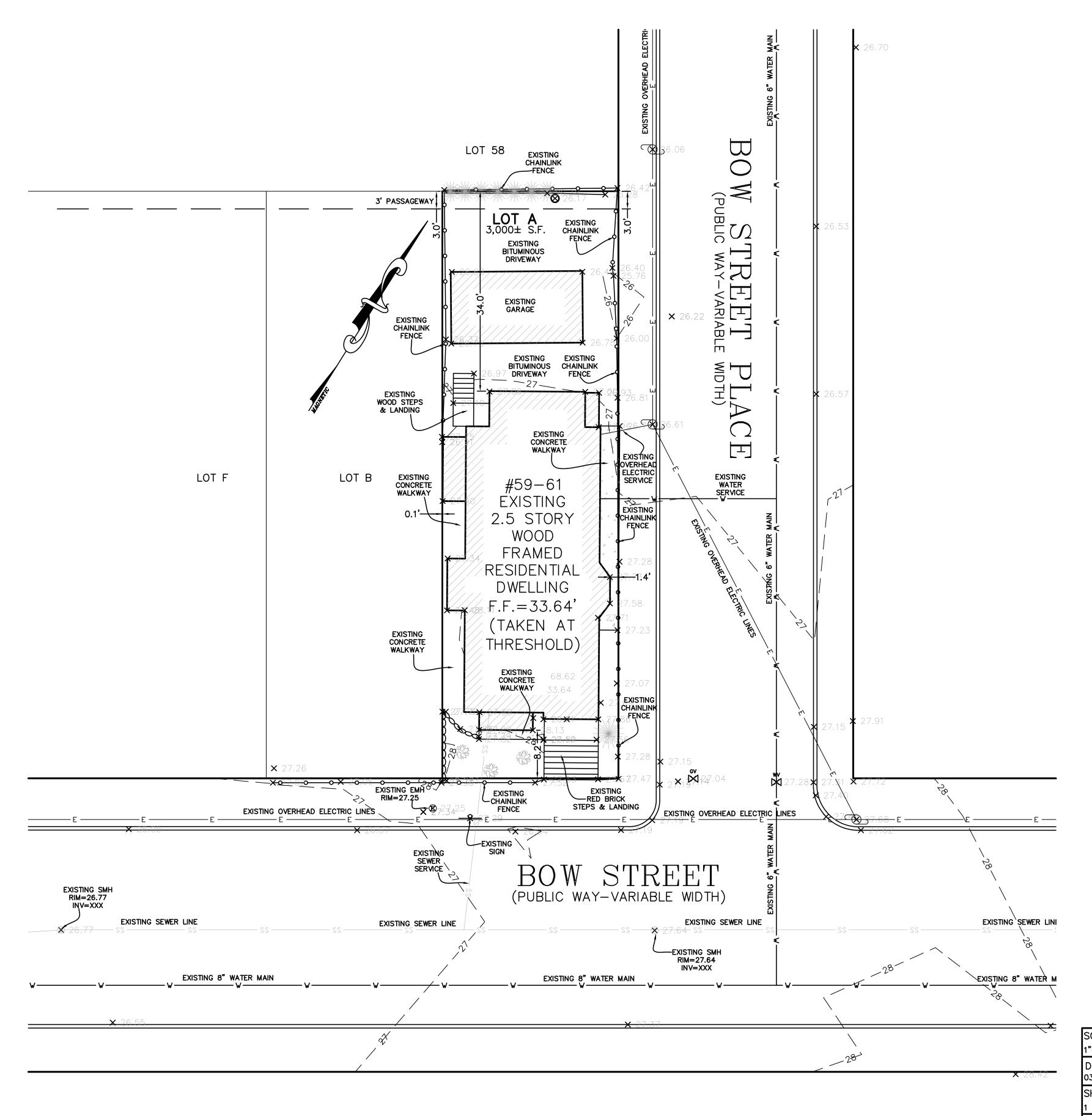
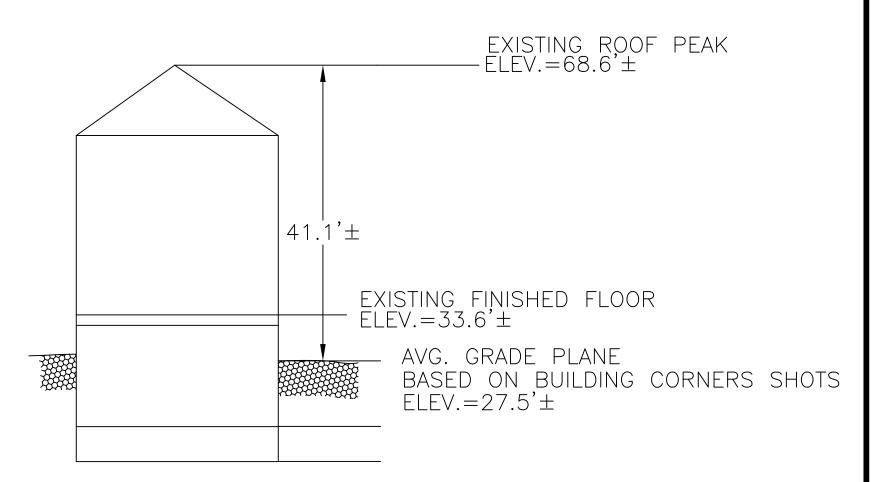
EXIST	ING LEGEND
	SEWER LINE
\$	SEWER MANHOLE
	WATER LINE
G	GAS LINE
₽	UTILITY POLE
GV ⊠	GAS VALVE
— Е —	OVERHEAD ELECTRIC SERVICE
wv 	WATER VALVE
	CATCH BASIN
0	FENCE
205	CONTOUR LINE (MJR)
	CONTOUR LINE (MNR)
×	SPOT GRADE
(D)	DRAIN MANHOLE
X	HYDRANT
	TREE



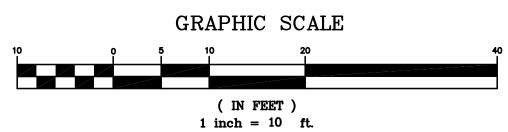
NOTES:

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- 2. DEED REFERENCE: BOOK 9569 PAGE 223, PLAN REFERENCE: PLAN 8 OF 1887 MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS.
- 3. THIS PLAN IS NOT INTENDED TO BE RECORDED.
- 4. I CERTIFY THAT THE DWELLING SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE X, ON FLOOD HAZARD BOUNDARY MAP NUMBER 25017C0438E, PANEL NUMBER 0438E, COMMUNITY NUMBER: 250214, DATED JUNE 4, 2010.
- 5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT USES OF THE LAND; HOWEVER THIS NOT CONSTITUTE A GUARANTEE THAN NO SUCH EASEMENTS EXIST.
- 6. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.
- 7. NO RESPONSIBILITY IS TAKEN FOR ZONING TABLE AS PETER NOLAN & ASSOCIATES LLC ARE NOT ZONING EXPERTS. TABLE IS TAKEN FROM TABLE PROVIDED BY LOCAL ZONING ORDINANCE. CLIENT AND/OR ARCHITECT TO VERIFY THE ACCURACY OF ZONING ANALYSIS.
- 8. ZONING DISTRICT = M.R.-5



EXISTING PROFILE NOT TO SCALE

SCALE "=10'					
DATE					
03/22/2021	REV	DATE	REVISION	BY	
SHEET					
PLAN NO. OF 1					
CLIENT:	EXISTING CONDITIONS SITE PLAN				SHEET NO.
DRAWN BY					
CHKD BY PJN	PETER NOLAN & ASSOCIATES LLC LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS COT CAMPRIDGE STREET SHITE 107 PRICHTON MA 02175				
APPD BY PJN	697 CAMBRIDGE STREET, SUITE 103 BRIGHTON MA 02135 PHONE: 857 891 7478/617 782 1533 FAX: 617 202 5691 EMAIL: pnolan@pnasurveyors.com				



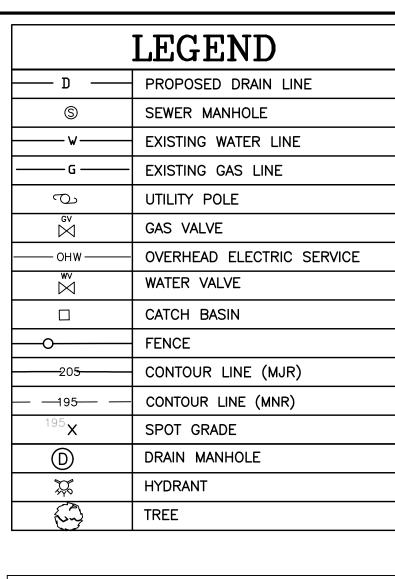
PETER NOLAN & ASSOCIATES LLC SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES; OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.

THE EXTENT OF PETER NOLAN & ASSOCIATES LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST

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DRAINAGE AREA SUMMARY

EXISTING ROOF AREA (HOUSE)= 1,346.6 S.F. EXISTING PAVED AREA (DRIVEWAY & WALKWAY) = 1,127.6 S.F. EXISTING GARAGE = 273.7 S.F.

EXISTING LANDING & STEPS = 124.4 S.F. EXISTING LANDSCAPE AREA = 127.7 S.F.

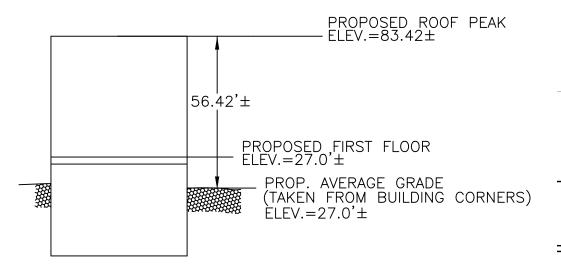
PROPOSED ROOF AREA= 2,827.9 S.F. PROPOSED LANDSCAPE AREA = 172.1 S.F.

TOTAL EXISTING IMPERVIOUS AREA = 2,872.3 S.F. TOTAL PROPOSED IMPERVIOUS AREA = 2,827.9 S.F.

TOTAL DECREASE IN IMPERVIOUS AREA = 44.5 S.F.

	EP OBS	ERVATION I	HOLE NUME	BER:	TD_1		000						
Depth H					1,6-51		GRO	UND ELE	/ATION:	EP OBSERVATION HOLE NUMBER: TP-1 GROUND ELEVATION:			
	Horizon/	Matrix:	Redo	ximorphic Feat	tures Texture		res Coarse Fragments (Percent by Volume) Structure Cor		Consistence	Other			
(in)	Layer	Color-Moist	Depth (in)	Color	Percent	(USDA)	Gravel	Cobbles & Stones	Structure	(Moist)	Other		
0-72 FI	ILL/ASH						-						
72-120	С	10YR 7/3	NONE			SILT LOAM	<5	<5	MASSIVE	BLOCKY			

Summary Table (HydroCAD results)						
Storm Event Runoff rate Volume of runoff						
	Existing	Proposed	Existing	Proposed		
2-Year	0.22 cfs	0.19 cfs	747 cf	400 cf		
10-Year						
	0.35 cfs	0.28 cfs	1,212 cf	857 cf		
25-Year						
	0.44 cfs	0.34 cfs	1,506 cf	1,148 cf		
100-Year						
	0.56.6	0.40 C	1 0 C 7 C	1 506 6		



PROPOSED PROFILE NOT TO SCALE

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ALL SURFACE WATER RUNOFF SHALL BE DIRECTED AWAY FROM BUILDING FOUNDATION AND AWAY FROM **NEIGHBORING PROPERTY**

EXISTING SMH RIM=26.77

EXISTING SEWER LINE

EXISTING 8" WATER MAIN

PROPOSED FIRST FLOOR ELEVATION TO BE VERIFIED BY ARCHITECT PRIOR TO ANY CONCRETE BEING POURED

DEVELOPMENT TEAM & STRUCTURAL ENGINEER TO ENSURE LOCATION OF PROPOSED INFILTRATION SYSTEM DOES NOT HAVE ANY STRUCTURAL IMPACTS ON PROPOSED FOUNDATION

DEVELOPMENT TEAM TO CONFIRM PROPOSED INFILTRATION SYSTEM IS ALLOWED IN PRIVATE WAY

PLAN REVIEWER TO NOTE PROPOSED BUILDING PROJECTIONS OVER LOT LINES REFER TO ARCHITECTURAL PLANS FOR ALL ZONING RELATED INFORMATION

LOCATION OF INTERNAL ROOF DRAINS TO BE VERIFIED BY ARCHITECT

SERVE AS OVERFLOW

3' PASSAGEWAY

EXISTING WOOD STEPS & LANDING

WALKWA

OUTLINE OF BUILDING ABOVE

RIM = 27.25

SEWER

EXISTING SEWER LINE

EXISTING SEWER

TO BE CUT &

CAPPED AT

SERVICE \

LOT B

PRÖPOSED

5 STORY

RESIDENTIAL

BUILDING

 $F.F. = 27.7' \pm (COMMERCIAL)$

 $F.F.=27.0'\pm(RESIDENTIAL)$

(TO BE VERIFIED BY

ARCHITECT BEFORE ANY

EXISTING OVERHEAD ELECTRIC LINES

CONCRETE BEING POURED

LOT F

FOR INFILTRATION

LOT 58

LOT BAUMIN 3,000± S.F.

ROOF DECK

ELEVATOR

PROPOSED

STAIR HEAD HOUSE

COMMERCIAL

F.F.= 27.7'

SIGN

RIM=26.3 INV=24.8

EXISTING

CHAINLINK

APPROX.

LOCATION OF

(TO BE VERIFIED BY

ARCHITECT)

RESIDENTIAL

LOCATION OF ROOF DRAIN

(TO BE VERIFIED BY

ARCHITECT)

FF = 27.0

36.0

MANHOLE

BUILDING ABOVE

GRADE=27.0'±

BOS=22.0'±

INV IN=24.0'±

(SEE DETAIL)

SERVICE

PROPOSED INFILTRATION

SYSTEM #1 3-STORM TECH UNITS

BARRIER TO BE INSTALLED

ALONG ALL SIDES OF

SYSTEM

PROPOSED

PERMEABLE

PAVEMENT

SIDEWALK

OUTLINE OF BUILDING ABOVE

EXISTING OVERHEAD ELECTRIC LINES_

ACCESSIBLE

PROPOSED BALCONY

(PUBLIC WAY-VARIABLE WIDTH)

PROP. 6" SDR 35 PVC

SEWER CONNECTION AT

MAIN INVERTS TO BE

VERIFIED IN FIELD

CURB RAMP

(SEE LANDSCAPE

PLAN)

EXISTING SEWER LINE

EXISTING 8" WATER MAIN

EXISTING SMH

RIM = 27.64

A E

NOTES:

26.70

PROP. 4.0" DICL

EXISTING WATER

TO BE CUT &

27.91

EXISTING SEWER LI

EXISTING 8" WATER

CAPPED AT MAIN.

DOMESTIC WATER

CONNECTION AT MAIN.

PROP. 4.0" DICL FIRE

CONNECTION AT MAIN.

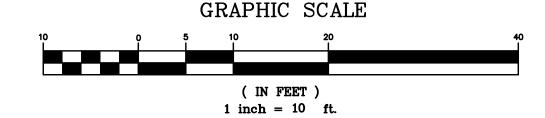
PROTECTION LINE TO

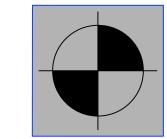
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GENERAL NOTES

- THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER OF ANY SIGNIFICANT VARIATIONS IN EXISTING SITE CONDITIONS FROM THOSE SHOWN ON THESE PLANS. ANY PROPOSED REVISIONS TO THE WORK, IF REQUIRED BY THESE SITE CONDITIONS, SHALL NOT BE UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER AND THE
- 2. IN ORDER TO PROTECT THE PUBLIC SAFETY DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING AT ALL TIMES ALL NECESSARY SAFETY DEVICES AND PERSONNEL, WARNING LIGHTS, BARRICADES, AND POLICE OFFICERS.
- 3. ALL WORK SHALL CONFORM TO CITY OF MELROSE GENERAL CONSTRUCTION STANDARDS
- 4. THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE TO A LEGAL DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.
- 5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION CONTROL MEASURES ON AN AS NECESSARY BASIS, SUCH THAT EXCESSIVE SOIL EROSION DOES NOT OCCUR.
- 6. THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTRACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-800-322-4844.
- 7. THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXTENDING THEM. IF THE NEW WORK POSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER SHALL BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.
- 8. NO LEDGE, BOULDERS, OR OTHER UNYIELDING MATERIALS ARE TO BE LEFT WITHIN 6" OF THE WATER IN THE TRENCH, NOR ARE THEY TO BE USED FOR BACKFILL FOR THE FIRST
- PAVEMENT AREA SHALL BE PAVED TO A THICKNESS AS SHOWN ON THE PLANS MEASURED AFTER COMPACTION, WITH A BINDER COURSE AND TOP COURSE OF CLASS I BITUMINOUS CONCRETE PAVEMENT, TYPE I-1.
- 10. BASE MATERIAL SHALL BE CLEAN BANK RUN GRAVEL, CONFORMING TO M.D.P.W. M1.03.1, WITH NO STONES LARGER THAN THREE (3) INCHES IN DIAMETER AND SHALL BE PLACED AND ROLLED WITH AT LEAST A TEN TON ROLLER. THE SURFACES SHALL BE WET DURING ROLLING TO BIND THE MATERIAL. ALL STONES OF 4" DIAMETER OR LARGER SHALL BE REMOVED FROM THE SUB-BASE PRIOR TO PLACING BASE MATERIAL.
- 11. ALL EXISTING PAVING TO BE DISTURBED SHALL BE CUT ALONG A STRAIGHT LINE THROUGH ITS ENTIRE THICKNESS. BUTT THE NEW PAVING INTO THE EXISTING PAVEMENT
- 12. ANY PAVEMENT REMOVED FOR UTILITY TRENCH EXCAVATION OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH A PAVEMENT SECTION CONSISTING OF 1 1/2" WEAR COURSE OVERLYING A 2 1/2" BINDER COURSE OVERLYING A 8" COMPACTED GRAVEL BASE COURSE.
- 13. THE CONTRACTOR SHALL APPLY FOR A STREET OPENING AND UTILITY CONNECTION PERMITS AND SIDEWALK CROSSING PERMIT WITH THE CITY OF MELROSE DPW.
- 14. CONTRACTOR TO ENSURE THAT ALL SURFACE WATER IS DIVERTED AWAY FROM BUILDING FOUNDATION DURING FINAL GRADING.

* PER TITLE V. SEWER FLOW RESIDENTIAL (G.P.D) EXISTING = $(5 \text{ BEDROOMS } \times 110 \text{ G.P.D.}) = 550 \text{ G.P.D}$ PROPOSED = $(16 \text{ BEDROOMS } \times 110 \text{ G.P.D.}) = 1,760 \text{ G.P.D.}$ THEREFORE, PROPOSED INCREASED FLOW = 1,210 G.P.D MITIGATION FEE = $$14.35 \times 1,210 \text{ G.P.D} = $17,363.5$





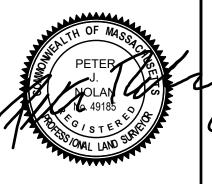


LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS 80 JEWETT ST, (SUITE 1 NEWTON, MA 02458



SPRUHAN ENGINEERING, P. O

80 JEWETT ST, (SUITE NEWTON, MA 02458 Tel: 617-816-0722 Email:edmond@spruhaneng. Tel:857-891-7478



617-782-1533



59-61 BOW STREET SOMERVILLE, **MASSACHUSETTS**

CIVIL PLAN

REVISION BLOCK

BY	DESCRIPTION	DATE
GP	BALCONIES REMOVED	3/15/2024

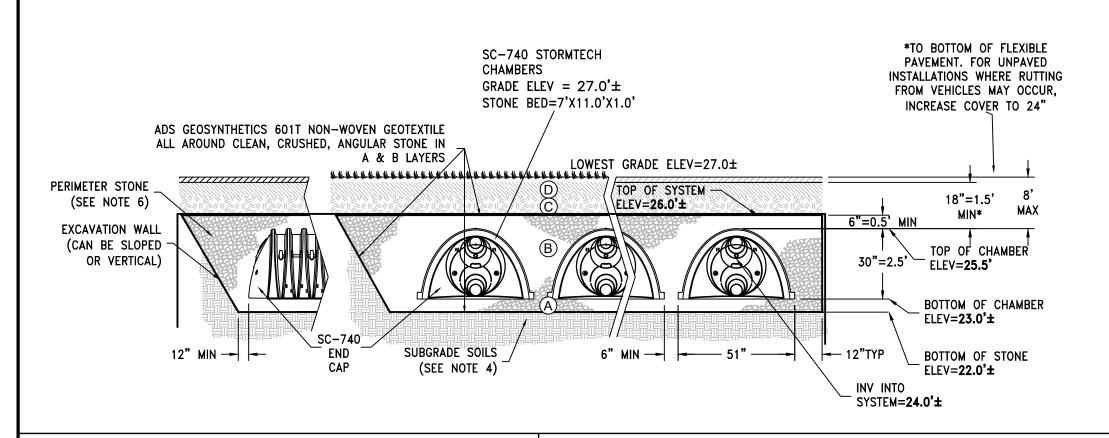
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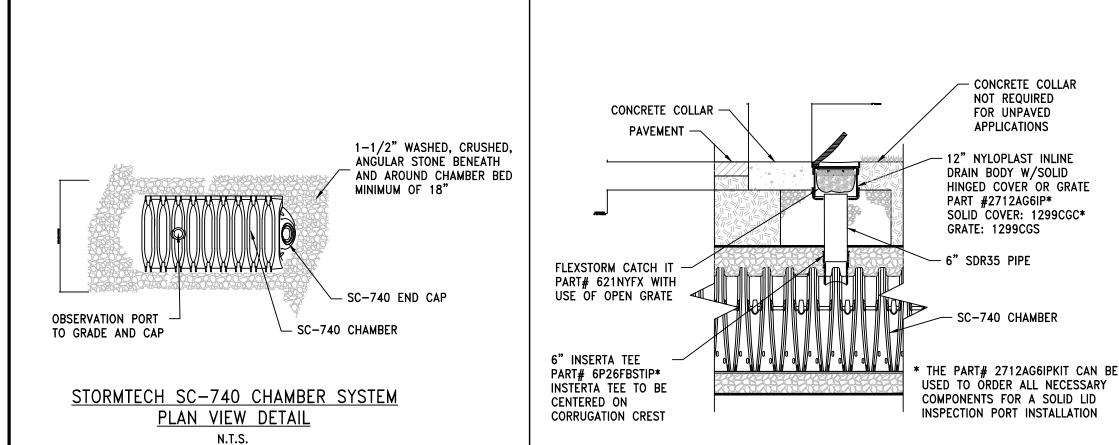
DATE:	10/30/2023
DRAWN BY:	JRH
CHECKED BY:	E.S
APPROVED BY:	P.N

CIVIL PLAN

SHEET 1 OF 4

INFILTRATION SYSTEM





ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAYEMENT OR UNPAYED FINISHED GRADE ABOVE. NOTE THAT PAYEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
С	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43' 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. 2 3

PLEASE NOTE:

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

NOTES:

- 1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION
- 2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- 4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- 5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 6. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

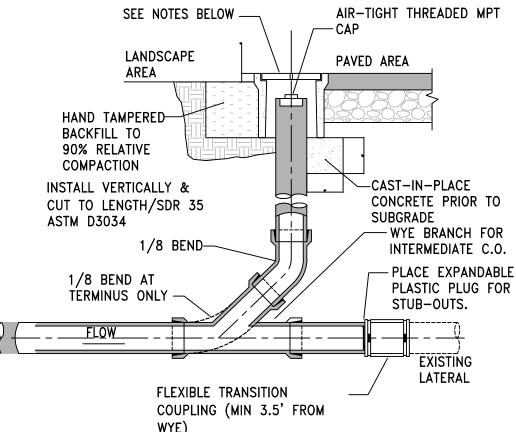
SEE NOTES BELOW — AIR-TIGHT THREADED MPT LANDSCAPE PAVED AREA HAND TAMPERED BACKFILL TO 90% RELATIVE COMPACTION —CAST−IN−PLACE INSTALL VERTICALLY & CONCRETE PRIOR TO CUT TO LENGTH/SDR 35 SUBGRADE ASTM D3034 - WYE BRANCH FOR 1/8 BEND-1/8 BEND AT TERMINUS ONLY STUB-OUTS. EXISTING LATERAL FLEXIBLE TRANSITION COUPLING (MIN 3.5' FROM

1. RECTANGULAR OR CIRCULAR BOXES ARE PERMITTED.

TRENCH WIDTH WS OR WU

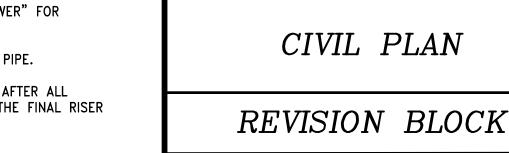
- 2. CONCRETE/FIBERLYTE LIDS ARE ACCEPTABLE IN NON-VEHICULAR AREAS. H-20 CAST IRON
- 3. ALL CLEANOUT LIDS SHALL BE MARKED WITH AN "S" OR THE WORD "SEWER" FOR
- 4. CLEANOUT PIPE SHALL BE THE SAME DIAMETER AS THE CONNECTED SITE PIPE.
- 5. TERMINATE C.O. AT CLOSEST JOINT TO SURFACE WITH TEMPORARY PLUG. AFTER ALL BACKFILL IS COMPLETE AND SUB-GRADE MADE IN AREAS TO BE PAVED, THE FINAL RISER PIPE AND BOX SHALL BE INSTALLED AS SHOWN.

CLEANOUT TO GRADE



- TRAFFIC LIDS AND BOXES IN VEHICULAR AREAS.
- SANITARY SEWER CLEANOUTS

NTS



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ENGINEERING CONSULTANTS

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Tel: 617-816-0722

DATE

Email:edmond@spruhaneng.d

DESCRIPTION

59-61 BOW STREET

SOMERVILLE,

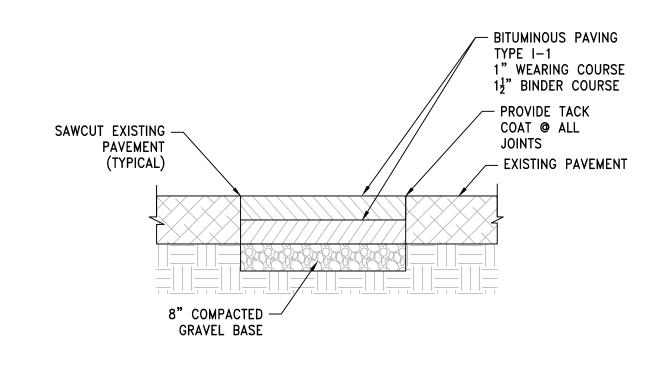
MASSACHUSETTS

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CHECKED BY:	E.S
APPROVED BY:	P.N

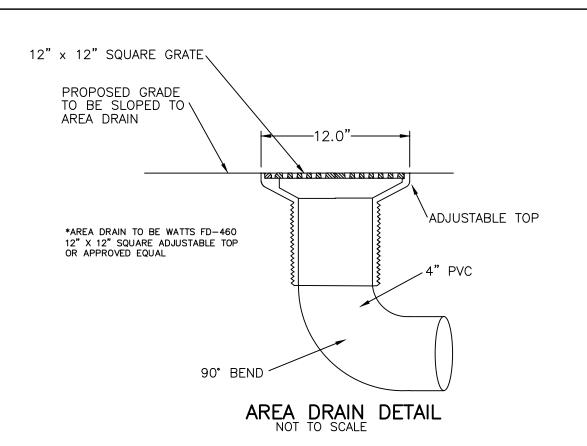
DETAILS

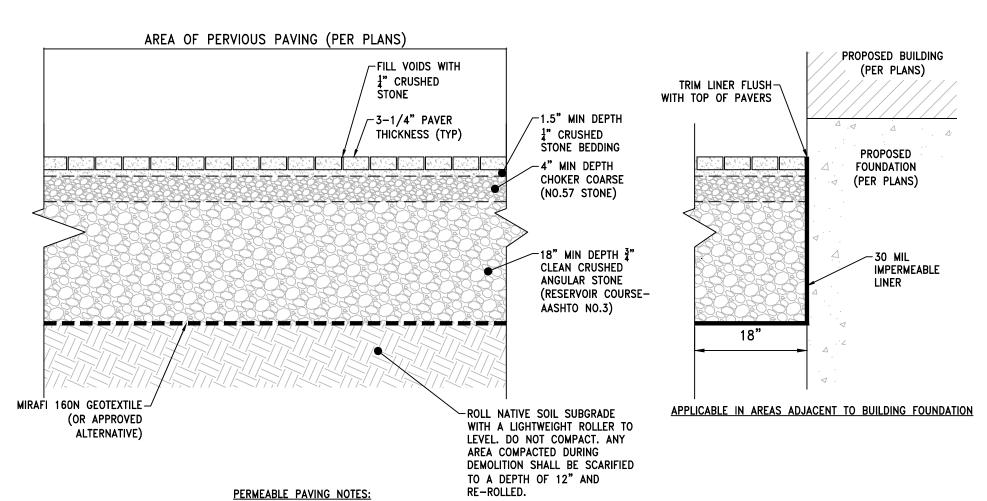
SHEET 2 OF 4



SC-740 6" INSPECTION PORT DETAIL N.T.S.

PAVEMENT MATCH SAWCUT DETAIL





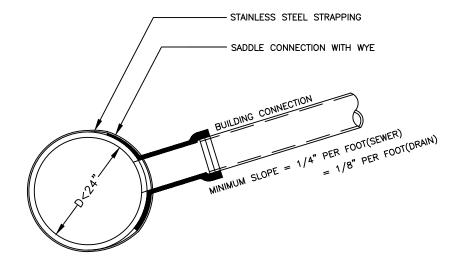
1. PAVERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURES SPECIFICATIONS.

PERVIOUS PAVER DETAIL

DIAM. OF PIPE **UNSHEETED** SHEETED 3'-0" 4'-2" 12" AND SMALLER 0.D.+20" 15" AND LARGER 0.D.+36" TRENCH WIDTH: WS OR WU WS/2 OR WU/2 LINE OF NARROW TRENCH LIMIT SHEETING, FUSED | = NO LEDGE OR SHALL BE LEFT IN PLACE UNEXCAVATED MATERIAL BELOW THE LINE OF SHALL PROJECT NARROW BEYOND THIS LINE. TRENCH LIMIT, **EXCEPT WHERE** OTHERWISE INDICATED OR ' SAND BACKFILL DIRECTED. PAYMENT LIMITS FOR PAYMENT LIMITS FOR NORMAL EXCAVATION ROCK EXCAVATION. _UNDISTURBED MATERIAL COMPACTED SCREENED GRAVEL AGAINST UNDISTURBED MATERIAL OR SHEETING HALF SECTION IN EARTH IN ROCK

WS

WATER TRENCH SECTION NOT TO SCALE



EXISTING SEWER OR DRAIN PIPE

- FULL PVC OR IRON SADDLE MAY BE USED TO CONNECT TO EXISTING PVC, CLAY, CONCRETE, OR IRON PIPE.
- 2. SADDLES MUST HAVE RUBBER GASKETS AND SHALL BE TIGHTENED WITH STRAPS. SADDLES WILL NOT BE CEMENTED ONTO THE PIPE.
- 3. FULL WYE CONNECTION FITTINGS MAY BE USED
- 4. PIPE SHALL BE CUT TO CONFORM TO THE OPENING IN THE SADDLE.
- 5. CONNECTIONS DIRECTLY INTO THE EXISTING PIPE WITHOUT A SADDLE OR A FULL WYE FITTING ARE NOT ALLOWED.

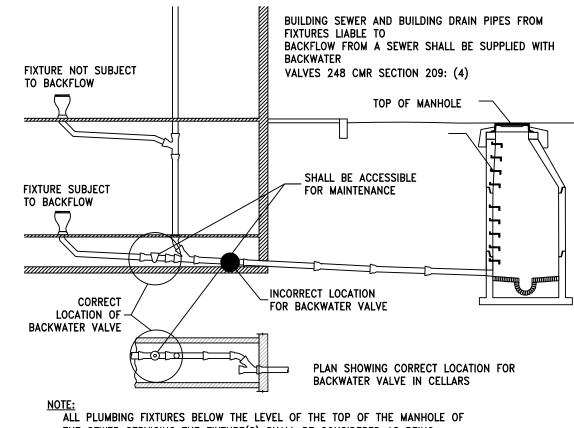
TYPICAL SADDLE CONNECTION TO EXISTING SEWER OR DRAIN SCALE: NOT TO SCALE

NOTES:

- CONCRETE THRUST BLOCK TO BE USED ONLY WHERE IT WILL BEAR ON UNDISTURBED EARTH.

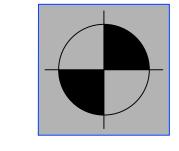
- USE RESTRAINED JOINT FITTINGS OR TIE RODS WHERE CONCRETE THRUST BLOCK IS UNACCEPTABLE.

- SIZE OF BLOCK OR MEGALUG TO BE DESIGNED FOR SPECIFIC CONDITIONS SIDEWALK----EDGESTONE ----FINISHED_ STREET GRADE BWSC STANDARD
VALVE BOX AND COVER ----- ACCESS TUBE 4"-12" DUCTILE IRON PIPE-EXISTING WATER ___ TAPPING SLEEVE ----MECHANICAL JOINTS -TYPICAL WATER PIPE CONNECTION WITH TAPPING SLEEVE AND GATE VALVE SCALE: NOT TO SCALE



THE SEWER SERVICING THE FIXTURE(S) SHALL BE CONSIDERED AS BEING SUBJECT TO BACKFLOW AND SHALL BE SUPPLIED WITH BACKWATER VALVES.

LOCATION OF BACKWATER VALVES
SCALE: NOT TO SCALE



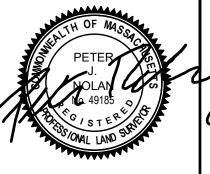
PETER NOLAN & ASSOCIATES, LLC

LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS 80 JEWETT ST, (SUITE 1) NEWTON, MA 02458 Tel:857-891-7478 617-782-1533



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80 JEWETT ST, (SUITE 1





59-61 BOW STREET SOMERVILLE, **MASSACHUSETTS**

CIVIL PLAN

REVISION BLOCK

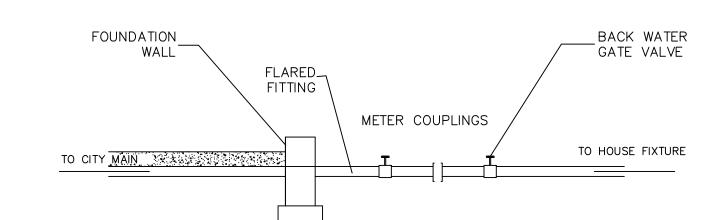
BY	DESCRIPTION	DATE

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DATE:	10/30/2023
DRAWN BY:	JRH
CHECKED BY:	E.S
APPROVED BY:	P.N

DETAILS

SHEET 3 OF 4



WATER METER DETAIL SCALE: NOT TO SCALE

EROSION CONTROL NOTES

- 1. THE EROSION CONTROL PLANS IN THIS SET SHALL BE REVIEWED AND IMPLEMENTED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL WORK WITH THE PROJECT'S ENGINEER THROUGHOUT CONSTRUCTION TO ENSURE THE SITE IS PROPERLY PROTECTED FROM POSSIBLE POLLUTANTS. THE ENGINEER HAS AUTHORIZATION TO ADD OR REMOVE BMP MEASURES THROUGHOUT CONSTRUCTION.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING SITE EROSION CONTROL AT ALL TIMES.
- 3. IT SHALL BE THE RESPONSIBILITY OF THE OWNER AND THE PERMITTEE TO ENSURE THAT EROSION DOES NOT OCCUR FROM ANY ACTIVITY DURING OR AFTER PROJECT CONSTRUCTION. ADDITIONAL MEASURES, BEYOND THOSE SPECIFIED, MAY BE REQUIRED BY THE PLANNING DIRECTOR AS DEEMED NECESSARY TO CONTROL ACCELERATED EROSION.
- 4. AT THE END OF EACH WORKDAY, AT THE END OF EACH WORKWEEK, THE CONTRACTOR SHALL IMPLEMENT ALL TEMPORARY MEASURES NECESSARY TO PREVENT EROSION AND SILTATION, UNTIL THE PROJECT HAS BEEN FINALIZED. THESE MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, DIRECT SEEDING OF THE AFFECTED AREAS, STRAW MULCHING, AND/OR INSTALLATION OF STRAW BALES DAMS/SILT FENCES.
- 5. DURING CONSTRUCTION, NO TURBID WATER SHALL BE PERMITTED TO LEAVE THE SITE. USE OF SILT AND GREASE TRAPS, FILTER BERMS, HAY BALES OR SILT FENCES SHALL BE USED TO PREVENT SUCH DISCHARGE.
- 6. ALL AREAS ON— AND OFF—SITE EXPOSED DURING CONSTRUCTION ACTIVITIES, IF NOT PERMANENTLY LANDSCAPED PER PLAN, SHALL BE PROTECTED BY MULCHING AND/OR SEEDING.
- 7. ALL EXCAVATED MATERIAL SHALL BE REMOVED TO AN APPROVED DISPOSAL SITE OR DISPOSED OF ON-SITE IN A MANNER THAT WILL NOT CAUSE EROSION.
- 8. ANY MATERIAL STOCKPILED, FOR LONGER THAN 14 DAYS, DURING CONSTRUCTION SHALL BE COVERED WITH PLASTIC.
- 9. UPON COMPLETION OF CONSTRUCTION, ALL REMAINING EXPOSED SOILS SHALL BE PERMANENTLY REVEGETATED.
- 10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ADDITIONAL MEASURES NECESSARY TO CONTROL SITE EROSION AND PREVENT SEDIMENT TRANSPORT OFF—SITE ARE IMPLEMENTED.
- 11. ALL SPILLS AND/OR LEAKS SHALL BE IMMEDIATELY CLEANED UP AND MITIGATED.

CONSTRUCTION MATERIALS

- ALL LOOSE STOCKPILED CONSTRUCTION MATERIALS THAT ARE NOT ACTIVELY BEING USED (I.E. SOIL, SPOILS, AGGREGATE, FLY-ASH, STUCCO, HYDRATED LIME, ETC.) SHALL BE COVERED AND BERMED.
- ALL CHEMICALS SHALL BE STORED IN WATERTIGHT CONTAINERS (WITH APPROPRIATE SECONDARY CONTAINMENT TO PREVENT ANY SPILLAGE OR LEAKAGE) OR IN A STORAGE SHED (COMPLETELY ENCLOSED).
- EXPOSURE OF CONSTRUCTION MATERIALS TO PRECIPITATION SHALL BE MINIMIZED. THIS DOES NOT INCLUDE MATERIALS AND EQUIPMENT THAT ARE DESIGNED TO BE OUTDOORS AND EXPOSED TO ENVIRONMENTAL CONDITIONS (I.E. POLES, EQUIPMENT PADS, CABINETS, CONDUCTORS, INSULATORS, BRICKS, ETC.).
- BEST MANAGEMENT PRACTICES TO PREVENT THE OFF-SITE TRACKING OF LOOSE CONSTRUCTION AND LANDSCAPE MATERIALS SHALL BE IMPLEMENTED.

WASTE MANAGEMENT

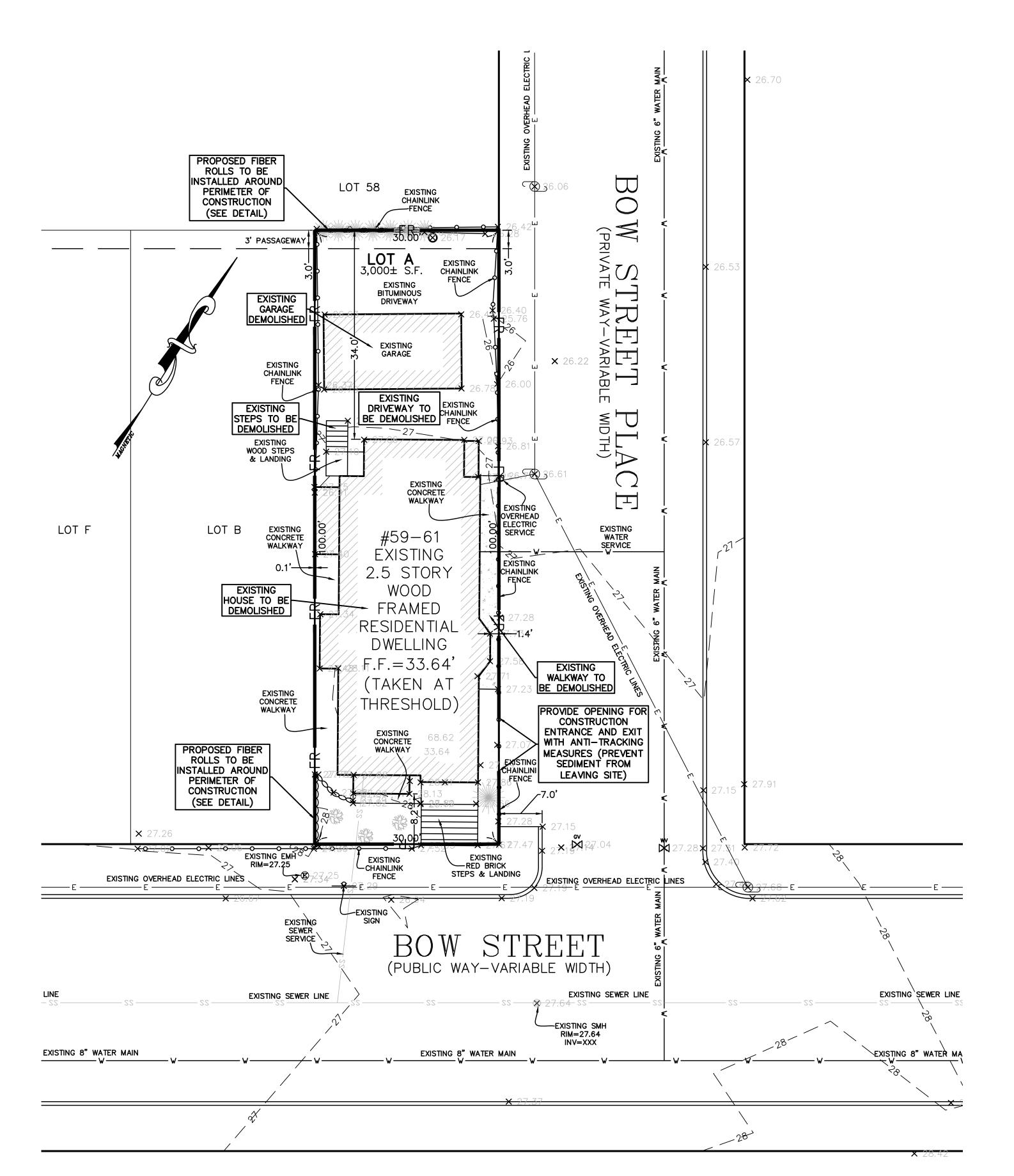
- DISPOSAL OF ANY RINSE OR WASH WATERS OR MATERIALS ON IMPERVIOUS OR PERVIOUS SITE SURFACES OR INTO THE STORM DRAIN SYSTEM SHALL BE
- SANITATION FACILITIES SHALL BE CONTAINED (E.G. PORTABLE TOILETS) TO PREVENT DISCHARGES OF POLLUTANTS TO THE STORM WATER DRAINAGE SYSTEM OR RECEIVING WATER, AND SHALL BE LOCATED A MINIMUM 20 FEET AWAY FROM AN INLET, STREET OR DRIVEWAY, STREAM, RIPARIAN AREA OR OTHER DRAINAGE FACILITY.
- SANITATION FACILITIES SHALL BE INSPECTED REGULARLY FOR LEAKS AND SPILLS AND CLEANED OR REPLACED AS NECESSARY.
- COVER WASTE DISPOSAL CONTAINERS AT THE END OF EVERY BUSINESS DAY AND DURING A RAIN EVENT.
- DISCHARGES FROM WASTE DISPOSAL CONTAINERS TO THE STORM WATER DRAINAGE SYSTEM OR RECEIVING WATER SHALL BE PREVENTED.
- STOCKPILED WASTE MATERIAL SHALL BE CONTAINED AND SECURELY PROTECTED FROM WIND AND RAIN AT ALL TIMES UNLESS ACTIVELY BEING USED.

PROCEDURES THAT EFFECTIVELY ADDRESS HAZARDOUS AND NON-HAZARDOUS SPILLS SHALL BE IMPLEMENTED. EQUIPMENT AND MATERIALS FOR CLEANUP OF SPILLS SHALL BE AVAILABLE ON SITE AND THAT SPILLS AND LEAKS SHALL BE CLEANED UP IMMEDIATELY AND DISPOSED OF PROPERLY; AND

CONCRETE WASHOUT AREAS AND OTHER WASHOUT AREAS THAT MAY CONTAIN ADDITIONAL POLLUTANTS SHALL BE CONTAINED SO THERE IS NO DISCHARGE INTO THE UNDERLYING SOIL AND ONTO THE SURROUNDING AREAS.

PETER NOLAN & ASSOCIATES LLC SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACT OF CONTRACT

HANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE, WITHOUT THE PRIOR WRITTEN PERMISSION OF PETER NOLAN & ASSOCIATES LLC ANY

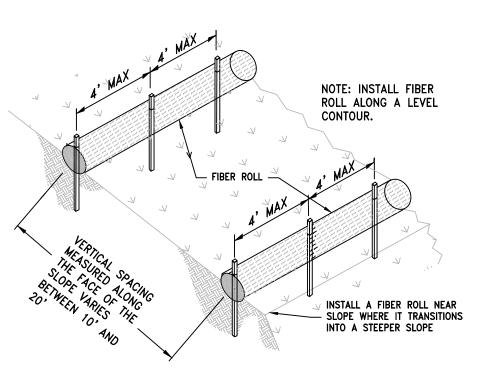


VEHICLE STORAGE AND MAINTENANCE

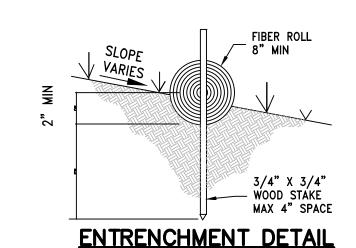
- MEASURES SHALL BE TAKEN TO PREVENT OIL, GREASE, OR FUEL TO LEAK IN TO THE GROUND, STORM DRAINS OR SURFACE WATERS.
- ALL EQUIPMENT OR VEHICLES, WHICH ARE TO BE FUELED, MAINTAINED AND STORED ONSITE SHALL BE IN A DESIGNATED AREA FITTED WITH APPROPRIATE BMPs.
- LEAKS SHALL BE IMMEDIATELY CLEANED AND LEAKED MATERIALS SHALL BE DISPOSED OF PROPERLY.

LANDSCAPE MATERIALS

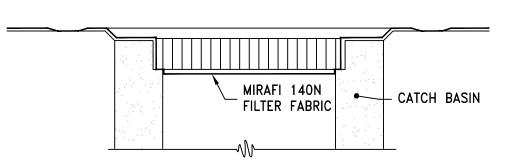
- CONTAIN STOCKPILED MATERIALS SUCH AS MULCHES AND TOPSOIL WHEN THEY ARE NOT ACTIVELY BEING USED.
- CONTAIN FERTILIZERS AND OTHER LANDSCAPE MATERIALS WHEN THEY ARE NOT ACTIVELY BEING USED.
- DISCONTINUE THE APPLICATION OF ANY ERODIBLE LANDSCAPE MATERIAL WITHIN 2 DAYS BEFORE A FORECASTED RAIN EVENT OR DURING PERIODS OF PRECIPITATION.
- APPLY ERODIBLE LANDSCAPE MATERIAL AT QUANTITIES AND APPLICATION RATES ACCORDING TO MANUFACTURE RECOMMENDATIONS OR BASED ON WRITTEN SPECIFICATIONS BY KNOWLEDGEABLE AND EXPERIENCED FIELD PERSONNEL.
- STACK ERODIBLE LANDSCAPE MATERIAL ON PALLETS AND COVERING OR STORING SUCH MATERIALS WHEN NOT BEING USED OR APPLIED.



TYPICAL INSTALLATION



FIBER ROLLS



INSPECTION AND MAINTENANCE:

- 1. FILTER FABRIC BARRIERS SHALL BE INSPECTED WEEKLY AFTER EACH SIGNIFICANT STORM 1 INCH RAINFALL (25.4 MM) IN 24 HOUR PERIOD. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- 2. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES 0.5" MAXIMUM HEIGHT. AT THAT TIME INSPECT THE FILTER MATERIAL FOR TEARS AND CLEAN OR REPLACE AS REQUIRED.
- 3. THE REMOVED SEDIMENT SHALL BE DISTRIBUTED EVENLY ACROSS AREAS ON-SITE, CONFORM WITH THE EXISTING GRADE AND BE REVEGETATED OR OTHERWISE STABILIZED PER EROSION CONTROL NOTES.

CATCH BASIN PROTECTION

FIBER ROLL CONSTRUCTION SPECIFICATIONS

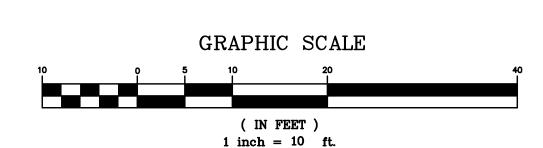
- 1. PREPARE SLOPE BEFORE THE WATTLING PROCEDURE IS STARTED. SHALLOW GULLIES SHOULD BE SMOOTHED AS WORK PROGRESSES.
- 2. DIG SMALL TRENCHES ACROSS SLOPE ON CONTOUR, TO PLACE WATTLES IN. THE TRENCH SHOULD BE DEEP ENOUGH TO ACCOMMODATE HALF THE THICKNESS OF THE WATTLE. WHEN THE SOIL IS LOOSE AND UNCOMPACTED, THE TRENCH SHOULD BE DEEP ENOUGH TO BURY THE WATTLE 2/3 OF ITS THICKNESS BECAUSE THE GROUND WILL SETTLE. IT IS CRITICAL THAT WATTLES ARE INSTALLED PERPENDICULAR TO WATER MOVEMENT, PARALLEL
- TO THE SLOPE CONTOUR.

 3. START BUILDING TRENCHES AND INSTALL WATTLES FROM THE BOTTOM OF THE SLOPE
- AND WORK UP.

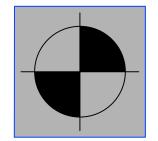
 4. CONSTRUCT TRENCHES AT CONTOUR INTERVALS OF THREE TO EIGHT FEET APART DEPENDING ON STEEPNESS OF SLOPE. THE STEEPER THE SLOPE, THE CLOSER TOGETHER THE TRENCHES
- 5. LAY THE WATTLE ALONG THE TRENCHES FITTING IT SNUGLY AGAINST THE SOIL. MAKE SURE NO GAPS EXIST BETWEEN THE SOIL AND THE STRAW WATTLE. USE A STRAIGHT BAR TO DRIVE HOLES THROUGH THE WATTLE AND INTO THE SOIL FOR THE WOODEN
- 6. DRIVE THE STAKE THROUGH THE PREPARED HOLE INTO THE SOIL. LEAVE ONLY ONE OR TWO INCHES OF STAKE EXPOSED ABOVE WATTLE. IF USING WILLOW STAKES REFER TO USDA SOIL CONSERVATION SERVICE TECHNICAL GUIDE, BIOENGINEERING, FOR GUIDELINES TO PREPARING LIVE WILLOW MATERIAL.
- 7. INSTALL STAKES AT LEAST EVERY FOUR FEET APART THROUGH WATTLE. ADDITIONAL STAKES MAY BE DRIVEN ON THE DOWNSLOPE SIDE OF THE TRENCHES ON HIGHLY EROSIVE OR VERY STEEP SLOPES.

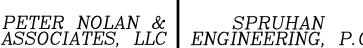
FIBER ROLL INSTALLATION AND MAINTENANCE

- 8. INSPECT THE STRAW WATTLE AND THE SLOPES AFTER SIGNIFICANT STORMS. MAKE SURE THE WATTLES ARE IN CONTACT WITH THE SOIL.
 9. REPAIR ANY RILLS OR GULLIES PROMPTLY.
- 10. RESEED OR REPLANT VEGETATION IF NECESSARY UNTIL THE SLOPE IS STABILIZED.



FIBER ROLLS



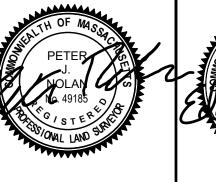


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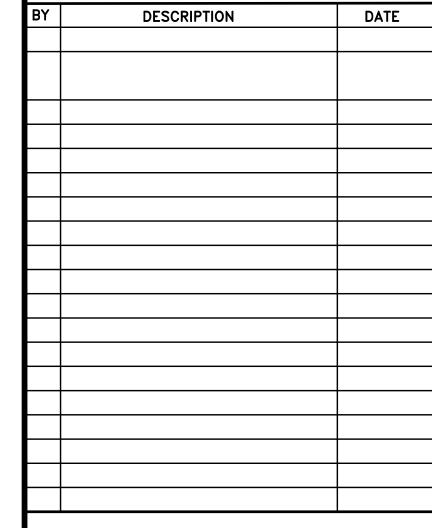




59-61 BOW STREET SOMERVILLE, MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK



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10/30/2023
JRH
E.S
P.N

EROSION CONTROL & DEMOLITION PLAN

SHEET 4 OF 4