LOCATION MAP



MILES HUNT LEARNING LOFT PRESCHOOL WALNUT HILL ROAD NORTH YARMOUTH, MAINE

TITLE	DWG NO
COVER SHEET	
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ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE

4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021 Phone 207.829.5016 • Fax 207.829.5692 • smemaine.com



GENERAL SITE NOTES:

- 1. EXISTING PROPERTY LINES FROM SURVEY PERFORMED BY RIVERSIDE SURVEY, LLC, DATED 9/17/2021.
- 2. EXISTING TOPOGRAPHY FROM MAINE GIS DATA CATALOG, BASED OFF OF LIDAR INFORMATION COLLECTED BETWEEN NOVEMBER 10, 2006 AND SEPTEMBER 5TH, 2007. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- 3. WETLAND DELINEATED BY ALBERT FRICK ASSOCIATES INC., DATED 9/27/2021.
- 4. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION IS NOT GUARANTEED. VERIFY SITE CONDITIONS INCLUDING TEST PITS FOR LOCATIONS AND INVERTS OF UTILITIES AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING WITH THAT PORTION OF WORK.
- 5. ALL SITE AND CONSTRUCTION ACTIVITIES SHALL BE IN COMPLIANCE WITH MEDEP BEST MANAGEMENT PRACTICES AND EXISTING FEDERAL, STATE, AND LOCAL PERMITS AND PERMITTING REQUIREMENTS FOR THE SITE.
- 6. PAVEMENT EDGES SHALL BE TRUE TO LINE. SAWCUT EXISTING PAVEMENT IN SMOOTH STRAIGHT LINE WHERE NEW PAVEMENT JOINS. PROVIDE TACK COAT LAYER IF SPECIFIED.

SURVEYOR'S NOTES

- 1. BEARINGS REFER TO MAINE STATE GRID WEST ZONE (SEE PLAN REFERENCE).
- 2. DEED REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
- 3. IRON RODS SET ARE 5/8" REBAR, 40" LONG, WITH PLASTIC CAP P.L.S. #2495, DRIVEN TO WITHIN 12" OF THE GROUND SURFACE, UNLESS OTHERWISE NOTED.
- 4. THE EXISTING BOUNDARY OF THIS LOT IS BASED ON THE PLAN REFERENCE.

GRADING NOTES:

- 1. ADD 4" LOAM, SEED AND MULCH TO DISTURBED AREAS UNLESS OTHERWISE NOTED. PROVIDE EROSION CONTROL MESH ON ALL SLOPES STEEPER THAN 3:1, AND ALONG DITCH CHANNELS.
- 2. MAINTAIN TEMPORARY EROSION CONTROL MEASURES FOR THE FULL DURATION OF CONSTRUCTION. INSPECT WEEKLY AND AFTER EACH STORM AND REPAIR AS NEEDED. REMOVE SEDIMENTS FROM THE SITE. PLACE IN AREA OF LOW EROSION POTENTIAL, AND STABILIZE WITH SEED AND MULCH.
- 3. PLACE TEMPORARY SOIL STABILIZATION WITHIN 7 DAYS OF INITIAL DISTURBANCE. PLACE PERMANENT SOIL STABILIZATION WITHIN 7 DAYS OF FINAL GRADING.
- 4. GRADE SURFACES TO DRAIN AWAY FROM BUILDINGS. PUDDLING OF WATER IN PAVED OR UNPAVED AREAS WILL NOT BE ACCEPTED.

UTILITY NOTES:

- 1. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION IS NOT GUARANTEED. VERIFY SITE CONDITIONS INCLUDING TEST PITS FOR LOCATIONS AND INVERTS OF UTILITIES AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING WITH THAT PORTION OF THE WORK.
- 2. COORDINATE WORK ON UTILITY LINES OR WITHIN ROAD RIGHT-OF-WAY WITH THE UTILITY COMPANIES AND TOWN ROAD DEPARTMENT AND MEDOT.
- 3. ALL PIPING AND DRAINAGE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE TOWN OF NORTH YARMOUTH MUNICIPAL STANDARDS.

TYPICAL ABBREVIATIONS

ACCMP ACP AGG ALUM APPD APPROX ARMH ASB ASP AUTO	ASPHALT COATED CMP ASBESTOS CEMENT PIPE ACRE AGGREGATE ALUMINUM APPROVED APPROXIMATE AIR RELEASE MANHOLE ASBESTOS ASPHALT AUTOMATIC	EA EG ELEC EL ELB EOP EQUIF EST EXC EXIST
AUX AVE AZ	AUXILIARY AVENUE AZIMUTH	FI FG FBRGL FDN
BCCMP BM BIT BLDG BOT BRG BV	BITUMINOUS COATED CMP BENCH MARK BITUMINOUS BUILDING BOTTOM BEARING BAI I VAI VE	FLEX FLG FLR FPS FT OR FTG
CB CEN CEM LIN CMP	CATCH BASIN CENTER CEMENT LINED CORRUGATED METAL PIPE	GA GAL GALV GPD GPM
CF CFS CI CL	CLEAN OUT CUBIC FEET CUBIC FEET PER SECOND CAST IRON CLASS	HDPE HORIZ HP HYD
CONC CONST CONTR CS CTR CU	CONCRETE CONSTRUCTION CONTRACTOR CURB STOP CENTER COPPER	ID IN OR INV INV EI
CY D DBL	CUBIC YARD DEGREE OF CURVE DOUBLE	LB LC LD LF
DEG OR [©] DEPT DI DIA OR	DEGREE DEPARTMENT DUCTILE IRON DIAMETER	LOC LT
DIA OK DIM DIST DN DR DWG	DIAME I EK DIMENSION DISTANCE DOWN DRAIN DRAWING	MH MJ MATL MAX MFR MIN MISC MON
		NITC NTS

EA	EACH
EG	EXISTING GROUND OR GRADE
ELEC	ELECTRIC
EL	ELEVATION
ELB	ELBOW
EOP	EDGE OF PAVEMENT
EQUIP	EQUIPMENT
EST	ESTIMATED
EXC	EXCAVATE
EXIST	EXISTING
FI	FIELD INLET
FG	FINISH GRADE
FBRGL	FIBERGLASS
FDN	FOUNDATION
FLEX	FLEXIBLE
FLG	FLANGE
FLR	FLOOR
FPS	FEET PER SECOND
FT OR '	FEET
FTG	FOOTING
ga	GAUGE
gal	GALLON
galv	GALVANIZED
gpd	GALLONS PER DAY
gpm	GALLONS PER MINUTE
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HYD	HYDRANT
ID	INSIDE DIAMETER
IN OR "	INCHES
INV	INVERT
INV EL	INVERT ELEVATION
LB	POUND
LC	LEACHATE COLLECTION
LD	LEAK DETECTION
LF	LINEAR FEET
LOC	LOCATION
LT	LEACHATE TRANSPORT
MH	MANHOLE
MJ	MECHANICAL JOINT
MATL	MATERIAL
MAX	MAXIMUM
MFR	MANUFACTURE
MIN	MINIMUM

MISCELLANEOUS

NOT IN THIS CONTRACT NOT TO SCALE

NOW OR FORMERLY

MONUMENT

N/F

NO OR # NUMBER

UD	
PC PD PI PIV PT PERF PP PSI PVC PVMT	
QTY	
RCP ROW RAD REQD RT RTE	
S SCH SF SHT SMH ST STA SY TAN TDH TEMP TYP UD V VA TEE VERT	
WG W/ W/O	
YD	

OC

ON CENTER OUTSIDE DIAMETER

POINT OF CURVE

PERIMETER DRAIN

POINT OF TANGENT PERFORATED

POWER POLE

PAVEMENT

QUANTITY

RADIUS REQUIRED

RIGHT ROUTE

SLOPE

STREET STATION

SQUARE YARD

TANGENT

TEMPORARY TYPICAL

UNDERDRAIN VOLTS

VERTICAL

WITH WITHOUT

YARD

WATER GATE

SCHEDULE SQUARE FEET SHEET

SANITARY MANHOLE

TOTAL DYNAMIC HEAD

VALVE ANCHORING TEE

RIGHT OF WAY

POINT OF INTERSECTION

POUNDS PER SQUARE INCH

REINFORCED CONCRETE PIPE

POLYVINYL CHLORIDE

POST INDICATOR VALVE

ZONING NOTES:

- 1. PROJECT INFORMATION
- OWNER: MILES HUNT
- APPLICANT: LEARNING LOFT PRESCHOOL
- 2. ZONING: VILLAGE RESIDENTIAL DISTRICT
- 4. DIMENSIONAL STANDARI
 - ROAD FRONTAGE FRONT ROUTE 115 ST
- REAR YARD SETBACK
- SIDE YARD SETBACK
- 6. PROPOSED IMPERVIOUS AREA: +/- 27,000 sf

- 9. WETLAND IMPACT: 1,155 SF

TOWN OF NORTH YARMOUTH NOTE:

THE TOWN OF NORTH YARMOUTH SHALL NOT BE RESPONSIBLE FOR THE MAINTENANCE, REPAIR, PLOWING, OR SIMILAR SERVICES FOR THE PRIVATE STREET SHOWN ON THIS PLAN.

ADDRESS: 78 WALNUT HILL ROAD

MAP 1 LOT 62

3. PROPOSED USE: PRESCHOOL AND SINGLE-FAMILY RESIDENCE

DS:	REQUIRED	PROVIDED
	50 FEET	97 FEET
REET SETBACK	20 FEET	> 20 FEET
	10 FEET	> 10 FEET
	10 FEET	> 10 FEET

5. UTILITIES: PROPERTY IS SERVED BY PRIVATE WATER, PRIVATE SEPTIC, AND UNDERGROND ELECTRIC

7. PROPOSED USE: PRESCHOOL AND SINGLE-FAMILY RESIDENCE

8. PARKING SUMMARY: NO MINIMUM NUMBER OF PARKING SPACES. 2 PROVIDED

10. FLOODPLAIN: FEMA ZONE C - PANEL 2302020010B EFF. JULY 16, 1981

DIG SAFE NOTES:

PRIOR TO EXCAVATION, VERIFY THE UNDERGROUND UTILITIES, PIPES, STRUCTURES AND FACILITIES. PROVIDE THE FOLLOWING MINIMUM MEASURES:

- 1. PRE-MARK THE BOUNDARIES OF PLANNED EXCAVATION WITH WHITE PAINT, FLAGS OR STAKES, SO UTILITY CREWS KNOW WHERE TO MARK THEIR LINES.
- 2. CALL DIG SAFE, AT 811, AT LEAST THREE BUSINESS DAYS BUT NO MORE THAN 30 CALENDAR DAYS BEFORE STARTING WORK. DO NOT ASSUME SOMEONE ELSE WILL MAKE THE CALL.
- 3. IF BLASTING, NOTIFY DIG SAFE AT LEAST ONE BUSINESS DAY IN ADVANCE.
- 4. WAIT THREE BUSINESS DAYS FOR LINES TO BE LOCATED AND MARKED WITH COLOR-CODED PAINT, FLAGS OR STAKES. NOTE THE COLOR OF THE MARKS AND THE TYPE OF UTILITIES THEY INDICATE. TRANSFER THESE MARKS TO THE AS-BUILT DRAWINGS.
- 5. CONTACT THE LANDOWNER AND OTHER "NON-MEMBER" UTILITIES (WATER, SEWER, GAS, ETC.). FOR THEM TO MARK THE LOCATIONS OF THEIR UNDERGROUND FACILITIES. TRANSFER THESE MARKS TO THE AS-BUILT DRAWINGS.
- 6. RE-NOTIFY DIG SAFE AND THE NON-MEMBER UTILITIES IF THE DIGGING, DRILLING OR BLASTING DOES NOT OCCUR WITHIN 30 CALENDAR DAYS, OR IF THE MARKS ARE LOST DUE TO WEATHER CONDITIONS, SITE WORK ACTIVITY OR ANY OTHER REASON.
- 7. HAND DIG WITHIN 18 INCHES IN ANY DIRECTION OF ANY UNDERGROUND LINE UNTIL THE LINE IS EXPOSED. MECHANICAL METHODS MAY BE USED FOR INITIAL SITE PENETRATION, SUCH AS REMOVAL OF PAVEMENT OR ROCK.
- 8. DIG SAFE REQUIREMENTS ARE IN ADDITION TO TOWN, CITY, AND/OR STATE DOT STREET OPENING PERMIT REQUIREMENTS.
- 9. FOR COMPLETE DIG SAFE REQUIREMENTS, CALL THE PUC OR VISIT THEIR WEBSITE.
- 10. IF YOU DAMAGE, DISLOCATE OR DISTURB ANY UNDERGROUND UTILITY LINE, IMMEDIATELY NOTIFY THE AFFECTED UTILITY. IF DAMAGE CREATES SAFETY CONCERNS, CALL THE FIRE DEPARTMENT AND TAKE IMMEDIATE STEPS TO SAFEGUARD HEALTH AND PROPERTY.
- 11. ANY TIME AN UNDERGROUND LINE IS DAMAGED OR DISTURBED OR IF LINES ARE IMPROPERLY MARKED, YOU MUST FILE AN INCIDENT REPORT WITH THE P.U.C. FOR AN INCIDENT REPORT FORM VISIT WWW.STATE.ME.US/MPUC OR CALL THE PUC AT 1-800-452-4699.

EXISTING	
	PROPERTY L
	SETBACK
	EASEMENT
	EDGE OF PAVE
	EDGE OF GRA
	RECLAIMED AS
100	CONTOUR
	SPOT GRAD
X	FENCE
SD	STORM DRA
\rightarrow	CULVERT
	UNDERDRA
\bigcirc	UTILITY PO
UGU	UNDERGROUND I
	OVERHEAD UT

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<b>₽</b> �			
<b>18</b> 2	ىغد	*	*
	•		



LEGEND





MONUMENT

------ SF ------ SILT FENCE

***

CHECK DAM

STABILIZED ENTRANCE

		<b></b>			
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		<b> </b>			
	DPD	1/2022	ISSUED FOR TOWN REVIEW		
REV.	BY	DATE	STATUS		
MILES HUNT					
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*	PIFFIN	*			
ANY	11841	84	NORTH YARMOUTH, MAINE		
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*******	WAL EN	unn	GENERAL NOTES, LEGEND, AND ABBREVIATIONS		
				DESIGN BY: 1TR	
			SEVEE & MAHER	DATE: 11/2021	
			ENGINEERS		
			ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE		
			4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021		
		ŀ	Phone 207.829.5010 • Fax 207.629.5092 • Smername.com	CTB: SME-SID	
			JOB NO. 21678 DWG FILE BASE	C-100	











## **EROSION CONTROL NOTES:**

- A. GENERAL
- 1. All soil erosion and sediment control will be done in accordance with: (1) the Maine Erosion and Sediment Control Handbook: Best Management Practices, Maine Department of Environmental Protection (MEDEP), October 2016.
- 2. The site Contractor (to be determined) will be responsible for the inspection and repair/replacement/maintenance of all erosion control measures, disturbed areas, material storage areas, and vehicle access points until all disturbed areas are stabilized.
- 3. Disturbed areas will be permanently stabilized within 7 days of final grading. Disturbed areas not to be worked upon within 14 days of disturbance will be temporarily stabilized within 7 days of the disturbance.
- 4. In all areas, removal of trees, bushes and other vegetation, as well as disturbance of topsoil will be kept to a minimum while allowing proper site operations.
- 5. Any suitable topsoil will be stripped and stockpiled for reuse as directed by the Owner. Topsoil will be stockpiled in a manner such that natural drainage is not obstructed and no off-site sediment damage will result. In any event, stockpiles will not be located within 100 feet of wetlands and will be at least 50 feet upgradient of the stockpile's perimeter silt fence. The sideslopes of the topsoil stockpile will not exceed 2:1. Silt fence will be installed around the perimeter of all topsoil stockpiles. Topsoil stockpiles will be surrounded with siltation fencing and will be temporarily seeded with Aroostook rye, annual or perennial ryegrass within 7 days of formation, or temporarily mulched.
- 6. Winter excavation and earthwork will be completed so as to minimize exposed areas while satisfactorily completing the project. Limit exposed areas to those areas in which work is to occur during the following 15 days and that can be mulched in one day. All areas will be considered denuded until the subbase gravel is installed in roadway areas or the areas of future loam and seed have been loamed, seeded, and mulched.

Install any added measures necessary to control erosion/sedimentation. The particular measure used will be dependent upon site conditions, the size of the area to be protected, and weather conditions.

To minimize areas without erosion control protection, continuation of earthwork operations on additional areas will not begin until the exposed soil surface on the area being worked has been stabilized.

- **B. TEMPORARY MEASURES**
- 1. STABILIZED CONSTRUCTION ENTRANCE/EXIT

A crushed stone stabilized construction entrance/exit will be placed at any point of vehicular access to the site, in accordance with the detail shown on this sheet.

- 2. SILT FENCE
- a. Silt fence will be installed prior to all construction activity, where soil disturbance may result in erosion. Silt fence will be erected at locations shown on the plans and/or downgradient of all construction activity.
- b. Silt fences will be removed when they have served their useful purpose, but not before the upgradient areas have been permanently stabilized.
- c. Silt fences will be inspected immediately after each rainfall and at least daily during prolonged rainfall. They will be inspected if there are any signs of erosion or sedimentation below them. Any required repairs will be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, they will be replaced with a temporary crushed stone check dam.
- d. Sediment deposits will be removed after each storm event if significant build-up has occurred or if deposits exceed half the height of the barrier.
- STONE CHECK DAMS

Stone check dams should be installed before runoff is directed to the swale. Stone check dams will be installed in grass-lined swales and ditches during construction. Remove stone check dams when they have served their useful purpose, but not before upgradient areas have been permanently stabilized.

- 4. EROSION CONTROL MIX SEDIMENT BARRIER
- a. It may be necessary to cut, pack down, or remove tall grasses, brush, or woody vegetation to avoid voids and bridges that allow the washing away of fine soil particles.
- b. Where approved, erosion control mix sediment barriers may be used as a substitute for silt fence. See the details in this drawing set for specifications.
- b. Rock Filter Berms: To provide more filtering capacity or to act as a velocity check dam, a berm's center can be composed of clean crushed rock ranging in size from the french drain stone to riprap.
- 5. TEMPORARY SEEDING

Stabilize disturbed areas that will not be brought to final grade and reduce problems associated with mud and dust production from exposed soil surface during construction with temporary vegetation.

TEMPORARY SEEDING SPECIFICATIONS

Mixture:	Application Rate (lbs/acre)
Winter Rye	112
Oats	80
Annual Ryegrass	40
Perennial Ryegrass	40
Perennial Ryegrass	40

6. TEMPORARY MULCHING

Use temporary mulch in the following locations and/or circumstances:

- In sensitive areas (within 100 feet of streams, wetlands and in lake watersheds) temporary mulch will be applied within 7 days of exposing spill or prior to any storm event.
- Apply temporary mulch within 14 days of disturbance or prior to any storm event in all other areas.
- Areas which have been temporarily or permanently seeded will be mulched immediately following seeding
- Areas which cannot be seeded within the growing season will be mulched for over-winter protection and the area will be seeded at the beginning of the growing season
- Mulch can be used in conjunction with tree, shrub, vine, and ground cover plantings.
- Mulch anchoring will be used on slopes greater than 5 percent in late fall (past October 15), and over-winter (October 15 - April 15).

The following materials may be used for temporary mulch:

- a. Hay or Straw material shall be air-dried, free of seeds and coarse material. Apply 2 bales/1,000 sf or 1.5 to 2 tons/acre to cover 90% of ground surface.
- b. Erosion Control Mix: It can be used as a stand-alone reinforcement:
- 2-inches thick for slopes flatter than 3H:1V;
- 4-inches thick for slopes greater than 3H:1V;
- on slopes 2 horizontal to 1 vertical or less; on frozen ground or forested areas; and

- at the edge of gravel parking areas and areas under construction. c. Erosion control mix alone is not suitable:
- on slopes with groundwater seepage;
- at low points with concentrated flows and in gullies;
- at the bottom of steep perimeter slopes exceeding 100 feet in length; • below culvert outlet aprons; and around catch basins and closed storm systems.
- d. Chemical Mulches and Soil Binders: Wide ranges of synthetic spray-on materials are marketed to protect the soil surface. These are emulsions that are mixed with water and applied to the soil. They may be used alone, but most often are used to hold wood fiber, hydro-mulches or straw to the soil surface.
- e. Erosion Control Blankets and Mats: Mats are manufactured combinations of mulch and netting designed to retain soil moisture and modify soil temperature. During the growing season (April 15th to November 1st) use mats indicated on drawings or North American Green (NAG) S75 (or mulch and netting) on:
- the base of grassed waterways; • steep slopes (15 percent or greater); and
- any disturbed soil within 100 feet of lakes, streams, or wetlands.

During the late fall and winter (November 1st to April 15th) use heavy grade mats indicated on drawings for NAG SC250 on all areas noted above plus use lighter grade mats NAG S75 (or mulch and netting) on:

• sideslopes of grassed waterways; and moderate slopes (between 8 and 15 percent).

C. TEMPORARY DUST CONTROL

To prevent the blowing and movement of dust from exposed soil surfaces, and reduce the presence of dust, use water or calcium chloride to control dusting by preserving the moisture level in the road surface materials.

D. CONSTRUCTION DE-WATERING

- 1. Water from construction de-watering operations shall be cleaned of sediment before reaching wetlands, water bodies, streams or site boundaries. Utilize temporary sediment basins, erosion control soil filter berms backed by staked hay bales, A Dirt Bag 55" sediment filter bag by ACF Environmental, or other approved Best Management Practices (BMP's).
- 2. In sensitive areas near streams or ponds, discharge the water from the de-watering operation into a temporary sediment basin created by a surrounding filter berm of uncompacted erosion control mix immediately backed by staked hay bales (see the site details). Locate the temporary sediment basin at lease 100 feet from the nearest water body, such that the filtered water will flow through undisturbed vegetated soil areas prior to reaching the water body or property line.

E. PERMANENT MEASURES

- 1. Riprapped Aprons: All storm drain pipe outlets and the inlet and outlet of culverts will have riprap aprons to protect against scour and deterioration.
- 2. Topsoil, Seed, and Mulch: All areas disturbed during construction, but not subject to other restoration (paving, riprap, etc.) will be loamed, limed, fertilized, seeded, and mulched.

Seeded Preparation: Use stockpiled materials spread to the depths shown on the plans, if available. Approved topsoil substitutes may be used. Grade the site as needed.

a. Seeding will be completed by August 15 of each year. Late season seeding may be done between August 15 and October 15. Areas not seeded or which do not obtain satisfactory growth by October 15, will be seeded with Aroostook Rye or mulched. After November 1, or the first killing frost, disturbed areas will be seeded at double the specified application rates, mulched, and anchored.

PERMANENT SEEDING SPECIFICATIONS

Mixture:	Roadside (lbs/acre)	Lawn (lbs/acre)
Kentucky Bluegrass	20	55
White Clover	5	0
Creeping Red Fescue	20	55
Perennial Ryegrass	5	15

b. Mulch in accordance with specifications for temporary mulching.

c. If permanent vegetated stabilization cannot be established due to the season of the year, all exposed and disturbed areas not to undergo further disturbance are to have dormant seeding applied and be temporarily mulched to protect the site.

3. Ditches and Channels: All ditches on-site will be lined with North American Green S75 erosion control mesh (or an approved equal) upon installation of loam and seed.

- F. WINTER CONSTRUCTION AND STABILIZATION
- 1. Natural Resource Protection: During winter construction, a double-row of sediment barriers (i.e., silt fence backed with hay bales or erosion control mix) will be placed between any natural resource and the disturbed area. Projects crossing the natural resource will be protected a minimum distance of 100 feet on either side from the resource.
- 2. Sediment Barriers: During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.
- 3. Mulching:
  - All areas will be considered to be denuded until seeded and mulched. Hay and
  - straw mulch will be applied at a rate of twice the normal accepted rate.
  - Mulch will not be spread on top of snow.
  - After each day of final grading, the area will be properly stabilized with anchored hay or straw or erosion control matting.
  - Between the dates of November 1 and April 15, all mulch will be anchored by either mulch netting, emulsion chemical, tracking or wood cellulose fiber.
- 5. Soil Stockpiling: Stockpiles of soil or subsoil will be mulched for over-winter protection with hay or straw at twice the normal rate or with a 4-inch layer of erosion control mix. This will be done within 24 hours of stocking and re-established prior to any rainfall or snowfall. Any soil stockpiles shall not be placed (even covered with mulch) within 100 feet from any natural resources. Sediment barriers should be installed downgradient of stockpiles. Stormwater shall be directed away from stockpiles.
- 6. Seeding: Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas will receive 4 inches of loam and seed at an application rate of three times the rate for permanent seeding. All areas seeded during the winter will be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75 percent catch) will be revegetated by replacing loam, seed, and mulch.

If dormant seeding is not used for the site, all disturbed areas will be revegetated in the spring.

- 7. Maintenance: Maintenance measures will be applied as needed during the entire construction season. After each rainfall, snow storm, or period of thawing and runoff, and at least once a week, the site Contractor will perform a visual inspection of all installed erosion control measures and perform repairs as needed to ensure their continuous function.
- 8. Identified repairs will be started no later than the end of the net work day and be completed within seven (7) calendar days.

Following the temporary and/or final seeding and mulching, the Contractor will, in the spring, inspect and repair any damages and/or bare spots. An established vegetative cover means a minimum of 85 to 90 percent of areas vegetated with vigorous growth.

- G. OVER-WINTER CONSTRUCTION EROSION CONTROL MEASURES
- 1. Stabilization of Disturbed Soil: By October 15, all disturbed soils on areas having a slope less than 15 percent will be seeded and mulched. If the Contractor fails to stabilize these soils by this date, then the Contractor shall stabilize the soil for late fall and winter, by using either temporary seeding or mulching.
- 2. Stabilization of Disturbed Slopes: All slopes to be vegetated will be completed by October 15. The Owner will consider any area having a grade greater than 15 percent (6.5H:1V) to be a slope. Slopes not vegetated by October 15 will receive one of the following actions to stabilize the slope for late fall and winter:
- a. Stabilize the soil with temporary vegetation and erosion control mesh.
- b. Stabilize the slope with erosion control mix. Stabilize the slope with stone riprap.
- d. Slopes steeper than 1.5:1 are prohibited.
- Stabilization of Ditches and Channels: All stone-lined ditches and channels to be used to convey runoff through the winter will be constructed and stabilized by November 15. Grass-lined ditches and channels will be complete by September 15. Grass-lined ditches not stabilized by September 15 shall be lined with either sod or riprap.

H. MAINTENANCE PLAN

Routine Maintenance: Inspection will be performed as outlined in the project's Erosion Control Plan. Inspection will be by a qualified person during wet weather to ensure that the facility performs as intended. Inspection priorities will include checking erosion controls for accumulation of sediments.

Housekeeping

- 1. Spill prevention. Controls must be used to prevent pollutants from being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.
- 2. Groundwater protection. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.
- 3. Fugitive sediment and dust. Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control. If off-site tracking occurs roadways should be swept immediately and no loss once a week and prior to significant storm events.
- 4. Debris and other materials. Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.
- 5. Trench or foundation de-watering. Trench de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water must be removed from the ponded area, either through gravity or pumping, and must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the department.
- 6. Authorized Non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:
- (a) Discharges from firefighting activity;
- (b) Fire hydrant flushings;
- (c) Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);
- (d) Dust control runoff in accordance with permit conditions and section I3;
- (e) Routine external building washdown, not including surface paint removal, that does not involve detergents;
- (f) Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;
- (g) Uncontaminated air conditioning or compressor condensate;
- (h) Uncontaminated groundwater or spring water;
- (i) Foundation or footer drain-water where flows are not contaminated;
- (j) Uncontaminated excavation dewatering (see requirements in section I5);
- (k) Potable water sources including waterline flushings; and
- (I) Landscape irrigation.
- Unauthorized non-stormwater discharges. The Department's approval under this Chapter does not authorize a discharge that is mixed with a source of non stormwater, other than those discharges in compliance with section I6. Specifically, the Department's approval does not authorize discharges of the following:
- (a) Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;
- (b) Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;
- (c) Soaps, solvents, or detergents used in vehicle and equipment washing; and
- (d) Toxic or hazardous substances from a spill or other release.
- 8. Additional requirements. Additional requirements may be applied on a site-specific basis.

J. CONSTRUCTION SEQUENCE

- In general, the expected sequence of construction for each phase is provided below. Construction is proposed to start in Spring 2022 and end in 2022.
- Mobilization Install temporary erosion control measures
- Clearing and grubbing
- Site stabilization, construct reclaimed asphalt access road, loam and seed, landscaping
- Remove temporary erosion control measures



BARRIER OR SILT FENCE FOR SLOPE PROTECTION.





 Site Grading Construct buildings







SHLDR

· 1/2"/1'

4" LOAM —

1 18" MIN 1

W/ (TYP)

COMPACTED GRANULAR

BORROW MDOT 703.19 -----

PREPARED SUBGRADE -

10'

TRAVELWAY

1/4"/1

— 3" COMPACTED AGGREGATE BASE

MDOT 703.06(a) TYPE A

€ ROAD

- 15" COMPACTED AGGREGATE SUBBASE

MDOT 703.06(B) TYPE D

HMA = HOT MIX ASPHALT.2. LOAM ALL SIDE SLOPES WITH 4" OF LOAM. SEED AS SOON AS POSSIBLE. PROTECT SIDE SLOPES FROM EROSION AS NEEDED OR AS

DIRECTED BY ENGINEER.

10'

TRAVELWAY

1/2"/1'、

1/4"/1' 🔪

AND FILLS UNLESS OTHERWISE INDICATED.

4. BACKSLOPE TO BE 2:1 IN ROCK EXCAVATION PROVIDED ADEQUATE

TYPICAL ROAD SECTION



- COMPACTED SUBGRADE





