CITY OF WORCESTER

LOCUS MAP – (NOT TO SCALE)

SOIL EVALUATOR: MARK ELBAG, JR P.E., SE# 12682 - PERC TEST BY:
TEST WITNESSED BY: DATE PERFORMED:3/18/2025

DEEP OBSERVATION HOLE NUMBER: TP-1

DEPTH FROM SURFACE (INCHES)	SOIL HORIZON/ LAYER	SOIL MATRIX: COLOR-MOIST (MUNSELL)	REDOXIMORPHIC FEATURES (MOTTLES)			SOIL TEXTURE (USDA)	SOIL CONSISTENCE (MOIST)
			DEPTH	COLOR	PERCENT		
7"	Ap	10YR3/2				SL	
14"	Bw	10YR4/2				LS	
98"	C	10YR4/4	NONE			LS	

DEEP OBSERVATION HOLE NUMBER: TP-2

DEPTH FROM SURFACE (INCHES)	SOIL HORIZON/ LAYER	SOIL MATRIX: COLOR-MOIST (MUNSELL)	REDOXIMORPHIC FEATURES (MOTTLES)			SOIL TEXTURE (USDA)	SOIL CONSISTENCE (MOIST)
			DEPTH	COLOR	PERCENT		
16"	Ap	10YR3/2				SL	
26"	Bw	10YR4/2				LS	
105"	C	10YR4/4	NONE			LS	

DEEP OBSERVATION HOLE NUMBER: TP-2

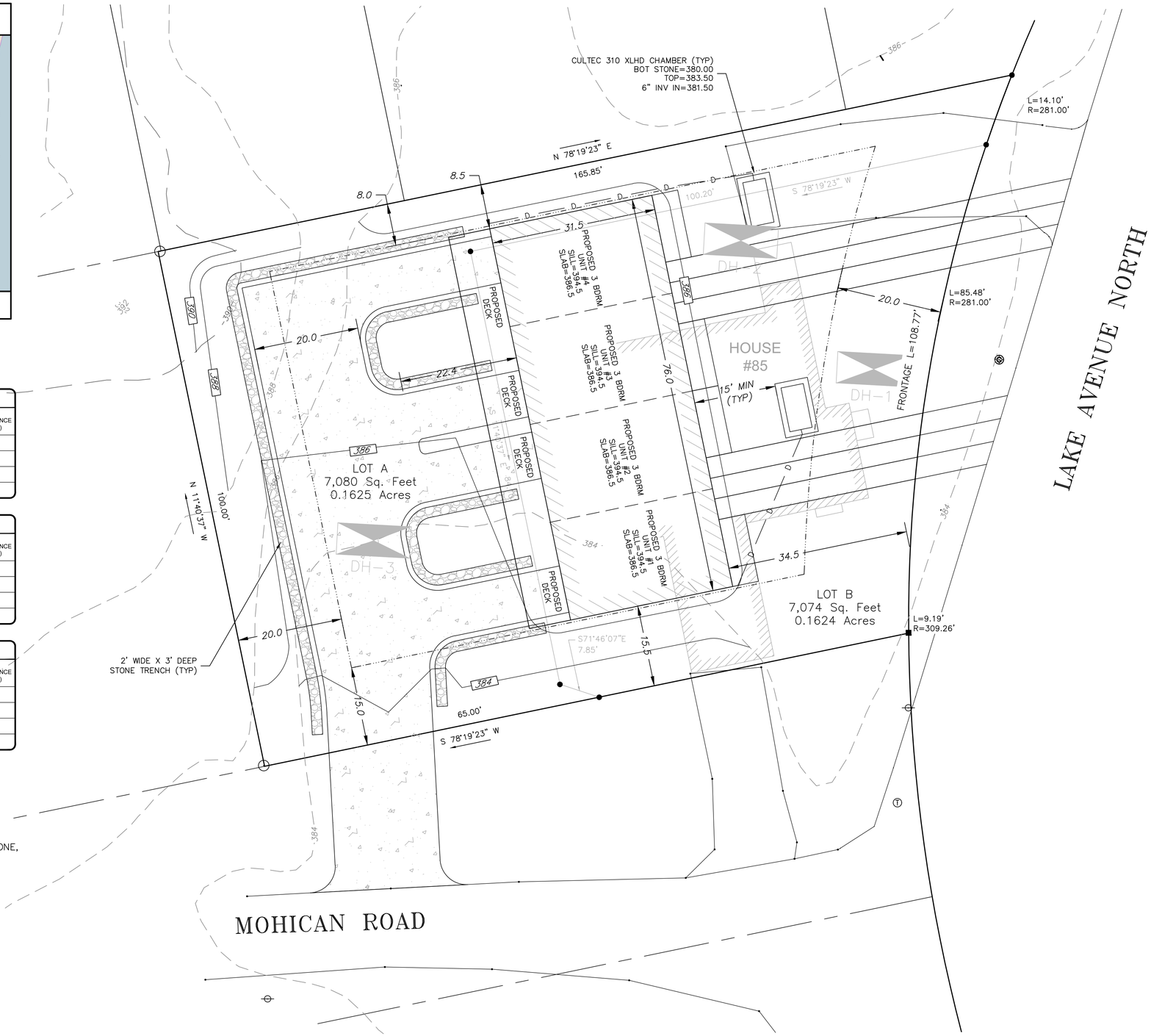
DEPTH FROM SURFACE (INCHES)	SOIL HORIZON/ LAYER	SOIL MATRIX: COLOR-MOIST (MUNSELL)	REDOXIMORPHIC FEATURES (MOTTLES)			SOIL TEXTURE (USDA)	SOIL CONSISTENCE (MOIST)
			DEPTH	COLOR	PERCENT		
10"	Ap	10YR3/2				SL	
26"	Bw	10YR4/2				LS	
106"	C	10YR4/4	NONE			LS	

INFILTRATION NOTES
SOIL TYPE A = 0.60 IN / SF
ROOF AREA = 2,394 SF
= (0.6 IN / 12 IN PER SF) X 2,394 SF
= 119.7 CF INFILTRATION REQ'D

1 CULTEC 310 XLHD PROPOSED WITH 12" SIDE AND END STONE, 6" TOP AND BASE STONE PROVIDES 132 CF INFILTRATION

DRIVEWAY AREA = 3,455 SF
= (0.6 IN / 12 IN PER SF) X 3,455 SF
= 173 CF INFILTRATION REQ'D

268 LINEAR FEET 2 FT WIDE X 3 FT DEEP STONE TRENCH
ASSUME 40% VOIDS
268 FT X 6 SF/FT X 0.40 = 643 CF INFILTRATION



ZONING REQUIREMENTS

ZONING DISTRICT: RL7
*SINGLE FAMILY ATTACHED

	REQUIRED
AREA	3,000 SQ. FT. / DU
FRONTAGE	25 FT. / DU
FRONT YARD	20 FT.
SIDE YARD	8 FT.
REAR YARD	20 FT.
FLOOR AREA RATIO	N/A
BUILDING HEIGHT	35 FT.
FRONT YARD IMP.	50% MAX

NOTES
– SURVEY PERFORMED BY JARVIS SURVEY INC. SHREWSBURY, MA
– THE OWNER OF A CORNER LOT MAY DESIGNATE EITHER STREET LOT LINE AS THE FRONT LOT LINE. ONCE SO DESIGNATED, IT SHALL APPLY FOR ALL DIMENSIONAL PURPOSES. THE EXTERIOR SIDE YARD OF A CORNER LOT SHALL NOT BE LESS THAN 15 FT IN A RL DISTRICT

FRONT YARD NOTES:

FRONT YARD AREA=4,607 SF
FRONT YARD IMPERVIOUS AREA = 767 SF
FRONT YARD IMPERVIOUS PERCENTAGE = 16.6%

GRAPHIC SCALE
10 0 10 20
(IN FEET)
1 inch = 10 ft.

COMMONWEALTH OF MASSACHUSETTS
MARK A. ELBAG, JR.
CIVIL
No. 48449
REGISTERED PROFESSIONAL ENGINEER

MARK A. ELBAG, JR., PE
PROFESSIONAL ENGINEER REG #48449

TYPICAL LEGEND

PROPERTY LINE	
SETBACK	
EASEMENT	
STONEWALL	
TREE LINE	
WELL	W
EXISTING CONTOUR	100
PROPOSED CONTOUR	100
SPOT ELEVATION	99x50
WATTLE	
WETLAND	
SILT FENCE	
HAYBALE	
BENCHMARK	
PROP. TEST PIT	

GRADING & DRAINAGE PLAN

PREPARED FOR:

RENTAHOME, LLC
13 MORNINGSIDE DRIVE
SHREWSBURY, MA 01545

PROPERTY ADRESS:

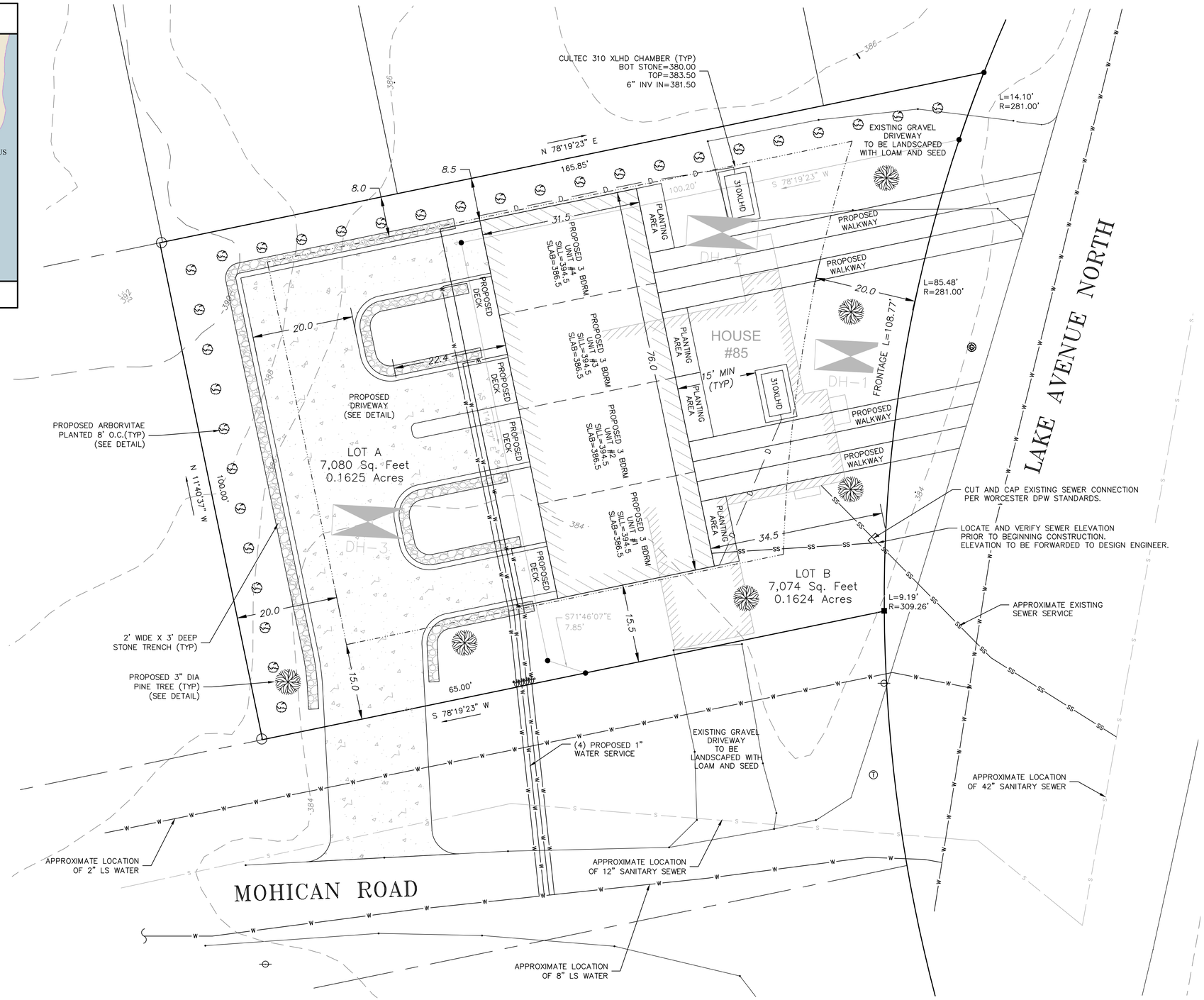
85 NORTH LAKE AVE
WORCESTER, MA
MBL 46-003-46-48

M.A. ELBAG ENGINEERING
P.O. BOX 636
RUTLAND, MA 01543
Phone:(508) 726-1199
maelbag@gmail.com

March 10, 2025 ***Rev: 4/8/2025***

CITY OF WORCESTER

LOCUS MAP – (NOT TO SCALE)



MARK A. ELBAG, JR., PE
PROFESSIONAL ENGINEER REG #48449

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LANDSCAPE & UTILITY PLAN

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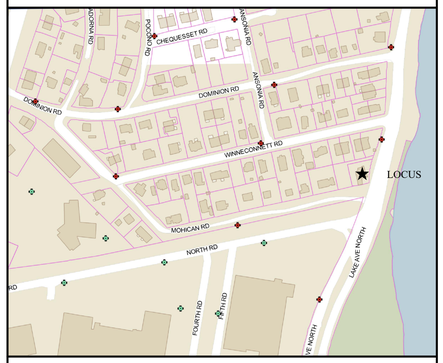

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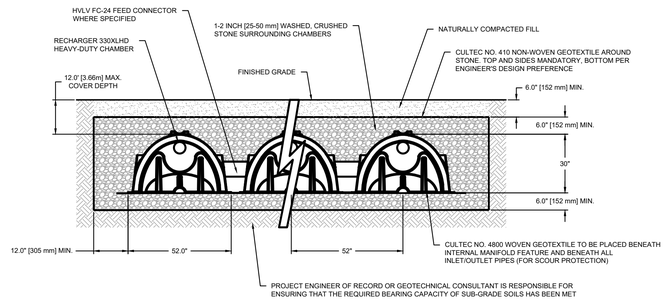
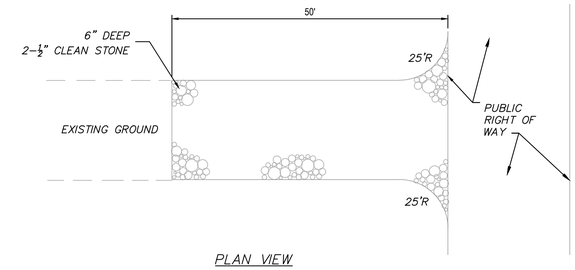


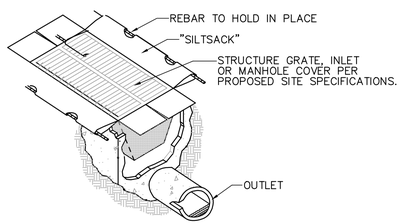
CROSS SECTION



PLAN VIEW

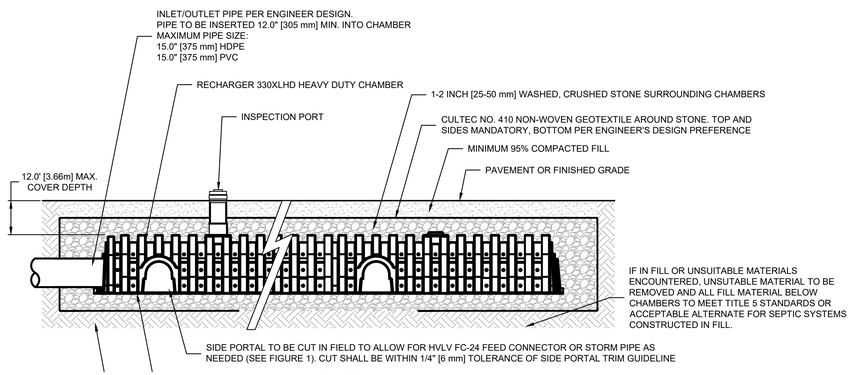
Stabalized Construction Entrance

(NOT TO SCALE)



Silt Sack Detail

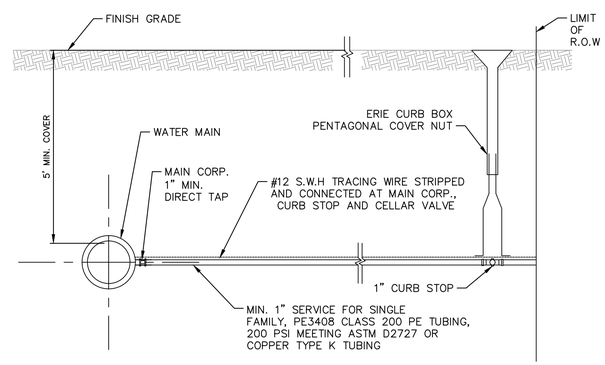
(NOT TO SCALE)



SIDE VIEW

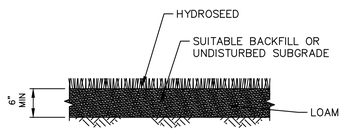
Cultec Contactor 330XLHD Detail

(NOT TO SCALE)



TYPICAL WATER SERVICE CONNECTION DETAIL

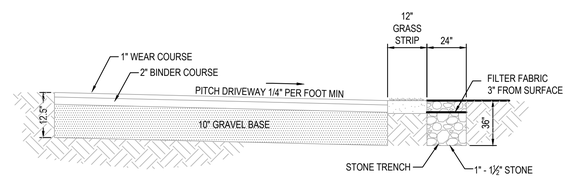
(NOT TO SCALE)



NOTES:
1. ALL DISTURBED AREA SHALL BE GRADED TO A DEPTH SUITABLE FOR INSTALLING THE LOAM PER THE GRADING PLAN AND PROPERLY SEEDED.
2. TOPSOIL – NO STONES GREATER THAN 3/4", COMPACT WITH A HAND–ROLLER IN TWO DIRECTIONS & FINE RAKE PRIOR TO SEEDING
3. SUBSOIL – COMPACTED AT 90% MAXIMUM DENSITY
4. SEED – NATIVE HYDROSEED MIX.

LOAM & SEED DETAIL

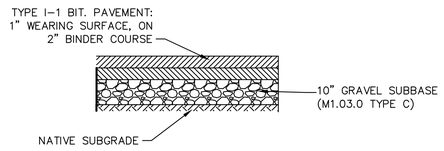
(NOT TO SCALE)



Driveway Cross Section

(NOT TO SCALE)

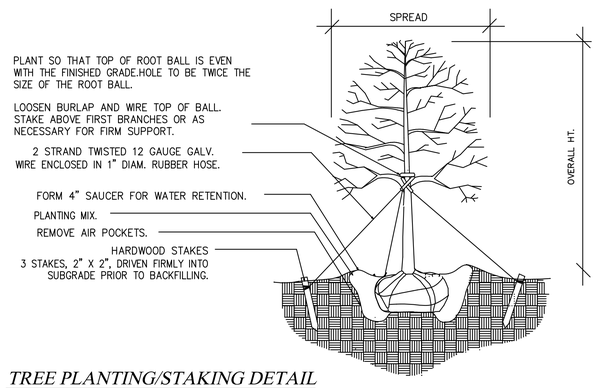
NOTES:
1. MAINTENANCE CONSISTS OF REMOVING TOP 3" OF STONE AND BUILDUP OF TSS AS NECESSARY.



NOTES:
1. SANDY–LOAM AND/OR LOAMY–SAND TOPSOIL MATERIAL SHALL BE EXCAVATED FROM ALL PAVED AREAS PRIOR TO SUB–BASE INSTALLATION.
2. SUBGRADE (EXISTING MATERIAL) SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE AND/OR COARSE SAND, FREE FROM LOAM AND CLAY TO A DEPTH NOT LESS THAN 4–FT BELOW THE FINISH PAVEMENT SURFACE.
3. SUBGRADE FILL SHALL BE COMPACTED TO 95% COMPACTION.

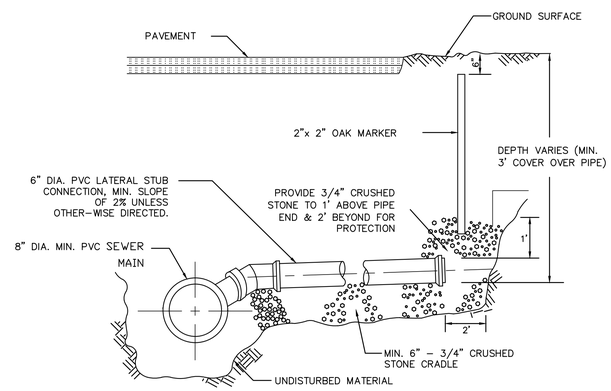
Driveway Detail

(NOT TO SCALE)



TREE PLANTING/STAKING DETAIL

(NOT TO SCALE)



TYPICAL SEWER LATERAL CONNECTION

(NOT TO SCALE)

GRAPHIC SCALE

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DETAIL SHEET

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