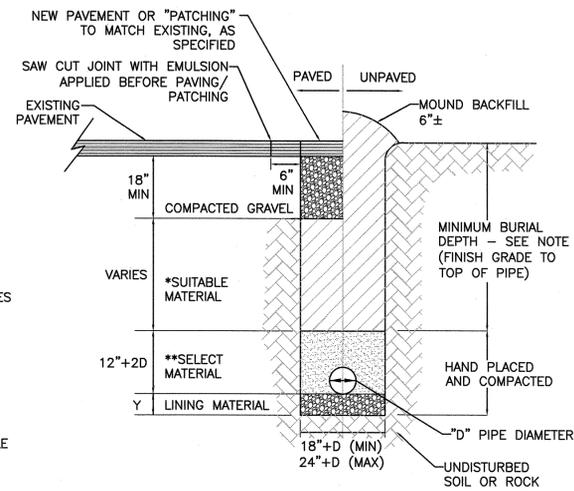


NOTES:

1. MINIMUM BURIAL DEPTH (FINISH GRADE TO TOP OF PIPE)
GRAVITY PIPE - SEE PLAN OR PROFILE
PRESSURE PIPE UNDER PAVING - 4'
PRESSURE PIPE BENEATH UNPAVED - 3'
2. WHERE BACKFILL IS DESIGNATED AS COMPACTED, THIS MEANS 90 TO 95% STANDARD PROCTOR, AASHTO T-99. ALL FILL PLACED BELOW PIPES AND STRUCTURES MUST MEET THIS REQUIREMENT.
3. FOR ALL TRENCHES WITH A GRADE GREATER THAN 4% AND/OR WHERE GROUNDWATER IS APPARENT, INSTALL CLAY DAMS AROUND THE PIPE AT 100' INTERVALS.
4. BACKFILL AS PER DCED-R100 AND REFERENCED AS STANDARD DRAWING.
5. TRENCHES WITHIN MILL STREET MAY REQUIRE FLOWABLE FILL. VERIFY WITH TOWN ENGINEER.



TRENCH DETAIL
NOT TO SCALE

1

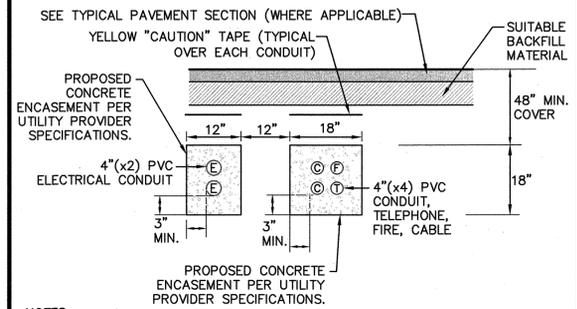
CONDITION & PIPE	**SELECT MATERIAL	LINING MATERIAL	Y-DIMENSION
DUCTILE IRON "ORDINARY SOIL"	TYPE I, II, OR III	SAND OR TYPE III	3"
RCP "ORDINARY SOIL"	TYPE II OR III	SAND OR TYPE III	3"
ALL PIPE OVER BEDROCK OR LEDGE	TYPE II OR III	SAND OR TYPE III	8"
DUCTILE IRON IN CLAY OR MUCK	TYPE II OR III	SAND	4"
RCP IN CLAY	TYPE II OR III	SAND	8"
ALL PLASTICS	TYPE III	SAND OR TYPE III	6"

*SUITABLE MATERIAL SHALL CONTAIN NO STONE GREATER THAN 4" IN DIAMETER, NO FROZEN LUMPS, AND ONLY MINOR AMOUNTS OF CLAY OR ORGANIC MATERIAL. ALL MATERIAL TO BE PLACED IN MAX 12" LIFTS AND COMPACTED BEFORE PLACING NEXT LIFT.

**TYPE I MATERIAL SHALL BE EITHER GRAVEL OR EXCAVATED MATERIAL CONTAINING NO STONES GREATER THAN 1.5" DIAMETER, NO FROZEN LUMPS, CLAY OR ORGANIC MATERIAL.

**TYPE II MATERIAL SHALL BE CLEAN, HARD, CRUSHED OR NATURAL STONE WITH A GRADATION BY WEIGHT OF 100% PASSING A 1.5" SQUARE OPENING, NOT MORE THAN 25% PASSING A 3/4" OPENING, AND NOT MORE THAN 5% PASSING A 1/2" SQUARE OPENING.

**TYPE III MATERIAL SHALL BE CLEAN, HARD, CRUSHED STONE FREE FROM COATINGS AND THOROUGHLY WASHED WITH A GRADATION BY WEIGHT OF 100% PASSING A 1" SQUARE OPENING, AND 0 TO 5% PASSING A 1/2" SQUARE OPENING.

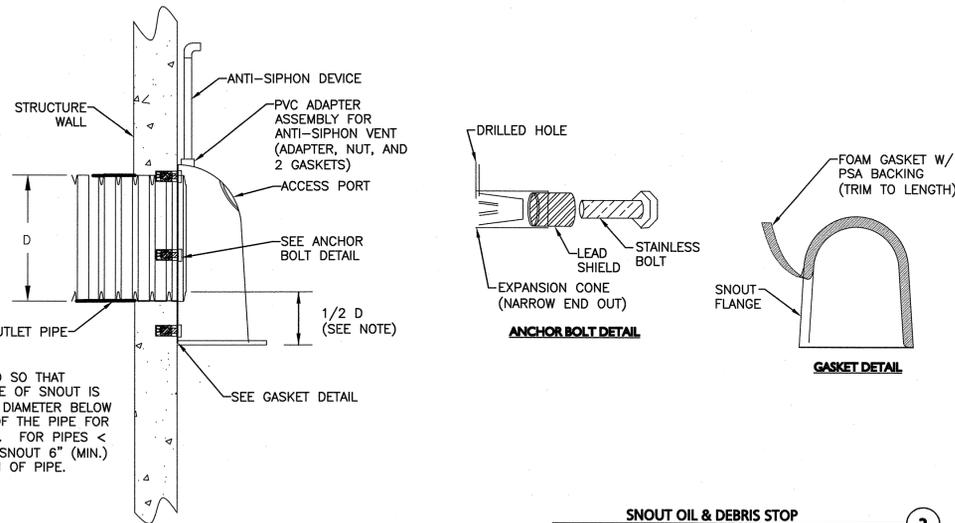


NOTES:

1. CONDUITS SHALL BE SCHEDULE 80 PVC
2. ALL UTILITY INSTALLATION REQUIREMENTS, SEPARATIONS, AND CONDUIT SIZES TO BE VERIFIED WITH EACH UTILITY COMPANY PRIOR TO INSTALLATION OF ANY UNDERGROUND UTILITY CONDUIT.

CONDUIT TRENCH SECTION A-A
NOT TO SCALE

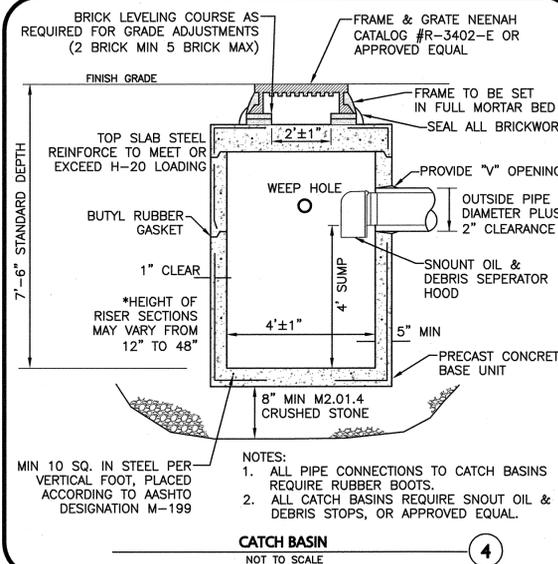
2



NOTE:
POSITION HOOD SO THAT BOTTOM FLANGE OF SNOUT IS 1/2 THE PIPE DIAMETER BELOW THE BOTTOM OF THE PIPE FOR PIPES >12" ID. FOR PIPES < 10" ID PLACE SNOUT 6" (MIN.) BELOW BOTTOM OF PIPE.

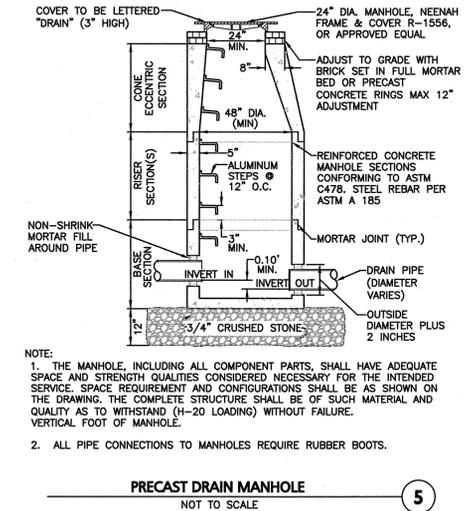
SNOUT OIL & DEBRIS STOP
NOT TO SCALE

3



CATCH BASIN
NOT TO SCALE

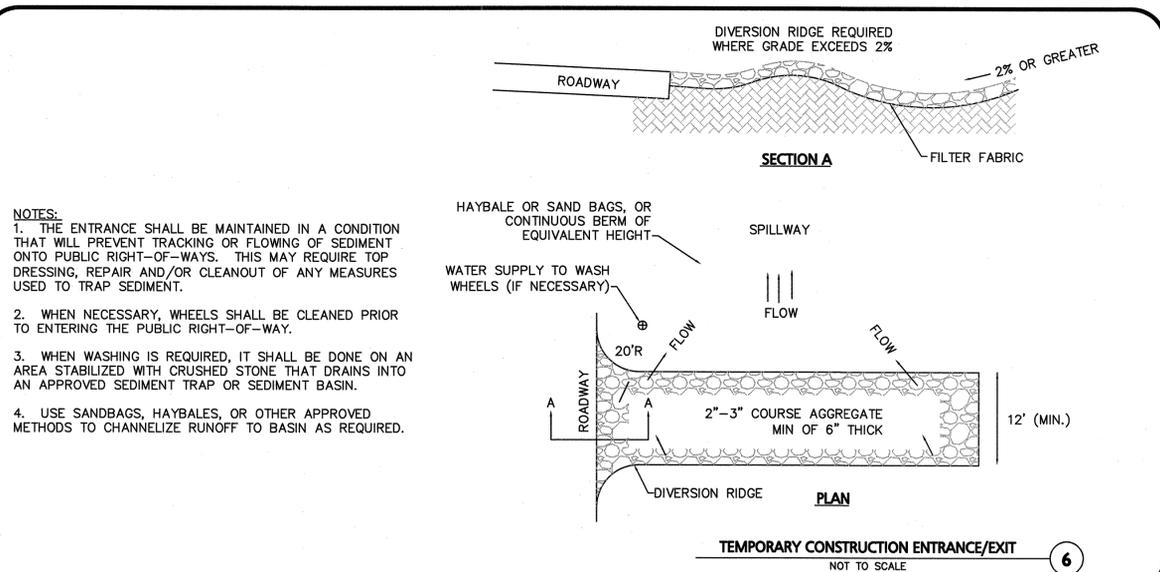
4



NOTE:
1. THE MANHOLE, INCLUDING ALL COMPONENT PARTS, SHALL HAVE ADEQUATE SPACE AND STRENGTH QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE. SPACE REQUIREMENT AND CONFIGURATIONS SHALL BE AS SHOWN ON THE DRAWING. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND (H-20 LOADING) WITHOUT FAILURE. VERTICAL FOOT OF MANHOLE.
2. ALL PIPE CONNECTIONS TO MANHOLES REQUIRE RUBBER BOOTS.

PRECAST DRAIN MANHOLE
NOT TO SCALE

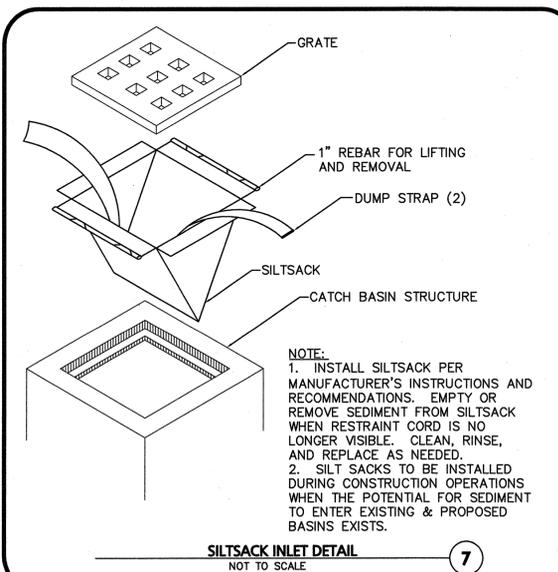
5



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTERING THE PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. USE SANDBAGS, HAYBALES, OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.

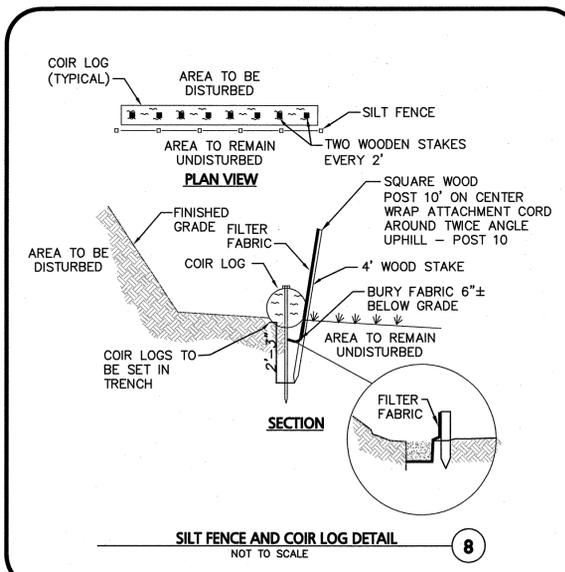
TEMPORARY CONSTRUCTION ENTRANCE/EXIT
NOT TO SCALE

6



SILTSACK INLET DETAIL
NOT TO SCALE

7



SILT FENCE AND COIR LOG DETAIL
NOT TO SCALE

8



PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV DATE DESCRIPTION

APPLICANT/OWNER:
100 DISCOVERY WAY LLC
259 TURNPIKE ROAD, SUITE 100
SOUTHBOROUGH, MA 01772

PROJECT:
BUILDING ADDITION
100 DISCOVERY WAY
ACTON, MA 01720

PROJECT NO. 1453-03 DATE: 11-07-13

SCALE: N.T.S. DWG. NAME: C1453-03

DESIGNED BY: RB/KEA CHECKED BY: TJW

PREPARED BY:

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DETAILS D-2