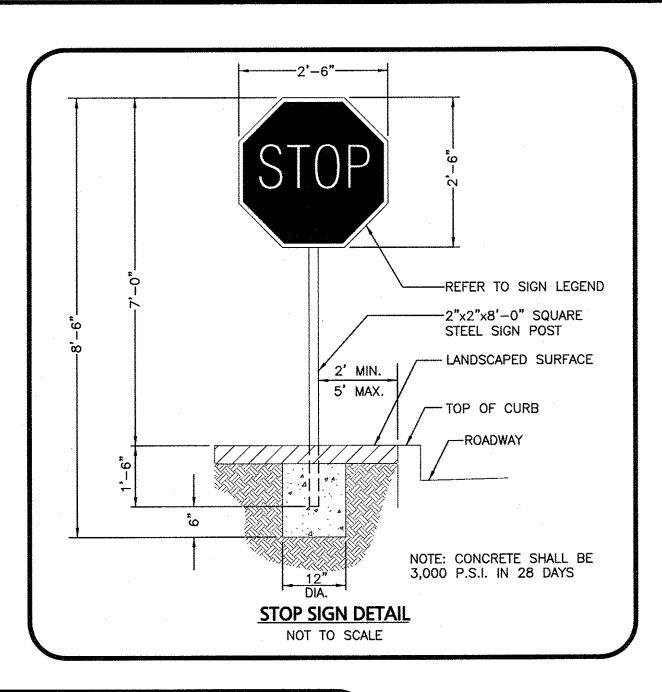
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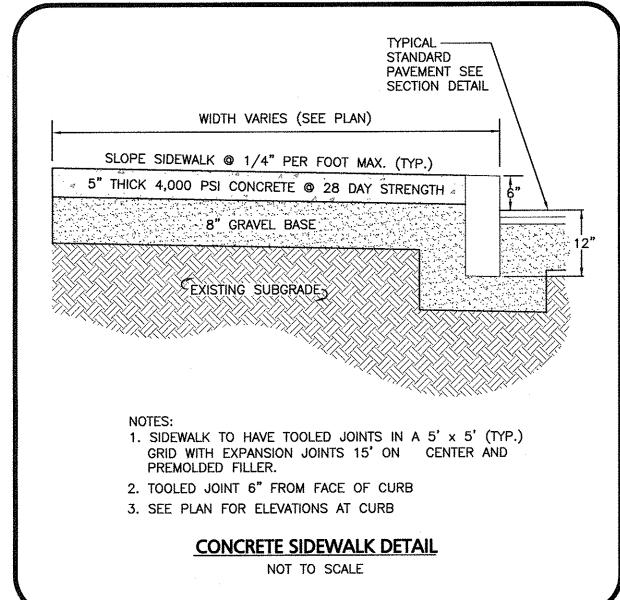
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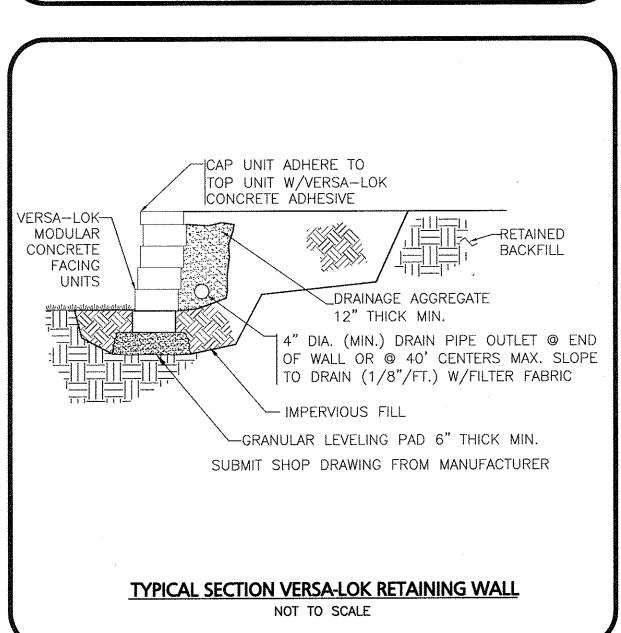


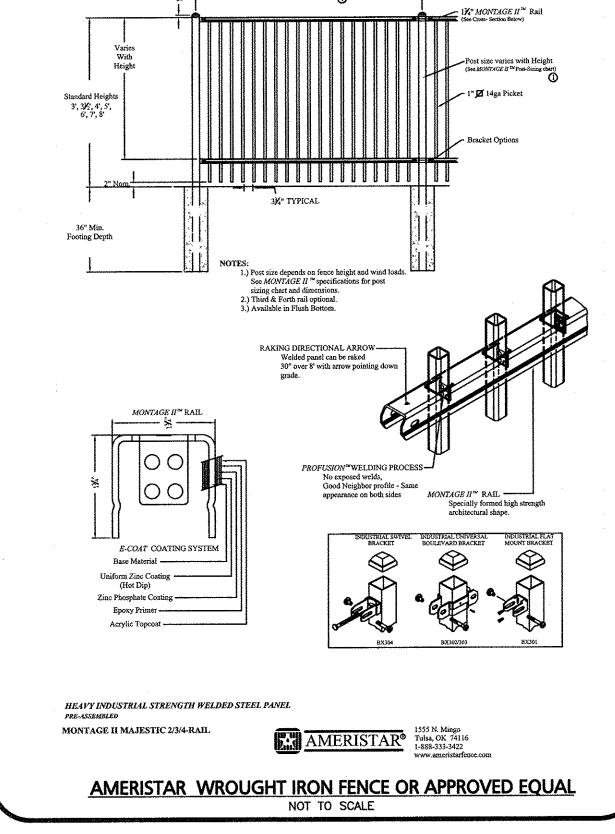


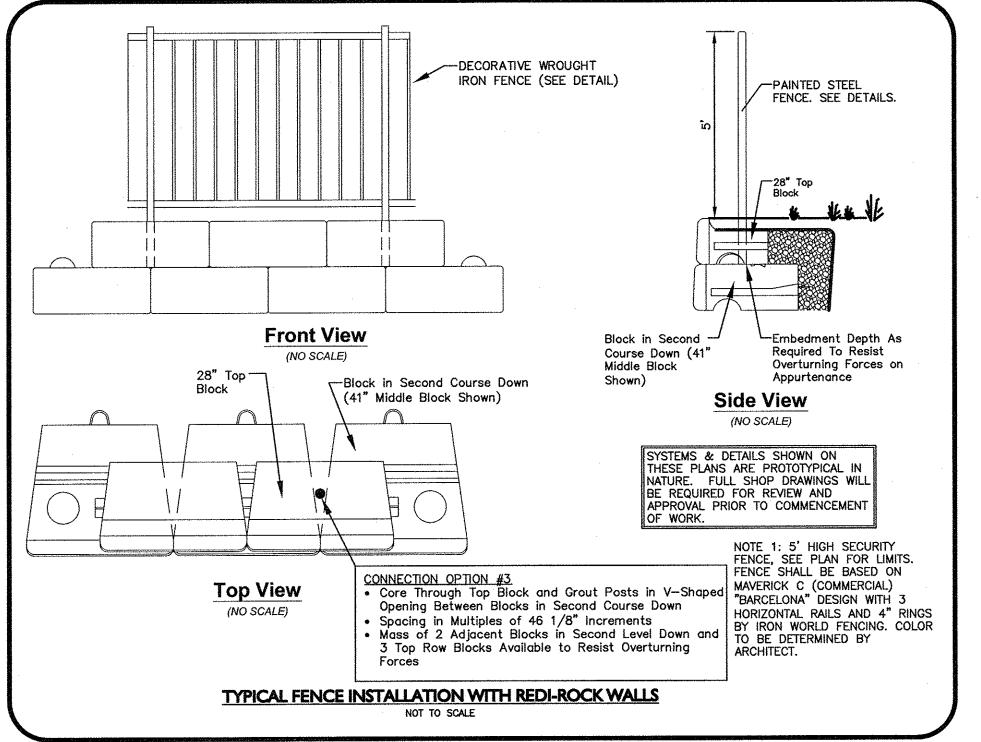


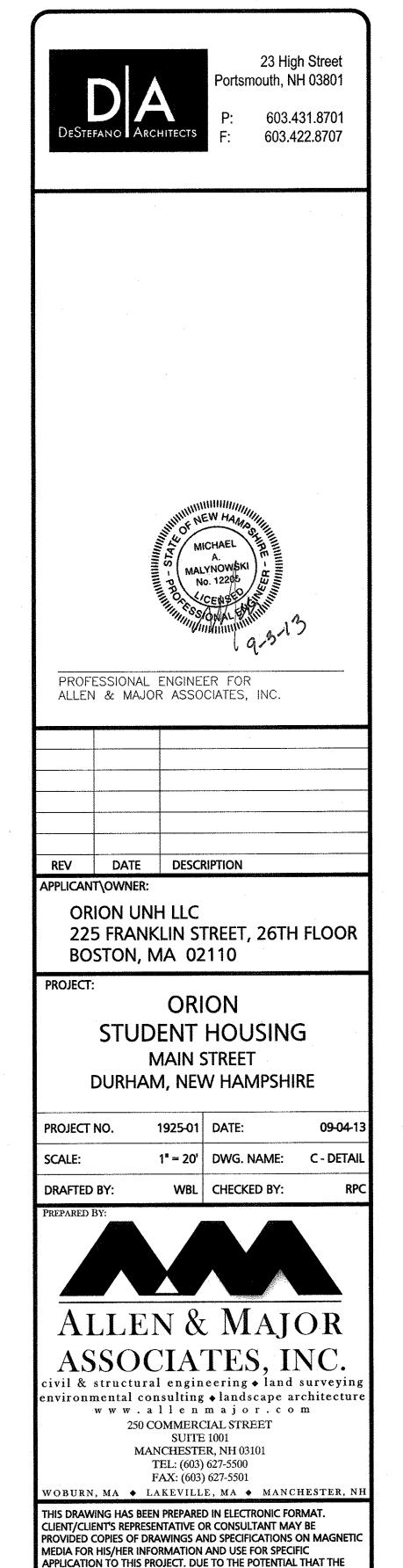












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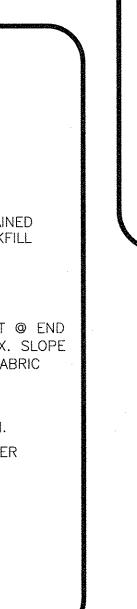
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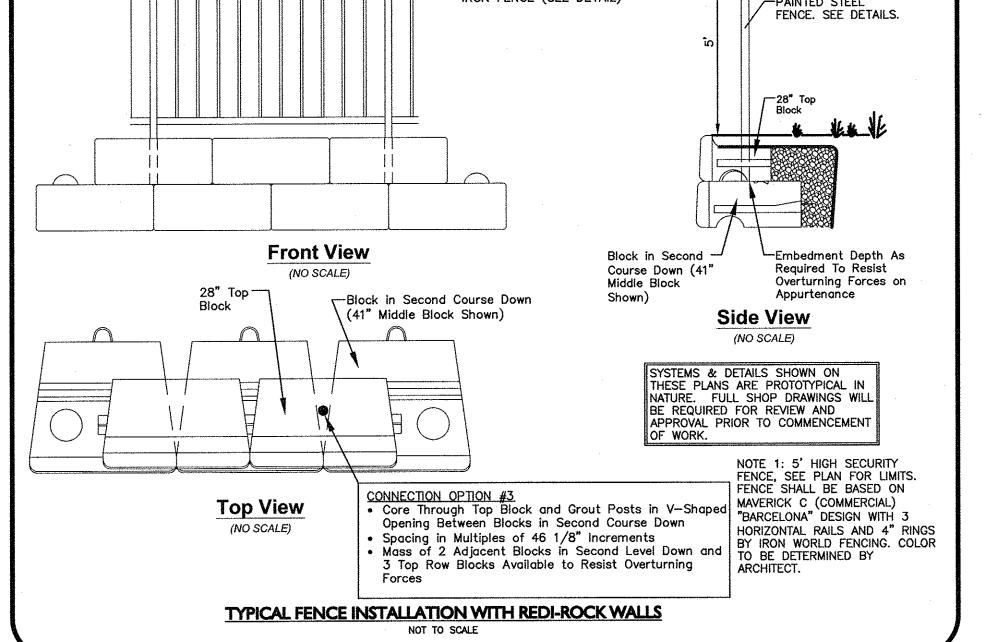
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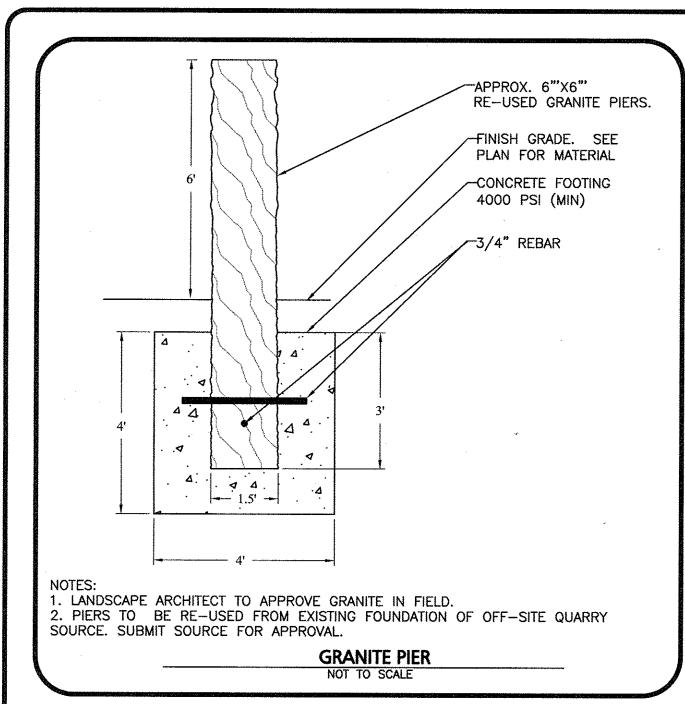
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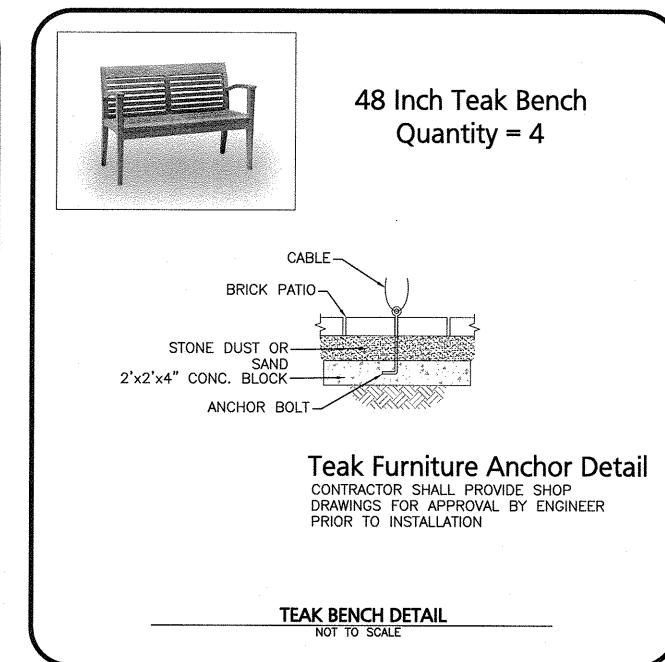
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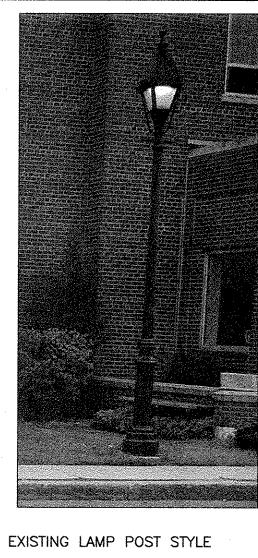




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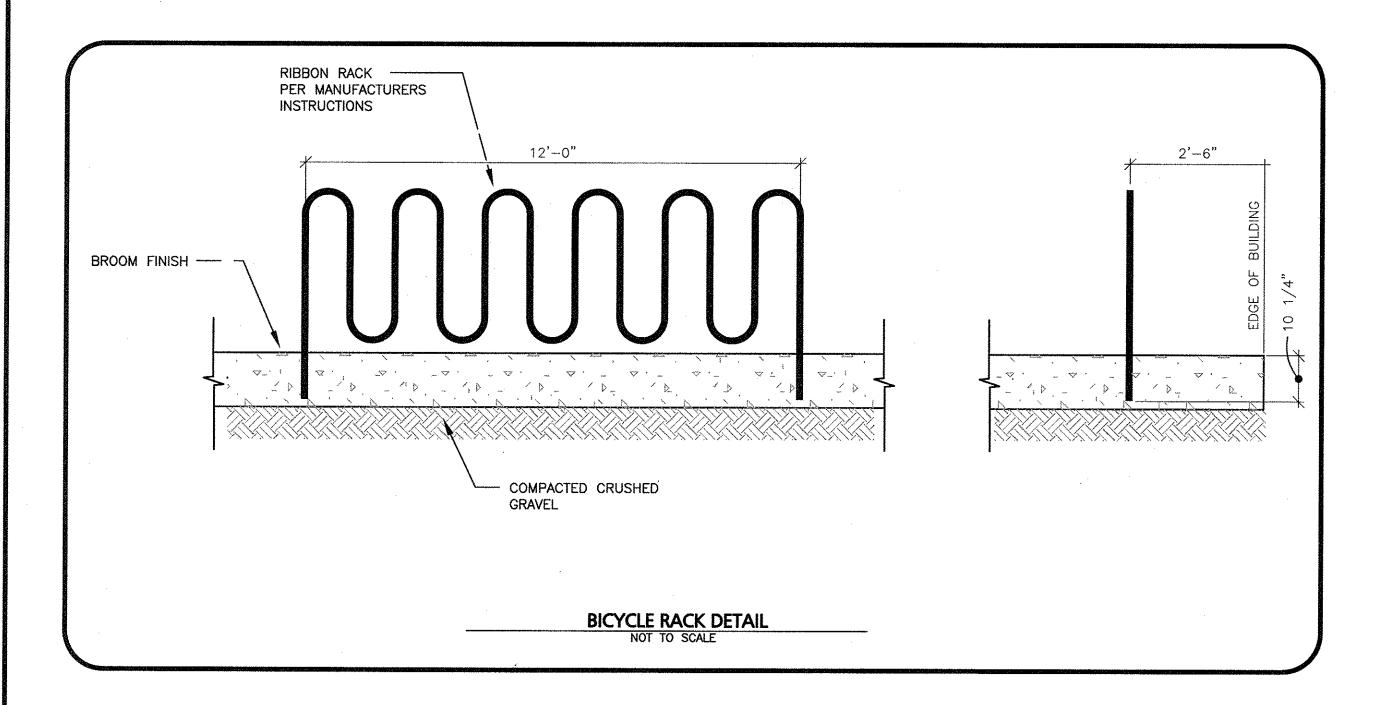






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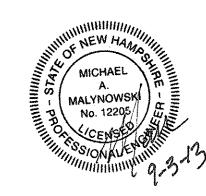
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23 High Street Portsmouth, NH 03801

> 603.431.8701 603.422.8707



PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV DATE DESCRIPTION

APPLICANT\OWNER: ORION UNH LLC 225 FRANKLIN STREET, 26TH FLOOR

BOSTON, MA 02110

PROJECT:

ORION STUDENT HOUSING MAIN STREET DURHAM, NEW HAMPSHIRE

1925-01 DATE: PROJECT NO.

1" = 20' DWG. NAME: C - DETAIL

09-04-13

WBL CHECKED BY: DRAFTED BY:

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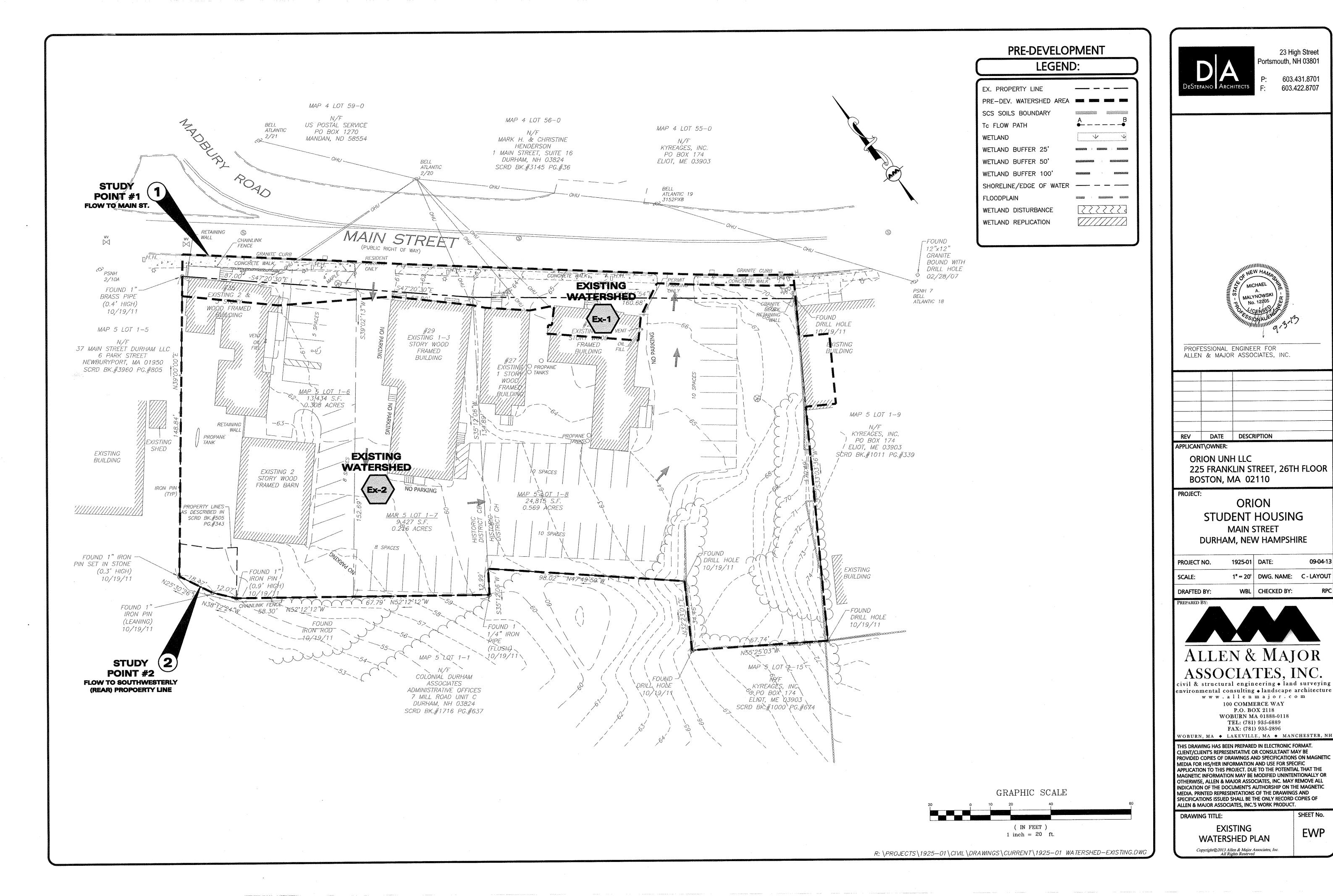
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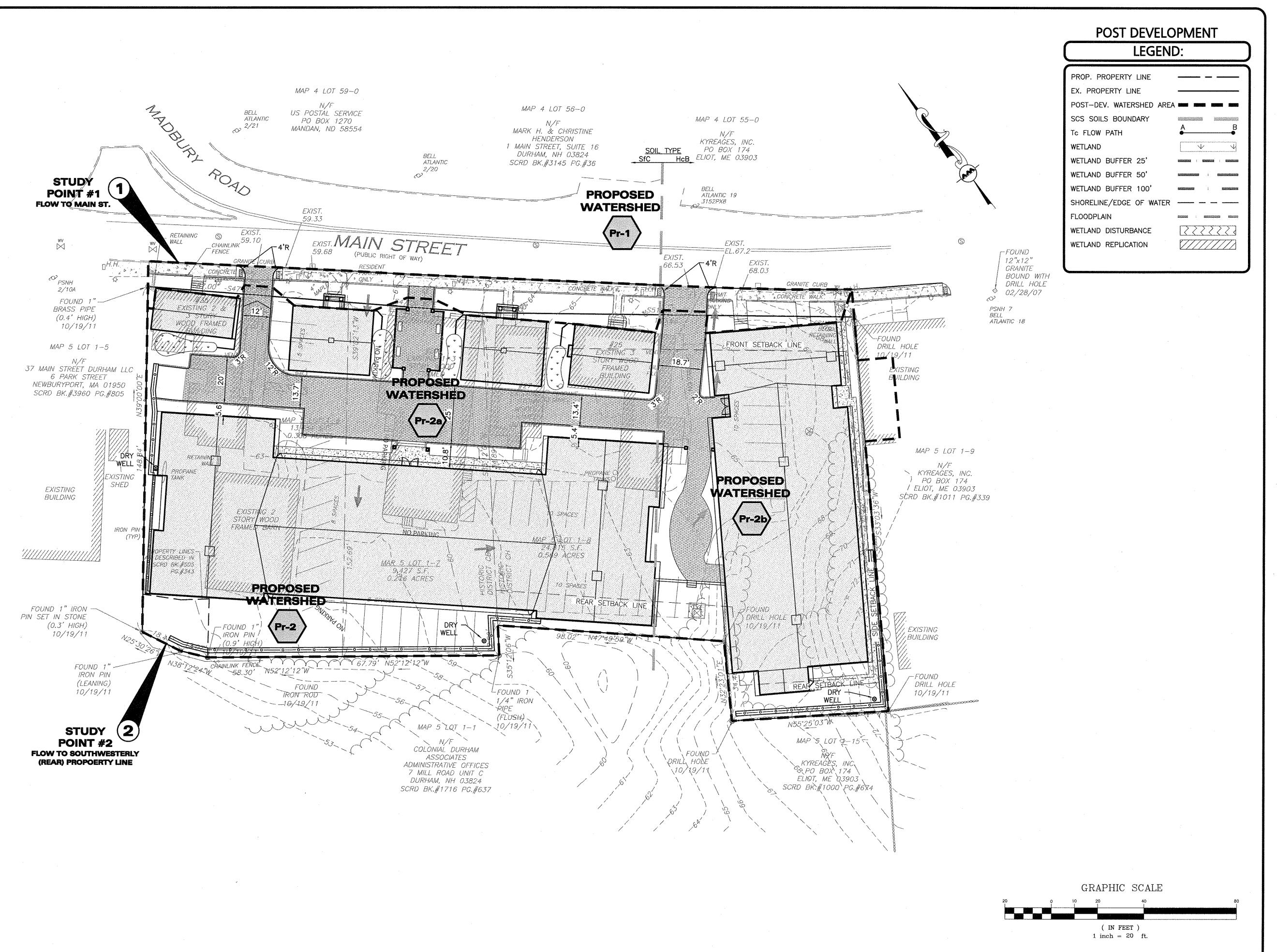
DRAWING TITLE:

SHEET No.

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PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

APPLICANT\OWNER:

REV DATE DESCRIPTION

ORION UNH LLC 225 FRANKLIN STREET, 26TH FLOOR BOSTON, MA 02110

PROJECT:

ORION
STUDENT HOUSING
MAIN STREET

DURHAM, NEW HAMPSHIRE

 PROJECT NO.
 1925-01
 DATE:
 09-04-13

 SCALE:
 1" = 20'
 DWG. NAME:
 C - LAYOUT

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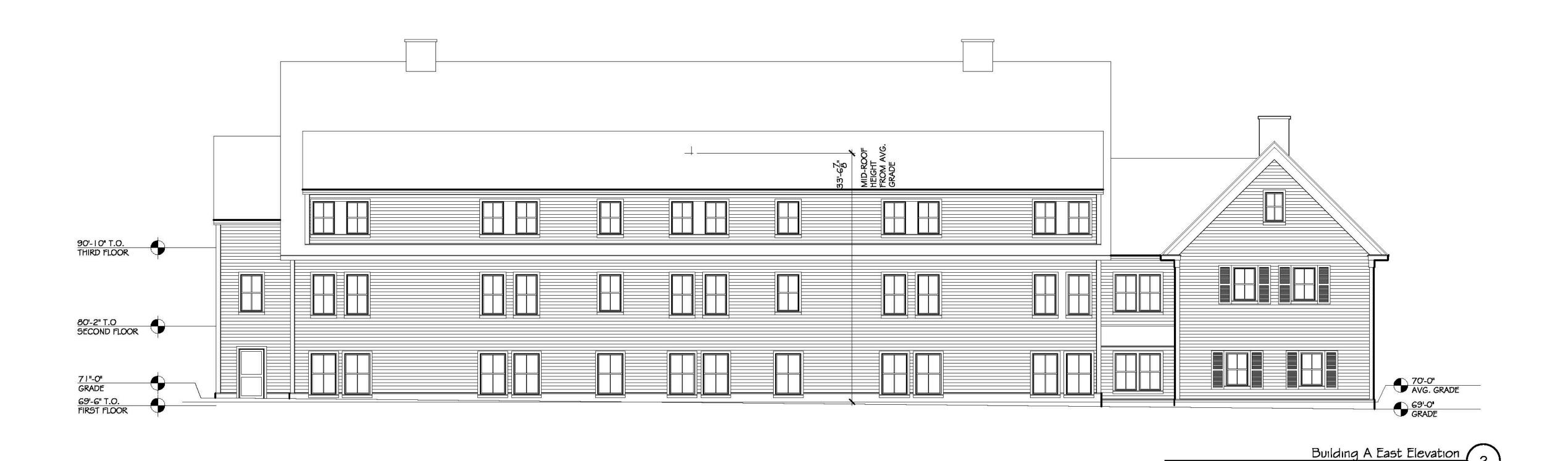
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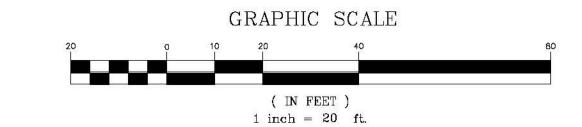
PROPOSED PWP

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WATERSHED PLAN







Building A West Elevation_

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REV DATE DESCRIPTION

APPLICANT\OWNER:

ORION UNH LLC

225 FRANKLIN STREET, 26TH FLOOR
BOSTON, MA 02110

ORION

STUDENT HOUSING

MAIN STREET
DURHAM, NEW HAMPSHIRE

1925-01 DATE:

DRAFTED BY:

JIN CHECKED BY:

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PROJECT NO.

SHEET No.

09-03-13

BUILDING A ELEVATIONS

VATIONS A-2.1





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DATE DESCRIPTION APPLICANT\OWNER: ORION UNH LLC 225 FRANKLIN STREET, 26TH FLOOR BOSTON, MA 02110 PROJECT:

ORION STUDENT HOUSING **MAIN STREET DURHAM, NEW HAMPSHIRE**

AS NOTED DWG. NAME: JJN CHECKED BY:

1925-01 DATE:

PROJECT NO.



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FAX: (781) 935-2896 WOBURN, MA ♦ LAKEVILLE, MA ♦ MANCHESTER, NH

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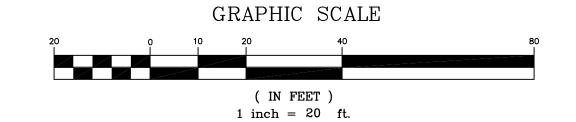
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09-03-13

BUILDING A&B ELEVATIONS A-2.2







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23 High Street Portsmouth, NH 03801

> : 603.431.8701 : 603.422.8707

REV DATE DESCRIPTION

APPLICANT\OWNER:

ORION UNH LLC

225 FRANKLIN STREET, 26TH FLOOR
BOSTON, MA 02110

PROJECT:

PROJECT NO. 1925-01 DATE: 09-03-13

SCALE: AS NOTED DWG. NAME:

ORION

STUDENT HOUSING

MAIN STREET

DURHAM, NEW HAMPSHIRE

PREPARED BY:

ALLEN & MAJOR

ASSOCIATES, INC.
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100 COMMERCE WAY P.O. BOX 2118 WOBURN MA 01888-0118 TEL: (781) 935-6889

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WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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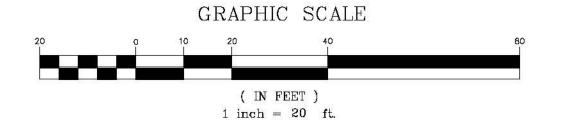
SHEET No.

BUILDING B ELEVATIONS

A-2.3







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> 603.431.8701 603.422.8707

REV DATE DESCRIPTION

APPLICANT\OWNER:

ORION UNH LLC

225 FRANKLIN STREET, 26TH FLOOR

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STUDENT HOUSING
MAIN STREET

BOSTON, MA 02110

DURHAM, NEW HAMPSHIRE

PROJECT NO. 1925-01 DATE: 09-03-13

SCALE: AS NOTED DWG. NAME:

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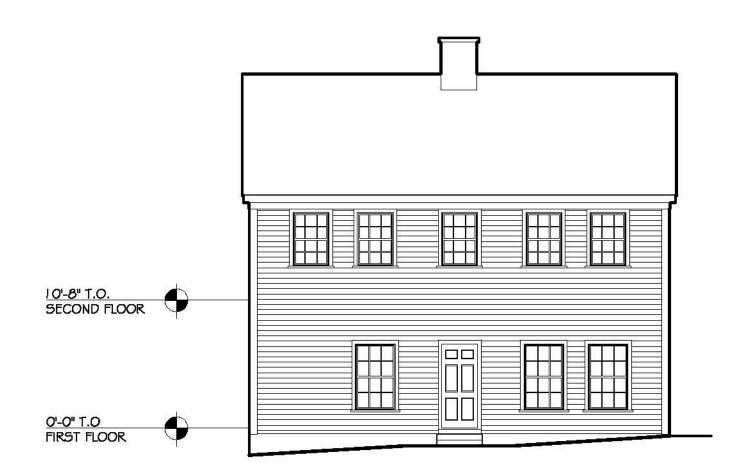
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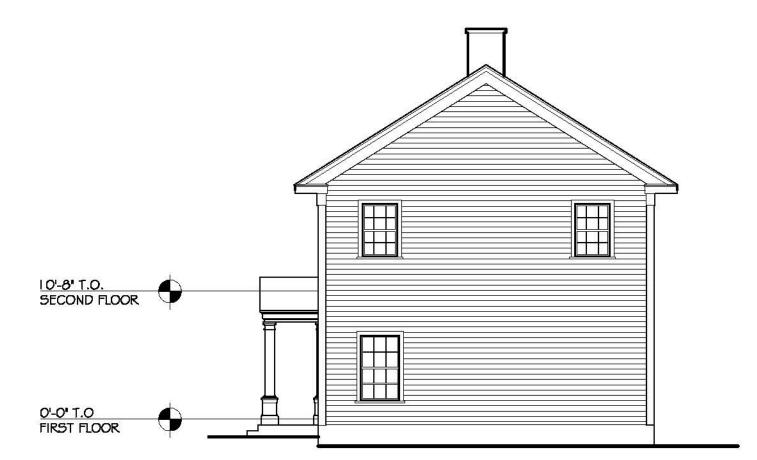
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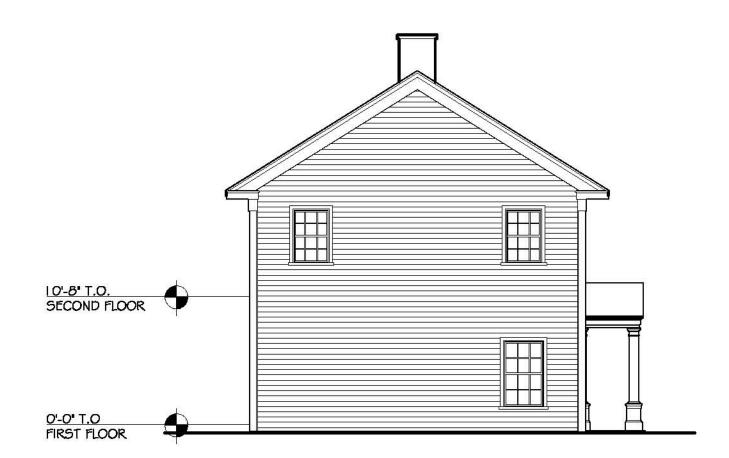
BUILDING B ELEVATIONS



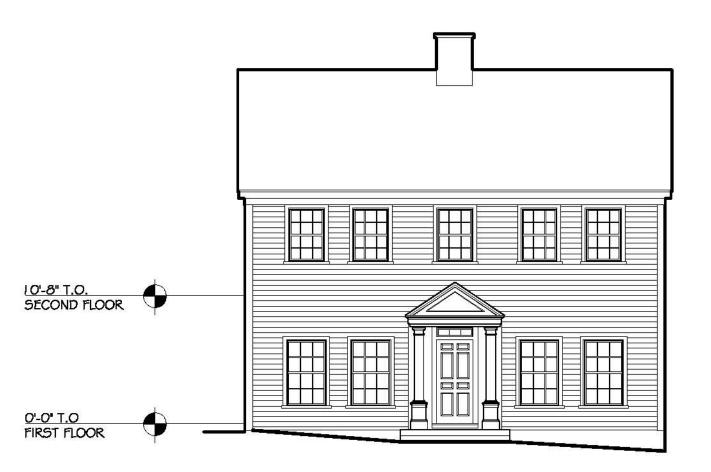
Building C/D Typical East Elevation 4



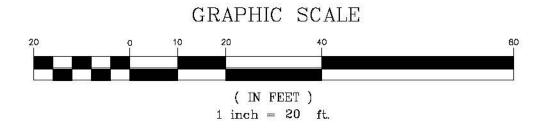
Building C/D Typical South Elevation



Building C/D Typical West Elevation 3



Building C/D Typical North Elevation



 $R: \PROJECTS \setminus 1925-01 \setminus CIVIL \setminus DRAWINGS \setminus VENDORS \setminus DESTEFANO \setminus 2013-9-3 \ ELEVATIONS \setminus PB-A2.1.DWG$



23 High Street Portsmouth, NH 03801

603.431.8701 603.422.8707

REV DATE DESCRIPTION APPLICANT\OWNER: **ORION UNH LLC** 225 FRANKLIN STREET, 26TH FLOOR

BOSTON, MA 02110 PROJECT:

ORION STUDENT HOUSING MAIN STREET

DURHAM, NEW HAMPSHIRE

1925-01 DATE: 09-03-13

AS NOTED DWG. NAME: JJN CHECKED BY: DRAFTED BY: PREPARED BY:



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