LOT 6
4.5 ± ACRES

LOT 5
5.3 ± ACRES

LOT 4
5.5 ± ACRES

LOT 3
5.8 ± ACRES

LOT 2
4.7 ± ACRES

LOT 1
3.7± ACRES

EXISTING LEACHFIELD

1000 GALLON SEPTIC TANK
1000 GALLON PUMP STATION
HOUSE
DRILLED WELL
3/4" P.E. WATER LINE
2" SDR 26 PVC FORCE MAIN
PROPOSED LEACHFIELD
LOT 6 PROPOSED LEACHFIELD
LOT 5 PROPOSED LEACHFIELD
SEPTIC EASEMENT
BUILDING ENVELOPE
DRIVEWAY
30' BUFFER
50' BUFFER
100' BUFFER
50' ROW FOR BENNETT AND CRANDALL
PROPOSED 24" HDPE CULVERT
PROPOSED 18" HDPE CULVERT
1000 GAL SEPTIC TANK
REPLACEMENT LEACHFIELD TRENCHES 4' x 65'
PRIMARY LEACHFIELD TRENCH 6' x 135'
PRIMARY LEACHFIELD 2 TRENCHES 4' x 90'
REPLACEMENT LEACHFIELD 2 TRENCHES 4' x 90'
70" BOX WITH RISER
4" SDR 35 PVC SEWER LINE
TEMPORARY BUFFER. IF AND WHEN DUMP ROAD IS MOVED TO BE PHYSICALLY LOCATED UNDER THE POWER LINES, THEN BUFFER IS TO BE PLANTED IN CURRENT LOCATION OF DUMP ROAD.
EXISTING TREES TO REMAIN

TBM
NAIL IN 20" MAPLE
ELEVATION 499.92'

TBM
NAIL IN 12" BIRCH
ELEVATION 427.5'

522' ± ALONG CL OF ROAD
279' ± ALONG CL OF ROAD
539' ± ALONG CL OF ROAD
DUMP ROAD
485' ± ALONG CL OF ROAD
491' ± ALONG CL OF ROAD
316' ± ALONG CL OF ROAD
464' ± ALONG CL OF ROAD
AIRPORT ROAD

WHERE FORCEMAIN CROSSES THE ROAD, SLEEVE FORCEMAIN WITH 6" SDR 26 PVC AND COVER WITH 4" OF RIGID INSULATION. MINIMUM BURIAL DEPTH IS 4 1/2 FEET.

SHEET INDEX

GRAPHIC SCALE

60 0 30 60 120 240

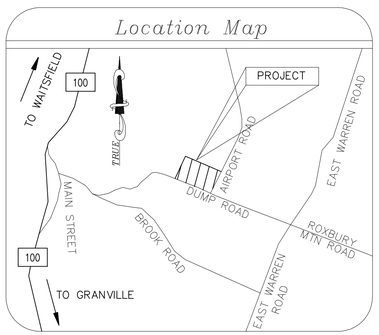
(IN FEET)
1 inch = 60 ft.

Topography by Total Station
Contour Interval 2'
Approximate USGS Datum
Based on Hand Held GPS Unit

LEGEND

TP-1	TRAVERSE POINT		STREAM
SB-1	TEST PIT		PROPOSED CULVERT
PT-1	PERC TEST	W	WATER LINE
W	PROPOSED WELL		OVER HEAD UTILITY LINES
IPF	IRON PIPE FOUND	100	10' CONTOURS
IRF	IRON ROD FOUND		2' CONTOURS
IRS	IRON ROD SET		WET AREA
TBM	TEMPORARY BENCH MARK		WET AREA BUFFER
	UTILITY POLE		PROPERTY LINE
1	STONE LINED DITCH		RIGHT OF WAY
2	STONE EROSION CHECK DAM		SEPTIC EASEMENT
4	SILT FENCE		BUILDING ENVELOPE
5	CULVERT HEADWALL		STONE WALL
8	GRASS CHANNEL		VEGETATION BUFFER ZONE

Location Map



THE CONTRACTOR SHALL REVIEW ALL CONSTRUCTION ACTIVITIES, COMPONENT LOCATIONS, SPECIFICATIONS, AND DETAILS PRIOR TO COMMENCEMENT OF SITE WORK AND SHALL NOTIFY MCCAIN CONSULTING OF ANY ISSUES OR DISCREPANCIES THAT ARISE FROM THAT REVIEW.

THIS IS NOT A SURVEY. THIS PLAN DOES NOT MEET THE REQUIREMENTS OF 27 VSA SEC. 1403 FOR THE FILING OF SURVEY PLATS.

Y:\Cadd\22000's\22002\22002 03-17-10.dwg

PRELIMINARY
NOT FOR CONSTRUCTION

CONSULTANT:
GUNNER MCCAIN
LD-B #237
CPESC #2646
CESSWI #0177

OVERVIEW

SHIRLEY M. RITCHIE TRUST

REVISION TO WW-5-2109 (LOTS 3-6)

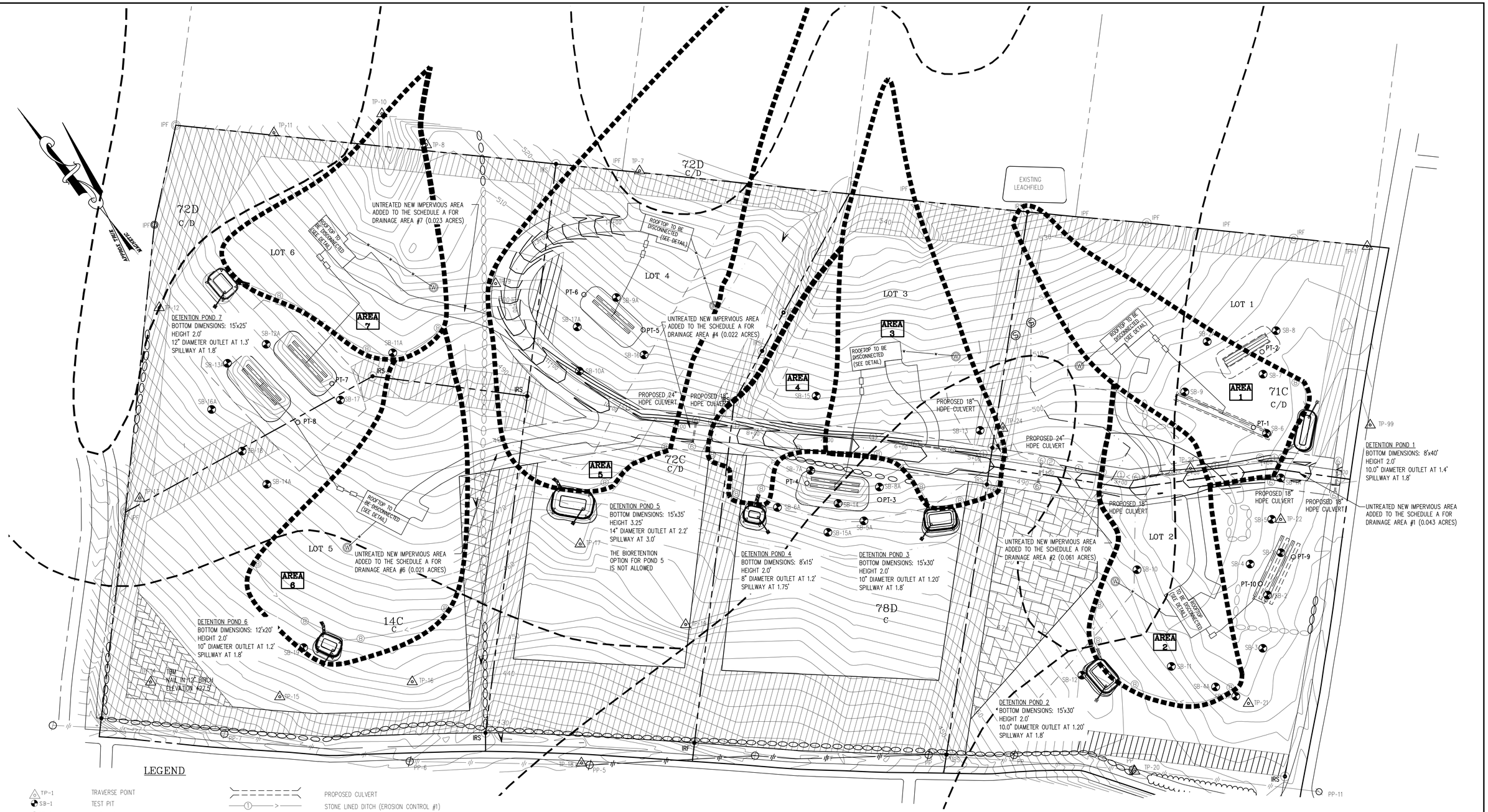
AIRPORT ROAD & DUMP ROAD — WARREN, VT

SCALE : 1" = 60'
DESIGNED BY: GNM PROJECT #22002
DRAWN BY: JTS/WDB
CHECKED BY: GNM/PCL

McCAIN CONSULTING, INC.
93 SOUTH MAIN STREET
WATERBURY, VERMONT 05676

DATE: MARCH 17, 2010

SHEET S-1



LEGEND

TP-1	TRAVERSE POINT
SB-1	TEST PIT
PT-1	PERC TEST
W	PROPOSED WELL
IPF	IRON PIPE FOUND
IRF	IRON ROD FOUND
IRS	IRON ROD SET
TBM	TEMPORARY BENCH MARK
	UTILITY POLE
2	STONE EROSION CHECK DAM
6	CULVERT HEADWALL
72D	SOIL DESIGNATION
C/D	HYDROLOGIC SOIL GROUP
AREA 1	DRAINAGE AREA NUMBER
	DRAINAGE AREA BOUNDARY
	SOIL AREA BOUNDARY
	STREAM

	PROPOSED CULVERT
1	STONE LINED DITCH (EROSION CONTROL #1)
4	SILT FENCE
3	GRASS CHANNEL
W	WATER LINE
	OVER HEAD UTILITY LINES
100	10' CONTOURS
	2' CONTOURS
	WET AREA
	WET AREA BUFFER
	PROPERTY LINE
	RIGHT OF WAY
	SEPTIC EASEMENT
	BUILDING ENVELOPE
	STONE WALL
	PERMITTED VEGETATION BUFFER ZONE PER TOWN SUBDIVISION (TO BE INCLUDED AS CONSERVED AREA)
	ADDITIONAL AREA ADDED TO VEGETATION BUFFER ZONE TO CREATE REQUIRED CONSERVED AREA - 7.63 ACRES

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

Topography by Total Station
Contour Interval 2'
Approximate USGS Datum
Based on Hand Held GPS Unit

THE CONTRACTOR SHALL REVIEW ALL CONSTRUCTION ACTIVITIES, COMPONENT LOCATIONS, SPECIFICATIONS, AND DETAILS PRIOR TO COMMENCEMENT OF SITE WORK AND SHALL NOTIFY MCCAIN CONSULTING OF ANY ISSUES OR DISCREPANCIES THAT ARISE FROM THAT REVIEW.

THIS IS NOT A SURVEY. THIS PLAN DOES NOT MEET THE REQUIREMENTS OF 27 VSA SEC. 1403 FOR THE FILING OF SURVEY PLATS.

Y:\Cadd\22000's\22002\22002 03-17-10.dwg

STORMWATER OVERVIEW

SHIRLEY M. RITCHIE TRUST

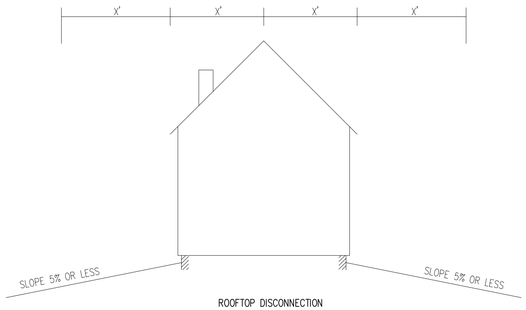
AIRPORT ROAD & DUMP ROAD — WARREN, VT

SCALE : 1" = 60'
DESIGNED BY: PETER C. LAZORCHAK, P.E.
DRAWN BY: WDB
CHECKED BY: PCL

McCAIN CONSULTING, INC.
93 SOUTH MAIN STREET
WATERBURY, VERMONT 05676

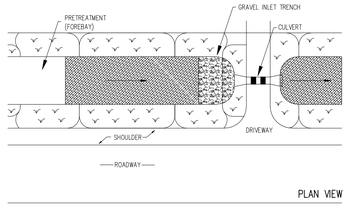
DATE: MARCH 17, 2010

SHEET SW-1

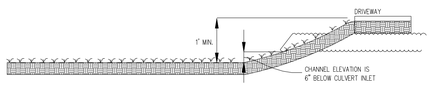


ROOFTOP DISCONNECTION

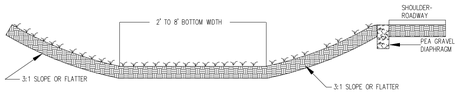
1. Slope land away from building at 5% or less.
2. Length of 5% (or less) is to be equal to or greater than the contributing rooftop length (x).
3. Gutters and downspouts are not allowed.
4. Sloped land is to be vegetated.
5. The rooftop length contributing to a given discharge location shall be 75' or less and the rooftop area contributing to any one discharge location shall not exceed 1000 s.f.
6. If these stated conditions cannot be met with final grading of individual lot, an approved water quality treatment structure may be utilized per the 2002 VSWMM. contact design engineer for guidance.



PLAN VIEW



LONGITUDINAL VIEW

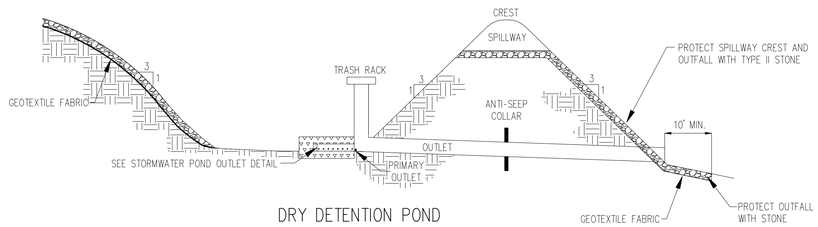


SECTION VIEW

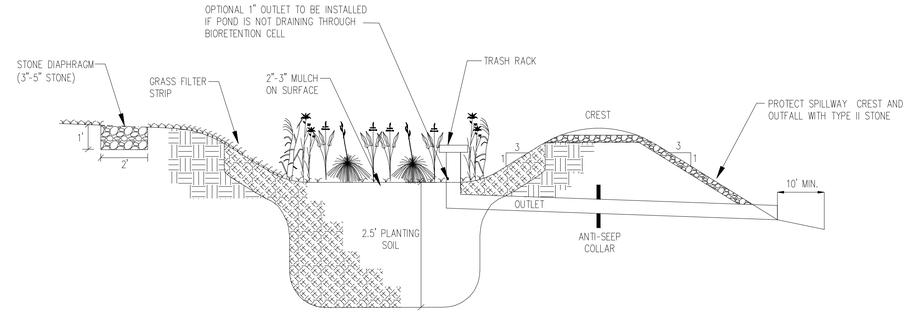
Grass lined channels with slopes greater than 5% shall utilize erosion control matting to achieve a stable vegetated channel. See Erosion Control Matting Detail for an installation detail.

GRASS CHANNEL
(NOT TO SCALE)

NOTES:
1. BERM IS TO BE COMPACTED TO 95% PROCTOR DENSITY IN 12 INCH LIFTS.
2. TOP WIDTH OF BERM TO BE A MINIMUM OF 2 FEET.
3. THE CONSTRUCTION OF A CLAY CORE, OR ADDITION OF BENTONITE TO EARTH FILL MAY BE NECESSARY FOR MODERATELY TO HIGHLY PERMEABLE SOILS.

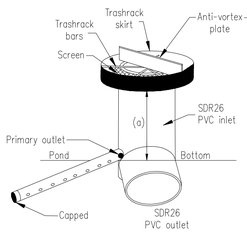


DRY DETENTION POND
(NOT TO SCALE)

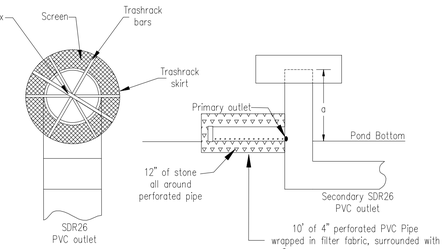


OPTIONAL
DRY POND/BIORETENTION CELL
(NOT TO SCALE)
(SUITABLE FOR ALL DRY DETENTION PONDS EXCEPT POND #5)

3/4 View



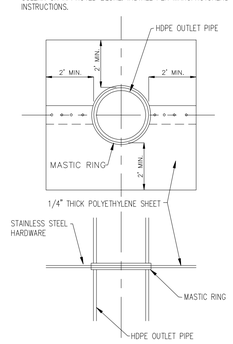
Top View



STORMWATER POND OUTLET DETAIL
(NOT TO SCALE)

	Pond 1	Pond 2	Pond 3	Pond 4	Pond 5	Pond 6	Pond 7
1' Outlet Elev.	0.00'	0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
8' Outlet Elev.	----'	----'	----	1.20'	----'	----'	----'
10' Outlet Elev.	1.40'	1.20'	1.20'	----'	----'	1.20'	----'
12" Outlet Elev.	----'	----'	----'	----'	----'	----'	1.30'
14" Outlet Elev.	----'	----'	----'	----'	2.20'	----'	----'
Spillway Elev.	1.80'	1.80'	1.80'	1.75'	3.00'	1.80'	1.80'

NOTE: USE SCHEIB DRAINAGE PRE-MANUFACTURED ANTI-SEEP COLLAR OR APPROVED EQUAL. INSTALL PER MANUFACTURERS INSTRUCTIONS.



ANTI-SEEP COLLAR
(NOT TO SCALE)

Bioretention Planting Plan
Part Shade

Abr	Qty	Botanical Name	Common Name	Height	Spread	S. Interest	Spacing	Install Size
AD	8	Aruncis dioicus	Goatsbeard	5'	2-4'	Spring	22-30"	1-2 Gallon
ADI	11	Astilbe 'Diamant'	Astilbe	30"	1.5-2'	Summer	22"	1 Gallon
CR	10	Cimicifuga ramosa 'Brunette'	Purple-leaf Bugbane	3-4'	2-3'	Sp, Su, Fl	22"	1 Gallon
EPM	14	Echinacea purpurea 'Magnus'	Coneflower	2.5-3'	1-1.5'	Summer	15-22"	1 Gallon
HC	13	Heuchera 'Chocolate Ruffles'	Coral Bells	1-2'	1-1.5'	Summer	15-22"	1 Gallon
OR	8	Osmunda Regalis	Royal Fern	3-4'	2-3'	Sp, Su, Fl	22-30"	1 Gallon
RH	8	Rodgersia henrici Sub-Rodgersia aesculifolia	Rodgersia	3-4'	3-4'	Summer	34-28"	1-2 Gallon

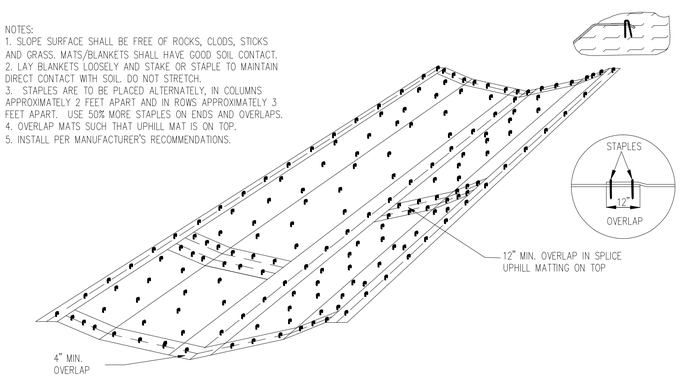
Sizing Chart			
Sq Ft	Qty of Diff. Species	Total Plant Qty	Ex. Garden Dimensions
50	3	24	6' x4' -6'
100	5	48	8' -6" x 6' -4"
150	7	72	18' -2" x 8' -3"
200	7	96	12" x 9'
250	7	120	13' -5" x 10'

NOTES:
1. ALTERNATE PLANTING PLANS MAY BE PRESENTED AND APPROVED BY DESIGNER. ANY CHANGES WILL BE SUBMITTED TO THE ANR STORMWATER SECTION. CONTACT DESIGNER IF THE GARDEN IS NOT LOCATED IN A PARTLY SHADED AREA FOLLOWING SITE DEVELOPMENT.

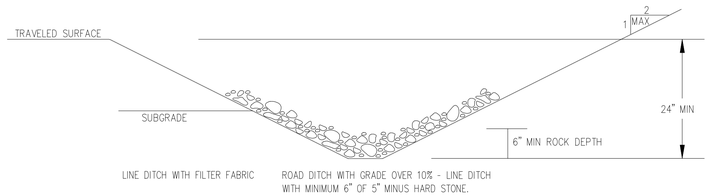
2. THE PLANTING SOIL SHOULD BE A SANDY LOAM, LOAMY SAND, LOAM, OR A LOAM/SAND MIX (I.E., SHOULD CONTAIN A MINIMUM 35 TO 60% SAND, BY VOLUME). THE CLAY CONTENT FOR THESE SOILS SHOULD BE LESS THAN 25% BY VOLUME (ETAB, 1993). SOILS SHOULD FALL WITHIN THE SM, OR ML CLASSIFICATIONS OF THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS). A PERMEABILITY OF AT LEAST 1.0 FOOT PER DAY (0.5"/HR) IS REQUIRED (A CONSERVATIVE VALUE OF 0.5 FEET PER DAY IS USED FOR DESIGN). THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, WOODY MATERIAL OVER 1" IN DIAMETER, AND BRUSH OR SEEDS FROM NOXIOUS WEEDS. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN LIFTS OF 12" TO 18", LOOSELY COMPACTED (TAMPED LIGHTLY WITH A DOZER OR BACKHOE BUCKET).

3. THE MULCH LAYER SHOULD BE STANDARD LANDSCAPE STYLE, SINGLE OR DOUBLE, SHREDDED HARDWOOD MULCH OR CHIPS. THE MULCH LAYER SHOULD BE WELL AGED (STOCKPILED OR STORED FOR AT LEAST 12 MONTHS), UNIFORM IN COLOR, AND FREE OF OTHER MATERIALS, SUCH AS WEED SEEDS, SOIL, ROOTS, ETC. THE MULCH SHOULD BE APPLIED TO A MAXIMUM DEPTH OF THREE INCHES. GRASS CLIPPINGS SHOULD NOT BE USED AS A MULCH MATERIAL.

NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2 FEET APART AND IN ROWS APPROXIMATELY 3 FEET APART. USE 50% MORE STAPLES ON ENDS AND OVERLAPS.
4. OVERLAP MATS SUCH THAT UPHILL MAT IS ON TOP.
5. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



EROSION CONTROL MATTING DETAIL
INSTALLATION FOR GRASS LINED CHANNEL
(NOT TO SCALE)



EROSION CONTROL NUMBER 1
STONE LINED DITCH
(NOT TO SCALE)

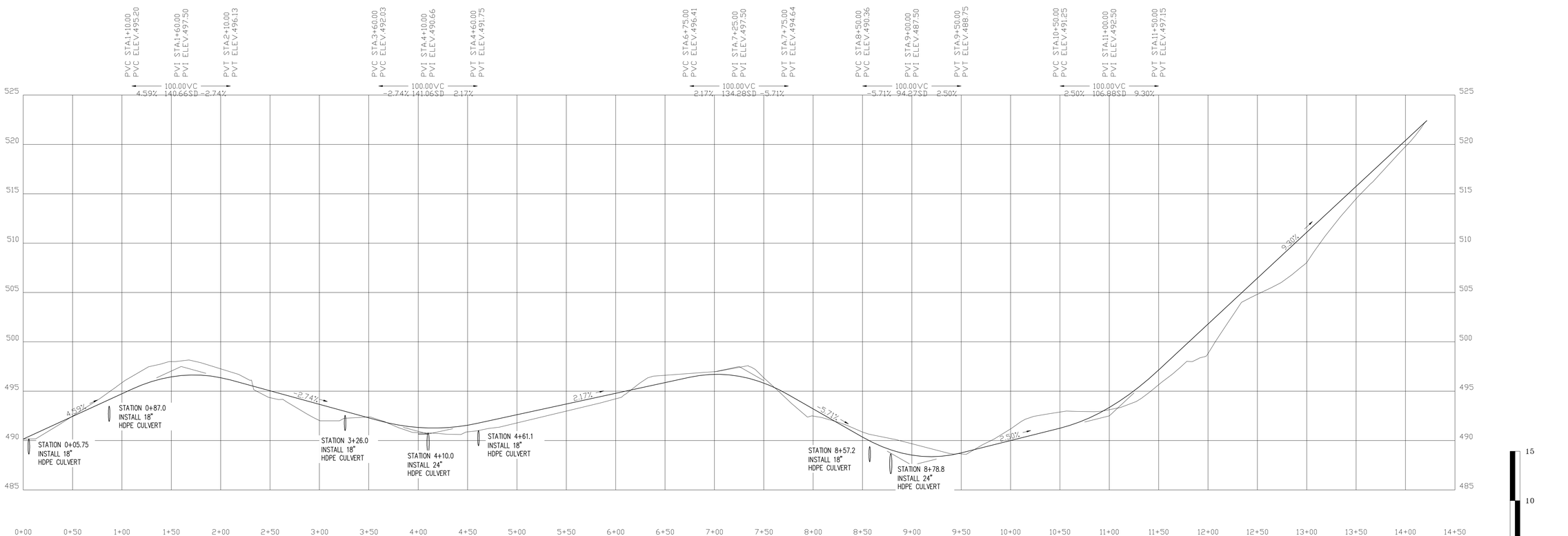
Y:\Cadd\22000's\22002\22002 03-17-10.dwg

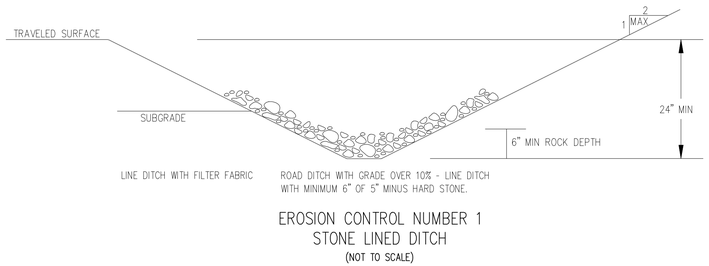
STORMWATER DETAILS
SHIRLEY M. RITCHIE TRUST
AIRPORT ROAD & DUMP ROAD — WARREN, VT

SCALE : NTS
DESIGNED BY: PETER C. LAZORCHAK, P.E.
DRAWN BY: WDB
CHECKED BY: PCL

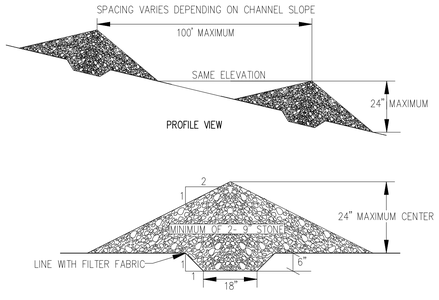
McCAIN CONSULTING, INC.
93 SOUTH MAIN STREET
WATERBURY, VERMONT 05676

DATE: MARCH 17, 2010 — SHEET SW-2

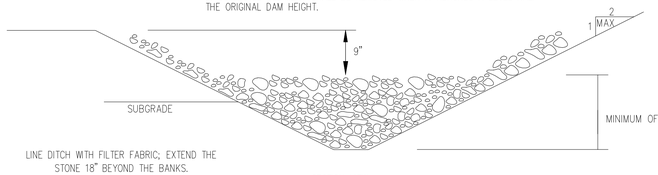




EROSION CONTROL NUMBER 1
STONE LINED DITCH
(NOT TO SCALE)

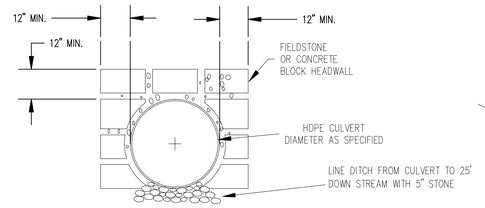


STONE CHECK DAM NOTES
1. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
2. COLLECTED SEDIMENT SHALL BE REMOVED WHEN IT REACHES A LEVEL HALF THE ORIGINAL DAM HEIGHT.

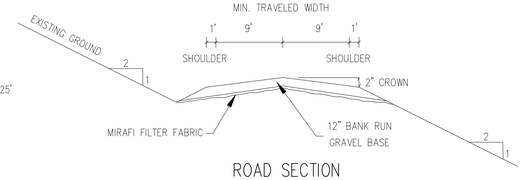


SECTION VIEW

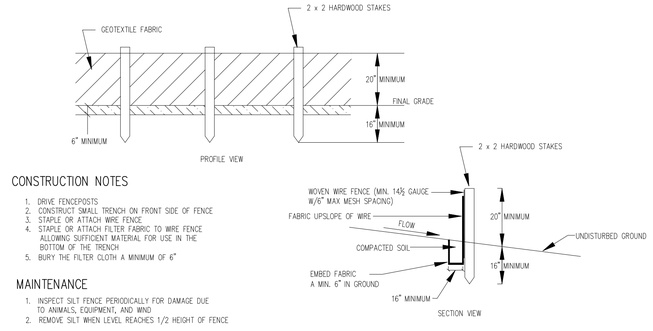
EROSION CONTROL NUMBER 2
STONE EROSION CHECK DAM
(NOT TO SCALE)



EROSION CONTROL NUMBER 6
CULVERT HEADWALL DETAIL
(NOT TO SCALE)



ROAD SECTION
(NOT TO SCALE)



CONSTRUCTION NOTES
1. DRIVE FENCEPOSTS
2. CONSTRUCT SMALL TRENCH ON FRONT SIDE OF FENCE
3. STAPLE OR ATTACH WIRE FENCE
4. STAPLE OR ATTACH FILTER FABRIC TO WIRE FENCE ALLOWING SUFFICIENT MATERIAL FOR USE IN THE BOTTOM OF THE TRENCH
5. BURY THE FILTER CLOTH A MINIMUM OF 6"

MAINTENANCE
1. INSPECT SILT FENCE PERIODICALLY FOR DAMAGE DUE TO ANIMALS, EQUIPMENT, AND WIND
2. REMOVE SILT WHEN LEVEL REACHES 1/2 HEIGHT OF FENCE

EROSION CONTROL NUMBER 4
SILT FENCE DETAIL
(NOT TO SCALE)

THE CONTRACTOR SHALL REVIEW ALL CONSTRUCTION ACTIVITIES, COMPONENT LOCATIONS, SPECIFICATIONS, AND DETAILS PRIOR TO COMMENCEMENT OF SITE WORK AND SHALL NOTIFY MCCAIN CONSULTING OF ANY ISSUES OR DISCREPANCIES THAT ARISE FROM THAT REVIEW.

THIS IS NOT A SURVEY. THIS PLAN DOES NOT MEET THE REQUIREMENTS OF 27 VSA SEC. 1403 FOR THE FILING OF SURVEY PLATS.

Y:\Cadd\22000's\22002\22002 03-17-10.dwg

PRELIMINARY
NOT FOR CONSTRUCTION

ENGINEER:
PETER C. LAZORCHAK, P.E.
VT P.E. 8930

ROAD PROFILE & EROSION PREVENTION AND SEDIMENT CONTROL DETAILS
SHIRLEY M. RITCHIE TRUST
REVISION TO WW-5-2109 (LOTS 3-6)

AIRPORT ROAD & DUMP ROAD — WARREN, VT

SCALE : 1" = 50'
DESIGNED BY: PCL PROJECT #22002
DRAWN BY: WDB
CHECKED BY: GNM/PCL

McCAIN CONSULTING, INC.
93 SOUTH MAIN STREET
WATERBURY, VERMONT 05676

DATE: MARCH 17, 2010

SHEET S-5

NOTES

Septic Tank and Building Sewer (Lots 3, 4, 5, & 6):

1) Use a 1000 gallon concrete septic tank with an access riser to grade, and an effluent filter.
2) Place tank a minimum of 10' from the building.
3) Use 4" cast iron or SCH 40 PVC from building to tank with one pipe joint placed on undisturbed soil to absorb settling.
4) Slope pipe from building to tank at ¼" per foot.

Pump Station (Lots 3, 4, 5, & 6):

1) Test pump on and off levels to verify dose volumes.
2) Test alarm level.
3) Test pump to verify minimum 28" discharge height at leachfield orifices.

Force Main (Lots 3, 4, 5, & 6):

1) Perform a hydrostatic leakage test of the force main at 50 psi and hold pressure for two hours.

Leachfield – Performance Based Approach Design Notes – Lots 3, 4, 5, & 6 (Replacement not required as per §1-804(c)(3):

1) Assume a four bedroom house. Daily Flow (DF) @ 140 gpd/br for the first three, and 70 gpd for the remaining bedroom = 490 gpd
2) Percolation rate t = 3 (mound sand) minute/inch
3) Application rate (AR) = $(3/\sqrt{t}) = (3/\sqrt{3}) = 1.73$ gal/sf/day
   Maximum application rate for effluent in a mound trench = 1.0 gal/sf/day
4) Required trench area: DF/AR = 490 gpd / 1.0 g/sf/day = 490 sf
5) Actual area: two trenches @ 4' x 65' = 520 sf
6) Required minimum effective basal area: 490 gpd / 0.74 gpd/sf = 662 sf
7) Basal area = 2353 sf (Lot 3), 1893 sf (Lot 4), 2159 sf (Lot 5), 2065 sf (Lot 6)
8) Maximum Linear Loading Rate (LLR) = h x f, where
   h = (depth to limiting layer) - (required unsaturated flow depth)
   = 18" + 24" (mound sand) - 36" (unsaturated flow) = 6" or 0.5'.
   Lot 3 - and f = LLR factor = 26.2 gpd/lf/ft for fine sandy loam with a 15.1-20% slope.
   Lots 4, 5 & 6 - and f = LLR factor = 18.7 gpd/lf/ft for fine sandy loam with a 10.1-15% slope.
   Therefore, **Lot 3** maximum LLR = 0.5 x 26.2 = 13.1 gpd/lf,
   Lots 4, 5 & 6 maximum LLR = 0.5 x 18.7 = 9.35 gpd/lf.
9) Actual LLR = 490 gpd/ 65 lf = 7.53 gpd/lf. which is less than the maximum allowed.
10) A Performance Based Design requires 6" naturally occurring unsaturated soil above the calculated level of the effluent plume. Based on #8 above, the Maximum Linear Loading Rate of 13.1 gpd/lf for **Lot 3**, and 9.35 gpd/lf for **Lots 4, 5, & 6** will result in 6" of mounding.
    As the limiting layer is at 18", 6" of mounding results in an effluent plume 12" below grade which exceeds the 6" requirement.

Leachfield - Construction Notes (Lots 3, 4, 5, & 6):

1) Contact the consultant prior to any work to discuss system layout and inspection requirements.
2) Construction of the mound shall not take place if the soil moisture content is high. If questionable contractor to contact designer prior to construction.
3) Install force main, leaving 4'± above grade.
4) Plow or scarify to limits of fill. Area to be plowed to a depth of 8" with plow lines running parallel with the contours, and throwing the soil uphill. Do not plow if area is wet. Do not run machinery on plowed surface.
5) Mound sand to meet the requirements of §1-913(c), see table:

	Sieve Number	Opening (mm)	Percent Passage, by Weight
	3/8	9.500	85 - 100
	40	0.420	25 - 75
Option 1	60	0.240	0 - 30
	100	0.149	0 - 10
	200	0.074	0 - 5
	4	4.750	95 - 100
	8	2.380	80 - 100
Option 2	16	1.190	50 - 85
	30	0.590	25 - 60
	50	0.297	10 - 30
	100	0.149	2 - 10
	3/8	9.500	85 - 100
Option 3	40	0.420	30 - 50
	200	0.074	0 - 5

6) Sand is to be stockpiled on the edge of the plowed area and placed with a small track machine, keeping a minimum of 6" of sand below the tracks. Do not compact the sand.
7) Place 8" of 1"-1½" clean hard crushed stone or washed stone per the detail. Lay pressure piping and connect to force main. ¼" holes to be pointed up with orifice shields over all holes and spaced according to the detail. Ream all holes to remove burrs. System must be tested prior to covering.
8) Cover pipe with minimun 2" of stone and filter fabric. Topsoil, seed, and mulch the entire area. Grade to drain runoff away from system.

Water Supply Basis of Design (Lots 3, 4, 5, & 6):

a) Average day demand = 4 bedroom house @ 490 gpd
b) Maximum day demand (gpm) = 0.68
c) Instantaneous peak demand (gpm) = 5 gpm
d) Source capacity = to be determined
e) Storage capacity = not required for single family residence
f) Pump capacities = to be determined
g) Operating pressure ranges = 30-50 psi
h) Reference to the floodplain = this project is not in the floodplain

Water Supply Well (Lots 3, 4, 5, & 6):

1) Install well in the location shown on the plan.
2) Provide well driller's log.
3) Provide well driller's certification as specified below.

Inspections and Certifications (Lots 3, 4, 5, & 6):

1) It is the owner's/ contractor's responsibility to contact the consultant for the following:

   a) For stakeout of the well and leachfield locations.
   b) For inspection of the scarification of the soil prior to placing stone.
   c) For inspection of the pressurization of the force main to 50 psi.
   d) To observe pump operation and to verify discharge height at the leachfield.

2) The septic system installer will provide the consultant with a signed and dated statement as follows:

   "I hereby certify that the installation-related information submitted is true and correct, and that in the exercise of my reasonable professional judgment, the wastewater system has been installed in accordance with the permitted design and all permit conditions, was inspected, was properly tested, and has successfully met those performance tests.

3) The well driller will provide the consultant with a signed and dated statement as follows:

   "I hereby certify that the installation-related information submitted is true and correct, and that in the exercise of my reasonable professional judgment, the potable water supply has been installed in accordance with the permitted design and all permit conditions, was inspected, was properly tested, and has successfully met those performance tests.

4) The certification of construction as required by section 1-308(a) of the Environmental Protection Rules may not be provided by the designer if the procedures outlined herein are not followed.

Maintenance (Lots 3, 4, 5, & 6):

(1) At least once a year, the depth of sludge and scum in the septic tank should be measured. The tank should be pumped if:
   (a) The sludge is closer than twelve inches to the outlet baffle,or
   (b) The scum layer is closer than three inches to the septic tank outlet baffle.
   (c) Following septic tank cleaning in units over 5,000 gallons, all interior surfaces of the tank should be inspected for leaks and cracks.

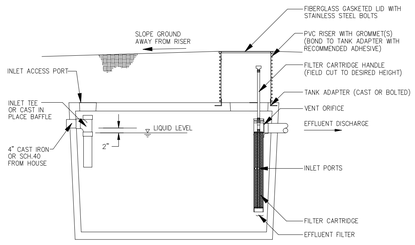
(2) At least twice a year, the outlet filter on the septic tank should be removed and cleaned by spraying it with water under normal household pressure.

(3) At least once a year, pump stations should be inspected:

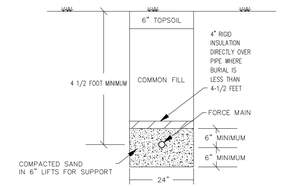
   (a) Remove settled solids as necessary. Solids and scum accumulation in the pump station may be indicative of a septic tank outlet filter malfunction, septic tank overloading, or other cause that should be investigated and remedied.
   (b) On/off and alarm floats should be tripped to ensure proper operation.
   (c) Inspect delivery of effluent to the leachfield. Slow delivery may indicate impending pump failure.

(4) Toxic or hazardous substances should in general not be disposed of in septic systems. These substances may pass through the system in an unaltered state and contaminate groundwater or remain in the septage and subsequently contaminate the soil or corps at the site of ultimate disposal.

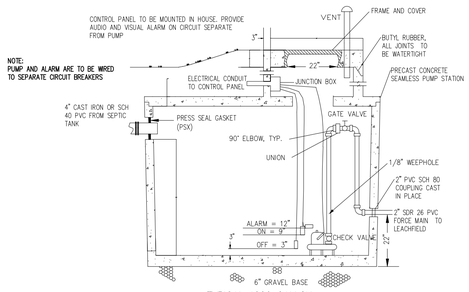
(5) The leachfields are not designed for the disposal of filter backwash or other byproducts of water treatment, filtration or purification systems.



TYPICAL SEPTIC TANK
(NOT TO SCALE)
(Lots 3, 4, 5, & 6)



FORCE MAIN TRENCH DETAIL
(NOT TO SCALE)
(Lots 3, 4, 5, & 6)



PUMP PARAMETERS:

PUMP IS TO DELIVER:
LOT 3: 32 GPM AT 10 FEET TDH,
LOT 4: 31 GPM AT 10 FEET TDH,
LOT 5: 31 GPM AT 25 FEET TDH,
LOT 6: 31 GPM AT 10 FEET TDH.

THE PUMP IS TO BE SUPPLIED WITH STANDARD ALARM AND CONTROLS AS SUPPLIED BY THE MANUFACTURER

VOLUMES AND FLOAT SETTINGS ARE BASED ON A 1000 GALLON PUMP STATION MANUFACTURED BY S.T. GRISWOLD AND COMPANY INC., CATALOG FILE 1000 2PC PS

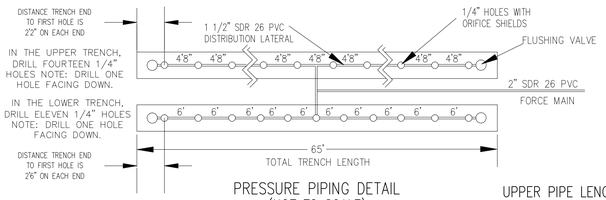
INSIDE DIMENSIONS VARY WITH EACH TANK SUPPLIER

TANK VOLUMES

BELOW OFF FLOAT	62 GALLONS
DOSE VOLUME (daily flow = 490)	130 GALLONS
BETWEEN ON AND ALARM FLOATS	62 GALLONS
ABOVE ALARM FLOAT (EMERGENCY STORAGE)	926 GALLONS
MINIMUM REQUIRED EMERGENCY STORAGE	490 GALLONS
TOTAL TANK VOLUME	1152 GALLONS

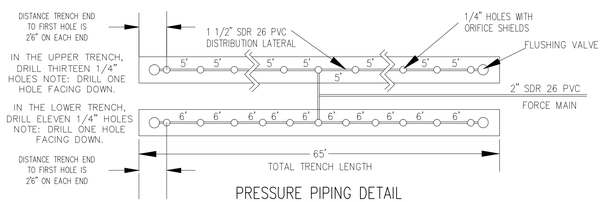
TYPICAL 1000 GALLON PUMP STATION
(NOT TO SCALE)
(Lots 3, 4, 5, & 6)

65' TRENCH
UPPER PIPE LENGTH FIRST HOLE TO LAST HOLE = 60' 8" - 14 HOLES
LOWER PIPE LENGTH FIRST HOLE TO LAST HOLE = 60' - 11 HOLES
SEE FLUSHING VALVE DETAIL TO DETERMINE TOTAL PIPE LENGTH

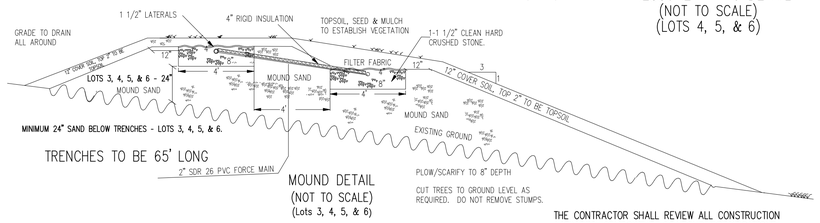


PRESSURE PIPING DETAIL
(NOT TO SCALE)
(LOT 3)

65' TRENCH
UPPER PIPE LENGTH FIRST HOLE TO LAST HOLE = 60' - 13 HOLES
LOWER PIPE LENGTH FIRST HOLE TO LAST HOLE = 60' - 11 HOLES
SEE FLUSHING VALVE DETAIL TO DETERMINE TOTAL PIPE LENGTH



PRESSURE PIPING DETAIL
(NOT TO SCALE)
(LOTS 4, 5, & 6)

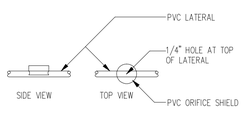


MOUND DETAIL
(NOT TO SCALE)
(Lots 3, 4, 5, & 6)

THE CONTRACTOR SHALL REVIEW ALL CONSTRUCTION ACTIVITIES, COMPONENT LOCATIONS, SPECIFICATIONS, AND DETAILS PRIOR TO COMMENCEMENT OF SITE WORK AND SHALL NOTIFY MCCAIN CONSULTING OF ANY ISSUES OR DISCREPANCIES THAT ARISE FROM THAT REVIEW.

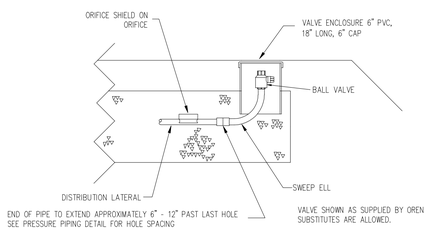
THIS IS NOT A SURVEY. THIS PLAN DOES NOT MEET THE REQUIREMENTS OF 27 VSA SEC. 1403 FOR THE FILING OF SURVEY PLATS.

Y:\Cadd\22000's\22002\22002 03-17-10.dwg



INSTALL ORIFICE SHIELD OVER EACH LATERAL HOLE AFTER THE PUMP DISCHARGE TEST IS COMPLETED AND WITNESSED BY THE DESIGNER.

ORIFICE SHIELD DETAIL
(NOT TO SCALE)
(LOTS 3, 4, 5, & 6)



FLUSHING VALVE DETAIL
(NOT TO SCALE)
(LOTS 3, 4, 5, & 6)

SOILS INFORMATION
TEST PITS DUG 4/3/02 BY OPEN-PIT BACKHOE
STEVE REBILLARD, ANR BARRE, PRESENT TO OBSERVE

SB-1
0" -10" BROWN TOPSOIL, LOAM
10" -18" ORANGE BROWN FINE SANDY LOAM
18" -76" GRAY BROWN SLIGHTLY GRAVELLY FINE SANDY LOAM
POCKET OF SILTY LOAM @ 42"
FEW FAINT MOTTLES @ 65"

SB-2
0 -17" BROWN TOPSOIL, LOAM
17" -82" GRAY BROWN SLIGHTLY GRAVELLY LOAMY SAND

SB-3 LEDGE @ 3"

SB-4
0" -17" BROWN TOPSOIL, LOAM
17" -39" GRAY BROWN SLIGHTLY GRAVELLY FINE SANDY LOAM
39" -87" GRAY MEDIUM FINE SAND, SLIGHTLY LOAMY
WINDOW TO 39"

SB-5
0" -8" BROWN TOPSOIL, LOAM
8" -30" ORANGE BROWN FINE SANDY LOAM
30" -72" GRAY BROWN SLIGHTLY GRAVELLY FINE SANDY LOAM
WET @ 16", SEEPAGE @ 30"

SB-6
0" -10" BROWN TOPSOIL, LOAM
10" -23" GRAY BROWN SANDY LOAM, FRIABLE
23" -52" GRAY BROWN SLIGHTLY GRAVELLY FINE SANDY LOAM
52" -68" GRAY BROWN SILTY LOAM
COMMON FAINT MOTTLES

SB-7
0" -12" BROWN TOPSOIL, SANDY LOAM
12" -25" ORANGE BROWN FINE SANDY LOAM
25" -36" GRAY BROWN SLIGHTLY GRAVELLY SILTY LOAM
36" -69" GRAY BROWN SLIGHTLY GRAVELLY LOAMY SLT, FIRM
COMMON FAINT MOTTLES

SB-8
0" -11" BROWN TOPSOIL, LOAM
11" -27" ORANGE BROWN SANDY LOAM
27" -40" GRAY BROWN SLIGHTLY GRAVELLY FINE SANDY LOAM, FRIABLE
40" -60" GRAY BROWN SLIGHTLY GRAVELLY FINE SANDY LOAM, FIRM
SEEPAGE @ 27"

SB-9
0" -11" BROWN TOPSOIL, LOAM
11" -25" ORANGE BROWN SANDY LOAM
25" -38" GRAY BROWN SLIGHTLY GRAVELLY VERY SANDY LOAM
38"-75" GRAY BROWN SLIGHTLY GRAVELLY VERY SANDY LOAM, FIRM
COMMON FAINT MOTTLES
SEEPAGE @ 43"

SB-10
0" -20" BROWN/ORANGE BROWN TOPSOIL, SANDY LOAM
WET @ 16"
20" -50" GRAY BROWN SLIGHTLY GRAVELLY FINE SANDY LOAM
SEEPAGE @ 22"

SB-11
0" -16" BROWN/ORANGE BROWN TOPSOIL, SANDY LOAM
16"-35/52" GRAY BROWN SLIGHTLY GRAVELLY FINE SANDY LOAM
LEDGE @ 35/52"

SB-12
0" -12" BROWN TOPSOIL, LOAM
12" -22" GRAY BROWN FINE SANDY LOAM, MOIST
22" -41" GRAY BROWN SLIGHTLY GRAVELLY LOAMY SAND
41" -70" GRAY BROWN SLIGHTLY GRAVELLY LOAMY FINE SAND, FIRM
SEEPAGE @ 28"
COMMON FAINT MOTTLES @ 41"

SB-13
0" -12" BROWN TOPSOIL
12" -22" GRAY BROWN SILTY LOAMY SAND, FRIABLE
22" -72" GRAY SILTY LOAMY SAND, FIRM
WATER @ 14"
MANY FINE MOTTLES @ 30"

SB-14
0" -7" BROWN TOPSOIL
7" -16" ORANGE BROWN GRAVELLY SANDY LOAM
16" -75" GRAY BROWN GRAVELLY SANDY LOAM
GROUND WATER @ 43"
MOTTLES @ 40"

SB-15
0" -17" BROWN TOPSOIL
17" -68" GRAY BROWN GRAVELLY SILTY LOAM, FRIABLE
SEEPAGE @ 17"

SB-16
0" -24" ORANGE BROWN TOPSOIL
24" -72" GRAY BROWN FINE SANDY LOAM
SEEPAGE @ 24"
FAINT MOTTLES @ 29"

SB-17
0" -20" BROWN TOPSOIL
20" -31" GRAY BROWN GRAVELLY SANDY LOAM
FAINT MOTTLES @ 20"
LEDGE @ 31"

SB-18
0" -22" ORANGE BROWN TOPSOIL
22" -61" GRAY BROWN FINE SANDY LOAM
COMMON FAINT MOTTLES @ 22"

SB-19
0" -22" OLIVE BROWN TOPSOIL
22" -55" OLIVE GRAVELLY SILTY LOAM
COMMON FAINT MOTTLES @ 15"
SEEPAGE @ 52"

TEST PITS DUG 6/26/02 BY OPEN-PIT BACKHOE
STEVE REBILLARD, ANR BARRE, PRESENT TO OBSERVE

SB-1A
0" - 6" BROWN FINE SANDY LOAM
6" -12" ORANGE BROWN GRAVELLY SILTY SAND
12"-26" GRAY BROWN SANDY SILT
26"-49" GRAY SLIGHTLY GRAVELLY FINE SANDY SILT
FEW FAINT MOTTLES @ 26"

SB-2A
0" -10" BROWN FINE SANDY LOAM
10"-24" RED BROWN GRAVELLY SILTY LOAM, WELL DRAINED
LEDGE @ 24"

SB-3A
LEDGE AT LESS THAN 24"

SB-4A
LEDGE @ 20"

SB-5A
0" -11" TOPSOIL, SANDY LOAM
11"-24" GRAY SILTY FINE SAND, MOIST
24"-43" GRAY SLIGHTLY GRAVELLY SILTY FINE SAND, FRIABLE
MANY DISTINCT MOTTLES @ 24"

SB-6A
0" -10" ORANGE BROWN SANDY LOAM
10"-18" GRAY SILTY FINE SAND
18"-40" GRAY SLIGHTLY GRAVELLY FINE SAND
COMMON DISTINCT MOTTLES @ 20"
SEEPAGE @ 44"
40"-55" GRAY BROWN GRAVELLY SILTY FINE SAND

SB-7A
0" - 4" DARK BROWN SANDY LOAM
4" -21" ORANGE BROWN GRAVELLY SILTY SAND
21"-40" GRAY BROWN GRAVELLY SILTY SAND
40"-58" GRAY BROWN GRAVELLY SILTY FINE SAND
COMMON DISTINCT MOTTLES @ 25"

SB-8A
0" -12" DARK BROWN SANDY LOAM
12"-26" ORANGE BROWN GRAVELLY SILTY SAND
26"-53" GRAY BROWN GRAVELLY SANDY SILT
MANY DISTINCT MOTTLES @ 19"

SB-9A
0" -10" DARK BROWN SANDY LOAM
10"-31" ORANGE BROWN SLIGHTLY GRAVELLY SAND
31"-57" GRAY BROWN GRAVELLY SANDY SILT
COMMON DISTINCT MOTTLES @ 21"

SB-10A
0" -10" DARK BROWN SANDY LOAM
10"-25" ORANGE BROWN SLIGHTLY GRAVELLY SAND
25"-33" GRAY BROWN /GRAY SANDY SILT
33"-50" GRAY BROWN GRAVELLY SANDY SILT, FIRM
COMMON DISTINCT MOTTLES @ 18"

SB-11A
COMMON DISTINCT MOTTLES @ 12"
SEEPAGE @ 49", FIRM @ 18"

SB-12A
0" - 4" DARK BROWN SANDY LOAM
4" -18" ORANGE BROWN SLIGHTLY GRAVELLY SAND
18"-38" GRAY BROWN /GRAY SANDY SILT
38"-52" GRAY BROWN GRAVELLY SANDY SILT, FIRM
COMMON DISTINCT MOTTLES @ 18"

SB-13A
0" - 4" DARK BROWN SANDY LOAM
4" -18" ORANGE BROWN SLIGHTLY GRAVELLY SAND
18"-46" GRAY BROWN GRAVELLY SANDY SILT
FEW FAINT MOTTLES @ 19"

SB-14A
NO GOOD
SEEPAGE @ 30", SATURATED @ 12"

HAND AUGERS DUG 3/16/10

SB-15A
0" - 5" DARK BROWN TOPSOIL, LOAM
5" -21" ORANGE BROWN FINE SANDY LOAM

SB-16A
0" - 2" BROWN TOPSOIL, LOAM
2" - 20" ORANGE BROWN FINE SANDY LOAM

SB-17A
0" - 2" DARK BROWN TOPSOIL, LOAM
2" - 20" ORANGE BROWN FINE SANDY LOAM
SATURATED @ 18"

PERC TESTS

PT-1 16 MIN./IN @ 24" PT-6 10 MIN/IN @ 21"
PT-2 15 MIN/IN @ 26" PT-7 3 MIN/IN @ 22"
PT-3 8 MIN./IN @ 25" PT-8 3 MIN/IN @ 23"
PT-4 11 MIN/IN @ 24" PT-9 10 MIN/IN @ 24"
PT-5 4 MIN./IN @ 24" PT-10 14 MIN/IN @ 24"

PRELIMINARY
NOT FOR CONSTRUCTION

CONSULTANT:
GUNNER MCCAIN
LD-B #237
CPESC #2646
CESSWI #0177

DETAILS

SHIRLEY M. RITCHIE TRUST

REVISION TO WW-5-2109 (LOTS 3-6)

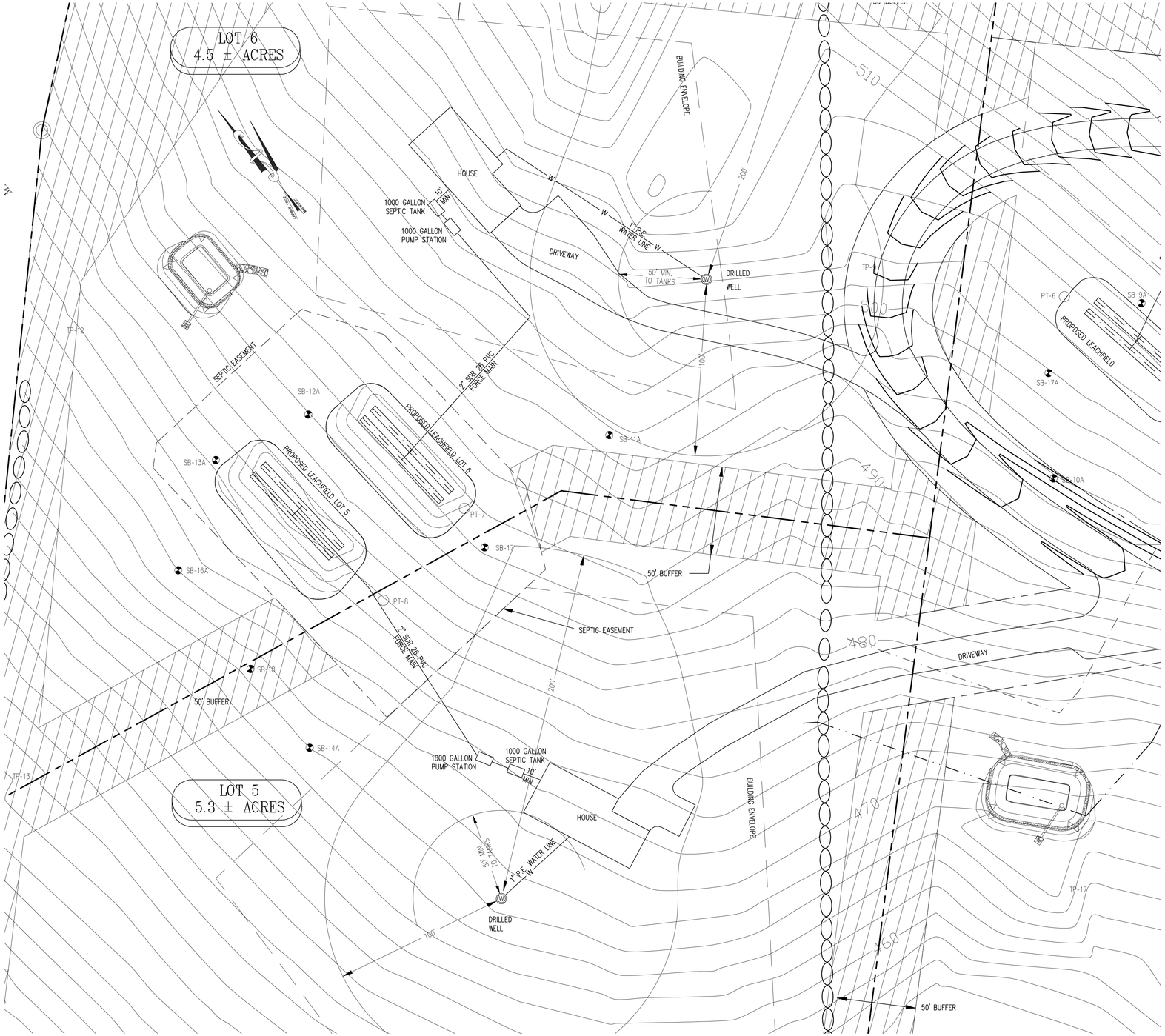
AIRPORT ROAD & DUMP ROAD — WARREN, VT

SCALE : 1" = 60'
DESIGNED BY: GNM PROJECT #22002
DRAWN BY: JTS/WDB
CHECKED BY: GNM/PCL

McCAIN CONSULTING, INC.
93 SOUTH MAIN STREET
WATERBURY, VERMONT 05676

DATE: MARCH 17, 2010

SHEET S-4



LEGEND

TP-1	TRAVERSE POINT
SB-1	TEST PIT
PT-1	PERC TEST
W	PROPOSED WELL
IPF	IRON PIPE FOUND
IRF	IRON ROD FOUND
IRS	IRON ROD SET
TBM	TEMPORARY BENCH MARK
	UTILITY POLE
	PROPOSED CULVERT
W	WATER LINE
//	OVER HEAD UTILITY LINES
100	10' CONTOURS
	2' CONTOURS
	WET AREA
	PROPERTY LINE
	RIGHT OF WAY
	SEPTIC EASEMENT
	BUILDING ENVELOPE
	STONE WALL
	VEGETATION BUFFER ZONE

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Topography by Total Station
Contour Interval 2'
Approximate USGS Datum
Based on Hand Held GPS Unit

THE CONTRACTOR SHALL REVIEW ALL CONSTRUCTION ACTIVITIES, COMPONENT LOCATIONS, SPECIFICATIONS, AND DETAILS PRIOR TO COMMENCEMENT OF SITE WORK AND SHALL NOTIFY MCCAIN CONSULTING OF ANY ISSUES OR DISCREPANCIES THAT ARISE FROM THAT REVIEW.

THIS IS NOT A SURVEY. THIS PLAN DOES NOT MEET THE REQUIREMENTS OF 27 VSA SEC. 1403 FOR THE FILING OF SURVEY PLATS.

Y:\Cadd\22000's\22002\22002 03-17-10.dwg

PRELIMINARY
NOT FOR CONSTRUCTION

CONSULTANT:
GUNNER MCCAIN
LD-B #237
CPESC #2646
CESSWI #0177

SITE PLAN – LOTS 5 & 6

SHIRLEY M. RITCHIE TRUST

REVISION TO WW-5-2109 (LOTS 3-6)

AIRPORT ROAD & DUMP ROAD — WARREN, VT

SCALE : 1" = 30'
DESIGNED BY: GNM PROJECT #22002
DRAWN BY: JTS/WDB
CHECKED BY: GNM/PCL

McCAIN CONSULTING, INC.
93 SOUTH MAIN STREET
WATERBURY, VERMONT 05676

DATE: MARCH 17, 2010

SHEET S-3