

PLAN INTENT

THESE DRAWINGS ARE INTENDED TO SHOW CONSTRUCTION REQUIREMENTS FOR A STORMWATER PERMIT FILING WITH THE PLANNING BOARD.

APPLICANT:

KEVIN WHELAN
63 PERKINS ROW
TOPSFIELD, MA 01983

RECORD OWNER:

NATALIE M. WHELAN
63 PERKINS ROW
TOPSFIELD, MA 01983

ZONING:

INNER RESIDENTIAL AND
AGRICULTURAL DISTRICT (IRA)

REFERENCES:

TRANSFER OF TITLE:
BOOK 593
CERT. NO. 95901
DOCU. NO. 638352

RECORD PLAN:
LAND COURT PLAN 21476-B

SOIL TESTING DATA:

TP1-14
0-9" Ad FINE SANDY LOAM 10YR4/4
9-28" Bw FINE SANDY LOAM 10YR5/6
28-100" C VERY GRAVELLY FINE SANDY LOAM 2.5Y5/6
ESHW @ 60"

TP5-14
0-9" Ad FINE SANDY LOAM 10YR3/4
9-17" Bw FINE SANDY LOAM 10YR5/8
17-115" C GRAVELLY FINE SANDY LOAM 10YR5/6
ESHW @ 74"

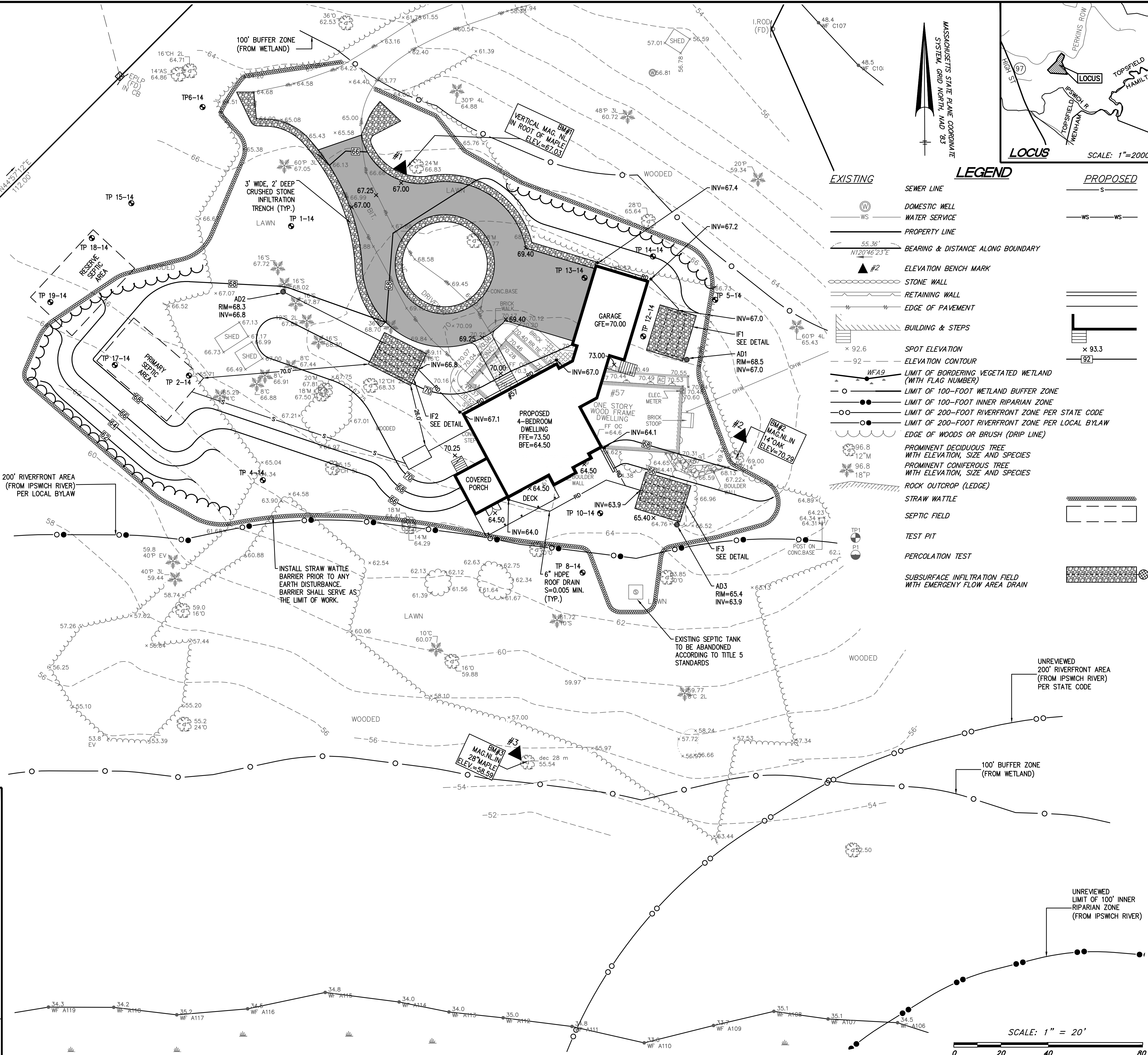
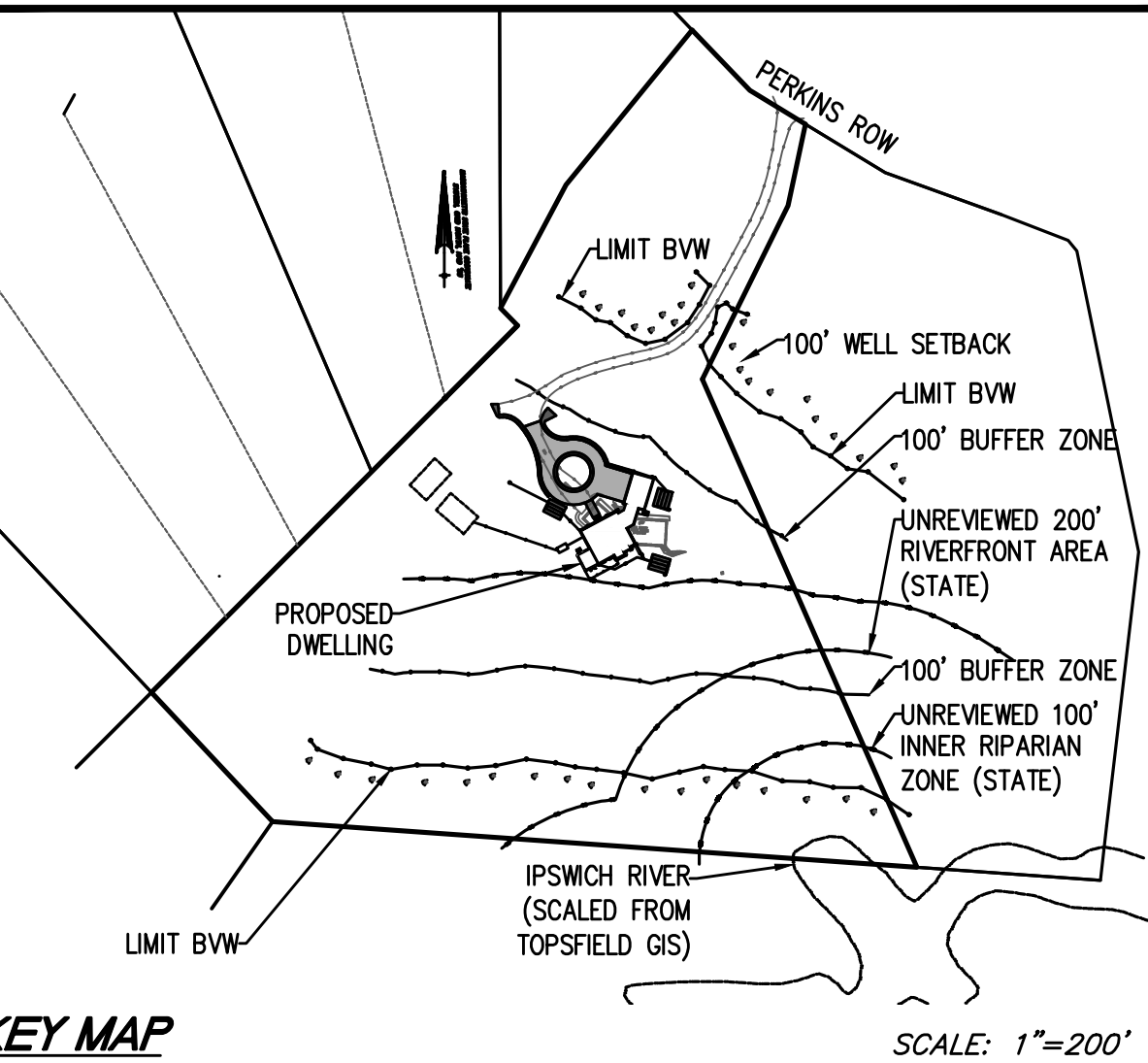
TP8-14
0-16" FILL (LOAM AND IMPORT)
16-30" Bw FINE SANDY LOAM 10YR5/6
30-96" C GRAVELLY FINE SANDY LOAM 2.5Y5/6
ESHW @ 60"

TP10-14
0-8" Ad FINE SANDY LOAM 10YR3/2
8-28" Bw FINE SANDY LOAM 10YR5/4
28-80" C GRAVELLY LOAMY FINE SAND 2.5Y5/6
ESHW @ 34"

TP12-14
0-6" Ad FINE SANDY LOAM 10YR3/2
6-20" Bw FINE SANDY LOAM 10YR4/6
20-120" C GRAVELLY FINE SANDY LOAM 2.5Y5/4
ESHW @ 40"

TP13-14
0-16" F FILL (LOAM AND BORROW)
16-78" C GRAVELLY FINE SANDY LOAM 2.5Y5/4
ESHW @ 44"

TP14-14
0-8" Ad FINE SANDY LOAM 10YR3/3
8-18" Bw FINE SANDY LOAM 2.5Y5/6
18-110" C GRAVELLY FINE SANDY LOAM 2.5Y5/4
ESHW @ 44"



STORMWATER
DRAINAGE
DESIGN

57 Perkins Row
Topsfield, Massachusetts 01983

ASSESSORS:

MAP LOT
58 25

PREPARED FOR:

Kevin
Whelan

57 Perkins Row
Topsfield, Massachusetts 01983

HANCOCK
ASSOCIATES

Civil Engineers

Land Surveyors

Wetland Scientists

185 CENTRE STREET, DANVERS, MA 01923
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3/18/24

1	JUP	MTC	3/18/24	COMMENTS FROM SW CONSULTANT
NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION

DATE: 3/4/24 DESIGN BY: JUP
SCALE: 1" = 20' DRAWN BY: PSL
APPRVD. BY: MTC CHECK BY: JUP

SITE
PLAN

PLOT DATE: Mar 21, 2024 10:10 am
PATH: P:\Gis\20 Projects\27296-Whelan-Topsfield\Eng\DWG\

DWG: 27296psp.dwg

LAYOUT: C1

SHEET: 1 OF 2

PROJECT NO.: 27296

GENERAL NOTES

- THE HORIZONTAL DATUM FOR THIS SURVEY IS THE MASSACHUSETTS COORDINATE SYSTEM, NAD 1983, MAINLAND ZONE. THE VERTICAL DATUM FOR THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVOD88). SAID DATUM WAS ESTABLISHED VIA GPS OBSERVATIONS UTILIZING NAD83 (NA2011) EPOCH 2010.00 (MYCS2) AND GEOID 18.
- UTILITIES SHOWN HEREON FROM FIELD LOCATIONS OF SURFACE STRUCTURES. NO UNDERGROUND UTILITIES WERE INCLUDED AS PART OF THIS SURVEY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, SIZE & ELEVATION OF ALL UTILITIES WITHIN THE AREA OF PROPOSED WORK AND TO CONTACT "DIG-SAFE" AT 811 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION OR CONSTRUCTION.
- LIMITS OF BORDERING VEGETATED WETLANDS SHOWN HEREON WERE DELINEATED BY HANCOCK ASSOCIATES ON 9/8/2023 AND LOCATED BY FIELD SURVEY.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND RELATIVE ELEVATION OF BENCH MARKS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
- CONTRACTOR SHALL FURNISH CONSTRUCTION LAYOUT OF BUILDING AND SITE IMPROVEMENTS. THIS WORK SHALL BE PERFORMED BY A PROFESSIONAL LAND SURVEYOR.
- SAFETY MEASURES, CONSTRUCTION METHODS AND CONTROL OF WORK SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION THAT ARE NOT DESIGNATED FOR DEMOLITION AND / OR REMOVAL HEREON. DAMAGED IMPROVEMENTS SHALL BE REPAIRED TO THE SATISFACTION OF THEIR RESPECTIVE OWNERS.
- ANY INTENDED REVISION OF THE HORIZONTAL AND/OR VERTICAL LOCATION OF IMPROVEMENTS TO BE CONSTRUCTED AS SHOWN HEREON SHALL BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO IMPLEMENTATION.
- THIS PLAN IS NOT INTENDED TO SHOW AN ENGINEERED BUILDING FOUNDATION DESIGN, WHICH WOULD INCLUDE DETAILS AND FINAL ELEVATIONS OF FOOTINGS, WALLS AND SUBSURFACE DRAINAGE TO PREVENT INTERIOR FLOODING. SEE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS.
- PROPOSED BUILDING FOUNDATION CONFIGURATION AND LOCATION ON THE LOT AS SHOWN ARE CONCEPTUAL AND SHALL BE VERIFIED AS TO CONFORMANCE WITH FINAL ARCHITECTURAL PLANS AND ZONING ORDINANCES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING HORIZONTAL AND VERTICAL MEASUREMENTS FOR ALL SUBSURFACE STRUCTURES. THIS INFORMATION SHALL BE REPORTED TO THE ENGINEER.

GRADING AND UTILITY PLAN NOTES

- LOCATIONS OF EXISTING UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS SHOWN HEREON ARE APPROXIMATE ONLY. ALL UTILITIES/OBSTRUCTIONS/SYSTEMS MAY NOT BE SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS, WHETHER OR NOT SHOWN HEREON.
- UNLESS OTHERWISE SHOWN, ALL NEW UTILITIES SHALL BE UNDERGROUND.
- RIM ELEVATIONS SHOWN FOR NEW STRUCTURES ARE APPROXIMATE AND ARE PROVIDED TO ASSIST CONTRACTOR WITH MATERIAL TAKEOFFS. FINISH RIM ELEVATIONS SHOULD MATCH PAVEMENT, GRADING OR LANDSCAPING, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- STRUCTURE DETAILS FROM INDEPENDENT VENDORS ARE CONSTANTLY CHANGING. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT DETAILS SHOWN MATCH CURRENT DETAILS AND SPECIFICATIONS FROM VENDORS.
- ALL PROPOSED TOP OF VERTICAL CURB ELEVATIONS ARE 6" ABOVE THE BOTTOM OF CURB UNLESS OTHERWISE SHOWN.
- WHERE NEW PAVING MEETS EXISTING PAVING, MEET LINE AND GRADE OF EXISTING WITH NEW PAVING.
- AT LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
- EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO THE OWNER.
- ALL DISTURBED AREAS NOT COVERED WITH PAVEMENT, STRUCTURES, INDIVIDUAL PLANTINGS, OR MULCH SHALL HAVE LOAM AND SOD, OR LOAM AND SEED AS SHOWN ON THE LANDSCAPE PLANS OR AS DIRECTED BY THE ENGINEER.
- ALL UNDERGROUND STRUCTURES AND UTILITIES SHALL BE CAPABLE OF WITHSTANDING H2O WHEEL LOADS.
- STRAW WATTLE SHOWN HEREON SHALL BE INSTALLED BEFORE EARTH DISTURBANCE OCCURS, AND SHALL SERVE AS THE LIMIT OF WORK.
- ALL POINTS OF CONSTRUCTION EGRESSOR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ON TO PUBLIC ROADS.

REGULATORY NOTES

- CONTRACTOR SHALL CONTACT "DIG-SAFE" FOR AN UNDERGROUND UTILITY MARKING AT 811 AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.
- CONTRACTOR SHALL MAKE HIMSELF AWARE OF ALL CONSTRUCTION REQUIREMENTS, CONDITIONS AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES PRIOR TO THE COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.
- ALL WORK OUTSIDE OF THE BUILDING THAT IS LESS THAN 10 FEET FROM THE INSIDE FACE OF THE BUILDING FOUNDATION SHALL CONFORM WITH THE UNIFORM STATE PLUMBING CODE OF MASSACHUSETTS, 24B CMR 2.00.
- CONSTRUCTION ACTIVITIES SHALL CONFORM TO THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

EROSION AND SEDIMENTATION PLAN

BEST MANAGEMENT PRACTICES (BMP) FOR EROSION AND SEDIMENTATION CONTROL ARE STAKED STRAW WATTLES, FILTER FENCES, HYDRO SEEDING, AND PHASED DEVELOPMENT. MANY STORMWATER BMP TECHNOLOGIES (E.G., INFILTRATION TECHNOLOGIES) ARE NOT DESIGNED TO HANDLE THE HIGH CONCENTRATIONS OF SEDIMENTS TYPICALLY FOUND IN CONSTRUCTION RUNOFF AND MUST BE PROTECTED FROM CONSTRUCTION-RELATED SEDIMENT LOADINGS. CONSTRUCTION BMP'S WILL BE INSPECTED DAILY AND MAINTAINED AS REQUIRED TO ENSURE PROPER FUNCTION.

IN DEVELOPING THE PROPOSED PROJECT CERTAIN MEASURES WILL BE IMPLEMENTED TO MINIMIZE IMPACTS EROSION AND SEDIMENTATION COULD HAVE ON SURROUNDING AREAS. THIS SECTION ADDRESSES ITEMS THAT INVOLVE PROPER CONSTRUCTION TECHNIQUES, CLOSE SURVEILLANCE OF WORKMANSHIP, AND IMMEDIATE RESPONSE TO EMERGENCY SITUATIONS. THE DEVELOPER MUST BE PREPARED TO PROVIDE WHATEVER REASONABLE MEASURES ARE NECESSARY TO PROTECT THE ENVIRONMENT DURING CONSTRUCTION AND TO STABILIZE ALL DISTURBED AREAS AS SOON AS CONSTRUCTION ENDS.

PRE-CONSTRUCTION

- THE CONTRACTOR SHALL HAVE A STOCKPILE OF MATERIALS REQUIRED TO CONTROL EROSION ON-SITE TO BE USED TO SUPPLEMENT OR REPAIR EROSION CONTROL DEVICES. THESE MATERIALS SHALL INCLUDE, BUT ARE NOT LIMITED TO STRAW WATTLES, SILT FENCE AND CRUSHED STONE.
- THE CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL ON SITE AND SHALL UTILIZE EROSION CONTROL MEASURES WHERE NEEDED, REGARDLESS OF WHETHER THE MEASURES ARE SPECIFIED ON THE PLAN OR IN THE ORDER OF CONDITIONS.
- UNSUITABLE EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE.

PRELIMINARY SITE WORK

- EXCAVATED MATERIALS SHOULD BE STOCKPILED, SEPARATING THE TOPSOIL FOR FUTURE USE ON THE SITE. EROSION CONTROL SHALL BE UTILIZED ALONG THE DOWN SLOPE SIDE OF THE PILES AND SIDE SLOPES SHALL NOT EXCEED 2:1.
- IF INTENSE RAINFALL IS ANTICIPATED, THE INSTALLATION OF SUPPLEMENTAL STRAW BALE DIKES, SILT FENCES, OR ARMORED DIKES SHALL BE CONSIDERED.

ONGOING SITE WORK

- EROSION CONTROL MEASURES SHALL BE INSPECTED DAILY AND REPLACED AS NEEDED. SEDIMENT BUILT UP BEHIND SILT FENCES SHALL BE REMOVED WHEN LEVEL REACHES ONE HALF WATTLE HEIGHT AND DISPOSED IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- IF NEEDED, DEWATERING SHALL BE DONE IN A MANNER SO AS NOT TO TRANSMIT SILT, SAND, OR PARTICULATE MATTER TO THE RECEIVING WATER OR EXISTING DRAINAGE SYSTEM.
- NO EXISTING UTILITIES SHALL BE ABANDONED IN PLACE.

LANDSCAPING

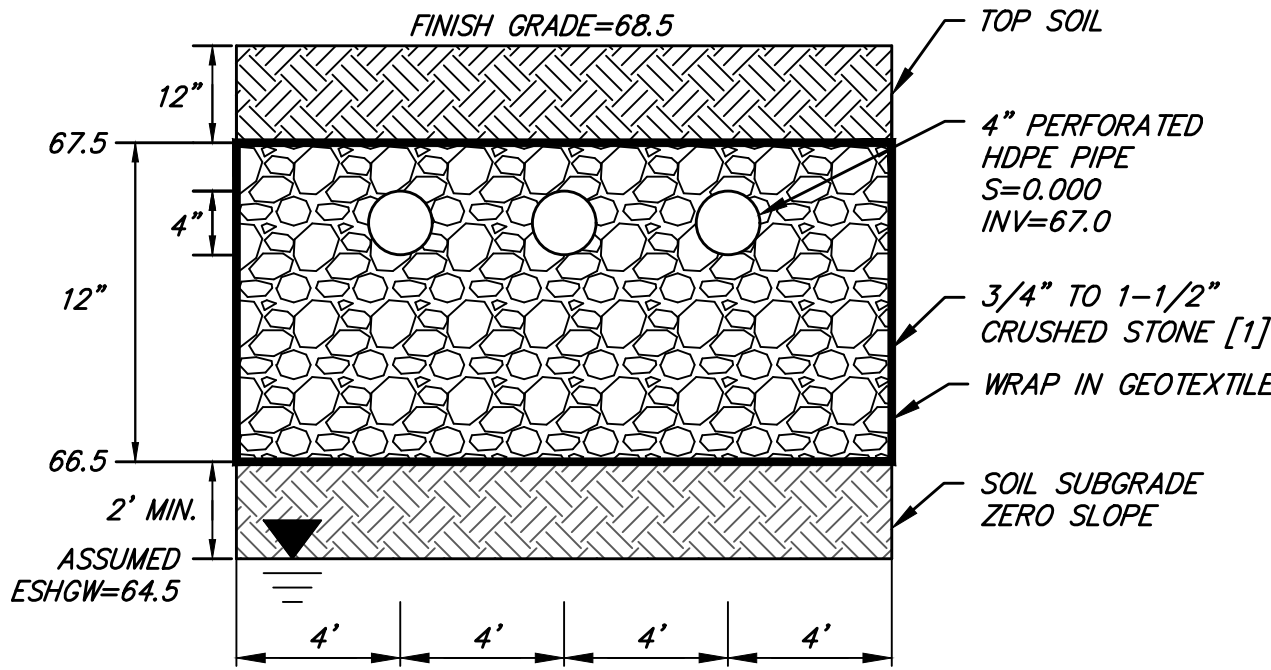
- LANDSCAPING SHALL OCCUR AS SOON AS POSSIBLE TO PROVIDE STABILIZATION OF DISTURBED SURFACES.
- IF THE SEASON OR ADVERSE WEATHER CONDITIONS DO NOT ALLOW THE ESTABLISHMENT OF VEGETATION, TEMPORARY MULCHING WITH STRAW, WOOD CHIPS WEIGHTED WITH SNOW FENCE OR BRANCHES, OR OTHER METHODS SHALL BE PROVIDED.
- A MINIMUM OF 6 INCHES OF TOPSOIL SHALL BE PLACED AND ITS SURFACE SMOOTHED TO THE SPECIFIED GRADES.
- THE USE OF HERBICIDES IS STRONGLY DISCOURAGED.
- HYDRO SEEDING IS ENCOURAGED FOR STEEP SLOPES. APPLICATION RATES ON SLOPES GREATER THAN 3:1 SHALL HAVE A MINIMUM SEEDING RATE OF 5-LBS/1000 SF. A LATEX OR FIBER TACKIFIER SHALL BE USED ON THESE SLOPES AT A MINIMUM RATE OF 50 LBS. OF TACKIFIER PER 500 GALLONS OF WATER USED.

LIMIT OF WORK

LIMIT OF WORK=40,245SF

CONSTRUCTION SEQUENCE

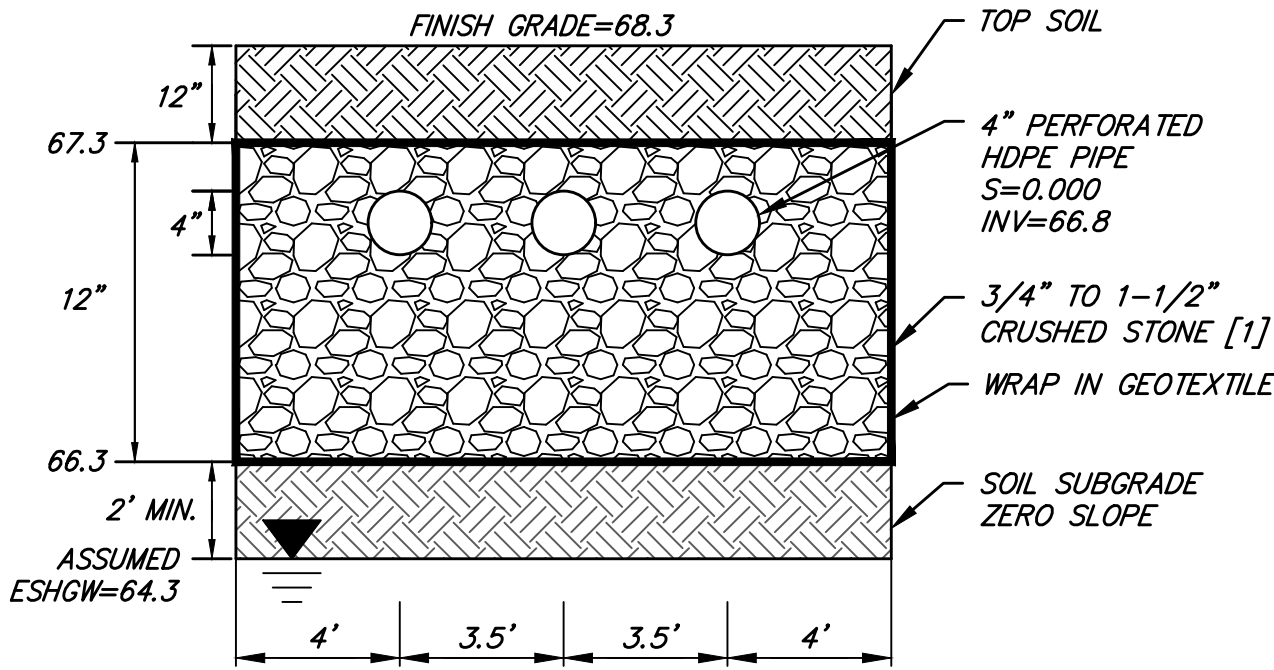
- INSTALL EROSION CONTROL
- SITE DEMOLITION AND PREPARATION.
- UTILITY AND FOUNDATION CONSTRUCTION.
- BACKFILL OF UTILITIES AND FOUNDATIONS.
- DRIVEWAY AND BUILDING CONSTRUCTION.
- FINAL GRADING AND PAVING.
- LANDSCAPING, LOAM AND SEED.
- REMOVAL OF EROSION CONTROL ONCE FULLY STABILIZED.



[1] ALL STONE SHALL BE DOUBLE WASHED
**SUBSURFACE INFILTRATION
FIELD IF1**

1

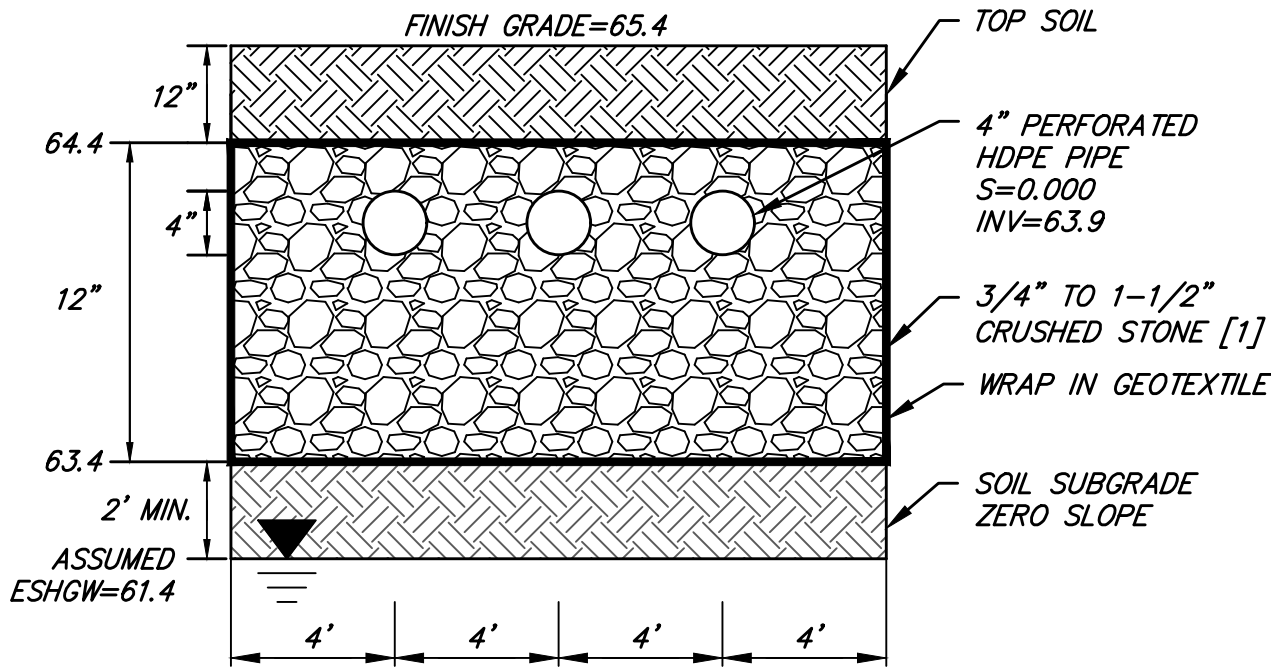
NOT TO SCALE



[1] ALL STONE SHALL BE DOUBLE WASHED
**SUBSURFACE INFILTRATION
FIELD IF2**

2

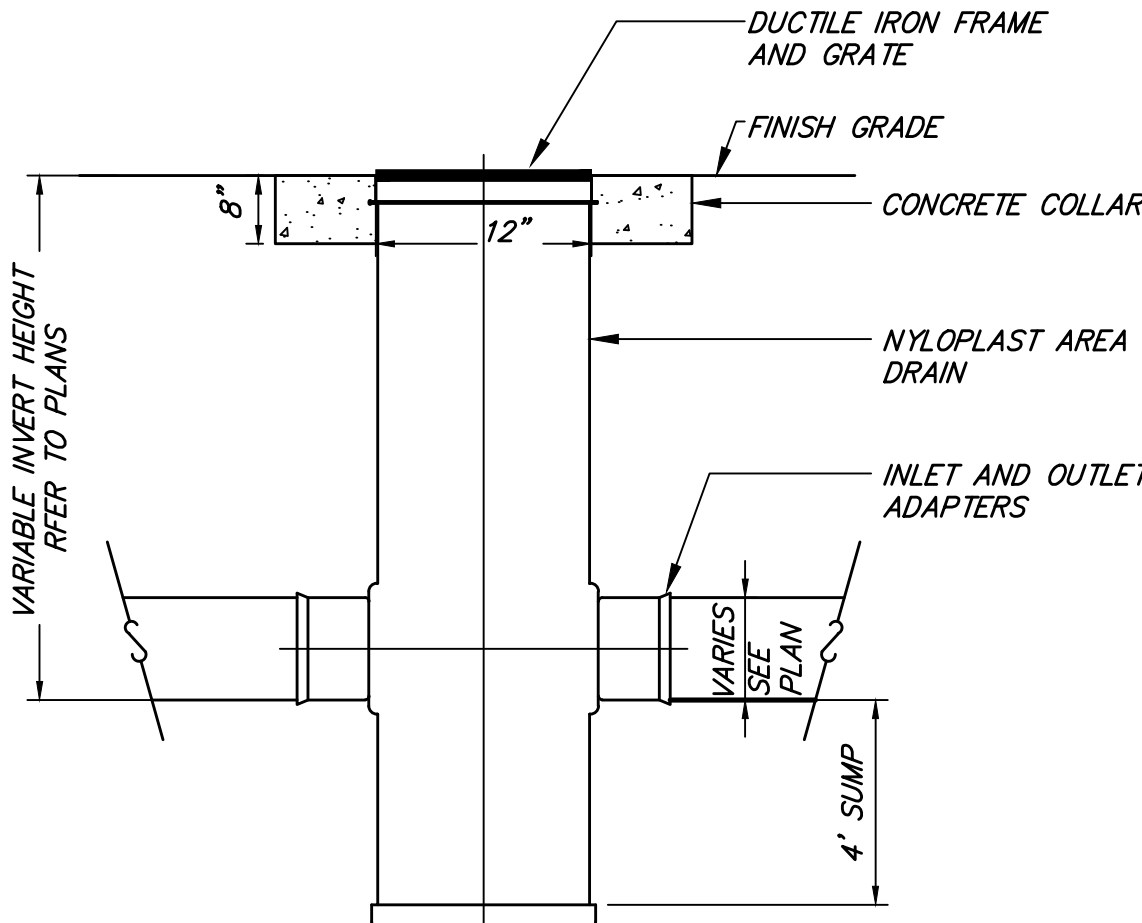
NOT TO SCALE



[1] ALL STONE SHALL BE DOUBLE WASHED
**SUBSURFACE INFILTRATION
FIELD IF3**

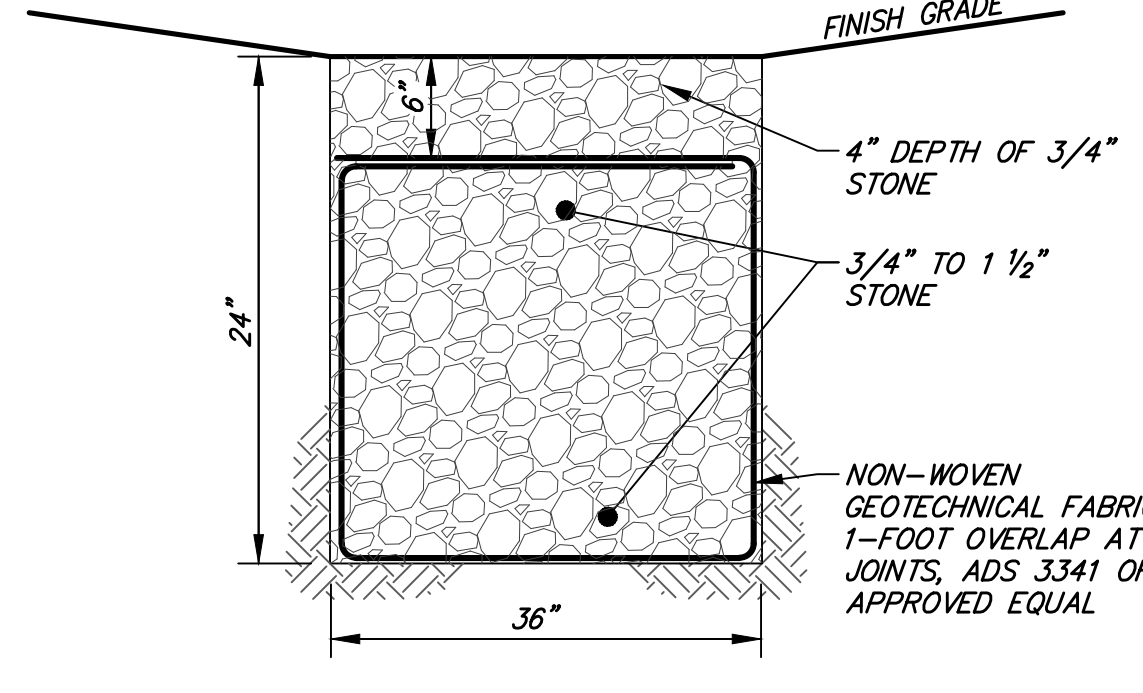
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NOT TO SCALE



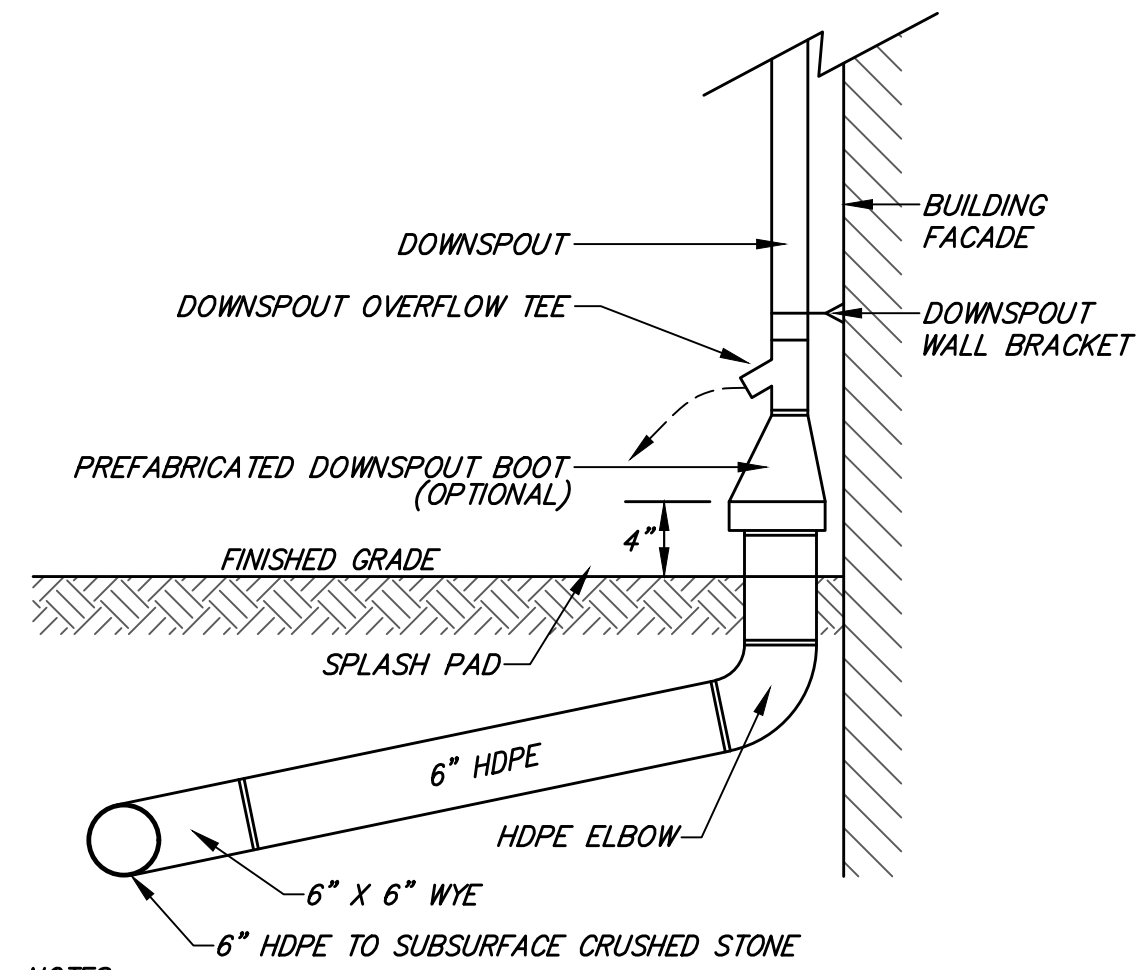
AREA DRAIN (AD)
TYPICAL CROSS SECTION
NOT TO SCALE

4



INFILTRATION TRENCH
NOT TO SCALE

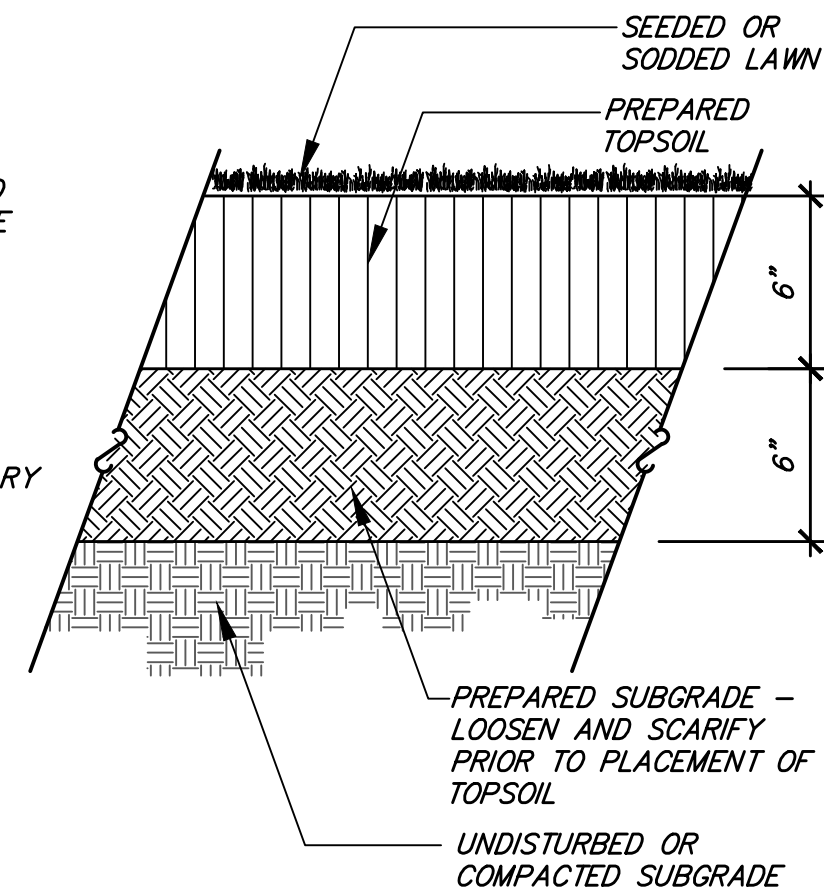
5



NOTES:
1. COORDINATE ALL ROOF DRAIN DOWNSPOUTS WITH ARCHITECTURAL DRAWINGS.

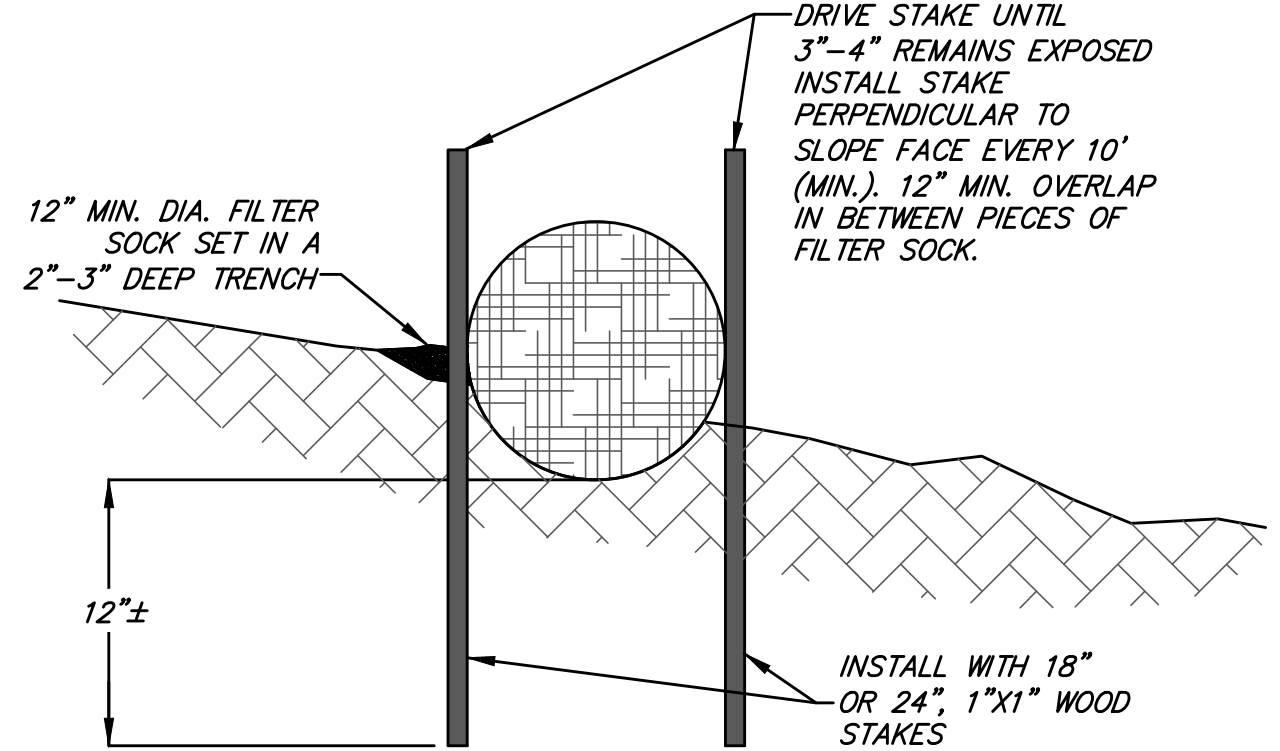
ROOF DRAIN CONNECTION
NOT TO SCALE

6



LOAM AND SEED
NOT TO SCALE

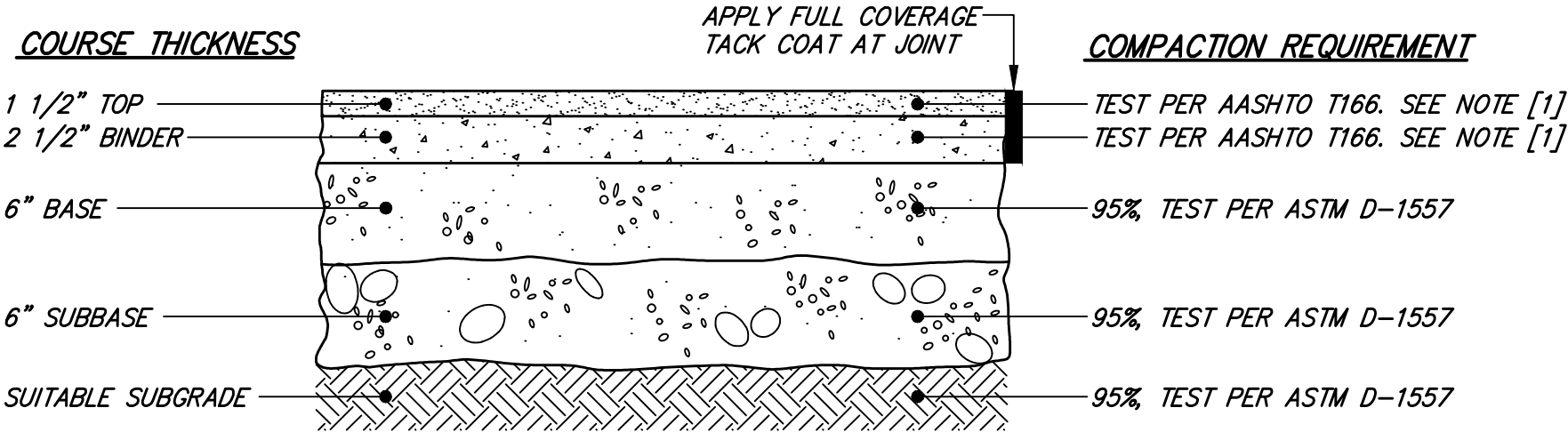
7



NOTES:
1. SOCK SIZE DEPICTED IS FOR GENERAL USE. GREATER SLOPES MAY REQUIRE LARGER SOCK.
2. COMPOST MATERIAL MAY BE DISPERSED ON SITE AT THE DISCRETION OF THE APPROVING AUTHORITY
3. PRIOR TO SETTING THE SOCK REMOVE LOOSE LITTER, BRANCHES AND OTHER MATERIAL THAT MAY PREVENT THE SOCK FROM DIRECT CONTACT WITH SOIL.

WATTLE
NOT TO SCALE

8



NOTES:
[1] COMPACT TO TEST AVERAGE OF 95% ±2.5%

MATERIAL	SPECIFICATION	MAXIMUM AGGREGATE OR PARTICLE SIZE (IN.)
TOP - BITUMINOUS CONCRETE	MHD M3.11.03 CLASS I, TYPE I-1	1/2
BINDER - BITUMINOUS CONCRETE	MHD M3.11.03 CLASS I, TYPE I-1	1
BASE - DENSE GRADED CRUSHED STONE	MHD M2.01.7	1 1/2
SUBBASE - GRAVEL BORROW	MHD M1.03.0 TYPE C	2

BITUMINOUS CONCRETE PAVEMENT
TYPICAL CROSS SECTION
NOT TO SCALE

9

STORMWATER
DRAINAGE
DESIGN

57 Perkins Row
Topsfield, Massachusetts 01983

ASSESSORS:

MAP
58

LOT
25

PREPARED FOR:

Kevin
Whelan

57 Perkins Row
Topsfield, Massachusetts 01983

HANCOCK
ASSOCIATES

Civil Engineers

Land Surveyors

Wetland Scientists

185 CENTRE STREET, DANVERS, MA 01923
VOICE (978) 777-3050, FAX (978) 774-7816
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3/18/24

1	JUP	MTS	3/18/24	COMMENTS FROM SW CONSULTANT
NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION
DATE:	3/4/24	DESIGN BY:	JUP	
SCALE:	NTS	DRAWN BY:	PSL	
APPRVD. BY:	MTS	CHECK BY:	JUP	

DETAILS
SHEET

PLOT DATE: Mar 21, 2024, 10:00 am
PLOT: P:\Gd\30 Projects\27296-KWhelan-Topsfield\Eng\DWG\

DWG: 27296psp.dwg

LAYOUT: C2

SHEET: 2 OF 2

PROJECT NO.:

27296

C2