



## KITTERY TOWN PLANNING BOARD MEETING

Council Chambers – Kittery Town Hall 200 Rogers Road, Kittery, Maine 03904

Phone: 207-475-1323 - Fax: 207-439-6806 - [www.kittery.org](http://www.kittery.org)

### AGENDA for Thursday, September 11, 2014 6:00 P.M. to 10:00 P.M.

#### CALL TO ORDER – ROLL CALL – PLEDGE OF ALLEGIANCE – APPROVAL OF MINUTES – 8/28/2014

**PUBLIC COMMENTS** - Public comment and opinion are welcome during this open session. However, comments and opinions related to development projects currently being reviewed by the Planning Board will be heard only during a scheduled public hearing when all interested parties have the opportunity to participate. Those providing comment must state clearly their name and address and record it in writing at the podium.

#### ITEM 1 – (45 min.)– Shepard’s Cove Subdivision – Modification to an Approved Plan – Final Plan Review.

Action: Hold a public hearing, approve or deny final plan. Owner and applicant DLJ Corp., is requesting consideration of their plans to amend the previously approved 2004 subdivision plan, replacing a proposed 24 unit building with detached 5 single-unit buildings at their Elderly Housing Facility located off Rogers Road, Tax Map 22, Lot 21, Residential-Urban Zone and Shoreland Overlay Zone. Agent is Lewis Chamberlain, P.E., Attar Engineering, Inc.

#### OLD BUSINESS

#### ITEM 2– (10 min.)–Pine Tree Plaza Site Plan – Modification to an Approved Plan

Action: Continue Plan Application. Kenneth Lemont, owner and applicant (for Harrison E. Lemont Management Co., Inc.), requests approval to amend a previously approved Site Plan in order to replace an existing building (Curtis House) and attached ell with a new 2,450 sf building and increase the existing garage (by 364 sf). The property is located at 435 US Route 1 in the Mixed Use zone, Tax Map 50, Lot 8.

**ITEM 3 – (20 minutes) - Board Member Items / Discussion:** A. Debrief on Joint TC/PB 9/8 workshop; B. Town Code Quality Improvement Overlay Zone; C. Town Code Sign Workshop; D. Town Code Outdoor Seating; and E. Other.

**ITEM 4 – (15 minutes) – Town Planner Items:** A. Memorial Circle Plan Status; B. SML Bridge Plan Review 9/25/2014 Joint TC/PB MTG; C. Quality Improvement Plan for Kittery Foreside; D. Quality Improvement Plan for Route 1 By Pass District; and E. Other

#### ADJOURNMENT - (by 10:00 PM unless extended by motion and vote)

NOTE: ACTION LISTED IN ABOVE AGENDA ITEMS IS FOR REFERENCE ONLY AND THE BOARD MAY DETERMINE A DIFFERENT ACTION.  
DISCLAIMER: ALL AGENDAS ARE SUBJECT TO REVISION ONE WEEK PRIOR TO THE SCHEDULED TOWN PLANNING BOARD MEETING.  
TO REQUEST A REASONABLE ACCOMMODATION FOR THIS MEETING PLEASE CONTACT STAFF AT (207) 475-1323 OR (207) 475-1307.

1 TOWN OF KITTEERY, MAINE  
2 PLANNING BOARD MEETING  
3 Council Chambers

UNAPPROVED  
August 28, 2014

4  
5 Meeting called to order at 6:05 p.m.

6 Board Members Present: Tom Emerson, Karen Kalmar, Susan Tuveson, Mark Alesse, Ann Grinnell, Bob  
7 Melanson

8 Members absent: Susan Tuveson

9 Staff: Chris DiMatteo, Assistant Planner

10  
11 Pledge of Allegiance

12  
13 Minutes: July 24, 2014

14 Ms. Grinnell moved to accept the minutes of July 24, 2014 as amended

15 Mr. Melanson seconded

16 Motion carried by all members present

17  
18 Public Comment:

19  
20 Earldean Wells:

21 – Contacted by Sue Johnson regarding mature street tree cutting in Admiralty Village by Navy.

22 – Questioned recent BoA Miscellaneous Variation for 9 Cutts Road for building within 20 feet  
23 of a wetland greater than one acre in the Shoreland Zone. She contacted the Town Manager,  
24 and noted it should have been reviewed by the Planning Board, not the BoA.

25 Mr. Mylroie stated there was a newspaper article regarding tree removal, noting some roots were  
26 going into the septic systems. He will look into this. Ms. Davis: Is this area still owned by the  
27 Navy or Balfour Realty? Mr. Emerson: If they're not paying taxes, perhaps Balfour is managing  
28 the buildings, but they are still owned by the Navy.

29  
30 OLD BUSINESS

31  
32 ITEM 1 –Brave Boat Conservation at Sawyer Lane – Cluster Subdivision —Preliminary Plan  
33 Review

34 Action: Hold a public hearing and grant or deny preliminary approval. Owner and Applicant  
35 Jonathon & Kathleen Watts are requesting consideration of their plans for a 4-lot cluster  
36 subdivision at 143 Brave Boat Harbor Road, Tax Map 63, Lot 19, Residential Rural Zone, with a  
37 portion in the Shoreland Overlay Zone. Agents are Ken Markley, Easterly Surveying, Inc. and  
38 Scott Anderson, Attorney: Realize there is additional information needed for final plan review.

39 Ken Markley: Summarized the proposal to date: addition of three lots with an existing single  
40 lot; 75% of total land in conservation open space; served by town water; on-site wastewater  
41 systems; wetlands located by Joe Noel; DEP visited site to determine their jurisdiction, and  
42 found no vernal pools; flood area located in open space due to culvert back-up; most of parcel is  
43 located in shoreland overlay zone, and some in resource protection; CMA has reviewed  
44 stormwater management and found acceptable, with a few comments that will be addressed.

45  
46 Public Hearing opened at 6:19 p.m.

47 Gabrielle Burke, 139 Brave Boat Harbor Road: Has lived here for 2 1/2 years; purchased  
48 because the lot was small, but with woods behind; they have seen deer and heard owls; there is a

49 lot of wetland and is concerned basements will be wet with water runoff; construction will be in  
50 their backyard; seems there are a number of existing houses for sale in Kittery.

51 Patrick Winn, 141 Brave Boat Harbor Road: Likes the environment and wildlife; has the same  
52 issues as Gabrielle Burke; water rushes thru backyard now and with more tree cutting, it will be  
53 worse.

54 Daniel Moran, 139 Brave Boat Harbor Road: Property is small and is concerned about water  
55 runoff by adding three houses at a higher elevation; wants to conserve mature trees and is  
56 concerned about selective cutting that will expose remaining trees to damage and impact on their  
57 properties because of shallow tree roots.

58 Earldean Wells: Are the building envelopes to be clear-cut?; requested calculations of the  
59 number of diseased hemlocks removed; requests Board require additional planting if needed  
60 following removal; will the upland open space deeded as conservation land, restricting future  
61 development;

62 Ken Markley:

63 – The building envelopes are illustrated on plan, and all cutting on the property totals less than  
64 1 acre; cleared areas could be included in the homeowners documents; the no-cut no-disturb  
65 areas will be identified and can be marked on-site;

66 – Stormwater management: Stormwater plan will decrease impact on abutters with grading;  
67 calculations indicate runoff in a 2-year storm is .23 cf/sec, reduced to .19 cf/sec, a 17%  
68 decrease; in a 25-year storm, runoff is reduced to .42 cf/sec from .60 cf/sec, a 30% decrease;  
69 stormwater plan diverts runoff to wetlands, through forested areas, across grass swales to  
70 level spreaders and sub-catchment areas.

71 – Scott Anderson: There will be a change; development impacts are addressed through  
72 ordinance standards, such as cutting/buffers/stormwater management, showing  
73 improvements over existing conditions; only 3 additional lots, with 75% of the property set  
74 aside.

75 Jim Van Kennen, 19 Short Farm Road, Kittery Point: Where is the open space? Loosing idea of  
76 what cluster housing should be; issue is the southside drainage from Rt. 103 under a culvert onto  
77 the Porter property; is this a technique to increase density in a Residential Rural area that should  
78 not be increased? Previous development did not pan out, and the Board needs to address  
79 development in this area.

80 Mr. Markley: Wetlands, floodzones, etc. are taken out of density calculations in cluster  
81 developments; sub-catchbasin #1 will decrease flow to Brave Boat Harbor Road, other flow goes  
82 to the wetland; stormwater design will benefit Mr. Porter; project includes an undisturbed high  
83 quality wetland, and uplands are set aside.

84 Ms. Kalmar: Is the upland reasonably accessible, in a monetary sense?

85 Mr. Markley: Yes, it is accessible with a wetland crossing, but doing so impacts the wetland and  
86 changes the flow; not desirable, more expensive, but can be done.

87 Mr. Anderson: Mr. Watts chose to set aside the uplands and concentrate on one area, with a high  
88 quality area set aside, meeting and exceeding ordinance requirements; all conservation land will  
89 be identified and protected in homeowner's documents;

90 Patrick Winn: He built an addition and had to meet setbacks that the proposal does not; there are  
91 a number of homes in Kittery that remain empty, why build more?

92 Mr. Alesse: Mr. Porter's letter also identified flag lots.

93 Mr. Van Kennen: Read email from John Porter (Attached)

94 Mr. Emerson: Cluster zoning is allowed in Kittery in attempt to use less land area while still  
95 meeting the density requirements of the zone, while conserving large contiguous land areas,  
96 which standard subdivision design does not do.

97 Gabrielle Burke: Did not choose to live where houses are clustered behind her home on the only  
98 buildable area; asked the Board to consider rejecting this development proposal. Will there be  
99 another public hearing?

100 The public hearing closed at 7:05 p.m.

101

102 Ms. Kalmar: Board needs to consider Title 16.6.6 Basis for Decision for Special Exception Use,  
103 for example:

104 • *The character of the existing and probable development of uses in the zone and the peculiar*  
105 *suitability of such zone for the location of any of such uses;*

106 • *The conservation of property values and the encouragement of the most appropriate uses of*  
107 *land;*

108 • *Whether the use, or the structures to be used, will cause an overcrowding of land or undue*  
109 *concentration of population;*

110 Many of the neighbors have raised these issues. Is cluster development the very best use of the  
111 land with these considerations in mind? The dense development in abutter's back yards, inability  
112 to use other upland area due to access... Do the negative impacts outweigh the positive.

113 Mr. Melanson: Factors for consideration are subjective. The Board should thoroughly review  
114 the requested modifications.

115 Ms. Grinnell: The Board needs to do both.

116 Mr. Emerson: The modifications are more of an issue before the Board.

117 Mr. Anderson: As part of the Board's review, they will address each of the special exception  
118 factors.

119 Mr. Markley: Summarized modification requests;

120 • the 9.3-foot modification request is on the existing parcel;

121 • street frontage modification allows a reduction of roadway length;

122 • set back modification allows more flexibility to site reasonably sized homes on the parcels.

123 Deeper setbacks would force a house to be sited closer to the abutters;

124 Ms. Grinnell: There are a number of modification requests, and all are maximized, including lot  
125 size and street frontage.

126 Mr. Emerson: Modifications are maximized to reduce the footprint. This is the first cluster  
127 development that looks like a text book design. Homes along Brave Boat Harbor Road are very  
128 close together, closer than those proposed in this project.

129 Mr. Anderson: The proposal does not sneak under the requirement, as the open space is well  
130 beyond requirements; the proposal keeps the footprint as small as possible.

131 Mr. Alesse: Does not like placing a house behind an existing house, as is shown on Lot 2.

132 Ms. Davis: Asked all test pits, pass or fail, be shown.

133 Mr. Markley: A soil scientist has indicated which tests pits have passed. They will not be shown  
134 on the final plan, only the septic location.

135 Ms. Kalmar: The cul-de-sac request is a waiver. Per state law, dimensional modifications apply  
136 to: lot area, lot coverage, frontage and setbacks. The Board can waive an improvement, such as  
137 a cul-de-sac, if it is beneficial.

138 Mr. Anderson: Asking for approval at the preliminary plan stage, and will bring all required  
139 information back to the Board as well as address other issues, including building envelope in lot  
140 2.

141 Discussion followed regarding special exception considerations.

142 Mr. Anderson: Applicant would like the opportunity to address these standards for  
143 consideration.

144 Ms. Wells: Requests applicant addresses the reduction of diseased hemlocks. What amount of  
145 tree coverage will be left?

146 Mr. Anderson: This could be a condition of approval.

147 Ms. Davis: It would be to the benefit of the applicant if the diseased trees were identified before  
148 building so they are not penalized for removing diseased trees, allowed by code.

149 Mr. Anderson: Would like to receive preliminary approval on the subdivision, with a decision  
150 on the use in the shoreland zone provided at the final plan stage.

151 Mr. Emerson: If the Board is not prepared to approve the plan, it would be appropriate to  
152 continue review as the applicant has been asked for additional information.

153

154 Mr. Melanson moved to continue review of the Brave Boat Harbor Conservation in light of the  
155 Board's concerns regarding modifications and the shoreland special exception considerations,  
156 and request for further information.

157 Ms. Kalmar seconded

158 Motion carried unanimously by all members present

159

160 Discussion followed regarding continuing / holding another public hearing following receipt of  
161 requested information from applicant.

162

163 Mr. Melanson amended his previous motion to include the decision to hold a second public  
164 hearing.

165 Ms. Kalmar seconded

166 Motion carried unanimously by all members present

167

168 The public hearing will be noticed accordingly.

169

170 No further action was taken.

171

172

173 NEW BUSINESS

174

175 Ms. Kalmar: Given the pending amendment language for Council consideration, it may be better to  
176 move this item to the next business meeting.

177 Mr. Melanson: The applicant and agent is present, and this should be heard.

178

179 ITEM 2 – Betty Welch Road Cluster Subdivision - Sketch Plan Review

180 Action: Review and schedule Site Walk. Landmark Properties, LTD., owner and Chinburg  
181 Builders, Inc., applicant, propose to develop a 24-lot single family cluster subdivision on 86.5 +/-  
182 acres. The site is identified as Tax Map 22 Lots 2A & 8 in the Residential Rural and Shoreland  
183 Overlay Zones. Agent is Jeff Clifford, P.E., Attar Engineering.

184

185 Jeff Clifford: Summarized the proposal:

- 186 • 86.5 acres; 39.5 acres upland area; 25 acres net residential acreage; 27 lots allowed; 24 lots
- 187 proposed
- 188 • Water District easement through parcel
- 189 • 2700-foot greenspace at cul-de-sac
- 190 • Septic is advanced pre-treatment. Proposed pre-treatment of wastewater at each lot results in
- 191 a cleaner effluent through the forced main.
- 192 • Wetlands have been flagged
- 193 • 76 acres/88% of open space
- 194 • Municipal water available
- 195 • Potential rabbit habitat, to be mapped
- 196 • No floodplain on site
- 197 • Shoreland zone on edge of property outside of developed area
- 198 • HISS mapping needed for sketch plan acceptance
- 199 • ACOE identified vernal pool outside of proposed development area
- 200 • Roadway shields development from main road
- 201 • Density is not greater than adjacent homes, but buffered with open space
- 202 • Project will go to MDEP for review

203

204 A site walk was scheduled for Wednesday, September 24 at 5:00 p.m.

205

206 8:10

207 OLD BUSINESS

208 ITEM 3 – Town Code Amendment - Title 16.8.10.2.C Signs – General Requirements. Action:

209 review amendment and schedule a public hearing. Proposed amendment re-defines Light-

210 emitting diode (LED) lighting.

211 Mr. Mylroie: Focus on LED use; consensus was to amend the ordinance and allow for use of

212 LED lighting in fixtures; issue now includes use of LEDs in message boards and whether this

213 should be allowed; need clarification if LED lighting can be used in external and internal lit

214 signage;

215 Discussion followed regarding where and how LED lighting can be used; colors and intensity of

216 LED illumination; need to find amendment language defining properties/qualities of LED

217 lighting to address color and lighting levels;

218 This item will be continued; no action taken. Requested staff provide technical information on

219 LED to further discussion.

220

221 Dave Moulton: Regarding internally lit signs:

222 – In the 1988 sign ordinance, the intent was to not permit internally lit signs, and all signs were

223 to be brought into conformance.

224 – In 1997, all existing signs, including internally lit signs, were accepted as compliant by

225 Council, though not all were compliant.

226 – Internally lit signs are usually off by 6:00 p.m. during winter months, and are not used during

227 summer when daylight is longer.

228 – Allowance of internally lit signs was not the intent of the sign ordinance at the time. External

229 lighting was the intent., using goose-neck lamps, etc.

230 A workshop needs to be scheduled; identify specific areas of town to address internally lit signs.  
231 Chris DiMatteo: Title 16.8.24 F was amended to allow use of LED lighting and includes  
232 industry standards; Title 16.8.24.3.F addresses glare. The CEO could direct lighting applicants  
233 to meet code requirements in 16.8.24, allowing for removal of LED language found elsewhere.  
234 Ms. Davis: Need to remove reference to time and temperature signs in 16.8.10.2.C or other  
235 attempts to use movable signage cannot be enforced.  
236 Ms. Davis: Will provide National Sign Association contact information to staff for assistance in  
237 drafting language.

238  
239 This needs to be on the Council workshop agenda to advise of Board direction. Once contact  
240 with the Sign Association is made, a workshop can be scheduled. No action taken.

241  
242

243 ITEM 4 –Town Code Amendment - Title 16.8.10.2 Signs – General Requirements. Action:  
244 Schedule a workshop. Discuss code amendments related to gas price signage and other message  
245 board sign standards.

246  
247

There was no discussion on this item, separately from Item 3.

248  
249

ITEM 5 – Quality Improvement Plan for Kittery Shore and Harbors

251 Action: review and make recommendation to Town Council for adoption. Town advisory  
252 committee is transmitting draft plan for Town Planning Board review, hearings and  
253 recommendation to Town Council for adoption. The QIP Plan is a specific plan that includes  
254 goals/policies and implementation strategies for improving/protecting the Town's shores and  
255 harbors.

256

Board members reviewed comments prepared by Ms. Davis;

- 258 – need page numbers in Table of Contents;
- 259 – move section 4.3 (Community Priorities) to Section 2.2;
- 260 – Ms. Kalmar: Leave 4.3 where is, but summarize 4.3 and add in 2.1, Introduction and History
- 261 – Mr. Emerson: Move 4.3 to 2.3, following assets.
- 262 – Change Rice Avenue 'Neighborhood' to 'Parcel' (2.2.D)
- 263 – Ms. Grinnell: remove reference to increased access in the Warren's vicinity (2.2B).
- 264 – 3.2.A Public Access should not be listed first as it was the last on the list of public interests,  
265 and could be removed. Ms. Kalmar: Perhaps this is not in order of priority. Ms. Grinnell:  
266 Change order in Part 3 to relate to Part 4.3 Community Priorities. Mr. Emerson: Delete  
267 'Desired' in Part 3.2.
- 268 – Ms. Grinnell: Finds the document flawed and is not representative of discussions held.  
269 Understood this document was to be an appendix to the Comp Plan Update. Mr. Emerson:  
270 This document has to be part of the Comp Plan for us to have authority to change the  
271 document.
- 272 – Mr. Mylroie: To apply for and receive state grants for capital expenses, a plan was prepared,  
273 spearheaded by Public Works.
- 274 – Ms. Davis: This document appears to be written to apply for grants which usually means  
275 new things, but the public discussion wanted to maintain what is already in place.

- 276 – Ms. Grinnell: Offered to sit down with the Town Manager to review the document.  
277 – Mr. Emerson: This document needs to be part of the Comp Plan and the Council and the  
278 Town Manager need to understand this. Once part of the Comp Plan, could then become a  
279 stand-alone document. However, because the Council authorized funds to produce this  
280 document, does not want to be told, after the fact, that the Board did not have the authority to  
281 make the number of changes proposed.  
282 – Ms. Grinnell and Ms. Davis will meet with the Town Manager. This will be discussed in  
283 October, not the September 8 Council workshop agenda.  
284  
285

286 ITEM 6 – Board Member Items / Discussion  
287

- 288 A. Action List: Requested Board members prioritize their Action Lists and discuss as a  
289 Board.  
290 – Ms. Kalmar: Site work on projects before the Board is already prohibited in Title  
291 16.10.3.3.D and can be removed. Needs to be enforced.  
292 – Mr. Emerson: Bulletin/memo regarding Board concerns/issues (i.e. site work) can be  
293 provided to department heads (i.e. CEO/DPW).  
294 B. Town Council & Planning Board Joint Workshops  
295 – Ms. Kalmar distributed September 8 Council workshop packet.  
296 – Mr. Emerson: PB Briefing Book needs to be provided to Council in October. Board  
297 review of the Briefing Book will be held at the September 25 meeting.  
298 C. Route 1 – BP District Quality Improvement Plan TPB Advisory Committee.  
299 – Mr. Mylroie: As a Planning Board project, this is a part of a \$20,000 grant to hire a  
300 consultant to implement the plan. Mr. Emerson: The Board needs to be aware of the  
301 grants and selection of consultants, etc.  
302 – By-pass owners/abutters need to be made aware of the September 18 MDOT hearing  
303 and the September 25 presentation to the Board, regarding the Sarah Long Bridge.  
304 D. Quality Improvement Overlay Zone (Kittery Crossing and Coastal Route 1 Malls)  
305 – Mr. Emerson: He and Susan Tuveson, Earledean Wells and Gerry Mylroie met  
306 previously on this issue, but needs to be discussed at a later date.  
307 E. TPB Kittery Foreside Committee per Title 16  
308 – Committee needs to be re-constituted. Issues in the area should be directed to the  
309 Committee.  
310 – Ms. Grinnell: Noted there is a central contact who will forward information without  
311 providing email addresses.  
312 – Terry Lockhead: This was began by residents in the Old Armory Way area; explained  
313 the email list would not be shared without their permission, and information would be  
314 forwarded to them via blind copy; should comments from the Old Armory Way  
315 residents be sent to the Planning Board and Comp Plan Committee; thought the Board  
316 would repopulate the Foreside Committee;  
317 – Mr. Emerson: Send to both the Board and the Comp Plan Committee. Groups such as  
318 the Foreside Committee can help the Board direct their interests, not just act as a design  
319 review group.

- 320 – Tom Ryan: If there is no standing committee, how does that affect a pending  
321 application requiring committee review within 45 days? Will the project be delayed?  
322 How will those of us opposed have an opportunity to review the project?  
323 – Mr. Emerson: The committee is advisory and, in the absence of the committee, the  
324 Board would act. Other developments in the Foreside have been reviewed by the Board  
325 without benefit of the committee. Through public hearings, any opposition or support  
326 of a project would be heard.  
327 – Ms. Grinnell: The Committee is extinct, and the Council would have to appoint  
328 members to the committee.  
329

330 Ms. Grinnell moved to continue the meeting until 10:15 p.m.

331 Ms. Kalmar seconded

332 4 in favor; 0 against; 2 abstain (Alesse and Melanson)

333

334 F. Committee Updates

- 335 – Ms. Grinnell requested the Board appoint her to the Kittery Port Authority when  
336 elections are held in December.  
337

338

339

339 ITEM 7 – Town Planner Items:

340

341 A. Town Code amendment - Outdoor Seating due by 12-31-2014

342 B. Other

- 343 – Council has requested input to amend the shoreland zone ordinance to remove invasive  
344 species at Fort Foster, Eagle Point, etc.  
345 – Outdoor seating sunsets on 12/31/14. Amendment draft to Title 16 would replace Title  
346 5, allowing for use of front yard areas for commercial seating.  
347 – MDOT public information meeting on the Sarah Long Bridge at Kittery Community  
348 Center on 9/18 from 3-7 p.m.  
349 – MDOT will hold a public hearing at the 9/25 Board meeting, focusing on the landing  
350 area, including intersection at Bridge Street, a park area, landscaping, etc.  
351 – Ms. Grinnell: Asked that MDOT provide drawings at the Board meeting.  
352 – Memorial Circle Project: \$3.4 million project; Chairman Emerson and Ms. Davis  
353 worked with MDOT in the finishing designs; a \$2 million traffic, pedestrian, bicycle  
354 circulation and landscaping plan remains to be completed. Plans will be shared with  
355 the Board.  
356

357

358

358 Mr. Emerson moved to adjourn

359 Mr. Davis seconded

360 Motion carried unanimously by members present

361

362 The Kittery Planning Board meeting of August 28, 2014 adjourned at 10:10 p.m.

363 Submitted by Jan Fisk, Recorder, September 1, 2014

364

365  
366

## Attachment

Dear Chairman and members of the planning board.

I regret I am unable attend tonight's meeting

I argue against use of the Cluster zoning code for the Watts Plan because it permits too dense a housing development in a sensitive ecological zone. Please see the CMA report on the Watts Plan where there is a listing of all the dimensions ( set backs and total lot size ) that define how a developer may build on a lot. In all cases of the lots the Watts Plan dimensions have been maximally minimized. There is only a bad reason to accept this reduction, more human use contamination released downstream down a significant slope to a significant wetland with absolutely minimal buffering. The CMA report indicates there are two "flag" lots in this plan. Flag lots do not conform to code. There is no good reason to permit Flag lots here especially if as in the case here the access road runs right along the wetland boundary ( 100' away).

The use of cluster zoning allows for large negative impact on the two existing homes that Watts lot 2 abuts. Large negative as in quality of life and economic impact.

As I understand the place of Cluster zoning in the Town of Kittery, gained through a conversation with the town planner, it is a choice "available" to the applicant and finally the planning board to use if the benefits out way the negatives. The negatives are the effects of more dense development on the environment and the current inhabitants. Permitting this zoning in this plan allows for three non conforming lots by the original, applicable zoning which requires one acre lots. Watts names his plan " Brave Boat Harbor Conservation ." Is the conservation the remaining 7 acres of the property which is arguably not a candidate for development due access restrictions? Is this "conservation" the reason for accepting the negatives in the Cluster plan?

Planning Board Members I explore you to NOT approve the Watts Cluster Plan and instead require Watts to present a plan defined by the Rural residential code if he wishes to build on his lot.

Thank you for your consideration, John Porter. Phone contact 207-475-8188

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## Town of Kittery Planning Board Meeting September 11, 2014

**ITEM 1 – Shepard’s Cove Subdivision – Modification to an Approved Plan – Final Plan Review.**

Action: Hold a public hearing, approve or deny final plan. Owner and applicant DLJ Corp., is requesting consideration of their plans to amend the previously approved 2004 subdivision plan, replacing a proposed 24 unit building with detached 4 single-unit buildings at their Elderly Housing Facility located off Rogers Road, Tax Map 22, Lot 21, Residential-Urban Zone and Shoreland Overlay Zone. Agent is Lewis Chamberlain, P.E., Attar Engineering, Inc.

**PROJECT TRACKING**

REQ'D	ACTION	COMMENTS	STATUS
No	Sketch Plan Review / Acceptance		
Yes	Site Visit	Title 16.10.5.1.3 Board elected not to conduct a site visit (Minutes: 5/8/14)	Not Held
Yes	Preliminary Plan Review Completeness/Acceptance	Accepted as complete	5/8/14
Yes	Public Hearing		6/12/14
Yes	Preliminary Plan Approval		6/12/14
Yes	Final Plan Review		

**Applicant:** Prior to the signing of the approved Plan any Conditions of Approval related to the Findings of Fact along with waivers and variances (by the BOA) must be placed on the Final Plan and, when applicable, recorded at the York County Registry of Deeds. **PLACE THE MAP AND LOT NUMBER IN 1/4" HIGH LETTERS AT LOWER RIGHT BORDER OF ALL PLAN SHEETS.** As per Section 16.4.4.13 - Grading/Construction Final Plan Required. - Grading or construction of roads, grading of land or lots, or construction of buildings is prohibited until the original copy of the approved final plan endorsed has been duly recorded in the York County registry of deeds when applicable.

Note to applicant/agent: Provide the map and lot number in 1/4" high letters at the lower right border of all plan sheets.

**Background**

The Shepard’s Cove elderly housing subdivision was approved on April 8, 2004 for 115 dwelling units. See copy of this approved plan (Sheet C-1 in application package for 5/8/14). The current proposal, the third modification since originally approved in 2001, is to reduce the 115 total units approved to 95 units by replacing the approved 24-unit building (B) with 4 single, detached units in the same area.

**Staff Comments**

The following documentation has been submitted to date:

Site and Subdivision Plan Amendment, Sheets 1-5, 4/16/14, REV.8/18/14

Subdivision Plan Amendment Application, 4/16/14

Last approved Subdivision Plan, REV. 5/05/04 (Prepared by Altus Engineering)

Amended Subdivision Plan, REV. 8/18/14 (Prepared by Altus Engineering)

Shepard’s Cove Condominium Association & DLJ Corp. Agreement, re: Subdivision Amendment, January, 2013

Stormwater Management Study, 4/16/14 REV. 8/18/14

DEP SLD Permit Application, 4/21/14

The most recent CMA review (9/03/14) is attached and comments have been incorporated in the following draft Findings.

Regarding CMA’s comments concerning architectural elevations. Staff has not found any requirements for the applicant to submit this information, nor any standards for the Board to apply.

CMA also makes reference to street trees. In addition to considering additional trees, the Applicant should confirm the nine street trees that were a condition of approval per the 2001 approval (note 27)

were planted and maintained. The Applicant should confirm that all previous conditions (from all previous approvals) have been met and none outstanding.

Recommend plan revisions:

- 1) Plan Sheet C-1: REV#10 note should reference that this is Modification #3.
- 2) Plan Sheet C-1: Units Proposed under Zoning Summary should read 95 not 113.
- 3) Plan Sheet C-1: Title should read: 'Amended Site/Subdivision Amendment #3'
- 4) All plan sheets: add Map and Lot under sheet number.
- 5) Plan Sheet 1 (Attar): title should read Site Plan. (it would be confusing to approve and record two (Altus and Attar) concurrent subdivision plans. C-1 should be the principal plan for recording the subdivision.

Attached is correspondence staff received subsequent to the last board meeting regarding the Moffat property.

Recommendation:

In consideration of Peer-Review Engineer and Staff's comments, and conditions noted, this project is ready final approval.

**KITTERY PLANNING BOARD  
FINDINGS OF FACT**

**For**  
Shepard's Cove. Amendment to an Approved Subdivision

---

**WHEREAS:** Owner and applicant DLJ Corp., is requesting consideration of their plans to amend the previously approved 2004 amended subdivision plan, replacing a proposed 24 unit building with detached 4 single-unit buildings at their Elderly Housing Facility located off Rogers Road, Tax Map 22, Lot 21, Residential-Urban Zone and Shoreland Overlay Zone.

Hereinafter the "Development".

The Project Application and Plan and other documents considered to be a part of the approval by the Planning Board in this finding, consist of the following (Hereinafter the "Plan").

- Amended Site Plan, (prepared by Altus Engineering) Sheet C-1, REV #10 8/18/14
- Site and Subdivision Plan Amendment (prepared by Attar Engineering, Inc), Sheets 1-5, 4/16/14, REV. 8/18/14
- Modification to an Approved Plan Application Submission(s), 4/16/14; REV. 8/18/14/
- Shepard's Cove Condominium Association & DLJ Corp. Agreement, Subdivision Amendment, January, 2013
- Stormwater Management Study, 4/16/14, REV. 8/18/14;
- DEP SLD Permit Application, 4/21/14

Plan Review meetings conducted by the Planning Board as noted:

- On May 8, 2014, the Planning Board elected not to conduct a site visit.
- Acceptance of Preliminary Plan: May 8, 2014
- Public Hearing: June 12, 2014
- Preliminary Plan Approval: June 12, 2014; scheduled a second public hearing
- Second Public Hearing: September 11, 2014
- Final Plan Review and Approval: September 11, 2014

**NOW THEREFORE,** based on the entire record before the Planning Board and pursuant to the applicable standards in the Land Use and Development Code, the Planning Board makes the following factual findings:

Action by the board is based upon the following Findings of Fact (**referenced in Plan Review Notes – Shepard's Cove Amendment – September 11, 2014**) which certify or waive compliance with all the required standards of this title, and which certify that the development satisfies the following requirements:

**A. Development Conforms to Local Ordinances.**

*The proposed development conforms to a duly adopted comprehensive plan as per adopted provisions in the Town Code, zoning ordinance, subdivision regulation or ordinance, development plan or land use plan, if any. In making this determination, the municipal reviewing authority may interpret these ordinances and plans.*

Approved subdivision (2008) allowed for a 24-unit, single building, on identified site. Modification proposes to replaces 24 unit building with 4 single units, reducing the overall units by 20 for a total of 95 units overall.

The proposed use, dwelling units, is a permitted use in the Residential-Urban zone. The applicant includes an amended Subdivision plan dated 8-18-2014 prepared by Altus Engineering, Inc. who prepared the original 2008 subdivision. The units are to be incorporated into the subdivision and Shepard's Cove Condominium Association documents. The development is proposed in the Residential-Urban Zone, and the uses is permitted. No development is proposed in the

Shoreland Protection or Resource Protection Overlay Zones.  Setbacks: 30' front; 15' side and rear - Setbacks met on amended subdivision for the overall lot. Other: Lighting: Is street lighting proposed, or existing, along Shepard's Cove Road? Will lighting be installed along proposed interior driveways? If so, this should be indicated on the plan, conforming to Title 16.8.24. Landscaping: Is landscaping proposed along the existing roadway and/or interior development? (Title 16.8.18) Structures: Maximum building height is 35 feet in the R-U zone. The residential units are conventional, and meet this requirement. Does the Board wish to see architectural renderings of the proposed structures prior to approval?
<b>Vote of __ in favor__ against __ abstaining</b>
<b>B. Freshwater Wetlands Identified.</b>  <i>All freshwater wetlands within the project area have been identified on any maps submitted as part of the application, regardless of the size of these wetlands.</i>
Wetlands are identified.  CMA: No direct impacts are indicated. Wetlands limits are depicted on the plans, and are referenced to delineations done as part of the original subdivision over 10 years ago. The applicant has updated reviewed the limits of the wetlands and provided a letter, and determined that the wetlands mapping from the original subdivision are the current limits, and remain accurate.
<b>Vote of __ in favor__ against __ abstaining</b>
<b>C. River, Stream or Brook Identified.</b>  <i>Any river, stream or brook within or abutting the proposed project area has been identified on any maps submitted as part of the application. For purposes of this section, "river, stream or brook" has the same meaning as in 38 M.R.S. §480-B, Subsection 9.</i>
GIS indicates there are no rivers, streams or brooks within or abutting the project area.
<b>Vote of __ in favor__ against __ abstaining</b>
<b>D. Water Supply Sufficient.</b>  <i>The proposed development has sufficient water available for the reasonably foreseeable needs of the development.</i>
The Kittery Water District has confirmed there is sufficient water for the foreseeable needs of the development.
<b>Vote of __ in favor__ against __ abstaining</b>
<b>E. Municipal Water Supply Available.</b>  <i>The proposed development will not cause an unreasonable burden on an existing water supply, if one is to be used.</i>
With reduction in units from 19 to 4, it is assumed municipal water is available for the proposed project. Applicant has requested confirmation from the Kittery Water District.
<b>Vote of __ in favor__ against __ abstaining</b>
<b>F. Sewage Disposal Adequate.</b>  <i>The proposed development will provide for adequate sewage waste disposal and will not cause an unreasonable burden on municipal services if they are utilized.</i>
The Kittery Sewer District has stated there is sufficient capacity available for sewage waste disposal (9/4/14).
<b>Vote of __ in favor__ 0 against __ 0 abstaining</b>
<b>G. Municipal Solid Waste Disposal Available.</b>  <i>The proposed development will not cause an unreasonable burden on the municipality's ability to dispose of solid waste, if municipal services are to be used.</i>
With reduction in units from 19 to 4, it is assumed the proposed project will not cause an unreasonable burden on

municipal solid waste disposal.
<b>Vote of __ in favor__ against __ abstaining</b>
<b>H. Water Body Quality and Shoreline Protected.</b> <i>Whenever situated entirely or partially within two hundred fifty (250) feet of any wetland, the proposed development will not adversely affect the quality of that body of water or unreasonably affect the shoreline of that body of water.</i>
Portions of the development are located within 250 feet of wetlands but the development should not adversely affect the quality of the water body.
<b>Vote of __ in favor__ against __ abstaining</b>
<b>I. Groundwater Protected.</b> <i>The proposed development will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater.</i>
Municipal water and sewage is available for this project. There are no adverse impacts to groundwater by the proposed development
<b>Vote of __ in favor__ against __ abstaining</b>
<b>J. Flood Areas Identified and Development Conditioned.</b> <i>All flood-prone areas within the project area have been identified on maps submitted as part of the application based on the Federal Emergency Management Agency's Flood Boundary and Floodway Maps and Flood Insurance Rate Maps, and information presented by the applicant. If the proposed development, or any part of it, is in such an area, the applicant must determine the one hundred (100) year flood elevation and flood hazard boundaries within the project area. The proposed plan must include a condition of plan approval requiring that principal structures in the development will be constructed with their lowest floor, including the basement, at least one foot above the one hundred (100) year flood elevation.</i>
The proposed project area is outside of the FEMA identified flood prone areas (including the 2013 FEMA draft FIRM). This standard is not applicable.
<b>Vote of __ in favor__ against __ abstaining</b>
<b>K. Stormwater Managed.</b> <i>Stormwater Managed. The proposed development will provide for adequate stormwater management</i>
Per CMA Engineers: The site design includes complete preliminary design of site drainage and stormwater management. Design includes comprehensive management, including application of BMPs for stormwater, including bio-retention features and distribution of outlets among the surrounding wetlands areas. The stormwater report appears comprehensive and satisfactory. The project has an existing MEDEP Site Location of Development Permit. A modification was submitted 4/14 to the MDEP for review and approval.
<b>Vote of __ in favor__ against __ abstaining</b>
<b>L. Erosion Controlled.</b> <i>The proposed development will not cause unreasonable soil erosion or a reduction in the land's capacity to hold water so that a dangerous or unhealthy condition results.</i>
The site design includes complete preliminary design of site drainage and stormwater management. Design includes comprehensive management, including application of BMPs for stormwater, including bio-retention features and distribution of outlets among the surrounding wetlands areas. The stormwater report appears comprehensive and satisfactory. The project has an existing MEDEP Site Location of Development Permit. A modification was submitted 4/14 to the MDEP for review and approval. Final Plan must include notes that reflect adherence to the Maine DEP <i>Best Management Practices</i> for all work associated with site and building renovations to ensure adequate erosion control and slope stabilization. [Condition #1]
<b>Vote of __ in favor__ against __ abstaining</b>

<p><b>M. Traffic Managed.</b></p> <p><i>The proposed development will:</i></p> <ol style="list-style-type: none"><li><i>1. Not cause unreasonable highway or public road congestion or unsafe conditions with respect to the use of the highways or public roads existing or proposed; and</i></li><li><i>2. Provide adequate traffic circulation, both on-site and off-site.</i></li></ol>
<p>CMA: No new streets are proposed. The units will generate an ADT of less than 100 trips per day, and less than the previously approved Building B. Adequate sight distances are shown from the driveways. This standard appears to have been met.</p>
<p style="text-align: right;"><b>Vote of _ in favor_ against _ abstaining</b></p>
<p><b>N. Water and Air Pollution Minimized.</b></p> <p><i>The proposed development will not result in undue water or air pollution. In making this determination, the following must be considered:</i></p> <ol style="list-style-type: none"><li><i>1. Elevation of the land above sea level and its relation to the floodplains;</i></li><li><i>2. Nature of soils and sub-soils and their ability to adequately support waste disposal;</i></li><li><i>3. Slope of the land and its effect on effluents;</i></li><li><i>4. Availability of streams for disposal of effluents;</i></li><li><i>5. Applicable state and local health and water resource rules and regulations; and</i></li><li><i>6. Safe transportation, disposal and storage of hazardous materials.</i></li></ol>
<ol style="list-style-type: none"><li>1. Proposed project area is not located within a floodplain.</li><li>2. Municipal sewer will be utilized. Not applicable.</li><li>3. Stormwater management report appears comprehensive and satisfactory, including application of BMPs for stormwater, including bio-retention features and distribution of outlets among the surrounding wetlands areas.</li><li>4. There are no streams on site. Not applicable.</li><li>5. The Applicant has applied for a modification of the approved (2008) MDEP Site Location of Development permit.</li><li>6. No hazardous materials anticipated. Not applicable.</li></ol>
<p style="text-align: right;"><b>Vote of _ in favor_ against _ abstaining</b></p>
<p><b>O. Aesthetic, Cultural and Natural Values Protected.</b></p> <p><i>The proposed development will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat identified by the department of inland fisheries and wildlife or the municipality, or rare and irreplaceable natural areas or any public rights for physical or visual access to the shoreline.</i></p>
<p>The applicant has completed an historical and archaeological review of the proposed site (by Emerson Bake, dated August 6, 2014), which focused on the so-called Pettigrew Site. The site was determined to be intact and potentially eligible for inclusion in the National Register of Historic Places. The conditions were researched and documented with field work. This work resulted in the elimination of a previously proposed residential unit. There are now four (4) residential units, reduced from five (5). The eliminated residential unit allows the documented area of the Pettigrew site to remain undisturbed.</p>
<p style="text-align: right;"><b>Vote of _ in favor_ against _ abstaining</b></p>
<p><b>P. Developer Financially and Technically Capable.</b></p> <p><i>Developer is financially and technically capable to meet the standards of this section.</i></p>
<p>Applicant has successfully built 91 condominium units since the original 2008 approval, including all associated infrastructure. It is anticipated the development of the proposed 5 single units is within the applicants technical and financial capability.</p>
<p style="text-align: right;"><b>Vote of _ in favor_ against _ abstaining</b></p>

**NOW THEREFORE** the Kittery Planning Board adopts each of the foregoing Findings of Fact and based on these Findings determines the proposed Development will have no significant detrimental impact, and the Kittery Planning Board hereby grants Preliminary and Final Approval for the Development at the above referenced property, including any waivers granted or conditions as noted.

Waivers: none

Conditions: (All conditions must be included on the final plan prior to signature by the Planning Board Chairman)

1. Receipt of all applicable State and Federal permitting/approvals.
2. Prior to the commencement of grading and/or construction within a building envelope, as shown on the Plan, the owner and/or developer must stake all corners of the envelope. These markers must remain in place until the Code Enforcement Officer determines construction is completed and there is no danger of damage to areas that are, per Planning Board approval, to remain undisturbed.
3. No changes, erasures, modifications or revisions may be made to any Planning Board approved final plan. See Title 16.10.9.1.2.
4. Instructions/Notice to Applicant per September 11, 2014 Findings of Fact

The Planning Board authorizes the Planning Board Chairman to sign the Final Plan and the Findings of Fact upon confirmation of compliance with any conditions of approval.

APPROVED BY THE KITTERY PLANNING BOARD ON \_\_\_\_\_

Vote of    in favor   0   against   0   abstaining

\_\_\_\_\_  
Thomas Battcock-Emerson, Planning Board Chairman

An aggrieved party with legal standing may appeal a final decision of the Planning Board to the York County Superior Court in accordance with Maine Rules of Civil Procedures Section 80B, within forty-five (45) days from the date the decision by the Planning Board was rendered. See Title 16.6.2.A.

Instructions/Notice to Applicant:

1. Incorporate plan revisions on the final plan as recommended by Staff, Planning Board and Peer Review Engineer, and submit for Staff review prior to presentation of final mylar.
2. State law requires all subdivision plans, and any plans receiving waivers or variances, be recorded at the York County Registry of Deeds within 90 days of the final approval.
3. One (1) mylar copy and two (2) paper copies of the recorded Plan and any and all related state/federal permits or legal documents that may be required, must be submitted to the Town Planning Department.
4. Prior to the release of the signed plans, the applicant must pay all outstanding fees associated with the permitting, including, but not limited to, Town Attorney fees, peer review, newspaper advertisements and abutter notification.
5. Performance Guaranty Conditions. Prior to soil disturbance, the Developer must submit to the Planning Department a Performance Guarantee and/or an escrow account to pay for any required field inspections or improvements. See Title 16.10.8.2.2.
6. This approval by the Planning Board constitutes an agreement between the Town and the Developer, incorporating as elements the Development Plan and supporting documentation, the Planning Board Findings of Fact, any Conditions of Approval, and any requirements as set forth in Title 16, Land Use and Development Code of Ordinances.

## Chris DiMatteo

---

**From:** Joseph Carleton <atty@maine.rr.com>  
**Sent:** Tuesday, July 08, 2014 10:20 AM  
**To:** Gmylroie  
**Cc:** 'John Convery'; Chris DiMatteo  
**Subject:** Planning Board - Shepard's Cove  
**Attachments:** ltr planning board re moffat.pdf; Moffat deed re emergency access.docx

Hello Gerry:

I understand that Scott Moffat claimed at a recent Planning Board meeting that the Association was responsible for installing utility services from its main access road, located on land of Shepard's Cove, to the boundary line of Scott Moffat's land, the utility services being for use by any dwelling units that might be constructed on Moffat's land. I have investigated this claim and find it not to be true. The accompanying letter explains the details. I wanted to get this letter to you in advance of this Thursday's Planning Board meeting, where the matter may again come up.

The association does maintain the emergency access roadway running across Mr. Moffat's land and perhaps Mr. Moffat is confusing the two. In this connection, I attach a deed from Moffat to the developer of Shepard's Cove in which Moffat grants access over his land for emergency access of public safety vehicles. Moffat has recently locked the gates, blocking this access.

Could you bring this message and attachments to the attention of the Planning Board when it next considers this matter.

I am sending a copy of this message to the Assistant Planner, in case you are on vacation or otherwise do not receive this message in time for the Thursday meeting.

Best personal wishes,

Joe

Joseph G. Carleton, Jr.  
Attorney at Law  
1465 Post Road, P.O. Box 369  
Wells, ME 04090  
207-646-8341  
207-646-8341 fax  
Joe Carleton

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[atty@maine.rr.com](mailto:atty@maine.rr.com)  
July 7, 2014

Kittery Planning Board  
200 Rogers Road  
Kittery, ME 03904

By email to Gerry Mylroie, Town Planner and U.S. Mail

Re: Shepard's Cove

Dear Board:

I represent Shepard's Cove Condominium Association.

I understand that at a recent meeting of the Planning Board, abutting landowner Scott Moffat claimed that the cost of installing utilities along a roadway running from the Shepard's Cove access road to the boundary line of Moffat is a cost that must be paid by Shepard's Cove Condominium Association and not by Scott Moffat.

That claim is demonstrably incorrect.

Scott Moffat is the southerly abutter to Shepard's Cove Condominium. In 2001, Coventry Assets, LLC, the developer of Shepard's Cove, gave deeded access easements across the Shepard's Cove access road and then from that road (in two places) to Moffat's property line. This was done in return for Moffat granting an emergency access easement across Moffat's land to Shepard's Cove.

The long access road into Shepard's Cove is labeled "60' WIDE RIGHT OF WAY" to distinguish it from the two easements running from the access road to Moffat's property, which are labeled "60' WIDE EASEMENT "A" and "50 WIDE EASEMENT "B" on a plan labeled as Sheet Number "SU-1," entitled "Right of Way and Easement" for the Shepard's Cove project, recorded at Plan Book 266, page 18 in the York County Registry of Deeds, a copy of which is attached. Further plans, labeled SU-2 and SU-3, also recorded in the Registry of Deeds, provided detail on the easement rights of Shepard's Cove over Moffat's land.

NOTE: 50' WIDE EASEMENT "B," located in the cul-de-sac at the end of the Shepard's Cove access road, is confusingly called EASEMENT NO. 1" in the deed creating it. EASEMENT B was subsequently relocated and deeds exchanged to extinguish the old easement location. Although I will be addressing EASEMENT "A", located adjacent to the proposed new construction, the language used in the deeds of both easements is similar.

The deed which actually creates the easements is from Coventry Assets, LLC to Scott Moffat, dated September 12, 2001, recorded in the York County Registry of Deeds, Book 10957, page 38. EASEMENT A, adjacent to the proposed construction, is the second easement described in that deed – and is referred to in the deed as "EASEMENT NO. 2." A copy of that deed is attached.

The language describing Easement No. 2 (Easement A) says:

*"That section of the easement that extends for 160.58 feet from land of Moffat to the 60' WIDE RIGHT OF WAY as shown on said survey may be constructed, improved, repaired, maintained and plowed by Scott C. Moffat, his heirs and assigns, at the sole cost and expense of said Scott C. Moffat, his heirs and assigns. Said 60 foot wide section may also be used for the installation, maintenance, repair and replacement of sewer, water, electrical, telephone, cable and natural gas utilities, at the sole cost and expense of said Scott C. Moffat, his heirs and assigns."*

The easement being referred to above extends from the access road to the Moffat line – it is the "60' FOOT WIDE EASEMENT", according to the nomenclature of the plan.

The deed then goes on to say:

*"Said easement shall continue as a right of way over the private roads located within the area designated as "60' Right of Way" as shown on said Shepard's Cove Plans from the point of entry of the 60 foot wide section of the right of way westerly to Rogers Road. The construction, maintenance, repair, plowing of the 60' Wide section of the right of way shall be at the sole expense and cost of Coventry Assets, LLC, its successors and or assigns."*

The language immediately above clearly refers to the access road into Shepard's Cove, not the easement from that road to Moffat's property. Naturally, Shepard's Cove is responsible for that road.

The deed language continues...:

*"This easement also includes the right to connect, at the sole expense and cost of Scott C. Moffat, his heirs and assigns, with any underground utilities located within the 60' Wide right of way. Scott C. Moffat, his heirs and assigns shall be solely respons(sic) e for any connection and user fees."*

The deed goes on to limit the easement given to Moffat to three single family residences that may be built on the Moffat property.

**Utility lines running from the Shepard's Cove access road to the Moffat property line provide no benefit to Shepard's Cove. They benefit any dwellings that Moffat might construct on his own land. It is entirely natural and reasonable that Moffat should be responsible for their cost, and the deed clearly says so.**

I hope this clears up any confusion about who is responsible for what.

Sincerely,  
  
Joseph G. Carleton, Jr.

cc. Shepard's Cove Condominium Association (by email)

**WARRANTY DEED**  
**Maine Statutory Short Form**

**KNOW ALL PERSONS BY THESE PRESENTS,**

That I, **Scott C. Moffatt** of 144 Rogers Road, Kittery, Maine 03904 for consideration paid, grant to **Coventry Assets, LLC** a Maine limited liability company whose mailing address is P.O. Box 930, Portsmouth, New Hampshire 03802-0930, with **WARRANTY COVENANTS**, an easement in the Town of Kittery, County of York and State of Maine, described as follows:

A certain appurtenant easement located on the easterly side of Rogers Road in the Town of Kittery, County of York and State of Maine. Said easement to extend in a northeasterly direction from Rogers Road to the southeasterly sideline of land of Coventry Assets, LLC (as described in a deed recorded in the York County Registry of Deeds Book 10382, Page 90). Said easement shall be 33 feet in width for most of its length, but shall narrow to 15 feet in width by a distance of 77.65 feet as noted in the description below. Said easement shall be bounded and described as follows:

Said easement shall commence on the northeasterly sideline of Rogers Road with its northerly and southerly boundaries being marked by two rebar with caps to be set, the center line of said 33 foot wide easement shall commence on Rogers Road at a point equal distance between said two rebar and then extend North 74° 22' 11" East for a distance of 96.83 feet; said easement shall then narrow to a width of 15 feet with its centerline extending North 74° 22' 11" East for 12.39 feet; thence running northeasterly on a curve having a radius of 100 feet for a length of 65.26 feet; said easement then again expanding to a width of 33 feet with the center line of a 20 foot wide travel section of said easement running North 36° 58' 44" East for a distance of 109.79 feet; the center line of said 33 foot wide easement thence running on a curve having a radius of 300 feet for a length of 31.80 feet; thence turning and running North 43° 03' 08" East for a distance of 158.10 feet; thence continuing on a curve having a radius of 170 feet for a length of 109.40 feet; thence turning and running North 79° 55' 24" East for 96.57 feet; thence continuing on a curve having a radius of 350 feet for a length of 130.65 feet; thence running North 58° 32' 08" East for a distance of 54.42 feet; thence running northeasterly on a curve having a radius of 300.00 feet for a length of 91.08 feet; thence running North 41° 08' 28" East for a distance of 71.66 feet; thence continuing on a curve having a radius of 300 feet for a length of 35.84 feet; thence running North 47° 58' 09" East for a distance of 74.85 feet; thence turning northerly on a curve having a radius of 200 feet for a length of 141.52 feet; thence running North 07° 26' 31" East for a distance of 53.73 feet; thence on a curve having a radius of 140.00 feet for a length of 93.78 feet; thence continuing on a curve having a radius of 75.00 feet for a length of 56.67 feet; thence running North 02° 31' 43" East for a length of 17.97 feet to a stone wall at land of Coventry Assets, LLC.

Meaning to grant an easement over a portion of the premises described in the deed of The First National Bank of Boston to Scott Moffatt dated in January of 1992 and recorded in the York County Registry of Deeds at Book 5940, Page 348. Also granting an easement over a portion of the premises formerly shown as a 25' Roadway that bordered land labeled as Geo. Farish on the plan of The Goodsoe Property November 1939 and recorded in the York County Registry of Deeds at Plan Book 12, Page 143. Title to the northwesterly section of said

Roadway, measuring from the centerline of said 25-foot roadway having previously reverted to Scott Moffat, or his predecessors in title by virtue of their being the northerly abutter to said roadway.

The above described easement is shown on a survey consisting of three pages, labeled SU-1, SU-2 and SU-3 on a plan labeled "SHEPARD'S COVE SENIOR HOUSING COMMUNITY TAX MAP 22, LOT 21 KITTEERY, MAINE" the owner/applicant is Coventry Assets, LLC and the plan is by ALTUS Engineering, Inc, Easterly Surveying, Inc dated April 23, 2001 and to be recorded at the York County Registry of Deeds.

The 33 foot wide (and in one portion 15 foot wide) easement shall be used for the following purposes:

A 20 foot wide (and in one portion 15 foot wide) section of said easement, being 10 feet (and in one portion 7.5 feet) on either side of the centerline as described above, shall be to provide an emergency access easement in favor of Coventry Assets, LLC, its successors and or assigns on foot or with vehicles, northeasterly from Rogers Road to the southeasterly sideline of land of said Coventry Assets, LLC to be used by police, fire and other official town vehicles of the Town of Kittery.

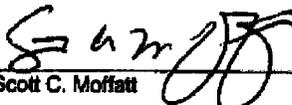
The remaining portion of the 33 foot wide easement, being that section that typically extends for 6.5 feet on either side of the edges of the 20 foot wide section, but in some areas, as depicted on the plan, extends for a greater length on one side of the center line may be used for the installation, maintenance, repair and replacement of either above or below ground utilities, for construction purposes in building the 20 foot wide traveled section, to clear brush or trees for travel sight lines and for the plowing of snow.

Said 33 foot wide easement shall be used in common with Scott Moffat, his heirs and assigns and such others as may have legal rights to the use of said right of way easement.

Coventry Assets, LLC agrees for itself, its heirs and assigns to maintain that section of the easement from Rogers Road to property of said Coventry Assets, LLC, in a manner that allows access to all types of emergency apparatus including aerial devices. Coventry Assets, LLC further agrees for itself, its heirs and assigns to pave the traveled portion of the easement from Rogers Road to the bottom of the hill. Said paving to be completed by such time as Coventry Assets LLC, its successors and or assigns completes the first phase of a development project on adjoining land owned by Coventry Assets, LLC.

Witness my hand this 14<sup>th</sup> day of September, 2001.

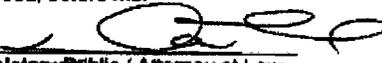
  
Witness

  
Scott C. Moffat

STATE OF MAINE  
COUNTY OF YORK

September 14, 2001  
August

Then personally appeared the above named Scott C. Moffat and acknowledged the foregoing instrument to be his free act and deed, before me:

  
Notary Public / Attorney at Law  
Dan W. Thornhill

Moffat to Coventry Assets easement deed

ATTEST  
SEP 17 2001  
RECORDS OF DEEDS

Cheryl Whitney

## Chris DiMatteo

---

**From:** Joseph Carleton <atty@maine.rr.com>  
**Sent:** Tuesday, July 08, 2014 10:41 AM  
**To:** 'John Convery'  
**Cc:** Gmylroie; Chris DiMatteo  
**Subject:** Access road across Moffat property  
**Attachments:** Moffat deed re emergency access.docx

Hello John:

As promised, I have looked more closely at the deed establishing rights in the access road from Rogers Road, across Moffat's property, to Shepard's Cove. The rights of the parties are established by deed, and I attach another copy of it.

The legal description of the road itself is a little complicated, since the road width varies, but it seems consistent with the plans I have previously sent you. (i.e., those labeled SU-1, SU-2 and SU-3)

The easement is given for the purpose of "emergency access," for "police, fire and other official town vehicles of the Town of Kittery," which probably means that unit owners at Shepard's Cove cannot use it for normal travel to and from Rogers Road. Coventry Assets (and its successor, Shepard's Cove Condominium Association) agrees to maintain the road "in a manner that allows access to all types of emergency apparatus including aerial devices." Presumably this means Town fire and police apparatus. This is the test – the sole test – of the level of maintenance required by the Association. To the extent that Mr. Moffat prevents this emergency access he is violating the terms of his own easement deed.

Moffat can, of course, use the road for his own purposes, such as access to any dwellings he may, in the future, construct on his own land.

Coventry also agreed to pave the road "to the bottom of the hill" and I recollect from my travel along this road recently that this has been done. Nothing is said in the deed about the Association being responsible for repaving the road.

The other thing to note is that the Association has an easement for utility services along the side of the road, if it ever needs it.

I am forwarding a copy of this message to the Planning Office in case the question arises at the Planning Board meeting.

Joe

Joseph G. Carleton, Jr.  
Attorney at Law  
1465 Post Road, P.O. Box 369  
Wells, ME 04090  
207-646-8341  
207-646-8341 fax



September 3, 2014

Chris DiMatteo, Assistant Town Planner  
Town of Kittery  
P.O. Box 808  
Kittery, Maine 03904

**RE: Town of Kittery, Planning Board Services  
Shepard's Cove Subdivision Amendment  
176 Rogers Road, Tax 22, Lot 21  
Review #2  
CMA #591.78**

CMA ENGINEERS, INC.

CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street

Portsmouth, New Hampshire

03801-3819

Phone: 603/431-6196

Dear Chris:

Following our first review of the proposal and our May 30, 2014 review letter, CMA Engineers has received supplemental information for Assignment #78 regarding the proposed amendment to the Shepard's Cove Subdivision at 176 Rogers Road Wilson Road (Tax Map 22, Lot 21).

- 1) Amended Site Plan for Subdivision at Shepard's Cove on Spruce Creek, Map 22, Lot 21, **updated 8/18/14 by Altus Engineering Inc.** (the firm that completed the original subdivision).
- 2) Plan set "Site and Subdivision Plan Amendment, Shepard's Cove, 176 Rogers Road, Kittery ME" prepared by Attar Engineering, dated April 14, 2014 **and updated 6/16/14 and 8/18/14** by Attar Engineering, Inc. of Eliot ME, on behalf of DLJ Corporation, York ME.
- 3) Stormwater Management Study by Attar Engineering, dated April 16, 2014, **and revised 6/16/14 and 8/18/14.**
- 4) Narrative including comments on 6/16/14 and 8/18/14 revisions; Archeological Survey at the Pettigrew Site, Kittery Maine by Emerson Baker dated 8/6/14; Letter with update wetlands delineation by Attar Engineering; letters to local utilities.

We have reviewed the information submitted for conformance with the Kittery Land Use and Development Code (LUDC) and general engineering practices, and offer the comments below that correspond directly to the Town's Ordinances. This review is of a preliminary submittal per 16.10.5.

The project includes modification of a previously approved subdivision at Shepard's Cove, an elderly housing facility. The original subdivision was approved in the early 2000s. The original subdivision included condominiums and a condominium association, and included 115 housing units distributed among numerous multi-unit buildings of different sizes. The original subdivision included so-called Building B about mid-way on Shepard's Cove Road. Building B has not been constructed, and was planned to include 24 residential units.

The amendment proposes four (reduced from 5 in April 2014) single detached residential units in the area formerly approved for Building B, and elimination of Building B. Accordingly, a reduction of 20 residential units over the entire subdivision results.

The four residential units are proposed in an area that is approximately 360' by 280', although it is not a separate lot in the condominium subdivision. Three units are proposed of a joint driveway off Shepard's Cove Road, and two are proposed off single driveways off a spur road off Shepard's Cove Road.

All units are proposed to be served by public water from existing Kittery Water District mains, and sewers service from existing sewer mains on Shepard's Cove Road. Site drainage is proposed with a combination of bio-retention basins, swales, piping, and discharges to uplands.

### ***Overall Comment***

The units will be condominiums, and this has been clarified by the applicant in the recent materials. In these materials, the applicant has submitted a revised overall subdivision plan showing the modifications, removal of the original 24-unit building, and addition of the four (4) additional single residential units.

## **16.3 Zoning Regulations**

### ***16.3.2.1 Residential-Urban (R-U)***

The proposed use (dwellings) is a permitted use.

*Land area:* Public water and sewer are available. The minimum land area per dwelling unit is 20,000 sf. There appears to be sufficient land area for 4 units, although there are not separate lots.

*Lot size and configuration:* In this zone, 15' side and rear yard setbacks, and 30' front yard setback is required. Each unit has at least 30' setback from roadways. These are met with the overall amended subdivision.

The applicant has clarified that these will be condominiums on the single Shepard's Cove lot

### ***16.3.2.17 Shoreland Overlay Zone (OZ-SL) and 16.3.2.1 Resource Protection Overlay Zone (OZ-RP)***

The applicant has confirmed that the proposed development is outside the Shoreland Overlay or Resource Protection Overlay zones.

## **16.8 Design and Performance Standards-Built Environment**

### **Article IV. Streets and Pedestrian Ways**

#### ***16.8.4.2.C. Street Layout:***

No new streets are proposed. The units will generate an ADT of less than 100 trips per day, and less than the previously approved Building B. Sight distances are reported and satisfactory.

### **Article VI. Water Supply, and Article VII Sewage Disposal**

Use of Kittery Water District public water, and Kittery Sewer District sewers is proposed.

- Are the water and sewer pipes being connected to public facilities, or owned by Shepard's Cove with connections to the public utilities on Rogers Road?

### **Article VIII. Surface Drainage**

The site design includes complete preliminary design of site drainage and stormwater management. Design includes comprehensive management, including application of BMPs for stormwater, including bio-retention features and distribution of outlets among the surrounding wetlands areas. The stormwater report appears comprehensive and satisfactory.

Article XVIII. Landscaping

16.8.18.1. Does the Board require any street trees?

Article XXIV. Landscaping

16.824. *Exterior Lighting*

Is any new exterior lighting proposed? If so, it should be describe per this section.

**16.9 Design and Performance Standards-Natural Environment**

Article I. General

16.9.1.3 *Prevention of Erosion;*

16.9.1.4 *Soil Suitability*

16.9.1.5 *Water Quality and Wastewater Pollution*

The project has an existing MEDEP Site Location of Development Permit that will require modification per the proposed amendment. The Town should be copied on the application and any permit action.

Article III. Conservation of Wetlands Including Vernal Pools

16.9.3.7 *Wetlands Alteration Approval Criteria*

There are wetlands in close proximity to the site on three sides. No direct impacts are indicated. The wetlands limits have been confirmed in August 2014.

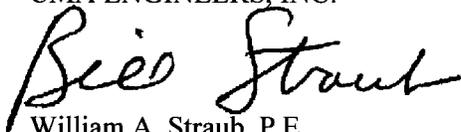
***Other***

Does the Planning Board desire to review, or does the applicant wish to provide typical building architectural elevations?

Should you have any questions, please do not hesitate to call.

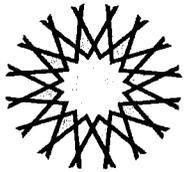
Very truly yours,

CMA ENGINEERS, INC.



William A. Straub, P.E.  
Project Manager

cc: Lew Chamberlain, PE, Attar Engineering



**ATTAR**

ENGINEERING, INC

CIVIL STRUCTURAL MARINE

RECEIVED  
AUG 18 2014

BY: .....

Gerry Mylroie, AICP, Town Planner  
Town of Kittery  
200 Rogers Road Ext.  
Kittery, Maine 03904

August 18, 2014  
Project No.: C009-14

**Re: Shepard's Cove  
Subdivision Plan Amendment Application  
Tax Map 22, Lot 21**

Dear Mr. Mylroie:

On behalf of DLJ Corp., I have enclosed a revised Plan Set and associated documents for your review and consideration. The site is located at 176 Rogers Road in the Residential-Urban (RU) District.

The purpose of this submission is to respond to Planning Board comments/questions, to date, and to respond to items identified in a project peer review prepared by CMA Engineers (dated May 30, 2014).

This submittal includes an archaeological report that addresses the Pettigrew site identified on the previously approved plans. Based on the archeological findings, the number of proposed units has been reduce from five to four in order to preserve the Pettigrew site.

Other items are addressed as follows:

CMA Review

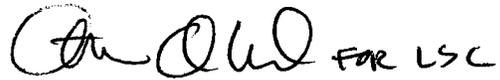
- An overall subdivision plan (Sheet C-1), prepared by Altus Engineering, Inc., has been added to the plan set.
- The four proposed units, when built, will be incorporated into the existing Shepard's Cove Condominium Association. Each unit will have an associated, exterior, Limited Common Area (LCE) for the use of the owner. The remaining land around the units will be Common Area, and will include the drainage ponds and Pettigrew archaeological site. Typically, the final limits of LCE areas and Common Areas, and as-built unit locations, are delineated on a Condominium Plat, and recorded at the York County Registry of Deeds.
- Shoreland and Resource Protection zones are depicted on Sheet C-1. None of the area being modified is within either zone.
- The plans have been forwarded to the Kittery Water District and Kittery Sewer District with a request for capacity confirmation.
- Pond outlet pipes will be protected with rip rap level spreaders. A culvert inlet/outlet protection detail has been added to Sheet
- A letter addressing wetlands is attached (prepared by Wetland Scientist Kenneth A. Wood).

We look forward to discussing this project with the Board at the next available meeting.

1284 State Road, Eliot, ME 03903 tel (207) 439-6023 fax (207) 439-2128

Please contact me for any additional information or clarifications required.

Sincerely,

Handwritten signature in black ink, appearing to read "Lewis Chamberlain" with "FOR LSC" written in smaller letters to the right.

Lewis Chamberlain, P.E.

cc: DLJ Corp.

C009-14 KITTERY\_LTR1.doc

# **Archaeological Survey at the Pettigrew Site (ME 226-25) Kittery, Maine, 2014**

Submitted to DLJ Corporation, August 6, 2014

by Emerson W. Baker

## **Project Summary**

Archaeological survey was carried out by Emerson Baker within the Shepard's Cove Subdivision, in Kittery, Maine in June and July 2014, on the Pettigrew Site (ME 226-25) for DLJ Corporation. The fieldwork first determined that this site, dating from the early to mid-eighteenth century, was intact and potentially eligible for inclusion in the National Register of Historic Places. After making this determination, work continued at the site to determine site bounds, so the site could be avoided by proposed construction.

A total of thirteen test excavation units were dug during the project, and confirmed the well-preserved presence of ME 226-25, the Pettigrew site. The site was first discovered and recorded by Emerson Baker in 1985, as a part of the York County Archaeological Survey. The 1985 work was carried out to identify sites, prior to the proposed subdivision and development of the property by Allen Associates.

## **Historical Background Research**

The site is on the twenty-two acre farm of John Ball, first occupied about 1667. On June 8, 1717, John Ball and his wife Joanna, signed a deed giving their home and all twenty-two acres to their daughter Elizabeth, and her husband Francis Pettigrew. Ball did so for "providing for me and my wife Joanna sufficient maintenance or nursing during the term of our natural lives as also for and in consideration of that love, good will and affection which I have and do bear toward my son-in-law and his wife Elizabeth my daughter." The Pettigrews apparently built a home on the western end of the property, while the Balls continued to occupy their home on the eastern end, overlooking Spruce Creek, and adjacent to the family cemetery.<sup>1</sup>

On December 31, 1725, Elizabeth Pettigrew testified in a case where her neighbor Sarah Keene was suing John Spinney for slandering her by calling her a witch:

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<sup>1</sup> For documents relating to the history of the site, see York Deeds, 2:70; 3: 44; 5:75; 8:230 230; 16: 44; 21:278; the quote is from 8:230. "Petition of John Ball," in James P. Baxter, ed., *Documentary History of the State of Maine* (Portland, 1900), 6: 353. For background information, see also Everett Stackpole, *Old Kittery and Her Families* (Lewiston, 1903), 65, 71, 282-3; Sybil Noyes, Charles T. Libby, and Walter G. Davis, *Genealogical Dictionary of Maine and New Hampshire* (Portland, 1928-39), 73-4.

“The deposition of Elizabeth Pettigrew of full age Testifyeth & Saith that Some time in the Month of August five years ago last August, about nine or Ten of the Clock in the Night as She was at the Door of her house heard a noyse of People Talking down the Country road Towards Nath'l Kenes. She went to the Side of the of the road and Imediately saw Sarah Kene on horse back with the head of a riding hood on her head& a white hankerchief about her neck the moon Shining very bright and the Depona't was So near that She Could have took her by the hand, And with sd Sarah Kene were Seven horses double having fourteen women on them, as they Appeared to her they follow'd Each other and Talked and Laughed Loud & Seemed to be very Merry but She did not hear Sarah Kene say anything.”

Pettigrew implied that Sarah Keene and the fourteen others were headed to a witches Sabbath. The deposition continued to give several other examples of suspicious behavior by Keene, including Keene asking the question of whether a person could be a witch and not know it.<sup>2</sup>

Aside from providing insight into the continued belief in witches a generation after the Salem witch trials, the deposition is important for it helps to place the location of the Pettigrew home. The Keene home was located in the vicinity of the present-day Kittery traffic circle, and the “Country road” Pettigrew refers to is what is now Rogers Road. The Pettigrew site is about 1,200 feet to the east of Rogers Road, while the Ball site (the other possible place the Pettigrews could have been living at the time) is over 2,600 feet. It would be impossible to hear people and see them by moonlight from a half mile away, but would have been possible from the Pettigrew site. Thus this document confirms that in 1720 the Pettigrews were living at the Pettigrew site.<sup>3</sup>

Pettigrew sold the entire twenty-two acres to Benjamin Parker for £160 on April 13, 1734. Less than a year later, on March 5, 1735, Parker sold the land for £160 to John Shepard whose farm abutted the land on the north and west. Both of the deeds included reference to “all the housing, fruit trees and fencing” but it is unclear if the Pettigrew house was still standing at the time. Benjamin Parker may have continued to live on the land, but Shepard did not. Shepard, who owned the adjoining farm, bought it to get the farmland and orchards, not the farmhouse.<sup>4</sup> The Pettigrew house, located roughly 600 feet from the Shepard home, may have been used briefly by members of the Shepard family but it was gone by 1768. John Shepard's estate division of 1768 mentions only one house on the farm, and that was the original Shepard house.<sup>5</sup>

### **Description of Fieldwork at ME 226-25 in 1985 and 2014**

The Pettigrew site was first discovered in 1985 by Emerson Baker, as a part of the survey of 100 acres of land. At the time the owner of the property, Allen Associates was proposing putting close to 300 single family homes on approximately 100 acres. The Pettigrew site was one

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<sup>2</sup> Neal W. Allen, Jr., ed., *The Maine Province and Court Records* (Portland: Maine Historical Society, 1975), 6:212-3; Stackpole, *Old Kittery and Her Families* (Lewiston: Press of the Lewiston Journal, 1903), 71-3.

<sup>3</sup> Everett Stackpole, *Old Kittery and Her Families* (Lewiston: Press of the Lewiston Journal, 1903), 71-3.

<sup>4</sup> *York Deeds* 8: 44-5 (quote).

<sup>5</sup> John Eldridge Frost, *Maine Probate Abstracts, 1687-1775* (Camden, ME: Picton Press, 1991), 2: 649-50.

of six sites found during the survey. The Pettigrew site was discovered late in the survey, so very little work was done on it. The site consisted of two cellars. Structure 1 was the foundation of a house, and Structure 2, located approximately 75 feet to the northwest, was believed to be a barn or outbuilding. Test pits revealed a broad scatter of artifacts to the south and west of Structure 1, suggesting an activity area and possibly the presence of outbuildings. The topsoil here was unplowed – a rarity in Maine, making the site extremely well preserved. Artifacts recovered here, including combed-yellow slipware (ca. 1680-1775), English brown stoneware (1690-1775) and clay tobacco pipe stems (5/64” and 6/64” pipe stem fragments) all agreed with the known occupation of the property by the Pettigrew family.

In 2001 work began on the Shepard’s Cove community. The parcel that included the Pettigrew site was used as a staging area for construction of the condominiums. The northern end of the site, including Structure 2, was destroyed by construction. The southern limit of this extensive remodeling of the land is marked by a wall which was constructed from very large rocks and the occasional chunk of concrete. Heavy equipment was employed on the southern end, with dumping of bark mulch and construction materials, including a large concrete conduit which was placed on the ground surface inside the cellar of Structure 1.

In June and July 2014, under contract to DLJ Associates, Emerson Baker returned to the site to determine whether any part of the Pettigrew site survived. Condominiums had initially been planned for this location in 2001, but had never been built. Now DLJ Corporation was working with the Shepard’s Cove owner’s association to develop this plot. Initial test excavations determined that despite the heavy equipment and dumping, the area around Structure 1 was remarkably well preserved. The decision being made to protect the Pettigrew Site, Baker’s next task was to provide bounds for the site, so the site could be avoided by construction.

A total of thirteen units (measuring 50cm x 50cm) were excavated in June and July 2014. All units were placed within a metric grid, with an arbitrary datum established at N200 E200 meters. All units are designated by the quadrant of the one meter square (NWQ, SWQ, NEQ and SEQ for northwest, southwest, northeast and southeast quadrants). Units are designated by grid coordinate, specifically the southwest corner of the pit. Hence, the 1 x 1 meter square designated N204 E204 has its southwest corner four meters to the north and four meters to the east of the N200 E200 archaeological datum. Most units were placed away from Structure 1, as the goal was to bound the site, rather than provide more details on the structure.

### **Site Bounds for the Pettigrew Site, ME 226-25**

Based on the excavations, the site bounds are determined as follows and are marked on the site plan (see appendix 1).

The northern boundary is the large rock and concrete wall, created when the site was a construction staging area. Although the site originally extended beyond this wall, construction activities to the north destroyed this part of the site. Several random shovel test pits in this area confirmed that the ground here was severely disturbed, and no longer contained intact archaeological deposits.

The southern boundary was established as the rock wall which marks the property boundary. This is an historic boundary, going back to the 1660s and it is assumed that the Pettigrews would have limited their activity to their own property. Therefore, no test units were excavated to try to further limit the southern boundary.

The eastern boundary was located by test excavation, and is placed along the E227 line. Excavations along E223 line found colonial artifacts and intact stratigraphy, indicating they were within the site. Two excavation units were placed to the east of E223, at N212 E227 and N212 E229. While both pits produced several artifacts, they were found in a disturbed context. The colonial ground surface had been removed here. Instead, the soil had been removed, down to sterile subsoil, and a thick layer of bark mulch – as thick as 74 centimeters (29 inches).

The western boundary of the site was located at the E203 line. No artifacts were recovered in the N208 E203 unit. Only four artifacts were recovered in stratum I (the colonial ground surface) in N204 and E203, and the put one meter to the west – N204 E204 was completely sterile.

### **Artifacts Recovered**

A total of 225 artifacts were recovered and cataloged in 2014 (see Appendix 3). 75 artifact numbers were given these 225 finds, as in some cases multiple artifacts (such as brick fragments or redware shards) were assigned the same catalog number. The most common artifact recovered was brick fragments. The fragments were consistent with colonial brick. Small pieces and flecks of brick and charcoal were found in every pit, with the concentration decreasing the further from Structure 1 – suggesting the structure had a brick chimney, and that the building burned down. Most nail and nail fragments recovered were from hand-forged nails, which date no later than 1790, so presumably come from the Pettigrew house. However, two modern wire nails were recovered, surrounded with wood. It should be noted that there were some pieces of wood, including pallets found on the surface of the site. Presumably this wood and wire nails were placed on the site when it was used as a staging area. Aside from the occasional modern artifact, the materials recovered seem to date quite tightly to the Pettigrew occupation of the site.

Ceramics can be closely dated, and thus serve as important chronological markers for a site. Several fragments of English brown stoneware mugs were recovered (1690-1775), as well as English combed-yellow slipware (ca. 1680-1775), Westerwald stoneware (ca. 1650-1775), and White English salt-glazed stoneware (ca. 1720-1775). Equally significant is the lack of creamware on the site. First made in England by Josiah Wedgwood in 1762, this popular and inexpensive ceramic quickly dominated the English and American ceramic market. Although negative evidence always has to be used with caution, the lack of creamware, or its successor pearlware on the site, strongly suggests it had been abandoned by ca. 1770 at the latest.

The ceramics recovered are all related to the foodways on the site – the preparation and consumption of food and drink. More direct evidence of diet comes from the 37 bone fragments that were excavated in 2014. In the early colonial era, trash tended to be simply thrown out the door or window, creating a broadcast scatter. Hence, the closer to the house, the more fragments

of ceramics, glass and bone are excavated. Among these fragments were parts of cow and pig teeth, suggesting at the largely domestic diet typical in colonial Maine.

Clay tobacco pipe fragments also support the documented 1717-1735 occupation. Cheap to make and easily breakable, white clay tobacco pipe fragments litter colonial archaeological sites. Pipe stems can be roughly dated based on their average bore size. Pipe stems show a trend toward smaller bore size over time, with bores measured in 64ths of an inch. Generally the larger the pipe bore, the older the pipe. These distributions can be plotted into bar graphs, to show the relative numbers and percentages of pipe stems within a given site, stratum, or area of a site:

9/64" - before 1620	6/64" - 1680 to 1710
8/64" - 1620 to 1650	5/64" - 1710 to 1740
7/64" - 1650 to 1680	4/64" - post 1740

In 2014, a total of ten pipe stem fragments were recovered, eight measured 5/64" and two measured 7/64". This was a similar distribution to the 1985 test excavations where seven 5/64" and four 6/64" stems were recovered. Thus, pipe stem totals are:

2 – 7/64" (1650 to 1680)
4 – 6/64" (1680 to 1710)
15 – 5/64" (1710 to 1740)

By using the average bore size, and a line regression formula known as the Binford formula, one can determine the Binford date – the median date of site occupation, based on the pipe stem assemblage. The Binford date for the site, based on these 21 stems is 1726. While Binford dates are not terribly accurate, especially when based on such a small stem sample, the date agrees with the documented evidence for the site, as well as the ceramic evidence.

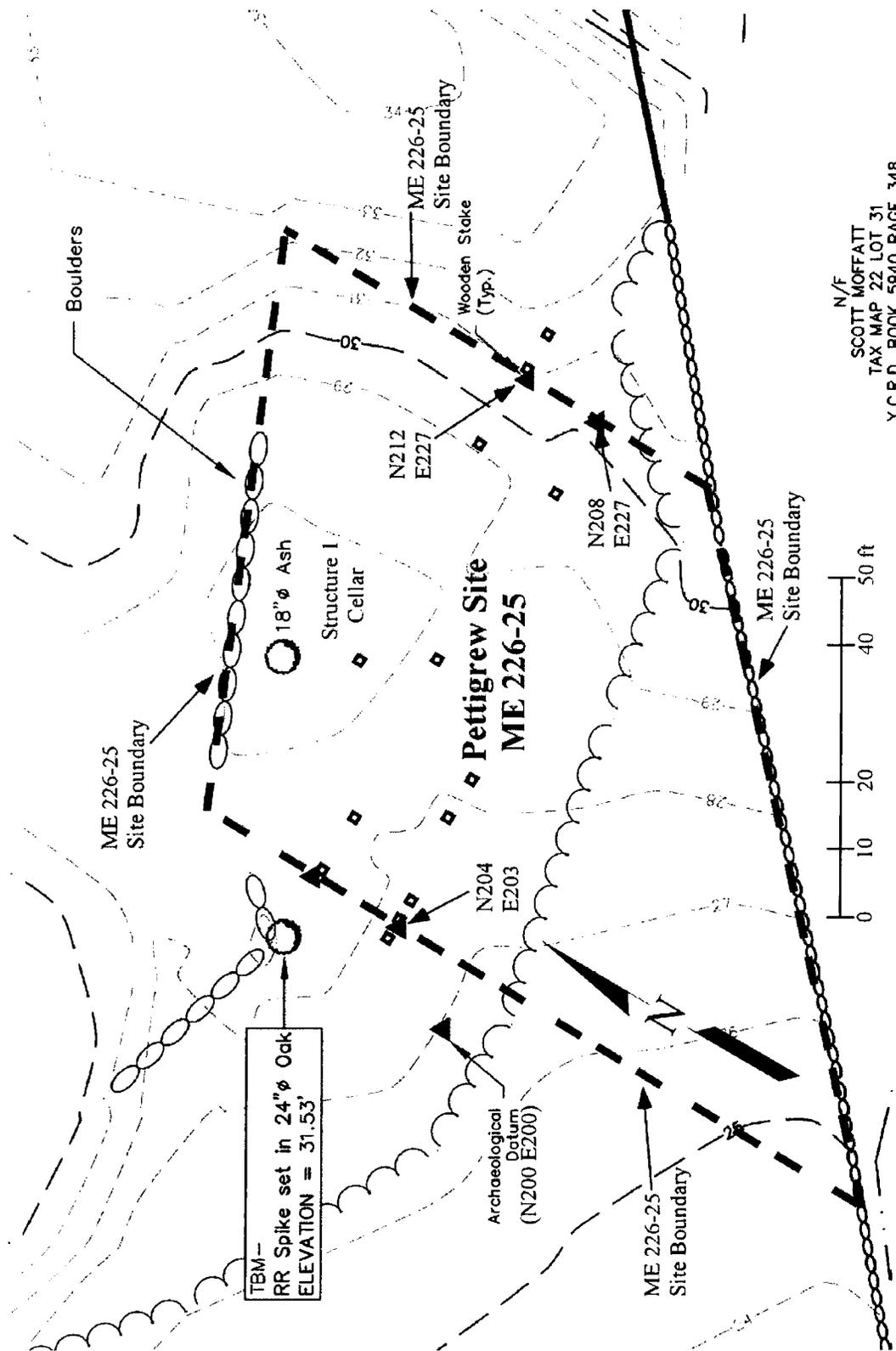
One other significant artifact was recovered – a part of a shoe buckle (technically, the part called the buckle roll, which held keep the shoe belt buckled). The style of bucket roll suggests it was made roughly between 1690 and 1720.

### **Historical Archaeology Conclusions and Recommendations**

The Pettigrew site is an intact site dating from the early to mid-eighteenth century. Although part of the site has been lost to construction, the remaining area in and around the Pettigrew home (Structure 1) is quite well preserved. Indeed, sites of this era that have escaped the disturbance of the plow are quite rare. The site would appear to be well qualified for inclusion in the National Register of Historic Places, and worthy of being protected from development.

To protect the site it is important that no heavy equipment be allowed on it. This is a particular concern during the upcoming construction of adjacent condo units. Furthermore, any removal of trees or vegetation should be done by hand tools, with stumps left in place so no root balls are exposed that might disturb the site. The boundaries of the site – particularly the open east and west boundaries, should be enclosed by fencing to prevent any inadvertent traffic by heavy equipment crossing or disturbing the site during construction.

Appendix 1 Plan of 2014 Excavations at the Pettigrew Site Showing Site Bounds



Appendix II Description of Excavation Units – all 50 x 50 cm unless otherwise noted

N211 E212 NW Quad shovel test pit excavated only to a depth of 10 cm, without reaching sterile soil.

Stratum I (0-10cm below surface) 10yr 3/3 dark brown sandy clay, heavy brick concentration

N208 E214 NW Quad 2' x 2' test pit

Stratum I (0-13cm b.s.) 10yr 3/3 dark brown sandy clay, with flecks of brick and charcoal

Stratum II (13-17 cm below surface) 10yr 5/3 brown sandy clay – sterile subsoil

N204 E210 NW Quad

Stratum I (0-17cm b.s.) 10yr 3/3 dark brown sandy clay, with flecks of brick and charcoal

N203 E207 NW Quad

Stratum I (0-13cm b.s.) 10yr 3/3 dark brown sandy clay, with flecks of brick and charcoal

Stratum II (13-15 cm b.s.) 10yr 5/3 brown sandy clay – sterile subsoil

N204 E204 SW Quad

Stratum IA (0-9cm b.s.) 10yr 3/3 dark brown sandy clay, appears to be recent fill and backhoe action, lying over the colonial ground surface (Stratum I)

Stratum I (9-22 cm b.s.) 10yr 3/3 dark brown sandy clay, with flecks of brick and charcoal

Stratum II (22-28 cm b.s.) 10yr 5/3 brown sandy clay – sterile subsoil

N204 E202 SW Quad

Stratum I (0-4 cm b.s.) 10yr 4/3 brown/dark brown silty clay, with flecks of brick and charcoal

Stratum II (4-11 cm b.s.) 5y 5/3 Olive clay – sterile subsoil

N204 E203 SW Quad

Stratum IA (0-8cm b.s.) 7.5yr 4/2 dark brown/brown sandy silt, appears to be recent fill and backhoe action, lying over the colonial ground surface (Stratum I)

Stratum I (8-12 cm b.s.) 10yr 3/3 dark brown silty clay, with flecks of brick and charcoal

Stratum II (22-28 cm b.s.) 2.5y 4/4 olive brown clay – sterile subsoil

THIS IS THE WESTERN BOUNDARY OF THE SITE

N208 E203 SW Quad

Stratum I (0-9 cm b.s.) 10yr 4/3 brown/dark brown silty clay, with flecks of brick and charcoal

Stratum II (9-14 cm b.s.) 2.5y 5/4 light olive brown clay – sterile subsoil

THIS IS THE WESTERN BOUNDARY OF THE SITE

N208 E206 SW Quad - No artifacts recovered from this excavation unit.

Stratum I (0-10 cm b.s.) 10yr 3/3 dark brown silty clay, with flecks of brick and charcoal

Stratum II (10-15 cm b.s.) 10yr 4/3 brown/dark brown light clay – sterile subsoil

N208 E223 SW Quad

Stratum I (0-10 cm b.s.) 10yr 4/3 brown/dark brown silty clay, with flecks of brick and charcoal

Stratum II (10-15 cm b.s.) 5y 5/3 olive clay – sterile subsoil

## N212 E223 SW Quad

Stratum I (0-32 cm b.s.) 10yr 3/3 dark brown silty clay, with flecks of brick and charcoal

Stratum IIA (32-41 cm b.s.) 10yr 4/3 dark brown clay

Stratum II (41-45 cm b.s.) 2.5y 4/4 olive brown clay - sterile subsoil

## N212 E227 SW Quad

Stratum IA (0-28 cm b.s.) 10yr 4/3 brown/dark brown silty clay

Stratum IIB (28-80 cm b.s.) decomposing bark mulch

Stratum II (80-83 cm b.s.) 2.5y 3/2 very dark grayish brown clay – sterile subsoil

EASTERN BOUNDARY OF SITE

## N212 E229 SW Quad

Stratum IA (0-6 cm b.s.) 10yr 4/3 brown/dark brown silty clay

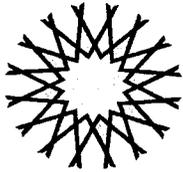
Stratum IIB (0-74 cm b.s.) decomposing bark mulch

Stratum II (74-79 cm b.s.) 2.5y 3/2 very dark grayish brown clay – sterile subsoil

**Appendix 3 - Catalog of artifacts excavated at the Pettigrew Site, ME 226-25, July - August 2014**

art#	material	#	w/f	description	Strat	N	E	quad
1	ceramic	1	f	combed-yellow slipware, burned	I	208	214	NWQ
2	ceramic	1	f	redware, unglazed	I	208	214	NWQ
3	ceramic	6	f	redware, brown glazed	I	208	214	NWQ
4	brick	7	f	brick fragments	I	208	214	NWQ
5	pipe clay	2	f	5/64" pipe stem fragments	I	208	214	NWQ
6	glass	2	f	curved aqua colored glass	I	208	214	NWQ
7	glass	1	f	curved, thin dark green glass	I	208	214	NWQ
8	glass	1	f	clear glass, possible wine glass base	I	208	214	NWQ
9	iron	5	f	nail fragments	I	208	214	NWQ
10	copper alloy	1	f	buckle roll to shoe buckle (ca. 1690-1720)	I	208	214	NWQ
11	bone	1	f	tooth fragment	I	208	214	NWQ
12	bone	2	f	cow teeth fragments	I	208	214	NWQ
13	bone	3	f	calcine bone fragments	I	208	214	NWQ
14	ceramic	2	f	Westerwald stoneware	I	203	207	NWQ
15	ceramic	2	f	combed-yellow slipware	I	203	207	NWQ
16	ceramic	1	f	redware, brown glazed	I	203	207	NWQ
17	brick	17	f	brick fragments	I	203	207	NWQ
18	glass	1	f	melted dark green glass	I	203	207	NWQ
19	glass	1	f	thin dark green bottle glass	I	203	207	NWQ
20	iron	1	f	nail fragment	I	203	207	NWQ
21	bone	3	f	calcine bone fragments	I	203	207	NWQ
22	brick	8	f	brick fragments (sample)	I	210	212	NWQ
23	ceramic	1	f	combed-yellow slipware	I	204	210	NWQ
24	ceramic	1	f	white English saltglazed stoneware	I	204	210	NWQ
25	ceramic	5	f	redware, brown glazed	I	204	210	NWQ
26	ceramic	1	f	redware, light brown glazed	I	204	210	NWQ
27	brick	8	f	brick fragments	I	204	210	NWQ
28	pipe clay	3	f	pipe bowl fragments	I	204	210	NWQ
29	pipe clay	3	f	5/64" pipe stem fragments	I	204	210	NWQ
30	glass	1	f	thin green window glass	I	204	210	NWQ
31	glass	3	f	dark green wine bottle glass	I	204	210	NWQ
32	flint	1	f	piece of gray European flint	I	204	210	NWQ
33	iron	1	w	2.5" hand-forged nail	I	204	210	NWQ
34	iron	13	f	nail fragments	I	204	210	NWQ
35	bone	13	f	calcine bone fragments	I	204	210	NWQ
36	brick	2	f	brick fragments	I	208	223	SWQ
37	glass	1	f	dark green wine bottle glass	I	208	223	SWQ
38	ceramic	1	f	English brown stoneware (mug fragment)	I	208	223	SWQ
39	brick	1	f	brick fragment	IA	212	229	SWQ
40	ceramic	1	f	redware, brown glazed	I	212	223	SWQ
41	brick	9	f	brick fragments	I	212	223	SWQ
42	glass	1	f	green case bottle glass	I	212	223	SWQ

43	iron	2 f	hand-forged nail fragments	I	212	223	SWQ
44	iron	1 f	unidentified iron (possible spike head)	I	212	223	SWQ
45	ceramic	1 f	redware, brown glazed	IIA	212	223	SWQ
46	ceramic	3 f	redware, unglazed	IIA	212	223	SWQ
47	brick	12 f	brick fragments	IIA	212	223	SWQ
48	pipe clay	1 f	5/64" pipe stem fragment	IIA	212	223	SWQ
49	glass	1 f	dark green wine bottle glass	IIA	212	223	SWQ
50	glass	1 f	clear, wine glass glass	IIA	212	223	SWQ
51	iron	1 w	3" hand-forged nail	IIA	212	223	SWQ
52	bone	2 f	calcine bone fragments	IIA	212	223	SWQ
53	brick	9 f	brick fragments	I	208	206	SWQ
54	pipe clay	1 f	7/64" pipe stem fragment	I	208	206	SWQ
55	pipe clay	1 f	pipe bowl fragment	I	208	206	SWQ
56	glass	1 f	light green pharmaceutical bottle glass	I	208	206	SWQ
57	glass	3 f	dark green wine bottle glass	I	208	206	SWQ
58	iron	1 f	hand-forged nail fragment	I	208	206	SWQ
59	iron	2 w	2" wire nails with wood	I	208	206	SWQ
60	bone	1 f	calcine bone fragment	I	208	206	SWQ
61	ceramic	1 f	English brown stoneware (mug base)	IA	204	203	SWQ
62	brick	1 f	5/64" pipe stem fragment	I	204	203	SWQ
63	pipe clay	1 f	5/64" pipe stem fragment	I	204	203	SWQ
64	iron	1 f	nail fragment	I	204	203	SWQ
65	bone	1 f	calcine bone fragment	I	204	203	SWQ
66	brick	6 f	brick fragments	IA	204	204	SWQ
67	iron	3 f	nail fragments	IA	204	204	SWQ
68	brick	10 f	brick fragments	I	204	204	SWQ
69	pipe clay	1 f	7/64" pipe stem fragment	I	204	204	SWQ
70	pipe clay	3 f	pipe bowl fragments	I	204	204	SWQ
71	pipe clay	1 f	pipe stem fragment	I	204	204	SWQ
72	glass	1 f	dark green wine bottle glass	I	204	204	SWQ
73	iron	1 f	nail fragment	I	204	204	SWQ
74	bone	2 f	pig tooth fragments	I	204	204	SWQ
75	bone	6 f	cow tooth fragments	I	204	204	SWQ
76	bone	3 f	calcine bone fragments	I	204	204	SWQ



# ATTAR

ENGINEERING, INC

CIVIL STRUCTURAL MARINE

Chris DiMatteo, Ass't. Town Planner  
Town of Kittery  
P.O. Box 808  
Kittery, Maine 03904

August 20, 2014  
Project No.: C009-14

**Re: Shepard's Cove  
Wetlands Delineation**

Dear Mr. DiMatteo:

On June 30, 2014 I visited the referenced site to determine any changes in the location of delineated wetlands in relation to the 4 cottage-style dwellings proposed by our Site Plan Amendment currently being reviewed by the Kittery Planning Board.

Wetlands adjacent to the area being developed are shown on the original plan-set; "Shepard's Cove on Spruce Creek" dated May 5, 2004, prepared by Altus Engineering, Inc. As noted in Site Note No. 9, the original wetland delineation was performed by Peter Spear in April, 1999 and field verified by Joseph Noel in October, 2000.

During my site visit I determined the wetland boundaries to the north, west and south of the area proposed for development and compared these boundaries to the original site plan. I also evaluated the subcatchment to the south, bounded by the emergency access road, for any significant changes in hydrology which may have affected this wetland complex. I determined that the wetland boundaries are essentially the same as shown on the May 5, 2004 plans; these boundaries are also reflected on the current plan set for the 4 dwellings.

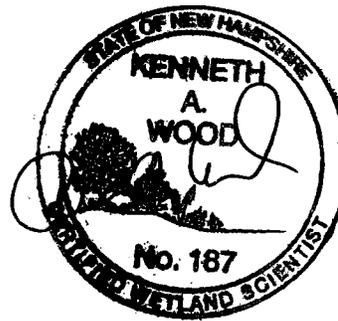
Please contact me for any additional information.

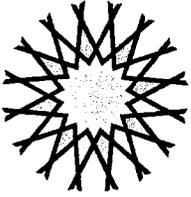
Sincerely,

Kenneth A. Wood, PE, CWS  
President

cc:

C009-14\_Wetlands





# ATTAR

ENGINEERING, INC

CIVIL STRUCTURAL MARINE

## TRANSMITTAL

Michael Rogers, Superintendent  
Kittery Water District  
17 State Road  
Kittery, Maine 03904

August 18, 2014  
Project No.: C009-14

George Kathios, Superintendent  
Kittery Sewer Department  
200 Rogers Road  
Kittery, Maine 03904

RE: Shepard's Cove Amendment  
176 Rogers Road, Kittery, Maine

Dear Mr. Rogers and Mr. Kathios:

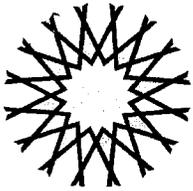
I am writing to request a letter of service capacity for the above referenced project, as required by the Kittery Planning Board. The latest project plans are enclosed.

Please contact me if you have questions or require additional information.

Sincerely,

Lewis Chamberlain, P.E.

C009-14\_KSD\_KWD\_trans



RECEIVED  
APR 16 2014

**SHEPARD'S COVE AMENDMENT  
ROGERS ROAD, KITTERY, MAINE  
STORMWATER MANAGEMENT STUDY**

BY: .....

Project No.: C009-14

April 16, 2014  
Revised 6/16/14  
Revised 8/18/14

◆ **Scope**

This stormwater management plan has been prepared for a proposed amendment to Shepard's Cove, an existing elderly housing facility, located on Rogers Road in Kittery, Maine. The entire parcel contains approximately 43 acres.

This scope of this report is limited to the proposed amendment, which involves replacing a previously approved, but unconstructed, 24 elderly housing unit building, with 4 single family elderly housing buildings.

The currently approved project includes a total of 115 elderly housing units and associated amenities and infrastructure; the proposed amendment will reduce the total number of elderly housing units by 20, resulting in 95 total elderly housing units. The proposed amendment will also reduce the total amount of impervious area by approximately 11,000 S.F.

The existing project is subject to an existing Site Location of Development Permit (L-20634-87-A-N) from the Maine Department of Environmental Protection (MDEP). The proposed amendment must receive an amendment to the referenced MDEP permit and meet the Stormwater Management requirements for the Town of Kittery.

◆ **Site and Watershed Description**

The site is located in the Spruce Creek watershed. Spruce Creek is tidal, and directly tributary to the Piscataqua River and Atlantic Ocean.

A 7½ minute series U.S.G.S. map of the project area is attached. The site is partially developed with buildings, roads and landscaped areas. The remainder of the lot contains woodlands and wetlands.

The topography of the proposed amended area is gently rolling with the majority of grades from near level to 8%.

The proposed amended area does not lie within a 100 year flood zone as determined by the Federal Emergency Management Agency (FEMA) Maps.

◆ **Soils/Hydrologic Soil Groups**

Soil types and their respective Hydrologic Soil Groups (HSG) were determined from a Class B High Intensity Soil Survey (HISS) developed for the original project. Soil types in the vicinity of the proposed amendment consist of Lamoine Silt Loam (La) and Tunbridge-Lyman Fine Sandy Loams Complex (TL) soils. Hydrologic Soil Groups (HSG's) are "D" for Lamoine soils and "C/D" for Tunbridge-Lyman soils.

#### ◆ **Methodology**

The stormwater quantity analysis will be conducted using the HydroCAD Stormwater Modeling System by Applied Microcomputer Systems. The analysis determines the "Existing Condition" and "Developed Condition" stormwater flows. Both cases are analyzed for the 2, 10 and 25-year, 24-hour frequency storm events. The Existing Condition analyzes the site as it currently exists and the Developed Condition models the site with the proposed improvements described above.

#### ◆ **Water Quantity Analysis**

##### Existing Condition

The site was divided into four on-site subcatchments (SC) for the Existing Condition analysis. SC 1 drains in a southerly direction to an existing culvert under an existing paved access road. Subcatchments 2 and 3 drain in a southwesterly direction to the property line. Subcatchment 4 drains in an easterly direction to a culvert under Shepards Cove Road. Analysis Points (AP) downstream of the SC's were chosen to provide points to compare Existing Condition flows to Developed Condition flows.

##### Developed Condition

The Developed Condition analysis consists of five on-site subcatchments. Other features such as ponds and reaches were added to account for on-site routing and detention of stormwater. All Developed Condition flows were routed to the Analysis Points described above.

##### Changes in Stormwater Flows

Changes in stormwater flows at the analysis points, representing the difference from the Existing Condition to the Developed Condition were analyzed. The stormwater flows are shown on the attached table. The results indicated slight increases in peak flow for most storm events. The current project was approved with a variance from MDEP's water quantity standard; the variance allowed increases in peak discharge to be conveyed to Spruce Creek as it is tidal. The proposed amendment will convey stormwater runoff to Spruce Creek in a similar manner to the currently approved project. It should be noted that the proposed amendment reduces the overall project impervious area, as stated above. No negative affects on downstream properties are anticipated.

#### ◆ **Water Quality Analysis**

The currently approved project was designed to meet MDEP's "sliding scale" treatment standard for removal of Total Suspended Solids (TSS), utilizing Best Management Practices (BMP's) such as wooded / seeded buffers and vegetated swales.

In 2006, the MDEP Stormwater Management Law was revised and new treatment standards were adopted. Projects that were approved and constructed under the previous standards are allowed to remain, but new projects and changes to approved projects, in most cases, are required to meet the new standards.

The new standards allow buffers to be utilized; however, the approved buffers in the vicinity of the proposed amendment do not meet the new standards due to inadequate length and soil type (buffers are not allowed on HSG "D" soils).

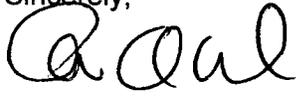
The proposed amendment was designed to meet MDEP's current treatment standards utilizing Underdrained Soil Filter BMP's.

Approximately 92.6% of the impervious area and 93.9% of the developed area will be treated. *Chapter 500* requires 95% of the impervious area and 80% of the developed area to be treated, however, Section B(2) allows impervious area treatment as low as 90% provided that the treatment of a greater depth of runoff than specified in the standard will result in at least an equivalent amount of overall treatment for the impervious area. The BMP Calculations indicate that the cumulative Channel Protection Volume (CPV) of the proposed soil filter treatment ponds provides capacity to treat in excess of 95% of the project impervious area.

◆ **Summary**

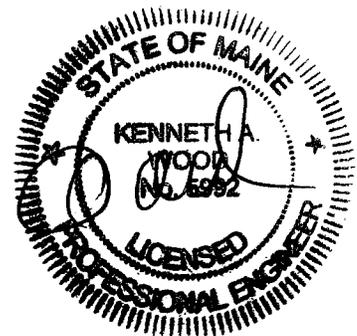
Water quantity increases in peak flow will be routed to the tidal waters of Spruce Creek via level spreaders in a manner similar to what was approved for the current project. Water quality will be addressed by the use of Underdrained Soil Filters. No adverse effects are anticipated on any downstream properties or drainage structures.

Sincerely;

 FOR LSC

Lewis Chamberlain, P.E.

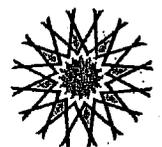
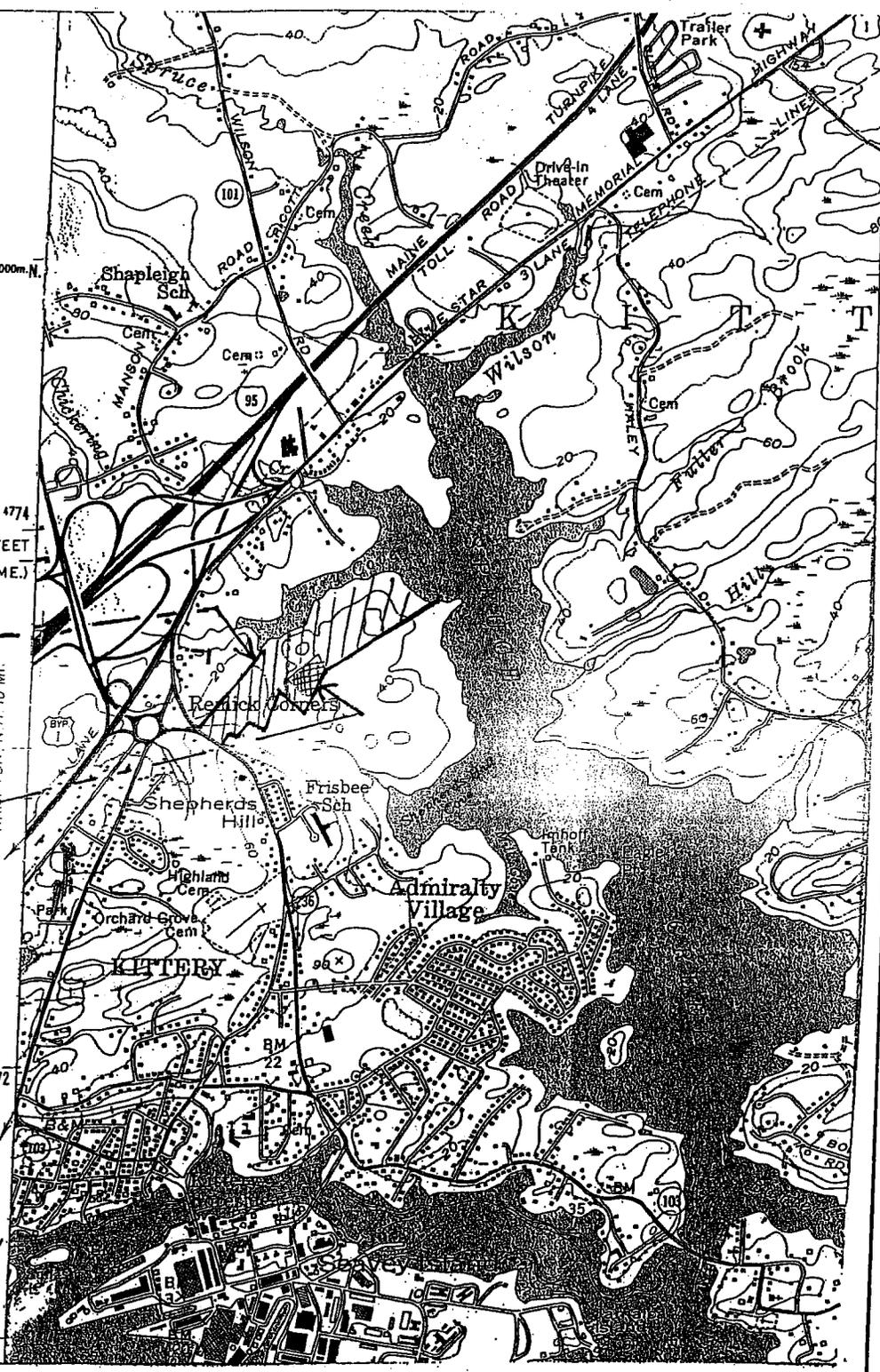
C009-14 SW SHEPARDS COVE.doc



SHEPARD'S COVE  
PROJECT SITE

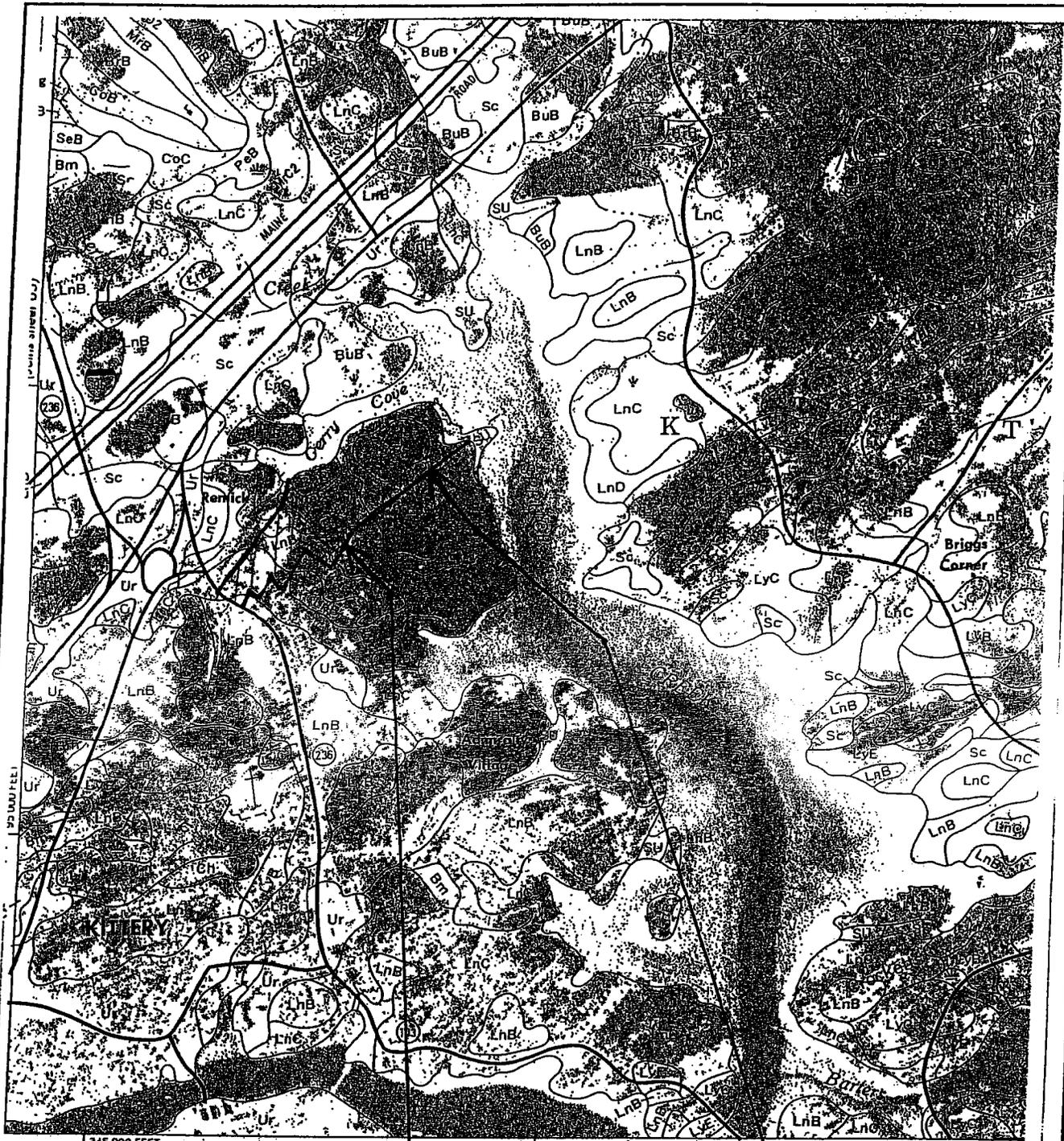
AMENDMENT  
LOCUS

4775000m N.  
4774  
100 000 FEET  
(ME.)  
HAMPTON, N.H. 10 MI.  
4773  
4772  
HAMPTON, N.H. 12 MI.  
PORTSMOUTH, N.H. 1.2 MI.

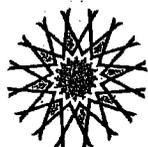


**ATTAR**  
ENGINEERING, INC  
CIVIL STRUCTURAL MARINE

**LOCATION MAP**  
SHEPARD'S COVE AMENDMENT - KITTERY, MAINE  
USGS 7.5' SERIES - KITTERY QUADRANGLE  
APPROX. SCALE: 1" = 2000'  
PROJECT NO: C009-14



AMENDMENT LOCUS —  
 SHEPARD'S COVE PROJECT SITE —



**ATTAR**  
 ENGINEERING, INC

CIVIL · STRUCTURAL · MARINE

1284 STATE ROAD, ELIOT ME 03903

**LOCATION MAP**  
 SHEPARD'S COVE AMENDMENT – KITTERY, MAINE  
 SOIL SURVEY OF YORK COUNTY, MAINE  
 APPROX. SCALE: 1" = 1667'  
 PROJECT NO. C009-14

STORM EVENT

		2	10	25	
EXT	AP1	0.45	1.02	1.32	(cfs)
	AP2	0.8	1.94	2.57	(cfs)
	AP3	0.25	0.58	0.76	(cfs)

---

DEV	AP1	0.3	0.51	1.05	(cfs)
	AP2	0.1	0.62	1.22	(cfs)
	AP3	0.08	0.19	0.42	(cfs)

CHANGE	AP1	-0.15	-0.51	-0.27	(cfs)
	AP2	-0.7	-1.32	-1.35	(cfs)
	AP3	-0.17	-0.39	-0.34	(cfs)

TREATMENT CALCULATIONS

Amended Impervious Area to be Treated 18,333 sf  
 Amended Developed Area to be Treated 70,426 sf

0.42  
 1.62

AMENDED DEVELOPED CONDITIONS:

AREA	IMP. (ft <sup>2</sup> )			L.A. (ft <sup>2</sup> )		DEV. (ft <sup>2</sup> )			TREATMENT
	Ext. (HCAD)	Created Require to Treat	Total (Hydro CAD)	Ext. (HCAD)	Not Treated	Created Require to Treat	Total (Hydro CAD)	Not Treated	
SC 1	1160	1,326	2,486	9231	0	10,391	9,231	0	POND 1
SC 2	0	7,195	7,195	29540	0	29,540	29,540	0	POND 2
SC 3	1208	2,283	3,491	13402	0	14,610	13,401	0	POND 3
SC 4	507	3,285	3,802	13968	0	14,475	13,968	0	POND 4
SC 5	1359	0	1,359	4287	1,359	5,646	4,287	4,287	N/A
<b>TOTAL</b>	<b>4,234</b>	<b>14,099</b>	<b>18,333</b>	<b>70,428</b>	<b>2,928</b>	<b>74,662</b>	<b>70,427</b>	<b>4,287</b>	

AREA	IMP. (ft <sup>2</sup> )	DEV (ft <sup>2</sup> )
Total Area	16974	66140
Total Acres	0.39	1.52
% Treated=	92.6%	93.9%

\*BIORETENTION - MAX 1 ACRE SUBCATCHMENT, BOP<3000 S.F.  
 95% IMP. AND 80% DEV IS REQUIRED

Required Area= 13394  
 Area Needed= -3560

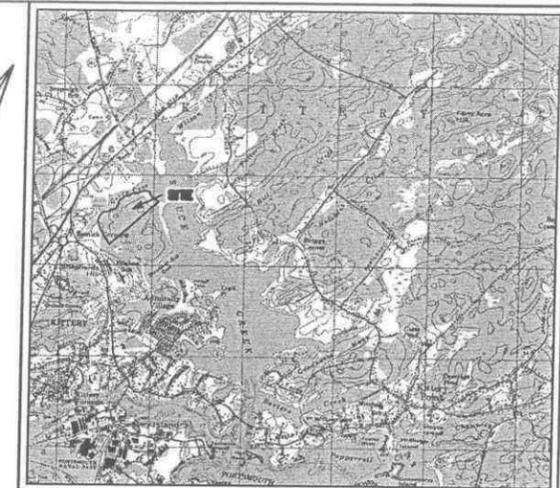
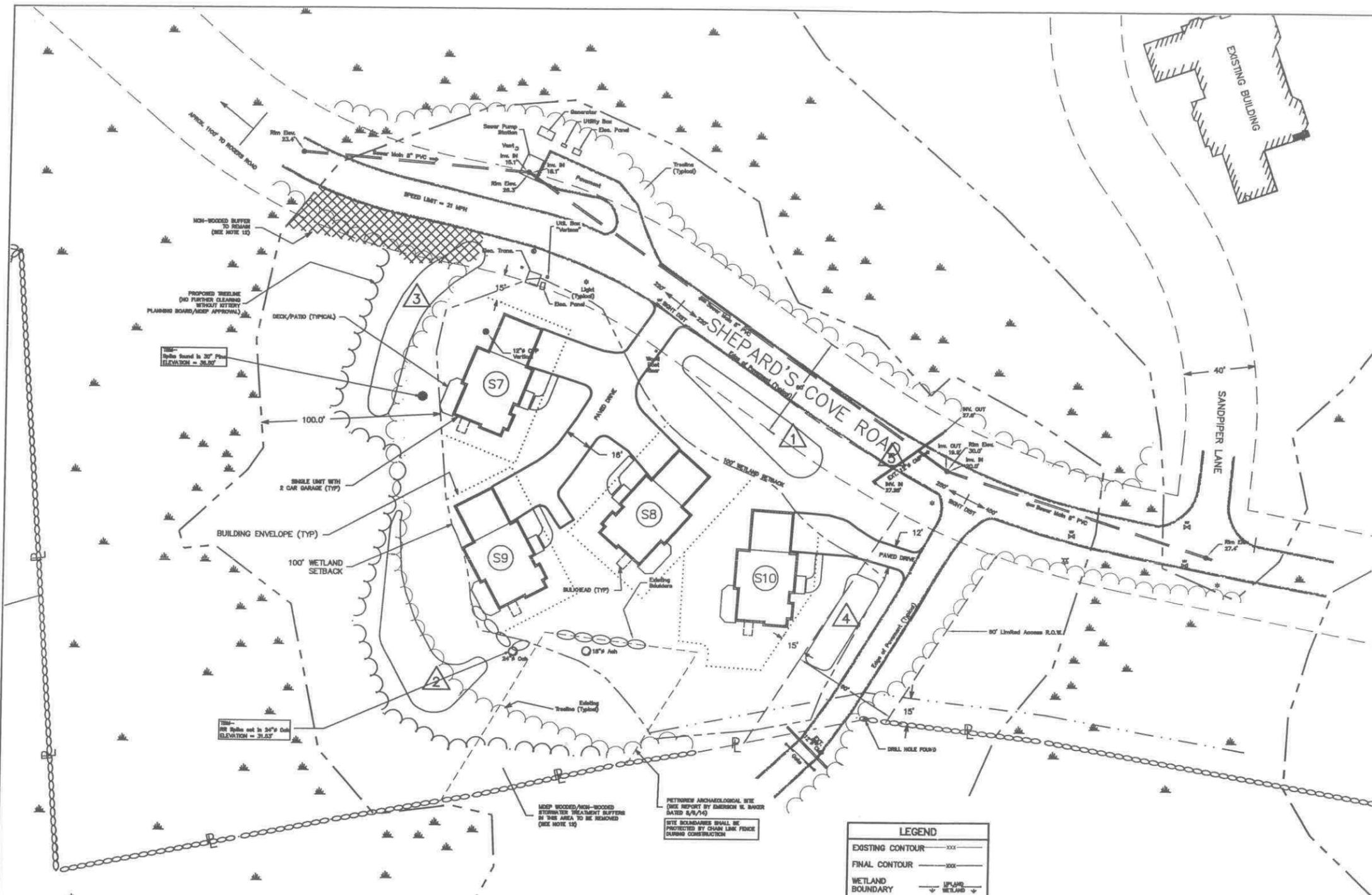
-3388  
 -69528

Calculation of Excess CPV in Ponds:

16,974 S.F. (IMP. AREA TREATED @ 92.4%)  
 17,416 S.F. (IMP. AREA THAT WOULD BE TREATED @ 95%)  
 442 SF (DIFFERENCE)  
 36.8 CF ADDITIONAL CPV req'd (DIFF X 1/12)  
 737 CF ADDITIONAL CPV AVAILABLE







**SITE LOCATION MAP**  
APPROXIMATE SCALE 1" = 2000'

**GENERAL NOTES**

- THIS PLAN DEPICTS AN AMENDMENT TO THE PREVIOUSLY APPROVED SITE/SUBDIVISION PLAN (REFERENCE 1) FOR THE SHEPARD'S COVE DEVELOPMENT LOCATED AT 178 ROGERS ROAD, KITTERY, MAINE. THE EXISTING AND PROPOSED USE IS ELDERLY HOUSING.
- THE PURPOSE OF THIS AMENDMENT IS TO REPLACE THE PREVIOUSLY APPROVED, 24-UNIT, BUILDING B WITH 4 SINGLE-FAMILY BUILDINGS. REFERENCE 1 INCLUDED APPROVAL FOR 115 ELDERLY HOUSING UNITS; THE PROPOSED AMENDMENT WILL REDUCE THE TOTAL NUMBER OF ELDERLY HOUSING UNITS BY 20. THEREFORE, AT FULL BUILD-OUT, THE PROJECT WILL CONTAIN 95 ELDERLY HOUSING UNITS.
- SEE SHEET C-1 FOR OVERALL SITE/SUBDIVISION PLAN
- THE DEVELOPMENT SITE IS IDENTIFIED ON THE TOWN OF KITTERY TAX MAP 22 LOT 21 IN THE RESIDENTIAL-URBAN (RU) DISTRICT. THE LOT IS APPROXIMATELY 43 ACRES IN AREA. DISTRICT REQUIREMENTS FOR THE RU DISTRICT ARE AS FOLLOWS:  
 LOT SIZE: 20,000 S.F.  
 SETBACKS: 15' FROM SIDE AND REAR YARDS  
 30' FRONT YARD  
 MAXIMUM BUILDING COVERAGE: 20%  
 MAXIMUM BUILDING HEIGHT: 35'  
 MINIMUM STREET FRONTAGE ON LOT SERVED BY PUBLIC SEWER: 100'  
 APPROXIMATELY 295' OF STREET FRONTAGE EXISTS ON ROGERS ROAD FOR THE PROPOSED PROJECT.
- WATER SERVICE SHALL BE PROVIDED TO THE SITE BY KITTERY WATER DISTRICT. SEWER SERVICE SHALL BE PROVIDED TO THE SITE BY THE KITTERY SEWER DEPARTMENT. WATER AND SEWER IMPROVEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH RESPECTIVE DISTRICT/DEPARTMENT REQUIREMENTS.
- THE CONTRACTOR MUST CONTACT DIG SAFE AND ALL LOCAL UTILITIES PRIOR TO THE START OF CONSTRUCTION TO VERIFY THE LOCATION OF EXISTING SUBSURFACE UTILITIES AND CONDITIONS. LOCATING AND PROTECTING ANY UNDERGROUND OR ABOVE GROUND UTILITY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- WETLAND DELINEATION DEPICTED ON THE PLAN WAS TAKEN FROM REFERENCE 1. SEE SITE NOTE #6 FROM REFERENCE 1 AND SHEET C-1.
- EXISTING, OFF-SITE, STRUCTURES SHOWN ON THIS PLAN ARE IN APPROXIMATE LOCATIONS.
- ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
- THIS PROJECT IS SUBJECT TO MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION (MDEP) SITE LOCATION OF DEVELOPMENT PERMIT L-20834-87-A-N. THE CURRENTLY PROPOSED SITE/SUBDIVISION AMENDMENT WILL REQUIRE AN AMENDMENT TO THIS PERMIT.
- THIS PLAN REVISES THE STORMWATER TREATMENT BUFFERS DEPICTED ON REFERENCE 2 AS SHOWN. ALL OTHER BUFFERS SHOWN ON REFERENCE 2 SHALL REMAIN.
- RESIDENTIAL BUILDING-MOUNTED LIGHT FIXTURES SHALL BE LOCATED AT EACH UNIT ENTRANCE.

**REFERENCES**

- "SITE PLAN - SHEPARD'S COVE ON SPRUCE CREEK - TAX MAP 22, LOT 21, 178 ROGERS ROAD, KITTERY, MAINE" PREPARED BY ALTUS ENGINEERING, INC. PORTSMOUTH, NH. REVISION 9, DATED 5/5/04, Y.C.R.D BOOK 291, PAGE 19.
- "BUFFER EASEMENT PLAN - SHEPARD'S COVE SENIOR HOUSING COMMUNITY" PREPARED BY ALTUS ENGINEERING/ NORTH EASTERLY SURVEYING INC, DATED 5/7/02, YCRD BK 271 P.8
- "EXISTING CONDITIONS FOR PROPERTY AT SHEPARD'S COVE ROAD KITTERY, YORK COUNTY, MAINE" PREPARED BY NORTH EASTERLY SURVEYING, INC. DATED 1/19/2012, REVISION A DATED 7/31/14.

LEGEND	
EXISTING CONTOUR	---XXX---
FINAL CONTOUR	---XXX---
WETLAND BOUNDARY	---WETLAND---
UTILITY POLE	EXT. @ PROP. @
EXT. WATER	---WB---
EXT. SEWER	---SB---
EXT. OVERHEAD UTIL.	---OUB---
EXT. UNDERGROUND UTIL.	---OUB---
PRP. WATER	---WP---
PRP. SEWER	---SP---
PRP. FORCE MAIN	---FMB---
PRP. UTILITY	---PUB/T/C---
WATER VALVE	EXT. @ PROP. @
WATER SHUTOFF	⊕
SEWER MANHOLE	⊙
LIGHT POLE	EXT. @ PROP. @
ASPHALT CURB	---
EXISTING CURB	---
BOLLARD	⊙
FIRE HYDRANT	EXT. @ PROP. @

TOWN OF KITTERY PLANNING BOARD	DATE

**INDEX OF SHEETS**

C-1	SITE AND SUBDIVISION PLAN AMENDMENT (ALTUS)
1.	SITE AND SUBDIVISION PLAN AMENDMENT (ATTAR)
2.	GRADING AND UTILITY PLAN (ATTAR)
3.	DETAILS PLAN (ATTAR)
4.	DETAILS PLAN (ATTAR)
5.	DETAILS PLAN (ATTAR)



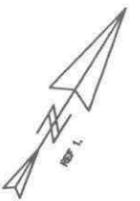
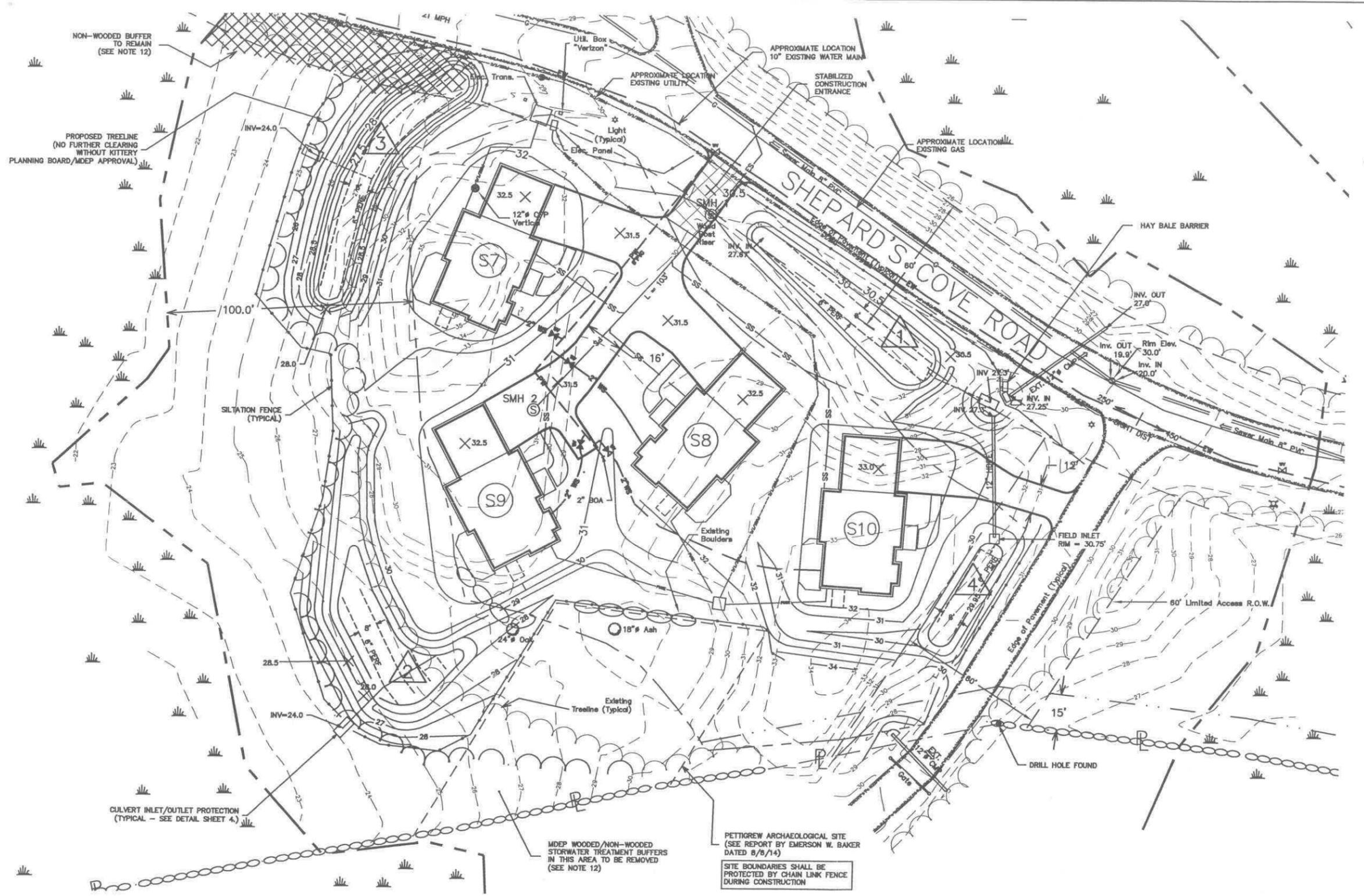
NO.	DESCRIPTION	DATE
B.	DELETED UNIT S-11, REVISED ARCHAEOLOGICAL SITE	8/18/14
A.	GENERAL REVISIONS.	8/18/14
NO.	DESCRIPTION	DATE

**SITE & SUBDIVISION PLAN AMENDMENT**  
**SHEPARD'S COVE**  
 176 ROGERS ROAD, KITTERY, ME

FOR: DLJ CORP.  
 433 U.S. RT. 1, SUIT 101  
 YORK, ME 03909

**ATTAR ENGINEERING, INC.**  
 CIVIL • STRUCTURAL • MARINE  
 1284 STATE ROAD - ELIOT, MAINE 03903  
 PHONE: (207)439-5023 FAX: (207)439-2128

SCALE: 1" = 30'	APPROVED BY: STB	DRAWN BY: STB
DATE: 4/18/14	REVISION: DATE B: 8/18/14	



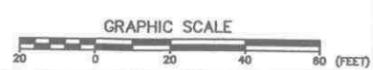
**GENERAL NOTES**

- EXISTING CONDITIONS TOPOGRAPHY WAS TAKEN FROM REFERENCE 3. THE PROJECT DATUM IS NGVD 1928.
- ALL GRAVITY SEWER MAINS SHALL BE 8" PVC (SDR 35). ALL OTHER ASPECTS OF THE SEWER SYSTEM INCLUDING MANHOLES, SERVICE CONNECTIONS AND CONSTRUCTION METHODS SHALL MEET CURRENT KITTERY SEWER DEPARTMENT (KSD) STANDARDS. ALL SEWER LINES AND MANHOLES SHALL BE TESTED IN ACCORDANCE WITH CURRENT KSD REQUIREMENTS.
- ALL STORM DRAINS SHALL BE ADS N-12 (HDPE) OR APPROVED EQUAL (UNLESS NOTED OTHERWISE). PROPER TRENCHING AND BACKFILLING ARE VITAL TO THE LONG TERM PERFORMANCE AND DURABILITY OF HDPE CULVERT INSTALLATIONS. SEE HDPE CULVERT TRENCH DETAIL.
- 8" PVC WATER MAINS SHALL BE C-900, DR-18, CLASS 150, 2" WATER SERVICES SHALL BE CIS POLYETHYLENE. ALL OTHER VALVES, FITTINGS AND CONNECTIONS SHALL MEET CURRENT KITTERY WATER DISTRICT (KWD) STANDARDS. ALL WATER LINES SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH CURRENT KWD STANDARDS.
- A MINIMUM OF 5.0' OF COVER SHALL BE MAINTAINED OVER ALL WATER LINES.
- PROPOSED OVERHEAD/UNDERGROUND UTILITIES ARE APPROXIMATELY LOCATED. CENTRAL MAINE POWER WILL PREPARE THE ELECTRICAL PLAN FOR CONSTRUCTION.

**SEWER SCHEDULE**

SMH 1	RM=30.5
INV IN (2)	=19.1'
INV OUT	=18.0'
SMH 2	RM=31.0
INV OUT	=25.0

\*APPROXIMATE ELEVATION, VERIFY IN FIELD.



NO.	DESCRIPTION	DATE
A	DELETED UNIT 9-11, REVISED ARCHAEOLOGICAL SITE	8/18/14

**GRADING AND UTILITY PLAN**  
**SHEPARD'S COVE**  
**176 ROGERS ROAD, KITTERY, ME**

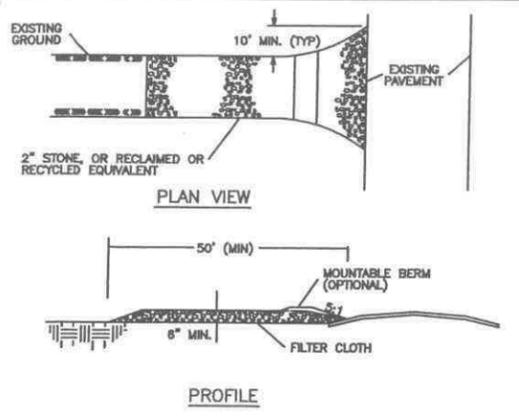
FOR: **DLJ CORP.**  
**433 U.S. RT. 1, SUIT 101**  
**YORK, ME 03909**

**ATTAR ENGINEERING, INC.**  
 CIVIL • STRUCTURAL • MARINE  
 1284 STATE ROAD - ELJOT, MAINE 03903  
 PHONE: (207)439-6023 FAX: (207)439-2128

SCALE: 1" = 20'	APPROVED BY: STB	DRAWN BY: STB
DATE: 4/16/14	REVISION : DATE A : 8/18/14	

JOB NO: C008-14    CAD FILE: SC BASE    SHEET 2





**NOTES**

1. GEOTEXTILE: PLACE FILTER CLOTH OVER ENTIRE AREA TO BE COVERED WITH AGGREGATE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENTIAL LOT.
2. PIPING OF SURFACE WATER UNDER ENTRANCE SHALL BE PROVIDED AS REQUIRED. IF PIPING IS IMPOSSIBLE, A MOUNTABLE BERM WITH A 5:1 SLOPE WILL BE PERMITTED.

STABILIZED CONSTRUCTION ENTRANCE

**EROSION & SEDIMENTATION CONTROL NOTES**

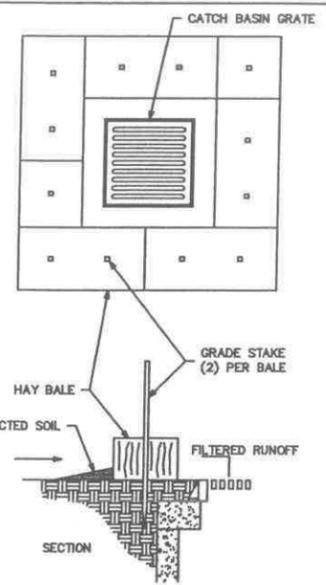
1. SILTATION FENCE OR HAY BALE BARRIERS WILL BE INSTALLED DOWNSLOPE OF ALL STRIPPING OR CONSTRUCTION OPERATIONS. A DOUBLE SILT FENCE BARRIER SHALL BE INSTALLED DOWNSLOPE OF ALL SOIL MATERIAL STOCKPILES. SILT FENCES SHALL BE INSPECTED AFTER EACH RAIN EVENT AND DAILY DURING PROLONGED RAIN. SILT AND SOIL PARTICLES ACCUMULATING BEHIND THE FENCE SHALL BE REMOVED AFTER EACH SIGNIFICANT RAIN EVENT AND IN NO INSTANCE SHOULD ACCUMULATION EXCEED 1/2 THE HEIGHT OF THE FENCE. TORN OR DAMAGED AREAS SHALL BE REPAIRED.
2. TEMPORARY AND PERMANENT VEGETATION AND MULCHING IS AN INTEGRAL COMPONENT OF THE EROSION AND SEDIMENTATION CONTROL PLAN. ALL AREAS SHALL BE INSPECTED AND MAINTAINED UNTIL THE DESIRED VEGETATIVE COVER IS ESTABLISHED. THESE CONTROL MEASURES ARE ESSENTIAL TO EROSION PREVENTION AND ALSO REDUCE COSTLY REWORK OF GRADED AND SHAPED AREAS.
3. SEEDING, FERTILIZER AND LIME RATES AND TIME OF APPLICATION WILL BE DEPENDENT ON SOIL REQUIREMENTS. TEMPORARY VEGETATION SHALL BE MAINTAINED IN THESE AREAS UNTIL PERMANENT SEEDING IS APPLIED. ADDITIONALLY, EROSION AND SEDIMENTATION MEASURES SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
4. ALL LAWN AREA, OUTER POND SIDE SLOPES AND SWALES SHALL BE PERMANENTLY SEEDDED WITH THE FOLLOWING MIXTURE: 20 LB/ACRE CREEPING RED FESCUE, 2 LB/ACRE REDTOP AND 20 LB/ACRE TALL FESCUE FOR A TOTAL OF 42 LB/ACRE. FERTILIZER AND LIME RATES SHALL BE DEPENDENT ON SOIL TESTING. IN THE ABSENCE OF SOIL TESTS, FERTILIZE WITH 10-20-20 (N-P2O5-K2O) AT 800 LB/ACRE AND LIME AT 3 TONS/ACRE. MULCH WITH HAY AT 70-90 LB/1000 S.F. 4" OF LOAM SHALL BE APPLIED PRIOR TO SEEDING.
5. POND BOTTOMS AND INNER POND SIDESLOPES SHALL BE PERMANENTLY SEEDDED WITH THE FOLLOWING MIXTURE: 20 LB/ACRE CREEPING RED FESCUE, 8 LB/ACRE BIRDSFOOT TREFLOID AND 20 LB/ACRE TALL FESCUE FOR A TOTAL OF 48 LB/ACRE. SEE THE ABOVE NOTE FOR FERTILIZER, LIME AND MULCHING RATES.
6. TEMPORARY VEGETATION OF ALL DISTURBED AREAS, MATERIAL STOCKPILES AND OTHER SUCH AREAS SHALL BE ESTABLISHED BY SEEDING WITH EITHER WINTER RYE AT A RATE OF 112 LB/ACRE OR ANNUAL RYEGRASS AT A RATE OF 40 LB/ACRE. WINTER RYE SHALL BE USED FOR FALL SEEDING AND ANNUAL RYEGRASS FOR SHORT DURATION SEEDING. SEEDING SHALL BE ACCOMPLISHED BEFORE OCTOBER 1.
7. TEMPORARY SEEDING OF DISTURBED AREAS SHALL BE ACCOMPLISHED BEFORE OCTOBER 1. PERMANENT SEEDING SHALL BE ACCOMPLISHED BEFORE SEPTEMBER 15.
8. ALL SEEDED AREAS SHALL BE MULCHED WITH HAY AT A RATE OF 2 BALES (70-90 LB) PER 1000 S.F. OF SEEDED AREA.
9. ALL DISTURBED AREAS ON THE SITE SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE.
10. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT ALL ACCESSSES TO PUBLIC ROADS (SEE PLAN). TEMPORARY CULVERTS SHALL BE PROVIDED AS REQUIRED.
11. SLOPES 2:1 OR STEEPER SHALL BE TREATED WITH POLYAJUTE OPEN WEAVE GEOTEXTILE (OR EQUIVALENT) AFTER SEEDING. JUTE MATS SHALL BE ANCHORED PER MANUFACTURER'S SPECIFICATIONS.
12. EXCESSIVE DUST CAUSED BY CONSTRUCTION OPERATIONS SHALL BE CONTROLLED BY APPLICATION OF WATER OR CALCIUM CHLORIDE.
13. THE CONTRACTOR MAY OPT TO USE EROSION CONTROL MIX BERM AS A SEDIMENT BARRIER IN LIEU OF SILTATION FENCE OR HAY BALE BARRIERS WITH APPROVAL FROM THE INSPECTING ENGINEER.

**DRIVEWAY CONSTRUCTION NOTES**

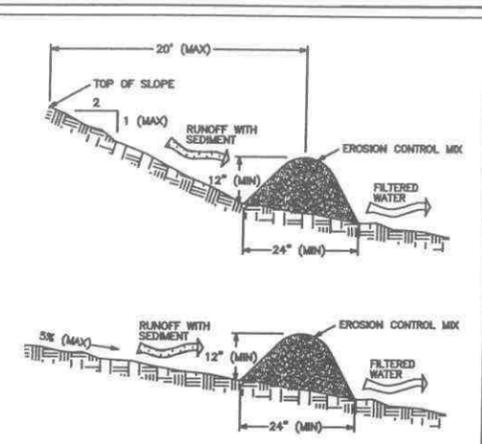
1. DRIVEWAYS TO BE CONSTRUCTED IN ACCORDANCE WITH THE APPROPRIATE CROSS SECTION DETAIL. GRAVEL FILL TO BE COMPACTED TO 95% MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D 1557. LIFT THICKNESSES TO BE A MAXIMUM OF 6".
2. ALL STUMPS, ORGANIC MATERIAL, ROCKS AND BOULDERS TO BE REMOVED TO A MINIMUM DEPTH OF 24" BELOW SUBBASE.
3. ALL STUMPS, LEDGE AND LARGE BOULDERS TO BE REMOVED FROM THE CONSTRUCTION AREA. THE CONSTRUCTION AREA SHALL BE CLEARED AND ROUGH GRADED.
4. ALL CULVERTS TO BE ADS N-12 (HDPE) OR APPROVED EQUAL. CULVERT INLETS AND OUTLETS TO BE PROTECTED IN ACCORDANCE WITH THE CULVERT INLET/OUTLET PROTECTION DETAIL.
5. THE CONTRACTOR MUST CONTACT DIG SAFE AND ALL LOCAL UTILITIES PRIOR TO THE START OF CONSTRUCTION TO VERIFY THE LOCATION OF EXISTING SUBSURFACE UTILITIES AND CONDITIONS. LOCATING AND PROTECTING ANY UNDERGROUND OR ABOVE GROUND UTILITY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

**WINTER CONSTRUCTION NOTES**

1. EXPOSED AREAS SHOULD BE LIMITED TO AN AREA THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
2. AN AREA SHALL BE CONSIDERED STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH HAY AT A RATE OF 100 LB/1000 S.F. OR DORMANT SEED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SO THAT THE SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.
3. FROM OCTOBER 15 TO APRIL 1, LOAM AND SEED WILL NOT BE REQUIRED. DURING PERIODS OF TEMPERATURES ABOVE FREEZING, DISTURBED AREAS SHALL BE FINE GRADED AND PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL PERMANENT SEEDING CAN BE APPLIED. AFTER NOVEMBER 1, DISTURBED AREAS MAY BE LOAMED, FINE GRADED AND DORMANT SEED AT A RATE 200-300% HIGHER THAN THE SPECIFIED PERMANENT SEEDING RATE. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, DISTURBED AREAS SHALL BE GRADED BEFORE FREEZING AND TEMPORARILY STABILIZED WITH MULCH. DISTURBED AREAS SHALL NOT BE LEFT OVER THE WINTER OR FOR ANY OTHER EXTENDED PERIOD OF TIME UNLESS STABILIZED WITH MULCH.
4. FROM NOVEMBER 1 TO APRIL 15 ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACK OR WOOD CELLULOSE FIBER. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAN 3% SLOPES EXPOSED TO DIRECT WINDS AND FOR SLOPES GREATER THAN 8% MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1, THE SAME APPLIES TO ALL SLOPES GREATER THAN 8%.
5. DURING WINTER CONSTRUCTION, DORMANT SEEDING OR MULCH AND ANCHORING SHALL BE APPLIED TO ALL DISTURBED AREAS AT THE END OF EACH WORKING DAY.
6. SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.



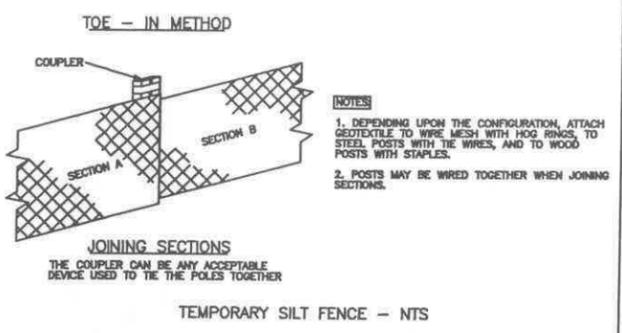
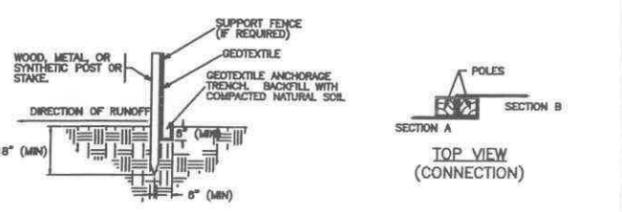
HAY BALE FILTER FOR CATCH BASIN (NTS)



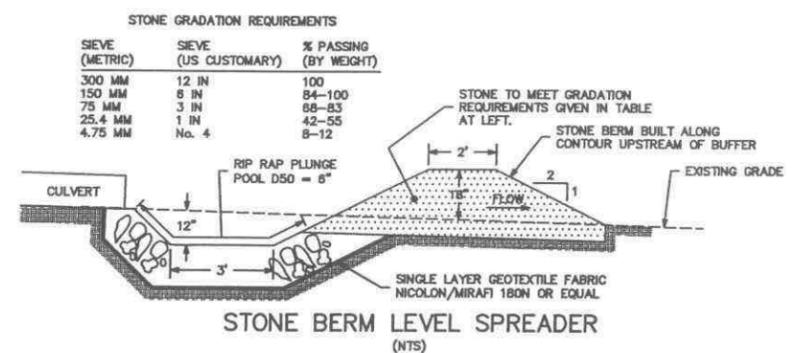
**EROSION CONTROL MIX COMPOSITION STANDARDS:**

- THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100% DRY WEIGHT BASIS.
- PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A #8 SCREEN AND A MINIMUM OF 70% MAXIMUM OF 80% PASSING A 0.75" SCREEN.
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX
- SOLUBLE SALTS CONTENT SHALL BE <math><4.0\text{ mmhos/cm}</math>
- THE pH SHOULD FALL BETWEEN 5.0 AND 8.0

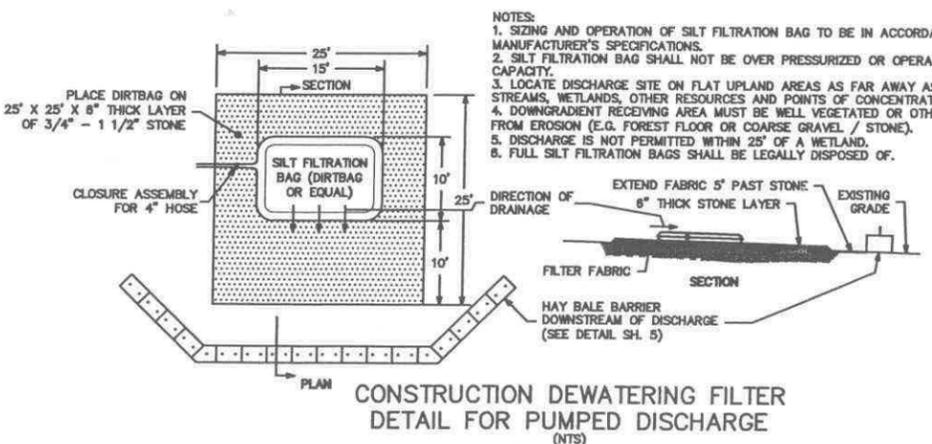
EROSION CONTROL MIX BERM (NTS)



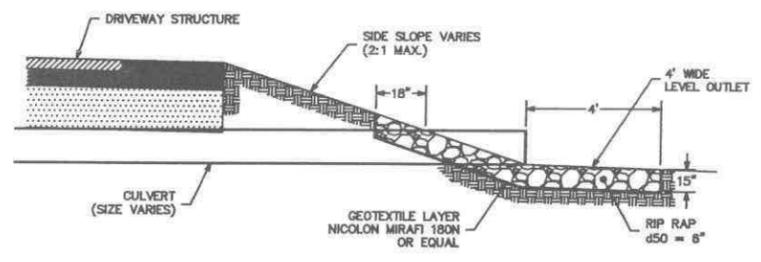
TEMPORARY SILT FENCE - NTS



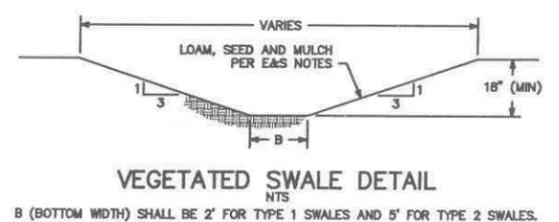
STONE BERM LEVEL SPREADER (NTS)



CONSTRUCTION DEWATERING FILTER DETAIL FOR PUMPED DISCHARGE (NTS)

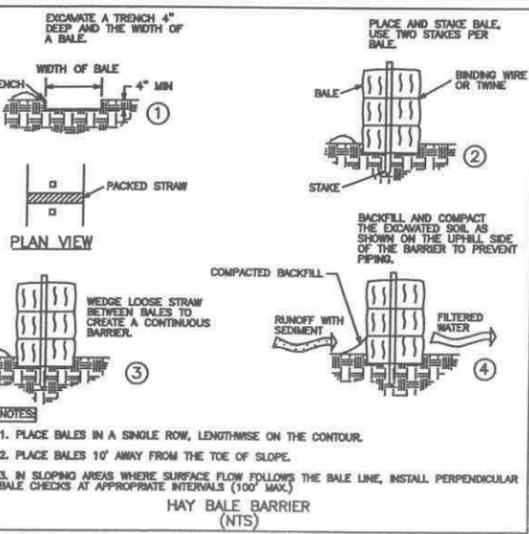


CULVERT INLET/OUTLET PROTECTION DETAIL (NTS)



VEGETATED SWALE DETAIL (NTS)

B (BOTTOM WIDTH) SHALL BE 2' FOR TYPE 1 SWALES AND 5' FOR TYPE 2 SWALES.



HAY BALE BARRIER (NTS)

NO.	REVISIONS	DATE
A	GENERAL REVISIONS	6/16/14
	DESCRIPTION	DATE

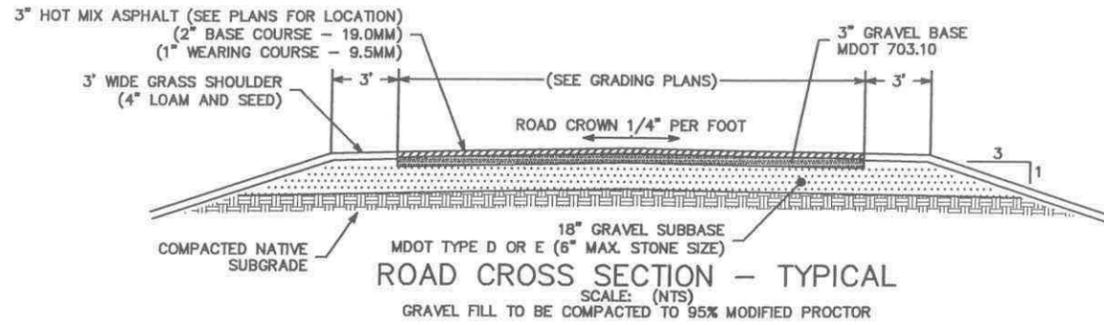
**SITE DETAILS**  
SHEPARD'S COVE  
176 ROGERS ROAD, KITTERY, ME

FOR: DLJ CORP.  
433 U.S. RT. 1, SUIT 101  
YORK, ME 03909

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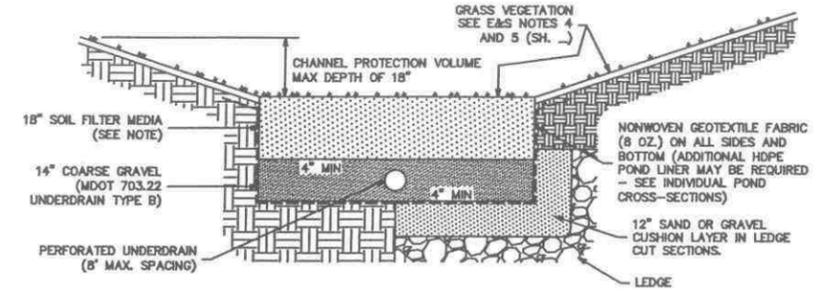
SCALE: AS NOTED APPROVED BY: DRAWN BY: STB  
DATE: 4/16/14 REVISION: DATE A: 6/16/14

JOB NO: C009-14 CAD FILE: SC\_DET SHEET 4

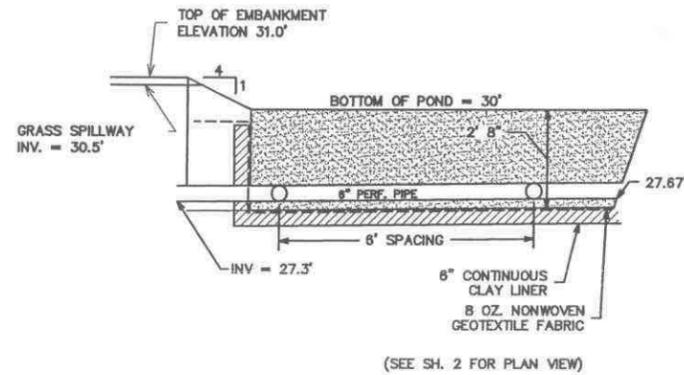


**SOIL FILTER MEDIA NOTE:**  
 THE SOIL FILTER MEDIA SHALL CONSIST OF A SILTY SAND OR SOIL MIXTURE COMBINED WITH 20% - 25% FINE SHREDDED BARK OR WOOD FIBER MULCH. THE MIXTURE MUST HAVE NO LESS THAN 85% PASSING THE 200 SIEVE, AND A CLAY CONTENT OF LESS THAN 2%. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST CHECK WITH THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR UPDATED SOIL FILTER MEDIA SPECIFICATIONS.

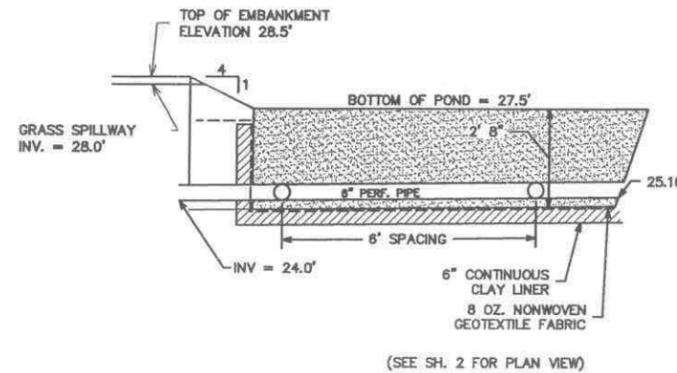
**CONSTRUCTION OVERSIGHT REQUIRED:**  
 INSPECTION OF THE FILTER BASIN SHALL BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY THE DESIGN ENGINEER WITH REQUIRED REPORTING TO THE DEP. AT A MINIMUM, INSPECTIONS WILL OCCUR:  
 - AFTER PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES 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;  
 - AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS; AND  
 - ALL MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN WILL BE APPROVED BY THE DESIGN ENGINEER AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.  
 - CONTRACTOR SHALL COORDINATE INSPECTION SCHEDULE WITH INSPECTING ENGINEER PRIOR TO CONSTRUCTION.



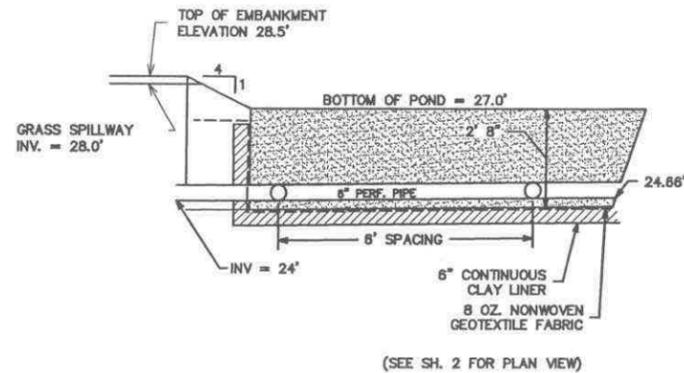
VEGETATED UNDERDRAINED SOIL FILTER FIELD CROSS SECTION  
 (APPLIES TO PONDS 1, 2, 3, AND 4)  
 (NTS)



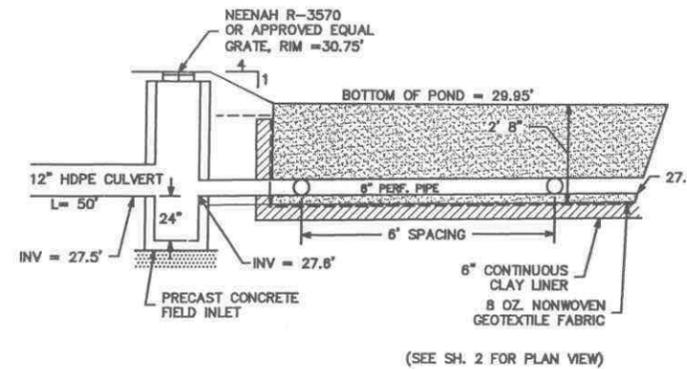
CROSS-SECTION POND 1 - UNDERDRAIN SOIL FILTER POND  
 (NTS)



CROSS-SECTION POND 3 - UNDERDRAIN SOIL FILTER POND  
 (NTS)



CROSS-SECTION POND 2 - UNDERDRAIN SOIL FILTER POND  
 (NTS)



CROSS-SECTION POND 4 - UNDERDRAIN SOIL FILTER POND  
 (NTS)

NO.	DESCRIPTION	DATE
A	ADDED POND 4 CROSS SECTION	8/18/14
	REVISIONS	

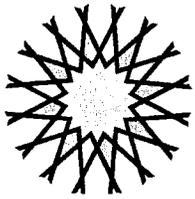
**SITE DETAILS**  
 SHEPARD'S COVE  
 176 ROGERS ROAD, KITTERY, ME 03909

FOR: DLJ CORP.  
 433 U.S. RT. 1, SUIT 101  
 YORK, ME 03909

**ATTAR ENGINEERING, INC.**  
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 PHONE: (207)439-8023 FAX: (207)439-2128

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DATE: 4/16/14		REVISION: DATE
		A: 8/18/14

JOB NO: C009-14 CAD FILE: SC\_DET SHEET 5



# ATTAR

ENGINEERING, INC

CIVIL STRUCTURAL MARINE

**SHEPARD'S COVE  
176 ROGERS ROAD  
KITTERY, MAINE**

## **OPERATION AND MAINTENANCE PROGRAM STORMWATER MANAGEMENT BMP'S (DLJ CORP. AMENDMENT)**

This O&M Program is specific to the construction of 5 single, detached units, and associated site work, proposed by DLJ Corp. This construction is considered an amendment to the original project, which includes other existing buildings, site infrastructure and stormwater BMP's. These existing areas, not included in the DLJ Corp. amendment, shall continue to be inspected and maintained under the originally approved O&M Program.

The DLJ Corp. amendment contains specific Best Management Practices (BMP's) for the conveyance, storage, and treatment of stormwater and the prevention of erosion. These BMP's consist of swales, catchbasins, culverts and underdrained soil filters. All components should be inspected quarterly, and after every significant rain event of 1" in any 24-hour period. Additional inspection intervals are specified for certain BMP's, specifically, underdrained soil filters.

The party responsible for implementing this Operation and Maintenance Program (O & M Program) shall be the DLJ Corp. until the project is incorporated into the condominium association (Shepard's Cove Condominium Association), at which time the association will become the responsible party.

### **Swales**

All swales should be inspected for accumulation of debris, which could adversely affect the function of this BMP. These areas should also be maintained to have gradual slopes, which prevent channeling of stormwater and erosion of the bottom and sides of the swales.

### **Catch Basins**

All catch basin grates, sumps, and inlets/outlets should be inspected for accumulation of debris, which could adversely affect the function of this BMP. Additionally, the basin inverts shall be inspected for clogging and material soundness. Sumps shall always be clear to a depth of 1' below the outlet invert. Inlet structures shall be inspected and cleaned of debris at least twice annually, once in the spring following snow melt and once in the autumn after leaf fall.

### **Culverts**

Culvert inlets and outlets should be inspected for debris, which could clog the BMP. Additionally, the placement of rip-rap should be inspected to ensure that all areas remain smooth and no areas exhibit erosion in the form of rills or gullies.

### **Underdrained Soil Filters**

The underdrained soil filter area is a very effective BMP, however, long term maintenance is essential to its operation. The soil filter should be inspected after every major storm event during the first year to ensure proper function and at least twice-annually, thereafter. The inspection should ensure that the filter drains within 24 - 48 hours. The top several inches of the filter should be replaced with fresh filter material, when water ponds for longer than 72 hours. Debris and sediment that builds up should be removed from the pre-treatment structure at least annually. Outlet structures shall be inspected and cleaned of debris at least twice annually, once in the spring following snow melt and once in the autumn after leaf fall. If mowing of the grass surface is desired, mowing frequency shall be kept to a minimum and the height of grass shall be maintained at a minimum of 6". Mowing equipment above the soil filter shall be limited to string trimmers and push mowers (no tractors).

### **Snow Removal**

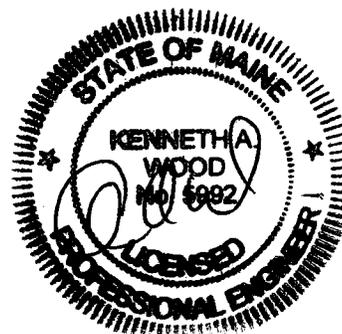
Snow shall be stockpiled only in the approved snow storage areas. Plowing of snow into wetland areas or detention ponds shall be avoided. Additionally, a mostly sand mix (reduced salt) shall be applied during winter months to prevent excessive salt from leaching into wetland areas. Excess sand shall be removed from the storage areas, all paved surfaces and adjacent areas each spring.

### **Seeding, Fertilizing and Mulching**

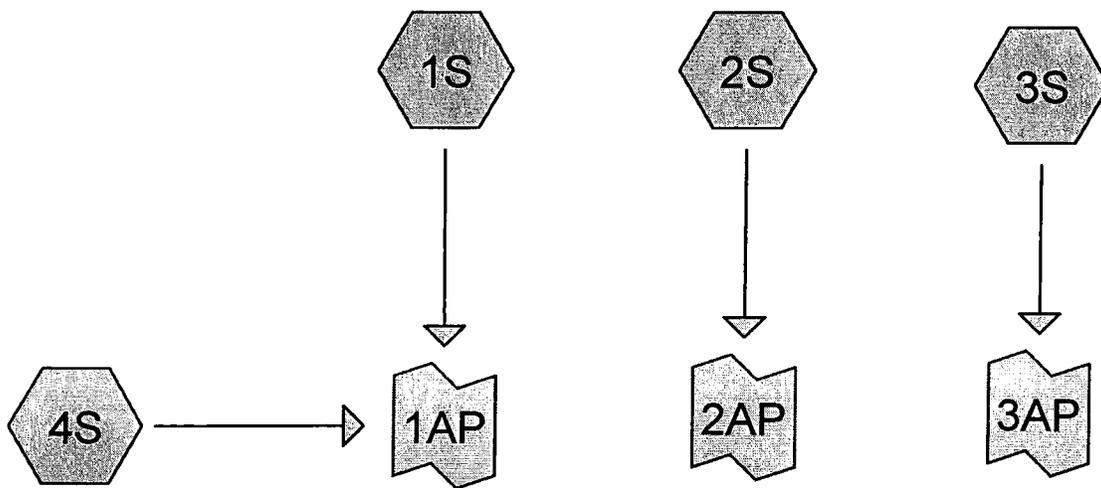
All exposed soil materials and stockpiles must be either temporarily or permanently seeded, fertilized and mulched in accordance with plan specifications. This is one of the most important features of the Erosion Control Plan, which will provide both temporary and permanent stabilization. Eroded or damaged lawn areas must be repaired until a 75% effective growth of vegetation is established and permanently maintained.

### **Record Keeping**

Routine maintenance and inspections will be accomplished by the developer [DLJ Corp., 433 U.S. Route 1, Suite 101, (207)-752-1268] until the project is incorporated into the condominium association. At that time, routine maintenance and inspections will be the responsibility of the condominium association's maintenance staff or third party contracted by the property owner or condominium association [Shepard's Cove Condominium Association, 3 Holland Way, Suite 201, Exeter, NH 03833]. All inspections accomplished in accordance with this program shall be documented on the attached Inspection & Maintenance Log. Copies of the Log shall be kept by the property owner or condominium association, and be made available to the Department (Maine Department of Environmental Protection), upon request.







**COVE\_EXT**

Type III 24-hr 2 YEAR STORM Rainfall=3.00"

Prepared by Hewlett-Packard Company

Printed 8/19/2014

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Page 1

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 1S:** Runoff Area=11,340 sf 14.39% Impervious Runoff Depth>0.93"  
Flow Length=98' Tc=7.9 min UI Adjusted CN=76 Runoff=0.27 cfs 0.020 af

**Subcatchment 2S:** Runoff Area=43,593 sf 2.08% Impervious Runoff Depth>0.82"  
Flow Length=305' Tc=12.0 min CN=74 Runoff=0.80 cfs 0.069 af

**Subcatchment 3S:** Runoff Area=10,173 sf 6.67% Impervious Runoff Depth>0.88"  
Flow Length=102' Tc=5.2 min UI Adjusted CN=75 Runoff=0.25 cfs 0.017 af

**Subcatchment 4S:** Runoff Area=6,937 sf 26.90% Impervious Runoff Depth>0.98"  
Flow Length=87' Tc=7.9 min UI Adjusted CN=77 Runoff=0.18 cfs 0.013 af

**Link 1AP:** Inflow=0.45 cfs 0.033 af  
Primary=0.45 cfs 0.033 af

**Link 2AP:** Inflow=0.80 cfs 0.069 af  
Primary=0.80 cfs 0.069 af

**Link 3AP:** Inflow=0.25 cfs 0.017 af  
Primary=0.25 cfs 0.017 af

**COVE\_EXT**

Type III 24-hr 10 YEAR STORM Rainfall=4.60"

Prepared by Hewlett-Packard Company

Printed 8/19/2014

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Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 1S:** Runoff Area=11,340 sf 14.39% Impervious Runoff Depth>2.05"  
Flow Length=98' Tc=7.9 min UI Adjusted CN=76 Runoff=0.62 cfs 0.044 af

**Subcatchment 2S:** Runoff Area=43,593 sf 2.08% Impervious Runoff Depth>1.89"  
Flow Length=305' Tc=12.0 min CN=74 Runoff=1.94 cfs 0.158 af

**Subcatchment 3S:** Runoff Area=10,173 sf 6.67% Impervious Runoff Depth>1.97"  
Flow Length=102' Tc=5.2 min UI Adjusted CN=75 Runoff=0.58 cfs 0.038 af

**Subcatchment 4S:** Runoff Area=6,937 sf 26.90% Impervious Runoff Depth>2.13"  
Flow Length=87' Tc=7.9 min UI Adjusted CN=77 Runoff=0.39 cfs 0.028 af

**Link 1AP:** Inflow=1.02 cfs 0.073 af  
Primary=1.02 cfs 0.073 af

**Link 2AP:** Inflow=1.94 cfs 0.158 af  
Primary=1.94 cfs 0.158 af

**Link 3AP:** Inflow=0.58 cfs 0.038 af  
Primary=0.58 cfs 0.038 af

**COVE\_EXT**

Type III 24-hr 25 YEAR STORM Rainfall=5.40"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 1S:** Runoff Area=11,340 sf 14.39% Impervious Runoff Depth>2.67"  
Flow Length=98' Tc=7.9 min UI Adjusted CN=76 Runoff=0.81 cfs 0.058 af

**Subcatchment 2S:** Runoff Area=43,593 sf 2.08% Impervious Runoff Depth>2.49"  
Flow Length=305' Tc=12.0 min CN=74 Runoff=2.57 cfs 0.208 af

**Subcatchment 3S:** Runoff Area=10,173 sf 6.67% Impervious Runoff Depth>2.58"  
Flow Length=102' Tc=5.2 min UI Adjusted CN=75 Runoff=0.76 cfs 0.050 af

**Subcatchment 4S:** Runoff Area=6,937 sf 26.90% Impervious Runoff Depth>2.76"  
Flow Length=87' Tc=7.9 min UI Adjusted CN=77 Runoff=0.51 cfs 0.037 af

**Link 1AP:** Inflow=1.32 cfs 0.094 af  
Primary=1.32 cfs 0.094 af

**Link 2AP:** Inflow=2.57 cfs 0.208 af  
Primary=2.57 cfs 0.208 af

**Link 3AP:** Inflow=0.76 cfs 0.050 af  
Primary=0.76 cfs 0.050 af

**COVE\_EXT**

Type III 24-hr 25 YEAR STORM Rainfall=5.40"

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**Summary for Subcatchment 1S:**

Runoff = 0.81 cfs @ 12.12 hrs, Volume= 0.058 af, Depth&gt; 2.67"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YEAR STORM Rainfall=5.40"

Area (sf)	CN	Description
9,708	74	>75% Grass cover, Good, HSG C
1,632	98	Unconnected pavement, HSG C
11,340	77	Weighted Average, UI Adjusted CN = 76
9,708		85.61% Pervious Area
1,632		14.39% Impervious Area
1,632		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	50	0.0100	0.11		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
0.2	48	0.0520	3.42		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
7.9	98	Total			

**Summary for Subcatchment 2S:**

Runoff = 2.57 cfs @ 12.17 hrs, Volume= 0.208 af, Depth&gt; 2.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YEAR STORM Rainfall=5.40"

Area (sf)	CN	Description
42,686	74	>75% Grass cover, Good, HSG C
907	98	Unconnected pavement, HSG C
43,593	74	Weighted Average
42,686		97.92% Pervious Area
907		2.08% Impervious Area
907		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	50	0.0100	0.11		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
4.3	255	0.0200	0.99		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
12.0	305	Total			

**COVE\_EXT**

Type III 24-hr 25 YEAR STORM Rainfall=5.40"

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**Summary for Subcatchment 3S:**

Runoff = 0.76 cfs @ 12.08 hrs, Volume= 0.050 af, Depth&gt; 2.58"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YEAR STORM Rainfall=5.40"

Area (sf)	CN	Description
9,494	74	>75% Grass cover, Good, HSG C
679	98	Unconnected pavement, HSG C
10,173	76	Weighted Average, UI Adjusted CN = 75
9,494		93.33% Pervious Area
679		6.67% Impervious Area
679		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	50	0.0300	0.17		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
0.3	52	0.0484	3.30		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
5.2	102	Total			

**Summary for Subcatchment 4S:**

Runoff = 0.51 cfs @ 12.11 hrs, Volume= 0.037 af, Depth&gt; 2.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YEAR STORM Rainfall=5.40"

Area (sf)	CN	Description
5,071	74	>75% Grass cover, Good, HSG C
1,866	98	Unconnected pavement, HSG C
6,937	80	Weighted Average, UI Adjusted CN = 77
5,071		73.10% Pervious Area
1,866		26.90% Impervious Area
1,866		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	50	0.0100	0.11		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
0.2	37	0.0540	3.49		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
7.9	87	Total			

**Summary for Link 1AP:**

Inflow Area = 0.420 ac, 19.14% Impervious, Inflow Depth > 2.70" for 25 YEAR STORM event  
Inflow = 1.32 cfs @ 12.11 hrs, Volume= 0.094 af  
Primary = 1.32 cfs @ 12.11 hrs, Volume= 0.094 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Summary for Link 2AP:**

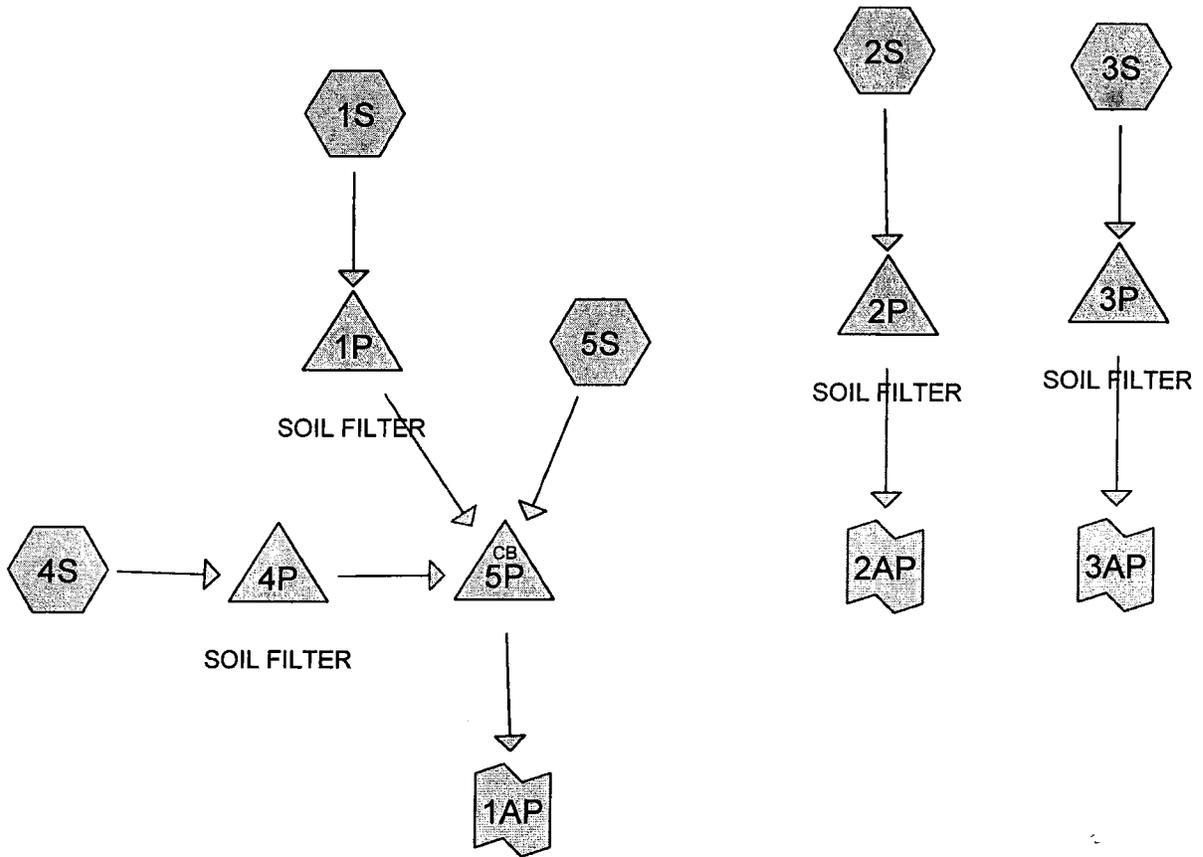
Inflow Area = 1.001 ac, 2.08% Impervious, Inflow Depth > 2.49" for 25 YEAR STORM event  
Inflow = 2.57 cfs @ 12.17 hrs, Volume= 0.208 af  
Primary = 2.57 cfs @ 12.17 hrs, Volume= 0.208 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Summary for Link 3AP:**

Inflow Area = 0.234 ac, 6.67% Impervious, Inflow Depth > 2.58" for 25 YEAR STORM event  
Inflow = 0.76 cfs @ 12.08 hrs, Volume= 0.050 af  
Primary = 0.76 cfs @ 12.08 hrs, Volume= 0.050 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 1S:** Runoff Area=9,231 sf 26.93% Impervious Runoff Depth>0.98"  
Flow Length=25' Slope=0.0050 '/ Tc=0.7 min UI Adjusted CN=77 Runoff=0.29 cfs 0.017 af

**Subcatchment 2S:** Runoff Area=29,540 sf 24.36% Impervious Runoff Depth>0.98"  
Flow Length=256' Tc=5.3 min UI Adjusted CN=77 Runoff=0.82 cfs 0.055 af

**Subcatchment 3S:** Runoff Area=13,401 sf 26.05% Impervious Runoff Depth>0.98"  
Flow Length=115' Tc=9.5 min UI Adjusted CN=77 Runoff=0.33 cfs 0.025 af

**Subcatchment 4S:** Runoff Area=13,968 sf 27.22% Impervious Runoff Depth>0.98"  
Flow Length=133' Tc=0.9 min UI Adjusted CN=77 Runoff=0.43 cfs 0.026 af

**Subcatchment 5S:** Runoff Area=4,287 sf 31.70% Impervious Runoff Depth>1.28"  
Flow Length=51' Slope=0.0500 '/ Tc=4.1 min CN=82 Runoff=0.17 cfs 0.010 af

**Pond 1P: SOIL FILTER** Peak Elev=30.11' Storage=148 cf Inflow=0.29 cfs 0.017 af  
Primary=0.08 cfs 0.017 af Secondary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.017 af

**Pond 2P: SOIL FILTER** Peak Elev=27.59' Storage=907 cf Inflow=0.82 cfs 0.055 af  
Primary=0.10 cfs 0.055 af Secondary=0.00 cfs 0.000 af Outflow=0.10 cfs 0.055 af

**Pond 3P: SOIL FILTER** Peak Elev=27.71' Storage=284 cf Inflow=0.33 cfs 0.025 af  
Primary=0.08 cfs 0.025 af Secondary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.025 af

**Pond 4P: SOIL FILTER** Peak Elev=30.30' Storage=385 cf Inflow=0.43 cfs 0.026 af  
Outflow=0.06 cfs 0.026 af

**Pond 5P:** Peak Elev=27.56' Inflow=0.30 cfs 0.054 af  
12.0" Round Culvert n=0.013 L=48.0' S=0.0052 '/ Outflow=0.30 cfs 0.054 af

**Link 1AP:** Inflow=0.30 cfs 0.054 af  
Primary=0.30 cfs 0.054 af

**Link 2AP:** Inflow=0.10 cfs 0.055 af  
Primary=0.10 cfs 0.055 af

**Link 3AP:** Inflow=0.08 cfs 0.025 af  
Primary=0.08 cfs 0.025 af

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 1S:** Runoff Area=9,231 sf 26.93% Impervious Runoff Depth>2.13"  
Flow Length=25' Slope=0.0050 '/ Tc=0.7 min UI Adjusted CN=77 Runoff=0.64 cfs 0.038 af

**Subcatchment 2S:** Runoff Area=29,540 sf 24.36% Impervious Runoff Depth>2.13"  
Flow Length=256' Tc=5.3 min UI Adjusted CN=77 Runoff=1.81 cfs 0.120 af

**Subcatchment 3S:** Runoff Area=13,401 sf 26.05% Impervious Runoff Depth>2.13"  
Flow Length=115' Tc=9.5 min UI Adjusted CN=77 Runoff=0.72 cfs 0.054 af

**Subcatchment 4S:** Runoff Area=13,968 sf 27.22% Impervious Runoff Depth>2.13"  
Flow Length=133' Tc=0.9 min UI Adjusted CN=77 Runoff=0.96 cfs 0.057 af

**Subcatchment 5S:** Runoff Area=4,287 sf 31.70% Impervious Runoff Depth>2.55"  
Flow Length=51' Slope=0.0500 '/ Tc=4.1 min CN=82 Runoff=0.33 cfs 0.021 af

**Pond 1P: SOIL FILTER** Peak Elev=30.37' Storage=542 cf Inflow=0.64 cfs 0.038 af  
Primary=0.09 cfs 0.038 af Secondary=0.00 cfs 0.000 af Outflow=0.09 cfs 0.038 af

**Pond 2P: SOIL FILTER** Peak Elev=28.09' Storage=1,923 cf Inflow=1.81 cfs 0.120 af  
Primary=0.13 cfs 0.086 af Secondary=0.49 cfs 0.019 af Outflow=0.62 cfs 0.105 af

**Pond 3P: SOIL FILTER** Peak Elev=28.05' Storage=830 cf Inflow=0.72 cfs 0.054 af  
Primary=0.10 cfs 0.051 af Secondary=0.09 cfs 0.003 af Outflow=0.19 cfs 0.055 af

**Pond 4P: SOIL FILTER** Peak Elev=30.77' Storage=921 cf Inflow=0.96 cfs 0.057 af  
Outflow=0.30 cfs 0.054 af

**Pond 5P:** Peak Elev=27.67' Inflow=0.51 cfs 0.112 af  
12.0" Round Culvert n=0.013 L=48.0' S=0.0052 '/ Outflow=0.51 cfs 0.112 af

**Link 1AP:** Inflow=0.51 cfs 0.112 af  
Primary=0.51 cfs 0.112 af

**Link 2AP:** Inflow=0.62 cfs 0.105 af  
Primary=0.62 cfs 0.105 af

**Link 3AP:** Inflow=0.19 cfs 0.055 af  
Primary=0.19 cfs 0.055 af

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 1S:** Runoff Area=9,231 sf 26.93% Impervious Runoff Depth>2.76"  
Flow Length=25' Slope=0.0050 '/ Tc=0.7 min UI Adjusted CN=77 Runoff=0.83 cfs 0.049 af

**Subcatchment 2S:** Runoff Area=29,540 sf 24.36% Impervious Runoff Depth>2.76"  
Flow Length=256' Tc=5.3 min UI Adjusted CN=77 Runoff=2.34 cfs 0.156 af

**Subcatchment 3S:** Runoff Area=13,401 sf 26.05% Impervious Runoff Depth>2.76"  
Flow Length=115' Tc=9.5 min UI Adjusted CN=77 Runoff=0.93 cfs 0.071 af

**Subcatchment 4S:** Runoff Area=13,968 sf 27.22% Impervious Runoff Depth>2.76"  
Flow Length=133' Tc=0.9 min UI Adjusted CN=77 Runoff=1.24 cfs 0.074 af

**Subcatchment 5S:** Runoff Area=4,287 sf 31.70% Impervious Runoff Depth>3.23"  
Flow Length=51' Slope=0.0500 '/ Tc=4.1 min CN=82 Runoff=0.41 cfs 0.026 af

**Pond 1P: SOIL FILTER** Peak Elev=30.51' Storage=768 cf Inflow=0.83 cfs 0.049 af  
Primary=0.10 cfs 0.048 af Secondary=0.02 cfs 0.000 af Outflow=0.11 cfs 0.049 af

**Pond 2P: SOIL FILTER** Peak Elev=28.15' Storage=2,064 cf Inflow=2.34 cfs 0.156 af  
Primary=0.13 cfs 0.092 af Secondary=1.09 cfs 0.045 af Outflow=1.22 cfs 0.137 af

**Pond 3P: SOIL FILTER** Peak Elev=28.10' Storage=933 cf Inflow=0.93 cfs 0.071 af  
Primary=0.10 cfs 0.059 af Secondary=0.31 cfs 0.012 af Outflow=0.42 cfs 0.071 af

**Pond 4P: SOIL FILTER** Peak Elev=30.78' Storage=939 cf Inflow=1.24 cfs 0.074 af  
Outflow=0.69 cfs 0.068 af

**Pond 5P:** Peak Elev=27.88' Inflow=1.05 cfs 0.143 af  
12.0" Round Culvert n=0.013 L=48.0' S=0.0052 '/ Outflow=1.05 cfs 0.143 af

**Link 1AP:** Inflow=1.05 cfs 0.143 af  
Primary=1.05 cfs 0.143 af

**Link 2AP:** Inflow=1.22 cfs 0.137 af  
Primary=1.22 cfs 0.137 af

**Link 3AP:** Inflow=0.42 cfs 0.071 af  
Primary=0.42 cfs 0.071 af

**Summary for Subcatchment 1S:**

Runoff = 0.83 cfs @ 12.01 hrs, Volume= 0.049 af, Depth> 2.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YEAR STORM Rainfall=5.40"

Area (sf)	CN	Description
6,745	74	>75% Grass cover, Good, HSG C
2,486	98	Unconnected pavement, HSG C
9,231	80	Weighted Average, UI Adjusted CN = 77
6,745		73.07% Pervious Area
2,486		26.93% Impervious Area
2,486		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	25	0.0050	0.58		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.00"

**Summary for Subcatchment 2S:**

Runoff = 2.34 cfs @ 12.08 hrs, Volume= 0.156 af, Depth> 2.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YEAR STORM Rainfall=5.40"

Area (sf)	CN	Description
22,345	74	>75% Grass cover, Good, HSG C
7,195	98	Unconnected pavement, HSG C
29,540	80	Weighted Average, UI Adjusted CN = 77
22,345		75.64% Pervious Area
7,195		24.36% Impervious Area
7,195		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	25	0.0050	0.58		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.00"
0.3	25	0.0407	1.41		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
4.3	206	0.0132	0.80		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
5.3	256	Total			

**Summary for Subcatchment 3S:**

Runoff = 0.93 cfs @ 12.14 hrs, Volume= 0.071 af, Depth> 2.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YEAR STORM Rainfall=5.40"

Area (sf)	CN	Description
9,910	74	>75% Grass cover, Good, HSG C
3,491	98	Unconnected pavement, HSG C
13,401	80	Weighted Average, UI Adjusted CN = 77
9,910		73.95% Pervious Area
3,491		26.05% Impervious Area
3,491		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	8	0.0050	0.46		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.00"
8.8	42	0.0050	0.08		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"
0.4	65	0.0310	2.64		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
9.5	115	Total			

**Summary for Subcatchment 4S:**

Runoff = 1.24 cfs @ 12.02 hrs, Volume= 0.074 af, Depth> 2.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YEAR STORM Rainfall=5.40"

Area (sf)	CN	Description
3,802	98	Unconnected pavement, HSG C
10,166	74	>75% Grass cover, Good, HSG C
13,968	81	Weighted Average, UI Adjusted CN = 77
10,166		72.78% Pervious Area
3,802		27.22% Impervious Area
3,802		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	50	0.0300	1.36		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.00"
0.3	83	0.0448	4.30		<b>Shallow Concentrated Flow,</b> Paved Kv= 20.3 fps
0.9	133	Total			

**Summary for Subcatchment 5S:**

Runoff = 0.41 cfs @ 12.06 hrs, Volume= 0.026 af, Depth> 3.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YEAR STORM Rainfall=5.40"

Area (sf)	CN	Description
1,359	98	Unconnected pavement, HSG C
2,928	74	>75% Grass cover, Good, HSG C
4,287	82	Weighted Average
2,928		68.30% Pervious Area
1,359		31.70% Impervious Area
1,359		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	51	0.0500	0.21		<b>Sheet Flow,</b> Grass: Short n= 0.150 P2= 3.00"

**Summary for Pond 1P: SOIL FILTER**

Inflow Area = 0.212 ac, 26.93% Impervious, Inflow Depth > 2.76" for 25 YEAR STORM event  
 Inflow = 0.83 cfs @ 12.01 hrs, Volume= 0.049 af  
 Outflow = 0.11 cfs @ 12.52 hrs, Volume= 0.049 af, Atten= 86%, Lag= 30.3 min  
 Primary = 0.10 cfs @ 12.52 hrs, Volume= 0.048 af  
 Secondary = 0.02 cfs @ 12.52 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 30.51' @ 12.52 hrs Surf.Area= 1,720 sf Storage= 768 cf  
 Flood Elev= 31.00' Surf.Area= 2,155 sf Storage= 1,716 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 68.5 min ( 855.0 - 786.4 )

Volume	Invert	Avail.Storage	Storage Description
#1	30.00'	1,716 cf	<b>Custom Stage Data (Prismatic) Listed below (Recalc)</b>

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
30.00	1,289	0	0
30.50	1,710	750	750
31.00	2,155	966	1,716

Device	Routing	Invert	Outlet Devices
#1	Primary	27.67'	<b>6.0" Round Culvert</b> L= 120.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 27.67' / 27.30' S= 0.0031 ' / S= 0.0031 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	30.00'	<b>2.400 in/hr Exfiltration over Surface area</b>
#3	Secondary	30.50'	<b>7.0' long x 4.0' breadth Broad-Crested Rectangular Weir</b>

Head (feet)	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
	2.50	3.00	3.50	4.00	4.50	5.00	5.50			
Coef. (English)	2.38	2.54	2.69	2.68	2.67	2.67	2.65	2.66	2.66	
	2.68	2.72	2.73	2.76	2.79	2.88	3.07	3.32		

Primary OutFlow Max=0.10 cfs @ 12.52 hrs HW=30.51' TW=27.60' (Dynamic Tailwater)

└─1=Culvert (Passes 0.10 cfs of 0.78 cfs potential flow)

└─2=Exfiltration (Exfiltration Controls 0.10 cfs)

Secondary OutFlow Max=0.02 cfs @ 12.52 hrs HW=30.51' TW=27.60' (Dynamic Tailwater)

└─3=Broad-Crested Rectangular Weir (Weir Controls 0.02 cfs @ 0.24 fps)

### Summary for Pond 2P: SOIL FILTER

Inflow Area = 0.678 ac, 24.36% Impervious, Inflow Depth > 2.76" for 25 YEAR STORM event  
 Inflow = 2.34 cfs @ 12.08 hrs, Volume= 0.156 af  
 Outflow = 1.22 cfs @ 12.24 hrs, Volume= 0.137 af, Atten= 48%, Lag= 9.3 min  
 Primary = 0.13 cfs @ 12.24 hrs, Volume= 0.092 af  
 Secondary = 1.09 cfs @ 12.24 hrs, Volume= 0.045 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 28.15' @ 12.24 hrs Surf.Area= 2,389 sf Storage= 2,064 cf  
 Flood Elev= 29.00' Surf.Area= 2,812 sf Storage= 2,985 cf

Plug-Flow detention time= 104.7 min calculated for 0.136 af (87% of inflow)  
 Center-of-Mass det. time= 66.7 min ( 856.8 - 790.1 )

Volume	Invert	Avail.Storage	Storage Description
#1	27.00'	2,985 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.00	1,242	0	0
28.00	2,215	1,729	1,729
28.50	2,812	1,257	2,985

Device	Routing	Invert	Outlet Devices
#1	Primary	24.66'	<b>6.0" Round Culvert</b> L= 70.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 24.66' / 24.00' S= 0.0094 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Secondary	28.00'	<b>8.0' long x 3.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#3	Device 1	27.00'	<b>2.400 in/hr Exfiltration over Surface area</b>

Primary OutFlow Max=0.13 cfs @ 12.24 hrs HW=28.14' TW=0.00' (Dynamic Tailwater)

↑1=Culvert (Passes 0.13 cfs of 1.13 cfs potential flow)

↑3=Exfiltration (Exfiltration Controls 0.13 cfs)

Secondary OutFlow Max=1.08 cfs @ 12.24 hrs HW=28.14' TW=0.00' (Dynamic Tailwater)

↑2=Broad-Crested Rectangular Weir (Weir Controls 1.08 cfs @ 0.93 fps)

**Summary for Pond 3P: SOIL FILTER**

Inflow Area = 0.308 ac, 26.05% Impervious, Inflow Depth > 2.76" for 25 YEAR STORM event  
 Inflow = 0.93 cfs @ 12.14 hrs, Volume= 0.071 af  
 Outflow = 0.42 cfs @ 12.42 hrs, Volume= 0.071 af, Atten= 56%, Lag= 16.6 min  
 Primary = 0.10 cfs @ 12.42 hrs, Volume= 0.059 af  
 Secondary = 0.31 cfs @ 12.42 hrs, Volume= 0.012 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 28.10' @ 12.42 hrs Surf.Area= 1,826 sf Storage= 933 cf  
 Flood Elev= 28.50' Surf.Area= 2,140 sf Storage= 1,721 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 65.2 min ( 858.6 - 793.4 )

Volume	Invert	Avail.Storage	Storage Description
#1	27.50'	1,721 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.50	1,255	0	0
28.00	1,745	750	750
28.50	2,140	971	1,721

Device	Routing	Invert	Outlet Devices
#1	Primary	25.16'	<b>6.0" Round Culvert</b> L= 26.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 25.16' / 24.00' S= 0.0446 ' / S= 0.0446 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	27.50'	<b>2.400 in/hr Exfiltration over Surface area</b>
#3	Secondary	28.00'	<b>4.0' long x 7.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=0.10 cfs @ 12.42 hrs HW=28.10' TW=0.00' (Dynamic Tailwater)

↑1=Culvert (Passes 0.10 cfs of 1.55 cfs potential flow)

↑2=Exfiltration (Exfiltration Controls 0.10 cfs)

Secondary OutFlow Max=0.31 cfs @ 12.42 hrs HW=28.10' TW=0.00' (Dynamic Tailwater)

↑3=Broad-Crested Rectangular Weir (Weir Controls 0.31 cfs @ 0.77 fps)

**Summary for Pond 4P: SOIL FILTER**

Inflow Area = 0.321 ac, 27.22% Impervious, Inflow Depth > 2.76" for 25 YEAR STORM event  
 Inflow = 1.24 cfs @ 12.02 hrs, Volume= 0.074 af  
 Outflow = 0.69 cfs @ 12.15 hrs, Volume= 0.068 af, Atten= 44%, Lag= 8.1 min  
 Primary = 0.69 cfs @ 12.15 hrs, Volume= 0.068 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 30.78' @ 12.15 hrs Surf.Area= 1,284 sf Storage= 939 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)  
 Center-of-Mass det. time= 81.3 min ( 867.9 - 786.6 )

Volume	Invert	Avail.Storage	Storage Description
#1	29.95'	1,190 cf	<b>Custom Stage Data (Prismatic)</b> Listed below
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
29.95	456	0	0
30.00	928	35	35
31.00	1,383	1,156	1,190

Device	Routing	Invert	Outlet Devices
#1	Primary	27.50'	<b>12.0" Round Culvert</b> L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 27.50' / 27.30' S= 0.0040 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	27.62'	<b>6.0" Round Culvert</b> L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 27.62' / 27.60' S= 0.0004 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Device 2	29.95'	<b>2.400 in/hr Exfiltration over Surface area</b>
#4	Device 1	30.75'	<b>2.0" x 2.0" Horiz. Orifice/Grate X 7.00 columns X 7 rows C= 0.600</b> Limited to weir flow at low heads

**Primary OutFlow** Max=0.69 cfs @ 12.15 hrs HW=30.78' TW=27.87' (Dynamic Tailwater)

- 1=Culvert (Passes 0.69 cfs of 5.67 cfs potential flow)
- 2=Culvert (Passes 0.07 cfs of 1.10 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.07 cfs)
- 4=Orifice/Grate (Weir Controls 0.62 cfs @ 0.59 fps)

**Summary for Pond 5P:**

Inflow Area = 0.631 ac, 27.82% Impervious, Inflow Depth > 2.72" for 25 YEAR STORM event  
 Inflow = 1.05 cfs @ 12.14 hrs, Volume= 0.143 af  
 Outflow = 1.05 cfs @ 12.14 hrs, Volume= 0.143 af, Atten= 0%, Lag= 0.0 min  
 Primary = 1.05 cfs @ 12.14 hrs, Volume= 0.143 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 27.88' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	27.25'	<b>12.0" Round Culvert</b> L= 48.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 27.25' / 27.00' S= 0.0052 ' S= 0.0052 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=1.02 cfs @ 12.14 hrs HW=27.86' TW=0.00' (Dynamic Tailwater)

↑1=Culvert (Barrel Controls 1.02 cfs @ 2.88 fps)

**Summary for Link 1AP:**

Inflow Area = 0.631 ac, 27.82% Impervious, Inflow Depth > 2.72" for 25 YEAR STORM event  
 Inflow = 1.05 cfs @ 12.14 hrs, Volume= 0.143 af  
 Primary = 1.05 cfs @ 12.14 hrs, Volume= 0.143 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Summary for Link 2AP:**

Inflow Area = 0.678 ac, 24.36% Impervious, Inflow Depth > 2.42" for 25 YEAR STORM event  
 Inflow = 1.22 cfs @ 12.24 hrs, Volume= 0.137 af  
 Primary = 1.22 cfs @ 12.24 hrs, Volume= 0.137 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Summary for Link 3AP:**

Inflow Area = 0.308 ac, 26.05% Impervious, Inflow Depth > 2.76" for 25 YEAR STORM event  
 Inflow = 0.42 cfs @ 12.42 hrs, Volume= 0.071 af  
 Primary = 0.42 cfs @ 12.42 hrs, Volume= 0.071 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



**SOILS LEGEND**

TIB - TUNBRIDGE-LYMAN FINE SANDY LOAM, 3% - 8% SLOPES, HSG C  
 TIC - TUNBRIDGE-LYMAN FINE SANDY LOAM, 8% - 15% SLOPES, HSG C  
 TID - TUNBRIDGE-LYMAN FINE SANDY LOAM, 15% - 25% SLOPES, HSG C  
 LaB - LAMONE SILT LOAM, 3% - 8% SLOPES, HSG D

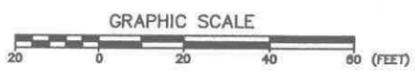
**LEGEND**

WETLAND/SOIL BNDY. UPLAND  
 EXT. CONTOUR WETLAND  
 PRP. CONTOUR  
 SUBCATCHMENT BNDY.  
 SOIL TYPE BOUNDARY  
 To PATH FLOW TYPE/LENGTH

- SUBCATCHMENT
- REACH
- POND
- ANALYSIS POINT

**FLOW TYPES**

SF - SHEET FLOW  
 SCF - SHALLOW CONCENTRATED FLOW  
 CF - CHANNEL FLOW



NO.	DESCRIPTION	DATE

**STORMWATER PLAN EXISTING**  
**SHEPARD'S COVE**  
**176 ROGERS ROAD, KITTERY, ME**

FOR: DLJ CORP.  
 433 U.S. RT. 1, SUITE 101  
 YORK, ME, 03909

**ATTAR ENGINEERING, INC.**  
 CIVIL • STRUCTURAL • MARINE  
 1284 STATE ROAD - ELJOT, MAINE 03903  
 PHONE: (207)439-6023 FAX: (207)439-2128

SCALE: 1" = 20'  
 DATE: 4/18/14

APPROVED BY: \_\_\_\_\_  
 DRAWN BY: STB  
 REVISION: DATE



**FLOW TYPES**  
 SF - SHEET FLOW  
 SCF - SHALLOW CONCENTRATED FLOW  
 CF - CHANNEL FLOW

**SOILS LEGEND**  
 TIB - TUNBRIDGE-LYMAN FINE SANDY LOAM, 3% - 8% SLOPES, HSG C  
 TIC - TUNBRIDGE-LYMAN FINE SANDY LOAM, 8% - 15% SLOPES, HSG C  
 TID - TUNBRIDGE-LYMAN FINE SANDY LOAM, 15% - 25% SLOPES, HSG C  
 LoB - LAMONE SILT LOAM, 3% - 8% SLOPES, HSG D

**LEGEND**

WETLAND/SOIL BNDY.	UPLAND
EXT. CONTOUR	WETLAND
PRP. CONTOUR	XXX
SUBCATCHMENT BNDY.	---
SOIL TYPE BOUNDARY	---
To PATH	FLOW TYPE/LENGTH

- 1 SUBCATCHMENT
- 1R REACH
- 1 POND
- 1 ANALYSIS POINT

TBM - RR Spike set in 24" Oak  
 ELEVATION = 31.53'

CULVERT INLET/OUTLET PROTECTION  
 (TYPICAL - SEE DETAIL SHEET 4)

POND SIZING CALCULATIONS							
AREA	IMP. (ft²)	LA (ft²)	RA (ft²)	DMP	CPV (ft³)	P. POOL (ft³)	CHECK
<b>Pond SC1</b>							
2,436	6,745			432	N/A		
<b>Total</b>							
2,436	6,745	0		432	N/A		0.00
5% Impervious + 2% Landscaped Area = 259							
5% Impervious + 2% Paved Area = 259							
Paved CPV = 737							
Paved Area = 1,239							
OK OK							
<b>Pond SC2</b>							
7,139	22,345			1,344	N/A		
<b>Total</b>							
7,139	22,345	0		1,344	N/A		0.00
5% Impervious + 2% Landscaped Area = 807							
5% Impervious + 2% Paved Area = 807							
Paved CPV = 1,625							
Paved Area = 1,242							
OK OK							
<b>Pond SC3</b>							
3,491	9,910			621	N/A		
<b>Total</b>							
3,491	9,910	0		621	N/A		0.00
5% Impervious + 2% Landscaped Area = 373							
5% Impervious + 2% Paved Area = 373							
Paved CPV = 763							
Paved Area = 1,256							
OK OK							
<b>Pond SC4</b>							
3,822	10,166			656	N/A		
<b>Total</b>							
3,822	10,166	0		656	N/A		0.00
5% Impervious + 2% Landscaped Area = 393							
5% Impervious + 2% Paved Area = 393							
Paved CPV = 663							
Paved Area = 422							
OK OK							

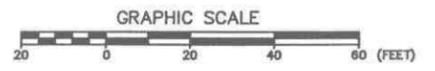
AREA	IMP. (ft²)	DEV (ft²)
Total Area	16974	66140
Total Acres	0.39	1.52
% Treated =	92.6%	93.9%

95% IMP. AND 80% DEV IS REQUIRED

Calculation of Excess CPV in Ponds.

16,974	S.F. (IMP. AREA TREATED @ 92.4%)
17,416	S.F. (IMP. AREA THAT WOULD BE TREATED @ 95%)
442	SF (DIFFERENCE)
36.8	CF ADDITIONAL CPV req'd (DIFF X 1/12)
737	CF ADDITIONAL CPV AVAILABLE

ALTERNATE CALCULATION OF EXCESS POND CAPACITY (CPV):  
 (0.05" OF ADDITIONAL RUNOFF FOR EACH 1 PERCENT BELOW 95% IMPERVIOUS AREA)  
 95 - 92 = 3 X (0.05") = 0.15" ADDITIONAL RUNOFF DEPTH REQUIRED.  
 ADDITIONAL CPV REQUIRED = 16,974 S.F. X 0.15" / 12" / FT = 212.48 CF  
 737 CF OF ADDITIONAL CPV IS AVAILABLE OK.



NO.	DESCRIPTION	DATE
C.	DELETED UNIT 5-11, REVISED ARCHAEOLOGICAL SITE	8/18/14
B.	ALTERNATE EXCESS CPV CALC.	8/27/14
A.	GENERAL REVISIONS.	8/18/14

**STORMWATER PLAN PROPOSED  
 SHEPARD'S COVE  
 176 ROGERS ROAD, KITTELY, ME**

FOR: DLJ CORP.  
 433 U.S. RT. 1, SUITE 101  
 YORK, ME 03909

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SCALE: 1" = 20'	APPROVED BY:	DRAWN BY: STB
DATE: 4/18/14		REVISION : DATE C : 8/18/14

JOB NO: C009-14 CAD FILE: SC\_BASE SHEET 2 OF 2

2

**Chris DiMatteo**

---

**From:** Ken Markley <ken@easterlysurveying.com>  
**Sent:** Wednesday, September 03, 2014 1:55 PM  
**To:** Chris DiMatteo  
**Cc:** Kenneth Lemont  
**Subject:** RE: Pine Tree Plaza Site Plan Review

Chris,  
Thanks for the update. I will ask en what he wants to do.

Ken

North  
W  **EASTERLY**  
**SURVEYING, Inc.**  
**Kenneth D. Markley, PLS**  
President  
191 State Road, Kittery, Maine 03904  
P: 207-439-6333 F: 207-439-1354

---

**From:** Chris DiMatteo [mailto:CDiMatteo@kitteryme.org]  
**Sent:** Tuesday, September 02, 2014 6:12 PM  
**To:** Ken Markley; Kenneth Lemont  
**Cc:** Gmylroie; 'Pete Agrodnia'  
**Subject:** RE: Pine Tree Plaza Site Plan Review

Hi Ken and Ken,

It has been 90 days since the Board continued this for a public hearing.  
Technically it needs to be placed on the agenda for Board action. 16.10.5.4.1.C

Can I have something in writing that requests the Board to continue the application and why you need the additional time?

Without Board action constitutes "disapproval", essentially the application is denied and the applicant can essentially reapply without another fee.

Let me know how you would like to proceed.

Chris

**Christopher Di Matteo**  
Assistant Town Planner  
200 Rogers Road, Kittery Maine 03904  
(207) 439-6807 Ext. 303 / (207) 475-1323 (Direct Line)  
[cdimatteo@kitteryme.org](mailto:cdimatteo@kitteryme.org)



# *Town of Kittery, Maine*

## *Town Planning and Development*

200 Rogers Road, Kittery, ME 03904  
Phone: 207-439-0459 Fax: 207-439-6806  
[www.kittery.org](http://www.kittery.org)

### **ANNUAL REPORT**

Town Planning and Development Department  
Annual Report  
July 1, 2013 – June 30, 2014

July 15, 2014

Improving the quality of Kittery is the goal of the Town Planning and Development Department. We aim to make the Town better; better for you, better for your neighborhood, better for the environment, better for business, better for financial value.

Since August 2009, we have intensified our work and much has been accomplished under the leadership of the Town Council, Town Manager, Town Planning Board Chair, Tom Battcock-Emerson and current Planning Board Vice Chair, Susan Tuveson; Secretary, Debbie Driscoll-Davis; continuing members Bob Melanson, Ann Grinnell and Mark Alesse, and new appointee Karen Kalmar.

Additionally, economic development progress has been achieved under the leadership of prior committee Chairs, John Carlson and Gary Beers and current Chair, George V. Dow and members Patrick Trevino, Vice Chair; and Stephen Kosacz. Also appreciation is extended to the Comprehensive Plan Update Committee's prior Chair, Vern Gardner, and current Chair, Russell B. White (Town Council Representative), Terry Gagner (Citizen Representative), Debbie Driscoll-Davis (Town Planning Board Representative) and Kim Beddard (School Board Representative).

Again appreciation is extended to all of them for hundreds of hours of voluntary service to Kittery to improve its quality of life and place. Some of this year's accomplishments include:

1. Ongoing quality of life and place improvement via implementation of the Comprehensive Plan goals, policies and implementation strategies including Town Code development standards enforcement.
2. Increase in overall Town property asset value since 2009 by \$200 million to \$1.6 billion in 2014; this during the nation's worst economy since the 1929 Great Depression.
3. Memorial Bridge improved design, lighting, completion and opening ceremonies.
4. Kittery Destination Marketing Program- Phase 1 implementation of the Town Council adopted program to expand business opportunities in Kittery including new Interstate-95 Kittery identification and local business signs.
5. Implementation of over 6 months of local media advertising to promote Kittery events, Kittery Foreside businesses and other activities to draw customers to Kittery while Memorial Bridge was closed.
6. Kittery Community Center at Frisbee Common Board of Directors' support with fundraising and program planning to create a real "town center" for indoor and outdoor civic activities.
7. Growth Management Program update via the Comprehensive Plan update including ongoing review and initial re-affirmation of current development policies and plan, as well as Town Code updates for further environmental/rural protection, economic development and overall development quality improvement.

23. Town Planning Board review and approval of the new Route 236 overpass at Route 1 BP including special granite boulder designed exterior, black railings and evergreen trees and shrubs landscaping.
24. Continued planning and design of Memorial Circle improvements including granite curbing around Memorial Circle, installation of a pedestrian path around the outside of the Circle with new street trees and bicycle lanes that extend north on Route 1/State Road toward Adams Drive. This \$2 million project paid by Federal (80%), State (15%) and Town funding will start construction in the Spring of 2015.
25. Extensive work by the Town Planning Board on proposed Town Code amendments to align land use development standards with the citizen adopted 2002 Comprehensive Plan related to rural residential areas and sewage disposal.
26. Support for Kittery Land Trust acquisition of 54 acres of land off Braveboat Harbor Road subsequent to extensive Town Planning Board review of the project.
27. Town Planning Board approval of the Kittery Point Village / Town Dock improvements.
28. Town Planning Board approval of the sewer extension plan west of I-95 into the Kittery Business Park and Shapleigh School neighborhood.
29. Completion and dedication of the new Kittery Memorial Park adjacent to Town Hall on May 26, 2014, with the new USS Thresher Memorial and the William Whipple Memorial plaque and stone, honoring the Kittery born signer of the US Declaration of Independence.

Additionally:

1. Kittery Economic Development Committee approving an Economic Development Plan for Town Council consideration and launching the new Town website- linked Economic Development Opportunities website.
2. Comprehensive Plan Update Committee continuing to prepare recommendations to manage growth and development to improve quality of life and place in Kittery for the year 2020.
3. Conservation Commission, Kittery Port Authority and Kittery Open Space Advisory Committee approvals of other planning and development/conservation improvements.
4. Property Maintenance ordinance adopted by Town Council implementation with Code Enforcement and Public Safety Departments.

All this would not be possible without the leadership of the Town Council and Town Planning Board, Economic Development Committee, Parks Commission, Conservation Commission, Kittery Open Space Advisory Committee as well as voluntary services of committee members, and citizens and the terrific Town staff including Assistant Planner, Chris DiMatteo, and our partners Heather Ross, Code Enforcement Officer, Shelly Bishop, Assistant Code Enforcement Officer and Christian Kuhn, Development Clerk.

As we look to 2014-2015, Kittery citizens will be called upon to make key decisions about what kind of Town do you want by the year 2020 and how to achieve it. So we look forward to helping in any way we can to improve the quality of Kittery.

Gerald R. Mylroie, AICP  
 Town Planner /  
 Director of Town Planning and Development





# *Town of Kittery, Maine*

## *Town Planning and Development*

*200 Rogers Road, Kittery, ME 03904*  
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2. Increase in overall Town property asset value since 2009 by \$200 million to \$1.6 billion in 2014; this during the nation's worst economy since the 1929 Great Depression.
3. Memorial Bridge improved design, lighting, completion and opening ceremonies.
4. Kittery Destination Marketing Program- Phase 1 implementation of the Town Council adopted program to expand business opportunities in Kittery including new Interstate-95 Kittery identification and local business signs.
5. Implementation of over 6 months of local media advertising to promote Kittery events, Kittery Foreside businesses and other activities to draw customers to Kittery while Memorial Bridge was closed.
6. Kittery Community Center at Frisbee Common Board of Directors' support with fundraising and program planning to create a real "town center" for indoor and outdoor civic activities.
7. Growth Management Program update via the Comprehensive Plan update including ongoing review and initial re-affirmation of current development policies and plan, as well as Town Code updates for further environmental/rural protection, economic development and overall development quality improvement.

8. Open space conservation / cluster development subdivision standards updated in Town Code and implementation to protect rural character.
9. Support for Russellwood Farm conservation easement acquisition by Kittery Land Trust and final acquisition.
10. Shoreland and natural resource protection by continued implementation of newly adopted Maine State mandates and related Town Code amendments.
11. Quality Improvement Plan (a specific plan) preparation for Kittery Foreside and Foreside Crossing continued with the possibility of adopting an additional Municipal Improvement District enabling “tax increment financing” of public improvements. Also this included having the area designated as “Center of Opportunity” via a US Department of Housing and Urban Development grant thru the Southern Maine Planning and Development Commission and the Greater Portland Council of Governments. This enabled obtaining valuable consulting services about improvement opportunities for Town and citizen consideration. Also support for Town Council initiated Kittery Foreside Forums to enable more public suggestions on improvements.
12. Quality Improvement Plan for Coastal 1 Kittery shopping area continued with the possibility of increased environmental protection and public awareness of local ecology, increased pedestrian connectivity, reduced vehicular trips, outdoor cafés and seating, trolley service interconnected with other business districts and attractions and increased town revenues for citizen services.
13. Pedestrian and Bicycle Ways Plan preparation continued with updated and new policies and implementation strategies to improve access and safety throughout the Town.
14. Quality Improvement Plan for Kittery Center Village plan implementation continued with the Town Planning Board’s and Town Council’s previous approval of and continuation of the successful Kittery Community Market, every Wednesday in the spring, summer and fall in Kittery Center Village and during the winter within the Kittery Community Center at Frisbee Common.
15. Town Planning Board and Town Council approval of a new Town Code amendment to enable “specialty food and beverage uses” in the business zones and the subsequent approval and soon to open new Tributary Brewing Company business at Post Office Square in Kittery Center Village.
16. Quality Improvement Plan for Memorial Circle implemented given the supporting resolution adopted by Town Council to establish a USS Thresher submarine memorial and subsequent private donations to create Memorial Park.
17. Town and regional planning and development project approvals benefiting Kittery via the following: the Southern Maine Planning and Development Commission, Kittery Area Comprehensive Transportation System Metropolitan Planning Organization and the Southern Maine Partnership for Regional Planning and Sustainability; a coalition of towns, cities and other public and private organizations in York, Oxford and Cumberland Counties. Approvals included \$810,000 for street, sidewalk, and signal improvements within Kittery Foreside on Walker Street, Wallingford Square and Wentworth to Saint Raphael’s Church.
18. Town Planning Board approval of plans for additional businesses in Kittery Foreside and Kittery Crossing.
19. Working with property owners on additional improvements in the Route 1 / Cutts Corner District.
20. Approving new commercial development sites in the Route 236 Business Parkway District.
21. Ongoing planning for the construction of the new \$180 million Sarah Mildred Long Bridge and its Kittery landing area/ a new “gateway entrance to Kittery and the State of Maine including a new signalized intersection at Bridge Street, entrance sign and architectural landscape.
22. Initiation of the new Town Planning Board Advisory Committee to prepare a Quality Improvement Plan for the Route 1 By-Pass business district and obtaining a \$20,000 planning grant.

23. Town Planning Board review and approval of the new Route 236 overpass at Route 1 BP including special granite boulder designed exterior, black railings and evergreen trees and shrubs landscaping.
24. Continued planning and design of Memorial Circle improvements including granite curbing around Memorial Circle, installation of a pedestrian path around the outside of the Circle with new street trees and bicycle lanes that extend north on Route 1/State Road toward Adams Drive. This \$2 million project paid by Federal (80%), State (15%) and Town funding will start construction in the Spring of 2015.
25. Extensive work by the Town Planning Board on proposed Town Code amendments to align land use development standards with the citizen adopted 2002 Comprehensive Plan related to rural residential areas and sewage disposal.
26. Support for Kittery Land Trust acquisition of 54 acres of land off Braveboat Harbor Road subsequent to extensive Town Planning Board review of the project.
27. Town Planning Board approval of the Kittery Point Village / Town Dock improvements.
28. Town Planning Board approval of the sewer extension plan west of I-95 into the Kittery Business Park and Shapleigh School neighborhood.
29. Completion and dedication of the new Kittery Memorial Park adjacent to Town Hall on May 26, 2014, with the new USS Thresher Memorial and the William Whipple Memorial plaque and stone, honoring the Kittery born signer of the US Declaration of Independence.

Additionally:

1. Kittery Economic Development Committee approving an Economic Development Plan for Town Council consideration and launching the new Town website- linked Economic Development Opportunities website.
2. Comprehensive Plan Update Committee continuing to prepare recommendations to manage growth and development to improve quality of life and place in Kittery for the year 2020.
3. Conservation Commission, Kittery Port Authority and Kittery Open Space Advisory Committee approvals of other planning and development/conservation improvements.
4. Property Maintenance ordinance adopted by Town Council implementation with Code Enforcement and Public Safety Departments.

All this would not be possible without the leadership of the Town Council and Town Planning Board, Economic Development Committee, Parks Commission, Conservation Commission, Kittery Open Space Advisory Committee as well as voluntary services of committee members, and citizens and the terrific Town staff including Assistant Planner, Chris DiMatteo, and our partners Heather Ross, Code Enforcement Officer, Shelly Bishop, Assistant Code Enforcement Officer and Christian Kuhn, Development Clerk.

As we look to 2014-2015, Kittery citizens will be called upon to make key decisions about what kind of Town do you want by the year 2020 and how to achieve it. So we look forward to helping in any way we can to improve the quality of Kittery.

Gerald R. Myroie, AICP  
 Town Planner /  
 Director of Town Planning and Development



BUILDING PERMIT REPORT												
Number of Building Permits Issued												
Value of Building Permits \$2,577,652.00												
Permit Fees Collected \$34,040.35												
Impact Fees Paid \$5,093.75												
Date	Permit #	Property Owner	Address	Map	Lot	C	R	Work	Description	Value	Fee	Impact Fee
8/5/2014	14-208	SEGERS, BETH	84 PEPPERRELL RD	27	51	R	R	RENOVATION	CONVERT GAR TO ROOM	\$50,000.00	\$675.00	-
8/5/2014	14-209	DRISCOLL, DEBBIE	1 BOWEN RD	17	1	R	R	MAINT & REPAIR	BATHROOM RENOV	\$2,500.00	\$25.00	-
8/6/2014	14-210	KITTERY PREMIUM OUTLETS	375 US RT 1	47	1	C		DEMO	DEMO	\$10,000.00	\$20.00	-
8/12/2014	14-211	FALKNER, KAREN	541 HALEY RD	35	24	R	R	RENOVATION	LIV SPACE IN BARN	\$35,000.00	\$445.00	-
8/12/2014	14-212	TWEEDIE, BENJAMIN	28 COLE ST	16	130	R		SHED	SHED	\$750.00	\$34.00	-
8/12/2014	14-213	GREENE, PATRICIA	19 GERRISH ISLAND LANE	45	52	R	R	MAINT & REPAIR	RENOVATE	\$40,000.00	\$385.00	-
8/12/2014	14-214	HIMMER HOMES	3 WOODSIDE MEADOW RD	67	22-3	R		SINGLE FAMILY	SINGLE FAMILY HOME	\$230,000.00	\$2,785.00	\$615.00
8/13/2014	14-215	BACHNER, WAYNE	12 GERRISH ISL LANE	44	49	R		DECK	DECK	\$7,000.00	\$109.00	-
8/13/2014	14-216	TEDASCO, RALPH	67 WILSON RD	54	12	R		BARN	BARN	\$9,000.00	\$133.00	-
8/13/2014	14-217	GRAYSTONE BLDRS	7 COTTAGE WAY	38	13-7	R		SINGLE FAMILY	SINGLE FAMILY	\$325,000.00	\$3,925.00	\$1,125.00
8/14/2014	14-218	LANDRY, JEFF	51 FERNALD RD	28	22	R	R	RENOVATION	GARAGE TO WKSHP	\$1,000.00	\$37.00	-
8/14/2014	14-219	KITTERY WATER DISTRICT	147 ROGERS RD	14	52	C		WIRELESS	US CELLUAR	\$12,000.00	\$280.00	-
8/14/2014	14-220	GOURVILLE, JOHN	6 GOODWIN RD	58	11	R	R	PROPANE TANKS	PROPANE TANKS	\$2,000.00	\$49.00	-
8/14/2014	14-221	PAINCHAUD, JERRY & DIANE	6 GEORGE ST	9	70	R	R	MAINT & REPAIR	ELECTRICAL	\$12,000.00	\$49.00	-
8/14/2014	14-222	SIL VIA, BENJAMIN	6 HIGH PASTURE RD	56	3-10	R		MAINT & REPAIR	RESHINGLE, SID, WINDOW	\$12,500.00	\$55.00	-
8/14/2014	14-223	SIMSON, STEVEN MICHAEL	88 OLD POST RD	8	18-1	R		RENOVATION	KITCHEN	\$30,000.00	\$265.00	-
8/14/2014	14-224	KEVIN INC, TRADING POST	301 US ROUTE 1	38	2	C		DOCK	REPLACE DOCK	\$22,500.00	\$2,250.00	-
8/14/2014	14-225	PARSIGIAN, KEVIN	6 SEAPOINT RD	58	9-3	R		DECK	DECKS	\$35,000.00	\$445.00	-
8/14/2014	14-226	BREWER, TED & SARAH	67 PEPPERRELL RD	26	4	R		ADDITION	ADDITION	\$248,000.00	\$3,001.00	\$740.00
8/14/2014	14-227	BEVAN, MARYANN	5 TENNEY HILL RD	36	60	R	R	MAINT & REPAIR	RESHINGLE	\$7,900.00	\$25.00	-
8/14/2014	14-228	NICKERSON, L YNNE	47 BOUSCH STRET	15	19	R		DECK	DECK	\$1,300.00	\$40.60	-
8/19/2014	14-229	LABBEE, DAVID	89 GOODWIN RD	58	65	R	R	MAINT & REPAIR	GUTTERS, WINDOWS	\$5,000.00	\$25.00	-
8/19/2014	14-230	MCKENNA, SEAN & LEISA	10 PEPPERRELL RD	18	44	R		ADDITION	DORMER	\$28,500.00	\$367.00	-
8/19/2014	14-231	WEISSBROD, PETER	111 BRAVE BOAT HARBOR RD	63	6	R		ADDITION	SUNROOM	\$45,463.00	\$571.00	-
8/19/2014	14-232	WHITE, JOSEPH	2 MANSON AVE	9	149	R		PELLET STOVE	PELLET STOVE	\$2,876.00	\$61.00	-
8/19/2014	14-233	INHABITANTS OF KITTERY	120 ROGERS RD	15	91	C		RENOVATION	BOILERS, GAS	\$63,800.00	-	-
8/19/2014	14-234	SBA NETWORKS	43 CHARLES HILL RD	62	12A	C		WIRELESS	US CELLUAR	\$12,000.00	\$280.00	-
8/20/2014	14-235	SSG6 LLC	435 US ROUTE 1	50	9	C		DECK	DECK	\$18,000.00	\$370.00	-
8/20/2014	14-236	OLSON, LEONARD	25 MAC DOUGAL ST	24	11	R		GENERATOR	GENERATOR	\$3,995.00	\$73.00	-
8/20/2014	14-237	WALKER, ROBERT	42 ELIOT RD	2	89	R		GENERATOR	GENERATOR	\$4,250.00	\$76.00	-
8/20/2014	14-238	ISLAND MARINE PROPERTIES	27 BADGERS ISL WEST UNIT 6	1	30-6	C		PIER	EXPAND PIER	\$7,200.00	\$205.00	-
8/20/2014	14-239	SYL VIA FALLOW BREWSTER TRUST	1 BOND RD	26	32	R		SINGLE FAMILY	SINGLE FAMILY	\$300,000.00	\$3,625.00	\$1,000.00
8/20/2014	14-240	ROWAN, CARROLL	ROWAN WAY	59	16-9B	R		SINGLE FAMILY	SINGLE FAMILY	\$153,000.00	\$1,861.00	\$265.00
8/21/2014	14-241	DELLAPASQUA, MARK	75 US ROUTE 1 BYPASS	7	25-2	C		ADDITION	ADDITION	\$299,768.00	\$4,596.75	\$998.75
8/21/2014	14-242	HOAG, STEVE	9 PARSONAGE WAY	48	14	R		SINGLE FAMILY	SINGLE FAMILY	\$170,000.00	\$2,065.00	\$350.00

8/21/2014	14-243	PANCIENCIA, DAVID	20 JEFFERSON LN	61	26-25	R	SHED	SHED	\$2,000.00	\$49.00	-
8/21/2014	14-244	ST GEORGE, JASON & ELAINE	17 LYNCH LN	68	11	R	MAINT & REPAIR	REPAIR PORCH	\$23,000.00	\$181.00	-
8/21/2014	14-245	HODGKINS, DAVID	43 MARTIN RD	11	15	R	MAINT & REPAIR	SIDING & REPAIR PORCH	\$6,000.00	\$25.00	-
8/21/2014	14-246	KELLY, DAVID & INGRID	7 HIGHPOINT CIRCLE	61	9/10/2014	R	GENERATOR	GENERATOR	\$4,200.00	\$73.00	-
8/21/2014	14-247	MAJOR, FAY	15 PICOTT RD	37	7A	R	BARN	POLE BARN	\$2,500.00	\$55.00	-
8/21/2014	14-248	MACLEOD, BARBARA	30 POCOHONTAS RD	51	1	R	ADU	ADU IN GARAGE	\$0.00	\$25.00	-
8/25/2014	14-249	LINSCOTT, DAVID	24 MANSON RD	30	17	R	MAINT & REPAIR	DUMSTER	\$0.00	\$25.00	-
8/25/2014	14-250	RYKERSON, DEAN	1 SALT MARSH LANE	69	14	R	SOLAR	SOLAR PANELS	\$16,923.00	\$217.00	-
8/25/2014	14-251	WALKER STREET LLC	36 WALKER ST	4	160	C	MAINT & REPAIR	WATER HEATERS	\$5,000.00	\$175.00	-
8/25/2014	14-252	DEMARCO, RICHARD	10 TUDOR DR	17	43-4	R	MAINT & REPAIR	GAS LINE	\$695.00	\$25.00	-
8/25/2014	14-253	NICKERSON, L YNNE	45 BOUSH ST	15	19	R	DECK	DECK	\$1,700.00	\$46.00	-
8/25/2014	14-254	VENUTO, ROBIN	6 CUTTS RD LOT 70	60	21-70	R	MAINT & REPAIR	ROOF	\$6,500.00	\$25.00	-
8/25/2014	14-255	LUCIANO	5 JANAHLANE	41	5/4/2014	R	SINGLE FAMILY	SINGLE FAMILY	\$240,000.00	\$2,905.00	-
8/27/2014	14-256	MC CARTHY, RYAN	4 KEENE CIRCLE	10	67	R	MAINT & REPAIR	RENOVATIONS/UPDATE	\$20,000.00	\$145.00	-
8/28/2014	14-257	GERASIN FAMILY TRUST	1 ROUTE 236	21	18	C	COM REFIT	STEELE ST CORPORATION	\$0.00	\$100.00	-
8/28/2014	14-258	CPG	375 US ROUTE 1	47	4	C	COM MAINT	ROOF TOP UNITS	\$40,032.00	\$715.00	-
8/28/2014	14-259	RODONETS, BRIAN	42 PEPPERELL RD	18	27	R	RENOVATION	ADD BATHROOM	\$1,800.00	\$46.00	-