

LOCUS MAP  
NOT TO SCALE

OWNER:  
SOMERBRIDGE HOTEL LLC  
C/O JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

SITE ENGINEER/LANDSCAPE ARCHITECT:  
ALLEN & MAJOR ASSOCIATES, INC.  
400 HARVEY ROAD  
MANCHESTER, NH 03103

SURVEYOR:  
ALLEN & MAJOR ASSOCIATES, INC.  
100 COMMERCE WAY  
WOBURN, MA 01888-0118

ARCHITECT:  
JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

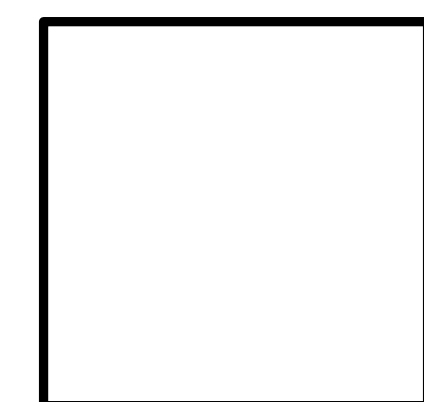
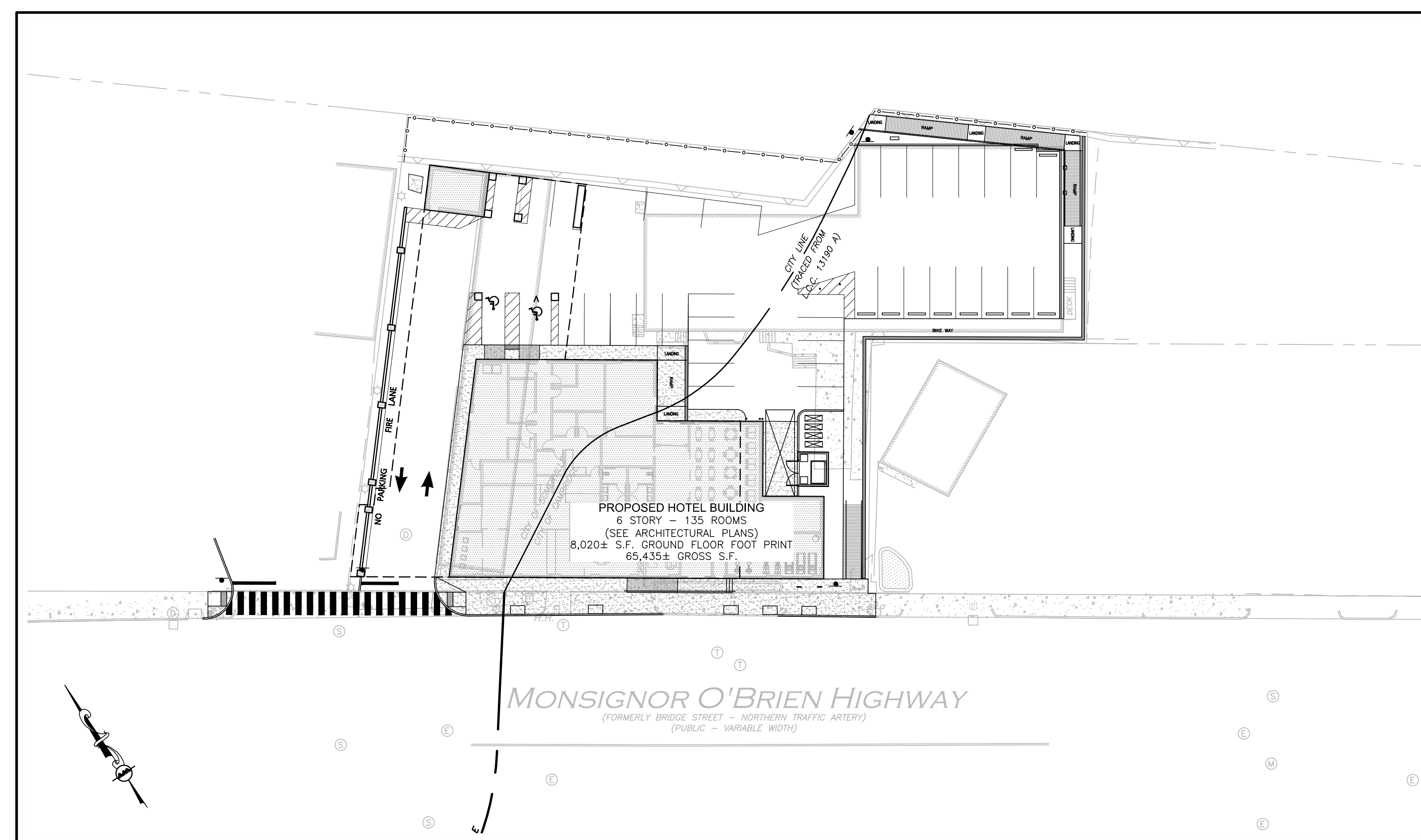
# SITE DEVELOPMENT PLANS FOR 135 ROOM EXTENDED STAY HOTEL

1 McGRATH HIGHWAY  
SOMERVILLE, MA

MAP 115, BLOCK B, LOT 8

263 MSGR. O'BRIEN HIGHWAY  
CAMBRIDGE, MA

MAP 7, LOT 35

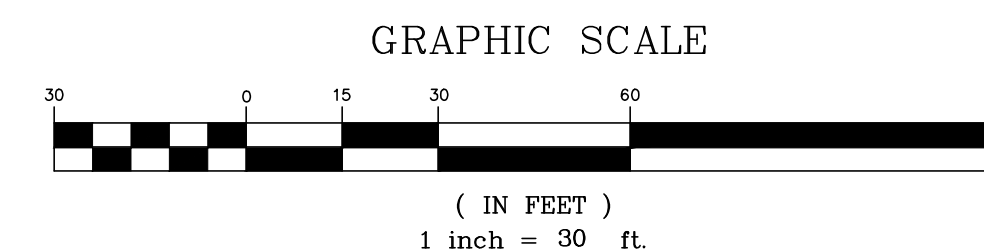


CITY OF SOMERVILLE STAMP

PREPARED BY:



ALLEN & MAJOR  
ASSOCIATES, INC.  
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environmental consulting • landscape architecture  
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400 HARVEY ROAD  
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## LIST OF DRAWINGS

DRAWING TITLE	SHEET NO.	ISSUED
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POST DEVELOPMENT WATERSHED PLAN	WS2	09-26-18

CITY OF CAMBRIDGE DPW  
STORMWATER CONTROL PERMIT NUMBER



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

ISSUED FOR SUBMISSION: SEPT. 26, 2018

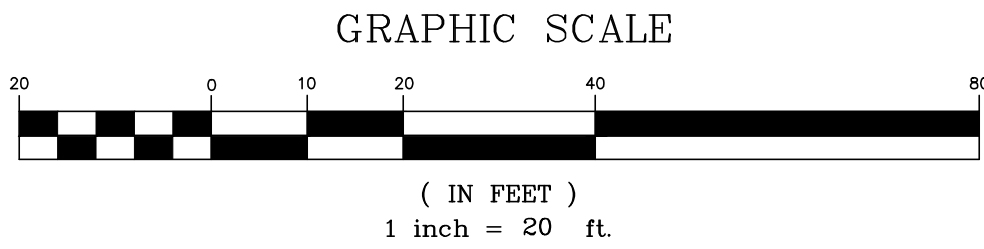
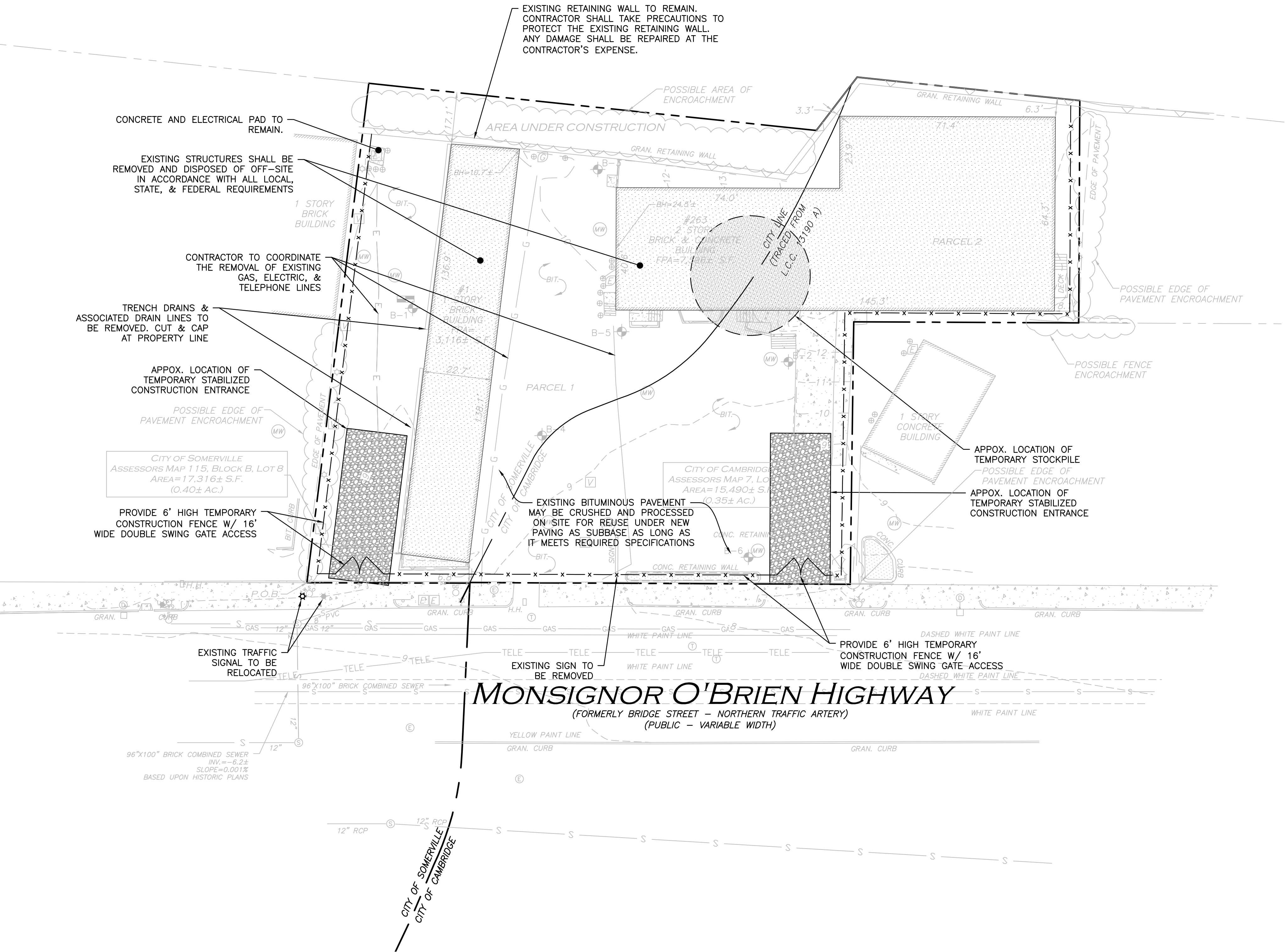






DEMO NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR IT'S 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.
2. GRADING / DEMOLITION OUTSIDE OF THE PROJECT BOUNDARIES REQUIRES A TEMPORARY CONSTRUCTION/GRADING EASEMENT FROM THE LANDOWNER (BY OTHERS).
3. ALTHOUGH CERTAIN ITEMS HAVE BEEN NOTED ON THIS DRAWING FOR DEMOLITION, NO ATTEMPT HAS BEEN MADE TO DELINEATE EACH AND EVERY ITEM THAT REQUIRES DEMOLITION FOR THE COMPLETION OF THE PROJECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL NECESSARY DEMOLITION WORK TO COMPLETE THE PROJECT. ALLEN & MAJOR ASSOCIATES, INC. IS NOT RESPONSIBLE FOR SITE DEMOLITION ITEMS NOT SHOWN ON THE SURVEY, OR SPECIFICALLY NOTED. THE DEMOLITION NOTES AND ARROWS ON THIS PLAN ARE TYPICAL AND DO NOT REFLECT QUANTITY.
4. CLEAR GRUB AND REMOVE ALL EXISTING VEGETATION ON SITE, EXCEPT AS NOTED ON PLAN.
5. REFER TO STORMWATER POLLUTION PREVENTION PLANS FOR ADDITIONAL DETAIL REGARDING EROSION CONTROL MEASURES.
6. REFER TO THE LANDSCAPE DRAWINGS AND SPECIFICATIONS REGARDING THE TREATMENT OF TOPSOIL.
7. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. IT'S 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.



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
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OWNER:  
SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

PROJECT:  
135 ROOM EXTENDED STAY HOTEL  
263 MONSIGNOR O'BRIEN HIGHWAY  
CAMBRIDGE, MA

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO.	1362-16	DATE:	9/26/18
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SCALE:	1" = 20'	DWG.:	1362-16_Demo
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DESIGNED BY:	SM	CHECKED BY:	MM
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PREPARED BY:

**ALLEN & MAJOR ASSOCIATES, INC.**  
civil & structural engineering ♦ land surveying  
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DRAWING TITLE:	SHEET No.
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DEMOLITION PLAN	C-1
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CITY OF SOMERVILLE  
(IA) INDUSTRIAL A DISTRICT

ITEM	EXISTING	REQUIRED/ ALLOWED	PROPOSED
LOT AREA (MIN)	17,316 SF	N/A	17,316 SF
FLOOR AREA RATIO (MAX)	3.3	2.0	2.34*
BUILDING HEIGHT (MAX)	15'±	50'	69'-11"*
FRONT YARD SETBACK (MIN)	6.8'	N/A	5.2'
SIDE YARD SETBACK (MIN)	29.8'	N/A	1.0'
REAR YARD SETBACK (MIN)	17.1'	N/A	16.9'
FRONTAGE (MIN)	54'	N/A	54'
LOADING ZONES (MIN)	N/A	1	0
GROUND COVERAGE (MAX)	29.9%	80%	40.6%
LANDSCAPED AREA (MIN)	12.5%	10%	10.5%

\* VARIANCE REQUIRED

NOTES:

- FLOOR AREA RATIO (FAR) BASED UPON THE ASSUMPTION OF 40,637 G.S.F. OF BUILDING WITHIN THE SOMERVILLE CITY LIMITS. (AN ADDITIONAL 3,002 G.S.F. NOT USED IN FAR CALCULATION PER ZONING ORDINANCE ITEM 2.2-58)
- LOADING ZONE PROVIDED ON CAMBRIDGE SIDE OF PROJECT

SPECIAL PERMIT REQUIRED FOR:

HOTEL USE

OFF STREET PARKING SUMMARY - SOMERVILLE

USE: HOTEL, MOTEL (ORDINANCE SECTION 9.5)	
0.8 SPACE FOR GUESTROOM (90 GUESTROOMS)	= 72
AND 0.5 SPACE FOR EACH EMPLOYEES ON PEAK SHIFT (10 EMP)	= 5
PLUS 1/4 THE NORMAL REQUIREMENT FOR ANY OTHER USE IN THE HOTEL (N/A)	= 0
SITE TOTAL OFF-STREET PARKING REQUIRED	= 77 SPACES
ADA REQUIRED: 2 TOTAL PARKING STALLS SHALL BE ACCESSIBLE (MINIMUM OF 1 ACCESSIBLE STALL BE VAN ACCESSIBLE)	
ADA PROVIDED: 2 TOTAL ACCESSIBLE PARKING STALLS ARE PROVIDED (1 IS VAN ACCESSIBLE)	
COMPACT SPACES (ORDINANCE SECTION 9.11.C)	
COMPACT SPACES MAY NOT ACCOUNT FOR MORE THAN 20% OF REQUIRED SPACES	
5 PROVIDED / 77 REQUIRED = 6.5% COMPACT SPACES	
ONSITE PARKING	
STANDARD (9'x18')	8
ADA ACCESSIBLE	2
COMPACT (8'x16')	6
TOTAL PROVIDED	16*

\*VARIANCE REQUIRED

NOTE:

- PARKING CALCULATIONS BASED UPON 135 GUESTROOMS, 90 OF WHICH LIE WITHIN SOMERVILLE CITY LIMITS, WITH A MAXIMUM OF 10 EMPLOYEES ON THE LARGEST SHIFT.

CITY OF CAMBRIDGE  
(SD 1) SPECIAL DISTRICT 1

ITEM	EXISTING	REQUIRED/ ALLOWED	PROPOSED
LOT AREA (MIN.)	15,490 S.F.	N/A	15,490 S.F.
FLOOR AREA RATIO (MAX)	2.8	1.5	1.4
BUILDING HEIGHT (MAX)	>85'	85'	69'-11"*
FRONT YARD SETBACK (MIN)	91'±	3'	5'
SIDE YARD SETBACK (MIN)	3.3'	N/A	15.4'
REAR YARD SETBACK (MIN)	6.3'	N/A	111.9'
FRONTAGE (MIN)	126'	N/A	126'
LOADING ZONES (MIN)	1	1	1
PARKING SETBACK (MIN)	0	5'	>5'

NOTE:

- FLOOR AREA RATIO BASED UPON THE ASSUMPTION OF 21,796 G.S.F. OF BUILDING WITHIN THE CAMBRIDGE CITY LIMITS.
- REQUIRED LOADING ZONE DIMENSIONS: 30 FEET LONG X 10 WIDE X 14 FEET HIGH.

SPECIAL PERMIT REQUIRED FOR:

HOTEL USE

OFF STREET PARKING SUMMARY - CAMBRIDGE

USE: HOTEL (ORDINANCE SECTION 6.36.1.1.2)	
1 SPACE PER 2 SLEEPING ROOMS (45 SLEEPING ROOMS)	= 23
SITE TOTAL OFF-STREET PARKING REQUIRED	= 23 SPACES
ADA REQUIRED: 1 TOTAL PARKING STALL SHALL BE ACCESSIBLE (MINIMUM OF 1 ACCESSIBLE STALL BE VAN ACCESSIBLE)	
ADA PROVIDED: 0 TOTAL ACCESSIBLE PARKING STALLS ARE PROVIDED (ACCESSIBLE PARKING STALLS ARE PROVIDED ON SOMERVILLE SIDE OF PROJECT)	
COMPACT SPACES (ORDINANCE SECTION 6.34)	
COMPACT SPACES MAY NOT ACCOUNT FOR MORE THAN 50% OF REQUIRED SPACES	
9 PROVIDED / 23 REQUIRED = 39.1% COMPACT SPACES	
ONSITE PARKING	
STANDARD (9'x18')	14
ADA ACCESSIBLE	0
COMPACT (8'x16')	9
TOTAL PROVIDED	23

NOTE:

- PARKING CALCULATIONS BASED UPON 135 GUESTROOMS, 45 OF WHICH LIE WITHIN CAMBRIDGE CITY LIMITS.

PLAN NOTES:

- EXISTING CONDITIONS WERE COMPILED FROM AN ON THE GROUND SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES AS WELL AS AVAILABLE RECORD PLANS OBTAINED FROM THE CITY ENGINEERING DEPARTMENT AND OTHER SOURCES.
- 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 "DISAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK. THE CONTRACTOR SHALL ALSO CONTACT THE CITY DEPARTMENT OF PUBLIC WORKS AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF LOCAL UTILITIES.

LAYOUT NOTES:

- CURB RADII SHALL BE AS SHOWN ON THE PLAN, THOUGH TYPICALLY 10'-FT. AT CORNERS AND 2'-FT. ADJACENT TO PARKING STALLS.
- ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS OR CONDITIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR. ALL SITE ITEMS SHALL BE LAID OUT AND AS BUILT BY A LICENSED LAND SURVEYOR.

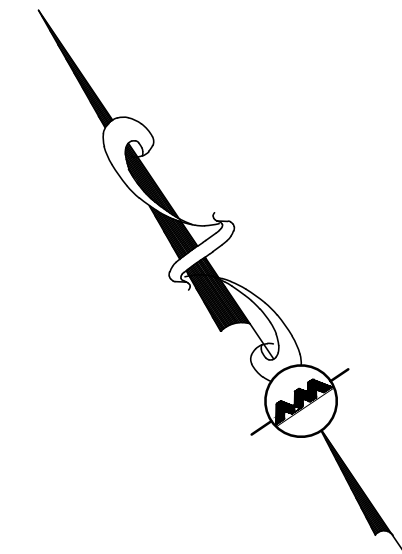
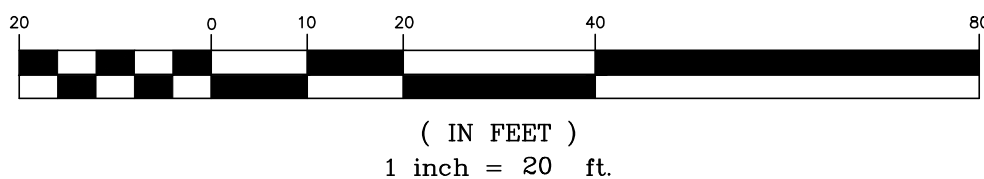
GENERAL NOTES:

- THIS PROJECT WILL BE SERVED BY PUBLIC SEWER, WATER, NATURAL GAS, TELEPHONE, CABLE AND ELECTRIC. ALL UTILITY LINES WILL BE INSTALLED UNDERGROUND.
- 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.
- 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.
- 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.
- THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION MEETING WITH THE CITY, 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.
- APPROPRIATE WARNING SIGNS, MARKERS, BARRICADES AND/OR FLAGMEN SHALL BE PROVIDED TO REGULATE TRAFFIC. CONSTRUCTION TRAFFIC CONTROL SHALL BE IMPLEMENTED PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE LOCAL AUTHORITY.
- 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.
- ALL PERMITS AND APPROVALS NECESSARY FROM AGENCIES GOVERNING THE WORK SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY SITE WORK OR EARTHWORK OPERATIONS, SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN IN PLACE UNTIL ALL SITE WORK IS COMPLETE AND GROUND COVER IS ESTABLISHED. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DETERMINED NECESSARY BY ON SITE INSPECTIONS BY THE OWNER, THEIR REPRESENTATIVES, OR REGULATORY AGENCIES HAVING JURISDICTION AT NO ADDITIONAL COST TO THE OWNER.
- 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.
- ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS INCLUDING THE CITY, MADOT, MADEP, MUTCD, AND AASHO.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY ALLEN & MAJOR ASSOCIATES, DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK, OR THE OWNER'S EMPLOYEES, CUSTOMERS, OR THE GENERAL PUBLIC. THE SEAL OF THE ENGINEER AS INCLUDED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PROVIDE THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), STATE, AND LOCAL REGULATIONS.
- GRANITE CURBING REMOVED FROM PUBLIC ROADS SHALL BE STOCKPILED AND RETURNED TO THE RESPECTIVE CITY DPW.
- EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COSTS SHALL BE INCLUDED IN BASE BID.
- 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 CITY'S GOVERNING AUTHORITY'S SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COSTS SHALL BE INCLUDED IN BASE BID.
- A SIGN PERMIT APPLICATION SHALL BE APPROVED BY THE TOWN PRIOR TO INSTALLATION OF FREESTANDING BUILDING/WALL SIGNS.
- SEE SHEET 1 FOR EXISTING CONDITIONS.
- 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 STORAGE SHOWN FOR CONCEPTUAL PURPOSES ONLY. SNOW SHALL BE TAKEN OFF-SITE ONCE SNOW STORAGE AREAS ON SITE BECOME INADEQUATE, AND BEGINS TO BLOCK ACCESS TO AND FROM THE SITE OR BLOCKS THE USE OF ON-SITE PARKING. ANY EXCESS WILL BE TRUCKED OFF-SITE & DISPOSED OF IN ACCORDANCE WITH CITY AND MADEP REQUIREMENTS.

LEGEND:

PROP. PROPERTY LINE	---
SIGN	+
BOLLARD	.
BUILDING	[Hatched Box]
BUILDING OVERHEAD	----
BUILDING INTERIOR WALLS	----
CURB	=====
PARKING STRIPING	[Hatched Box]
ROADWAY STRIPING	=====
TRAFFIC ARROWS	[Arrow]
VERTICAL GRANITE CURB	VGC
PRECAST CONC. CURB	PCC
INTEGRAL CONC. CURB	ICC
SIDEWALK	[Hatched Box]
SNOW STORAGE	[Hatched Box]
PARKING COUNT	10
COMPACT PARKING STALL	⊙

GRAPHIC SCALE



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
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OWNER:  
SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

PROJECT:  
135 ROOM EXTENDED STAY HOTEL  
263 MONSIGNOR O'BRIEN HIGHWAY  
CAMBRIDGE, MA

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO. 1362-16 DATE: 9/26/18

SCALE: 1" = 20' DWG.: 1362-16 Layout and Materials

DESIGNED BY: SM CHECKED BY: MM

PREPARED BY:

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DRAWING TITLE:

LAYOUT &  
MATERIALS PLAN

SHEET NO.

C-2

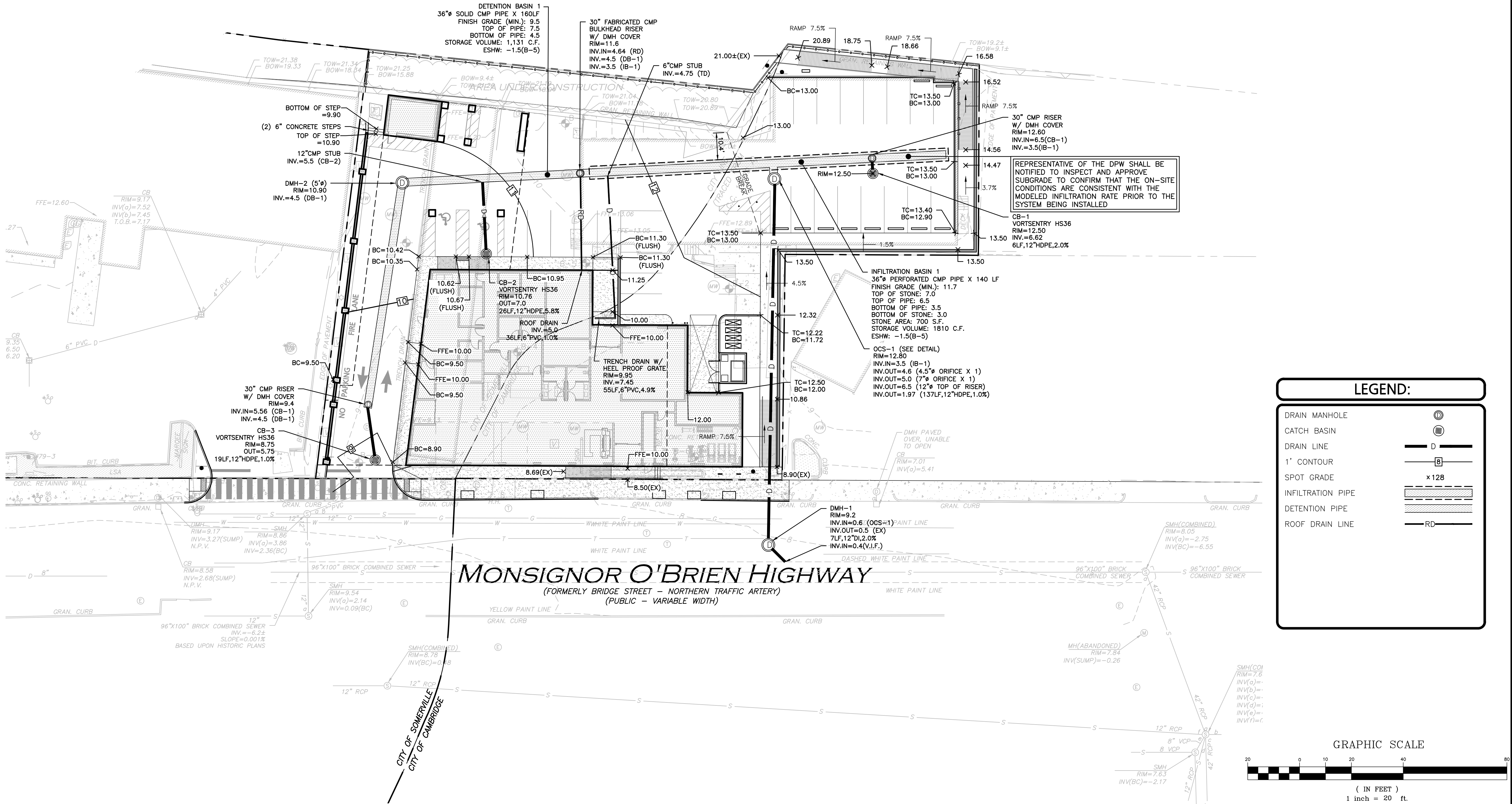
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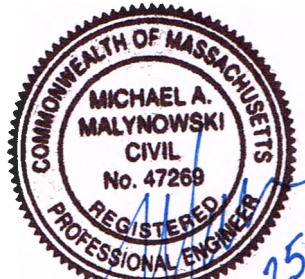


GRADING AND DRAINAGE NOTES

- CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY.
- ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
- PRECAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION.
- STORM PIPE SHALL BE HDPE.
- EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- IF ANY EXISTING 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.
- ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
- ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "DRAIN".
- THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
- TOPOGRAPHIC INFORMATION OBTAINED FROM AN ACTUAL FIELD SURVEY PERFORMED ON OR BETWEEN JULY 9, 2015 AND JULY 28, 2015.
- ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH COUNTY SPECIFICATIONS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
- ALL CATCH BASINS ON-SITE SHALL BE EQUIPPED WITH HOODS AND 4 FOOT SUMPS AND SHALL CONFORM TO LOCAL DRAINAGE REQUIREMENTS.
- A MINIMUM OF 18" VERTICAL CLEARANCE SHALL BE MAINTAINED WHERE WATER SERVICES CROSS STORM DRAIN LINES. WATER SERVICES SHALL BE ENCASED IN CONCRETE REGARDLESS OF CLEARANCE WHEN PASSING BELOW STORM DRAIN LINES. ENCASEMENT SHALL EXTEND ALONG WATER SERVICE A MINIMUM DISTANCE OF TEN FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
- ALL DRAINAGE SHALL CONFORM TO LOCAL REQUIREMENTS.
- ROOF DRAINS SHALL BE COORDINATED WITH THE ARCHITECTURAL PLANS AND FLOW VIA GRAVITY TO THE PROPOSED DETENTION SYSTEM.



CITY OF CAMBRIDGE DPW  
STORMWATER CONTROL PERMIT NUMBER



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
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OWNER:  
SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

PROJECT:  
135 ROOM EXTENDED STAY HOTEL  
263 MONSIGNOR O'BRIEN HIGHWAY  
CAMBRIDGE, MA

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO.	1362-16	DATE:	9/26/18
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SCALE:	1" = 20'	DWG.:	1362-16_Grading and Drainage
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DESIGNED BY:	SM	CHECKED BY:	MM
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PREPARED BY:

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DRAWING TITLE:

GRADING AND  
DRAINAGE PLAN

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SHEET No.

C-3



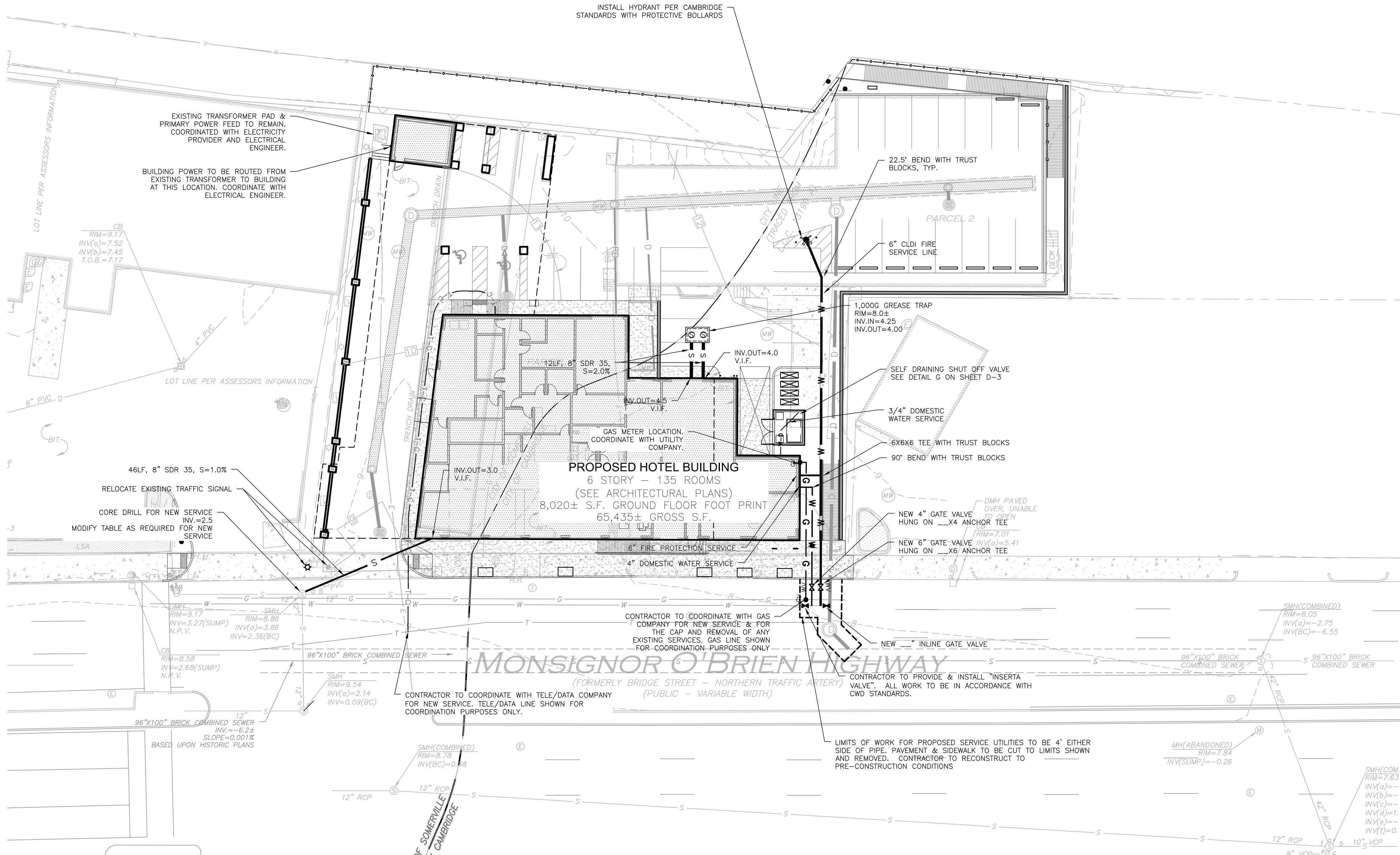
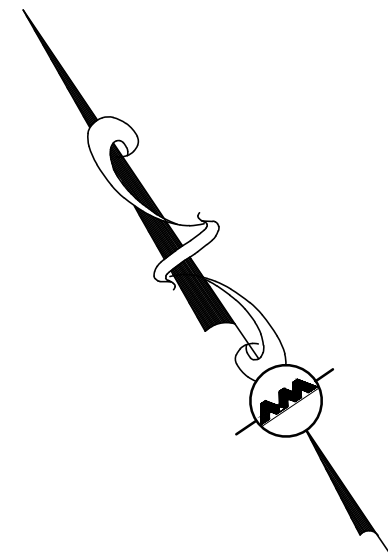
CAMBRIDGE WATER DEPARTMENT NOTES:

- A MINIMUM OF 72 HOURS NOTICE SHALL BE GIVEN TO THE CWD PRIOR TO STARTING CONSTRUCTION. EMERGENCY WORK WILL BE APPROVED BY THE DISTRIBUTION MANAGER OR DESIGNATED REPRESENTATIVE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND SUBMITAL OF THREE SETS OF BLUE LINE RECORD DRAWINGS TO THE CWD WITHIN 60 DAYS AFTER COMPLETION OF CONSTRUCTION. RECORD DRAWINGS SHALL BE A FULL SET OF DRAWINGS SHOWING ALL DETAILS OF THE CONSTRUCTION. A REGISTERED PROFESSIONAL ENGINEER SHALL CERTIFY RECORD DRAWINGS TRUE AND CORRECT.
- IN NEW CONSTRUCTION, EVERY INTERSECTION SHALL BE VALVED "(3) THREE-WAYS" IF A TEE IS USED; AND "(4) FOUR-WAY" IF A CROSS IS USED.
- DEAD ENDS SHALL BE AVOIDED BY THE LOOPING OF ALL WATER MAINS WHENEVER PRACTICAL.
- ALL WATER MAINS AND SERVICE PIPE SHALL BE LAID IN A TRENCH SEPARATE FROM ANY OTHER UTILITY. THE HORIZONTAL DISTANCE BETWEEN WATER MAINS OR SERVICE PIPE AND ANY OTHER UTILITY (GAS, ELECTRIC, TELEPHONE, ETC.) SHALL BE AT A MINIMUM NO LESS THAN TWO (2) FEET, VERTICAL DISTANCE SHALL BE NO LESS THAN (1) FOOT AND NO LESS THAN TEN (10) FEET FROM A SANITARY SEWER OR SURFACE WATER DRAIN.
- VERTICAL SEPARATION: WHENEVER SEWERS MUST CROSS UNDER WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18-INCHES (46CM) BELOW THE BOTTOM OF THE WATER MAIN.
- WHEN IT IS INFEASIBLE TO OBTAIN HORIZONTAL AND/OR VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF MECHANICAL-JOINT CEMENT LINED DUCTILE IRON PIPE OR OTHER EQUIVALENT.
- THE MINIMUM BURY SHALL BE 5 FEET FOR ALL WATER LINES UNLESS APPROVED BY CWD.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST "COMMONWEALTH OF MASSACHUSETTS, DEPARTMENT OF PUBLIC WORKS - STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES"; THE "AMERICAN WATER WORKS ASSOCIATION STANDARDS" AND IN ACCORDANCE WITH THE CURRENT PRACTICE OF THE CWD.
- THE CONTRACTOR SHALL NOT OPERATE ANY HYDRANTS, VALVES, CURB STOPS OR CORPORATIONS, NOR SHALL THEY DRAW ANY WATER FROM THE SYSTEM, WITHOUT SPECIFIC APPROVAL OF THE CWD. ONLY CWD PERSONNEL WILL OPERATE VALVES, HYDRANTS, CORPORATIONS AND CURB STOPS UNLESS OTHERWISE DIRECTED BY THE CWD.
- PUSH-ON TYPE JOINTS ARE RECOMMENDED ON STRAIGHT RUNS OF PIPE. CASSETS MUST BE STANDARD FOR PIPE USED AND BE SUITABLE TO THE CWD (E.G., NSP APPROVED AND OF VITON IF JOINTS ARE ADJACENT TO CONTAMINATED SOILS, ETC.). THE CWD MAY REQUIRE, UNDER CERTAIN CONDITIONS, THAT RESTRAINED TYPE JOINTS BE USED.
- DUCTILE IRON FITTINGS MUST BE USED AND SHALL BE CEMENT LINED. FITTINGS ARE REQUIRED TO BE EQUIPPED WITH A MECHANICAL JOINT RESTRAINT, UNLESS OTHERWISE SPECIFIED BY THE CWD.
- COUPLINGS SHALL BE OF A TYPE EQUAL TO SMITH BLAIR, STYLE 441; DRESS, STYLE 153; 360 OR ROMAC STYLE 501 OR AN APPROVED EQUAL. COUPLINGS SHALL BE PROVIDED WITH PLAIN, GRADE 27, RUBBER GASKETS AND WITH BLACK STEEL, TRACK-HEAD BOLTS WITH NUTS.
- GATE VALVES SHALL BE RESILIENT SEATED AND SHALL MEET THE REQUIREMENTS OF AWWA C-509. VALVES SHALL HAVE MECHANICAL JOINT ENDS AND SHALL BE EQUAL TO ANS/AWWA C11/A21.11. VALVES SHALL OPEN RIGHT (CLOCKWISE).
- TAPPING SLEEVES SHALL BE MECHANICAL JOINT TYPE AND SHALL BE MUELLER H-615, AMERICAN DARLING 1004 OR EQUAL. TAPPING VALVES SHALL MEET THE REQUIREMENTS OF AWWA C509. THE VALVES SHALL BE FLANGED BY MECHANICAL JOINT OUTLETS WITH NON-RISEING STEM AND DESIGNED FOR VERTICAL BURIAL. VALVES SHALL BE MUELLER H-667 OR EQUAL. VALVES SHALL OPEN RIGHT (CLOCKWISE). MULTIPLE TAPS TO BE THREE (3) FEET FROM FLANGE TO FLANGE. PRE-INSPECTION IS REQUIRED FOR ALL TAPS.
- VALVE BOXES SHALL BE PROVIDED FOR EACH GATE VALVE AND TAPPING VALVE. VALVE BOXES SHALL BE CAST IRON AND OF THE TELESCOPIC DESIGN WITH TWO PIECE CONSTRUCTION. GATE BOXES SHALL BE INSTALLED FOR EACH BURIED VALVE. CAST IRON BOXES SHALL BE GENERAL FOUNDRY BUFFALO BOXES OR EQUAL.
- SERVICE PIPE SHALL BE TYPE "K" COPPER TUBING, AMERICAN MANUFACTURED, 1-INCH MINIMUM. ALL SERVICE FITTINGS SHALL BE EXTRA HEAVY BRASS, MANUFACTURED BY EITHER WATER DISTRIBUTION PRODUCTS, CAMBRIDGE BRASS OR FORD METER BOX COMPANY, INC. ALL SERVICES GREATER THAN 1-INCH SHALL HAVE THE VALVE BOX INSTALLED AT THE CORPORATION AT THE MAIN.
- CORPORATIONS FOR 1-INCH INSTALLATIONS SHALL BE HEAVY PATTERN, EASY TURNING AND OF A TYPE EQUAL TO FORD FB 1000-4 (NO LEAD BRASS) SERIES. ALL TAPS GREATER THAN 1 INCH WILL REQUIRE THE USE OF A TAPPING SADDLE.
- FOR SIZES 1-INCH, THE CURB STOPS SHALL BE A TYPE EQUAL TO THE FORD B44-444-Q (NO LEAD BRASS) SERIES OR APPROVED EQUAL. THE CURB STOP SHALL HAVE A QUARTER TURN STOP WITH CHECK, SOLID TEE HEAD AND NO WASTE. NO CURB STOPS WITH PLUGGED SOLID WASTE SHALL BE ACCEPTED.
- SERVICE BOXES SUPPLIED SHALL BE "BUFFALO" STYLE, AMERICAN MANUFACTURED, OF A TELESCOPIC TYPE WITH A LENGTH FROM FOUR (4) TO FIVE (5) FEET. THE COVER SHALL BE MADE OF EXTRA GRADE GRAY IRON.
- WHERE APPLICABLE, THRUST BLOCKS SHALL BE FURNISHED AT ALL TEES, TAPPING SLEEVES AND BENDS AS DIRECTED OR AS DETAILED ON DRAWINGS WITH 3,000 PSI, 1-1/2, 470 CEMENT CONCRETE MASONRY. THE BLOCKS SHALL BE POURED AGAINST UNDISTURBED ORIGINAL GROUND AND SHALL BE SO PLACED THAT PIPE JOINTS WILL BE ACCESSIBLE FOR ANY POSSIBLE FUTURE REPAIRS.
- MECHANICAL JOINT RESTRAINT SHALL CONSIST OF INDIVIDUALLY ACTUATED WEDGES THAT INCREASE THEIR RESISTANCE TO PULL OUT AS PRESSURE OR TENSILE FORCES INCREASE. THE RESTRAINT SHALL BE THE SERIES 1100 MEG ALUG RESTRAINT AS PRODUCED BY EBAA IRON, INC. OR APPROVED EQUAL.

- NO ELECTRICAL GROUNDS SHALL BE MADE ON WATER SERVICE PIPES WHERE A DRIVEN GROUND ROD CAN PROVIDE THE NEEDED GROUNDING SERVICE AS DETERMINED BY THE ISO. ELECTRICAL GROUNDINGS MUST BE PROVIDED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
- FOR ALL NEW CONSTRUCTION AS A MINIMUM INVOLVING BUILDINGS WITH 50 UNITS OR MORE OR ANY OTHER FACILITY WHERE THE WATER NEED IS CONSIDERED CRITICAL DURING EMERGENCY SITUATIONS OR FOR PERFORMANCE OF ROUTINE MAINTENANCE THE OWNERS WILL BE REQUIRED TO INSTALL REDUNDANT WATER SERVICES (FEEDS).
- THE OWNER OR THE OWNER'S CWD APPROVED CONTRACTOR SHALL BE RESPONSIBLE, AT ITS EXPENSE, FOR INSTALLING THE WATER SERVICE PIPE AND APPURTENANCES AND MAKING CONNECTION TO THE PUBLIC WATER MAIN DESIGNATED BY THE CWD AND CUTTING AND CAPPING ANY WATER SERVICE PIPE TO BE ABANDONED. THE OWNER OR OWNER'S CONTRACTOR SHALL: (1) ARRANGE WITH AT LEAST 24 HOURS ADVANCE NOTICE FOR AN INSPECTION BY THE CWD BEFORE BACKFILLING THE INSTALLED WATER SERVICE PIPE AND APPURTENANCES; AND (2) NOT BACKFILLING THE INSTALLATION UNTIL AFTER RECEIPT OF A WRITTEN INSPECTION CERTIFICATE FROM THE DPW.
- IN NEW INSTALLATIONS, THE CWD SHALL FURNISH AT ITS EXPENSE METERS UP TO AND INCLUDING 2-INCH METERS IN SIZE. NEW METER INSTALLATIONS GREATER THAN 2 INCHES IN SIZE SHALL BE FURNISHED AND MAINTAINED IN GOOD WORKING ORDER BY THE OWNER. THE SIZE OF THE METER REQUIRED SHALL BE DETERMINED BY THE OWNER AND SUBJECT TO THE APPROVAL OF THE CWD. ONE METER SHALL BE SUPPLIED FOR EACH SERVICE LINE TAPPED OFF OF A CITY MAIN.
- ALL METERS ONCE INSTALLED, BECOME THE PROPERTY OF THE CWD.
- ALL METERS UP TO 2 INCH IN SIZE SHALL BE INSTALLED BY THE CWD AT ITS EXPENSE. ALL METERS GREATER THAN 2 INCHES IN SIZE SHALL ORIGINALLY BE INSTALLED BY THE OWNER AT ITS EXPENSE AND INSPECTED BY THE CWD. ALL METERS LARGER THAN 2 INCHES SHALL BE INSTALLED WITH A STRAINER.
- ALL METERS SHALL BE INSTALLED WITHIN AN OWNER'S BUILDING IN AN AMPLE AND SUITABLE SPACE FREE FROM EXPOSURE TO FREEZING, UNLESS OTHERWISE DIRECTED BY THE CWD. THIS SPACE SHALL AT ALL TIMES BE UNOBSTRUCTED AND ACCESSIBLE TO THE CWD. THE OWNER SHALL BE RESPONSIBLE FOR ANY DAMAGES AS A RESULT OF NOT ADHERING TO THIS SECTION. (PIT METERS ARE PROHIBITED).
- THE CWD MAY INSTALL A DEVICE WITHIN OR ON THE OUTSIDE OF A BUILDING IN A CONVENIENTLY ACCESSIBLE LOCATION TO ENABLE ROUTINE METER READINGS WITHOUT INTERNAL ACCESS TO THE OWNER'S BUILDING. REQUIRED ON ALL NEW INSTALLATIONS.

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 THAN 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 CITY OF CAMBRIDGE & CITY OF SOMERVILLE DEPARTMENT OF PUBLIC WORKS, WASTEWATER DIVISION SHALL BE FOLLOWED WHEN PERFORMING ANY SANITARY SEWER WORK. SEWER WORK WILL BE INSPECTED BY CITY PERSONNEL AND ALL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE LATEST STANDARDS OF THE CITY OF CAMBRIDGE & CITY OF SOMERVILLE AND DEPARTMENT OF PUBLIC WORKS SHALL BE FOLLOWED WHEN INSTALLING ANY WATER LINES, AND ALL WATER LINE WORK WILL BE INSPECTED BY CITY OF CAMBRIDGE 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 FACILITIES, 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)
- ALL UTILITY CONNECTIONS THROUGH THE BUILDING WALL SHALL BE BY MEANS OF FLEXIBLE JOINTS.
- THE CONTRACTOR SHALL FIELD VERIFY/LOCATE EXISTING WATER MAINS AND WATER SERVICES.
- PRESSURE AND LEAKAGE TEST, DISINFECTING AND FLUSHING SHALL BE IN ACCORDANCE WITH ALL LOCAL MUNICIPAL STANDARDS AND REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS IN CONNECTION WITH UTILITY TESTS, FLUSHING AND INSPECTIONS AS REQUIRED BY THE LOCAL MUNICIPALITY.
- SEWER FORCEMAIN SHALL BE TESTED AT TWO TIMES THE WORKING PRESSURE OR 150 PSI, WHICHEVER IS GREATER. THE PRESSURE SHALL BE MAINTAINED FOR TWO HOURS WITH NO MORE THAN A 5 PSI OR 5% DROP IN PRESSURE, WHICHEVER IS GREATER.
- CONTRACTOR IS ADVISED THAT INSTALLATION OF GRAVITY SERVICE LINES TAKE PRECEDENCE OVER PRESSURIZED SYSTEMS. CONTRACTOR TO FULLY UNDERSTAND LIMITS OF WORK PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS ACTUAL OR ANTICIPATED.



LEGEND:

SEWER MANHOLE

SEWER CLEANOUT

SEWER LINE

CONCRETE PIPE ENCASEMENT

WATER (FIRE SERVICE)

WATER (DOMESTIC SERVICE)

WATER VALVE

HYDRANT

WATER LINE REDUCER

GAS LINE

GAS VALVE

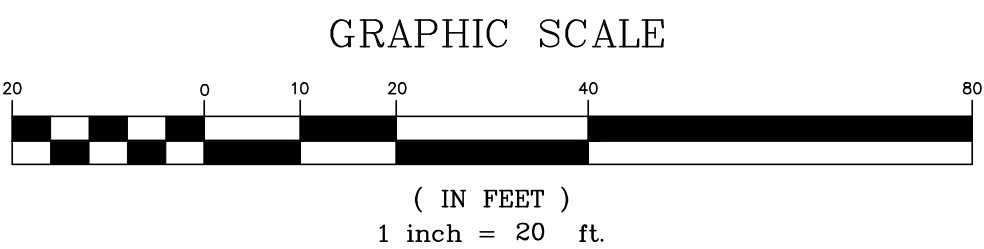
GREASE TRAP

OVER HEAD WIRE

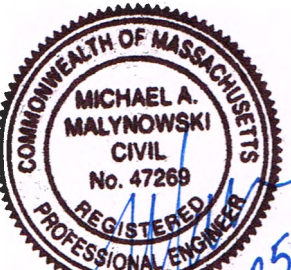
UTILITY POLE

ELECTRICAL CONDUIT

TELE/CABLE CONDUIT



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PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
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OWNER:  
SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

PROJECT:  
135 ROOM EXTENDED STAY HOTEL  
263 MONSIGNOR O'BRIEN HIGHWAY  
CAMBRIDGE, MA

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO. 1362-16 DATE: 9/26/18

SCALE: 1" = 20' DWG.: 1362-16 UTILITIES

DESIGNED BY: SM CHECKED BY: MM

PREPARED BY:

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DRAWING TITLE: SHEET NO.

UTILITY PLAN C-4

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## LANDSCAPE REGULATIONS - CAMBRIDGE

REGULATION	ITEM	REQUIRED/ALLOWED	PROPOSED
17.152 TREE PLANTING	AT LEAST ONE STREET TREE, MIN. CAL. 3" SHALL BE LOCATED IN THE FRONT YARD ALONG MONSIGNOR O'BRIEN HIGHWAY, FOR EACH 25' OF FRONTAGE ON THE HIGHWAY	1 TREE PER 25' OF FRONTAGE 125' OF FRONTAGE = 5 TREES MIN	5 TREES MIN ALONG MONSIGNOR O'BRIEN HWY.
6.48 PARKING LANDSCAPING	A. AT LEAST 5% OF THE INTERIOR OF THE PARKING FACILITY SHALL BE LANDSCAPED.	MIN 5% INTERIOR OF PARKING AREA LANDSCAPED	6% AREA LANDSCAPED 470 SF LANDSCAPE
	B. EACH PLANTING AREA SHALL BE AT LEAST 25 SF IN AREA AND HAVE NO DIMENSION LESS THAN 5'.	PLANTING AREA MIN. 25 SF AND NO DIMENSION LESS THAN 5'	PLANTING AREA MIN. 25 SF AND NO DIMENSION LESS THAN 5'
	C. EACH PLANTING AREA SHALL CONTAIN AT LEAST 1 TREE AND THE FACILITY AS A WHOLE SHALL CONTAIN AT LEAST 1 TREE FOR EVERY 10 PARKING SPACES	MIN. 1 TREE PER 10 PARKING SPACES	MIN. 1 TREE PER 10 PARKING SPACES
	D. TREES USED TO SATISFY PARKING LOT LANDSCAPING REQUIREMENTS SHALL BE A MIN. OF 3" CAL.	MIN. 3" CAL. TREES	MIN. 3" CAL. TREES

## LANDSCAPE REGULATIONS - SOMERVILLE

REGULATION	ITEM	REQUIRED/ALLOWED	PROPOSED
LANDSCAPING	AT LEAST 10% OF THE LOT AREA SHALL BE LANDSCAPED.	MIN 10% LOT AREA LANDSCAPED  LOT = 17,316 SF 10% = 1,731 SF MIN.	12.9% OF LOT IS LANDSCAPED 2,233.76 SF

## PLANTING SCHEDULE-TREES, SHRUBS, GROUNDCOVERS &amp; PERENNIALS

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	MIN. SIZE	SPACING	COMMENTS
DECIDUOUS TREES						
FS	7	FAGUS SYLVATICA 'DAWKII GREEN'	FASTIGIATE BEECH	3-3.5" CAL.	AS SHOWN	B&B
EVERGREEN/FLOWERING TREES						
AF	1	ABIES FRASERI	FRASER FIR	8'-9' HT.	AS SHOWN	B&B
IM	20	ILEX M. 'BLUE PRINCESS'	BLUE PRINCESS HOLLY	3.5-4' HT.	AS SHOWN	B&B
IMB	1	ILEX M. 'BLUE PRINCE'	BLUE PRINCE HOLLY	3.5-4' HT.	AS SHOWN	B&B
AG	5	AMELANCHEIR G. 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE	3-3.5" CAL.	AS SHOWN	B&B
TO	16	THUJA O. 'WINTERGREEN'	WINTERGREEN ARBORVITAE	8-10' HT.	AS SHOWN	B&B
SHRUBS						
IG	33	ILEX GLABRA 'SHAMROCK'	INKBERRY	2'-2.5' HT.	AS SHOWN	POT
JB	100	JUNIPERUS SABINA 'BROADMOORE'	BROADMOORE JUNIPER	#2	24" O.C.	POT
PJM	6	RHODODENDRON 'PJM'	PJM RHODODENDRON	2.5'-3' HT.	AS SHOWN	POT
PERENNIALS/BULBS						
LM	25	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LIRIOPE	#1	18" O.C.	STAGGERED
HH	57	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	#1	18" O.C.	STAGGERED
NW	85	NEPETA 'WALKER'S LOW'	WALKER'S LOW CATMINT	#1	18" O.C.	STAGGERED

## GENERAL NOTES

- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR IT'S 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 INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. IT'S 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.  
  
DIGSAFE: 1-800-344-7233  
TOWN OF CAMBRIDGE DPW: 1-617-349-4800
- THE CONTRACTOR SHALL CONTACT "DIGSAFE" AND THE TOWN OF CAMBRIDGE DPW AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST THE LOCATION OF THE EXISTING UTILITIES.
- WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS OR CONDITIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR. ALL SITE ITEMS SHALL BE LAYED OUT AND AS-BUILT BY A LICENSED LAND SURVEYOR.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY ALLEN & MAJOR ASSOCIATES, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK, OR THE OWNER'S EMPLOYEES, CUSTOMERS, OR THE GENERAL PUBLIC. THE SEAL OF THE ENGINEER AS INCLUDED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PROVIDE THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), STATE, AND LOCAL REGULATIONS.
- REFER TO ARCHITECTURAL PLANS FOR LIGHTING PROVIDED ON BUILDING.

## LEGEND:

DECIDUOUS TREE  
FLOWERING TREE  
EVERGREEN TREE  
SHRUB  
PLANT KEY  
PLANT BED

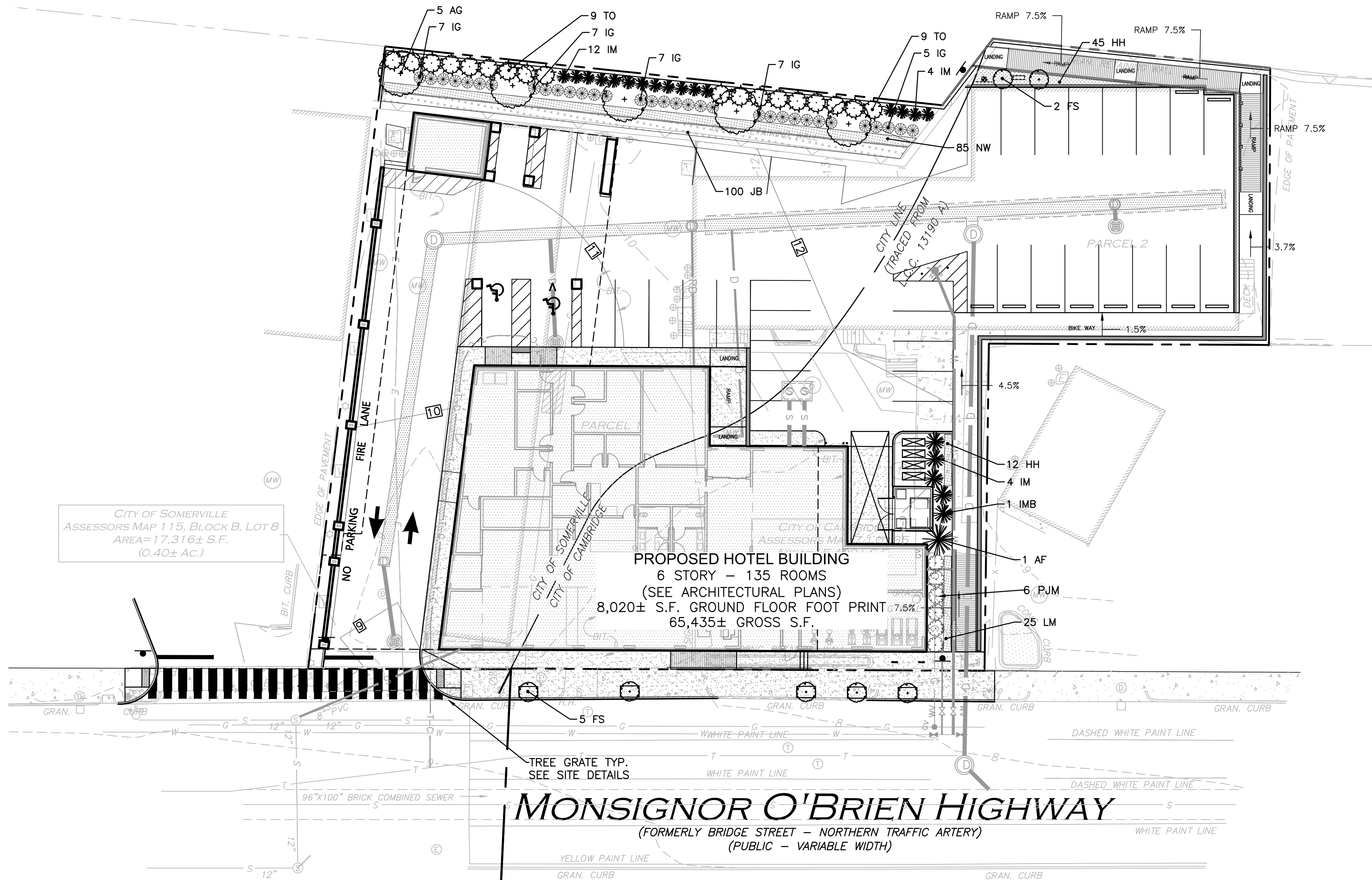
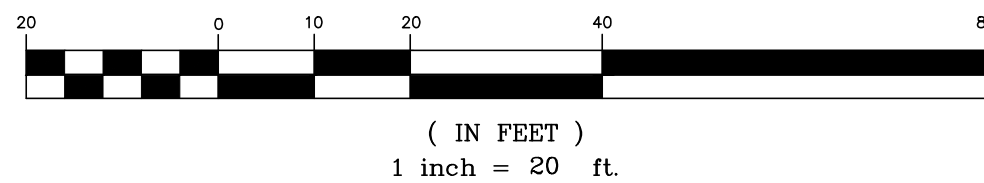


SPRAY WITH WILT PROOF ACCORDING TO  
MANUFACTURERS INSTRUCTIONS IF FOLIAGE IS PRESENT

## LANDSCAPE NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITIES OF CAMBRIDGE, MA AND SOMERVILLE, MA SPECIFICATIONS.
- PLANTING PLAN IS DIAGRAMMATIC IN NATURE. FINAL PLACEMENT OF PLANTS TO BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES, ANY PERMITTING AGENCIES, AND "DIG-SAFE"(1-888-DIG-SAFE) AT LEAST 72 HOURS IN ADVANCE OF ANY WORK THAT WILL REQUIRE EXCAVATION. CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE OF ANY CONFLICTS IN WRITING.
- NO PLANT MATERIAL SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA. ANY TREES NOTED AS "SEA" OR SELECTED SPECIMEN" SHALL BE TAGGED AND SEALED BY THE LANDSCAPE ARCHITECT.
- ALL TREES SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
- CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON PLANT LIST. QUANTITIES SHOWN ON PLANS SHALL GOVERN OVER PLANT LIST.
- ANY PROPOSED PLANT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
- ALL PLANT MATERIALS INSTALLED SHALL MEET THE GUIDELINES ESTABLISHED BY THE STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF ACCEPTANCE.
- ALL DISTURBED AREAS NOT OTHERWISE NOTED SHALL RECEIVE 4" OF LOAM AND SEED. LAWNS WITH OVER 3:1 SLOPES SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET.
- ANY FALL TRANSPLANTING HAZARD PLANTS SHALL BE DUG IN THE SPRING AND STORED FOR FALL PLANTING.
- TREES SHALL HAVE A MINIMUM CALIPER OF 2 1/2" ONE FOOT ABOVE THE ROOT CROWN
- ALL PLANT BEDS AND TREE SAUCERS TO RECEIVE 3" OF PINE BARK MULCH, AND GROUND COVER AREAS SHALL RECEIVE 1" OF PINE BARK MULCH.
- ALL DECIDUOUS TREES ADJACENT TO WALKWAYS AND ROADWAYS SHALL HAVE A BRANCHING PATTERN TO ALLOW FOR A MINIMUM OF 7' OF CLEARANCE BETWEEN THE GROUND AND THE LOWEST BRANCH.
- CONTRACTOR RESPONSIBLE FOR WATERING, AND RESEEDING OF BARE SPOTS UNTIL A UNIFORM STAND OF VEGETATION IS ESTABLISHED AND ACCEPTED.
- ALL PARKING ISLANDS PLANTED WITH SHRUBS SHALL HAVE 24" OF TOP SOIL. FINISH GRADE SHALL BE EQUAL TO THE TOP OF CURB.
- SOIL SAMPLES AND TESTS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT OR THE OWNER.
- REFER TO NEW ENGLAND WETLAND PLANS, INC (WWW.NEWP.COM) FOR CURRENT SEED MIXES & APPLICATION RATES.

## GRAPHIC SCALE



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV DATE DESCRIPTION

OWNER:  
SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

PROJECT:  
135 ROOM EXTENDED STAY HOTEL  
263 MONSIGNOR O'BRIEN HIGHWAY  
CAMBRIDGE, MA

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO. 1362-16 DATE: 9/26/18

SCALE: 1" = 20' DWG.: 1362-16 Landscape

DESIGNED BY: BCD CHECKED BY: MM

PREPARED BY:

**ALLEN & MAJOR ASSOCIATES, INC.**  
civil & structural engineering • land surveying  
environmental consulting • landscape architecture  
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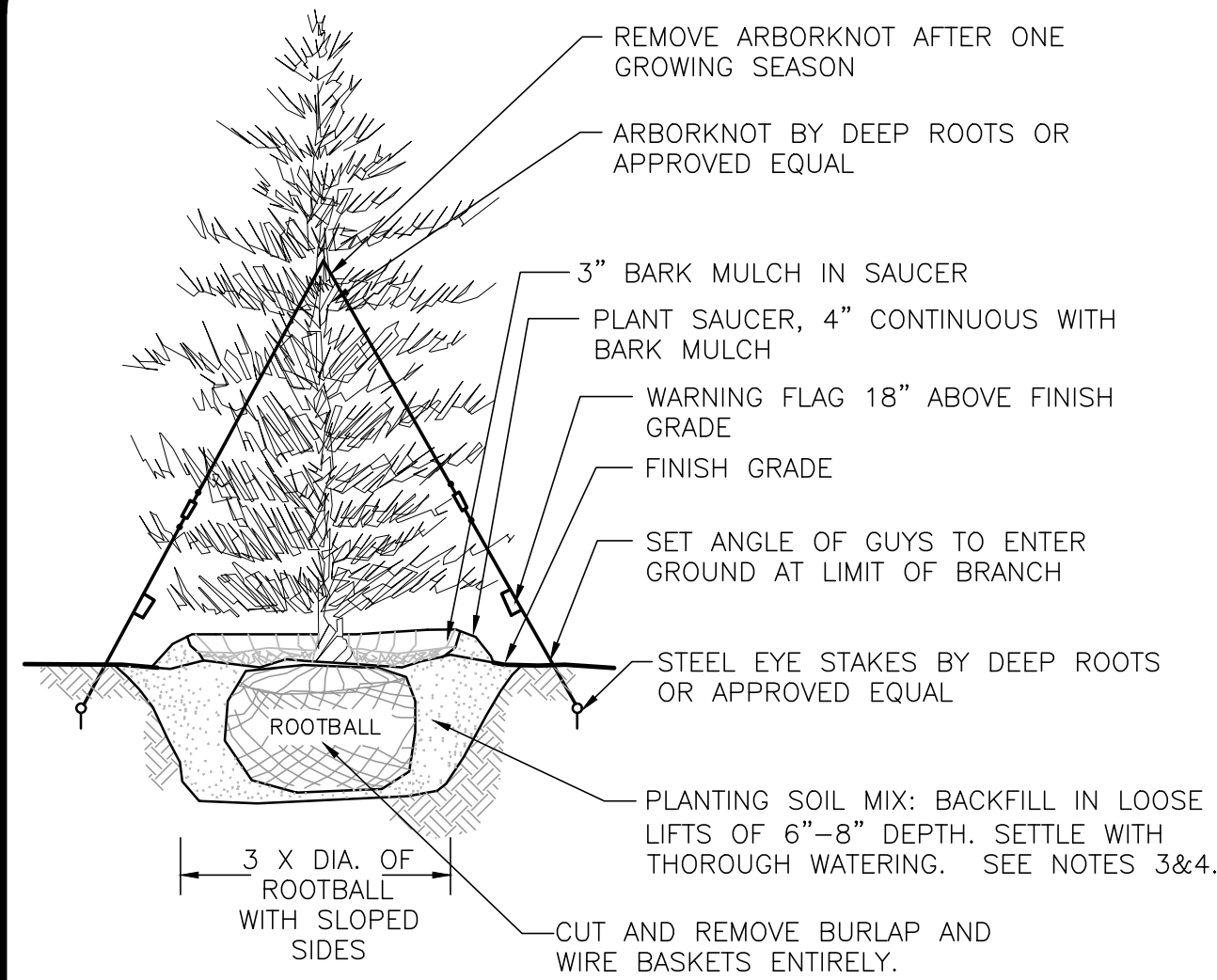
DRAWING TITLE:

LANDSCAPE PLAN

SHEET NO.

C-5



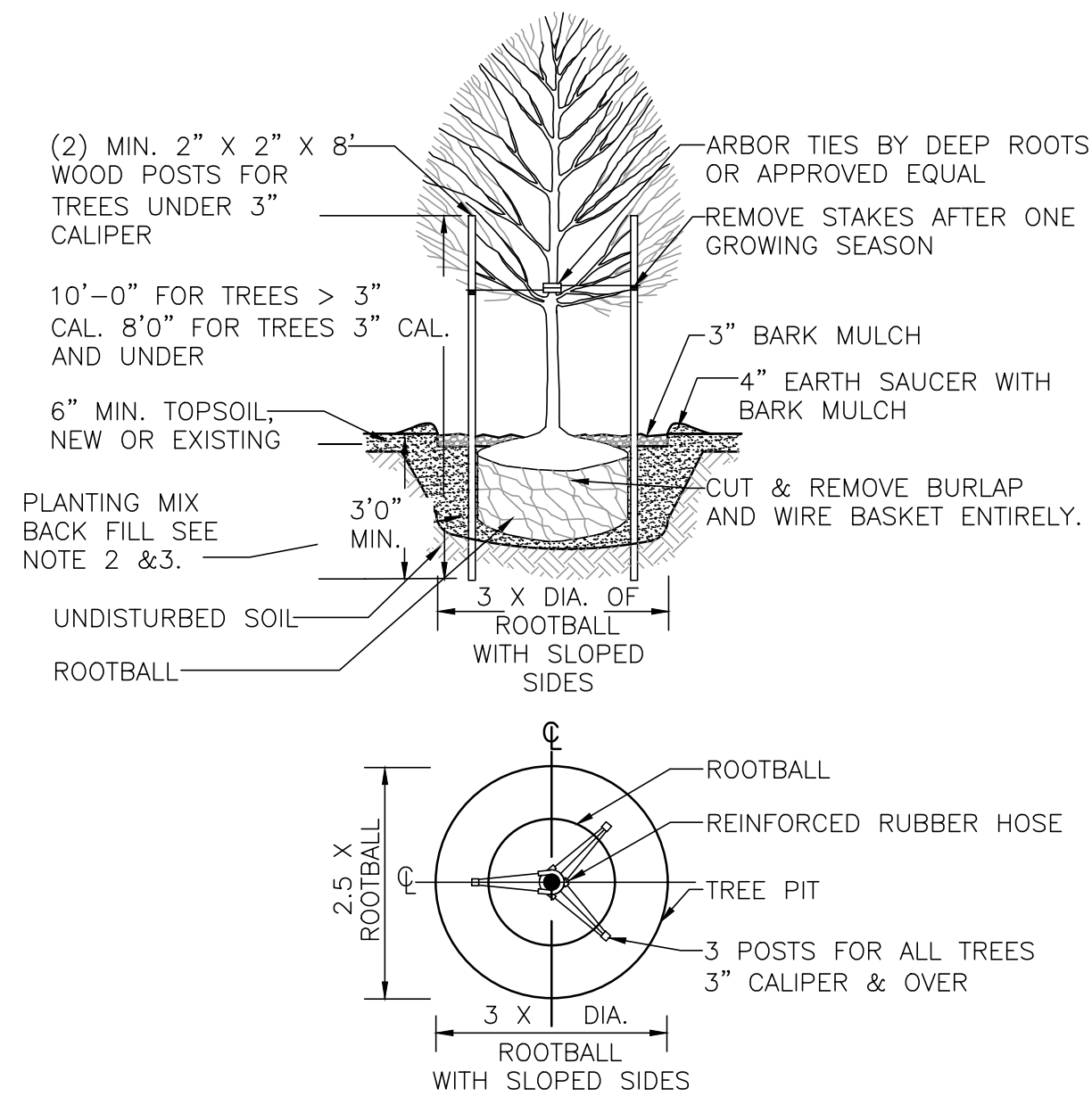


#### NOTES:

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

**EVERGREEN TREE DETAIL**  
NOT TO SCALE

1

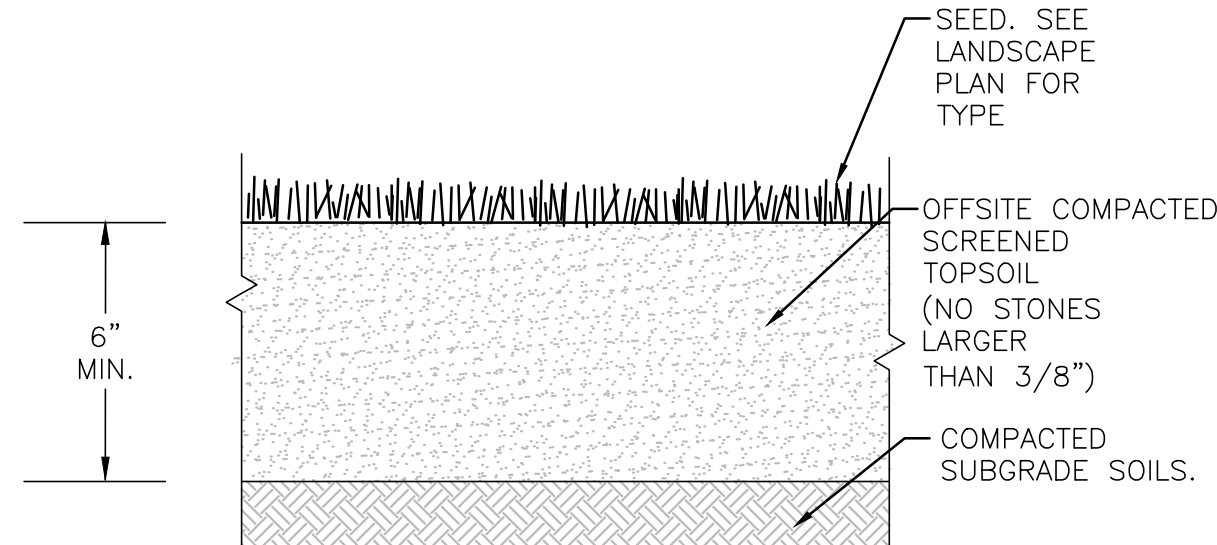


#### NOTES:

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

**DECIDUOUS TREE PLANTING DETAIL**  
NOT TO SCALE

2



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

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

#### NOTES:

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

**TOPSOIL FOR LAWN, TREES, SHRUBS, & PERENNIALS**  
NOT TO SCALE

3

#### LANDSCAPE MANAGEMENT NOTES:

**LANDSCAPE MANAGEMENT PLAN**  
IT SHOULD BE RECOGNIZED THAT THIS IS A GENERAL GUIDELINE TOWARDS ACHIEVING HIGH QUALITY AND WELL GROOMED LANDSCAPED AREAS. THE GROUNDS STAFF / LANDSCAPE CONTRACTOR MUST RECOGNIZE THE SHORTCOMINGS OF A GENERAL MAINTENANCE PROGRAM SUCH AS THIS, AND MODIFY AND/OR AUGMENT IT BASED ON WEEKLY, MONTHLY, AND YEARLY OBSERVATIONS. IN ORDER TO ASSURE THE HIGHEST QUALITY CONDITIONS, THE STAFF MUST ALSO RECOGNIZE AND APPRECIATE THE NEED TO BE AWARE OF THE CONSTANTLY CHANGING CONDITIONS OF THE LANDSCAPING AND BE ABLE TO RESPOND TO THEM ON A PROACTIVE BASIS.

**FERTILIZER**  
MAINTENANCE PRACTICES SHOULD BE AIMED AT REDUCING ENVIRONMENTAL, MECHANICAL AND PEST STRESSES TO PROMOTE HEALTHY AND VIGOROUS GROWTH. WHEN NECESSARY, PEST OUTBREAKS SHOULD BE TREATED WITH THE MOST SENSITIVE CONTROL MEASURE AVAILABLE. SYNTHETIC CHEMICAL CONTROLS SHOULD BE USED ONLY AS A LAST RESORT TO ORGANIC AND BIOLOGICAL CONTROL METHODS. FERTILIZER, SYNTHETIC CHEMICAL CONTROLS AND PEST MANAGEMENT APPLICATIONS (WHEN NECESSARY) SHOULD BE PERFORMED ONLY BY LICENSED APPLICATORS IN ACCORDANCE WITH THE MANUFACTURER'S LABEL INSTRUCTIONS WHEN ENVIRONMENTAL CONDITIONS ARE CONDUCTIVE TO CONTROLLED PRODUCT APPLICATION.

ONLY SLOW-RELEASE ORGANIC FERTILIZERS SHOULD BE USED IN THE LANDSCAPED AREAS TO LIMIT THE AMOUNT OF NUTRIENTS THAT COULD ENTER DOWNSTREAM RESOURCE AREAS. FERTILIZATION OF DEVELOPED AREAS ON SITE WILL BE PERFORMED WITHIN MANUFACTURERS LABELING INSTRUCTIONS AND SHALL NOT EXCEED AN NPK RATION OF 1:1:1 (I.E. TRIPLE 10 FERTILIZER MIX), CONSIDERED A LOW NITROGEN MIXTURE. ADDITIONALLY, THE FERTILIZER WILL INCLUDE A SLOW RELEASE ELEMENT.

**SUGGESTED AERATION PROGRAM**  
IN-SEASON AERATION OF LAWN AREAS IS GOOD CULTURAL PRACTICE, AND IS RECOMMENDED WHENEVER FEASIBLE. IT SHOULD BE ACCOMPLISHED WITH A SOLID THIN TINE AERATION METHOD TO REDUCE DISRUPTION TO THE USE OF THE AREA. THE DEPTH OF SOLID TINE AERATION IS SIMILAR TO CORE TYPE, BUT SHOULD BE PERFORMED WHEN THE SOIL IS SOMEWHAT DRIER FOR A GREATER OVERALL EFFECT.

DEPENDING ON THE INTENSITY OF USE, IT CAN BE EXPECTED THAT ALL LANDSCAPED LAWN AREAS WILL NEED AERATION TO REDUCE COMPACTION AT LEAST ONCE PER YEAR. THE FIRST OPERATION SHOULD OCCUR IN LATE MAY FOLLOWING THE SPRING SEASON. METHODS OF REDUCING COMPACTION WILL VARY BASED ON THE NATURE OF THE COMPACTION. COMPACTION ON NEWLY ESTABLISHED LANDSCAPED AREAS IS GENERALLY LIMITED TO THE TOP 2-3" AND CAN BE ALLEVATED USING HOLLOW CORE OR THIN TINE AERATION METHODS.

THE SPRING AERATION SHOULD CONSIST OF TWO PASSES AT OPPOSITE DIRECTIONS WITH 1/4" HOLLOW CORE TINES PENETRATING 3-5" INTO THE SOIL PROFILE. AERATION SHOULD OCCUR WHEN THE SOIL IS MOIST BUT NOT SATURATED. THE CORES SHOULD BE SHATTERED IN PLACE AND DRAGGED OR SWEEPED BACK INTO THE TURF TO CONTROL THATCH. IF DESIRED THE CORES MAY ALSO BE REMOVED AND THE AREA TOP-DRESSED WITH SAND OR SANDY LOAM. IF THE AREA DRAINS ON AVERAGE TOO SLOWLY, THE TOPDRESSING SHOULD CONTAIN A HIGHER PERCENTAGE OF SAND. IF IT IS DRAINING ON AVERAGE TOO QUICKLY, THE TOP DRESSING SHOULD CONTAIN A HIGHER PERCENTAGE OF SOIL AND ORGANIC MATTER.

#### LANDSCAPE MAINTENANCE PROGRAM PRACTICES:

##### LAWN

- MOW A MINIMUM OF ONCE A WEEK IN SPRING, TO A HEIGHT OF 2" TO 2 1/2" HIGH. MOWING SHOULD BE FREQUENT ENOUGH SO THAT NO MORE THAN 1/3 OF GRASS BLADE IS REMOVED AT EACH MOWING. THE TOP GROWTH SUPPORTS THE ROOTS. THE SHORTER THE GRASS IS CUT, THE LESS THE ROOTS WILL GROW. SHORT CUTTING ALSO DRIES OUT THE SOIL AND ENCOURAGES WEEDS TO GERMINATE.
- MOW APPROXIMATELY ONCE EVERY TWO WEEKS FROM JULY 1ST TO AUGUST 15TH DEPENDING ON LAWN GROWTH.
- MOW ON A TEN-DAY CYCLE IN FALL, WHEN GROWTH IS STIMULATED BY COOLER NIGHTS AND INCREASED MOISTURE.
- DO NOT REMOVE GRASS CLIPPINGS AFTER MOWING.
- KEEP MOWER BLADES SHARP TO PREVENT RAGGED CUTS ON GRASS LEAVES, WHICH CAUSE A BROWNISH APPEARANCE AND INCREASE THE CHANCE FOR DISEASE TO ENTER A LEAF.

##### SHRUBS

- MULCH NOT MORE THAN 3" DEPTH WITH SHREDDED PINE OR FIR BARK.
- HAND PRUNE ANNUALLY, IMMEDIATELY AFTER BLOOMING, TO REMOVE 1/3 OF THE ABOVE-GROUND BIOMASS (OLDER STEMS). STEM REMOVALS TO OCCUR WITHIN 6" OF THE GROUND TO OPEN UP SHRUB AND MAINTAIN TWO-YEAR WOOD (THE BLOOMING WOOD).
- FERTILIZE WITH 1/2 LB. SLOW-RELEASE FERTILIZER (SEE ABOVE SECTION ON FERTILIZER) EVERY SECOND YEAR.
- HAND PRUNE EVERGREEN SHRUBS ONLY AS NEEDED TO REMOVE DEAD AND DAMAGED WOOD AND TO MAINTAIN THE NATURALISTIC FORM OF THE SHRUB. NEVER MECHANICALLY SHEAR EVERGREEN SHRUBS.

##### TREES

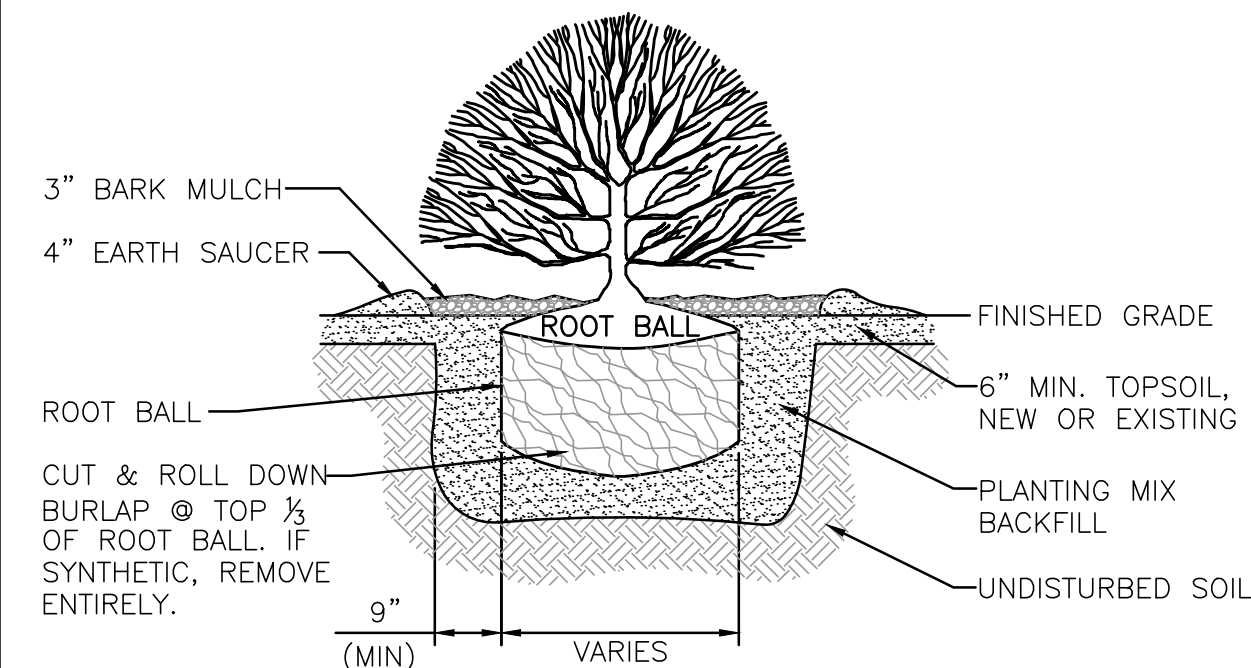
- PROVIDE AFTERCARE FOR NEW TREE PLANTINGS FOR THE FIRST THREE YEARS.
- DO NOT FERTILIZE TREES, IT ARTIFICIALLY STIMULATES THEM (UNLESS TREE HEALTH WARRANTS).
- WATER ONCE A WEEK FOR THE FIRST YEAR; TWICE A MONTH THE SECOND, ONCE A MONTH THE THIRD YEAR.
- PRUNE TREES ON A FOUR-YEAR CYCLE.

##### ORNAMENTAL GRASSES

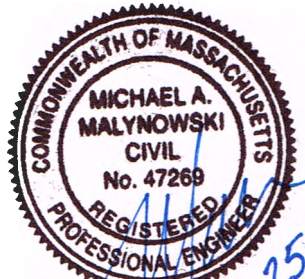
- APPLY LOW- NITROGEN 10-10-10 FERTILIZER AS GROWTH RESUMES IN THE SPRING. WATER IN THOROUGHLY.
- GRASSES DO NOT NEED TO BE CUT DOWN BEFORE WINTER. IN FACT, THEY ARE ATTRACTIVE WHEN LEFT STANDING AND THE FOLIAGE HELPS TO INSULATE THE CROWN OF THE PLANT. CUT BACK THE FOLIAGE TO ABOUT 4-6 INCHES IN THE SPRING BEFORE GROWTH RESUMES. WHEN FOLIAGE IS REMOVED, SPRING GROWTH WILL BEGIN EARLIER. OLD FOLIAGE LEFT ON THE PLANT CAN DELAY THE CROWN'S WARMING AND SUBSEQUENT GROWTH BY AS MUCH AS 3 WEEKS.

#### NOTE:

1. ALL SHRUBS SHALL HAVE THE SAME RELATIONSHIP TO FINISHED GRADE AFTER PLANTING AS THEY HAD AT THE ORIGINAL NURSERY SETTING.
2. ALL SHRUBS ARE TO BE PLANTED AT 3'-0" O.C. OR AS SPECIFIED ON THE PLANS.



**SHRUB PLANTING DETAIL**  
NOT TO SCALE



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV DATE DESCRIPTION

OWNER: SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

PROJECT: 135 ROOM EXTENDED STAY HOTEL  
263 MONSIGNOR O'BRIEN HIGHWAY  
CAMBRIDGE, MA

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO. 1362-16 DATE: 9/26/18

SCALE: AS SHOWN DWG.: 1362-16 Landscape

DESIGNED BY: BCD CHECKED BY: MM

PREPARED BY:

**ALLEN & MAJOR ASSOCIATES, INC.**  
civil & structural engineering • land surveying  
environmental consulting • landscape architecture  
www.allenmajor.com

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MANCHESTER, NH 03103  
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DRAWING TITLE:

LANDSCAPING DETAILS

SHEET NO.

C-6



GENERALIZED CONSTRUCTION SEQUENCE

THE BMP'S ASSOCIATED WITH THIS PROJECT WILL BE OWNED BY THE DEVELOPER, WHO WILL BE RESPONSIBLE FOR INSPECTION, OPERATION, AND MAINTENANCE.

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. PREPARE TEMPORARY PARKING AND STORAGE AREA. UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA POTTY, WHEEL WASH, CONCRETE WASHOUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., DENOTE THEM ON THE SITE MAPS IMMEDIATELY AND NOTE ANY CHANGES IN THE LOCATIONS AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.
3. INSTALL SILTATION FENCES AND CATCH BASIN INLET PROTECTION IN LOCATIONS SHOWN ON PLANS AND/OR AS DIRECTED. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATION. PREPARE STABILIZED CONSTRUCTION ENTRANCE IN SUITABLE LOCATIONS AS SHOWN ON THE PLANS OR AT LOCATIONS WHERE CONSTRUCTION VEHICLES ARE EXITING ONTO PUBLIC ROADWAYS.
4. CUT AND CLEAR TREES; CHIP WOOD STUMPS; DISPOSE OF DEBRIS. STRIPPED TOPSOIL SHALL BE STOCKPILED, WITHOUT COMPACTION, AND STABILIZED WITH TEMPORARY SEEDING AGAINST EROSION. SILT FENCE SHALL BE PLACED AROUND STOCKPILES.
5. CONSTRUCT AREAS TO BE USED AS SEDIMENT PONDS DURING CONSTRUCTION, AS NEEDED.
6. THE WORK AREA SHALL BE GRADED, SHAPED, AND OTHERWISE DRAINED IN SUCH A MANNER AS TO MINIMIZE SOIL EROSION, SILTATION OF DRAINAGE CHANNELS, DAMAGE TO EXISTING VEGETATION, AND DAMAGE TO PROPERTY OUTSIDE LIMITS OF THE WORK AREA. SILT FENCES, AND/OR SEDIMENTATION BASINS MAY BE NECESSARY TO ACCOMPLISH THIS END.
7. PERFORM SITE GRADING, INSTALL DRAINAGE SYSTEMS AND UTILITIES. DISTURBED AREAS SHALL BE STABILIZED UPON COMPLETION OF ROUGH GRADING PER THE EROSION CONTROL NOTES. INSTALL INLET PROTECTION IN ALL CATCH BASINS. ALL SIDE SLOPES SHALL BE STABILIZED WITHIN 72 HOURS.
8. FINALIZE GRADING AND PLACEMENT OF SELECTS.
9. INSTALL EROSION CONTROL PROTECTION ON CATCH BASIN RIMS UNTIL ROADWAY IS PAVED. IF SEDIMENT IS COLLECTING AROUND CATCH BASINS AFTER THE PLACEMENT OF THE BINDER COURSE, THE SILT SACKS SHALL REMAIN AND HAYBALES SHALL BE PLACED AROUND CATCH BASINS
10. INSPECT AND MAINTAIN EROSION CONTROL MEASURES WEEKLY AND AFTER EVERY RAIN EVENT OF 0.5" OR GREATER. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, CULVERTS, DITCHES SILTATION DEVICES SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.
11. FINISH GRADING TO PREPARE FOR PAVEMENT, LOAMING AND SEEDING. NO PORTION OF THIS SITE SHALL REMAIN UNSTABILIZED FOR OVER 45 DAYS. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF FINAL GRADING.
12. FINISH PAVING ROADWAY AND CONSTRUCT DRIVES. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
13. TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL ALL DISTURBED AREAS ARE STABILIZED AND HAVE A HEALTHY VEGETATIVE COVER. ONCE A HEALTHY VEGETATIVE COVER HAS BEEN ESTABLISHED ALL SILT FENCES, SILT SACKS, CATCH BASIN EROSION CONTROL, STONE CHECK DAMS AND ORANGE CONSTRUCTION FENCE SHALL BE REMOVED.
14. WINTERIZATION EFFORTS FOR AREAS NOT STABILIZED BY NOV. 1ST SHALL BE MADE BY THE APPROPRIATE USE OF MATTING, BLANKETS, MULCH AND SEEDING.
15. A CONSTRUCTION AREA SHALL BE CONSIDERED STABLE IF:
  - A. COMPACTED BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO RECEIVE PAVEMENT.
  - B. A MINIMUM OF 20% PERMANENT GROWTH HAS BEEN ESTABLISHED.
  - C. CUT OR FILL SLOPES HAVE A MINIMUM OF 3" NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP OR EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
  - D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

14. CLEAN ALL DRAINAGE STRUCTURE SUMPS OF SEDIMENT AND DEBRIS (INCLUDING ALL STRUCTURES WITHIN THE LIMIT OF WORK).
15. DUST SHALL BE CONTROLLED DURING CONSTRUCTION BY ADEQUATE USE OF WATER AND/OR CALCIUM CHLORIDE.
16. THE DETENTION/INFILTRATION BASINS MUST BE CLEANED OUT, SEEDED AND MATTED UPON COMPLETION OF THIS PROJECT. THE STORMWATER WILL BE ALLOWED TO BE DISCHARGED UNLESS PERMANENT SEEDING HAS BEEN WELL ESTABLISHED. THE FOLLOWING PRECAUTIONS WILL BE OBSERVED DURING THE CONSTRUCTION OF THE INFILTRATION BASINS:
  - A. PROPOSED INFILTRATION BASINS SHOULD NEVER SERVE AS TEMPORARY SEDIMENT TRAPS FOR CONSTRUCTION.
  - B. BEFORE THE DEVELOPMENT SITE IS GRADED, THE AREA OF THE INFILTRATION BASINS SHOULD BE ROPED OFF AND FLAGGED TO PREVENT HEAVY EQUIPMENT FROM COMPACTING THE UNDERLYING SOILS.
  - C. INFILTRATION TRENCHES SHOULD NOT BE CONSTRUCTED UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
  - D. DIVERSION BERMS SHOULD BE PLACED AROUND THE PERIMETER OF THE INFILTRATION BASIN DURING ALL PHASES ON CONSTRUCTION. SEDIMENT AND EROSION CONTROLS SHOULD BE USED TO KEEP RUNOFF AND SEDIMENT AWAY FROM THE TRENCH.
  - E. DURING AND AFTER EXCAVATION, ALL EXCAVATED MATERIALS SHOULD BE PLACED DOWNSTREAM, AWAY FROM THE INFILTRATION TRENCH, TO PREVENT REDEPOSITION OF THESE MATERIALS DURING RUNOFF EVENTS. THESE MATERIALS SHOULD BE PROPERLY HANDLED AND DISPOSED OF DURING AND AFTER CONSTRUCTION.
  - F. LIGHT EARTH-MOVING EQUIPMENT SHOULD BE USED TO EXCAVATE THE INFILTRATION TRENCH. USE OF HEAVY EQUIPMENT CAUSES COMPACTION OF THE SOILS BENEATH THEIR TRENCH FLOOR, RESULTING IN REDUCED INFILTRATION CAPACITY.

17. SEEDING SCHEDULE
  - A. SEEDING OPERATIONS SHOULD BE PERFORMED AS AN EARLY SPRING SEEDING (APRIL 1–MAY 15) WITH THE USE OF COLD TREATED SEED. A LATE FALL EARLY WINTER DORMANT SEEDING (NOVEMBER 1 – DECEMBER 15) CAN ALSO BE MADE, HOWEVER THE SEEDING RATE WILL NEED TO BE INCREASED BY 50%.
  - B. PERMANENT SEEDING SHOULD BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST. IF SEEDING CANNOT BE DONE WITHIN THE SPECIFIED SEEDING DATES, MULCH ACCORDING TO THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, CONSTRUCTION PHASES, EROSION AND SEDIMENT CONTROLS AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

18. ESTABLISHING A STAND
  - A. STONES AND TRASH SHOULD BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
  - B. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
  - C. IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHOULD BE APPLIED DURING THE GROWING SEASON.
  - D. APPLY UNIFORMLY 2 TONS OF GROUND LIMESTONE PER ACRE (100 LBS. PER 1,000 SQ. FT.) OR ACCORDING TO SOIL TEST. APPLY UNIFORMLY 10–10–10 ANALYSIS FERTILIZER AT THE RATE OF 400 LBS. PER ACRE (14 LBS. PER 1,000 SQ. FT.) OR AS INDICATED BY SOIL TEST. FORTY PERCENT OF THE NITROGEN SHOULD BE IN ORGANIC FORM.
19. WORK IN LIME AND FERTILIZER TO A DEPTH OF 4 INCHES USING ANY SUITABLE EQUIPMENT. SEED SHOULD BE SPREAD UNIFORMLY BY A METHOD MOST APPROPRIATE FOR THE SITE. SEEDING SHOULD BE PERFORMED BY ONE OF THE FOLLOWING METHODS:
  - DRILL SEEDINGS (DE–AWNED OR DE–BEARDED SEED SHOULD BE USED UNLESS THE DRILL IS EQUIPPED WITH SPECIAL FEATURES TO ACCEPT AWNED SEED).
  - BROADCAST SEEDING WITH SUBSEQUENT ROLLING, CUT/PACKING OR TRACKING THE SEEDING WITH SMALL TRACK CONSTRUCTION EQUIPMENT. TRACKING SHOULD BE ORIENTED UP AND DOWN THE SLOPE.
  - HYDROSEEDING WITH SUBSEQUENT TRACKING. IF WOOD FIBER MULCH IS USED, IT SHOULD BE APPLIED AS A SEPARATE OPERATION AFTER SEEDING AND TRACKING TO ASSURE GOOD SEED TO SOIL CONTACT.

SEEDING FOR TEMPORARY COVER			
SPECIES	POUNDS PER 1,000 SQ. FT.	POUNDS PER ACRE	RECOMMENDED SEEDING DATES
ANNUAL RYE GRASS	1	40	APRIL 1 TO JUNE 1
AUG. 15 TO SEPT. 15			
FOXTAIL MILLET	0.7	30	MAY 1 TO JUNE 30
OATS	2	80	APRIL 1 TO JULY 1
			AUGUST 15 TO SEPT. 15
WINTER RYE	3	120	AUG. 15 TO OCT. 15

CONSTRUCTION GENERAL PERMIT NOTES

**NARRATIVE:** THE STORMWATER POLLUTION PREVENTION PLANS TOGETHER WITH AN EXISTING CONDITIONS PLAN, AND GRADING PLAN ARE THE TOTAL EROSION CONTROL MEASURES.

THE STORMWATER POLLUTION PREVENTION PLANS CONSIST OF:

- NOTES SHEETS, SWPPP–1
- THE STORMWATER PREVENTION POLLUTION PLAN: SWPPP–2 (SHOWING THE EROSION CONTROL MEASURES)
- THE STORMWATER PREVENTION POLLUTION DETAILS: SWPPP–3

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 MUNICIPAL SYSTEM.
- C. CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED TO MINIMIZE EROSION.
- D. ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.

CONSTRUCTION PHASE

THE OWNER IS TO BE RESPONSIBLE FOR MAINTENANCE OF ALL DRAINAGE STRUCTURES IN THE PROJECT – INCLUDING DRAIN PIPES, ABOVEGROUND DETENTION BASINS AND SUBSURFACE INFILTRATION SYSTEMS. THE DEVELOPER WILL ULTIMATELY BE RESPONSIBLE FOR COMPLIANCE WITH THE PLAN.

REGULAR MAINTENANCE IS TO INCLUDE THE FOLLOWING:

1. DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED:
2. INSTALLATION OF SILTATION FENCES SHALL BE COMPLETED PRIOR TO THE START OF THE SITE WORK IN ANY GIVEN AREA. PREFABRICATED SILTATION FENCES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
3. SILTATION FENCES SHALL BE KEPT CLEAN DURING CONSTRUCTION AND REMOVED WHEN ALL SLOPES HAVE A HEALTHY STAND OF VEGETATIVE COVER. EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EVERY RAIN EVENT OF 0.5" OR GREATER.
4. EXISTING VEGETATION IS TO REMAIN UNDISTURBED WHEREVER POSSIBLE.
5. THE AREA OF LAND EXPOSED AND THE TIME OF EXPOSURE SHALL BE MINIMIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS AFTER FINAL GRADING WITH EITHER PERMANENT MEASURES OR TEMPORARY MEASURES. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 45 DAYS SHALL BE STABILIZED
6. IN NO CASE SHALL ANY DISTURBED AREAS BE LEFT UNSTABILIZED WITH EITHER PERMANENT OR TEMPORARY EROSION CONTROL MEASURES FOR MORE THAN 72 HOURS, OR AS NEEDED TO ENSURE SUFFICIENT STABILIZATION DUE TO WEATHER OR OTHER CONDITIONS.
7. SIMULTANEOUS WORK IN MULTIPLE AREAS MAY BE PERMITTED AS NEEDED, SUBJECT TO THE ABOVE, HOWEVER THE CONTRACTOR SHALL NOT DISTURB AREAS THAT CANNOT REASONABLY BE PROPERLY STABILIZED AND MAINTAINED WITHIN 72 HOURS.
8. ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 4" OF LOAM INSTALLED WITH NOT LESS THAN 1.1 POUNDS OF SEED MIX PER 1,000 SQ. FT. SEED MIXTURE SHALL BE:
  - A. SLOPE AND DETENTION MIX (MIX 6)
    - CREeping RED FESCUE – 0.25 LBS
    - CANADA BLUEGRASS – 0.25 LBS
    - PERENNIAL RYEGRASS – 0.25 LBS
    - RED TOP – 0.10 LBS
  - B. MIX: LAWN: MIX (MIX 11):
    - CREeping BENTGRASS – 0.10 LBS
    - BLUEJOINT REED GRASS – 0.10 LBS
    - VIRGINIA WILD RYE – 0.10 LBS
    - FOWL MEADOW GRASS – 0.25 LBS
    - SHOWY TICK TREFOIL – 0.10 LBS
    - RED TOP – 0.10 LBS
9. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE SOIL PRIOR TO OR AT THE TIME OF SEEDING. A MINIMUM OF 25 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS. PER ACRE OF 10–20–20 FERTILIZER SHALL BE APPLIED. SEEDING PRACTICES SHALL COMPLY WITH LOCAL USDA SOIL CONSERVATION SERVICES RECOMMENDATIONS.
10. HAY MULCH AND SLOPE PROTECTION BLANKET SHALL BE USED WHERE INDICATED ON THE PLANS. A MINIMUM OF 1.5 TONS OF MULCH PER ACRE SHALL BE APPLIED. MULCH SHALL BE ANCHORED IN PLACE WHERE NECESSARY. SLOPE PROTECTION BLANKET SHALL BE LAID IN THE DIRECTION OF RUNOFF FLOW AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND/OR THE DETAILS.
11. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDING AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY FALL. WHEN SEEDING AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM APRIL 1 TO MAY 15 OR FROM AUGUST 1 TO SEPTEMBER 10. DORMANT SEEDING RATE WILL NEED TO BE INCREASED BY 50%. NO DISTURBED AREA SHALL BE LEFT EXPOSED DURING WINTER MONTHS.
12. CALCIUM CHLORIDE AND/OR WATER SHALL BE USED FOR DUST CONTROL IN APPROPRIATE AREAS.
13. ALTERNATE PERMANENT SEEDING FOR AREAS NOT RECEIVING LAWN OR LANDSCAPING SHALL BE AS FOLLOWS. THE NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES PROVIDES AN APPROPRIATE SELECTION OF NATIVE AND NON–NATIVE GRASSES TO ENSURE THAT DRY AND RECENTLY DISTURBED SITES WILL BE QUICKLY REVEGETATED AND THE SOIL SURFACE STABILIZED. IT IS AN APPROPRIATE SEED MIX FOR ROAD CUTS, PIPELINES, DETENTION BASIN SIDE SLOPES, AND AREAS REQUIRING TEMPORARY COVER DURING THE ECOLOGICAL RESTORATION PROCESS. THE MIX MAY BE APPLIED BY HYDRO SEEDING, BY MECHANICAL SPREADER, OR ON SMALL SITES IT MAY BE SPREAD BY HAND. WHEN APPLYING ON BARE SOIL, RAKE THE SOIL TO CREATE GROOVES, APPLY SEED, AND THEN LIGHTLY RAKE OVER. THIS MIX MAY BE APPLIED AT ANY TIME OF THE YEAR. A LIGHT MULCHING OF WOOD FREE STRAW TO CONSERVE MOISTURE AND TO AID IN SLOPE STABILIZATION AND FERTILIZATION WITH 10–10–10 IS RECOMMENDED.
  - A. APPLICATION RATE: 35 LBS/ACRE (1245 SQ. FT/LB)
  - B. SPECIES: CREeping RED FESCUE (FESTUCA RUBRA), ANNUAL RYE–GRASS (LOLIUM MULTIFLORUM), TIMOTHY (PHEULUM PRATENSE), WHITE CLOVER (TRIFOLIUM REPENS), LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM), RED TOP (AGROSTIS ALBA), SIDE–OATS GRAMMA–GRASS (BOUTELLOA CURTIPENDULA), SWITCHGRASS (PANICUM VIRGATUM), VIRGINIA WILD RYE (ELYMUS VIRGINICUS), CREeping RED FESCUE (FESTUCA RUBRA), FOX SEDGE (CAREX VULPINOIDEA), CREeping BENTGRASS (AGROSTIS STOLONIFERA), SILKY WILD RYE (ELYMUS VILLOsus), NODDING BUR–MARGOLD (BIODEN CERNUA), SOFT RUSH (JUNCUS EFFUSUS), GRASS–LEAVED GOLDENROD (SOLIDAGO GRAMINIFOLIA), SENSITIVE FERN (ONOCLEA SENSIBILIS), JOE–PYE WEED (EUPATORIUM MACULATUM), BONESET (EUPATORIUM PERFOLIATUM), FLAT–TOP ASTER (ASTER UMBELLATUS), NEW YORK ASTER (ASTER NOVI–BELGII), BLUE VERVAIN (VERBENA HASTATA).
25. IF, DURING CONSTRUCTION, IT COMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE DUE TO ACTUAL SITE CONDITIONS, THE CONTRACTOR SHALL BE REQUIRED TO IMMEDIATELY INSTALL AND MAINTAIN THE NECESSARY EROSION PROTECTION.

POST CONSTRUCTION PHASE

THE DEVELOPER (OWNER) WILL BE RESPONSIBLE FOR MAINTENANCE OF THE SYSTEMS IN ACCORDANCE WITH THE PROJECT OPERATION AND MAINTENANCE PLAN INCLUDING THE FOLLOWING:

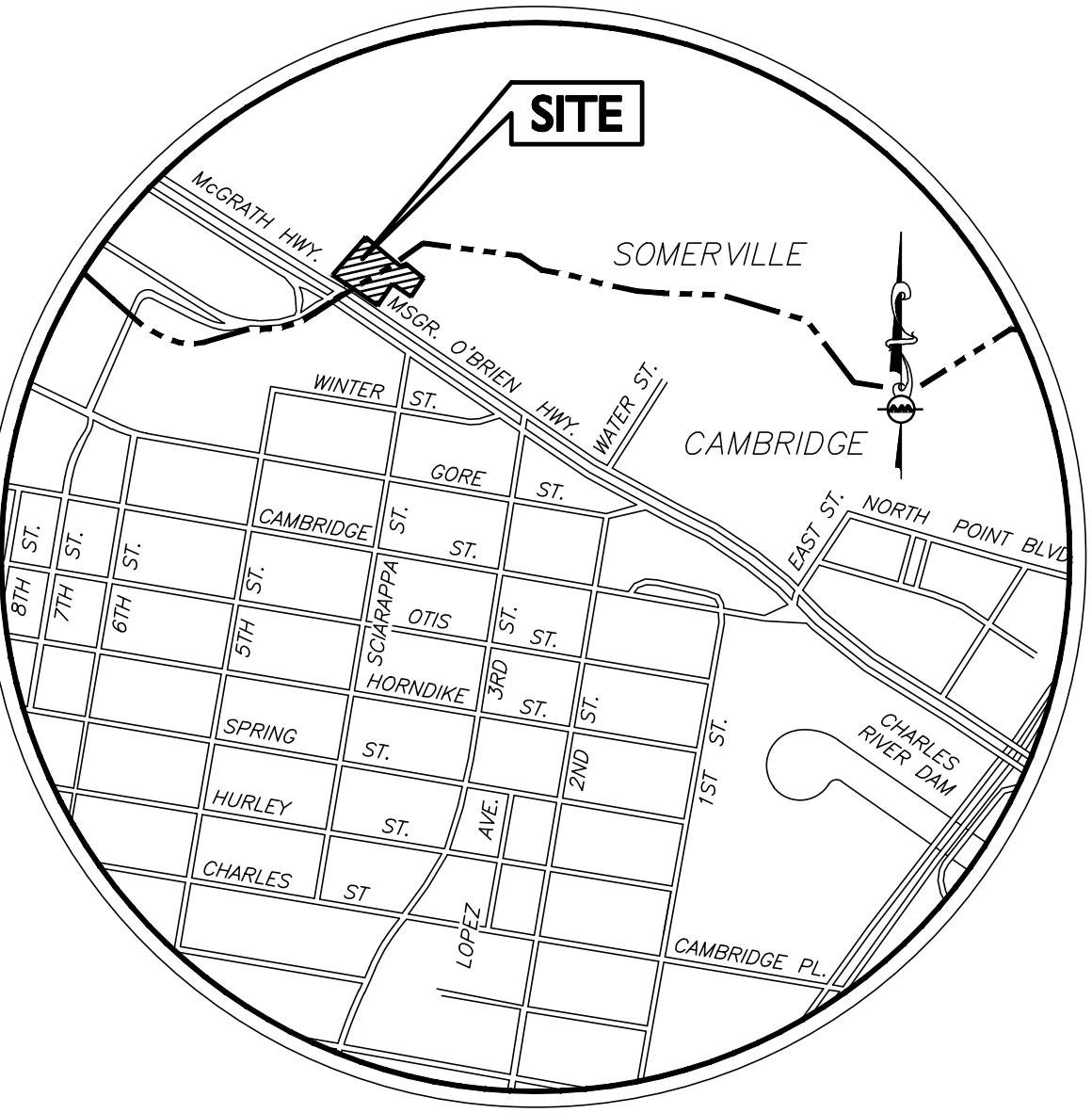
1. INSPECTION OF ALL DRAINAGE FACILITIES AND SYSTEMS THREE MONTHS. DURING THE FIRST YEAR OF OPERATION, ALL DRAINAGE FACILITIES SHOULD BE INSPECTED AFTER EVERY STORM, AND 2–3 DAYS AFTERWARD. THESE INSPECTIONS SHOULD LOOK FOR EVIDENCE STRUCTURAL DAMAGE, SILT ACCUMULATION (NEAR INLET INVERTS ON CATCH BASINS), AND IMPROPER FUNCTION.
2. AFTER INSPECTION, IF ANY OF THE ABOVE CONDITIONS EXIST, THE OWNER SHALL IMMEDIATELY ARRANGE FOR ALL NECESSARY REPAIRS AND SEDIMENT REMOVAL.
3. THE CATCH BASINS AND DETENTION BASIN ARE TO BE INSPECTED ANNUALLY. REMOVE OIL, DEBRIS, AND SEDIMENT AFTER INSPECTIONS.
4. ALL GRADED SLOPES SHALL BE INSPECTED FOR EROSION. UPON DISCOVERY OF ANY EROSION, LOAM AND SEED SHALL BE PUT IN PLACE AND NURTURED.

MAINTENANCE

1. ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN AND NOTES, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION 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:
2. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
3. ALL SEEDING AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEED AS NEEDED.
4. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES SIX INCHES IN HEIGHT, OR AS REQUESTED BY THE OWNER OR ENGINEER.
5. 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.
6. 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.

EROSION CONTROL AND SEDIMENT CONTROL NOTES:

1. REFER TO PROJECT PLANS FOR ADDITIONAL INFORMATION.
2. AS CONSTRUCTION DISTURBANCE IS LESS THAN 1 ACRE, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT NOI, AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ARE NOT REQUIRED. THESE PLANS WILL MEET ALL LOCAL REQUIREMENTS FOR EROSION CONTROLS AND STORM WATER POLLUTION PREVENTION.
3. SILT 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 BMP (BEST MANAGEMENT PRACTICES) PER THE E.P.A. 1992 "STORMWATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES" MANUAL. ANY SUCH MODIFICATIONS SHALL BE INSTALLED AS APPROVED BY THE ENGINEER.
4. AREAS OF EXPOSED SOIL UNDERGOING CONSTRUCTION THAT WILL NOT BE COVERED AND OR FINISHED GRADED WITHIN 7 DAYS OF EXPOSURE SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL MEASURES WITHIN 7 DAYS OF DISTURBANCE. 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, HAY OR STRAW MULCH SHALL BE APPLIED AT THE RATE OF 1.5 TO 2 TONS PER ACRE OR 70 TO 90 LBS PER 1,000 SQUARE FEET. APPLICATION 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 AND IN VEGETATIVE SLOPES WHICH EXCEED 15% AND DISTURBED AREAS WITHIN 100 FEET OF WETLANDS OR STREAMS.
5. IF DISTURBED AREAS DO NOT RECEIVE FINAL SEEDING BY SEPTEMBER 15 OF THE CONSTRUCTION YEAR, THEN ALL DISTURBED AREAS SHALL BE SEEDDED 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.
6. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 90 DAYS SHALL BE COVERED WITH HAY AND MULCH (AT 100LBS/1,000 SF), OR WITH AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR 90 DAYS OR MORE SHALL BE SEEDDED WITH WINTER RYE (FOR FALL SEEDING AT 3LB/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. LOAM SHALL BE STOCKPILED AT LOCATIONS DESIGNATED BY THE OWNER AND ENGINEER.
7. ALL HAYBALE FILTER BARRIERS, SILT SACKS, AND FILTER FABRICS SHALL BE INSTALLED ACCORDING TO THE EROSION CONTROL PLAN. THESE SHALL BE MAINTAINED DURING CONSTRUCTION TO REMOVE SEDIMENT FROM RUNOFF WATER. ALL THE EROSION CONTROL MEASURES 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.
8. THE EXISTING PARKING LOT SHALL BE PERIODICALLY SWEEP OR WASHED TO AVOID TRACKING MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA. A WATERING TROUGH WILL 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.
9. THE CONTRACTOR SHALL USE EXTREME CAUTION TO AVOID ALLOWING SEDIMENTS TO ENTER THE STORM DRAIN SYSTEM DURING CONSTRUCTION. CATCH BASIN INLETS SHALL ALSO BE PROTECTED DURING CONSTRUCTION BY THE USE OF STRAW BALE BARRIERS AROUND EACH INLET. SILT SACKS SHALL BE INSTALLED IN ALL EXISTING BASINS. INLET PROTECTION MAY BE REMOVED ONLY AFTER FINISHED AREAS ARE PAVED AND THE VEGETATED SLOPES ARE ESTABLISHED WITH AT LEAST 85–90% OF VIGOROUS PERENNIAL GROWTH.
10. REVEGETATION MEASURES SHALL COMMENCE IMMEDIATELY UPON THE COMPLETION OF CONSTRUCTION. FOLLOWING SEEDING, SEED PREPARATION AREAS NOT NOTED TO RECEIVE COVER SHALL BE LOAM AND SEEDDED. AREAS SEEDDED BETWEEN MAY 15 TO AUGUST 15TH SHALL BE COVERED WITH HAY OR STRAW MULCH. VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15TH. HAY AND STRAW MULCHES SHALL BE ANCHORED WITH MULCH NETTING OR TACKER SO THAT THEY ARE NOT BLOWN AWAY BY WIND OR WASHED AWAY BY FLOWING WATER. HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE OR 70 TO 90 LBS. PER 1,000 S.F.
11. IN LIEU OF SOIL TESTS, SOIL AMENDMENTS FOR TEMPORARY SEEDDED AREAS MAY BE APPLIED AS FOLLOWS:
  - 10–10–10 FERTILIZER (N–P205–K20 OR EQUAL). APPLICATION RATE= 25 LBS/1,000 S.F.
  - GROUND LIMESTONE (85% OF TOTAL CARBONATES. LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT 50% WILL PASS A 100 MESH SIEVE AND 90% WILL PASS THROUGH A 20 MESH SIEVE. APPLICATION RATE= 100 LB/1,000 S.F.
  - WHEN FERTILIZER IS APPLIED WITHIN 100' OF ANY RIVER, STREAM, POND, OR LAKE IT SHALL BE RESTRICTED TO A LOW PHOSPHATE, SLOW RELEASE NITROGEN FERTILIZER.
14. LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE PER SPECIFICATIONS. LOAM SHALL BE FREE OF SOIL, CLAY LUMPS, STONES AND OTHER OBJECTS OVER 1 INCH IN DIAMETER, AND WITHOUT WEEDS, ROOTS OR OTHER DELETERIOUS MATERIAL AND MEET THE LOAM SPECIFICATION DETAIL.
15. EROSION CONTROL MESH SHALL BE APPLIED IN ACCORDANCE WITH THE PLANS OVER ALL FINISHED SEEDDED AREAS AS SPECIFIED ON THE DESIGN PLANS.
16. AT THE OWNER'S DISCRETION ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED TO MAINTAIN STABILITY OF EARTHWORKS AND FINISHED GRADED AREAS. THE CONTRACTOR, AT HIS EXPENSE, WILL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY ADDITIONAL MEASURES AS SPECIFIED BY THE OWNER. THIS INCLUDES BUT IS NOT LIMITED TO REQUESTS BY EPA AND THE MUNICIPALITY, AS AUTHORIZED BY THE OWNER.
17. INSPECTIONS AND MONITORING MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. WEEKLY INSPECTIONS SHALL BE HELD THROUGH THE DURATION OF CONSTRUCTION ACTIVITY. WEEKLY INSPECTION REPORTS SHALL BE MAINTAINED IN THE CONTRACTOR'S FIELD OFFICE. IN ADDITION TO THE NORMAL WEEKLY INSPECTIONS, THE CONTRACTOR SHALL PERFORM AN INSPECTION OF ALL EROSION CONTROL MEASURES AFTER EACH RAINFALL OR RUNOFF EVENT, AND PERFORM THE NECESSARY REPAIRS. THE INSPECTIONS SHALL INCLUDE BUT NOT BE LIMITED TO THE SITE'S DOWN STREAM DISCHARGE POINTS.
18. IF ANY EVIDENCE OF SEDIMENTATION IS OBSERVED IN THE 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.
19. FOLLOWING THE TEMPORARY OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA BIMONTHLY TO ENSURE THE AREAS HAVE A MINIMUM OF 85–90% VEGETATED VIGOROUS GROWTH. RESEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW UP INSPECTIONS IN THE EVEN OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.
20. 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.



LOCUS MAP

CAMBRIDGE EROSION CONTROL NOTES

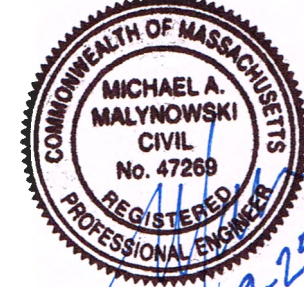
1. PRIOR TO ANY LAND DISTURBANCE ACTIVITIES COMMENCING ON THE SITE, THE DEVELOPER SHALL PHYSICALLY MARK THE LIMITS OF NO LAND DISTURBANCE ON THE SITE WITH TAPE, SIGNS, OR ORANGE CONSTRUCTION FENCE SO THAT WORKERS CAN SEE THE AREAS TO BE PROTECTED. THE PHYSICAL MARKERS SHALL REMAIN IN PLACE UNTIL A CERTIFICATE OF COMPLETION HAS BEEN ISSUED.
2. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO SOIL DISTURBANCE. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA. WETLAND AREAS AND SURFACE WATERS SHALL BE PROTECTED FROM SEDIMENT.
3. MINIMIZE TOTAL AREA OF DISTURBANCE AND PROTECT NATURAL FEATURES AND SOIL.
4. THE CONTRACTOR SHALL SEQUENCE ALL ACTIVITIES TO MINIMIZE SIMULTANEOUS AREAS OF DISTURBANCE. MASS CLEARINGS AND GRADING OF THE ENTIRE SITE SHALL BE AVOIDED.
5. MINIMIZE SOIL EROSION AND CONTROL SEDIMENTATION DURING CONSTRUCTION.
6. DIVERT UNCONTAMINATED WATER AROUND DISTURBED AREAS.
7. INSTALL AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICES OR THE 2008 EPA'S CONSTRUCTION GENERAL PERMIT.
8. PROTECT AND MANAGE ON AND OFF–SITE MATERIAL STORAGE AREAS (OVERBURDEN AND STOCKPILES OF DIRT, BORROW AREAS, OR OTHER AREAS USED SOLELY BY THE PERMITTED PROJECT ARE CONSIDERED A PART OF THE PROJECT).
9. COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS INCLUDING WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS, AND AIR QUALITY REQUIREMENTS, INCLUDING DUST CONTROL.
10. SEDIMENT SHALL BE REMOVED ONCE THE VOLUME REACHES 1/4 TO 1/2 THE HEIGHT OF THE EROSION CONTROL DEVICE. SEDIMENT SHALL BE REMOVED FROM SILT FENCE PRIOR TO REACHING THE LOAD–BEARING CAPACITY OF THE SILT FENCE WHICH MAY BE LOWER THAN 14 TO THE HEIGHT.
11. SEDIMENT FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS SHALL BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT.
12. BMPs TO BE USED FOR INFILTRATION AFTER CONSTRUCTION SHALL NOT BE USED AS BMPs DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE BOARD. MANY INFILTRATION TECHNOLOGIES ARE NOT DESIGNED TO HANDLE THE HIGH CONCENTRATIONS OF SEDIMENTS TYPICALLY FOUND IN CONSTRUCTION RUNOFF, AND THUS MUST BE PROTECTED FROM CONSTRUCTION RELATED SEDIMENT LOADINGS.
13. SOIL STOCKPILES MUST BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY. STOCKPILE SIDE SLOPES SHALL NOT BE GREATER THAN 2:1. ALL STOCKPILES SHALL BE SURROUNDED BY SEDIMENT CONTROLS.
14. FOR ACTIVE CONSTRUCTION AREAS SUCH AS BORROW OR STOCKPILE AREAS, ROADWAY IMPROVEMENTS AND AREAS WITHIN 50 FEET OF A BUILDING UNDER CONSTRUCTION, A PERIMETER SEDIMENT CONTROL SYSTEM SHALL BE INSTALLED AND MAINTAINED TO CONTAIN SOIL.
15. A TRACKING PAD OR OTHER APPROVED STABILIZATION METHOD SHALL BE CONSTRUCTED AT ALL ENTRANCE/EXIST POINTS OF THE SITE TO REDUCE THE AMOUNT OF SOIL CARRIED ONTO ROADWAYS AND OFF THE SITE.
16. ON THE CUT SIDE OF ROADS, DITCHES SHALL BE STABILIZED IMMEDIATELY WITH ROCK RIP–RAP OR OTHER NON–ERODIBLE LINERS, OR WHERE APPROPRIATE, VEGETATIVE MEASURES SUCH AS HYDRO SEEDING OR JUTE MATTING.
17. PERMANENT SEEDING SHALL BE UNDERTAKEN IN THE SPRING FROM MARCH THROUGH MAY, AND IN LATE SUMMER AND EARLY FALL FROM AUGUST TO OCTOBER 15. DURING THE PEAK SUMMER MONTHS AND IN THE FALL AFTER OCTOBER 15, WHEN SEEDING IS FOUND TO BE IMPRACTICAL, APPROPRIATE TEMPORARY STABILIZATION SHALL BE APPLIED. PERMANENT SEEDING MAY BE UNDERTAKEN DURING THE SUMMER IF PLANS PROVIDE FOR ADEQUATE MULCHING AND WATERING.
18. ALL SLOPES STEEPER THAN 3:1 (H: V, 33.3%), AS WELL AS PERIMETER DIKES, SEDIMENT BASINS OR TRAPS, AND EMBANKMENTS MUST, UPON COMPLETION, BE IMMEDIATELY STABILIZED WITH SOIL, SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES. AREAS OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST NOT BE DISTURBED.
19. TEMPORARY SEDIMENT TRAPPING DEVICES MUST NOT BE REMOVED UNTIL PERMANENT STABILIZATION IS ESTABLISHED IN ALL CONTRIBUTORY DRAINAGE AREAS.
20. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS OF REMOVAL.
21. PROPERLY MANAGE ON–SITE CONSTRUCTION AND WASTE MATERIALS.
22. PREVENT OFF–SITE VEHICLE TRACKING OF SEDIMENTS.
23. DUST SHALL BE CONTROLLED AT THE SITE.
24. ALL PREVIOUSLY DISTURBED LAND SHALL BE STABILIZED BY APPROVED METHODS AFTER 14 DAYS IF LEFT UNDISTURBED. THIS INCLUDES STOCKPILES, CONSTRUCTION ENTRANCES, GRADED AREAS AND OTHER CONSTRUCTION ACTIVITY RELATED CLEARING.
25. IF WORK IS HALTED OVER WINTER MONTHS THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZING THE AREA THROUGH GROUND COVER PRACTICES...

GENERAL NOTES

1. SEE SHEET 1 FOR EXISTING CONDITIONS.
2. SEE SHEET C3 FOR GRADING AND DRAINAGE
3. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. IT'S 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.

R:\PROJECTS\1362–16\CIVIL\DRAWINGS\CURRENT\1362–16–SWPPP–EROSION CONTROL.DWG

CITY OF CAMBRIDGE DPW  
STORMWATER CONTROL PERMIT NUMBER



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV DATE DESCRIPTION

OWNER: SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

PROJECT: 135 ROOM EXTENDED STAY HOTEL  
263 MONSIGNOR O'BRIEN HIGHWAY  
CAMBRIDGE, MA

1 McGrath Highway  
SOMERVILLE, MA

PROJECT NO. 1362-16 DATE: 9/26/18

SCALE: AS SHOWN DWG.: 1362-16-SWPPP Erosion Control

DESIGNED BY: SM CHECKED BY: MM

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.  
civil & structural engineering • land surveying  
environmental consulting • landscape architecture  
www.allenmajor.com

400 HARVEY ROAD  
MANCHESTER, NH 03103  
TEL: (603) 627-5500 FAX: (603) 627-5501

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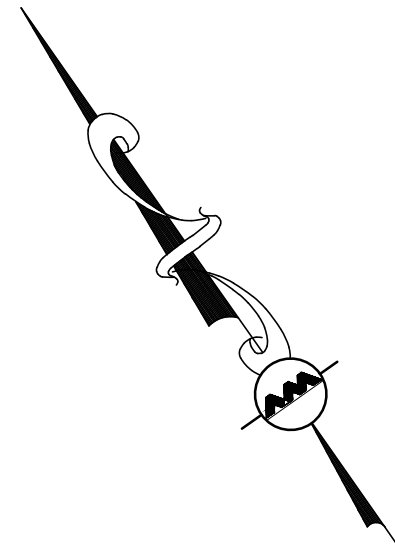
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DRAWING TITLE: SHEET NO.

STORMWATER POLLUTION PREVENTION NOTES SWPPP 1

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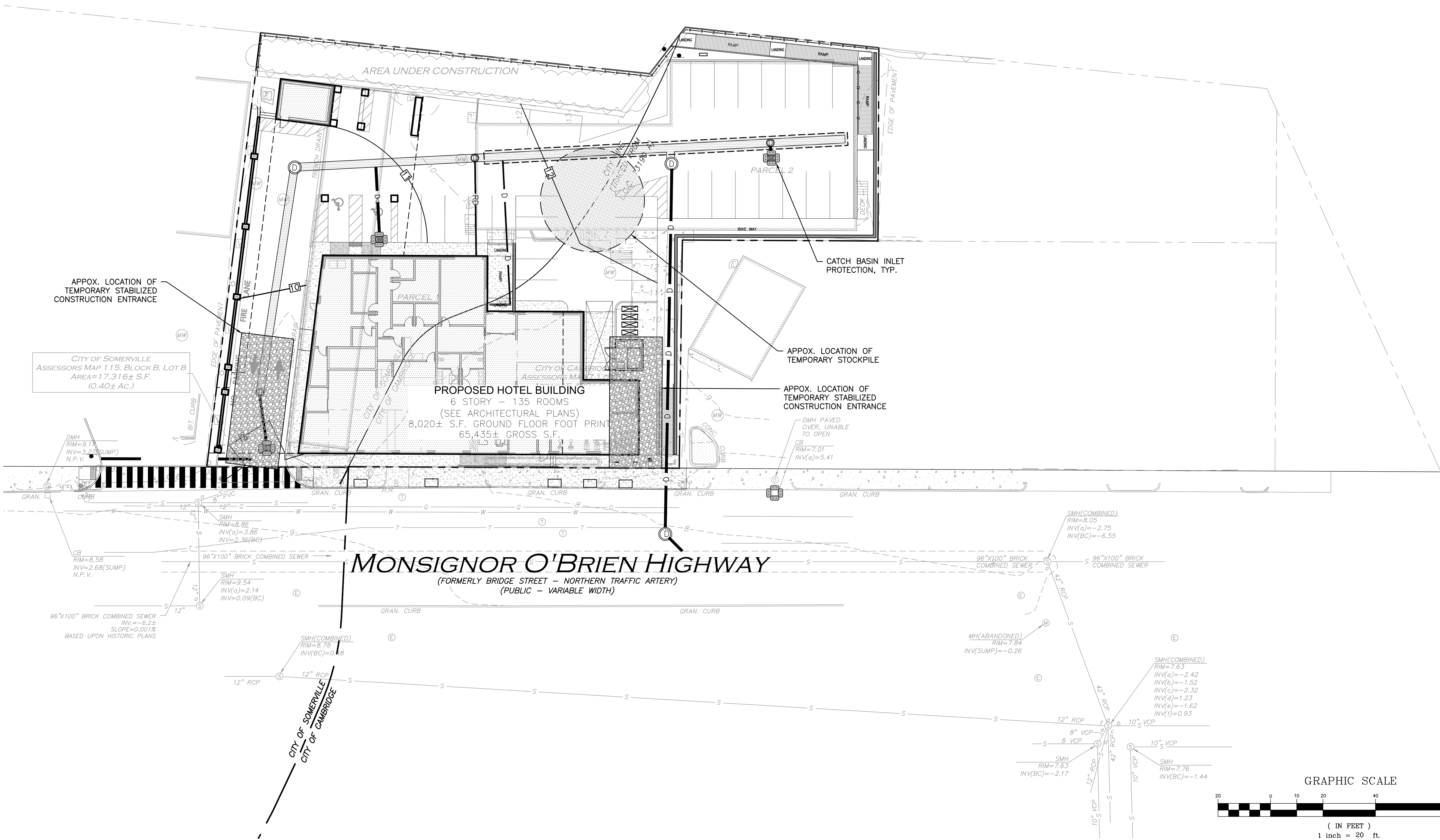


GENERAL NOTES:

1. SEE SHEET C-3 FOR GRADING & DRAINAGE.
2. SEE SHEET 1 FOR EXISTING CONDITIONS.
3. SHEETS SWPPP 1-3 MAKE UP THE COMPLETE STORMWATER PREVENTION PACKAGE.
4. 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.

LEGEND:

SILT FENCE	—SF—
HAYBALE LINE	—H—
EROSION CONTROL FABRIC	—E—
HAYBALE FILTER W/SILT SACK	—HFS—
STABILIZED CONST. ENTRANCE	—SCE—
STOCKPILE/CONSTRUCTION STAGING AREA	—SSA—



CITY OF CAMBRIDGE DPW  
STORMWATER CONTROL PERMIT NUMBER



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

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

OWNER:  
SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

PROJECT:  
135 ROOM EXTENDED STAY HOTEL  
263 MONSIGNOR O'BRIEN HIGHWAY  
CAMBRIDGE, MA

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO. 1362-16 DATE: 9/26/18

SCALE: 1" = 20' DWG.: 1362-16-SWPPP-Erosion Control

DESIGNED BY: SM CHECKED BY: MM

PREPARED BY:



400 HARVEY ROAD  
MANCHESTER, NH 03103  
TEL: (603) 627-5500 FAX: (603) 627-5501

WOBURN, MA • LAKEVILLE, MA • MANCHESTER, NH

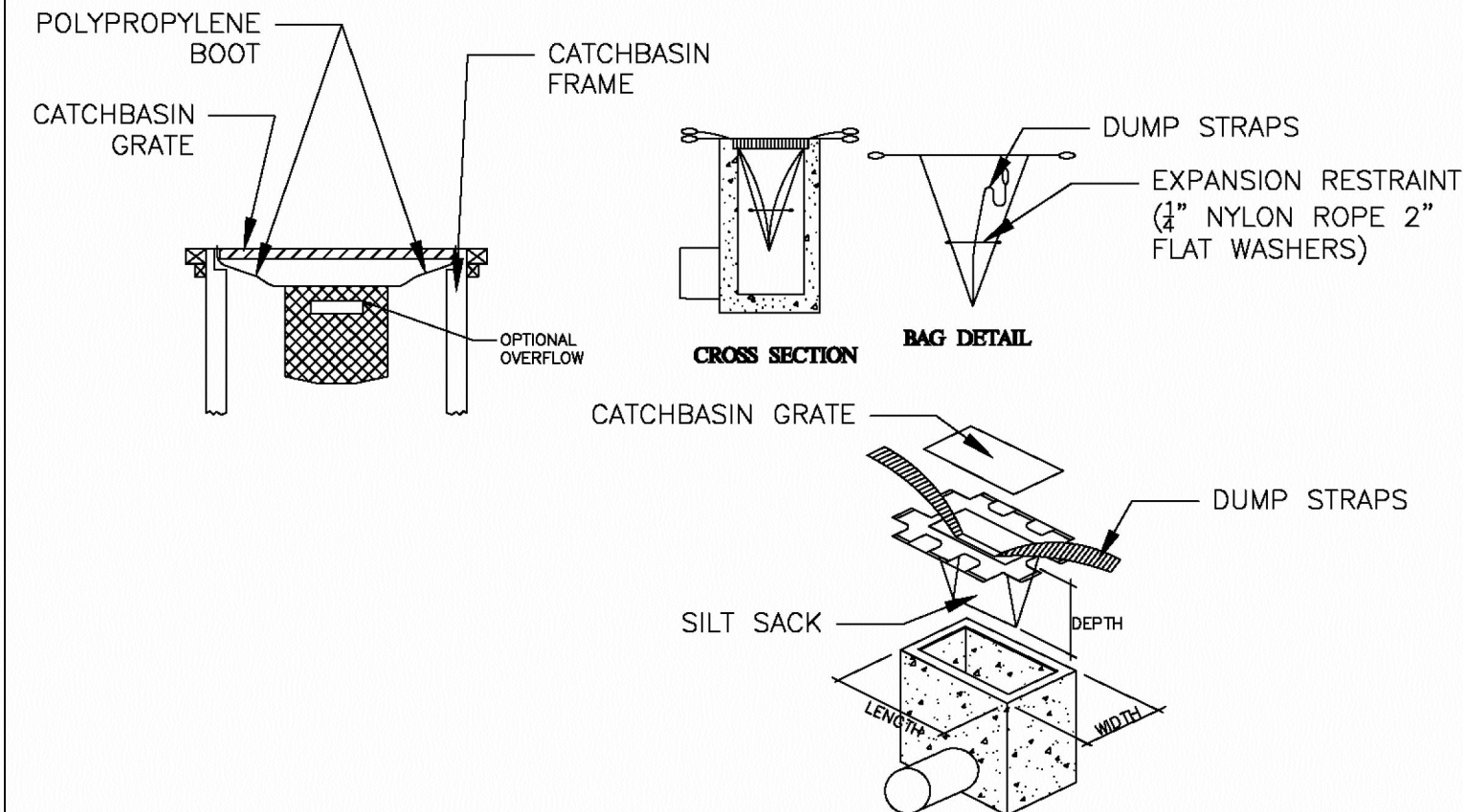
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DRAWING TITLE: SHEET No.

STORMWATER POLLUTION PREVENTION PLAN SWPPP 2

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THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS SHEET, OVERLAND AND CONCENTRATED FLOWS (NOT GREATER THAN 1 CFS). THE METHOD CAN DRAIN FLAT AREA TO STEEP SLOPES. INLET CAPACITY WILL DECREASE WITH THIS METHOD AND CONTRACTOR SHALL EXPECT FLOODING TO OCCUR DURING HIGH FLOW EVENTS.

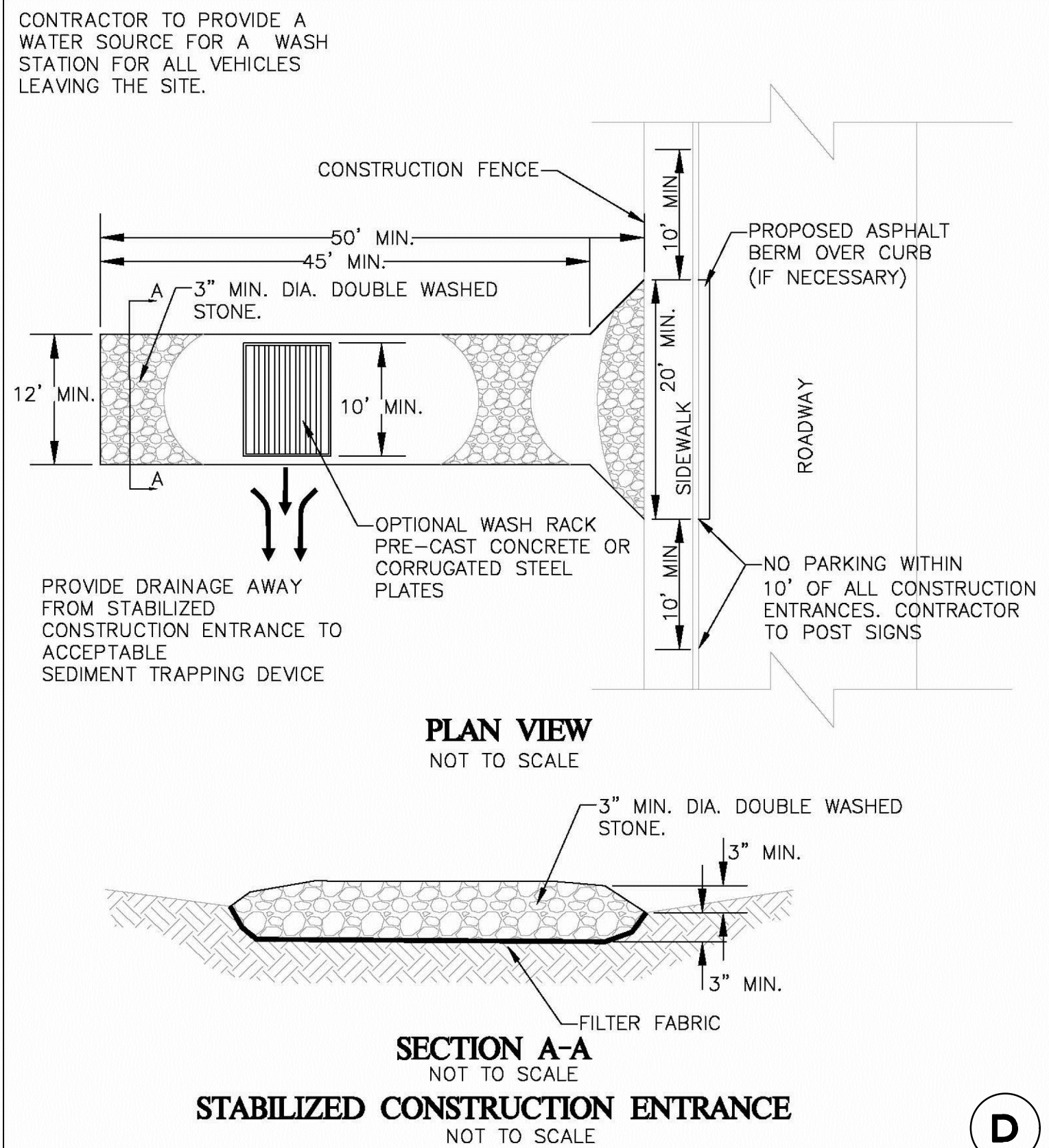
INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT

MAINTENANCE SHALL OCCUR WHEN NECESSARY. SILT SACKS SHALL BE CLEANED ONCE THE BAG IS FILLED HALF WAY WITH DEBRIS. CONTRACTOR SHALL REMOVE SILT SACK AND PLACE NEW UNIT. DO NOT EMPTY SILT SACK CONTENTS INTO THE CATCHBASIN.

**CATCH BASIN W/ SILT SACK  
INLET PROTECTION**  
NOT TO SCALE

A

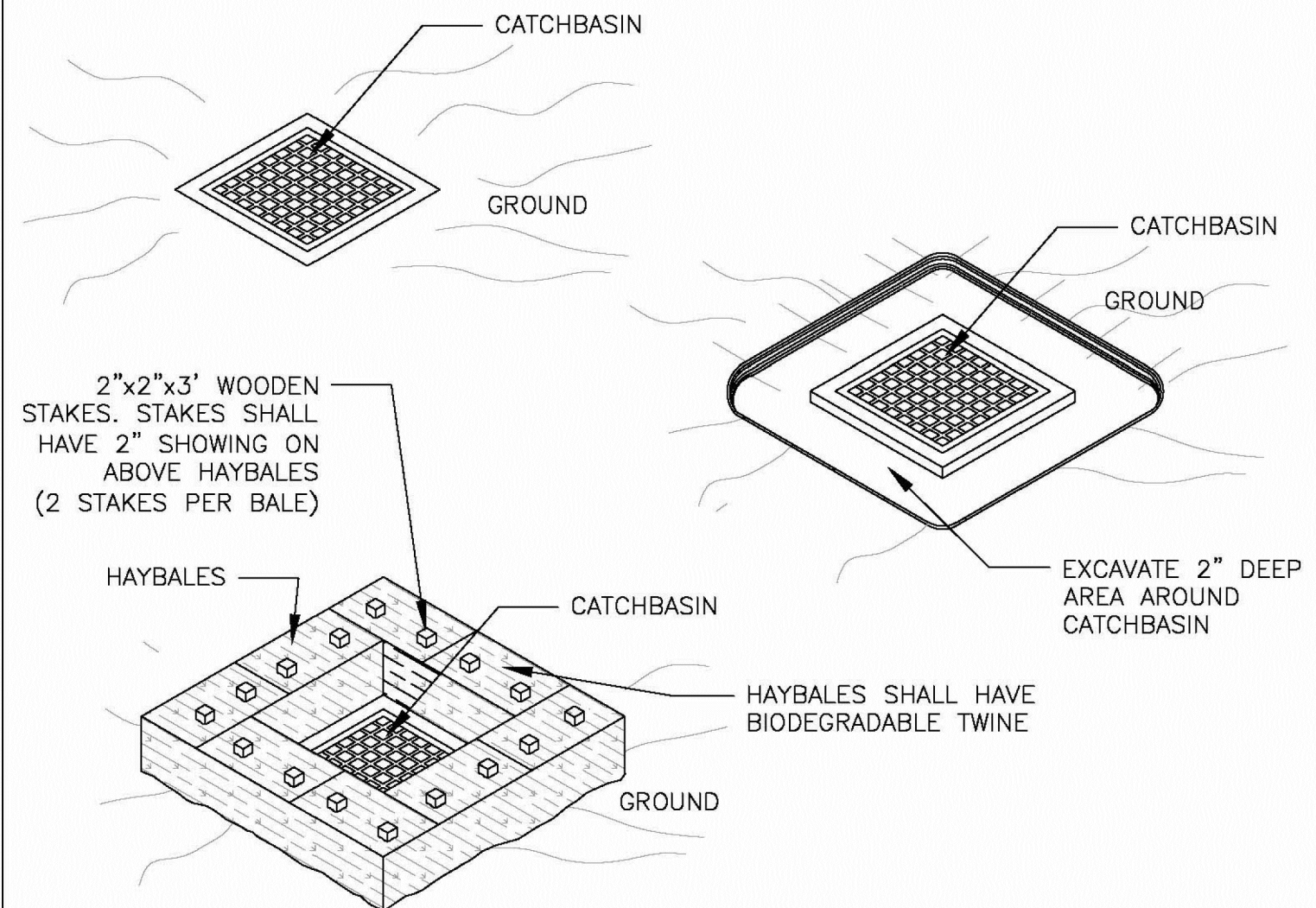
<b>THE WORKS</b> CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS	INLET PROTECTION		
	CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS		
	SCALE: N.T.S	DATE: 07/09	DRAWN BY: McLANE



**STABILIZED CONSTRUCTION ENTRANCE**  
NOT TO SCALE

D

<b>THE WORKS</b> CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS	STABILIZED CONSTRUCTION ENTRANCE		
	CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS		
	SCALE: N.T.S	DATE: 07/09	DRAWN BY: McLANE



INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%). WHERE THE INLET ACCEPTS SHEET OR OVERLAND FLOWS (NOT GREATER THAN 1 CFS). THIS METHOD SHOULD NOT APPLY TO AN INLET ACCEPTING CONCENTRATED FLOW.

HAYBALES SHOULD BE MADE FROM REGIONALLY FARMED HAY TO REDUCE THE POSSIBILITY OF INVASIVE SPECIES. WHEN POSSIBLE STRAW BALES SHOULD BE USED.

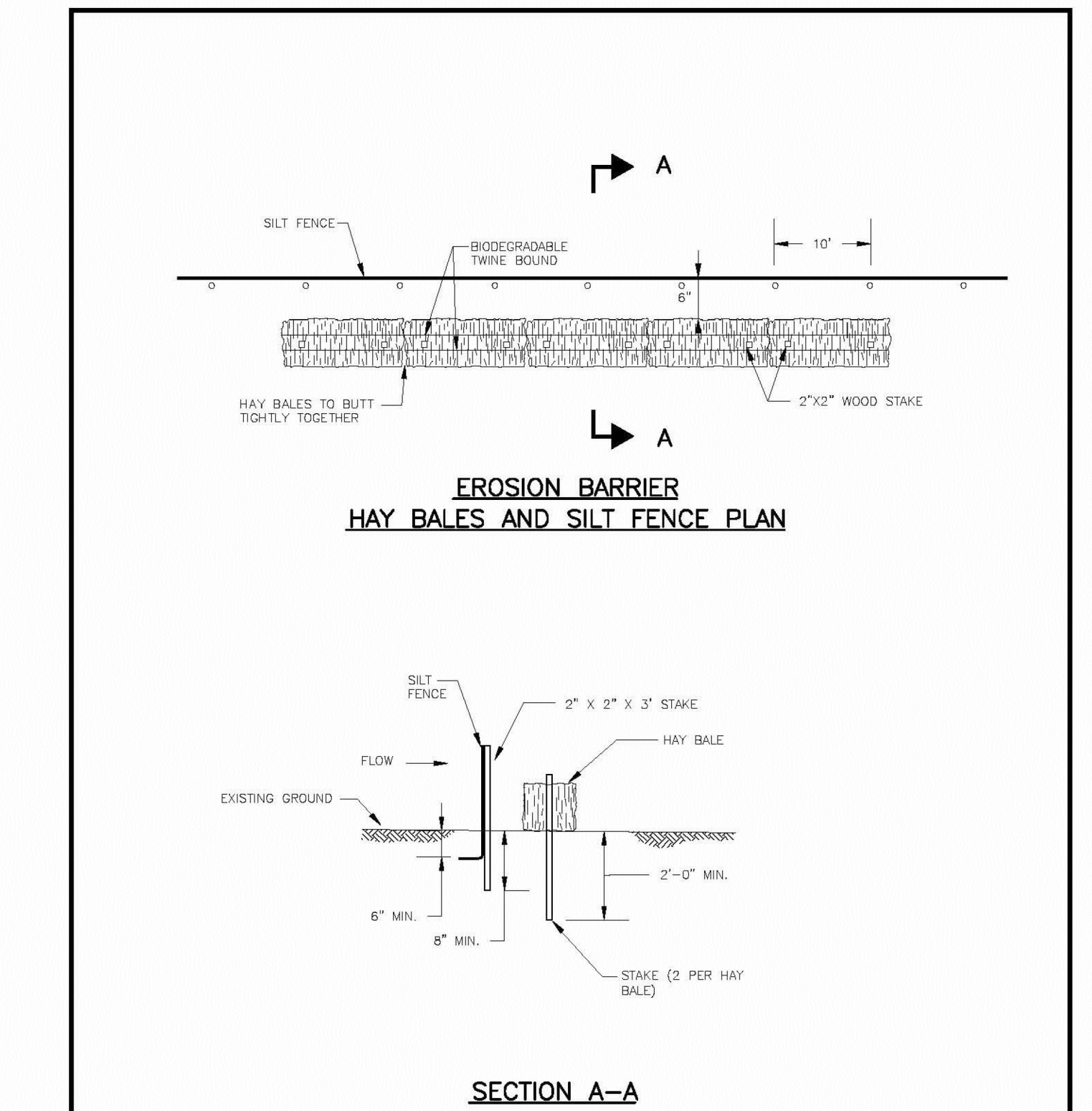
HAYBALES SHOULD ONLY BE USED WHEN APPROVED BY THE CITY OF CAMBRIDGE. HAYBALES ARE ALLOWS FOR PROJECTS THAT HAVE A DURATION OF LESS THAN THREE MONTHS.

MAINTENANCE SHALL OCCUR WHEN NECESSARY. HAYBALES ARE HIGHLY IMPERVIOUS AND THE CONTRACTOR SHOULD EXPECT PONDING IN THE AREA. HAYBALES SHOULD BE REPLACED EVERY 1 TO 3 MONTHS DEPENDING ON CONDITIONS.

**CATCH BASIN W/ HAYBALES  
INLET PROTECTION**  
NOT TO SCALE

B

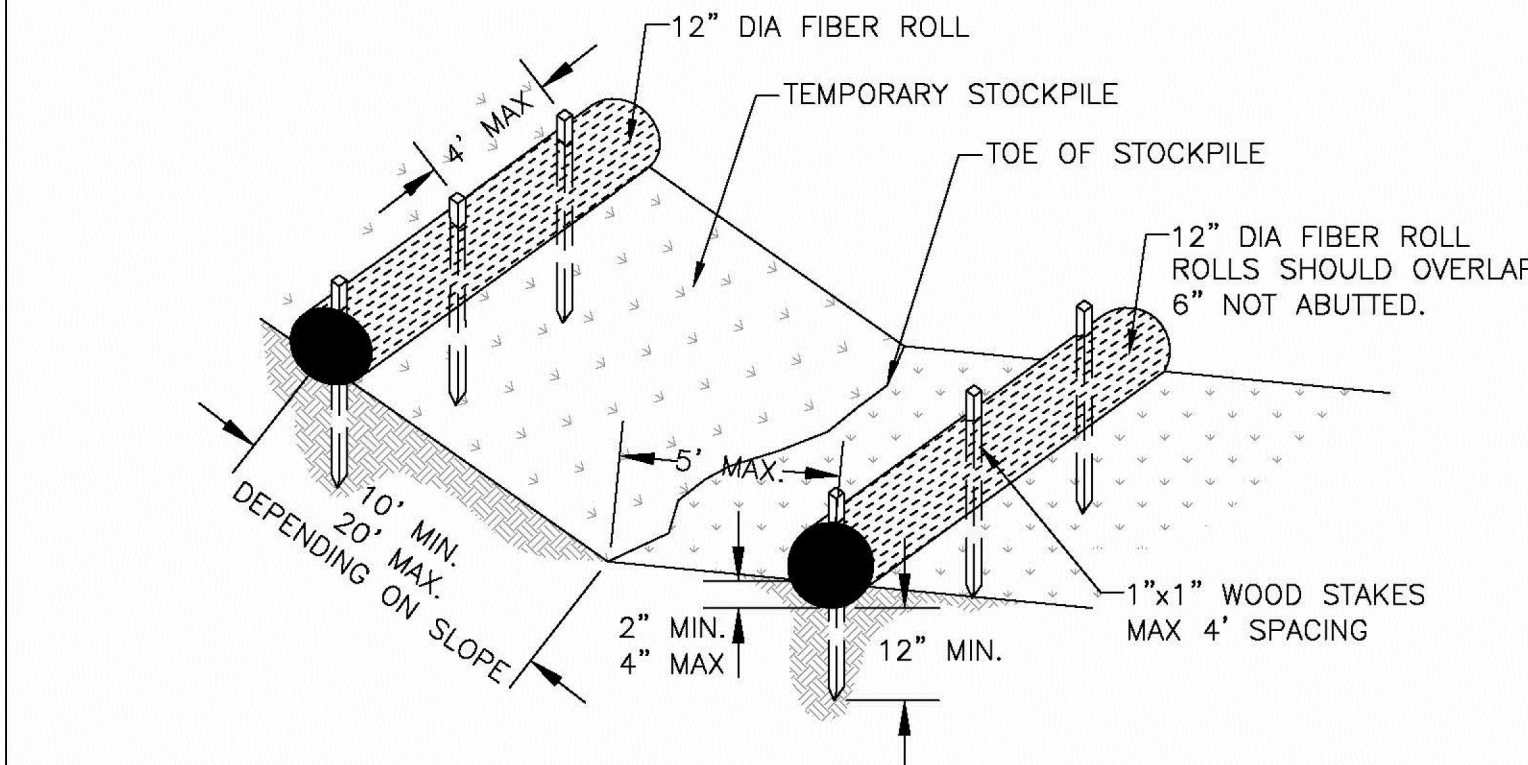
<b>THE WORKS</b> CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS	INLET PROTECTION		
	CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS		
	SCALE: N.T.S	DATE: 07/09	DRAWN BY: McLANE



**SECTION A-A**

E

<b>THE WORKS</b> CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS	SILT FENCE			
	CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS			
	SCALE: N.T.S.	DATE OF ISSUE: 2/2009	SPEC. SECTION REF#: 01500	1500.1



INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT

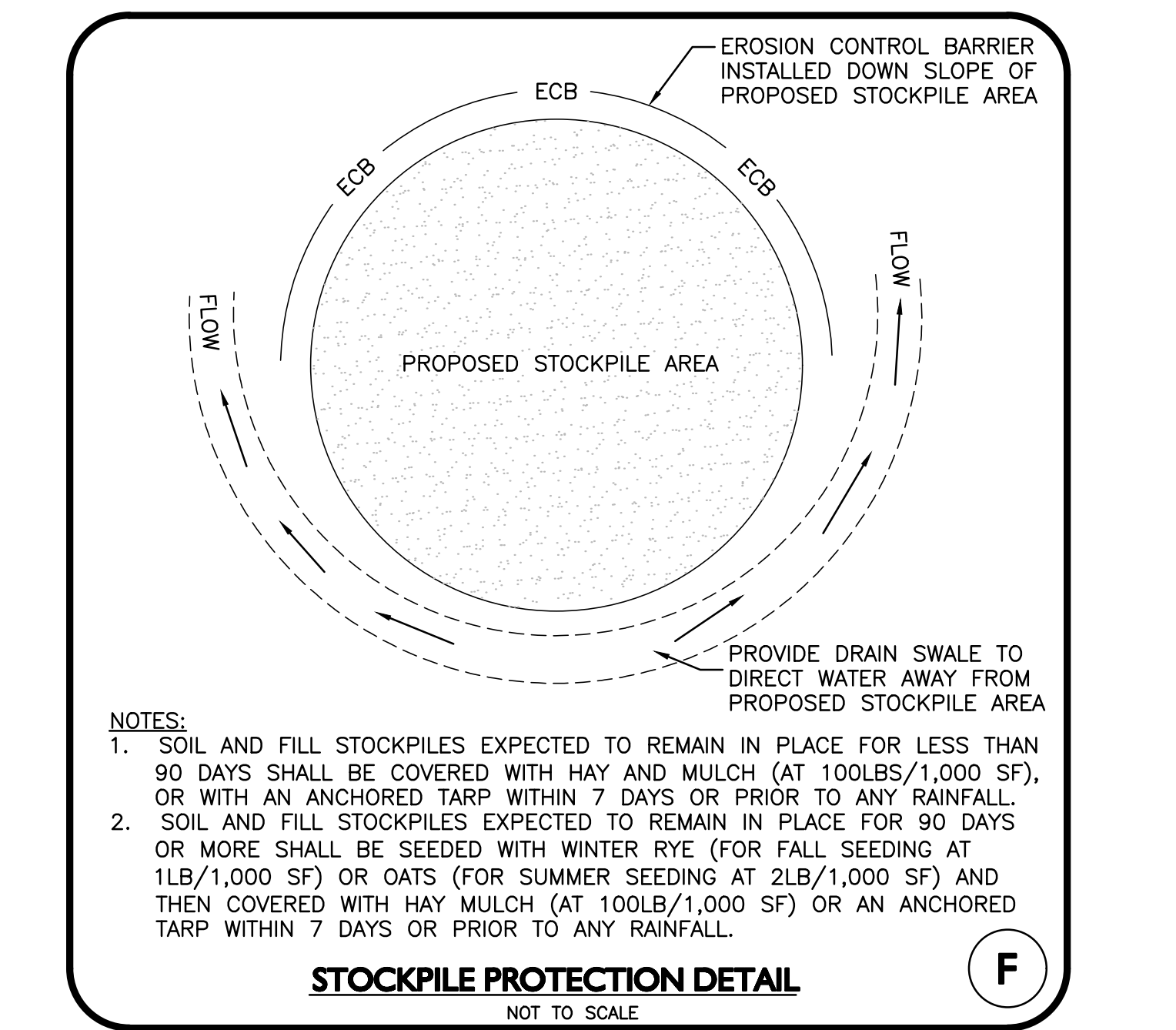
MAINTENANCE SHALL OCCUR WHEN NECESSARY. FIBER ROLLS SHALL BE REPLACE EVERY 6 MONTHS AND STACKS SHALL BE INSPECTED TO ENSURE STRUCTURAL INTEGRITY. FIBER ROLLS SHALL BE INSPECTED WEEKLY AND ALL MAINTENANCE ISSUES SHALL BE CORRECT AT THAT TIME.

TEMPORARY STOCKPILES ARE STOCKPILES THAT WILL BE USED WITHIN 14 DAYS FOR BEING PLACED. IF A STOCKPILE IS BEING LEFT UNDISTURBED FOR LONGER THAT 14 DAYS THEN PERMANENT STABILIZATION WILL BE REQUIRED

**FIBER ROLL STOCKPILE PROTECTION**  
NOT TO SCALE

C

<b>THE WORKS</b> CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS	FIBER ROLL STOCKPILE PROTECTION		
	CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS		
	SCALE: N.T.S	DATE: 07/09	DRAWN BY: McLANE



**STOCKPILE PROTECTION DETAIL**  
NOT TO SCALE

F

CITY OF CAMBRIDGE DPW  
STORMWATER CONTROL PERMIT NUMBER



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

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

OWNER:  
SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

PROJECT:  
135 ROOM EXTENDED STAY HOTEL  
263 MONSIGNOR O'BRIEN HIGHWAY  
CAMBRIDGE, MA

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO. 1362-16 DATE: 9/26/18

SCALE: AS SHOWN DWG.: 1362-16-SWPPP-Erosion Control

DESIGNED BY: SM CHECKED BY: MM

PREPARED BY:



400 HARVEY ROAD  
MANCHESTER, NH 03103  
TEL: (603) 627-5500 FAX: (603) 627-5501

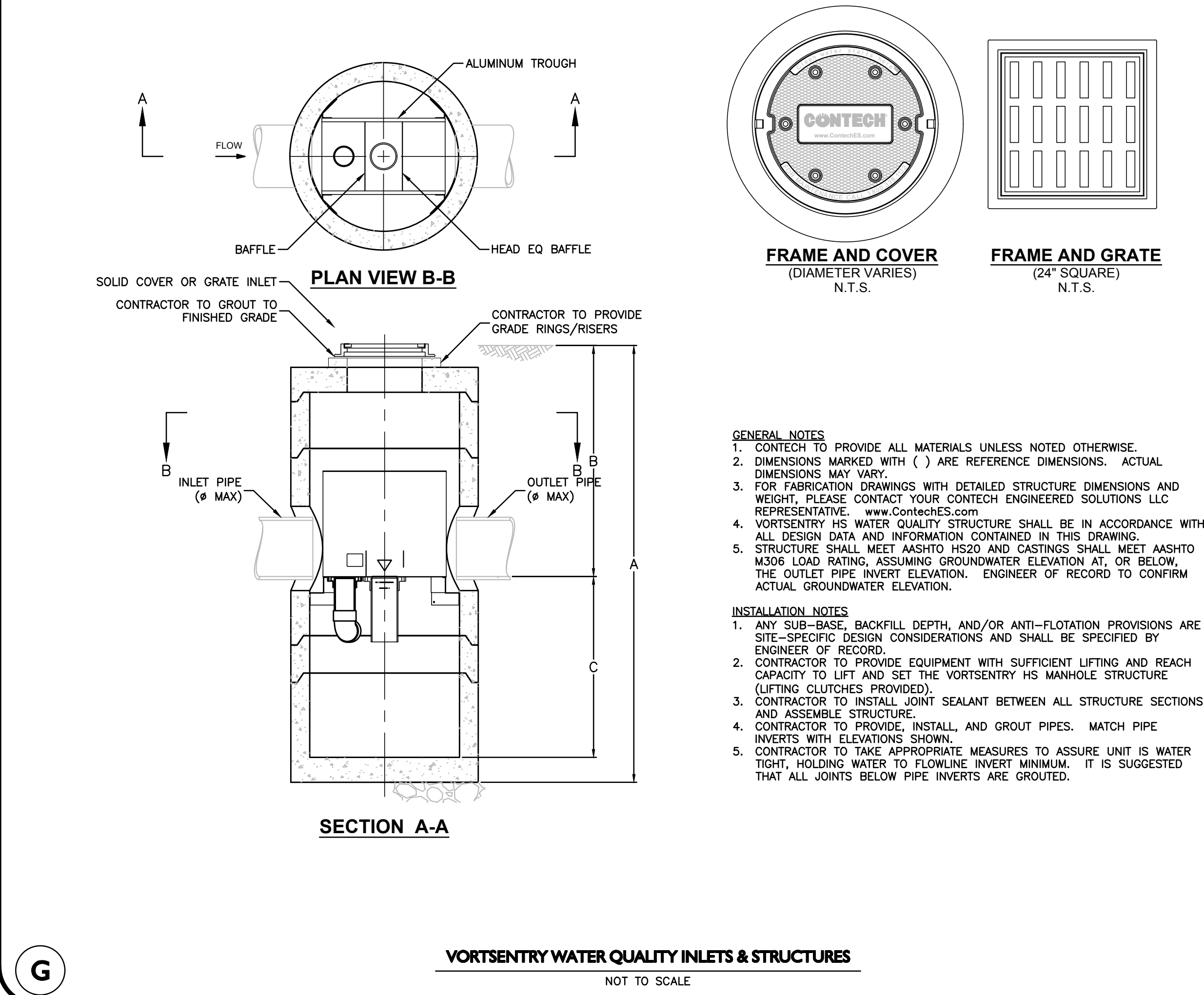
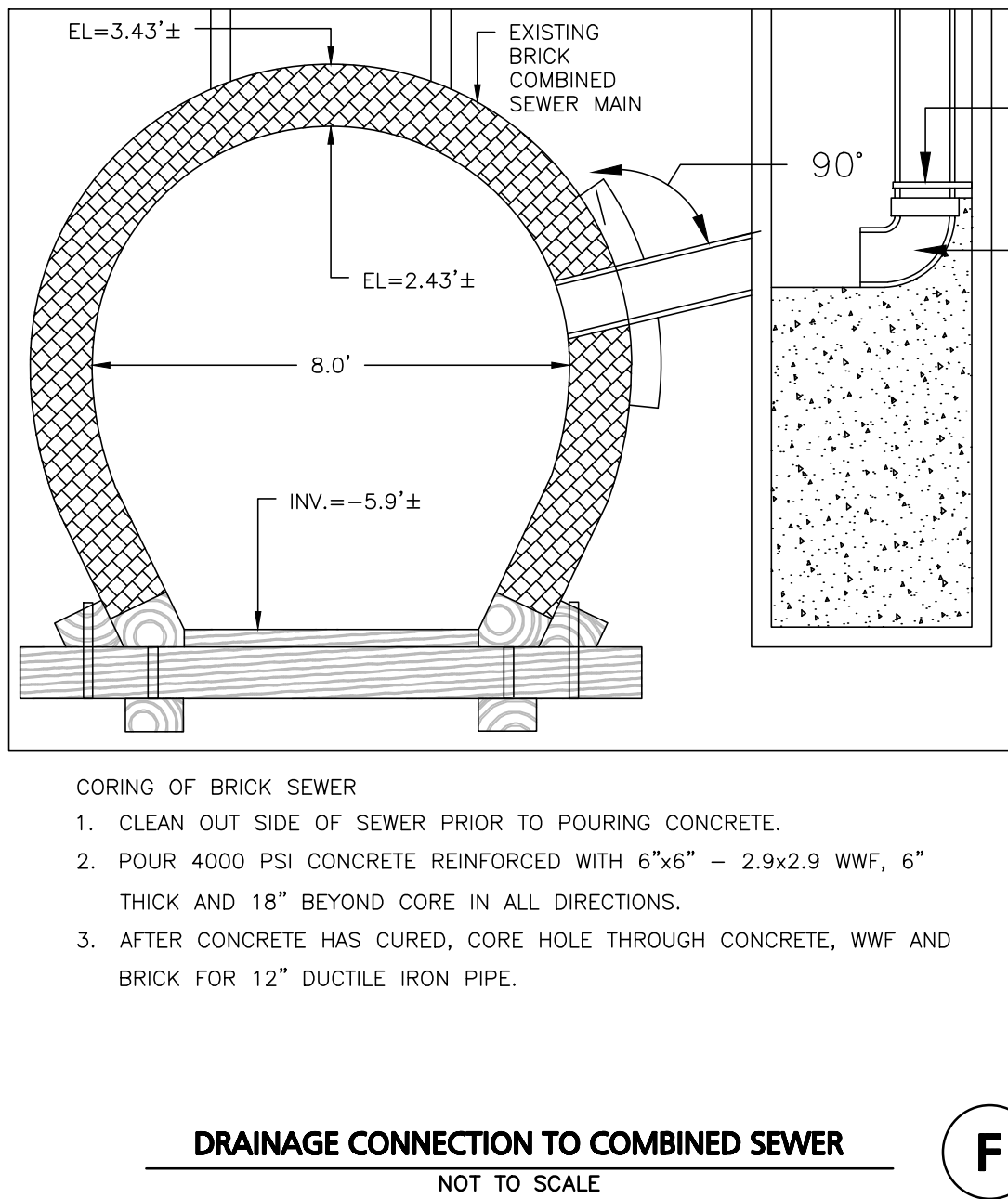
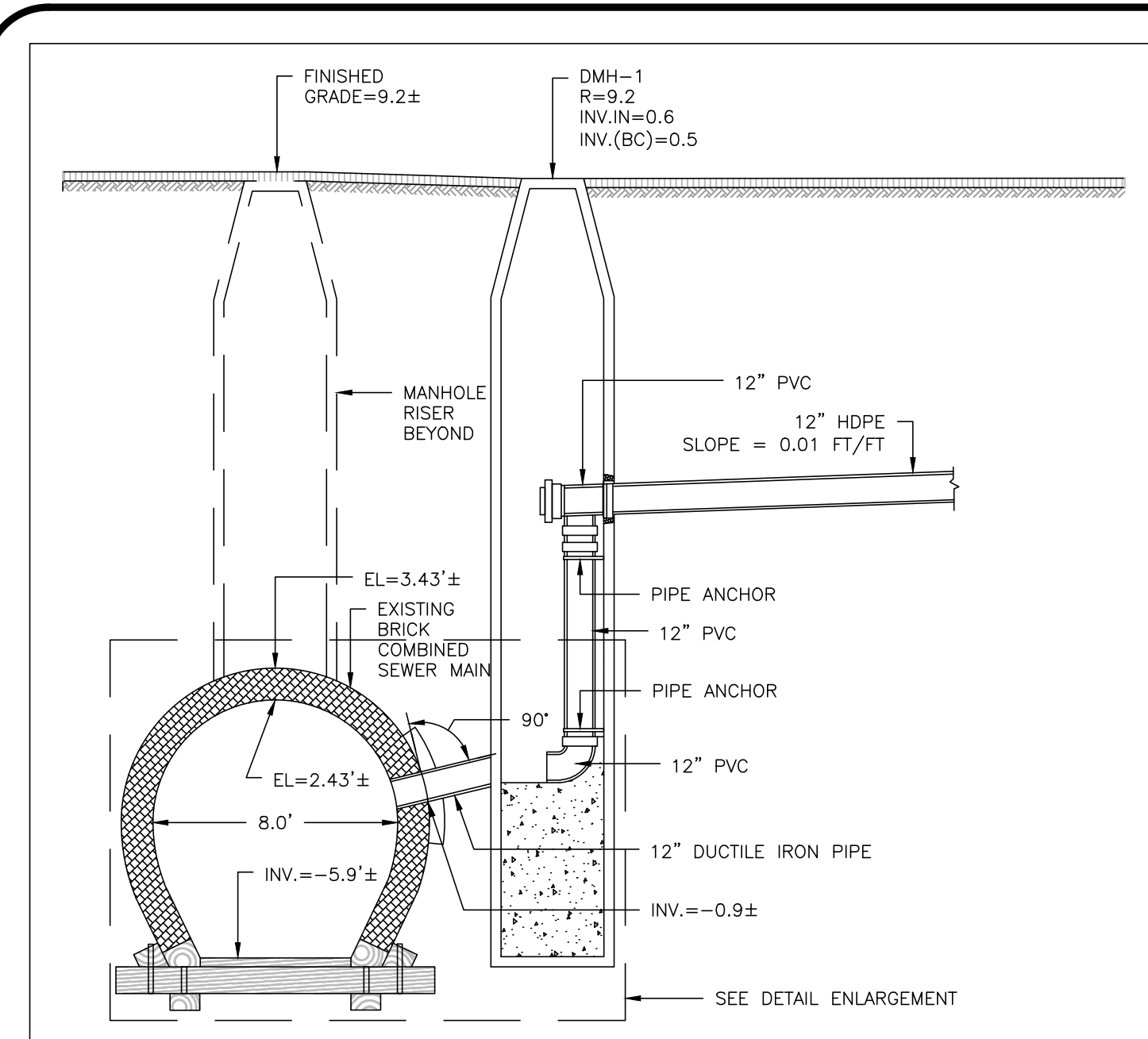
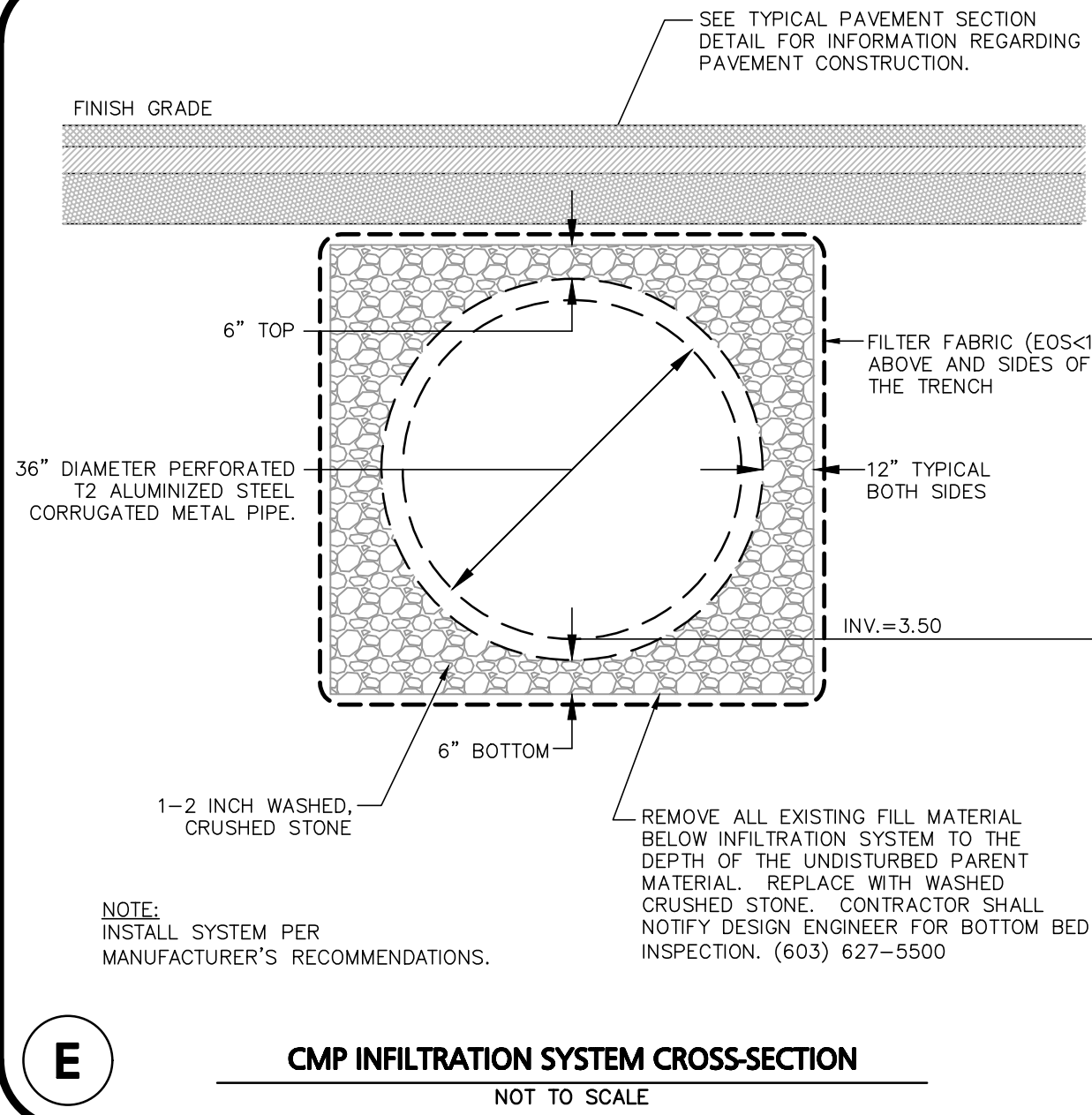
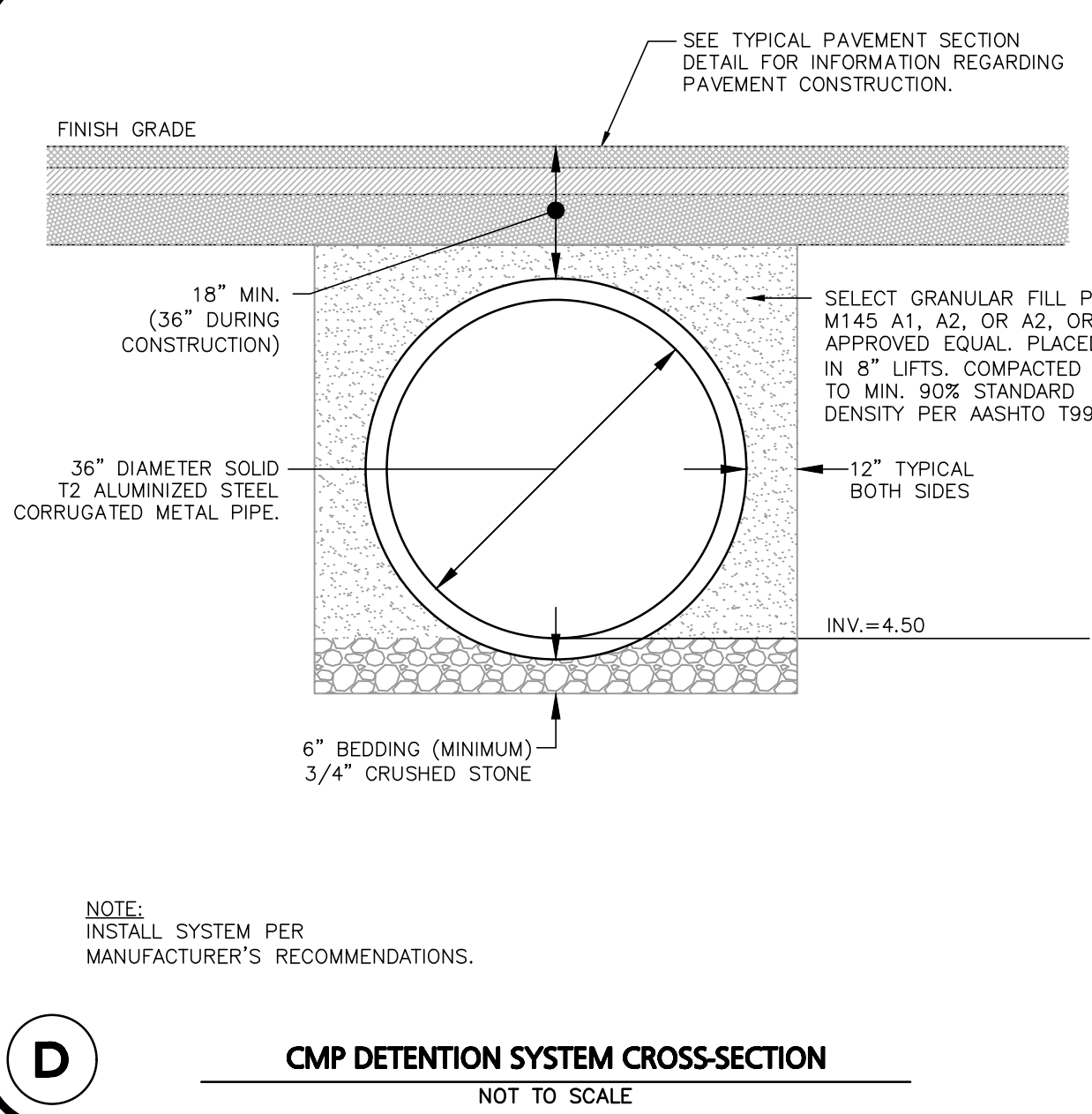
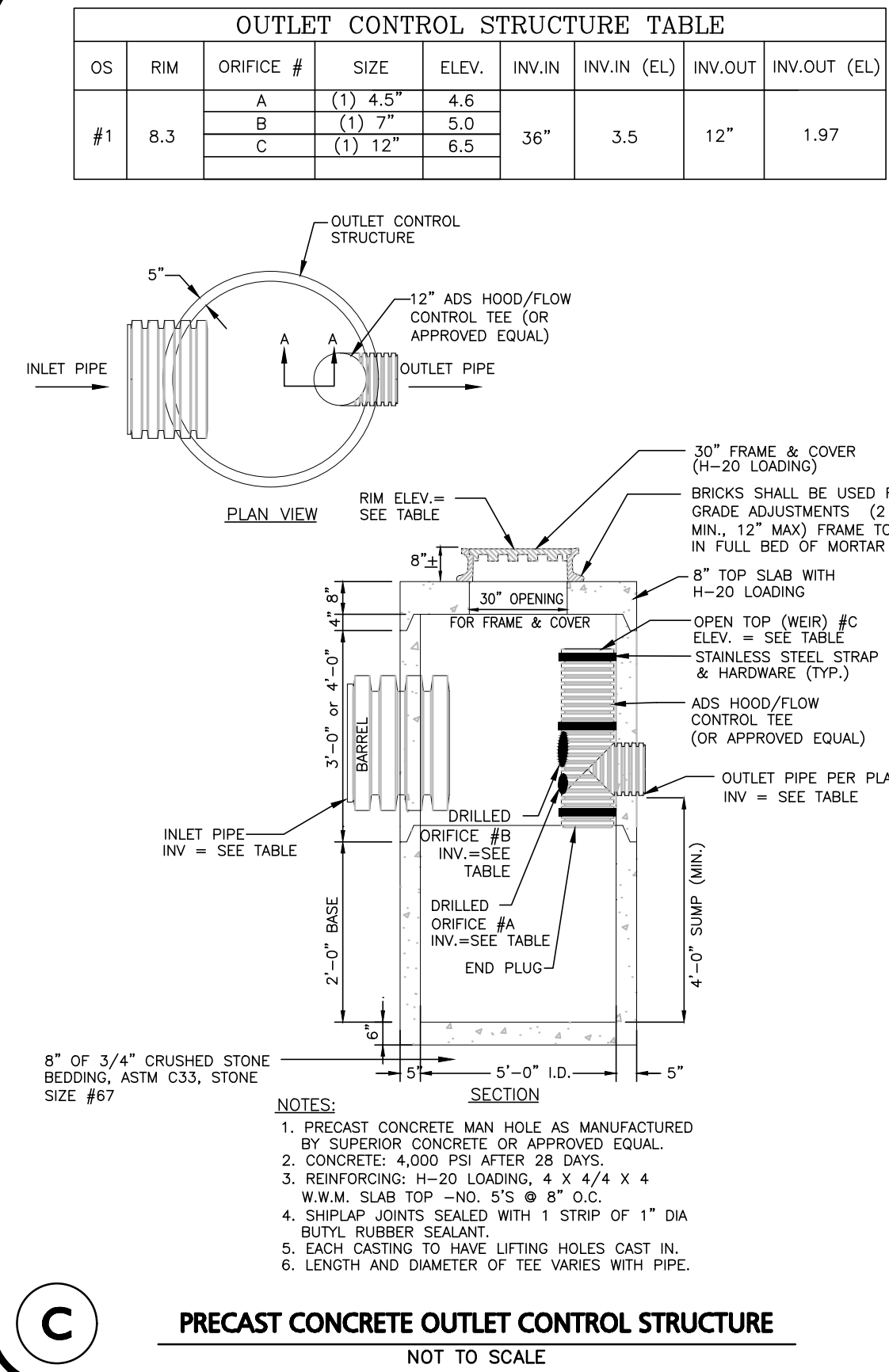
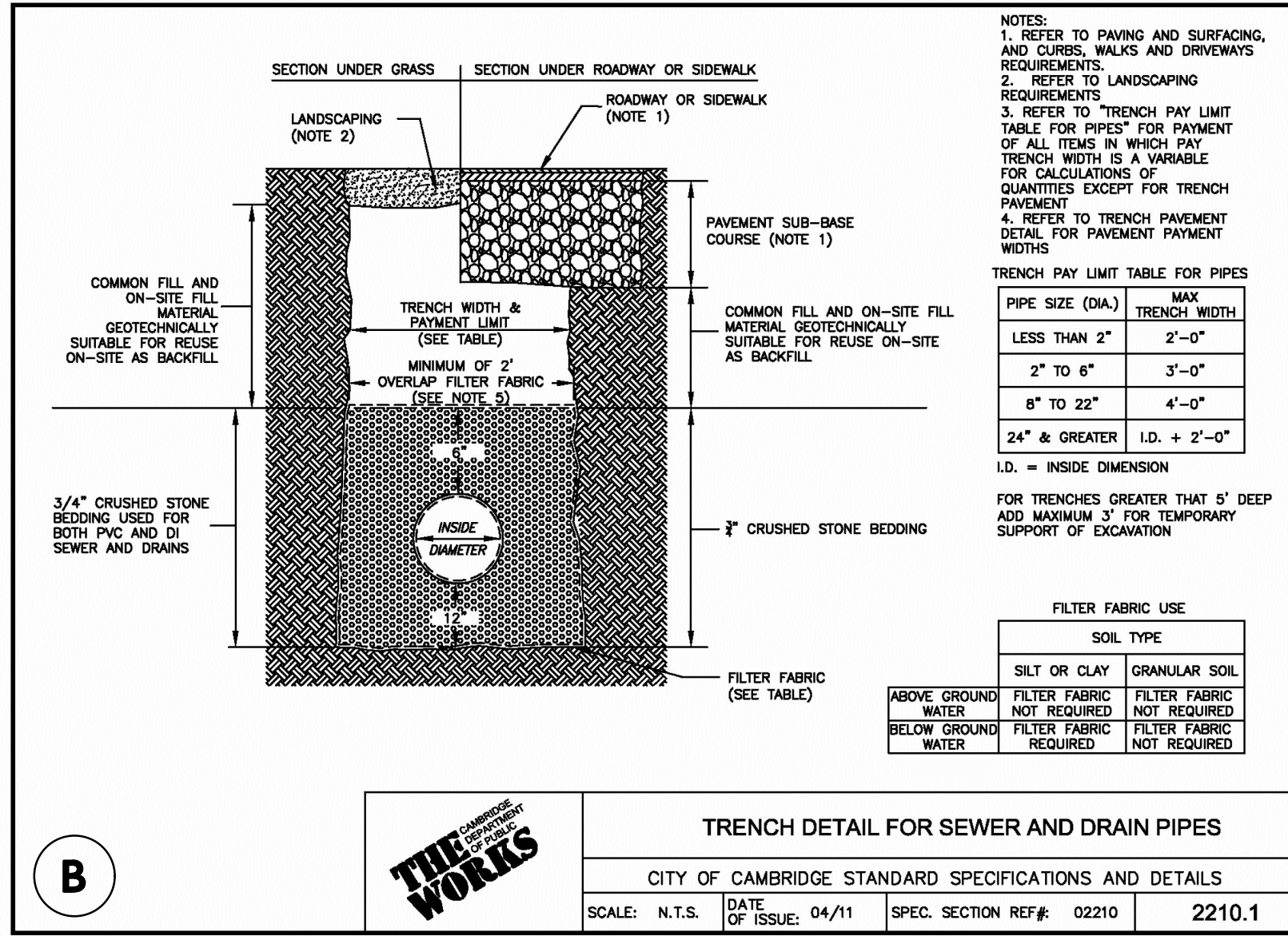
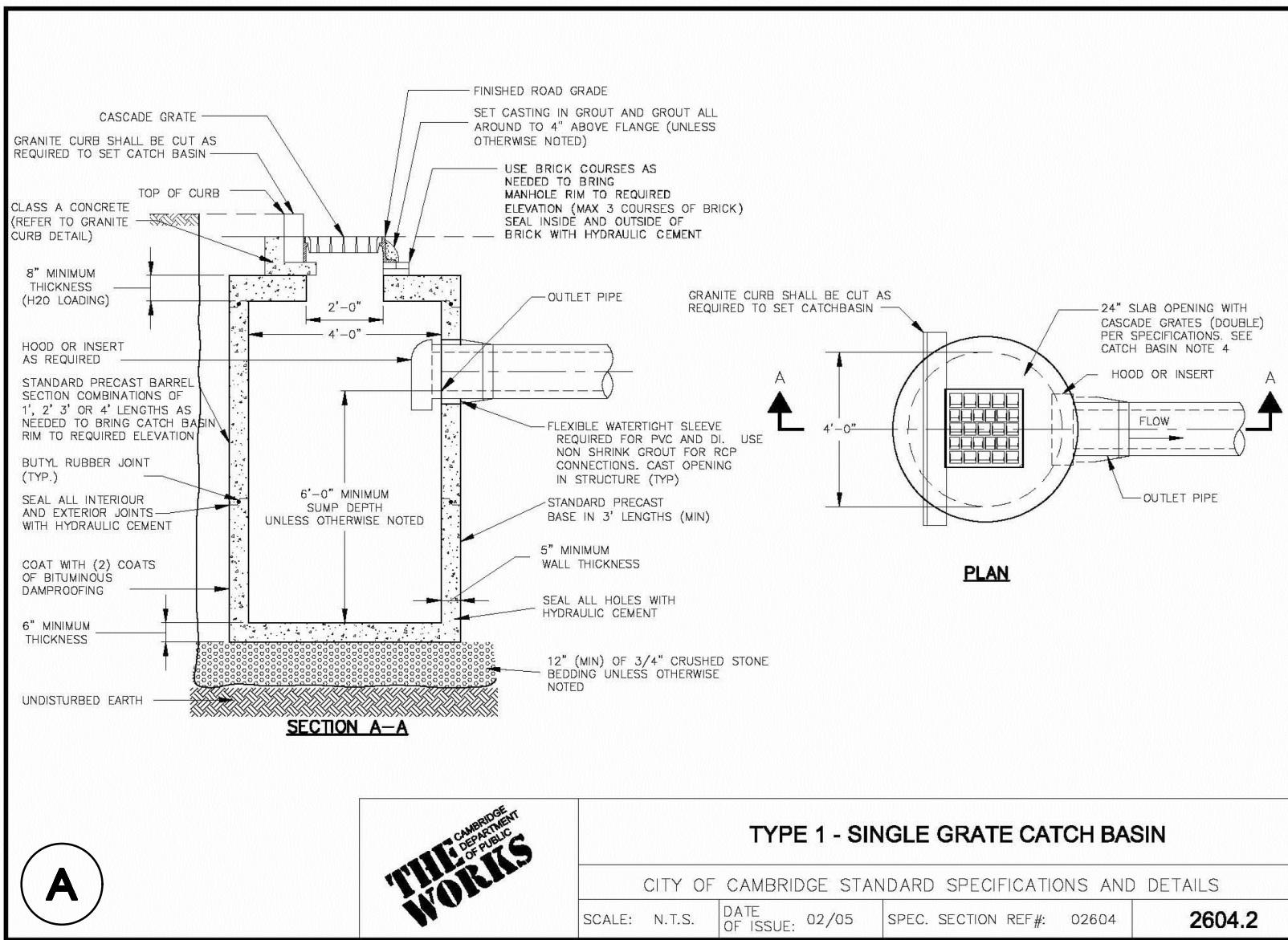
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STORMWATER POLLUTION PREVENTION DETAILS SWPPP 3





PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV DATE DESCRIPTION

OWNER: SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

PROJECT: 135 ROOM EXTENDED STAY HOTEL  
263 MONSIGNOR O'BRIEN HIGHWAY  
CAMBRIDGE, MA

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO. 1362-16 DATE: 9/26/18

SCALE: AS SHOWN DWG: 02604

DESIGNED BY: SM CHECKED BY: MM

PREPARED BY:

**ALLEN & MAJOR ASSOCIATES, INC.**  
civil & structural engineering • land surveying  
environmental consulting • landscape architecture  
www.allenmajor.com

400 HARVEY ROAD  
MANCHESTER, NH 03103  
TEL: (603) 627-5500 FAX: (603) 627-5501

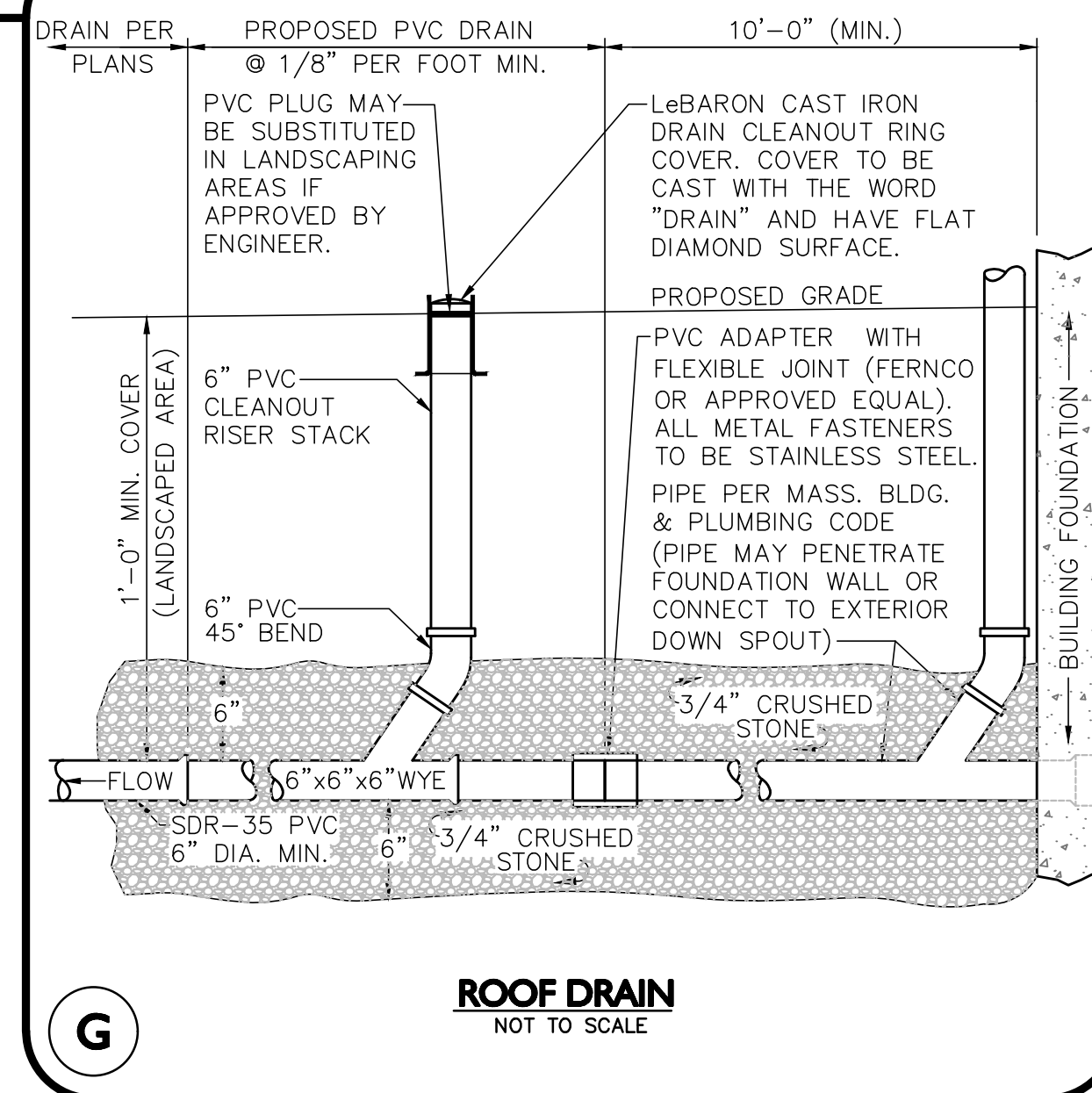
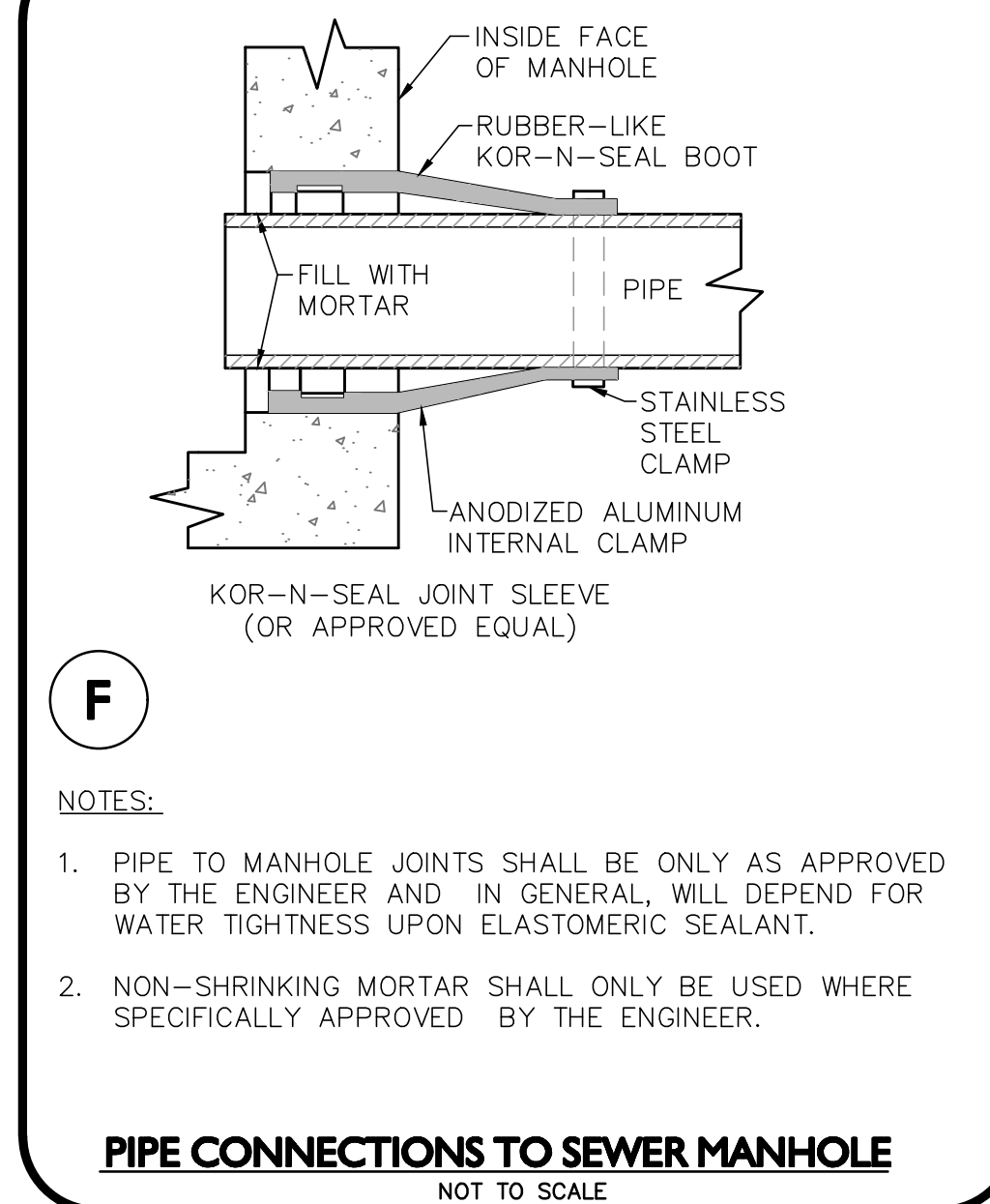
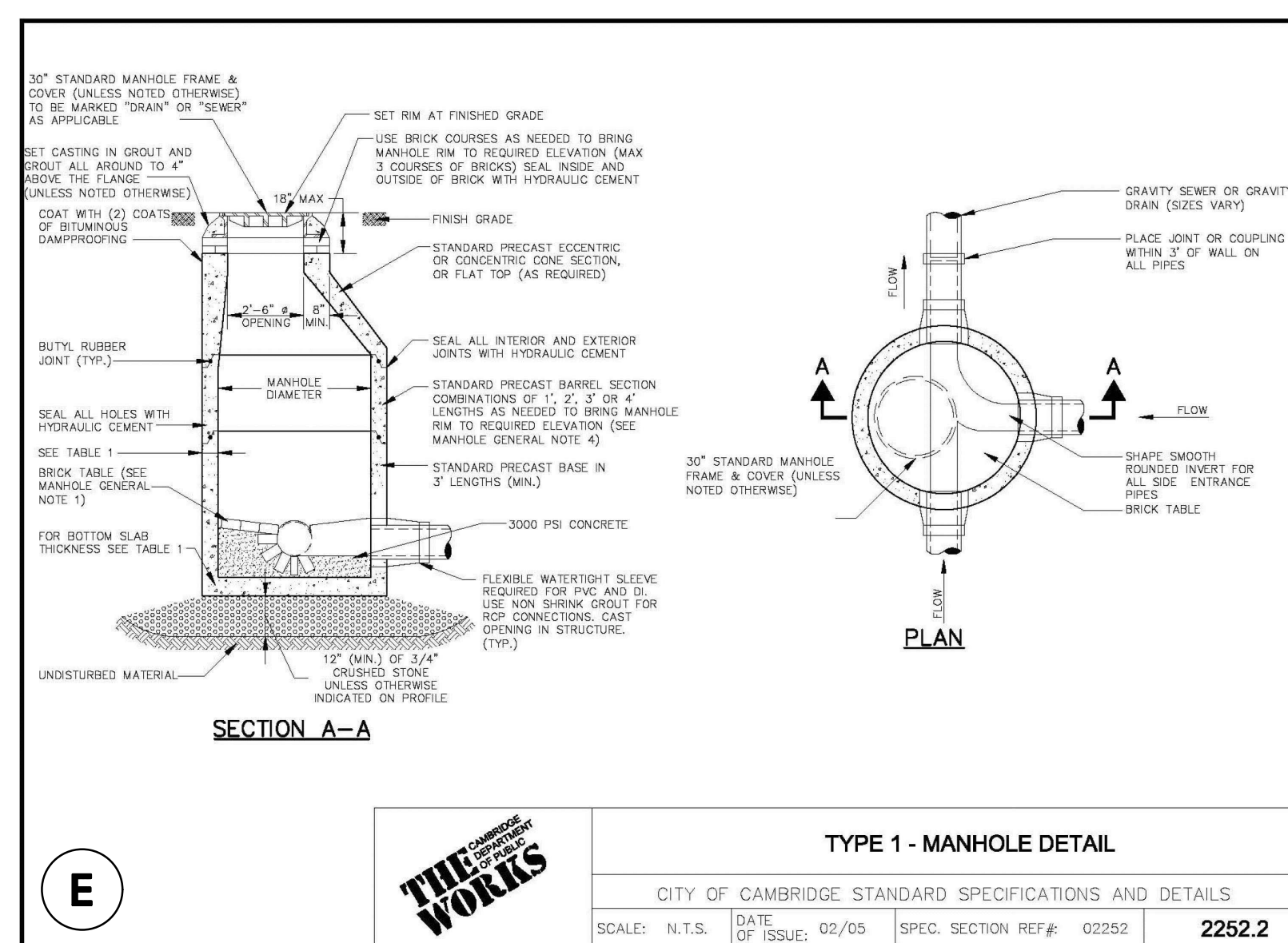
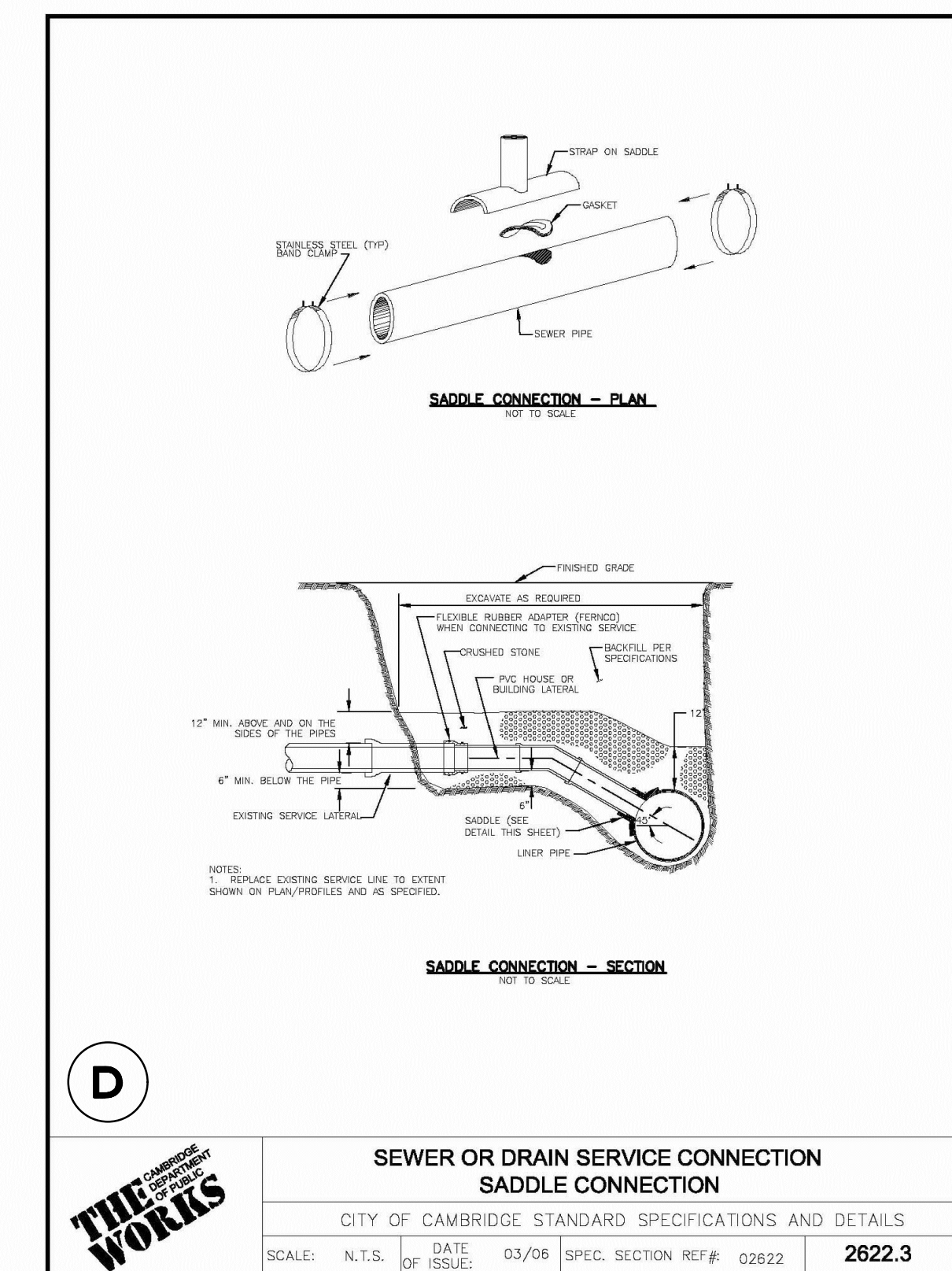
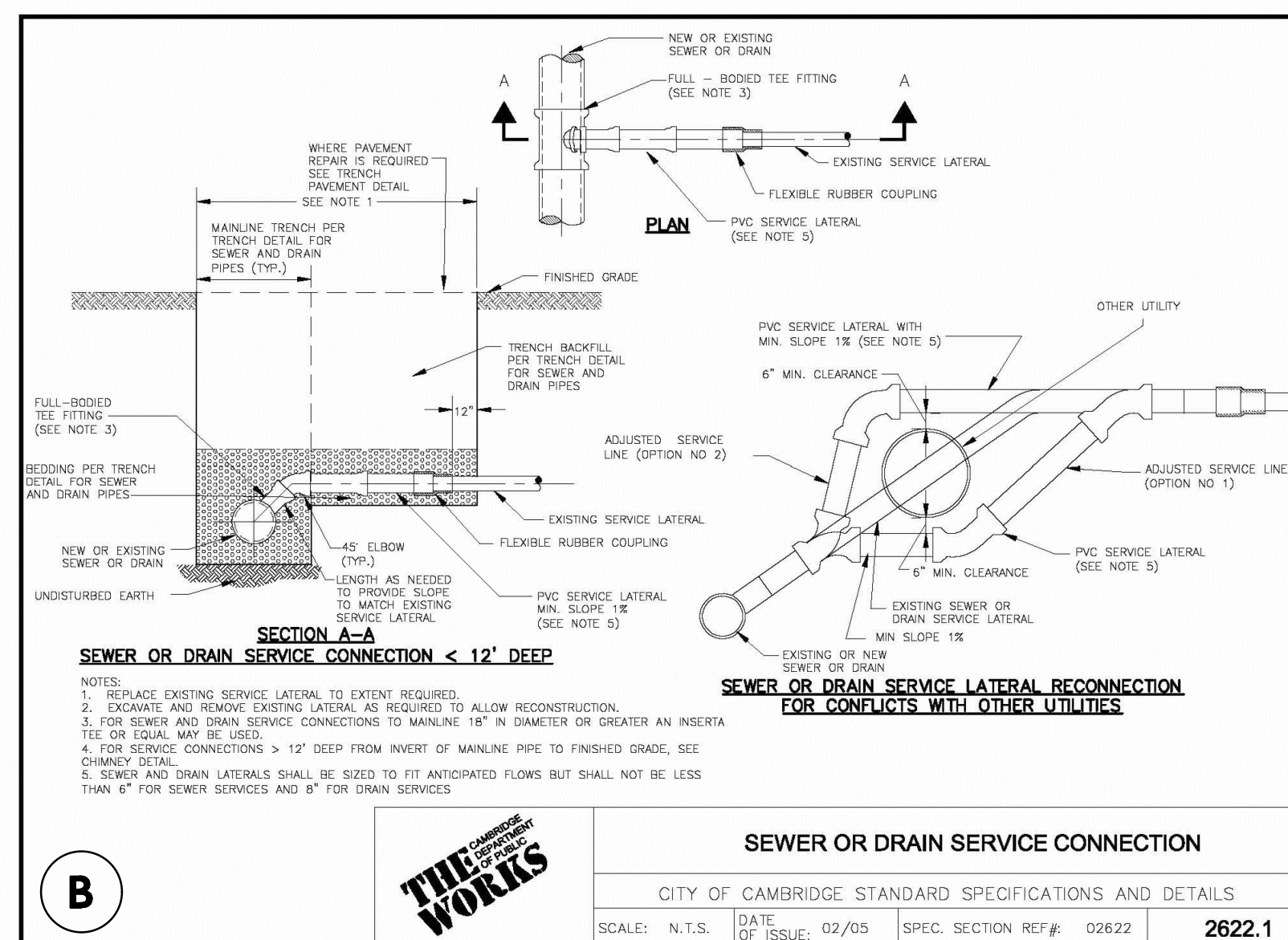
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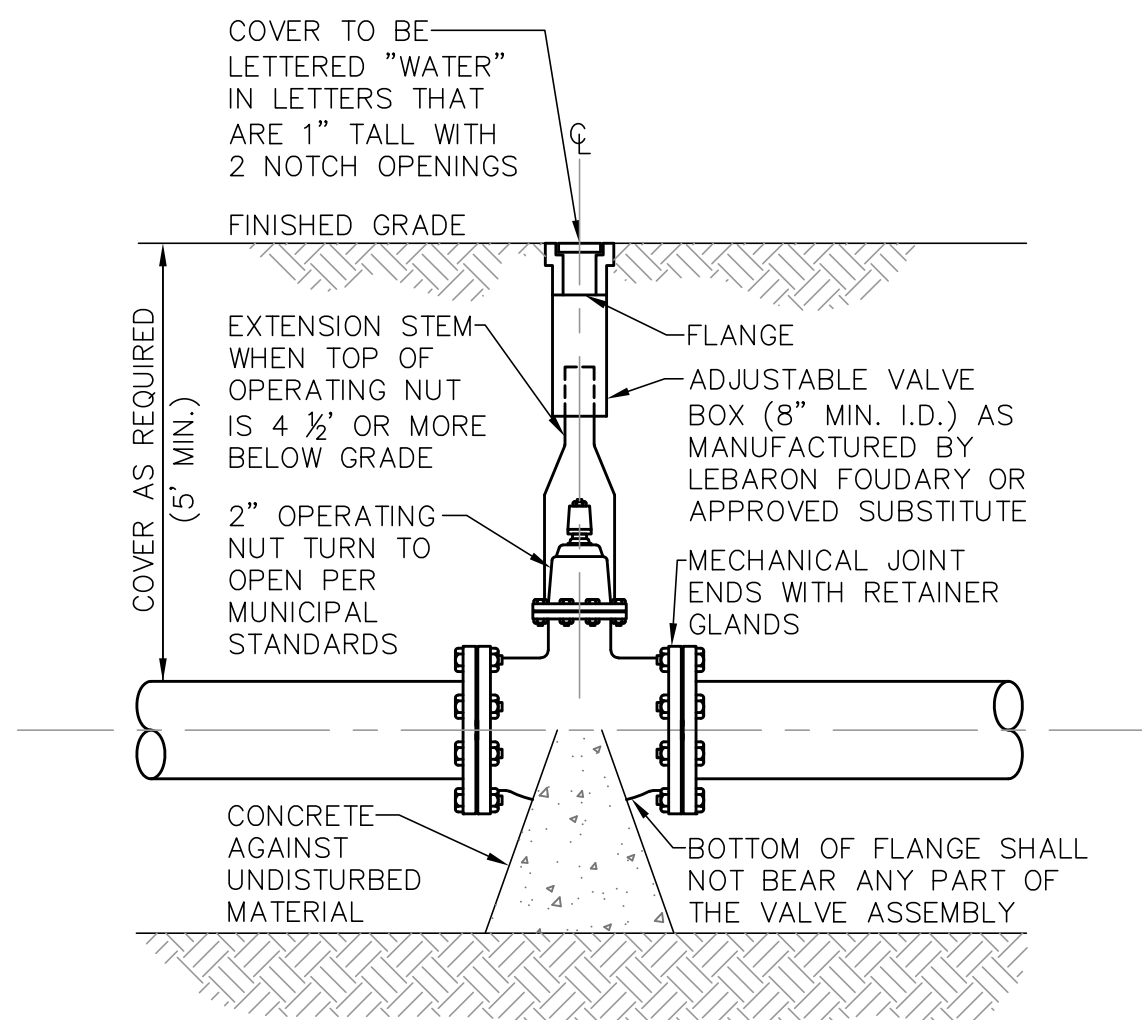
DRAWING TITLE: DETAILS SHEET No. D-1

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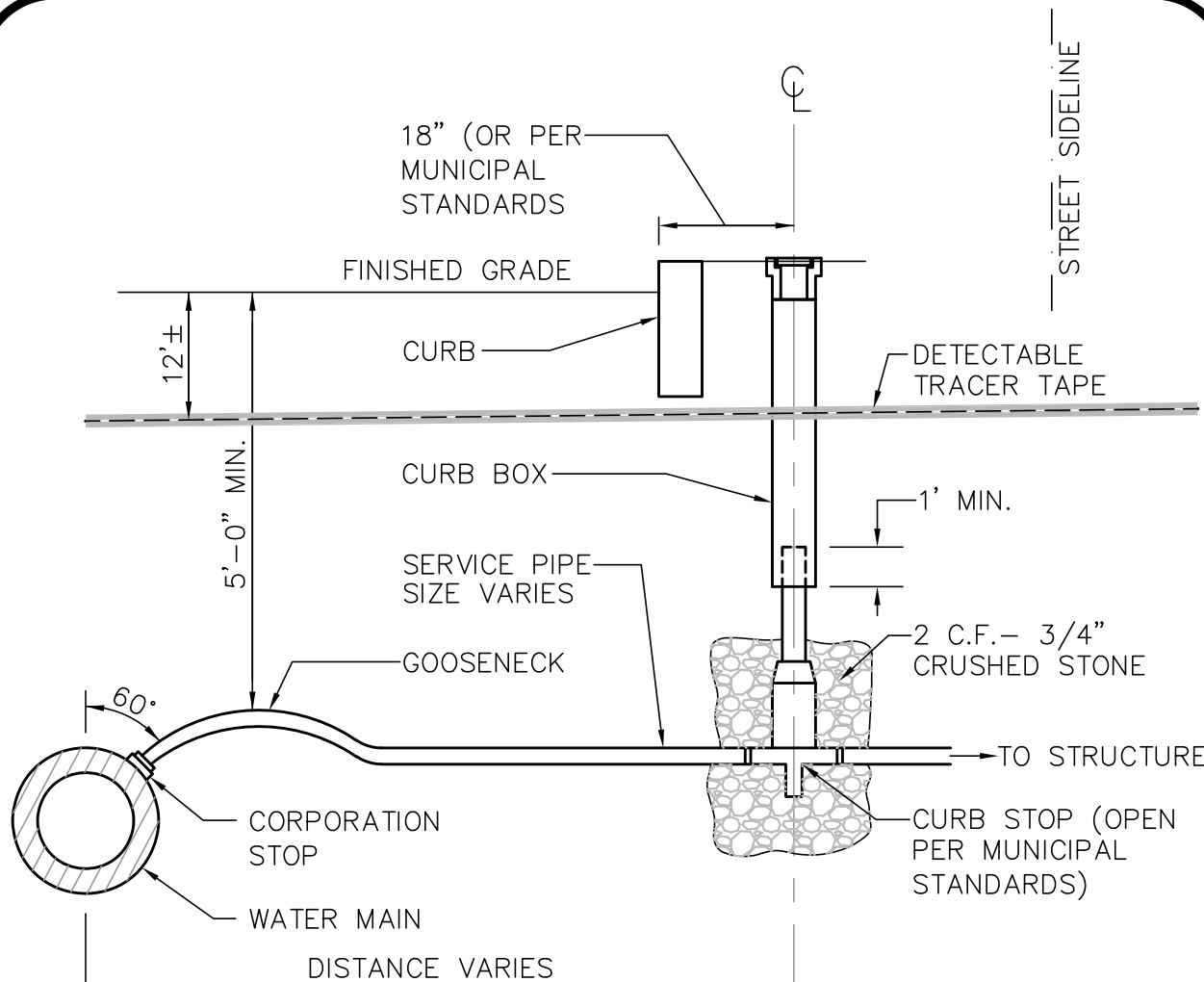






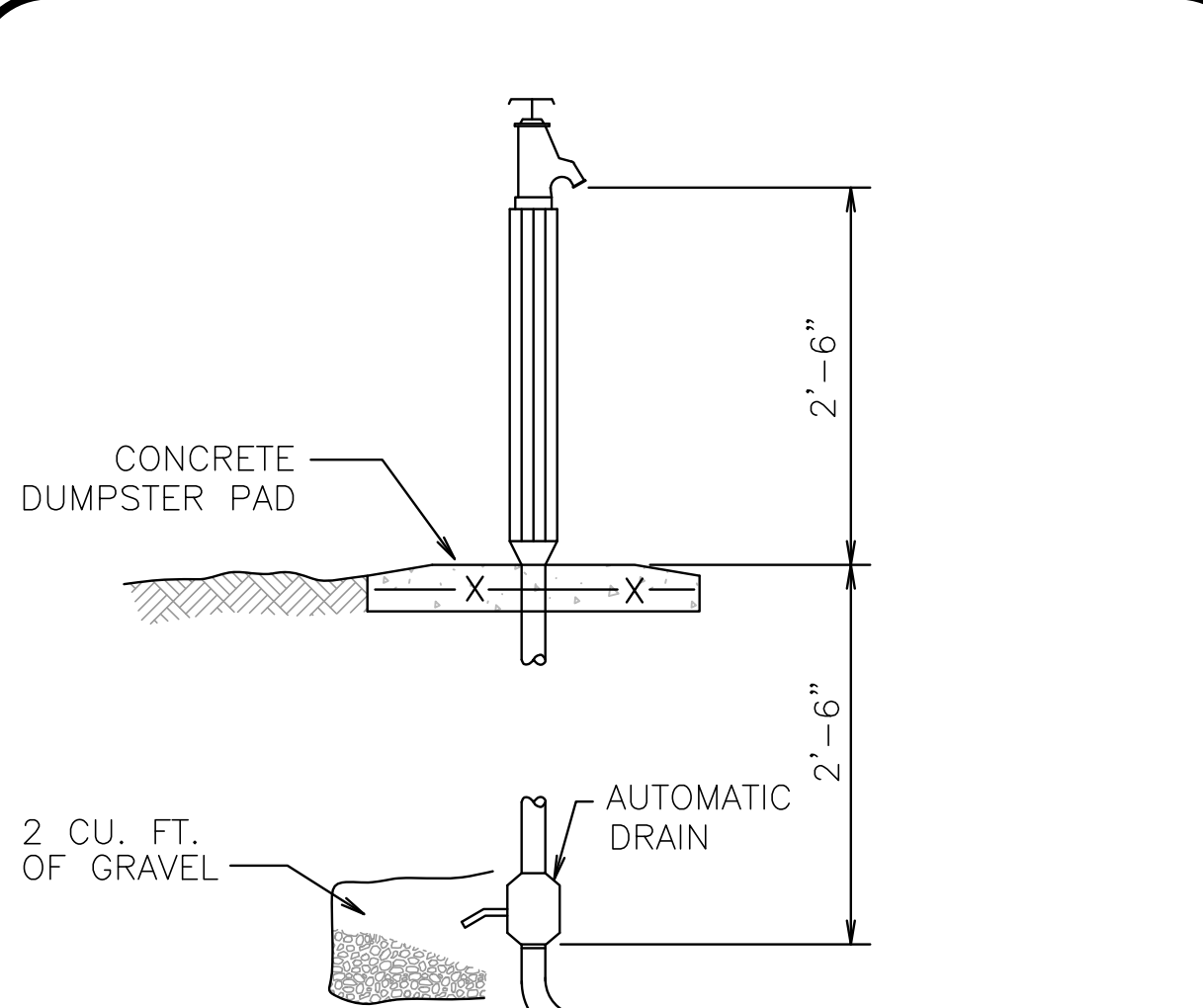
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**GATE VALVE DETAIL**  
NOT TO SCALE



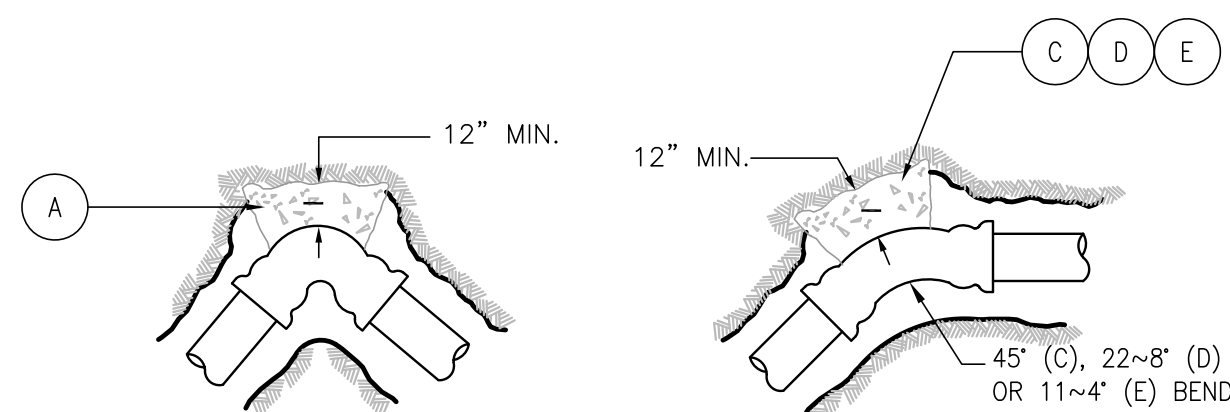
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**TYPICAL WATER SERVICE CONNECTION**  
NOT TO SCALE



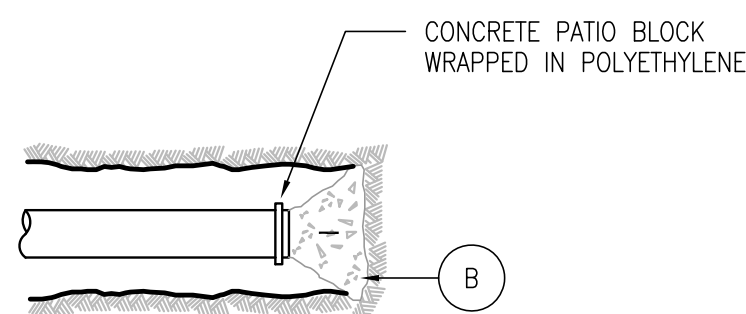
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**YARD HYDRANT**  
NOT TO SCALE



HORIZONTAL BEND

STANDARD BEND

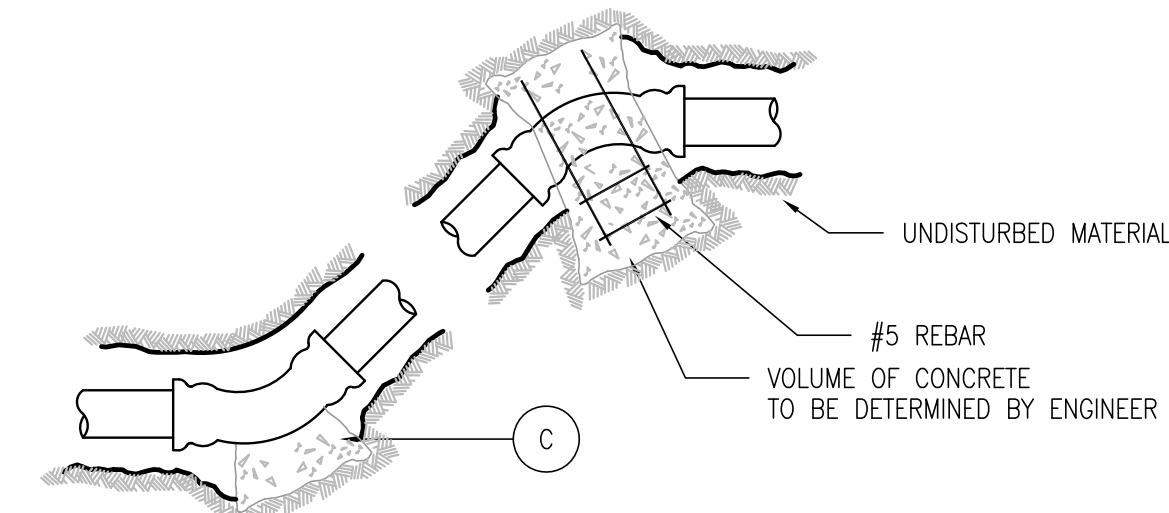


PIPE & CAP

**NOTES:**

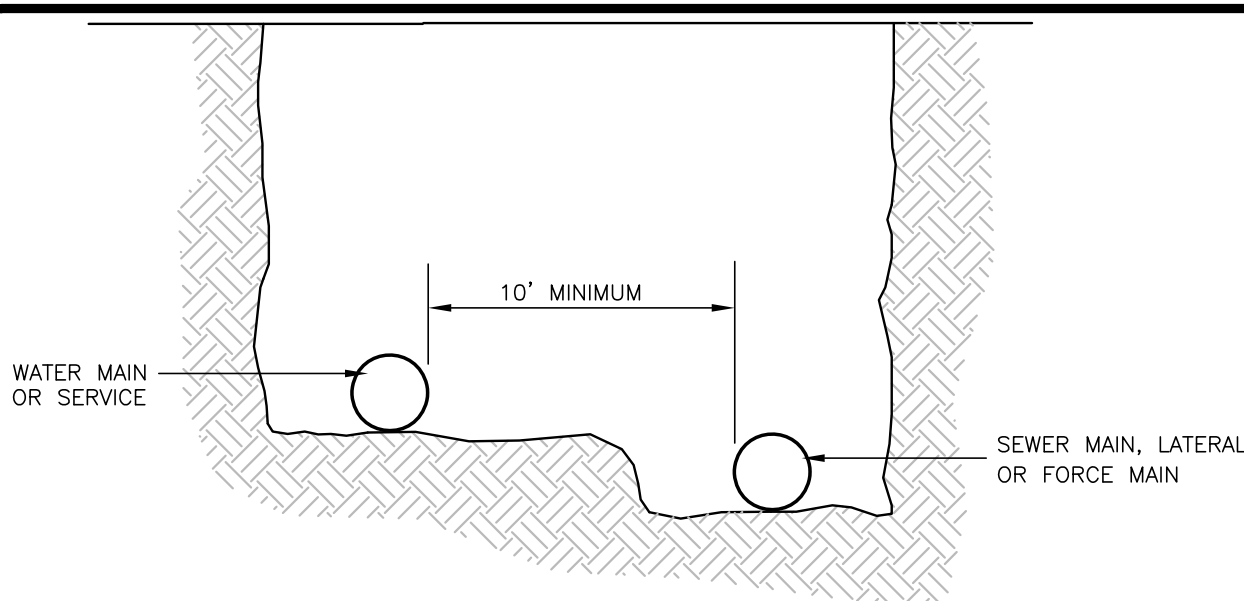
- POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL WHERE TRENCH SHALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
- ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
- PLACE CONCRETE PATIO BLOCKS IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCK.
- REQUIREMENTS OF THE ABOVE TABLE PRESUME MINIMUM SOIL BEARING OF 1 TON PER SQUARE FOOT AND MAY BE VARIED BY THE ENGINEER TO MEET OTHER CONDITIONS ENCOUNTERED.
- RETAINER GLANDS ARE REQUIRED FOR ALL MECHANICAL JOINTS. THESE GLANDS DO NOT REDUCE THE REQUIREMENTS FOR THRUST RESTRAINT.
- ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE OR BUILDING PAPER PRIOR TO INSTALLATION OF CONCRETE RESTRAINT.
- THREADED RODS SHALL BE ANSI A242 FYSO PIPE RESTRAINT NUTS TO MATCH AWWA C111. THREADED RODS AND NUTS TO GE FIELD COATED WITH BITUMINOUS PAINT.
- THRUST RESTRAINT IS REQUIRED FOR ALL TEES, BENDS, REDUCERS, CAPS PLUGS, OR CROSSES.
- INSTALL LIFT HOOKS INTO THRUST BLOCKS AT END CAPS AND PLUGS.

THRUST BLOCK SCHEDULE SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL						
REACTION TYPE	PIPE SIZE					
	1" TO 4"	6"	8"	10"	12"	
TEST PRESSURE = 100 PSIG						
(A)	0.89	2.19	3.92	5.57	8.62	
(B)	0.65	1.55	2.76	4.19	6.09	
(C)	0.48	1.19	2.12	3.01	4.66	
(D)	0.25	0.60	1.08	1.54	2.37	
(E)	0.13	0.30	0.54	0.77	1.19	
OTHER TEST PRESSURES FOR THE ABOVE REACTIONS	TEST PRESSURE TO BE 200 PSI MINIMUM AT LOW END OF THE TEST SECTION.  SQUARE FEET OF CONCRETE THRUST BLOCKING FOR OTHER TEST PRESSURES IS DIRECTLY PROPORTIONAL TO THE ABOVE TABLE.					

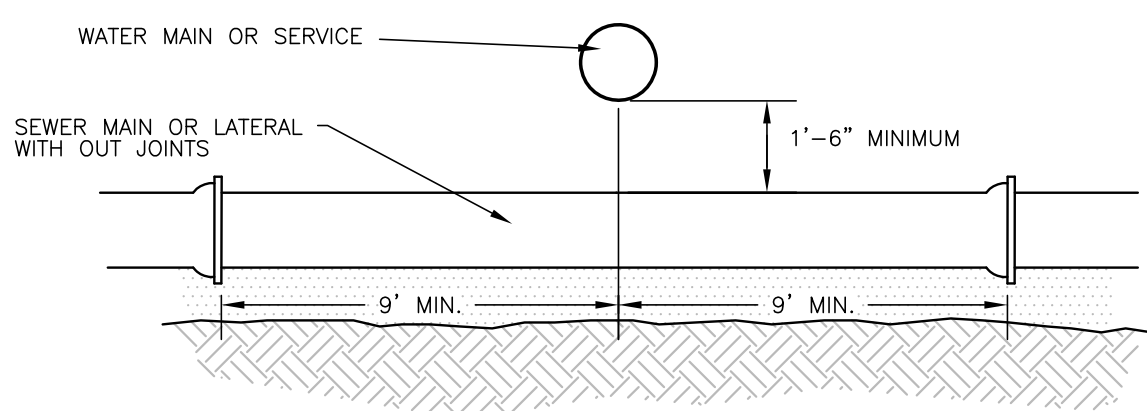


VERTICAL BEND - SECTION

**THRUST BLOCK DETAILS**  
NOT TO SCALE



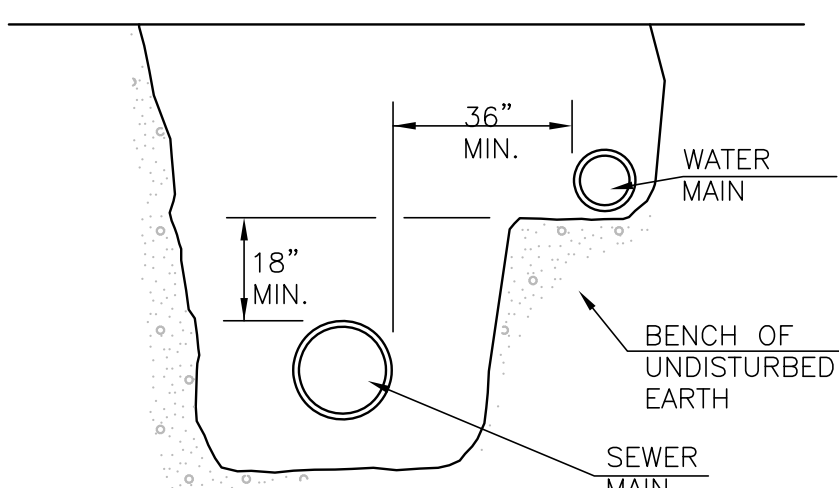
PARALLEL INSTALLATION



MAIN CROSSINGS

F

**WATER PIPE/SEWER PIPE SEPARATION**  
NOT TO SCALE



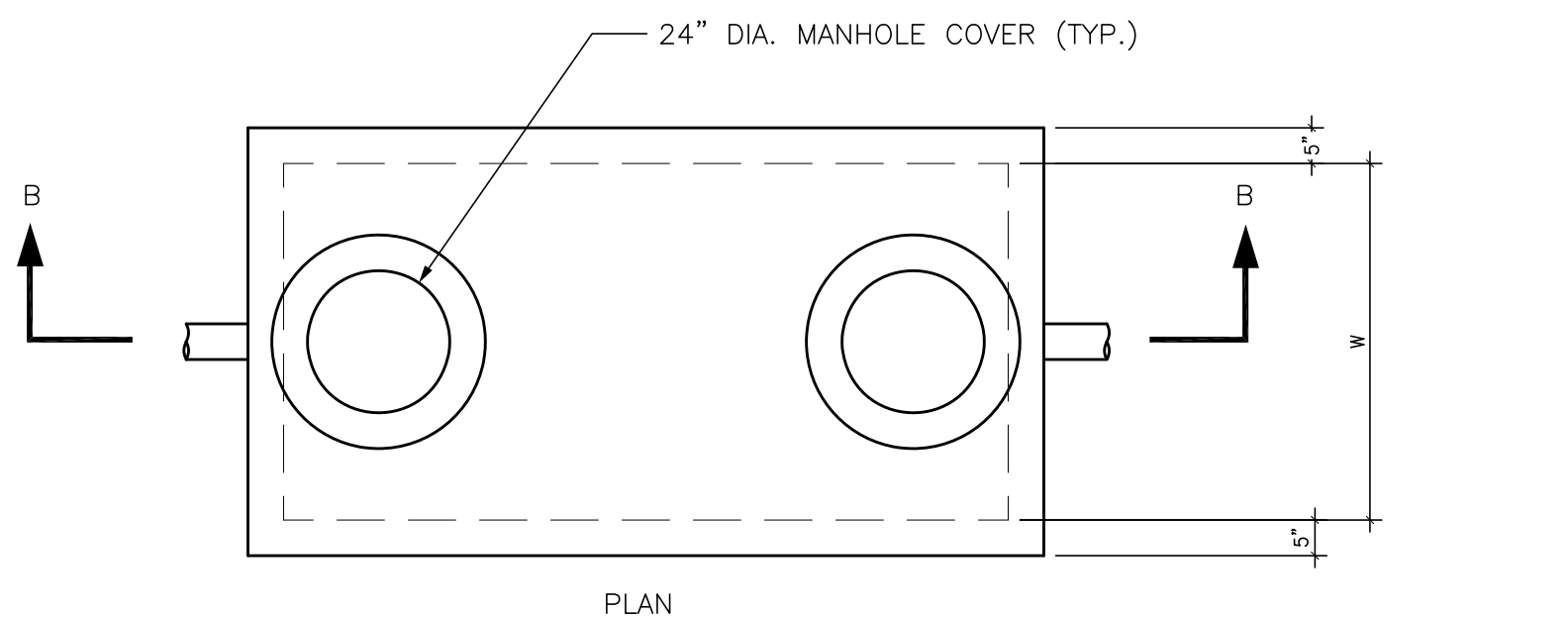
**WATER & SEWER IN SAME TRENCH**  
NOT TO SCALE

**IN-LINE GREASE TRAP SIZING CHART**

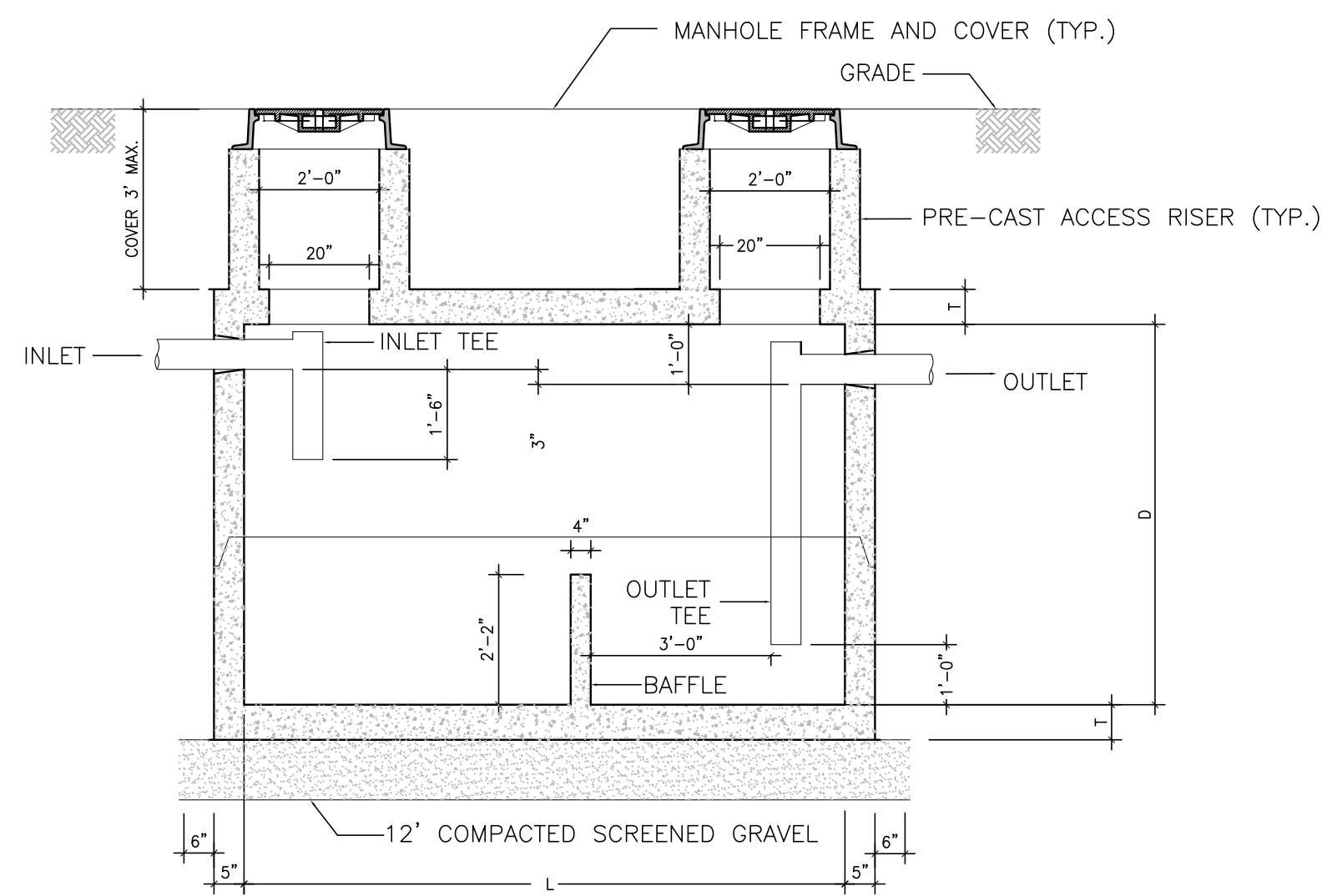
NUMBERS OF MEALS SERVED PER DAY	REQUIRED CAPACITY IN GALLONS	DIMENSIONS			THICKNESS OF TOP AND BOTTOM SLABS T
		D	L	W	
<500	1000	4'-1"	8'-10"	4'-2"	5"
500-1000	2000	5'-4"	10'-0"	5'-0"	6"

**NOTE:**

COVER IN EXCESS OF 3'-0" WILL REQUIRE SUBMITTAL STAMPED, SIGNED, AND DATED BY PROFESSIONAL ENGINEER REGISTERED IN MASSACHUSETTS WITH DESIGN THAT PREVENTS BUOYANCY FORCES FROM PUSHING EMPTY GREASE TRAP OUT OF THE GROUND.



PLAN



SECTION B-B

G

**IN-LINE GREASE TRAP DETAIL**  
NOT TO SCALE



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV DATE DESCRIPTION

OWNER: SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

PROJECT: 135 ROOM EXTENDED STAY HOTEL  
263 MONSIGNOR O'BRIEN HIGHWAY  
CAMBRIDGE, MA

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO. 1362-16 DATE: 9/26/18

SCALE: AS SHOWN DWG.: 1362-1601.dwg

DESIGNED BY: SM CHECKED BY: MM

PREPARED BY:

**ALLEN & MAJOR ASSOCIATES, INC.**  
civil & structural engineering • land surveying  
environmental consulting • landscape architecture  
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MANCHESTER, NH 03103  
TEL: (603) 627-5500 FAX: (603) 627-5501

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DRAWING TITLE:

DETAILS

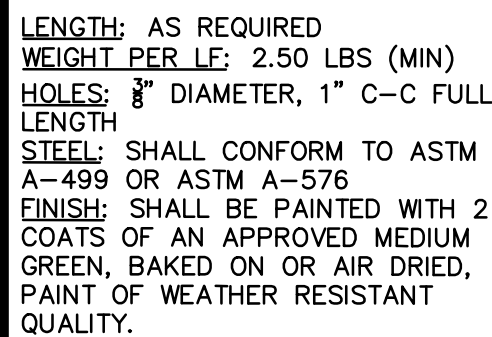
SHEET No.

D-3



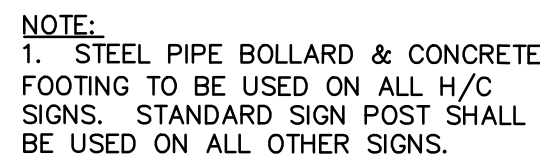






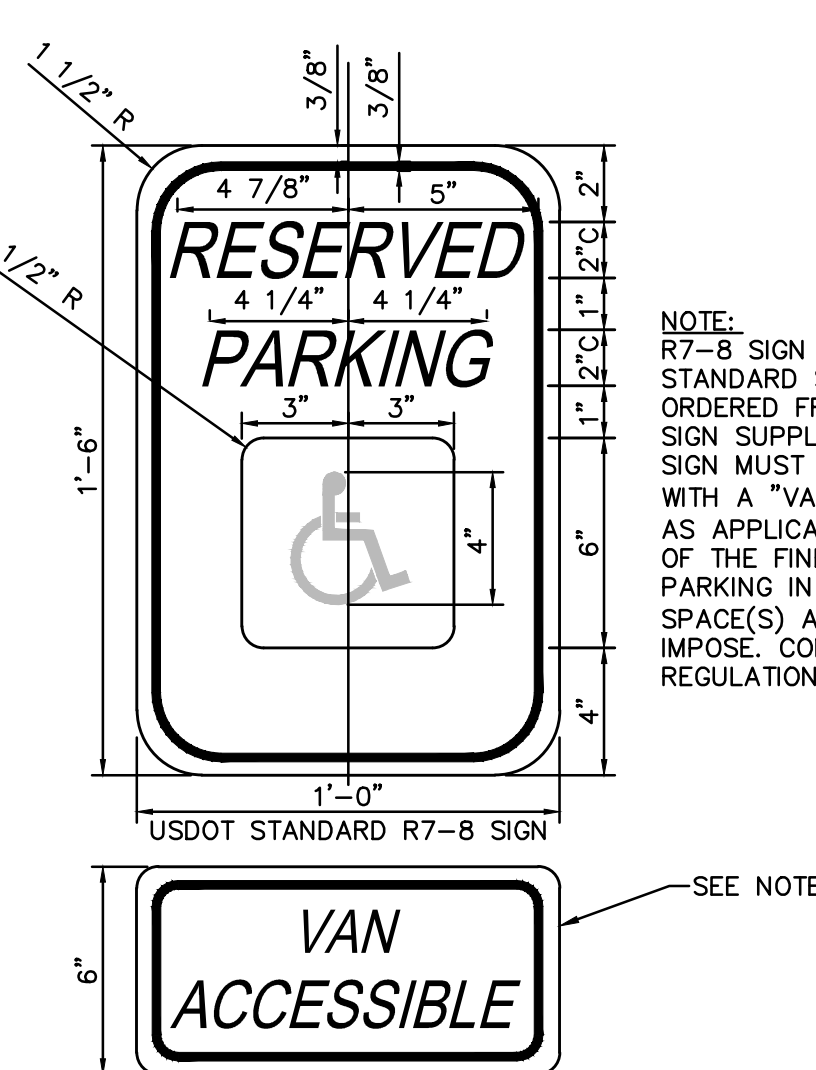
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**SIGN POSTS**  
NOT TO SCALE



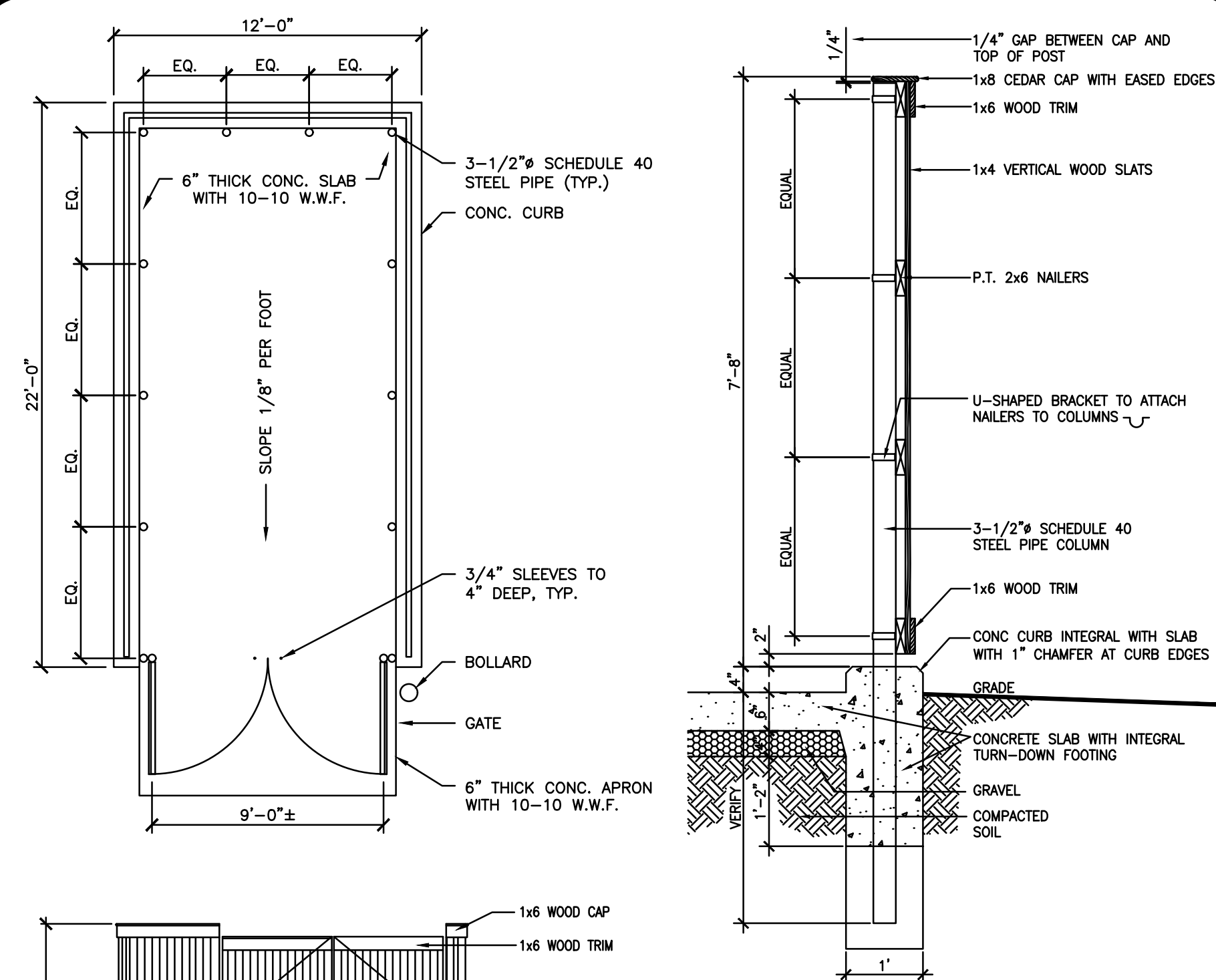
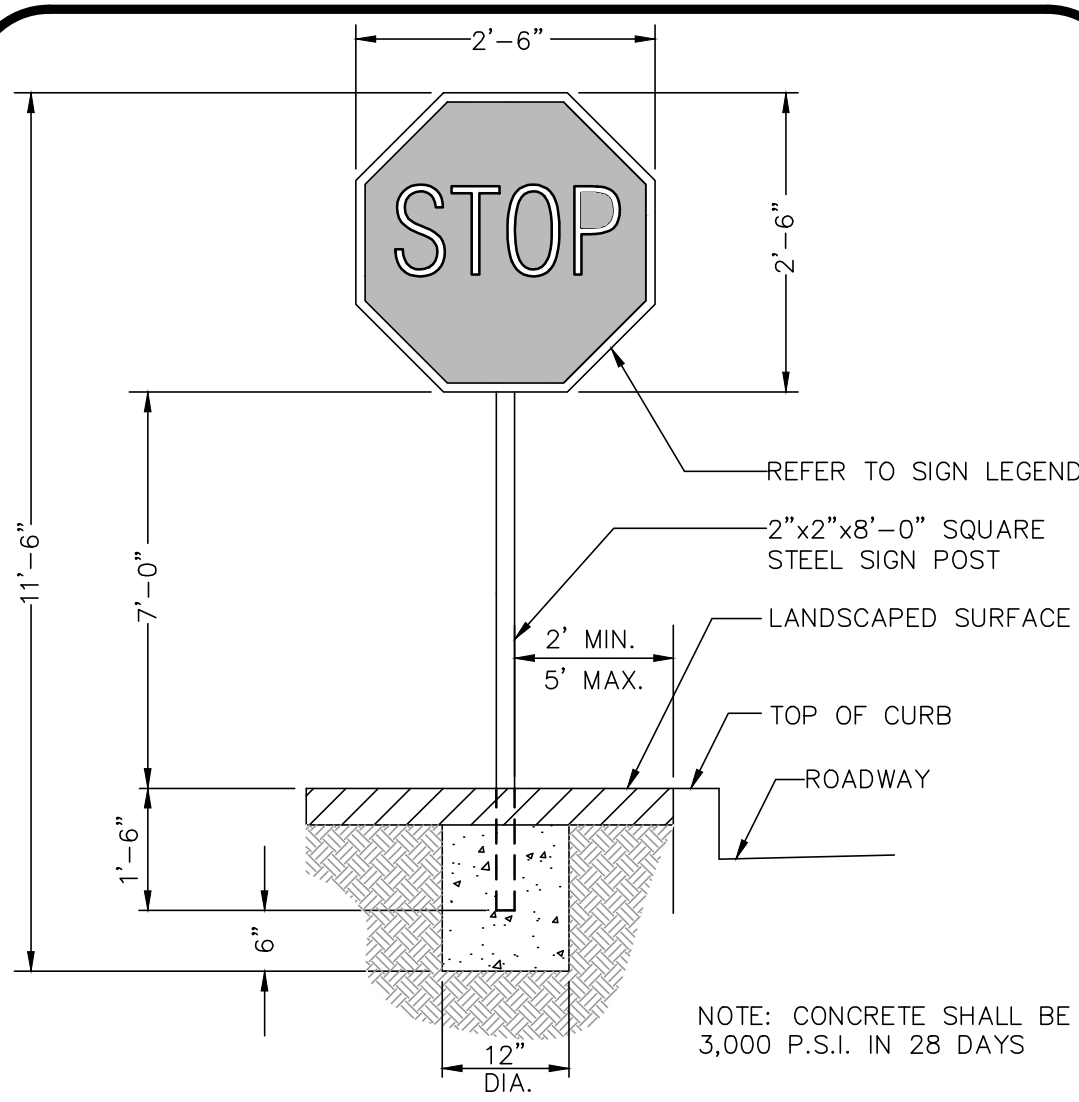
**B**

**ACCESSIBILITY SIGNAGE**  
NOT TO SCALE



**C**

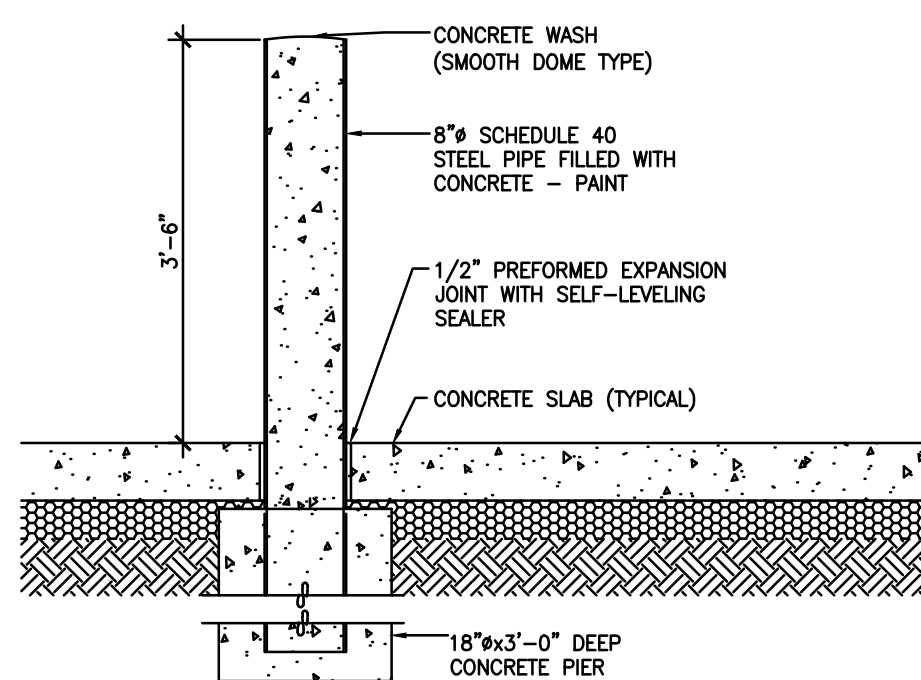
**STOP SIGN DETAIL**  
NOT TO SCALE



FRONT ELEVATION

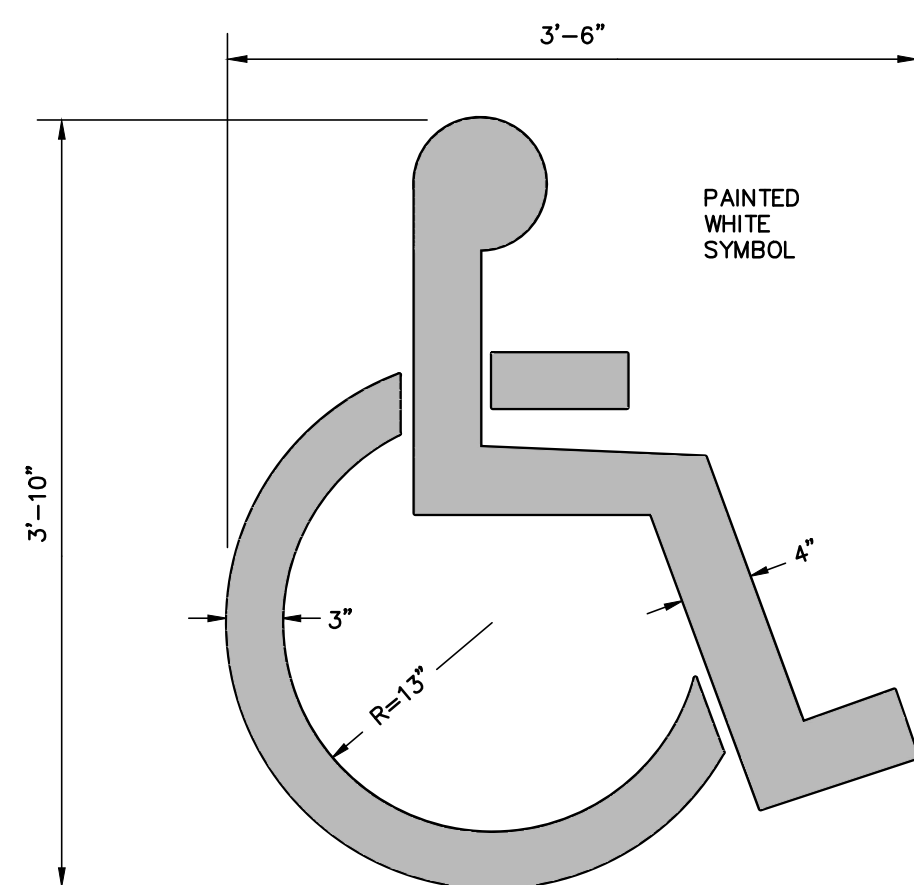
SIDE ELEVATION (REAR SIMILAR)

**TRASH ENCLOSURE DETAILS**  
NOT TO SCALE



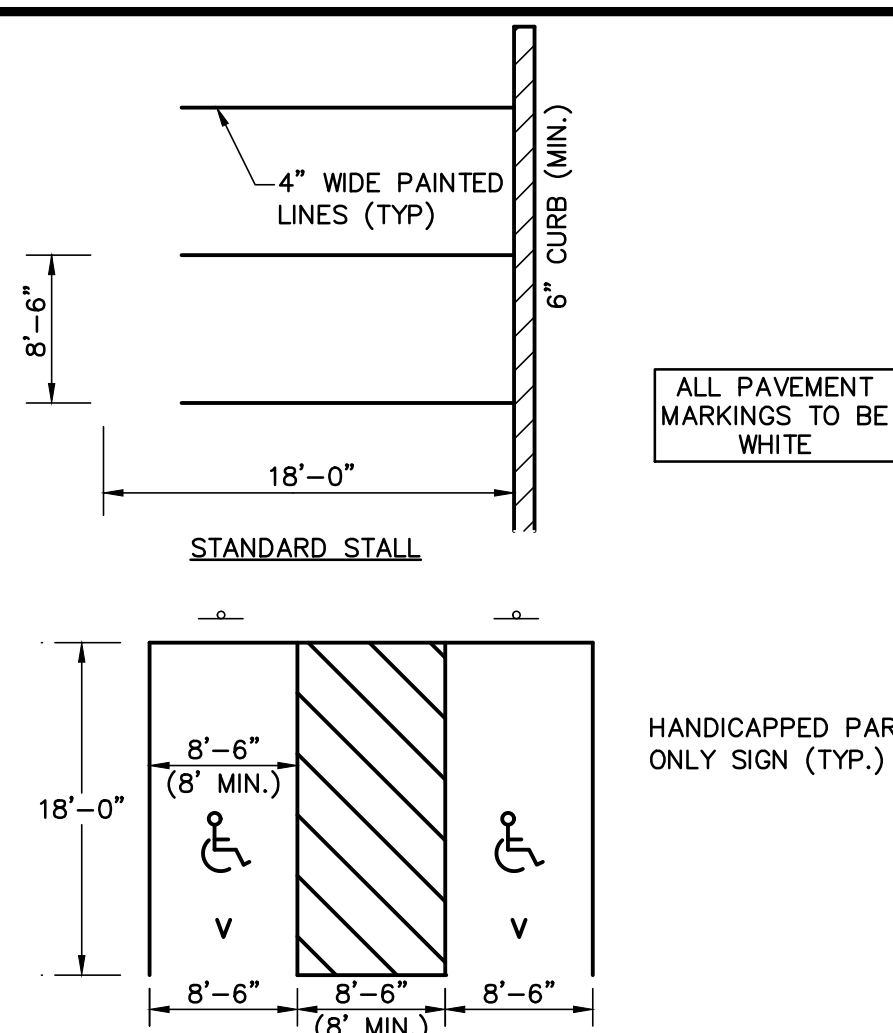
**F**

**BOLLARD DETAILS**  
NOT TO SCALE



**D**

**TYPICAL PAINTED HANDICAP SYMBOL DETAIL**

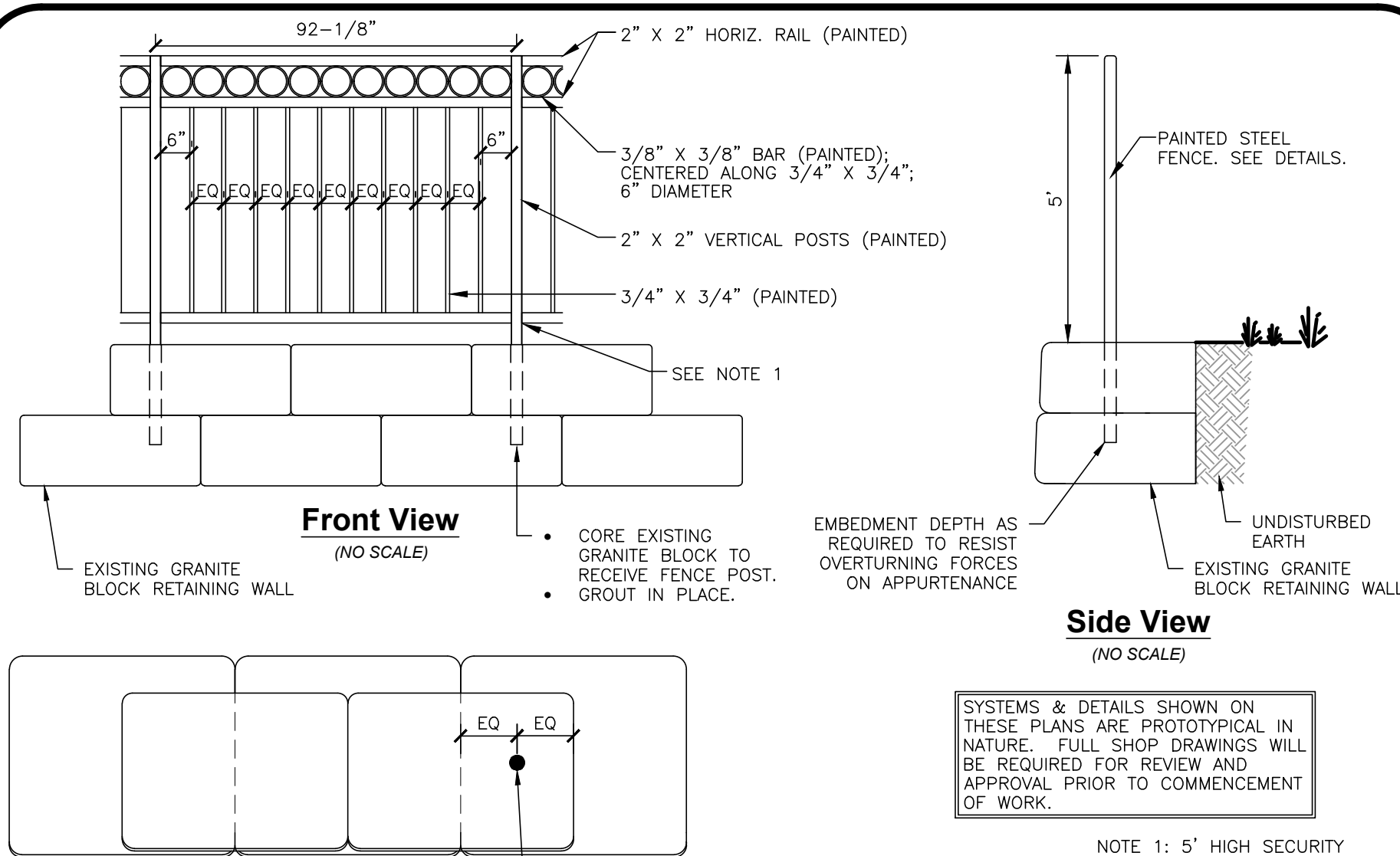


NOTE:

1. "V" DENOTES A VAN ACCESSIBLE HANDICAPPED PARKING SPACE  
VAN ACCESSIBLE STALL

**E**

### HANDICAPPED AND STANDARD STALL DETAIL



H

**TYPICAL FENCE INSTALLATION WITH EXISTING GRANITE BLOCK RETAINING WALL**



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC

REV	DATE	DESCRIPTION

OWNER: SOMERBRIDGE HOTEL LLC  
c/o JAL HOSPITALITY DESIGN, LLC  
227 MARGINAL STREET  
CHELSEA MA 02150

**PROJECT:**  
**135 ROOM EXTENDED STAY HOTEL**  
**263 MONSIGNOR O'BRIEN HIGHWAY**  
**CAMBRIDGE, MA**

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO.	1362-16	DATE:	9/26/16
SCALE:	AS SHOWN	DWG.:	1362-16 Details
DESIGNED BY:	SM	CHECKED BY:	MM

PREPARED BY:



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environmental consulting ♦ landscape architecture  
[www.allenmajor.com](http://www.allenmajor.com)

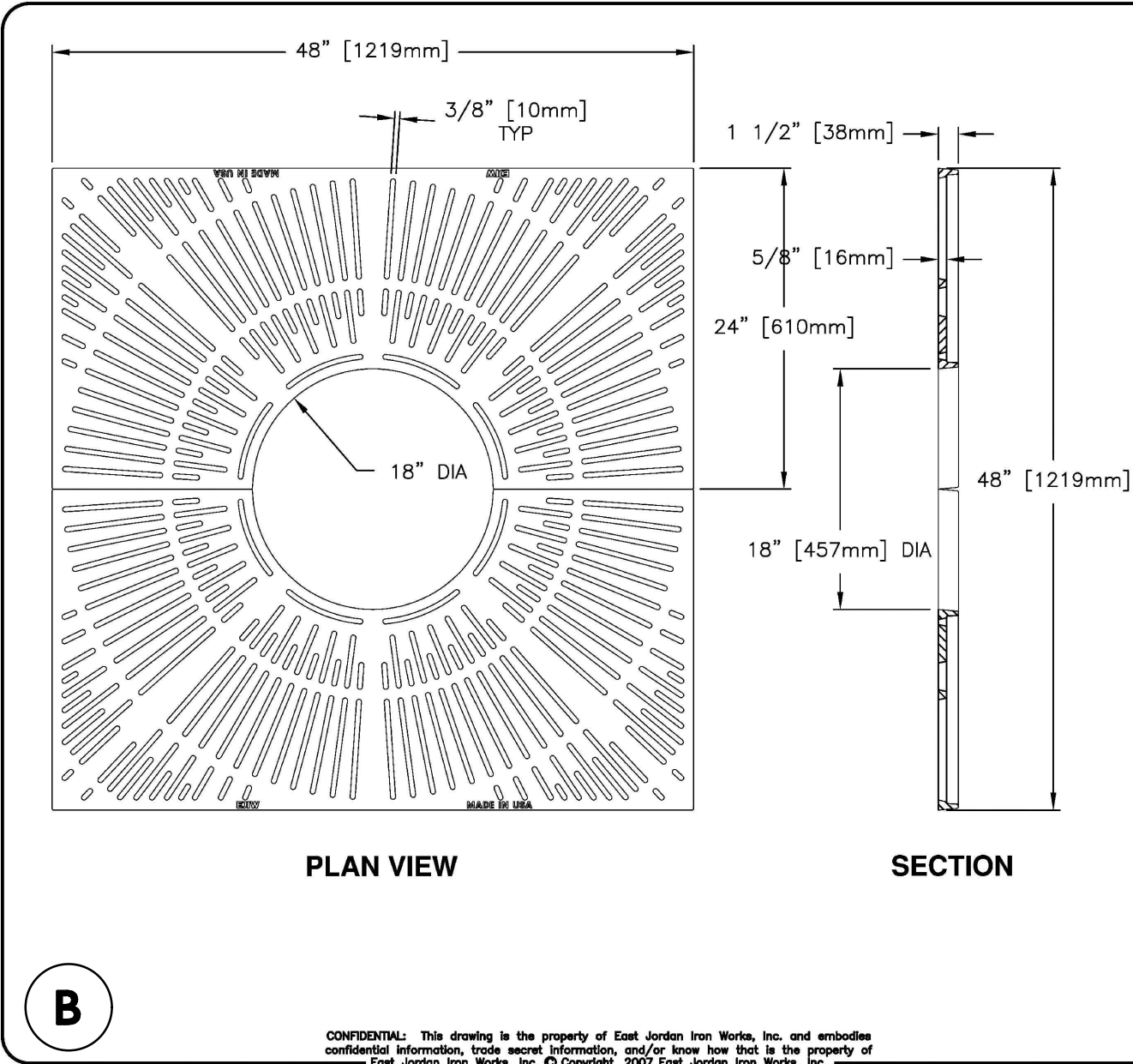
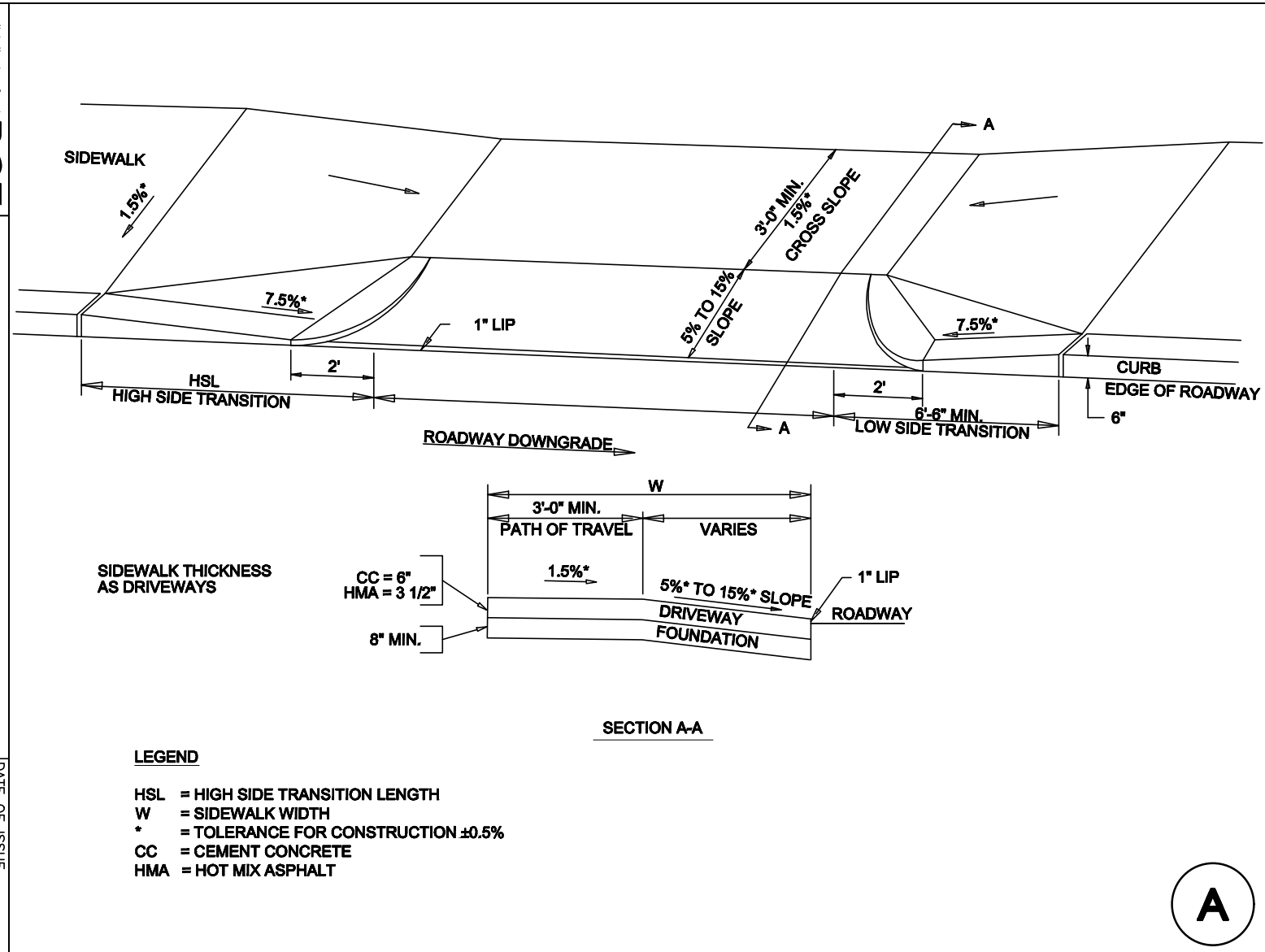
400 HARVEY ROAD  
MANCHESTER, NH 03103  
TEL: (603) 627-5500 FAX: (603) 627-5501

WOBBURN, MA • LAKEVILLE, MA • MANCHESTER, NH

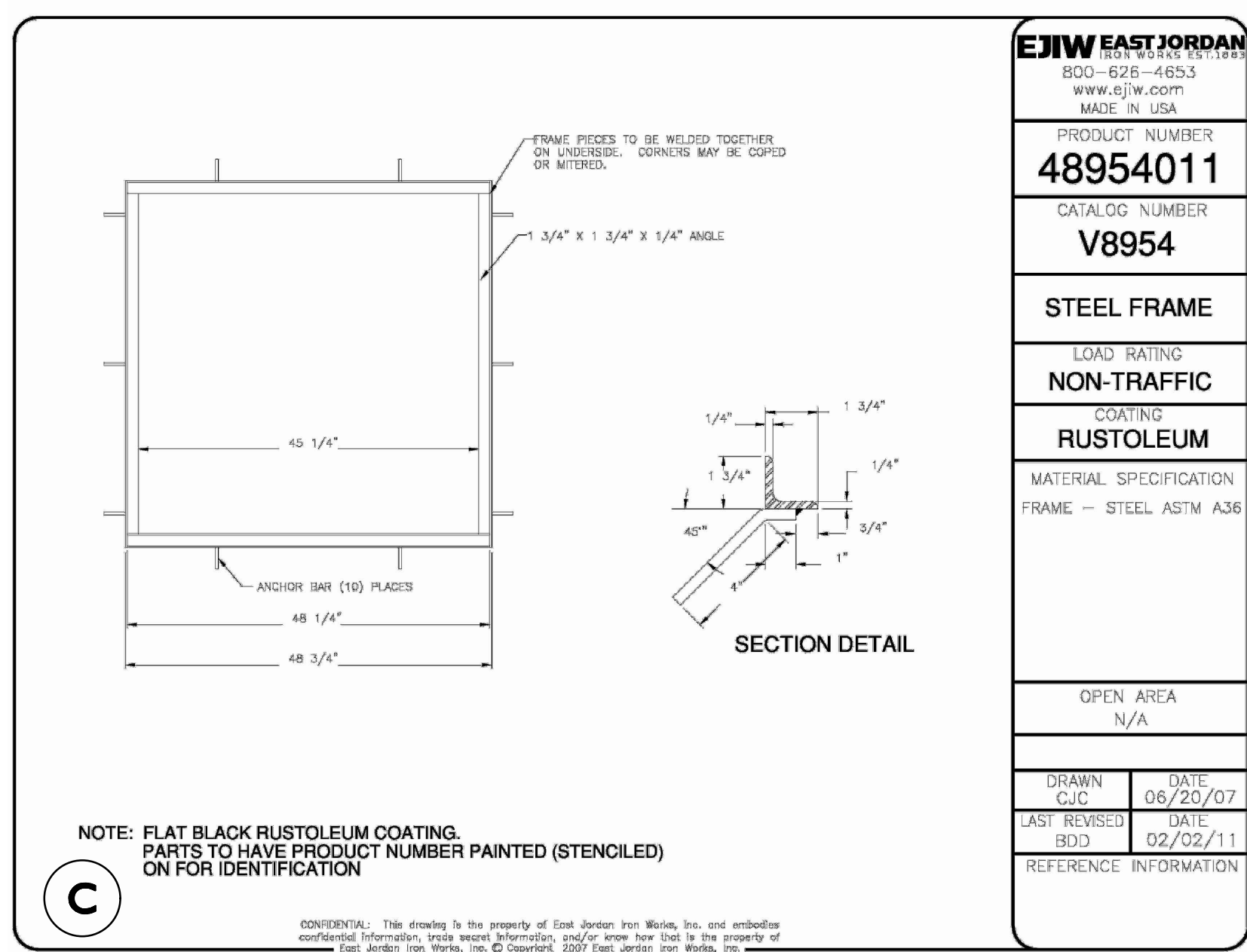
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DRAWING TITLE:	SHEET No.
DETAILS	D-5





EJIW EAST JORDAN IRON WORKS EST. 1983 800-626-4653 www.ejiw.com MADE IN USA	
PRODUCT NUMBER	00867130
CATALOG NUMBER	8671
ADA TREE GRATE SET	
LOAD RATING	NON-TRAFFIC
COATING	DIPPED
MATERIAL SPECIFICATION	GRATE - GRAY IRON ASTM A48 CL35B
OPEN AREA	418 SQ. INCHES
DESIGNATES MACHINED SURFACE	
DRAWN DEW	DATE 04/26/08
LAST REVISED NDM	DATE 6/03/10



EJIW EAST JORDAN IRON WORKS EST. 1983 800-626-4653 www.ejiw.com MADE IN USA	
PRODUCT NUMBER	48954011
CATALOG NUMBER	V8954
STEEL FRAME	
LOAD RATING	NON-TRAFFIC
COATING	RUSTOLEUM
MATERIAL SPECIFICATION	FRAME - STEEL ASTM A36
OPEN AREA	N/A
DRAWN CJC	DATE 06/20/07
LAST REVISED BDJ	DATE 02/02/11
REFERENCE INFORMATION	

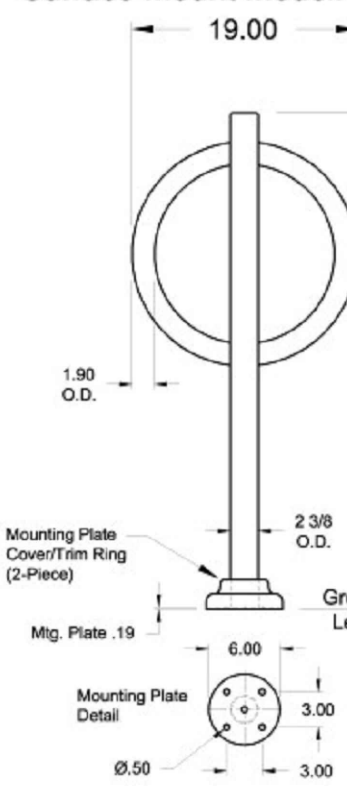


## Pedestal Bicycle Rack

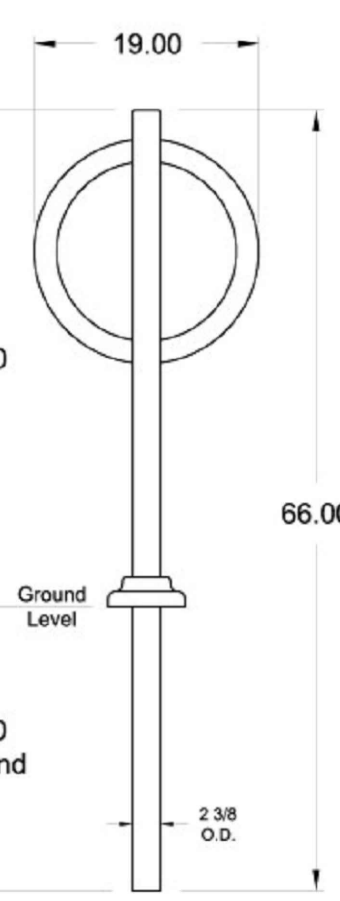
### ITEM 342-1607

### Specifications

Surface Mount Model:



In-Ground Model:



Surface Mount Model Shown

**Materials:**  
2.375" O.D. ILG Steel Tube  
1.9" O.D. ILG Steel Tube  
7 ga. Galv. Plate  
Aluminum Mounting Plate Cover (optional)

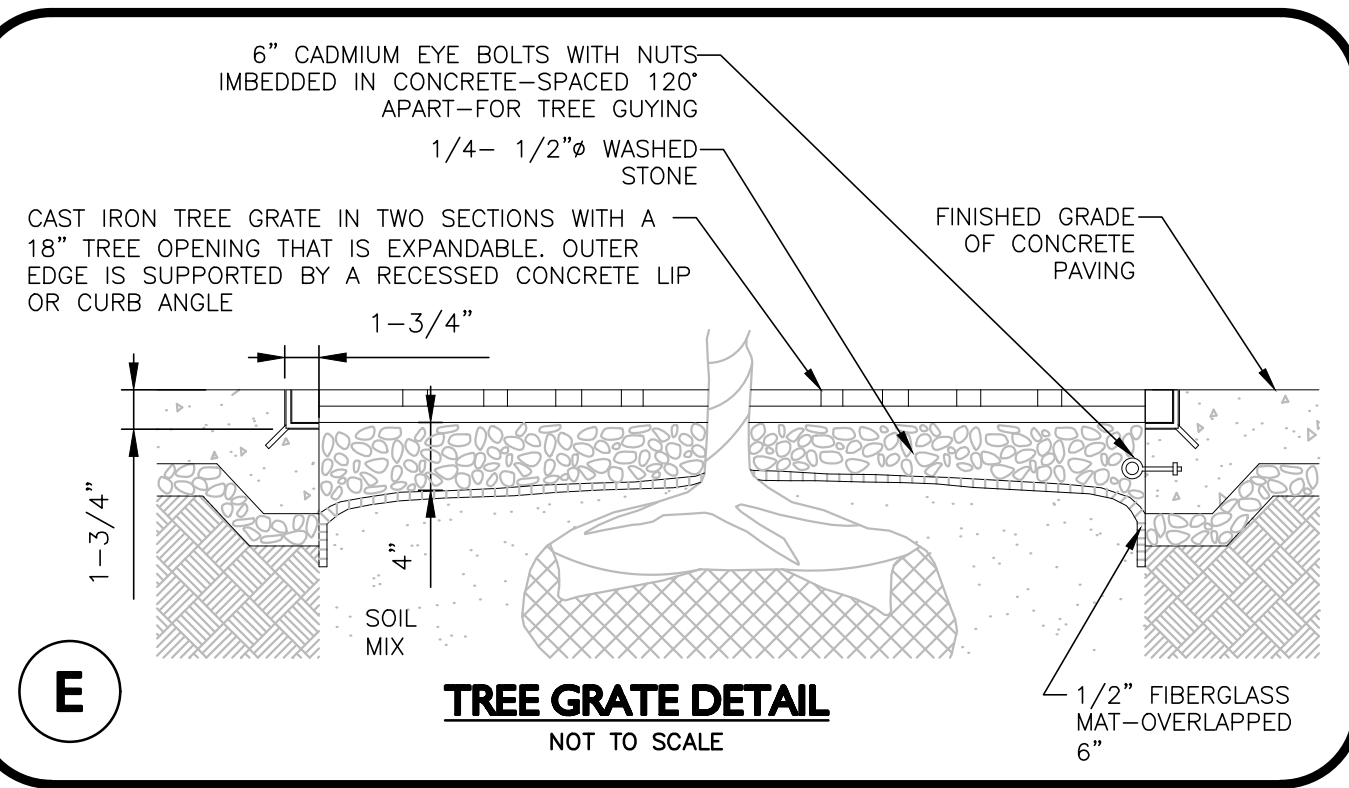
**Hardware:**  
No Hardware Required, unit comes fully welded/assembled.  
Anchoring Hardware Not Included.

**Available Finishes:**  
1) Polyester Powder Coating  
2) Hot Dipped Galvanized Coating

**NOTES:**  
Dimensions shown are in inches.  
We have endeavored to insure that all product specifications listed on this drawing were correct at the time of publication. We reserve the right to improve, alter, or discontinue specifications without notice.

### PEDESTAL BIKE RACK DETAIL

NOT TO SCALE



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

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

OWNER:	SOMERBRIDGE HOTEL LLC c/o JAL HOSPITALITY DESIGN, LLC 227 MARGINAL STREET CHELSEA MA 02150
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PROJECT:	135 ROOM EXTENDED STAY HOTEL 263 MONSIGNOR O'BRIEN HIGHWAY CAMBRIDGE, MA  1 McGRATH HIGHWAY SOMERVILLE, MA
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PROJECT NO.	1362-16	DATE:	9/26/18
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SCALE:	AS SHOWN	DWG.:	1362-1607.dwg
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DESIGNED BY:	SM	CHECKED BY:	MM
--------------	----	-------------	----

PREPARED BY:



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environmental consulting • landscape architecture  
www.allenmajor.com

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DRAWING TITLE:	SHEET No.
----------------	-----------

DETAILS

D-6



LEGEND:

EX. PROPERTY LINE

PRE-DEV. WATERSHED AREA

Tc FLOW PATH

WATERSHED LEGEND:

E

SP1

1

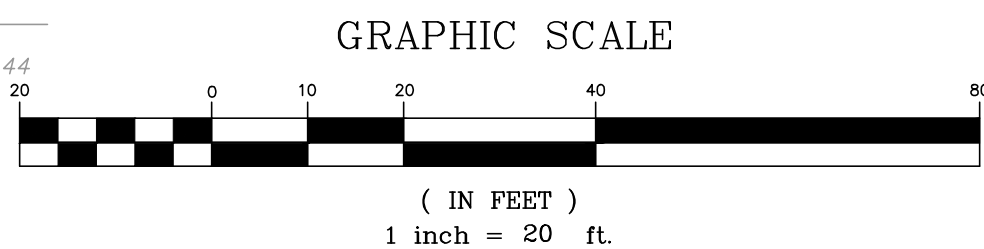
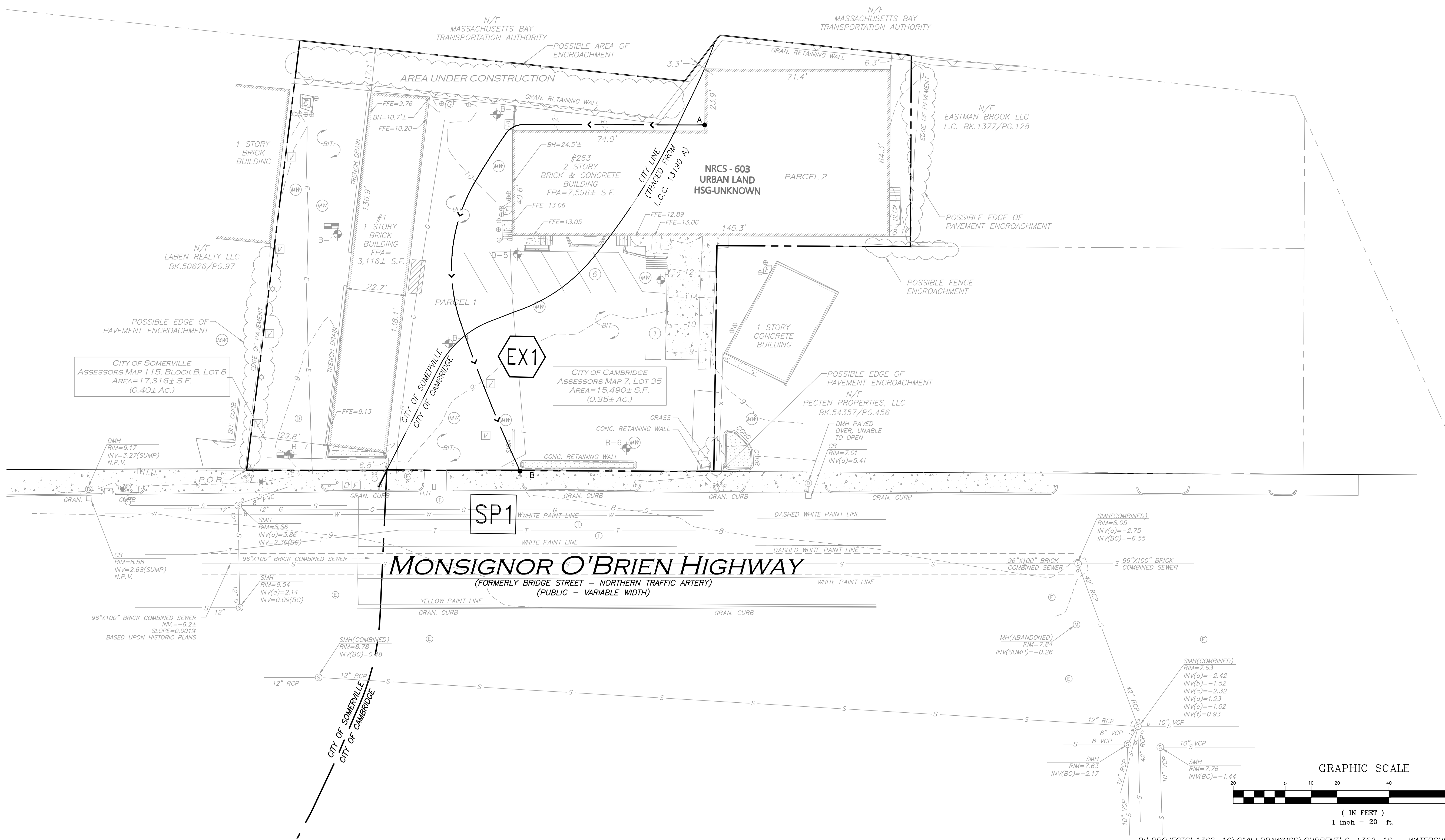
1L

SUBCATCHMENT: A relatively homogeneous area of land that drains into a single reach or pond. Each subcatchment generates a runoff hydrograph. (A subcatchment may also be used to account for the rain falling directly on the surface of a pond.)

REACH: A uniform stream, channel, or pipe that conveys water from one point to another reach or pond. The outflow of each reach is determined by a hydrograph routing calculation.

POND: A pond, swamp, dam, or other impoundment that fills with water from one or more sources and empties in a manner determined by a weir, culvert, or other device(s) at its outlet. The outflow(s) of each pond is determined by a hydrograph routing calculation. The primary and/or secondary outflow may drain into a reach or into another pond.

LINK: Used to enter a hydrograph generated outside HydroCAD, or to interconnect several routing diagrams. A link can also be used to scale a hydrograph, to split it into two components for independent routing, or to define a fixed or tidal tailwater elevation for certain routing methods.



PROFESSIONAL ENGINEER FOR  
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CAMBRIDGE, MA  
  
1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO.	1362-16	DATE:	9/26/18
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SCALE:	1" = 20'	DWG.:	C1362-16-Watershed_Pre
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DESIGNED BY:	SM	CHECKED BY:	MM
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PREPARED BY:  
  
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DRAWING TITLE:	SHEET No.
PRE-DEVELOPMENT WATERSHED PLAN	WS-1

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LEGEND:

EX. PROPERTY LINE

POST DEV. WATERSHED AREA

WATERSHED LEGEND:

P

SUBCATCHMENT: A relatively homogeneous area of land that drains into a single reach or pond. Each subcatchment generates a runoff hydrograph. (A subcatchment may also be used to account for the rain falling directly on the surface of a pond.)

SP1

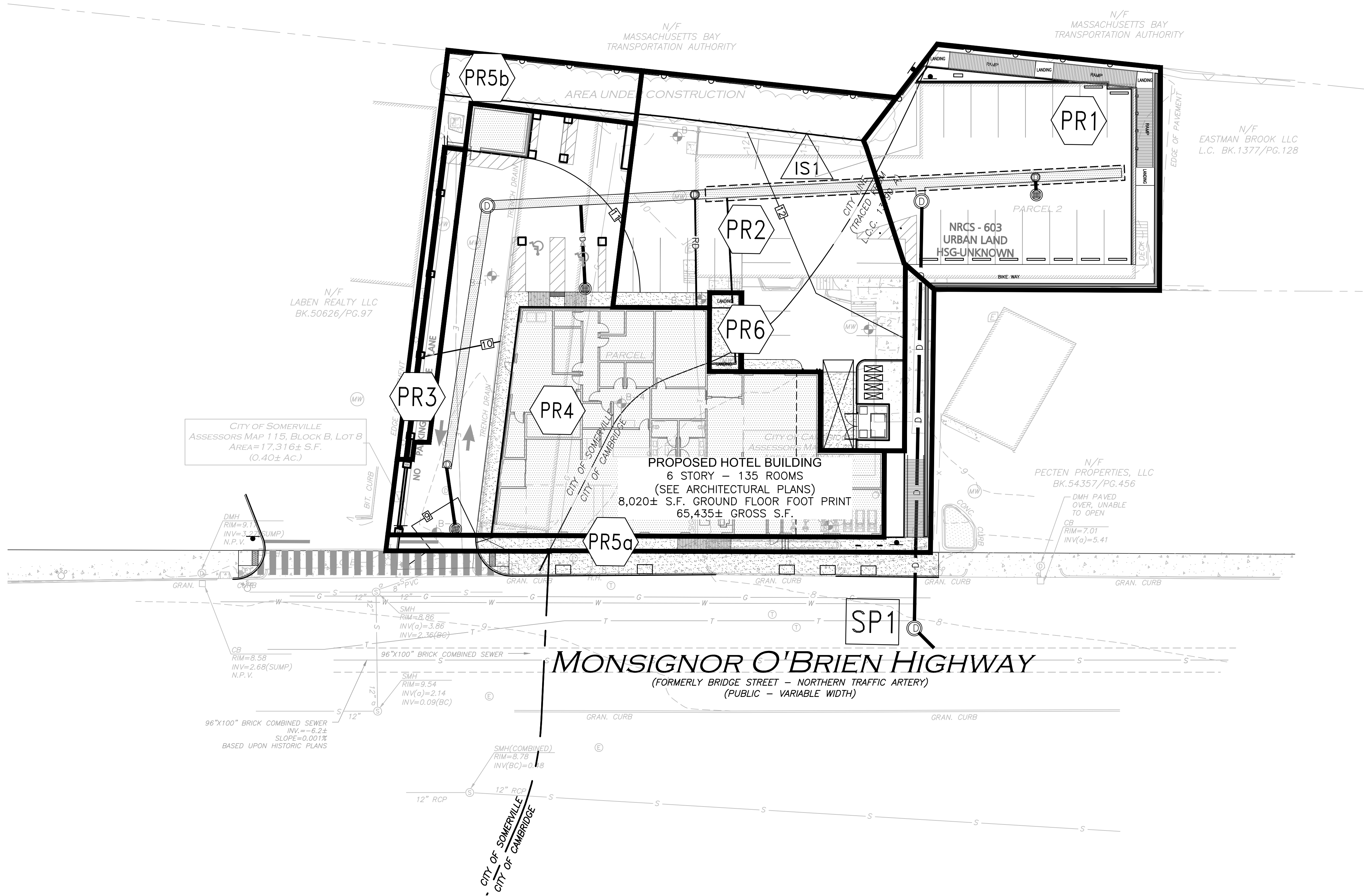
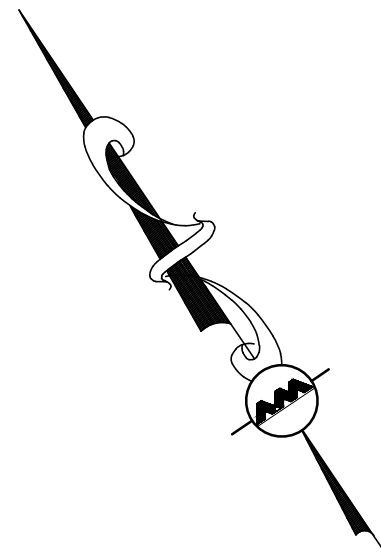
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1

POND: A pond, swamp, dam, or other impoundment that fills with water from one or more sources and empties in a manner determined by a weir, culvert, or other device(s) at its outlet. The outflow(s) of each pond is determined by a hydrograph routing calculation. The primary and/or secondary outflow may drain into a reach or into another pond.

1L

LINK: Used to enter a hydrograph generated outside HydroCAD, or to interconnect several routing diagrams. A link can also be used to scale a hydrograph, to split it into two components for independent routing, or to define a fixed or tidal tailwater elevation for certain routing methods.



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CAMBRIDGE, MA

1 McGRATH HIGHWAY  
SOMERVILLE, MA

PROJECT NO.	1362-16	DATE:	9/26/18
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SCALE:	1" = 20'	DWG.:	C:1362-16 - Watershed Post
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DESIGNED BY:	SM	CHECKED BY:	MM
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PREPARED BY:



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TEL: (603) 627-5500 FAX: (603) 627-5501

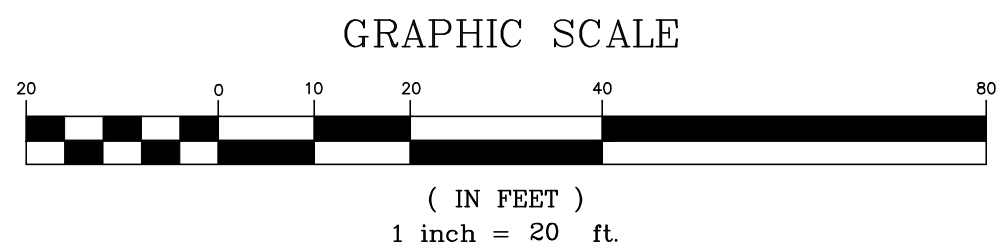
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DRAWING TITLE:	SHEET No.
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POST DEVELOPMENT WATERSHED PLAN	WS-2
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