

REPLICATION OF BORDERING VEGETATED WETLANDS

LOT A-19 FELIX STREET, LEICESTER, MASSACHUSETTS

The following is a list of the procedures for the replicaton of the Wetland Resource Area located at Lot A-19 Felix Street, Leicester MA.

1. The contractor and all subcontractors are to be made aware of the Order of Conditions as issued by the Leicester Conservation Commission and its regulations applicable to this project. DEP File #197-0645.

2. During the course of the replication project it may become necessary to alter the specifications due to the presence of unforeseen conditions. If this situation should occur, the Leicester Conservation Commission and the D.E.P. Central Region are to be notified of the needed alterations.

3. Prior to the commencement of replication within the resource areas, the required erosion control structures are to be installed as shown on the site plans and details. Phase One erosion controls are to be supplements with additional erosion controls at the commencement of Phase Two. Refer to Sheet 2 for the location of the Phase 2 erosion controls.

4. All heavy construction equipment is to be located outside of the resource areas. Special care is to be taken to avoid the spillage of petroleum based products commonly associated with the operation of the construction equipment. All refueling of the construction equipment is to be done outside of the buffer zone area.

5. All fill materials are to be removed from the replication area to a base level similar to the adjacent wetlands. Special care is to be taken to avoid damaging the existing wetland soil. Rough grade the area to a slope similar to the surrounding lower slopes. Large trees in the direct vicinity may be saved by protecting the roots. The intent is to locate the previous organic soil layer and restore it to its original condition. The contractor is to water the soils as necessary in order to assure the regeneration of the remaining root mass. Refer to the Replication Detail.

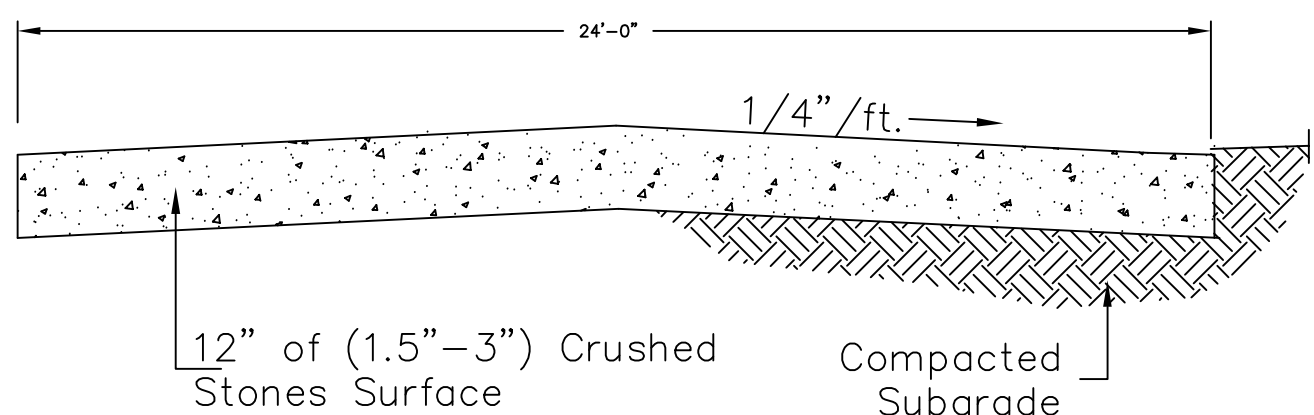
6. The Construction Sequence for the Replication Area is to follow Section 3.0 of the D.E.P. Wetland Replication Guidelines in order to assure compliance with respect to the management of the plant species and control of invasive species. The site is to be monitored for a one year growth period to insure to success of the plant materials and to remove unwanted invasive species. The applicant is responsible to water the replication area during the first growing season as necessary.

7. In the event that an adequate amount of wetland soils are not readily available to complete the amount of replication which has been designated, alternate soils are to be supplemented for this purpose. Additional organic material such as sphagnum peat moss may need to be added to the upper soil horizon.

8. Once the soils have been put in place and hand raked to a fairly smooth grade, the entire area is to be covered with a layer of loose (Seedless) hay. At this time the heavy equipment is to no longer be allowed to work in this area. An additional hay bale dike is to be installed at the upslope side of the replication area to further protect the transplanted species.

9. The contractor is to display good judgment when working near the wetland resource areas during adverse weather conditions. No work is to be performed in the restoration area during periods of heavy rainfall.

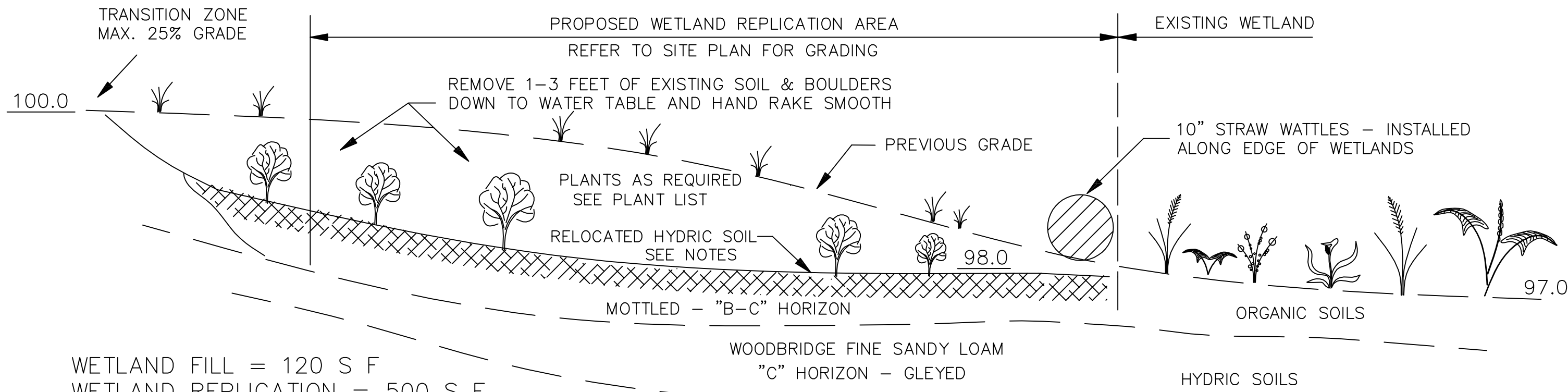
10. The contractor is to notify the Leicester Conservation Commission once the regulated construction has been completed. Upon approval of the work, the contractor is to receive a Certificate of Compliance which is to be recorded at the South Worcester County Registry of Deeds.



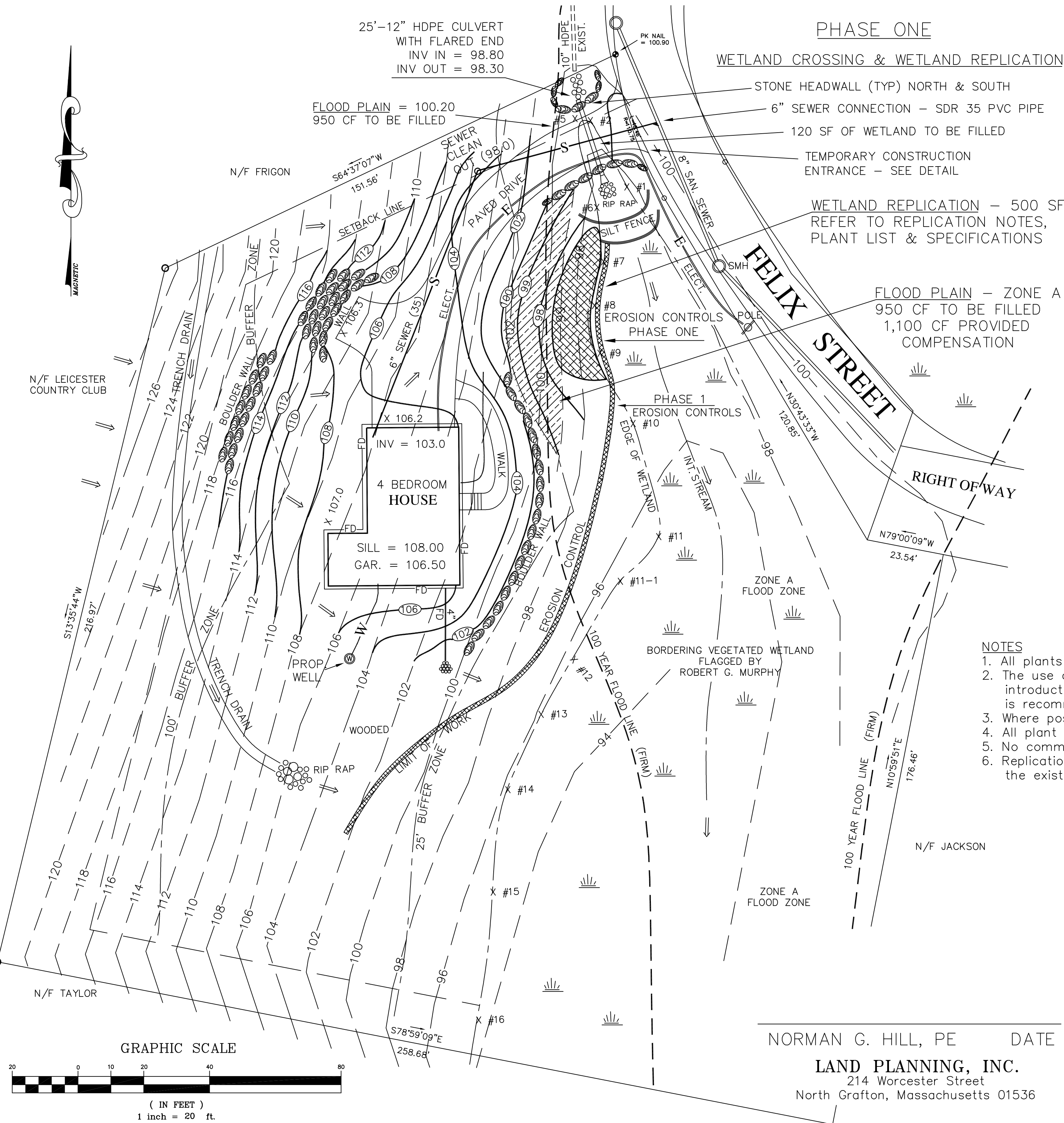
Temporary 50' Construction Entrance
NTS



CONTRACTOR TO NOTIFY DIG SAFE
72 HOURS PRIOR TO ANY EXCAVATION
TELEPHONE NUMBER 1-888-344-7233
WWW.DIGSAFE.COM



WETLAND REPLICATION DETAIL SECTION N.T.S.



PHASE ONE

WETLAND CROSSING & WETLAND REPLICATION

STONE HEADWALL (TYP) NORTH & SOUTH

6" SEWER CONNECTION - SDR 35 PVC PIPE

120 SF OF WETLAND TO BE FILLED

TEMPORARY CONSTRUCTION ENTRANCE - SEE DETAIL

WETLAND REPLICATION - 500 SF

REFER TO REPLICATION NOTES, PLANT LIST & SPECIFICATIONS

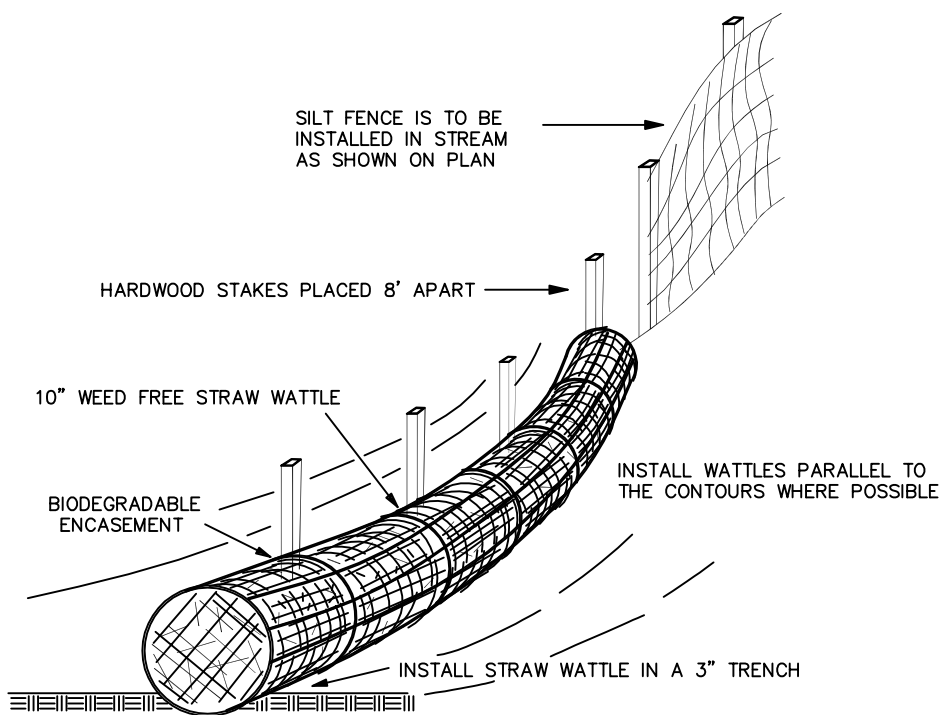
FLOOD PLAIN - ZONE A

950 CF TO BE FILLED

1,100 CF PROVIDED COMPENSATION

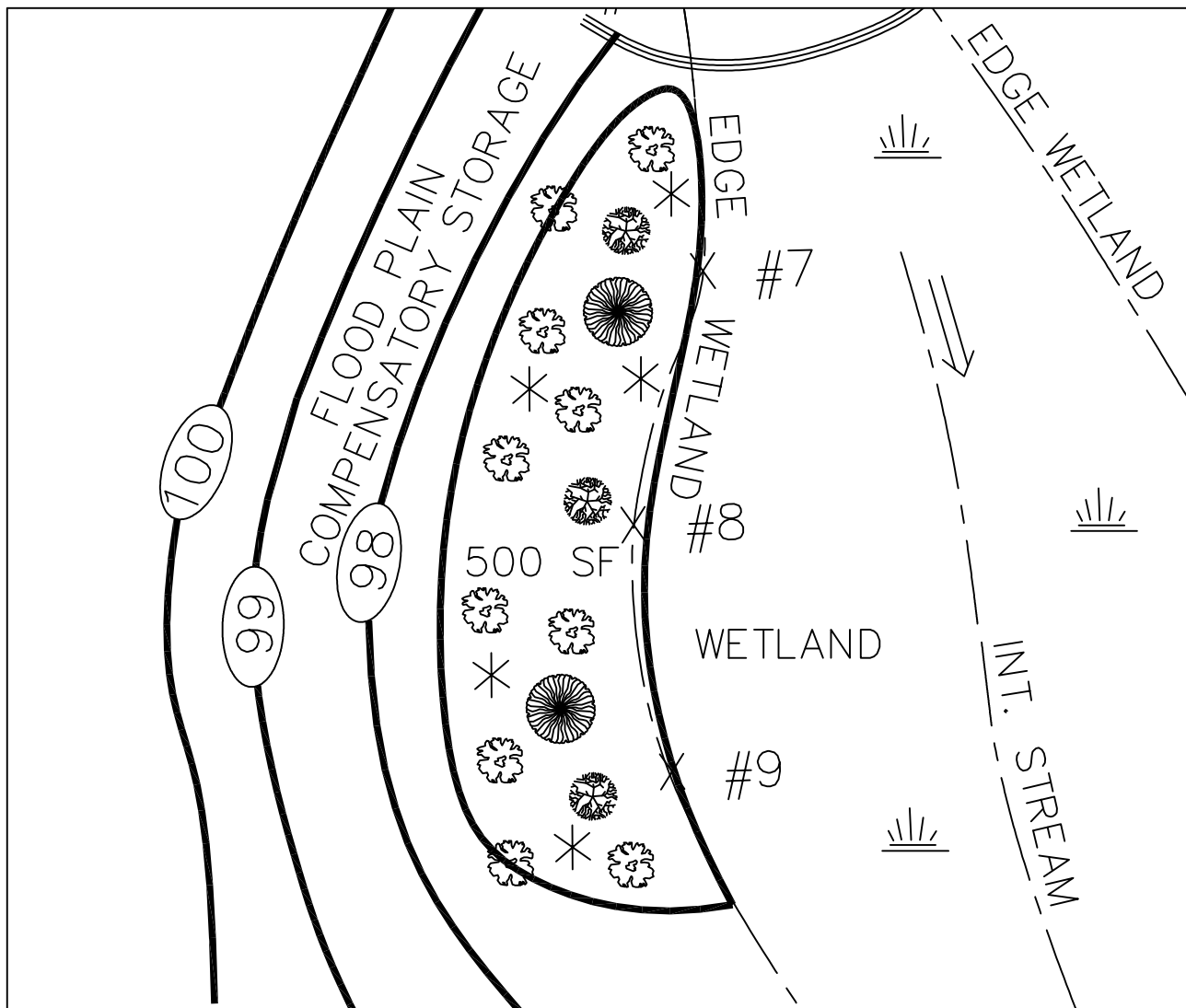
NOTES

1. All plants are to be locally grown to insure hardiness for the New England zone.
2. The use of hay as a mulch in the replication areas is to be avoided to reduce the introduction of unwanted vegetation. Sphagnum moss with a conservation seed mix is recommended.
3. Where possible, Winterberry Holly may be transplanted from the wetlands fill area.
4. All plant materials are to be guaranteed for a minimum of one growing season.
5. No commercial fertilizers or pesticides are to be used within the replication area.
6. Replication of wetland resource area is to be done in unison with the filling of the existing wetland area in order to utilize the hydric soils.



NOTE:
USE 10" WATTLES WHERE SHOWN ON THE SITE PLAN.

STRAW WATTLE DETAIL



WETLANDS REPLICATION DETAIL
1" = 10'

WETLANDS REPLICATION - BORDERING VEGETATED WETLAND

PLANT LIST & SPECIFICATIONS
Dominant Species

SHRUBS			
	Highbush Blueberry	Vaccinium corymb.	18" 10 Req.
	Winterberry Holly	Ilex verticillata	24" 3 Req.
TREES			
	Red Maple	Acer rubrum	2" cal. 2 Req.
FORBS			
	Conservation Seed Mix	Various Grasses	

LEGEND			DRAINAGE FLOW
—100—	EXISTING CONTOURS	—100—	EROSION CONTROLS
—100—	PROPOSED CONTOURS	—W—	UTILITIES
DESIGNED BY: R. G. Murphy	DRAWN BY: R. G. Murphy	DATE: MARCH 14, 2019	
SCALE: 1" = 20'	PLAN NO.: 5-18-33	SHEET: 1 OF 2	
ROBERT G. MURPHY & ASSOC., INC. ENVIRONMENTAL CONSULTANTS 214 Worcester Street No. Grafton, Massachusetts 01536 (508) 839-0310 Fax: (508) 839-5914			
PHASE ONE-WETLANDS REPLICATION PLAN STEVEN BRIGHAM LOT A-19 FELIX STREET MAP 19 PARCEL A-19 LEICESTER, MASSACHUSETTS			
REVISED:			SITE PLAN DEP #197-0645

CONSTRUCTION SEQUENCE & EROSION CONTROLS

LOT A-19 FELIX STREET, LEICESTER, MASSACHUSETTS

The following is a list of the proposed construction sequence and erosion controls for the Single Family Residence proposed by Steven Brigham Lot A-19, Leicester, Massachusetts DEP File #197-0

1. The contractor and all sub-contractors are to be made aware of the Order of Conditions as granted by the Leicester Conservation Commission and its regulations applicable to this project. A copy of this Order and the site plans are to be readily available on site at all times.

2. Staked Straw Wattles filled with bark mulch and silt fences are to be installed where shown on the site plans. The contractor and the owner are responsible for the proper maintenance of the filter socks and to identify and correct all sources of erosion.

3. Rough grading and stump removal are to be confined to areas as shown on the site plan for the development of the building, driveway and landscaped areas. Construction materials are to be stockpiled in an area outside the buffer zone where possible.

4. At no time should heavy equipment cross the erosion controls or operate within the bordering vegetated wetlands without authorization from the Leicester Conservation Commission. All fueling of construction equipment is to be done in the uplands outside of the buffer zone.

5. Temporary stabilization of disturbed areas is to limit erosion toward the wetland area to the west. All trenches are to be filled on a daily basis with special care taken to avoid routing rainfall through gullies toward the wetland areas.

6. The contractor is to use proper judgment relative to construction practices during adverse weather conditions or periods of high groundwater. No work is to be performed near the wetland areas during periods of heavy rainfall. Site inspections are required after heavy rainfall events.

7. Periodic maintenance of the erosion control structures is required in order to insure the proper protection of the resource areas.

8. All graded areas are to be loamed and seeded as soon as possible in order to insure the rapid stabilization of the erosion prone areas. A Conservation Seed Mixture of 20% Annual Ryegrass, 30% Creeping Red Fescue, 30% Chewings Fescue and 20% Perennial Ryegrass is recommended.

9. The staked erosion controls are to remain in place for at least one full growing season. Periodic inspections of these erosion control structures is to continue during this phase of vegetation stabilization. In areas where silt fences have been installed, they are to be removed once the slopes have been stabilized in order to promote migration of local amphibious species.

10. The contractor is to stabilize all slopes immediately upon completion of work within each phase to prevent erosion of soils into the resource areas or their associated buffer zones. During the grow-in period, temporary erosion controls (i.e. bark mulch or straw) is to be used to prevent erosion during periods of rainfall or snowmelt. If erosion of slopes should occur, immediate attention is to be given to stabilizing these areas to prevent impacts to resource areas and or their associated buffer zones.

11. Periodic inspections of the entire construction site are to be performed by a competent representative who will insure the adherence to the regulations as set forth in 310 CMR 10.00. The contractor is to allow unimpeded access to the jurisdictional areas by all members of the Leicester Conservation Commission in order that they may view the construction procedures. No unauthorized individuals are to enter the construction area without the expressed consent of the owner.

12. The Applicant is to notify the Leicester Conservation Commission once the jurisdictional work has been completed and the entire site has been properly stabilized. Upon approval of the work subject to the Order of Conditions, the applicant is to receive a Certificate of Compliance that is to be recorded at the South Worcester Registry of Deeds.

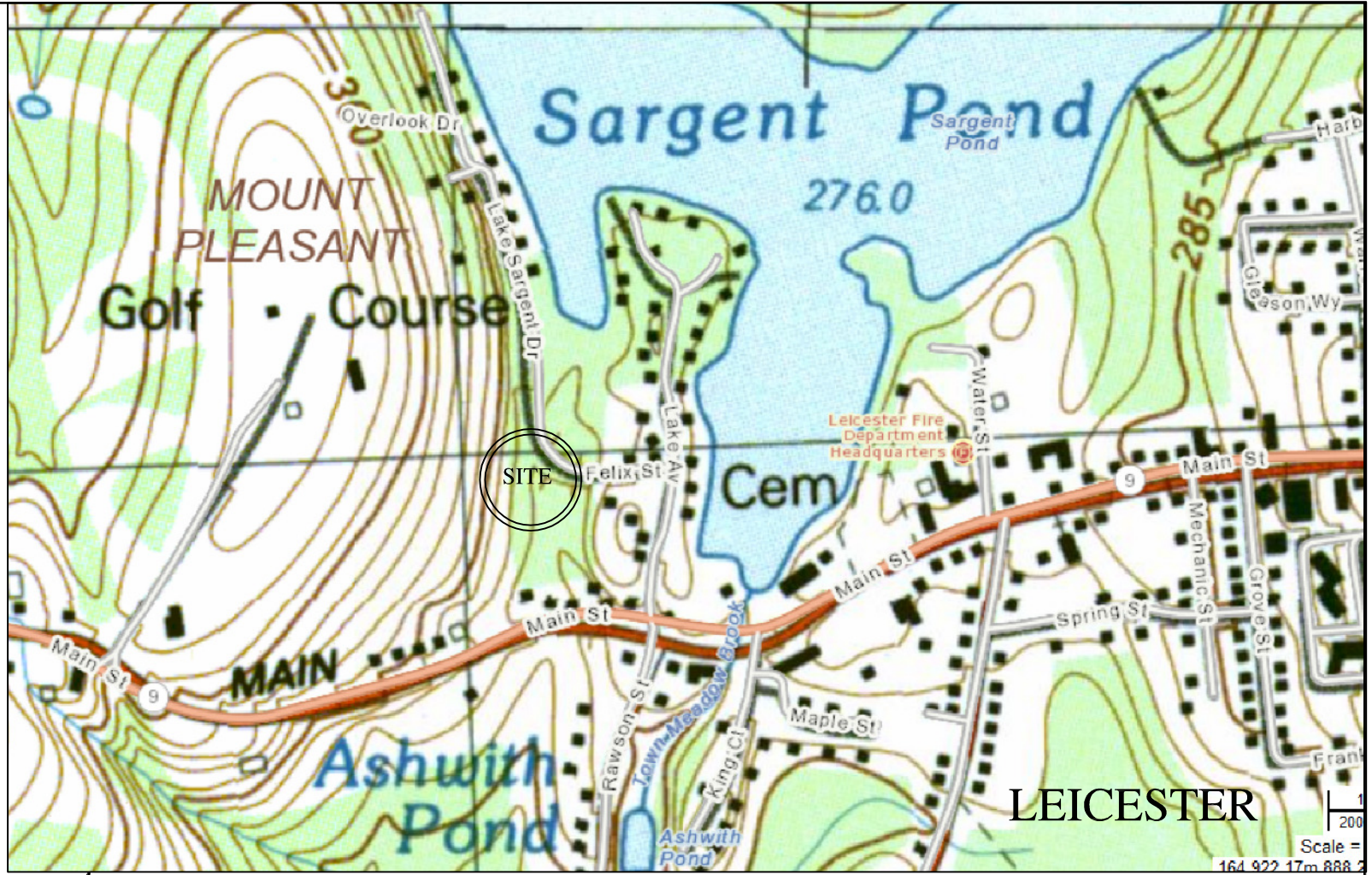
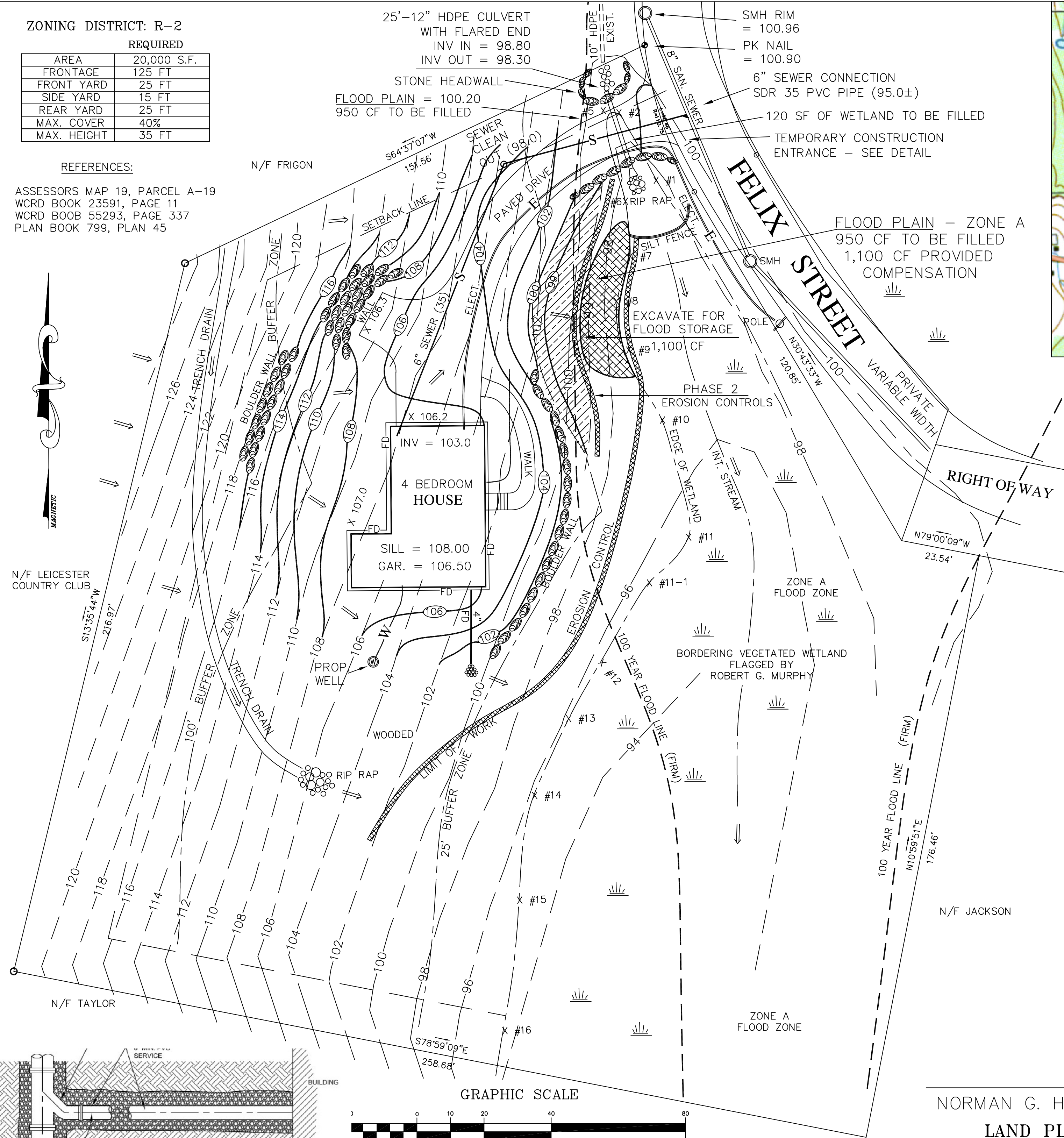
13. All buried utilities as shown are taken from available information and are to be considered as approximate only. Prior to commencement of construction, the contractor is to contact DIG SAFE at 1-888-DIG SAFE to have all buried utilities properly located.

ZONING DISTRICT: R-2

AREA	REQUIRED
FRONTAGE	125 FT
FRONT YARD	25 FT
SIDE YARD	15 FT
REAR YARD	25 FT
MAX. COVER	40%
MAX. HEIGHT	35 FT

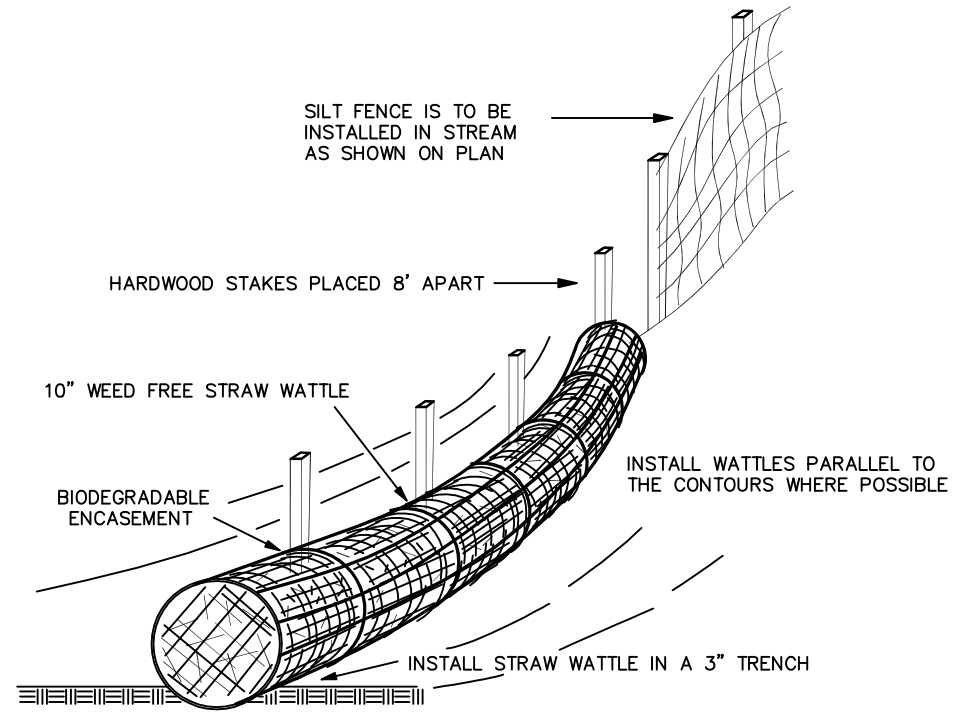
REFERENCES:

ASSESSORS MAP 19, PARCEL A-19
WORD BOOK 23591, PAGE 11
WORD BOOK 55293, PAGE 337
PLAN BOOK 799, PLAN 45



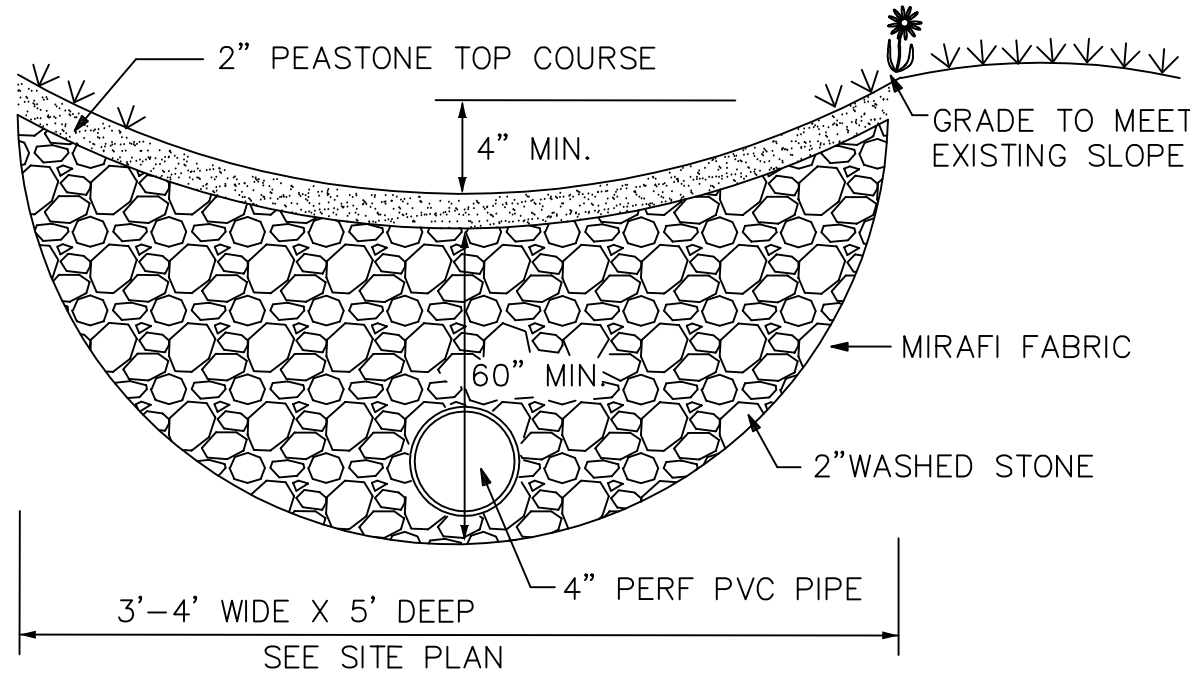
LOCUS

NTS



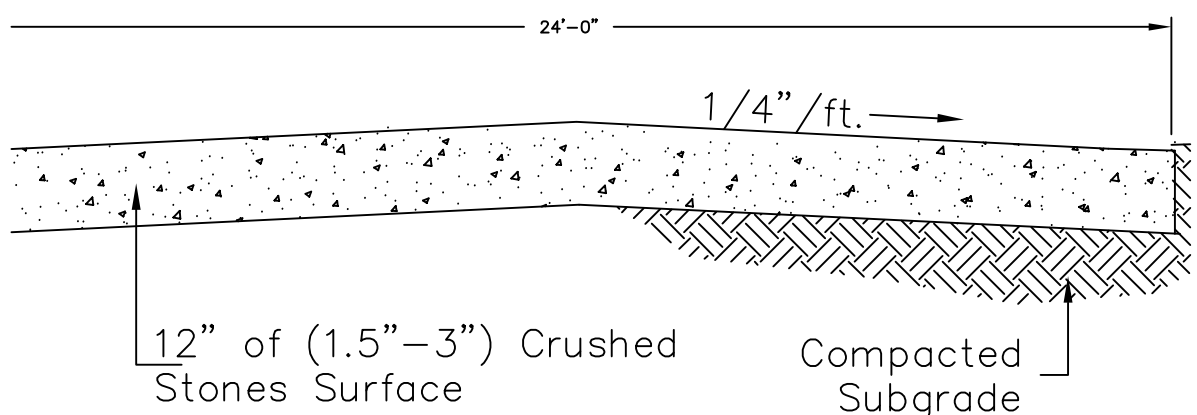
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STRAW WATTLE DETAIL

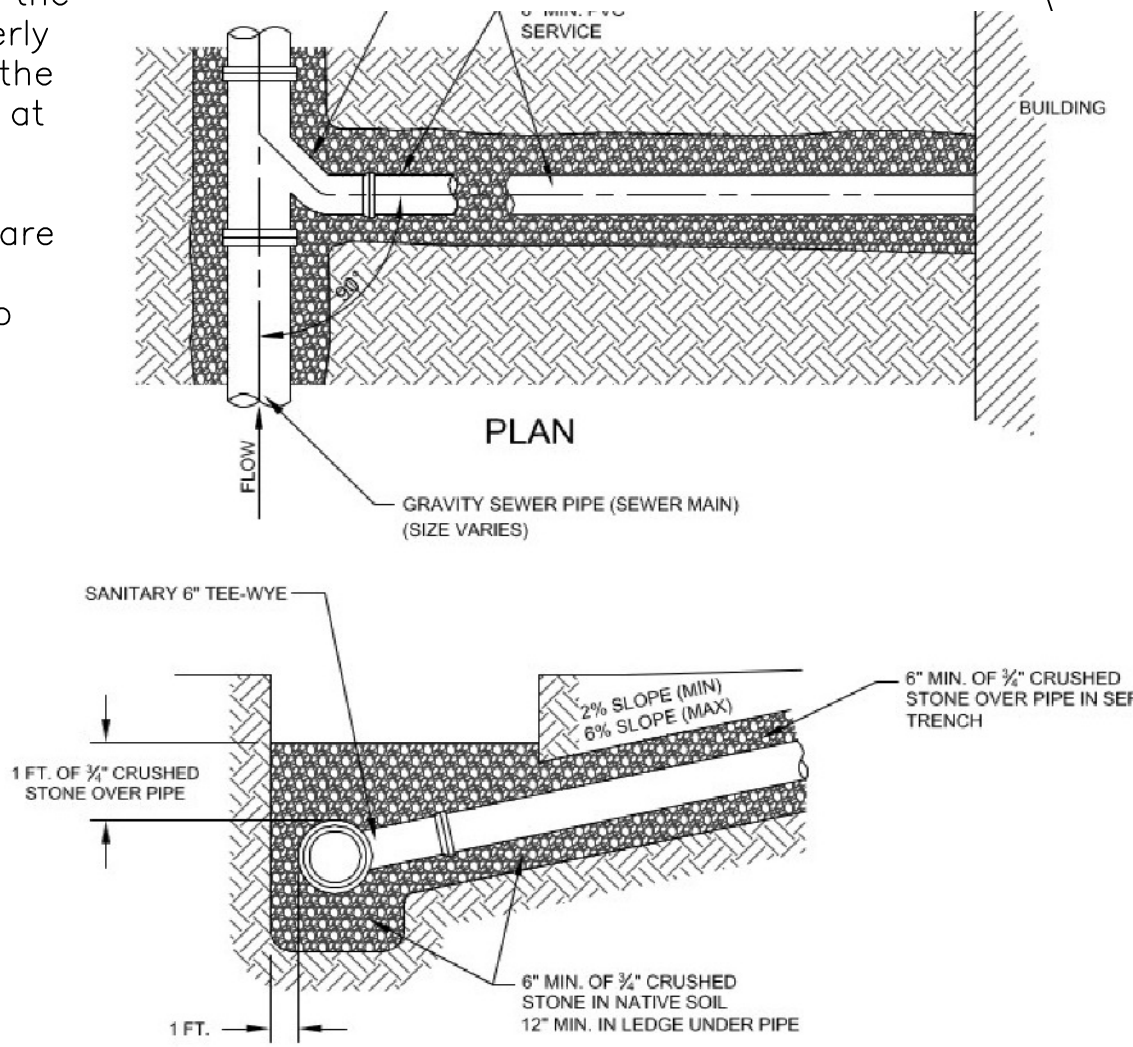


TRENCH DRAIN N.T.S.

NORMAN G. HILL, PE DATE
LAND PLANNING, INC.
214 Worcester Street
North Grafton, Massachusetts 01536

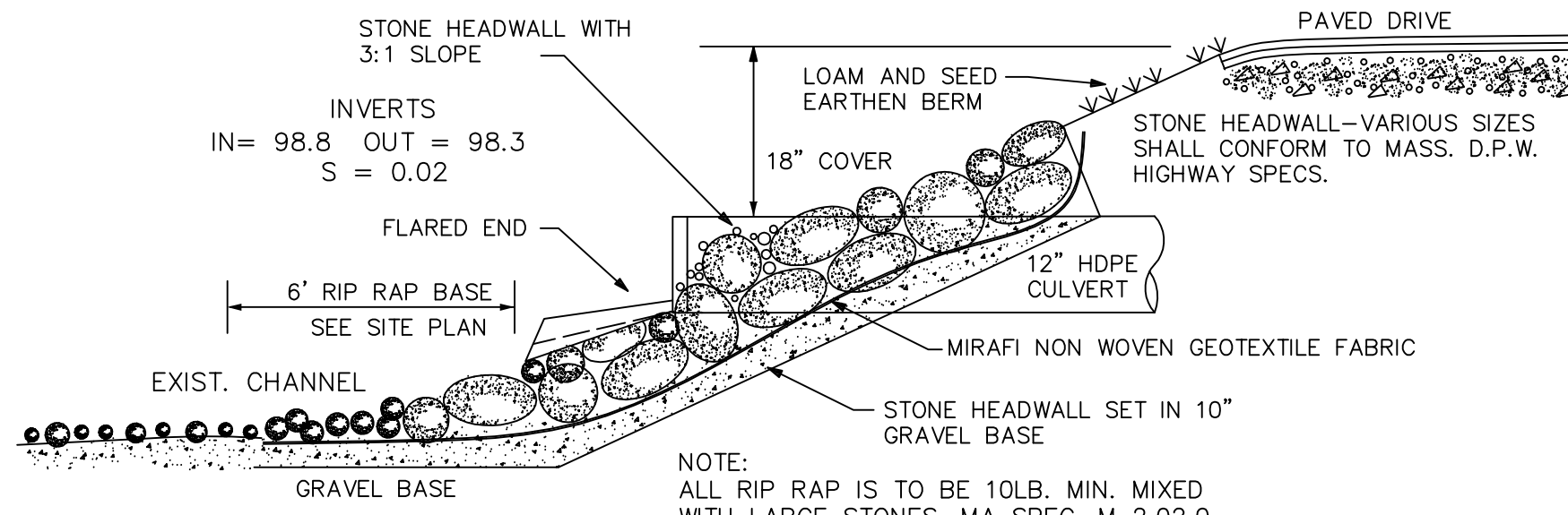


Temporary 50' Construction Entrance



SEWER SERVICE DETAIL

NTS



PHASE ONE - See Sheet 1

HDPE CULVERT- RIP RAP HEADWALL DETAIL N.T.S.

LEGEND		
—100—	EXISTING CONTOURS	← DRAINAGE FLOW
—100—	PROPOSED CONTOURS	— EROSION CONTROLS
		— W UTILITIES
DESIGNED BY: R. G. Murphy	DRAWN BY: R. G. Murphy	DATE: JAN. 14, 2019
SCALE: 1" = 20'	PLAN NO.: 5-18-33	SHEET: 2 OF 2
ROBERT G. MURPHY & ASSOC., INC. ENVIRONMENTAL CONSULTANTS 214 Worcester Street No. Grafton, Massachusetts 01536 (508) 839-0310 Fax: (508) 839-5914		

PHASE TWO - SITE PLAN
STEVEN BRIGHAM
LOT A-19 FELIX STREET MAP 19 PARCEL A-19
LEICESTER, MASSACHUSETTS

REVISED: PHASE 1 & PHASE 2, WETLANDS REPLICATION 3-14-2019 RGM

SITE PLAN
DEP #197-0645