PLANNING / DESIGN ASSOCIATES
RESIDENTIAL / COMMERCIAL / RECREATIONAL DESIGN SERVICES

- Architectural Designers
- Consulting engineers
- Site Planners
- Landscape Architects
- Development Consultants

9 Alexander Drive, Windham, ME p/f 207-892-2640 Email: plandesign @ live .com

NOVEMBER 15, 2016

PROJECT: PLAZA PROJECT PHASE 1
AMANDA LESSARD
PLANNING DEPT.
TOWN OF WINDHAM, ME
Amanda,
These are the responses to the issues raised by Bill Haskell:

See attached letter from Jim Manzer at Sevee Maher Engineers

See attached Ability to serve Letter from Portland Water District

Call me if you need further information.
Sincerely,

Fred Panico, Project Manager

CC.
MARTIN LIPPMAN
SEVEE MAHER ENGINEERS
FRICK ASSOCIATES
MACLEOD ENGINEERS
SURVEY INC.
KEN GRONDIN

November 15, 2016

16230.00
20161115nm.doc

Heather McNally, Code Enforcement Director
Town of Windham
8 School Road
Windham, ME 04062

Subject: Response to Town Review Comments (Will Haskell, P.E.)
The Plaza – Phase 1, 881 Roosevelt Trail, Windham, Maine

Dear Ms. McNally:

This letter is in response to an email received from Fred Panico Monday, November 14th concerning the Apple Annie's Enterprises, Inc. Site Plan recently revised per comments from Will Haskell, P.E. of Gorrill-Palmer on behalf of the Town.

To facilitate your review, we have structured our reply in comment – **response** format.

EMAIL FROM FRED PANICO DATED NOVEMBER 14, 2016

1. The Boulder retaining wall has been added to the rear of the project. Based on grades it is not clear if it was designed by a professional engineer. It can be part of the building permit process.

   The boulder retaining wall is a standard design our firm has utilized on many projects. We agree, details can be addressed as part of the building permit process. The Landscape Architect may utilize a stepped wall so that the grade remains the same near the property line but the vertical face of the walls will be not as high or as steep.

2. Check for grading over the water main at the end of the driveway.

   The proposed grade elevation (206) over the proposed water line extension at the end of the driveway (in a grassed area at the northeast corner of the proposed building) is about the same as the existing grade of the gravel over the existing waterline near the road. If any spots of concern are encountered during construction they can be remedied with extruded polystyrene rigid foam insulation.

3. It appears that the land disturbance at the rear of the property exceeds 1-acre. Does a Maine DEP construction permit need to be obtained?

   Yes. The Owner and Contractor will have to complete the attached 'Notice of Intent to Comply with Maine Construction General Permit." Mr. Panico, the Owner's Representative, has been informed of this requirement.

Please call with any questions, or if preferred, I could meet with you to discuss our comments.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.

James C. Manzer, P.E., PTOE
Project Engineer

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

November 15, 2016

Martin Lippman
71 Stuart Shores Rd
Standish, ME 04084

Re: 881-885 Roosevelt Trail, WI
Ability to Serve with PWD Water

Dear Mr. Lippman:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on October 25, 2016. Based on the information provided, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter does not constitute approval of this project from the District. Review and approval of final plans is required.**

Conditions of Service

The following conditions of service apply:

- The existing 8-inch service to the site can be used in the following two configurations:
  - A domestic service tapped off from the 8-inch fire line with separate control valves located in the public right of way. Domestic meter located in a meter vault located on private property within 10-20 feet of the property line on Roosevelt Trail.
  - An 8" combined fireline service in a fireline meter vault located on private property within 10-20 feet of the property line on Roosevelt Trail.

- The existing 1" service to the site must be terminated by shutting the corporation valve and cutting the pipe from the main.

- Further engineering review will need to take place to ensure proper development of the site.

- Water District approval of water infrastructure plans will be required for the project prior to construction. As your project progresses, we advise that you submit any preliminary design plans to MEANS for review of the water main and water service line configuration. We will work with you to ensure that the design meets our current standards.

- Following final plan approval the owner or contractor will need to make an appointment to come in and complete a service application form and pay the necessary fees prior to construction.

Existing Site Service

According to District records, the project site does currently have existing water service. An 8-inch diameter ductile iron water service line provides water service to this site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 12-inch diameter ductile iron water main in Roosevelt Trail and a public fire hydrant located 175 feet from the site. The most recent static pressure reading was 84 psi on February 4, 2016.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the Windham Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

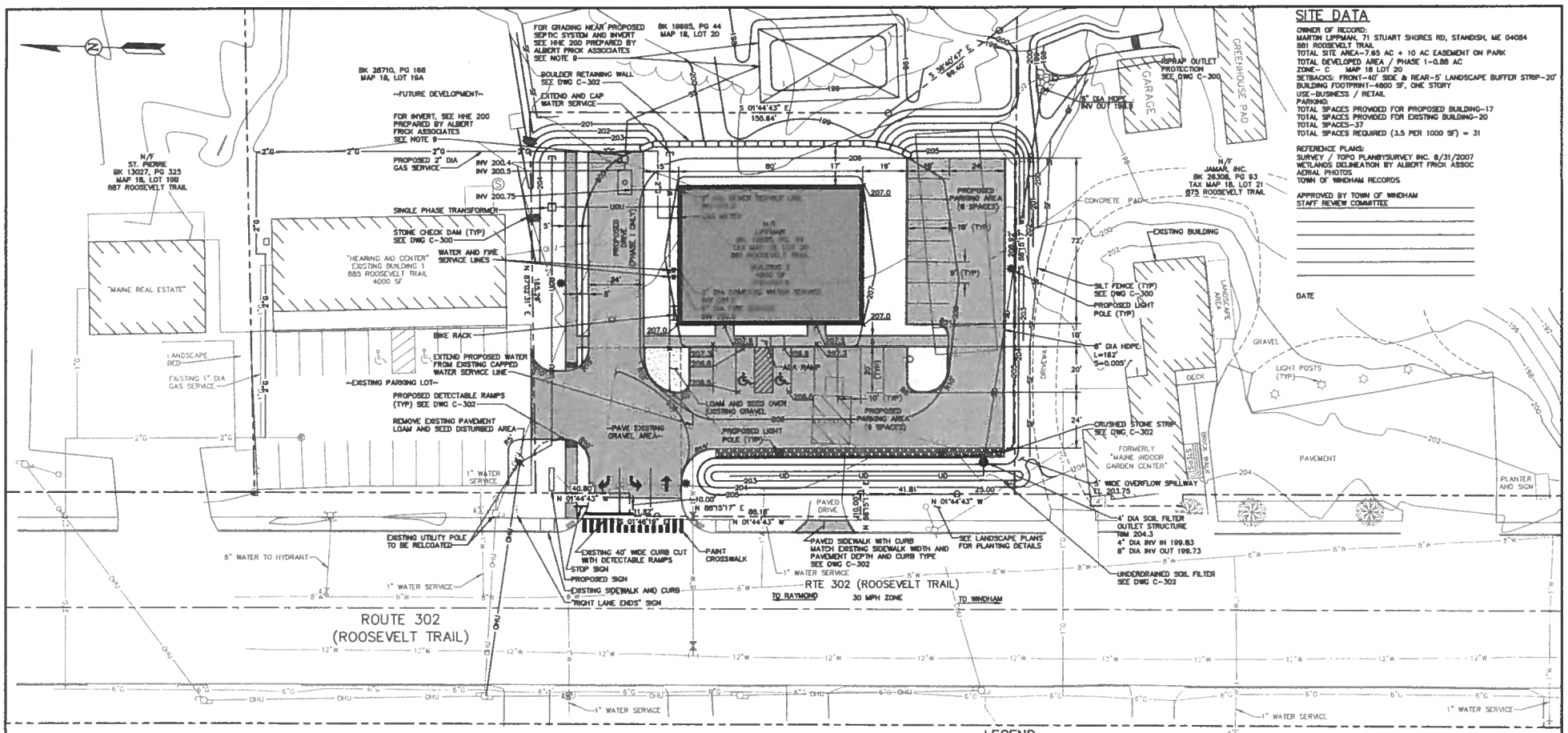
You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

Gordon S. Johnson, P.E.
Engineering Services Manager



NOTES:

1. EXISTING TOPOGRAPHY FROM PLAN TITLED "BOUNDARY SURVEY 881, 885, 875 ROOSEVELT TRAIL WINDHAM, MAINE" BY SURVEY, INC., WINDHAM MAINE, DATED JULY 30, 2012, REVISED MAY 6, 2013. STANDARD PRACTICE DICTATES THAT PLANS COMPILED IN THIS MANNER SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. WETLAND DELINEATION BY AL FRICK ASSOCIATES, INC., GORHAM, MAINE.
3. 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.
4. PAVING AND TRENCH REPAIR IN ROUTE 302 SHALL BE IN ACCORDANCE WITH TOWN OF WINDHAM AND PORTLAND WATER DISTRICT STANDARDS.
5. PROVIDE AT LEAST 5 FEET OF COVER OVER WATER LINES.
6. PROVIDE CONCRETE THRUST BLOCK FOR WATER LINE PER TABLE ON C-301.
7. COORDINATE WORK ON WATER MAIN WITH PORTLAND WATER DISTRICT.
8. PROVIDE TRAFFIC CONTROL SIGNAGE DURING CONSTRUCTION IN ACCORDANCE WITH U.S.D.O.T. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
9. TWO 2000 GALLON SEPTIC TANKS SHOWN. ACTUAL SIZE AND CONFIGURATION TO BE AS DESIGNED IN HHE-200 FORM BY LICENSED SITE EVALUATOR.
10. REMOVE EXISTING BUILDING AND STRUCTURES WITHIN CONSTRUCTION LIMITS.
11. UNDERGROUND UTILITY CONSTRUCTION WITH ROUTE 302 TO BE COORDINATED WITH TOWN ENGINEER 48 HOURS PRIOR TO CONSTRUCTION.

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 YOUR 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.

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	RIGHT OF WAY	
	CENTERLINE	
	BUILDING	
	EDGE OF PAVEMENT	
	CURB	
	EDGE OF GRAVEL	
100	CONTOUR	100
	SPOT GRADE	207.0
	FENCE	
	UTILITY POLE	
OHU	OVERHEAD UTILITY	
	LIGHT POLE	
W	WATER LINE	W
	WATER GATE VALVE	
	HYDRANT	
G	GAS LINE	G
	GAS VALVE	
S	SEWER MANHOLE	
	SIGN	
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
SF	SILT FENCE	SF
	STONE CHECK DAM	
	RIPRAP	

10 0 20 40 FEET

REV.	BY	DATE	STATUS
	CM	11/8/16	REVISED PER TOWN COMMENTS AND SUBMITTED TO TOWN FOR APPROVAL
	DPD	10/28/16	REVISED PER TOWN COMMENTS
	DPD	10/3/16	ISSUED TO TOWN FOR SITE PLAN REVIEW

APPLE ANNIE'S ENTERPRISES, INC
THE PLAZA – PHASE I
881 ROOSEVELT TRAIL
WINDHAM, MAINE

SITE, GRADING AND UTILITY PLAN

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone: 207.829.5016 • Fax: 207.829.5692 • www.sevee.com

DESIGN BY: DPD
DRAWN BY: SJM
DATE: 9/28/2016
CHECKED BY: DPD
LMN: SITEPLAN
CTB: SME-STD

JOB NO. 15243 DWG FILE BASE

C-100

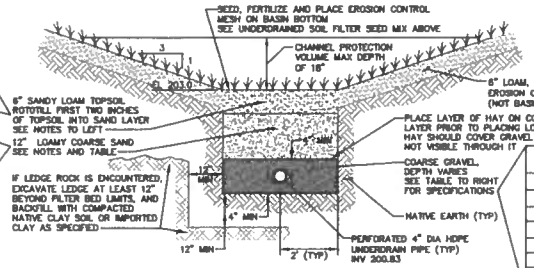
THE SANDY LOAM TOPSOIL SHALL BE TESTED AT A SOIL TESTING LAB AND:

- MATCH THE USDA SANDY LOAM TOPSOIL CLASSIFICATION
- HAVE 5–8% HUMIFIED ORGANIC MATTER
- HAVE NO LESS THAN 15% PASSING THE #200 SIEVE
- HAVE A CLAY CONTENT OF LESS THAN 2%
- BE FREE OF STONES, STUMPS, ROOTS OR OTHER OBJECTS GREATER THAN 2".

IF THE TOPSOIL DOES NOT CONTAIN SUFFICIENT NUTRIENT CONTENT TO SUPPORT GRASS GROWTH, SUPPLEMENT WITH SUPERHUMUS ORGANIC MATTER AND RETEST ORGANIC MATTER AND CLAY CONTENT.

SPECIFICATION FOR CLAY	
PARTICLE SIZE	MIN. 50% PASSING A #200 SIEVE GRAVEL – 5% MAX. MAX ROCK SIZE = 1" MAX CLOD SIZE = 3"
ATTERBERG LIMITS	LL ≥ 25% PL ≥ 12%
PERMEABILITY	$1x10^{-6}$ cm/s (MAX)

SOIL FOR 12" LOAMY COARSE SAND LAYER (MEDOT #703.01)	
SIEVE SIZE	% PASSING BY WEIGHT
3/8"	100
#4	95–100
#8	80–100
#16	50–85
#30	25–60
#50	10–30
#100	2–10
#200	0–5



UNDERDRAINED SOIL FILTER SEED MIX	
Name	LBS/ACRE
Creeping Red Fescue	20
Tall Fescue	20
Birdsfoot Trefoil	8
Total	48

COARSE GRAVEL MEDOT SPECIFICATIONS FOR UNDERDRAINS (MEDOT #703.22)	
SIEVE SIZE	% PASSING BY WEIGHT
UNDERDRAIN TYPE B	
1"	90–100
1/2"	75–100
#4	50–100
#20	15–80
#50	0–15
#200	0–5

CONSTRUCTION OVERSIGHT

THE APPLICANT WILL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO INSPECT THE CONSTRUCTION AND STABILIZATION OF ALL STORMWATER MANAGEMENT STRUCTURES. IF NECESSARY, THE INSPECTING ENGINEER WILL INTERPRET THE POND'S AND ROOF DRIPLINE FILTER CONSTRUCTION PLAN FOR THE CONTRACTOR. ONCE ALL STORMWATER MANAGEMENT STRUCTURES ARE CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE DEPARTMENT IN WRITING WITHIN 30 DAYS TO STATE THAT THE POND HAS BEEN COMPLETED. ACCOMPANYING THE ENGINEER'S NOTIFICATION MUST BE A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT, AND INCLUDE ANY TESTING DATA OR SIEVE ANALYSIS DATA OF EVERY MINERAL SOIL AND SOIL MEDIA SPECIFIED IN THE PLANS AND USED ON SITE.

UNDERDRAINED FILTER BASINS

CONSTRUCTION SEQUENCE: THE SOIL FILTER MEDIA AND VEGETATION MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION UNLESS THE RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA IS DIVERTED AROUND THE FILTER UNTIL STABILIZATION IS COMPLETED.
COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90% AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA.

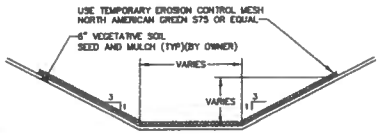
CONSTRUCTION OVERSIGHT: INSPECTION BY A PROFESSIONAL ENGINEER WILL OCCUR AT A MINIMUM:

- AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED,
- AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA,
- AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDED. BIO-RETENTION CELLS MUST BE STABILIZED PER THE PROVIDED PLANTING SCHEME AND DENSITY FOR THE CANOPY COVERAGE OF 30% TO 50%
- AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS, AND
- ALL THE MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY TO SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.

TESTING AND SUBMITTALS: THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL:

- SELECT SAMPLES FOR SAMPLING OF EACH TYPE OF MATERIAL FOR THE FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
- PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COURSE AGGREGATES) ON EACH TYPE OF THE SAMPLE MATERIAL.

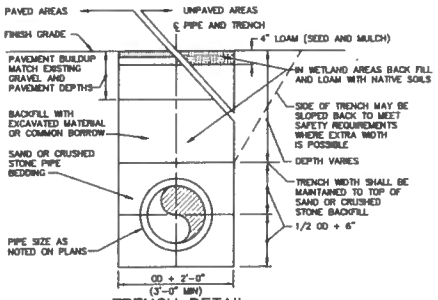
TYPICAL UNDERDRAINED SOIL FILTER DETAIL
NTS



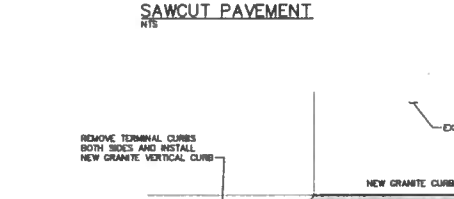
*SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION SPECIFICATIONS FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION.

NOTES:
1. ALL CHANNELS MUST BE KEPT FREE OF OBSTRUCTIONS SUCH AS FILL GROUND, FALLEN LEAVES AND WOODY DEBRIS, ACCUMULATED SEDIMENT AND CONSTRUCTION MATERIALS/WASTES. CHANNELS SHOULD BE KEPT MOWED AND/OR FREE OF ALL WEEDY, BRUSHY OR WOODY GROWTH. ANY UNDERGROUND UTILITIES RUNNING ACROSS/THROUGH THE CHANNEL(S) SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL(S) REPAIRED AND STABILIZED PER THE CHANNEL CROSS SECTION DETAIL.
2. VEGETATED CHANNELS SHALL BE CONSTRUCTED FREE OF ROCKS, TREE ROOTS, STUMPS OR OTHER PROJECTIONS THAT WILL IMPEDE NORMAL CHANNEL FLOW AND/OR PREVENT GOOD LINING TO SOIL CONTACT. THE CHANNEL SHALL BE INITIALLY OVER-EXCAVATED TO ALLOW FOR THE PLACEMENT OF TOPSOIL.

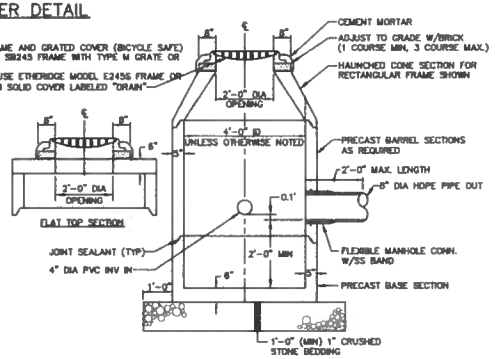
OVERFLOW SPILLWAY
NTS



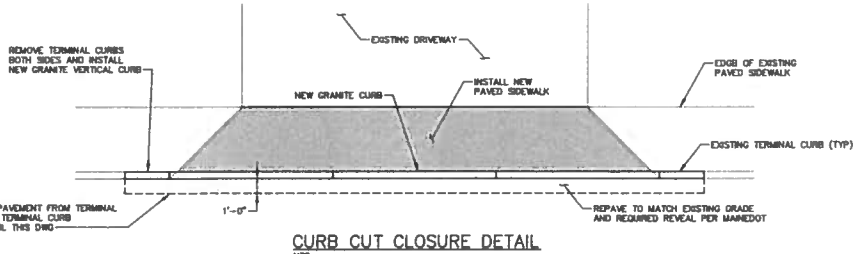
TRENCH DETAIL
NTS



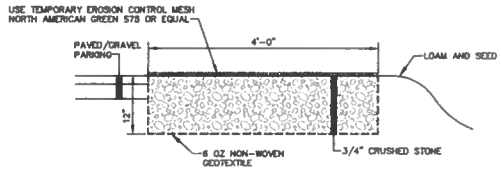
SAWCUT PAVEMENT
NTS



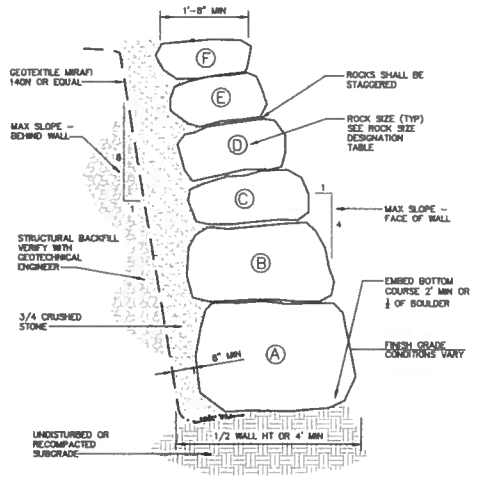
SOIL FILTER OUTLET STRUCTURE
NTS



CURB CUT CLOSURE DETAIL
NTS



CRUSHED STONE STRIP
NTS



*ROCK HEIGHT SHALL BE APPROX. 1/3 THE LENGTH

ROCK SIZE DESIGNATION

ROCK TYPE	ROCK WEIGHT	AVERAGE DIMENSION
1	200–880 LBS.	1'–6" TO 3'–0"
2	880–2000 LBS.	2'–0" TO 4'–0"
3	2000–4000 LBS.	2'–6" TO 5'–0"
4	4000–8000 LBS.	3'–0" TO 8'–0"

ROCK TYPE DESIGNATION

WALL HEIGHT	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ
0 TO 3'–3"	2	1	–	–	–	–
3'–3" TO 6'–6"	3	2	1	–	–	–
6'–6" TO 9'–9"	3	3	2	1	–	–
TALLER THAN 9'–9"	4	3	2	2	1	1

NUMBER IN TABLE CORRESPONDS TO ROCK TYPE

BOULDER RETAINING WALL
NTS

REV.	BY	DATE	STATUS
	SJM	11/8/16	REVISED PER TOWN COMMENTS AND SUBMITTED TO TOWN FOR APPROVAL
	DPD	10/28/16	REVISED PER TOWN COMMENTS
	DPD	10/3/16	ISSUED TO TOWN FOR SITE PLAN REVIEW

APPLE ANNIE'S ENTERPRISES, INC
THE PLAZA – PHASE I
881 ROOSEVELT TRAIL
WINDHAM, MAINE

DRAINAGE DETAILS

SME
Sevee & Maher Engineers, Inc.
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland Center, Maine 04021
Phone: 207 829 5016 • Fax: 207 829 5692 • www.sevee-maher.com

DESIGN BY:	DPD
DRAWN BY:	SJM
DATE:	9/28/2016
CHECKED BY:	
LMN:	NONE
CTB:	SME-STD

JOB NO. 15243.00 DWG FILE DETAILS

C-302